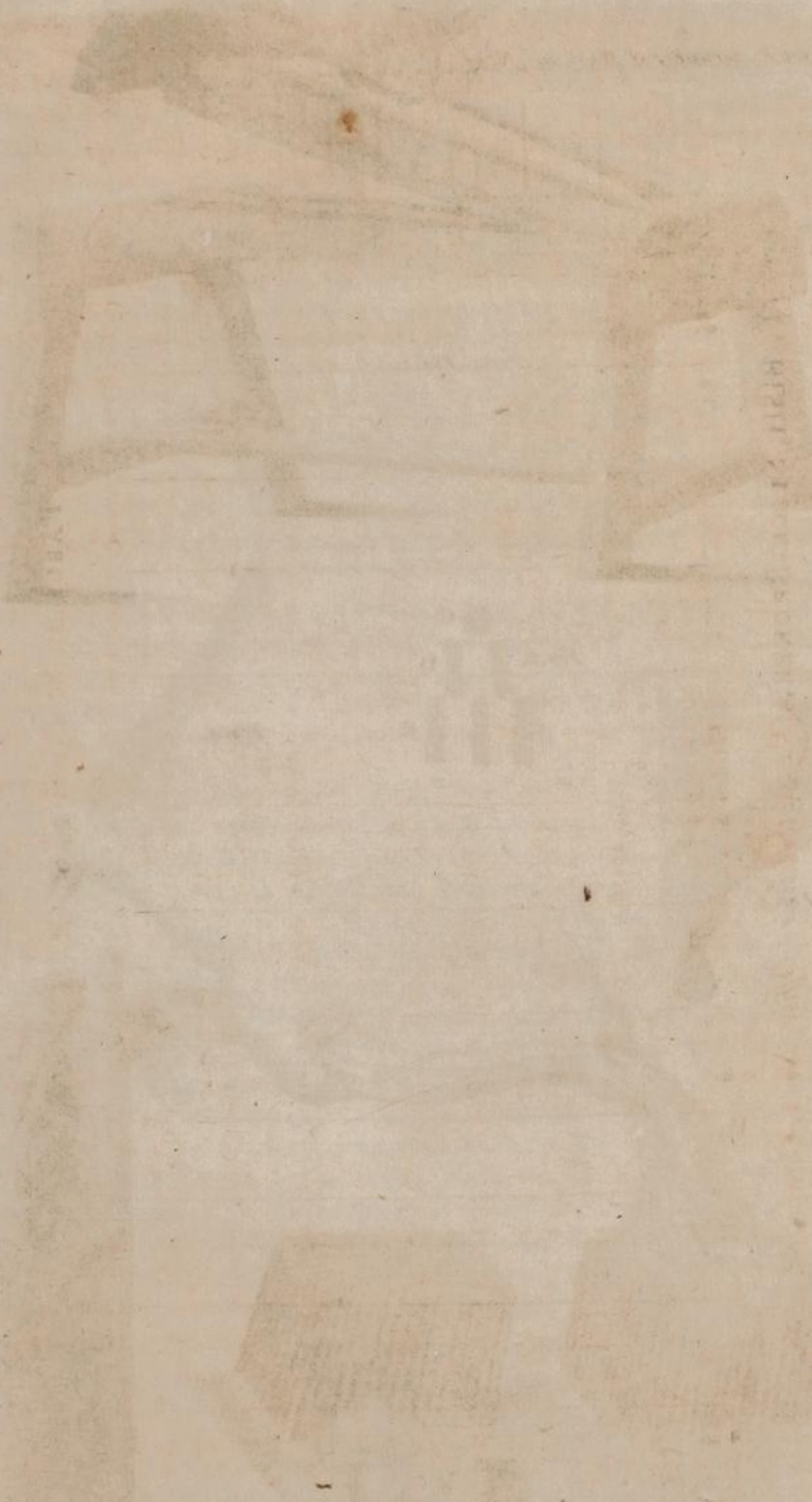

Method recommended by Mr. John Taylor, for preparing Hemp in Canada.

Commercial & Agricultural Magazine, No. 35.

Fig. 1.

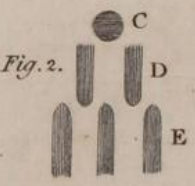

Fig. 2.

Fig. 3.

Fig. 4.

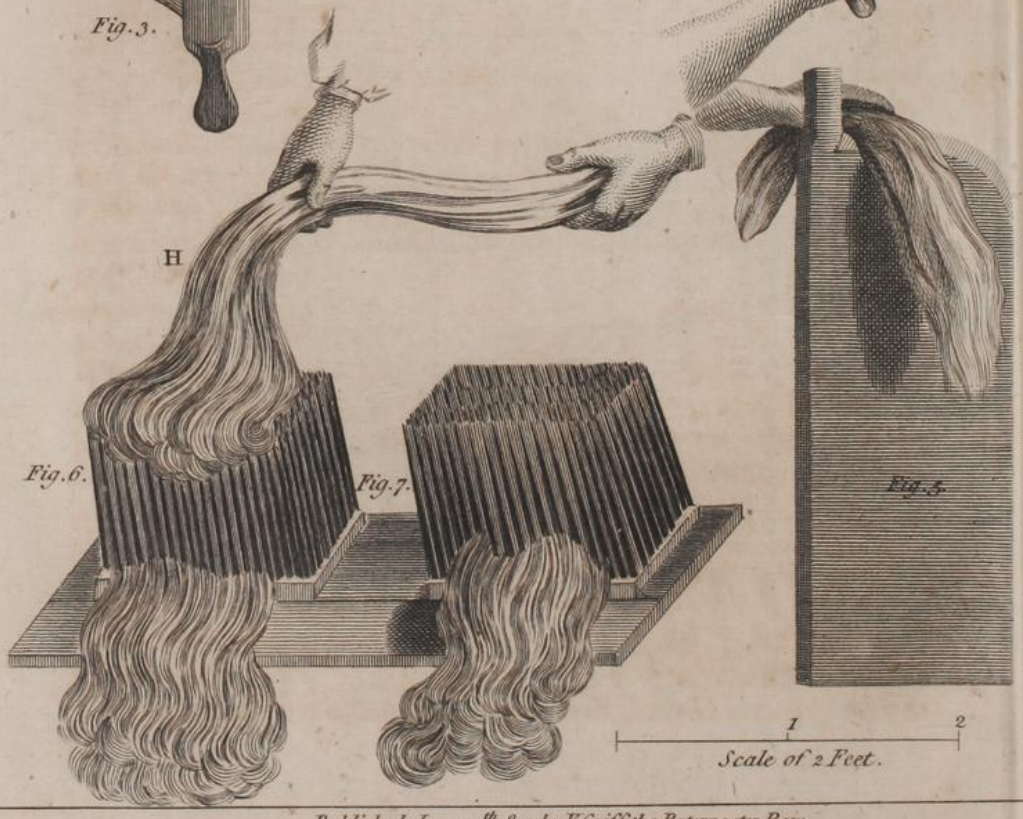

Fig. 6. *Fig. 7.* *Fig. 5.*

1 2

Scale of 2 Feet.

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THE

Commercial and Agricultural Magazine.

No. XXXV.] JUNE, 1802. [VOL. VI.

In our Magazine of February laſt, we inſerted ſome papers ſhowing the immenſe Conſumption in England of Hemp from the Baltic, the great importance of encouraging its Culture in our Canadian Settlements, and the premiums offered by the Society of Arts, &c. in London for that purpoſe, anxious to promote the true intereſts of the Britiſh Empire, we are happy to lay before the Public, a copy from a paper preſented only a few days ago to the Lords of his Majeſty's Committee of Council for Trade and Foreign Plantations, by Mr. John Taylor, whoſe uſeful Communications on Sugar from the Beet Root, and a Subſtitute for Coffee from the Chicoree Plant, we have given in our former Numbers. The preſent Paper not only gives a clear Account of the Culture and Preparation of Hemp as it ſhould now be conducted in Canada; but furniſhes ſuch information on the ſubject as will be ſerviceable to Farmers in Great Britain and Ireland.

An elegant ENGRAVING *is annexed, to explain the Preparation of* HEMP *ſubſequent to its Culture.*

ON THE CULTURE AND PREPARATION OF HEMP IN CANADA; ADDRESSED TO THE LORDS OF HIS MAJESTY'S COMMITTEE OF COUNCIL FOR TRADE AND FOREIGN PLANTATIONS.

My Lords,

THE importance of this ſubject has been ſo fully certified in a letter preſented to your Lordſhips by my father in January laſt, ſtating, amongſt other obſervations, that upwards of 30,000 tons of Hemp are annually imported into England, that I ſhall not enter into thoſe particulars. I ſhall therefore now obſerve, that as it does not come properly within the views of the Society of Arts, &c. to furniſh inſtructions and give opinions upon general culture, but rather to publiſh the experiments of others, and leave deductions to be drawn from facts; yet as the people of Canada have repeatedly applied to this country for information upon the mode of cultivating Hemp to advantage; and having, as a member of the Society, attended various diſcuſſions upon the ſubject, I have been led to examine the whole culture and preparation of Hemp in different countries, and am induced to lay before your Lordſhips ſuch information and ſhort inſtructions as I think will be conducive to eſtabliſh this great object in Canada, and have arranged the whole under diſtinct heads as the operations follow in ſucceſſion.

ON THE CULTURE OF THE HEMP, AND CHOICE OF THE SEED.

THE ſoil for Hemp ſhould be rich, deep, light, and moderately dry, of this deſcription much can be found on the banks of the creeks and rivers in Canada; if the ground has not had a pre-

vious ſummer fallow, it ſhould be ploughed once in the autumn and twice in the ſpring; it ſhould then be harrowed extremely fine with iron toothed harrows, and ſown with the Hemp-ſeed, broad-caſt, after the rate of two buſhels of ſeed for an arpent, or 4-5th of a ſtatute acre; the ſeed ſhould then be harrowed in by a harrow with ſmall iron teeth ſet cloſe.

Much care ſhould be taken in the choice of Hemp-ſeed, that of the laſt year's growth ſhould be choſen, and ſuch as has not been heated in the carriage; chooſe ſuch ſeed as appears freſh, firm and bright; prove it by rubbing it between your hands: if it ſuffers this without breaking, and becomes brighter, it is a good ſign; but if it be broken and made duſty by rubbing, it is unfit for the Farmer's uſe.

Whatever ſeed is ſent from England ſhould be packed in ſmall caſks, and great care taken to procure what is new and of the beſt quality; before it is depended upon for a crop, a ſmall quantity ſhould be ſown in good earth, in a warm ſecured ſituation, to ſee that it will vegetate. It has been ſuppoſed that keeping the Hemp-ſeed in a cellar two or three weeks previous to its being ſown, will aſſiſt its vegetation.

The beſt time for ſowing Hemp is between the 1ſt and 20th of May, according as the ſeaſon is favourable: when it is ſown it ſhould be carefully guarded againſt birds till firmly rooted in the ground.

The Hemp Plants are of two kinds, viz. the male, which yields a farina or powdery matter, and the female, which bears the ſeed; the action of the male farina upon the female plant is neceſſary for the production of the ſeed, and its effects may be promoted by artificial agitation at the time when the male plants are plucked from amongſt the female, as hereafter mentioned.

The male Hemp will be ready to pull about the ſecond week in Auguſt; its ripeneſs may be known from the farina or powder, which it yields on agitation; alſo from the leaves turning yellow, and the ſtems a whitiſh colour. As it is of great conſequence to raiſe at preſent as much ſeed as poſſible in Canada, I would recommend the following plan to be now adopted for that purpoſe, which may be deviated from at a ſubſequent period, when ſeed is plentiful there.

When the male Hemp is well ripened, let the perſons who pull the Hemp, clear paſſages through the field, of about two feet wide, and ſix feet diſtant from each other, by pulling up the male and female Hemp, which grow promiſcuouſly within the ſaid ſpace of two feet; let the Hemp thus plucked be carried to other ground in the neighbourhood, and ſpread thereon about an inch thick; after it has been thus laid for two or three days expoſed to the ſun and air, turn it with a ſmall pole, and let it lie a day or two more, then bind it up in bundles about the thickneſs of your thigh, or near three quarters of a yard in circumference, and either proceed to water-rot it, as it is termed, imme-

diately, as hereafter directed, or houſe it from rain, till a more convenient opportunity offers for the purpoſe.

I have before obſerved, that beds of the Hemp, of about ſix feet wide, ſhould be left growing until an intermediate ſpace of two feet wide had been cleared, and the Hemp which grew thereon carried away; you muſt then proceed to pull up the male Hemp which was left growing amongſt the female Hemp, leaving the latter to grow with as little injury as poſſible until the ſeed is ripe: the male Hemp may be dried in the intermediate ſpace of ground abovementioned, and made up in bundles as the former.

METHOD OF COLLECTING HEMP SEED.

THE female Hemp ſhould remain growing till the ſeed is fully ripe, the ſigns of which are the opening of the pods wherein the ſeeds are lodged, ſo much, that you may juſt perceive the ſeeds therein: they will have a browniſh appearance. It may probably be the firſt or ſecond week in October before the female Hemp ſhould be pulled; it ſhould then be carefully pulled to avoid ſhedding the ſeed, and be bound in ſmall bundles, and ſet to dry, with the root-ends downwards, like corn in ſheaves. Avoid looſing the ſeed in pulling or drying, and when the bundles are dry, you ſhould have a wooden ſtool, with a ſheet or blanket under it, and, by ſtriking the Hemp againſt the ſtool, to beat the ſeed from it into the ſheet or blanket, breaking your Hemp as little as poſſible.

After you have ſeperated the ſeed from the Hemp, either by beating it as above, or by threſhing it ſubſequently, you muſt be careful of the ſeed, particularly whilſt it is new, to prevent its heating; which is beſt guarded againſt by frequently turning it; it ſhould then be kept in a dry place, but not too cloſe, for the air will aſſiſt in preſerving it.

I have been very particular in giving directions about preſerving the ſeed, in order that good ſeed may be procured in Canada, without the neceſſity of always ſending it from England, and to avoid the riſk of bad ſeed being ſent from hence. I ſhall now return to the relation of the method of preparing Hemp which had been previouſly plucked, and was ready for the water-ſteep or water-rotting.

WATER-STEEPING OR WATER-ROTTING HEMP.

This operation is performed, by placing the Hemp which had been previouſly made up in bundles about the thickneſs of a man's thigh, after drying it in the air, in a pond containing about five or ſix feet deep of water, and free from mud: the bundles of Hemp ſhould be laid therein acroſs each other, and cloſe together, part of the heads one way, and part the other, the whole covered with water, and kept underneath it by ſtones, weights, or levers, till properly ſteeped, which may be known by taking

out a bundle and washing it; if the leaves come off freely, the coat opens and easily seperates from the rind or stalk, it is enough; if not, it must lie longer, under careful observation till ready. When the Hemp is found to be sufficiently steeped, the bundles must be taken out, one by one, and washed to separate the filth and loose particles; it should then be set on the root-ends to drain, the bands be untied, and the Hemp placed against a fence exposed to the sun and air, that it may be thoroughly dried.

Where the convenience can be had of filling a pond with water and letting it off at pleasure, such a situation should be preferred; but otherwise a common pond will answer.

In warm weather this operation of the water-steep may be performed in four or five days; in colder weather it will require eight or ten, and in very cold weather, eighteen or twenty days may be necessary.

The intent of this process is by a gentle fermentation to separate the gummy and mucilaginous matters from the fibres of the Hemp, with which they are intermixed, and to occasion the bark or rind on the outside of the fibres to be afterwards more easily detached by the break.

OF THE MANAGEMENT OF HEMP BY THE BREAK.

After the Hemp has been watered and well dried, it is fit for the break: if it cannot be sufficiently dried in the open air, it may be done by drying it carefully upon sticks placed across, about four feet above a gentle fire; the Hemp may be laid thereon about six inches deep, and carefully turned, from time to time, to be equally dried. In the Hemp countries, wind and water-mills, with particular machinery for the purpose, are contrived to break and prepare the Hemp in a more cheap and expeditious manner; but in a country where a manufacture is in its infancy, the most plain and simple methods must be adopted, and such machinery be used as the farmer can make himself. I have therefore added a drawing and description of a Hand-Break and other necessary implements for preparing Hemp, which will answer the purpose in Canada. To break the Hemp, the person employed takes in the left hand a handful of Hemp, and in the other the upper jaw of the break; the Hemp is laid across between the two jaws, and by raising and letting fall the upper jaw several times with great force, it breaks the dry stems under the rind that surrounds them. By this means the gummy matter and pith are made to quit the Hemp, and the operation is continued till the whole handful be perfectly broken; the Hemp is then stretched out on the ground or a table, and when about two pound weight is thus prepared, it is made into a parcel by doubling and twisting it slightly, and is then called a head of hemp or undressed stuff. A woman may break from 20 to 30 lbs. of Hemp in this manner in one day.

ON SCUTCHING HEMP.

After your Hemp has paſſed the break, it muſt be ſcutched in the following manner:—Take as much Hemp in your left hand as you can conveniently hold, and with your other hand having broken the ſtraw of the hemp, lay it over the edge of the ſcutching-board with the roots foremoſt, and beat it downwards with the ſcutcher along the ſide of the board, turning and winding it with your left hand as you ſcutch it, till moſt of the ſtraw and dirt is beat out. When that end is done, turn the other, and ſcutch it in a ſimilar manner; then lay that handful aſide and proceed with another, till the whole is finiſhed; then tie the Hemp up in bunches and lay it in a place moderately dry, until you have occaſion to uſe it. The intent of this operation is to beat out and detach the rind and dirt previouſly looſened by the break.

METHOD OF HECKLING HEMP.

When Hemp is intended for courſe yarn, it need only be heckled with a large toothed heckle; but if for finer uſes, it muſt be begun with a coarſe heckle, and afterwards paſſed through one or more finer heckles as occaſion may require. The buſineſs of the heckler conſiſts in ſeparating throughout the whole length the fibres of the Hemp, which the break and ſcutcher have divided only in part. The teeth of the heckle are of iron with ſharp points. The common coarſe heckle is about 21 inches by $6\frac{3}{4}$; the teeth in the rows are about $1\frac{3}{4}$ inches aſunder, and extending $9\frac{1}{2}$ inches from the board in which they are fixed; they are placed in a quincuna order, ſo that the teeth of the ſecond row are in the center of the ſpace of the firſt row. By drawing the Hemp through the heckle, the teeth carry off a part of the gum contained amongſt the fibres of the Hemp in the form of duſt, and by dividing the filaments, ſeperates entirely the heterogeneous matter contained amongſt them. To effect this purpoſe, the heckle being fixed on a plank, one ſide of which inclines from the workman, he takes a handful of the Hemp, which graſping in his right hand, he draws through the heckle, holding the other part of the Hemp in his left hand to prevent its being entangled. After one end of the Hemp is ſufficiently heckled it is reverſed, and the ſame operation performed on the other.

GENERAL OBSERVATIONS.

From accurate accounts lately received from Canada, it appears, that an acre of good land in corn will not produce above half the value to the planter, that the ſame land will yield there in Hemp; and that Hemp may be grown ſucceſſively on the ſame land many years to advantage when corn will not. An acre or two of land, it is agreed, may be planted with Hemp on each farm there, without interfering with other buſineſs. The preſent account is calculated for thoſe perſons in Canada, who have not been previouſly accuſtomed to the culture of Hemp, and who have

not the advantage of large machinery to complete its preparation. The whole of the buſineſs, even to the making of the implements here deſcribed, may be accompliſhed by the planter, and is ſufficient for the eſtabliſhment of this great national object, and of eventually preſerving unto the Britiſh Empire, the annual ſum of 1,500,000l. ſterling. If your Lordſhips will think proper, in the firſt inſtance, to ſend ſome good Hemp Seed to Canada to be ſold at moderate prices, but not given away; and if ſome perſons are appointed to purchaſe on fair terms the Hemp prepared in Canada, and to ſend it to England, a few years will eſtabliſh this trade on ſo firm a baſis, that no further protection from Government will be neceſſary.

If my obſervations on this ſubject meet your Lordſhips approbation, it is the only gratification I deſire.

My wiſhes to promote the intereſt of this Empire, and to fulfill your Lordſhips requeſt ſuggeſted to the Society of Arts in Jan. laſt, have induced me to make the preſent attempt individually, for that purpoſe. I have the honour to be, with high reſpect,

My Lords,

Your very obedient Servant,

No. 19, *John-Street, Adelphi,* JOHN TAYLOR.
June 17, 1802.

Reference to the annexed Engraving of the Implements uſed in the Preparation of Hemp.

Fig. 1.—Repreſents the Hand-Break for Hemp, the Hemp being held in the left hand acroſs the three under teeth or lower jaw of the break; the two upper teeth, which are moveable on the hinges AA, are with the right hand quickly and often forced down upon the Hemp, placed at B; the Hemp is frequently ſhifted and turned with the left hand; its rind is by this operation broken, and part thereof detached from the Filaments.

Fig. 2.—Is a croſs Section of the Teeth, and Handle of the Break; C is the Handle, D the two upper Teeth, and E the three under Teeth.

Fig. 3 and 4.—Repreſent two different kinds of Scutchers or Machines for clearing the Hemp of its dirt and rinds, the perſon who works with them holds the Hemp in the left hand, lays part of it over the ſtock, Fig. 5.—and with the right hand ſtrikes or threſhes the Hemp with one of the Scutchers. Either of the Scutchers may be uſed for this purpoſe, but that of Figure 3 gives a more regular and firmer ſtroke; the Wing F fixed upon it, equalizes the motion, prevents the Hemp from entangling on the Scutcher, and the ſpace betwixt the Wing and Scutcher G is uſeful in ſtraightening the Hemp, by drawing the bunch occaſionally through it.

Fig. 6 and 7.—Are two Heckles firmly fixed on a bench before the workman, who ſtrikes the Hemp H upon the Iron Teeth of the Heckle, and draws it through the Teeth, to open the Filaments.

ON THE DRAINAGE OF LAND.

To the Editor of the Commercial and Agricultural Magazine.

IN your Magazine for the Month of March, and likewiſe in your laſt number, I obſerve a ſubject, of no ſmall conſequence to the cauſe of huſbandry, treated in a manner in which I ſhould wiſh to ſee every ſubject both in Agriculture and Commerce handled. I mean in a way dictated by experience and practice. Give every encouragement, Mr. Editor, to men of this complexion, and your publication will be ſure to continue in high requeſt. In venturing to animadvert upon what either of them have written, I do not preſume to ſet my opinion in oppoſition to that of either of them; I wiſh only to draw out ſomething more from their ſtore-houſes for your advantage, and for the benefit of the public. I agree with them both, moſt cordially, in pronouncing the drainage of land to be a very important national concern. I ſhould be happy to ſee an eſſay upon this branch of huſbandry in every number of your Magazine, for years to come, provided that in each only one ray of freſh light was thrown upon the ſubject. It is lamentable to ſee what quantities of excellent manure are annually waſted upon wet and ſpewy land. I do not heſitate to aſſert that the produce of this Iſland would ſoon be at leaſt doubled, were every acre in it now under cultivation, to receive that degree of drainage of which it abſolutely ſtands in need, and which it is capable of receiving, at a moderate expence. But here an awkward queſtion ariſes; who is to drain, or rather, on whom is the expence of draining to fall? On the landlord, or on the tenant? The landlord, I think, ſhould take upon himſelf a part of the charge, and having granted a tolerably long leaſe, ſhould bind the tenant to perform a certain part of the work. The diviſion of the expence in draining, as pointed out by Mr. Greenall, in his very ſenſible and truly practical eſſay to the board of Agriculture, is, in my opinion, very reaſonable and proper: and I wiſh I could perſuade landlords in general to ſee it in that light. "My landlord," ſays he, "has allowed me for the cutting of the drains, the ſtones at the quarry, and for laying the drains; and I have carted the ſtones, filled up the drains, and finiſhed them." Drains properly made with ſtones, or chalk, will continue to perform their office for a longer ſpace of time than 20 years; therefore a landlord is in equity bound to take upon himſelf a conſiderable portion of the expence of draining land. I do not venture to ſay that turf-wedge-draining, which is recommended by your correſpondent T. P. will endure ſo long as the period above mentioned; but if it will continue to act for half that ſpace of time, it is well deſerving of the attention of the public.

Your correſpondent offers an objection to draining with chalk, on account of the difficulty "of carting chalk upon thoſe lands which ſtand moſt in need of draining." This objection applies equally to ſtone draining, and to chalk draining. T. P. makes an

exception, by saying, "unless it should be a very dry summer." And why not drain in summer? or at least cart the materials at that season? But there are other parts of the year in which land is frequently as dry as in summer; this spring, or the last, for instance, all land, that is fit to be called by that name, has been sufficiently dry to cart upon. I should always prefer the summer season for this operation; for, at that time, the soil is generally free from surface-water; and in digging the drains you are then able to discover, with greater accuracy, at what depth, in what direction, and in what quantity the spring water issues forth. I have frequently seen, likewise, the hard materials intended for the formation of drains, carted upon the land during a severe frost, to be in a state of readiness when a proper opportunity for cutting the land has offered: but this practice cannot obtain respecting chalk; for if chalk be once exposed to the effects of frost, it will be rendered totally unfit for the above use. There will, however, scarcely ever be wanting ways, means, and seasons for the using of chalk in draining, to any person who shall be so inclined, and who has plenty of it at hand. It is not reasonably to be expected, however, that any person will purchase chalk, and cart it a considerable distance for this purpose. When neither chalk nor stones are easy to be obtained, then I think the method recommended by your correspondent T. P. is an excellent substitute.

I should be happy to hear of any other methods of draining practised either by the above correspondents, or any improvers of land.

June 19*th*, 1802. I am yours, W. T.

ON MOLE CATCHING, &c.

To the Editor of the Commercial and Agricultural Magazine.

AS your Magazine for March contained a Method of destroying Moles, as practised successfully in France by Mr. Aurignac, which Mr. Dralet informs us, of all the means hitherto employed for their extermination, was the easiest and the surest; it might, perhaps, appear very like presumption in an Englishman to refuse giving implicit belief to such positive assertions; yet in such a situation do I stand; not but the public is equally obliged to you for procuring the translation of the Treatise, as it gives us at least a fair opportunity of endeavouring to shew our neighbours, that if we were not acquainted with the best and surest way of destroying Moles, we are in the habits of practising a mode more simple and efficacious, with less trouble and expence. The one I allude to was, I believe, the invention of a common labourer in Glamorganshire, who is at present alive, and who alone, by yearly agreement with the Gentlemen and Farmers, actually destroys the Moles of one half of the county, and also of a great part of Brecknockshire.

It is very simple in construction, and of course easily made; is composed entirely of oak, deal, or elm, (oak is the best) and common nails attainable in every part of England; can be made

and repaired by any common Carpenter or Wheelwright, and ſet to work by any common labourer. A deſcription of it follows:

Fig. 1.

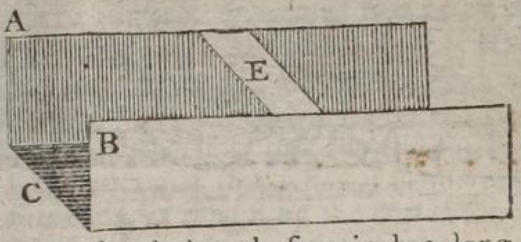


Fig. 1.—A and B are two boards of oak, forming the ſides of the trap, eighteen inches long, five inches wide, and half an inch thick.—C The bottom of the trap, more fully explained in fig. 2.—E a piece of oak board, five inches long, two inches wide, half an inch thick, nailed on the top edges of the boards A and B, both to ſtrengthen the trap, and to keep the ſides at a proper diſtance.

Fig. 2.

Fig. 2.—The trap with its bottom upwards.--CC, two pieces of oak board, five inches wide, four inches and a half long, half an inch thick.—D an apperture, nine inches long, four inches wide, made to receive the fall of the trap.—L An hole for a common clout-nail (forming the pivot of the fall) to turn in.

Fig. 3.

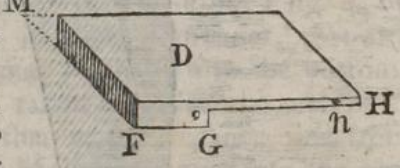


Fig. 3.—D The fall of the trap, nine inches long from F to H, three quarters of an inch thick (the diſtance from F to G two inches and an half, or three inches) from G to H half an inch thick, and four inches wide.—G Shews the hole for the clout-nail forming the pivot.—M, the dotted lines, ſhew the manner in which the upper part of the fall D muſt be bevelled, to prevent its falling both ways.

Fig. 4.

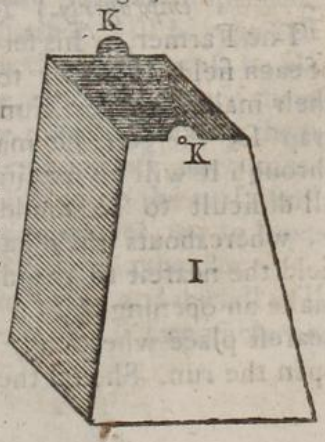
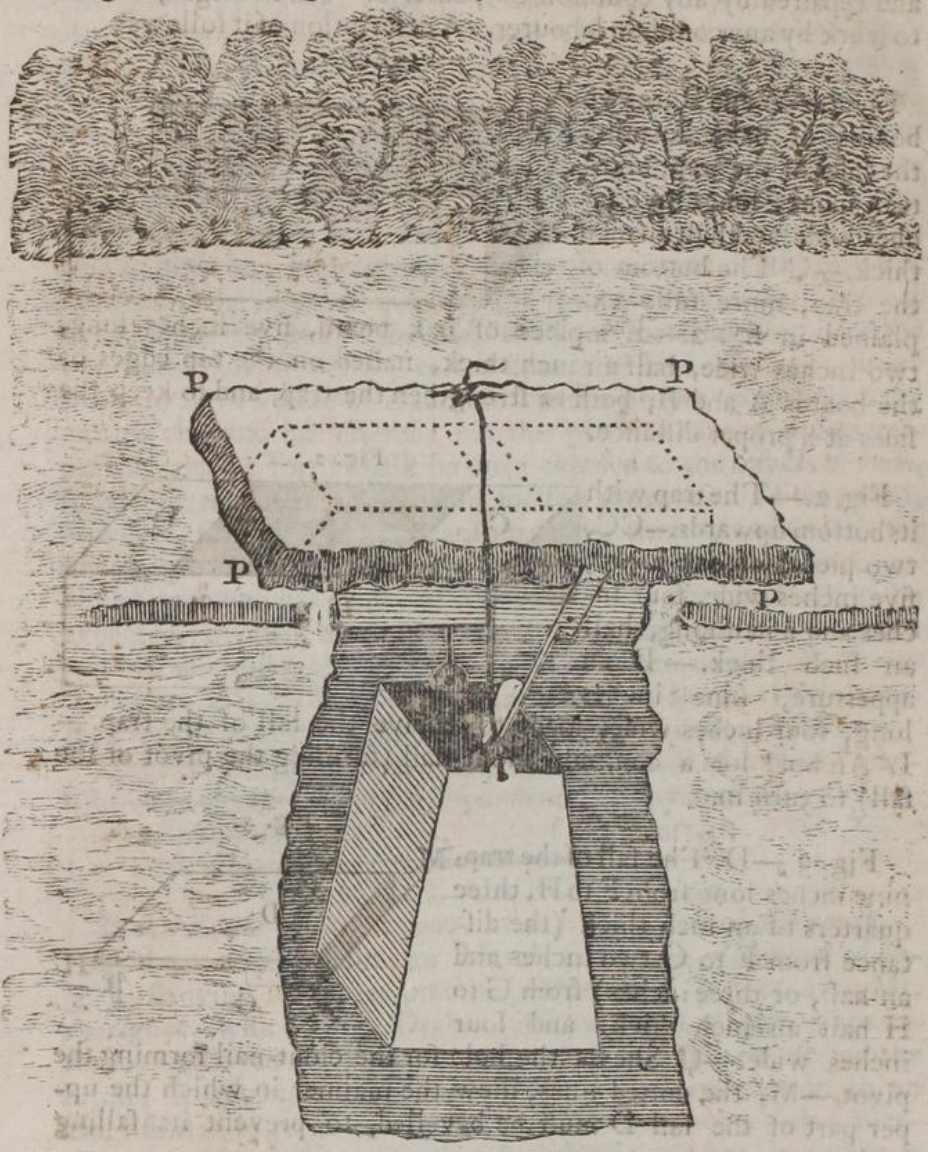


Fig. 4.—The Mole-pot, the uſes of which will be more fully explained afterwards, compoſed of four pieces of oak board, each five inches wide at the top, nine inches wide at the bottom, twelve inches long, one inch thick, or thereabouts, having two ears as at K K, with an hole in each large enough to carry a piece of ſmall rope or ſpun-yarn.

Fig. 5.—Shewing a Mole-trap ſet in the ſide of a ditch.



Method of finding the Runs or (as Mr. Dralet calls them, and not improperly,) Tunnels, and ſetting the Traps.

The Farmer, or his ſervant, muſt careſully examine the ditches of each field, in order to diſcover where the Moles have made their main Runs, or Tunnels; which having once found, and the trap ſet thereon, he may reſt aſſured that every one paſſing through it will be inevitably deſtroyed; neither are their runs at all difficult to be found, as the only thing neceſſary to obſerve is, whereabouts they have broken out moſt on that part of the field the neareſt to the ditch, in the ſide of which he muſt then make an opening with a ſmall common ſpade, oppoſite to the neareſt place where they are obſerved to work moſt, in order to open the run. Should the firſt endeavour to ſtrike upon it prove

unſucceſsful, he will not fail to find it by ſearching thereabouts, either a little higher or lower. In common fields and unincloſed lands a different method muſt be purſued; and as, of courſe, there are no ditches, the higher grounds and banks will be the certain and proper place to ſearch for their runs, which having once found, the workman muſt proceed in the following manner:

Firſt, An hole muſt be cut out the length of the trap, as repreſented in fig. 5, in ſuch a manner that when it is inſerted, the run may enter each of its ends, as ſhewn by the dotted lines; and alſo an hole or well of ſuch a ſize that the Mole-pot may be eaſily ſuſpended therein.

Secondly, A ſmall clout-nail, of which he ſhould take ſeveral in his pocket; or ſhould he have forgotten to do ſo, a thorn out of the hedge muſt be thruſt into the hole *n* fig. 2, which alſo communicates with the hole *n* fig. 3, and will effectually prevent the fall from acting.

Thirdly, A ſmall handful of fine earth, like that uſually thrown up by Moles whilſt working, and which may be taken from one of their heaps, muſt be ſcattered all over the bottom of the traps, ſo as to cover it, as well as both ends communicating with the run.

Fourthly, A turf, ſomething longer and wider than the traps, muſt be cut out of the head-land, both to ſerve as a cover to it, as is ſeen at P P P P, fig. 5, and as a certain mark by which it may be found with the greateſt eaſe; and laſtly, two pieces of ſpun-yarn muſt be faſtened, one to each ear of the Mole-pot I fig. 4, by which it muſt be tied on the trap in ſuch a manner, that any weight put upon the fall D at H may be thrown to the bottom; the carpenter having previouſly taken care that the weight of the fall from F to G ſhall more than counterbalance that from G to H, ſo that no ſooner ſhall a Mole be thrown into the pot, than it will ſpontaneouſly reſume its former ſituation, and be on a level with the reſt of the bottom.

I will now ſuppoſe the trap with the fall faſtened up by the clout-nail at *n*, the fine earth ſtrewn over the bottom, the turf covered over the top, and the Mole-pot properly ſuſpended, by being tied over the whole; nothing further will be required to be done to it for three or four days, (for the Moles muſt be allowed to paſs freely along it for that time, as it will induce them to uſe their run without fear, and be the means of taking them with the greater certainty.) The workman muſt now carefully examine his traps, and on gently lifting up the turf, will plainly perceive their marks, (taking care, however, not to leave any opening for the light to enter,) and pulling out the clout-nail at *n*, the trap will then be ſet fit for working, and the fall will throw them into the Mole-pot, out of which it is impoſſible for them ever to eſcape.

Should the Farmer, however, have ſtrictly followed the above inſtructions, and notwithſtanding the Moles ſtill continue to work about his land, he may be certain they have forſaken the run on which he has ſet his trap, and he muſt therefore ſearch for their new one.

The advantages ariſing from uſing traps on the above conſtruction are, that the materials are to be procured every where; they can be made by any common mechanic at a very ſmall expence, (the wood being uſed rough as it is comes from the ſaw,) are very durable if made of oak; are not liable to get out of repair, and if they ſhould, can be mended moſt probably by a labourer; they catch the whole year, and do not require looking after more than three or four times in that period, and that will comparatively require ſo ſhort a time, that a workman may with eaſe look over all the traps on a very large farm; and, ſuppoſing the fields to lie contiguous to each other, one trap for each ten acres would, on an average, be fully ſufficient.

AN ATTEMPT FOR ESTABLISHING PRINCIPLES IN AGRICULTURE.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

BEING diſpoſed to ſend a few papers to your valuable Agricultural Magazine, I wiſh this may be in time for your next number.

EXTRACTS.

Walter Blith remarks in page 218, Section 6th, in an extenſive work dedicated to the Lord General Cromwell:

"There is no poſſibility of nouriſhment, nor can there be any approach to vegetations, without moiſture—ſo no poſſibility of life, without an excitation, and production of it, by an actual warmth—and this is as well ſeen in trees and vegetables, as in animals. Obſerve, the earth is there—the ſalt is there—and the water is there—yet in ſharp and cold weather, the vegetation of the native trees of the country is not to be effected. Cold is not a fit ſeaſon for germination and expanſion.

"He, therefore, will enter upon this great ſubject of vegetation, with a deſire to know ſomething—muſt firſt conſider the *cauſes* and *attributes*, with the combinations of Earth—Salt—Water. The dews of evening, night, and morn, with the warmth and ſpring contained in the ſeed, and energy of the plant itſelf. Whether fermentation being other than a ſpecies of motion; whether there may not be divers, ariſing from the diverſity of ſalts, or other ſubjects.

"Whether nutrition (for increaſe) be not diſpoſed, more or leſs, to take to this or that figure. Theſe are ſome of the Inſtitutes in Huſbandry.

" In the ignorance of which, I think a man ſatisfactorily knows very little."

Blith remarks in page 220.—" Were I to anſwer the queſtions as before ſtated, concerning fertility, I would in one word ſay, the chief cauſe of the opening the ſeed, its germinating, expending, and becoming fruitful, is by the power and active principle of *anima*, or *ſalnatura* contained therein.

" All dungs are urinous, or natural ſalts, and from their action, ground may be fertiliſed, recovered, amended, and improved."

Blith, in tranſlating St. Auſtin, enforces that in the ſeeds and kernels of fruits, there is a great and wonderful virtue, for being caſt into the earth, it ariſeth into a plant, ſpreads itſelf into boughs, branches, and leaves, with fruit. The tree was before contained in the ſeed, and by the plaſtic powers of nature germinates, expands into a body.

Theſe quotations are the ſubſtance of more than 20 pages.

Walter Blith was one of the beſt and moſt expert writers on Agriculture, in the time of the Common wealth, 1653.

He ſays men were ignorant.

That men were ignorant 150 years ago is pretty clear, and I now fear in the year 1802, that the real knowledge as to the formation and growth of plants and animals, and the improvement of the ſoil, to their greater production; in theſe purſuits, I fear, *the bulk of mankind* are yet not much advanced, beyond childhood, as to the powers of land for producing plenty.

Whoever would make themſelves maſters of the proper train for introducing real improvements in Agriculture, ſhould diveſt themſelves of crude opinions, ſtudy nature in nature's own book, the open fields, ſecure a few leading principles, compare them to others more doubtful, then trace out the ſimilarity, and take with appearances as perfect, but upon full examination with circumſpection.

Let all the advances in improvement reſt on rational experience, and be confirmed by real practice, with the ſame rigid attention, as when in youth, we were taught to trace the progreſſive ſteps, upon ſound authority, through the propoſitions and theorems in the books of Euclid. There we made no advance without ſufficient inveſtigation.

Shew an active mind, and follow theſe inſtructions with energy, and the real increaſe of the productions of the earth may be nearly doubled, to the uſes of man.

The Public's moſt obedient ſervant,

WHEAT ⋈ SHEAF.

DIBBLING WHEAT, TO YIELD MORE PRODUCTIVE CROPS.

Let the firſt attempt be a very ſlight experiment on growing wheat; higher may come in afterwards.

Wiſhing, by way of example, to countenance very ſmall ex-

ertions, towards producing a great quantity of proviſions, from knowing that ſuch habits, could they be properly introduced, and generally practiſed, would be of great ſervice to the country--with this intention, I beg any gentleman in poſſeſſion of land, and fond of experiments, that he would apply two acres of ſpare land, without couch-graſs or root-weeds, in ſome retired ſituation, clear from the drip of trees, and which perſon would have no objection to undertake a little ſlight work himſelf.

I requeſt ſuch perſon would, for his own amuſement, and for the information of the neighbourhood, apply thoſe ſpots to raiſing two feedings on one acre, and one wheat crop in every two years, and the fallow year to be diſpenſed with.

The feeding crops ſhould be thus conducted, until better are introduced: the latter end of Auguſt ſow winter tares, and, as ſoon as they can be fed off, then work the land well for a crop of turnips, which muſt be fed off in September, (the manner of conducting theſe feeding crops, will be ſent in time, the intention of the preſent paper is to be on dibbling wheat.)

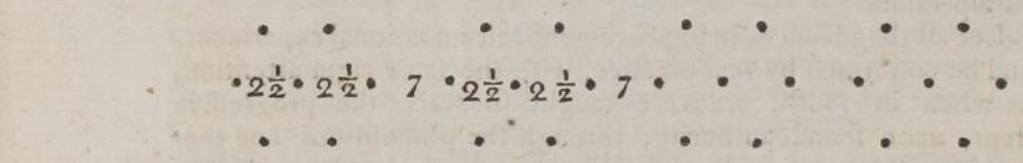
For raiſing Manure to ſupport the ſoil.

The green crops ſhould be conſtantly fed off upon the land, as quick as poſſible, by a cow or two tethered, and pigs pounded and kept warm.

Be attentive to keep the ſoil conſtantly worked, and whenever the land is got properly forward, for ſowing do not loſe a ſingle hour, particularly in the turnip crop.

When the land is brought into order for the wheat, begin dibbling, thus:—A dibble $1\frac{3}{4}$ inch long, under a ſtop, as and the dibble $\frac{3}{8}$ thick; each hole $2\frac{1}{2}$ inches aſunder, 7 in a clump, and drop two grains of wheat in each hole, making 14 grains.

As thus:



which is rather placing the plants in clumps of 5 x 5 inches, making a circular ſpot of 25 inches for each clump, and 7 inches between (each way) from which proceſs, one clump of 14 ſeeds falls in the center of 12 inches ſquare, and there are 39 ſquare feet or clumps in one yard, and 30 yards in a pole, making 43,200 clumps per acre. This does not require quite one buſhel of wheat for ſeed to one acre of land, whereas the farmer often allows $2\frac{1}{2}$ buſhels broadcaſt.

This large ſpace of 7 inches round, is allowed to give the plants room to ſpread, and that there may be ſpace for keeping the land perfectly clean, and room for the feet in working.

Fill up the dibbed holes with fine mould, ſuch as may be got from an old mellow bed,—a made dunghill well worked, or the mud from a pond or ditch, perfectly dry, and well pulverized; covering the whole ſpot for 6 inches, and full half an inch thick.—Over this ſpread for 6 inches a large handful of freſh ſlacked lime, ½ of an inch thick, to keep off the crows, ſlugs, and other vermin.

Before the dibbling begins, take care the ſeed-wheat be well waſhed, ſalted, and limed. There is more in this recommendation than at firſt may appear.

As ſoon as it can be determined which grains have failed, ſupply their places by freſh ſeed, ſo as to keep the clumps full and perfect.

In February or the month of March, go between the clumps with a five-inch hoe, and by hand pick every weed from within the clumps; April and May do the ſame, and hill up the clumps a little; this will enable the plants more effectually to branch, and fill up the ſpace between the clumps.—Never hoe in wet weather, and walk backwards in the hoeing, not to tread the ground after it is worked.

All this proceſs of the diſtance of the ſeeds and clumps muſt be conducted by obſervation and diſcretion, according to the richneſs of the land; for the richer the ſoil, fewer ſeeds are neceſſary.—Remember ſtiring the ground will be of great ſervice to the growth of the wheat plant, ſubdue the weeds, making the crop full and large.—I would inſure, if not thrown down by the weather, or deſtroyed by the birds, the crop ſhall produce more than 48 buſhels of wheat per acre. Suppoſe at 9*s*. £.21. 12*s*. per acre; and the ſpots of land each year increaſing in richneſs, and clearer from weeds, from the action of the feeding crops.

I deſire handycraftsmen, and cottagers, who can ſecure one quarter of an acre of land, will conſider this recommendation.

After the experiment may have undergone a fair and full trial, to convince the world of the improvement of the land, and productiveneſs of the crop, why not on many large farms from 200 to 500 acres, have ſpots of from 20 to30 acres aſſigned to theſe purpoſes, then obſerve the great increaſe of proviſions, from the land producing two feeding and one exhauſting crop in every two years.—This mode of croping is an abſtract of the moiety of the herdſmen's farms. Theſe I attempted to introduce ſome time ago, that is a tilth of 4 or 6 years, to produce much milk, butter, cheeſe, meat, pork, poultry, and corn,—each ariſing from the thought of introducing plenty of active manure, to ſuſpend the fallow year, and perfectly ſubdue the weeds.

The idea of dibbling I recommended when wheat was at 18*s*. per buſhel, with the view of ſaving the ſeed, and the beginning of April preſented a paper to the board, upon which I preſume they took up dibbling as enforced by them.

WHEAT ⋈ SHEAF.

ON DRAINING.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

I LAST month ſent you a method of Draining as practiſed by me and many others with conſiderable advantage, which, although not new in itſelf, is ſtill ſo far from being generally known, that I ſhould hope it might prove acceptable to ſome of your Readers, under which idea I ſubjoin the methods invariably purſued by me.

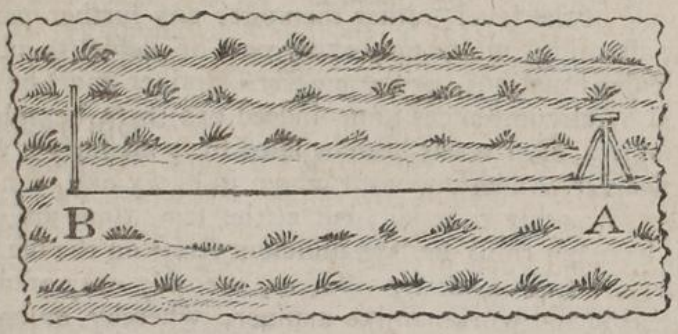
My firſt care is to examine minutely the land intended to be drained, I mean with regard to the poſition, the nature of the ſoil and its ſubſtrata, how much fall it may have, and to aſcertain from what cauſes it is rendered wet and boggy, as without thoſe precautions, every future attempt to drain it might prove abortive.

Should the fall be great, of courſe there will be but little trouble and expence in executing the work, keeping in view this firſt grand principle, the hinge on which every part of Draining turns, never fail (where there is a poſſibility of doing it) to cut off all kinds of ſprings and every other kind of water; as without doing ſo, I can venture to aſſert, that every other operation, no matter how well executed, will in a great meaſure, loſe its effect, to the certain loſs and diſappointment of the proprietor and diſgrace of the drainer.—I will ſuppoſe for a moment, that in every other reſpect, the land had been properly drained, what would be the conſequence? The wet would ſtill ſoak down through the whole, render the draining imperfect, and the expence and labour incurred in its execution, would be perhaps almoſt wholly thrown away. That this has been the caſe is but too true, and I truſt I ſhall be excuſed for relating an inſtance, as it may ſerve as a beacon to warn thoſe of their danger who might incautiouſly in a ſimilar ſituation place too great confidence in the drainer; not that I wiſh to caſt any general reflection on a very uſeful claſs of men, as there are many who, no doubt, thoroughly underſtood their buſineſs, and alſo unfortunately many of the contrary deſcription, through whoſe ignorance and inattention this moſt uſeful branch of Agriculture is greatly fallen in the public opinion.

A Gentleman in Hertfordſhire, employed a man to drain a large garden upwards of four acres, ſituate at the bottom of a gentle hill. Inſtead of endeavouring to cut off the wet, which muſt be for ever oozing down the hill, which he could have done moſt effectually by cutting a maſter drain immediately above the higher wall, he contented himſelf with making a few buſh or faggot drains, all drawing to one point, by which he rendered, as might be well expected, but little benefit, and has at the ſame time left it open to all the former inconveniences ariſing from the wet ſoaking down the hill.

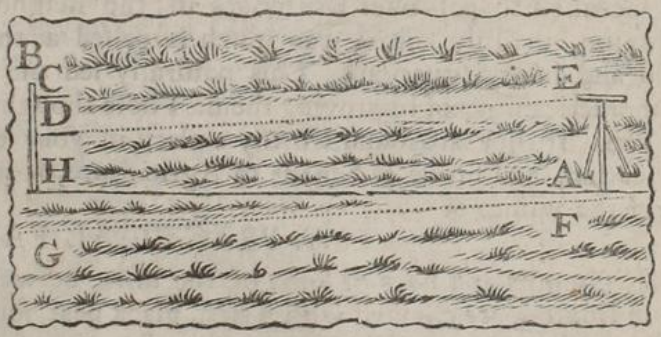
Should the land be exceedingly flat, the draining will then require a great degree of ſkill to execute, as the ſpirit-level muſt be abſolutely uſed to work with proper diſpatch and effect; and as very few but profeſſed ſurveyors thoroughly underſtand its uſes, it may not perhaps be inapplicable, for the ſake of thoſe practical farmers who are unacquainted with them, to ſay a few words on the ſubject.

One of the purpoſes for which the level is particularly uſeful, is that of ſetting out ſtraight lines; which is eaſily done in the following manner, by the vertical hair in the teleſcope, to the greateſt nicety, no matter how great the length required may be.



A the level; B a ſtaff fixed at the extremity of the drain intended to be cut from A to B. It is evident, if the teleſcope at A be pointed towards the ſtaff at B, (it is of no conſequence whether the level be ſet truly parallel to the earth or not,) and pins be put down in ſuch a manner as to be intercepted by the vertical hair, they muſt form the ſtraight line A B.

There is one other purpoſe for which it is ſtill more uſeful, that of aſcertaining at any given point the exact depth any drain ought to be according to the fall of the whole.



A the level; B a ſtaff erected at the intended end of the drain; C the mark of the real level, or point of interſection of the hairs; D another mark, as many inches below C, as it is intended to have fall in the Drain. If the level be lowered, ſo that the point of interſection, inſtead of being at C, be at D, the line

formed by the level, will be repreſented by the dotted line D E. The line H A repreſents the ſurface of the land. Now if a ſtaff, the length of D H, with the additional depth of the Drain at A F added to it, be removed to any ſituation betwen H and F, it will give the preciſe and exact ſlope it ought to have at that particular point, and the Drain with its regular fall is repreſented by the dotted lines G F.

As land varies ſo very much, both in point of ſituation, properties, ſoil, and many other local circumſtances, it would be next to an impoſſibility to lay down any fixed plan, or point out any particular method, which could be invariably and indiſcriminately uſed with advantage every where. I wiſh to preſs the free uſe of the level, rather than offer any further particular rules for draining, which may every one be liable to objection in particular ſituations, as the practical drainer muſt be always governed by circumſtances; nor indeed can there be much ſaid on the ſubject, after it has been handled in ſo maſterly a way by the learned Dr. Anderſon, with whom in every one of his principles I thoroughly coincide; but at the ſame time am free to confeſs, I do not think he lays ſufficient ſtreſs on the uſe of the ſpirit-level, which is, in my opinion, the only way of draining in a ſcientific and workmanlike manner, whereby much uſeleſs labour and expence are avoided, and the work, when completed, will every where bear the inſpection of the man of judgment.

I am, Sir, your humble ſervant,

V. P.

HINTS FOR IMPROVING AND DRAINING THE MOORS OF BUXTON.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

Having occaſion to paſs over the moors in the neighbourhood of Buxton, in July laſt, I was much ſurpriſed at their neglected and dreary ſituation. This naturally led me to think of the practicability of improving them. Thoſe thoughts I have ſent you. If they are found worthy a place in your excellent Publication, and prove of benefit to Agriculture, it will fully anſwer the wiſhes of

A PRACTICAL FARMER.

THE ſummits and ſides of ſome of the hills, between Leek and Buxton, are covered with a rich, black peat, four or five feet thick, from whence iſſue innumerable ſtreams of water.—I am fully convinced, if theſe ſprings were intercepted, by either open or covered drains, and carried off ſo that the land would be laid completely dry, it would make a very good paſture for either ſheep or beaſt, or it would grow very good potatoes or oats.—This is very evident from ſome ſpots that have been acci-

dentally drained by the people's digging peat for fuel. Where this is the caſe, as it is in a great many inſtances, it forms a thick and ſweet turf, full of white clover; and the cattle and ſheep eat it off very bare.—I likewiſe ſaw ſome of theſe accidental ſpots that were planted with potatoes, which promiſed to be very good crops.—It is very ſtrange that theſe inſtances of accidental improvement, ſo very plain to be ſeen, ſhould not ſet the proprietors of theſe diſtricts to work to drain on a large ſcale.—I walked round Buxton, viewed the Creſcent, &c. &c. It is a wonderful place, and there is a wonderful contraſt between theſe magnificent buildings and the dreary moors and waſtes that nearly encompaſs the town.—It is a great pity but ſome part of the money that is ſpent here in diſſipation ſhould be applied in draining theſe diſmal moors, incloſe them, cultivate them, plant ſome of their ſummits with timber; for the barreneſt and moſt expoſed part of them would bear ſome of the hardieſt kinds.—All the brooks and running waters here about are coloured black by the moor peat. They look like the water that drains from a farm-yard.

ORIGIN OF PEAT.

Peat conſiſts entirely of dead vegetables. I never knew peat but it was fed by a ſubterraneous ſpring of water. Water that is hard and inſalubrious will never form a peat. But it is water that is ſoft, and containing innumerable particles of vegetable food, that forms the richeſt peat-boggs. That peat was originally formed by ſubterraneous waters, is evident from even a curſory view of this country. There are many of the hills hereabout (as much elevated as thoſe which are covered with peat) that have none at all on their ſummits, and but a few patches on their middles, or their bottoms; and theſe patches are invariably where ſubterraneous water breaks out. This convinces me, that if peat was not formed by ſubterraneous water, it would equally cover every hill that has the ſame altitude.—Thus far for the formation of peat.

The next conſideration is how theſe ſprings are to be taken away, ſo as to leave the land completely dry; in which caſe there is no doubt of the peat's becoming a rich vegetable mould. I would recommend the making drains on the ſides of theſe hills, parallel to the horizon; giving them a gentle declivity; digging quite through the peat, and two or three feet into the rock, or whatever is under the peat; ſloping the ſides a good deal, and uſing the auger whenever occaſion requires, throwing the earth, &c. that comes out of the drain on the under ſide; theſe drains to be made as near to each other as the nature of the land requires. The laſt circumſtance experience will point out.—On the banks formed by the earth, &c. thrown out of the drain, and even on its ſides, I would recommend planting the Scotch fir, larch

or any other kind of trees that are known to proſper in a cold elevated ſituation; planting them thick, ſo as to form a good ſcreen fence.—If this method was purſued, I have no doubt but the land would be completely drained, and the air would be rendered conſiderably warmer by the ſcreen or fences on the ſides of the drains. The land would be uſeful for paſture, or the growth of potatoes or oats, and of twenty times its preſent value.—Between Buxton and Congleton the country is ſtill more mountainous. The aſpect is horrid! Mountains covered with black peat, whereon grows nothing but heath, bogberries, &c. and whereon feeds nothing but a few miſerable half-famiſhed ſheep. In fact, it is a diſgrace to the country we live in. I ſay this from a full conviction that what I have advanced is practicable.—By the ſides of the turnpike-road, that paſſes over theſe horrid mountains, there are ditches made to keep the road ſound, on the margins of which the peat is in ſome degree mixt with the materials that form the road. This produces a perfect carpet of white clover, and even nettles, that ſure teſt of a rich ſoil, grow on it in great abundance.—This *ſurely* is enough to convince any reaſonable man of the certainty of ſucceſs in draining and cultivating theſe moors, eſpecially as the immenſe lime works of Buxton is ſo very near, and lime is of all manures the beſt for the improvement of a drained peat-bog.

Coventry, May 31, 1802.

ON THE EXTRAORDINARY FOOD OF CATTLE IN SIBERIA.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

YOU have entertained us, at different times, in your Publication, with a variety of modes of feeding cattle; for which you, or your correſpondents, are entitled to our thanks. You have aſſured us, that they may be fed with almoſt any thing of a vegetable nature; but I beg leave to inform your readers, that they are not very averſe even to animal food. The inſtance which I am about to adduce, is, I grant, an extraordinary one; but when the very reſpectable authority, from whence it is derived, is known, its authenticity will not be doubted. It is narrated by Mr. Sauer, Secretary to a Geographical and Aſtronomical Expedition to the northern parts of Ruſſia, ſent by command of the late Empreſs, Catharine.

"When at Ochotſk, a city of Siberia," ſays Mr. Sauer, "we dined with Mr. Saretcheff on cold roaſt beef, which taſted ſo fiſhy, that we thought it had been baſted with train oil. In the afternoon we drank tea at the commandant's; this alſo taſted of fiſh; and when I mentioned it to our hoſt, he recommended the next cup without cream, which was very good. He told me that

the cattle had been fed for the laſt ten weeks entirely upon the offals of fiſh, and that the cows *preferred dried ſalmon to hay.*"

Well may the Londoner, after reading ſuch an account as this, ſuppoſe that all cattle, which are fatted with oil-cake are fed with animal food.

Whether you inſert this or not,

I remain yours,

Glouceſter, June 15, 1802. P. TURNER.

ON MAKING HAY.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

I AM juſt returned from a viſit to Cricklade, in the county of Wilts. In the vicinity of this town, I ſaw ſuch land, ſuch hay, and ſo judicious a method of making hay, as I never witneſſed before: I am therefore deſirous of once more appearing before the public in print. The land here, though a ſtrong clay to the very ſurface, produces an herbage very luxuriant, and at the ſame time fine, and plentifully intermixed with white clover, and likewiſe tolerably early. This herbage, when converted into hay, according to the excellent practice of this neighbourhood, is found to be equally fattening with the beſt hay and corn, or hay and oil-cake, of almoſt any other diſtrict in his Majeſty's dominions. Indeed nothing but graſs and hay are ever uſed here in the proceſs of fattening even the largeſt oxen; and this circumſtance convinces me, that there is not ſo much merit in the mode adopted by Lord Somerville, to aſcertain the comparative diſpoſitions of different breeds of cattle to fatten, as is generally imagined. His Lordſhip's method may ſerve to diſcover the comparative excellence of the land which produces their food, but not of the cattle. To aſcertain this, the food of all ſhould be of the ſame quality. For there is more difference in the quality of land, and in the reſpective food which it produces, than in the breeds of cattle. Take two yoke of oxen of the ſame breed, of the ſame value, and in the ſame condition, and feed one yoke in the above neighbourhood, and the other on land of inferior quality, on the beſt land in the occupation of the Duke of Bedford, for inſtance; and at the end of ten months it will be found, that the yoke fatted in the vicinity of Cricklade will be heavier by one-fourth of their whole weight, than the yoke which was fed at Woburn. If the graziers in this part of Wiltſhire ſhould think it worth their while to exert themſelves in the purſuit of the premiums given by Lord Somerville, no other graziers in the kingdom could poſſibly contend with them.

In the mode of making hay here, they excel as much as in their herbage. I ſhall therefore relate a few particulars of their proceſs, as given me by one of them. "My chief conſideration

is, *says he*, to make such hay as will fatten, not merely keep cattle alive; and my least consideration is the expence of doing this. Before I begin, I always engage five good hay-makers to each mower. On the first morning of mowing, although there is apparently little for them to do, I order out my whole strength, and first, by a careful tedding, and, as soon as this is done, by an immediate turning of the grass, whilst it is in its grass-state, this herbage is so worked that scarcely any two blades of it can be found adhering to each other, or lying in the same direction. Thus the whole is made to lie as open or hollow as possible, and every blade is equally exposed to the drying effects of the sun and air, and the colour and smell of the whole is, as much as possible, preserved. By having plenty of hands I can give it repeated turnings, and I gain nearly a whole day in the process, by working it well at first: and thus a few shillings extra, expended at the beginning, is frequently the saving or gaining of pounds. I never suffer my hay to lie abroad upon the ground after five o'clock in the afternoon, when the falling of the evening's dew commences, which is, I am convinced, very injurious to hay. I never suffer my hay to be touched in the morning, till the dew has entirely disappeared. I never carry my hay together into a barn or building, but always into a rick, where, I know, it settles much closer together, and will keep much sweeter, and preserve its weight much longer than in a covered building."

These rules and regulations, Mr. Editor, although they may not be new to certain of your readers, are, I assert, genuine and essential to the process of making good hay; and the man who observes them not, is either ignorant of, or inattentive to his own interest. I wish particularly to contrast this method with the two very extraordinary modes, mentioned in your Magazine for April, as practised on the Continent. I wish likewise to set it in competition with the method recommended a year or two ago, by Mr. Wakefield, near Liverpool, in an Essay to the Society of Arts, and for which, I am afraid, he received a premium from the Society; which was nothing more or less than binding up green clover in bundles, and suffering them to remain standing on one end till they were ready to be carried together, or rather till the outsides of the bundles were roasted, and their insides rotten. The true principle of hay-making, surely, is, to dry every particle of the hay alike, and never to suffer fermentation to take place before the hay is collected in the rick. I call upon every practical husbandman in the kingdom, to counteract these spurious doctrines.

Let not the practice of the sloven, because it happens in one favourable season to be right, divert or lessen our esteem for rational, long tried, and long approved systems of husbandry.

I remain yours,

PRACTICUS.

RESOLUTIONS OF A COMMITTEE OF THE HOUSE OF COMMONS, RESPECTING PADDINGTON MARKET.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

I Cannot forbear again congratulating you, and every other conſumer of butcher's meat in the Metropolis, and indeed humanity itſelf, on what appears to me the abſolute and final eſtabliſhment of the Market for fat cattle at Paddington. I am happy to ſay, that the deliberations of the Committee of the Houſe of Commons, to whom the objections of the City of London to this Market were referred, have terminated in the removal of all obſtacles to this moſt ſalutary plan. This determination was made known, a few days ago, to the Houſe, by Alderman Curtis, in words ſimilar to the following. "The reſolutions of the Committee ſtate, that the Corporation of the City of London have not eſtabliſhed any juriſdiction over the lands upon which the Market at Paddington is erected; and further, that the allegation contained in the petition of the ſaid Corporation, of the clauſe in the Act of the 38th of his preſent Majeſty, under which the right to hold the Market was claimed, having been unfairly introduced, had not been proved by the petitioners."

After ſuch an inveſtigation and deciſion as this, we have no reaſon, one would think, to apprehend any further oppoſition to this Market from the City of London, or from any other quarter.

If the plan of forming a Canal from Paddington to Poplar, which is much talked of, ſhall take effect, I hope that a Market for fat cattle will likewiſe be eſtabliſhed at Mile-End, on one of the three days of the Markets already exiſting; for it cannot ſurely be requiſite to have, on four days in a week, Markets of this kind Two Markets of the ſame kind, on one day, at different places in the vicinity of London, appears to me a very probable method of creating a competition, which may prove highly advantageous to the public.

I am yours,

T. WESTON.

ON HARVESTING CORN IN WET WEATHR.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

AS the corn-harveſt is drawing near, and approaching, I am happy to ſay, with a moſt promiſing and luxuriant aſpect, it appears to me to be the duty of every one to contribute all in his power towards preſerving and ſecuring the crops which are this ſeaſon moſt bountifully held out to us. Harveſt, I grant, will this year be an early one, and, therefore, you will think that we have the leſs reaſon to be apprehenſive for the ſafety of theſe crops; but ſtill, there can be no harm in being always prepared

and provided for the worſt: I therefore wiſh you to inſert, in the next number of your Magazine, a paper which I have lately met with, and which was ſent in claim of a premium offered by the Society of Arts, to the perſon who ſhould communicate the beſt and cheapeſt method of harveſting corn in wet weather. This communication was made by Mr. John Palmer, of Maxſtock, near Coleſhill, in Warwickſhire; for which, however, he was not entitled to the whole of the premium, not having complied with the conditions preſcribed by the Society: but as the Society were of opinion, that the method he uſed would be ſerviceable, if more generally known, the Silver Medal was adjudged to him as a bounty. He recites the particulars of a method which he uſed in the very wet ſummer of 1799, in order to ſecure his corn.

"The weather proving extremely rainy," ſays he, "and my corn then ſtanding taking much damage, I determined upon cutting it wet, and thraſhing it immediately, and then drying it on a kiln: in conſequence of this, I collected as many men as were ſufficient for the purpoſe, and employed them as follows, viz.

"I cauſed a part of my men to cut the Corn in the common method with ſickles, and bind it into ſheaves. A ſecond part I employed to load it on waggons, and carry it to the barn; and as many as could work in the barn, to thraſh it. The next morning I winnowed it, and carried it to a malt-kiln to be dried; which operation was always completed in leſs than twenty-four hours.

"As it is impoſſible for me to ſend you two ſheaves of the corn, harveſted as above deſcribed, I have ſent you the produce of two ſheaves and upwards, which I declare to be a fair ſample of the produce of four acres and upwards.

"A timber-ſtove, or a hop-kiln, will anſwer the purpoſe of drying corn equally well as a malt-kiln.

The Expence per Acre was as under ſtated.

	£.	s.	d.
Reaping and carrying to the barn - - - -	0	12	0
Thraſhing and winnowing - - - - -	0	12	0
Kiln-drying - - - - - - -	0	5	0
	£1	9	0

"*N. B.* Only a part of the above ſum ſhould be charged to my new method of harveſting Corn, viz. the extra expence, which is as follows:

"Five ſhillings per acre for drying, and four ſhillings for the extra trouble of thraſhing it.

"After the Wheat above-mentioned was thraſhed in the common method with flails, and dried, I ſo far completed a machine for thraſhing, that I thraſhed a very conſiderable quantity of Wheat,

and ten acres of barley with it, carried from the field in November; and it was dried in the manner deſcribed in my claim. I did not however ſtate this to the Society, becauſe I had taken out a patent, dated the 6th of December, 1799, for my thraſhing-machine, and was that day going to London to give in my ſpecification, dated the 4th of January, 1800.

"Part of the ſtraw of the four acres, deſcribed in my claim, was uſed for thatch immediately after it was thraſhed, and part ſtacked in ſmall narrow ridges, for litter for my fold-yard.

"The grain was very well ſeparated from the ſtraw by the flails; but that thraſhed by the machine was completely cleared, though in a very wet ſtate. This would not be the caſe with the common machines of the North.

"The quantity of wheat upon an acre was about twenty-one buſhels, which is nearly as much as there would have been, if it had been dried by fine weather. When the advantage of getting in an acre of wheat per day, in ſeaſons like the laſt, is properly conſidered, and making it immediately uſeful, at the ſmall additional expence of nine ſhillings per acre, there can be but little doubt reſpecting its utility; for probably theſe men could not be employed at any other work.

"I am, Sir,
Your humble Servant,
"*Maxſtock, 24th May*, 1800. JOHN PALMER."
MR. CHARLES TAYLOR."

The above letter was accompanied with three Certificates; one from Mr. Edward Palmer, of Maxſtock, in the county of Warwick; another from the Rev. John Dilke, of Maxſtock Caſtle; and the third from Mr. William Twamley, of Sutton Colfield, in the county of Warwick, miller: which teſtify that Mr. John Palmer did harveſt four acres of wheat and upwards, in the year 1799; that his plan is likely to be of general advantage; and that his thraſhing machine is in high repute, and anſwers every end propoſed.

ENQUIRY AFTER A METHOD OF BREEDING HARES.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

I Have regularly taken in your very valuable Magazine, from which I have derived much inſtruction and amuſement; and as the ſubject, which I wiſh to lay before your readers, is, in an extended ſenſe, Agricultural, I truſt you will endeavour to procure me a little information on the following queſtions.

What is the beſt mode of keeping hares confined for breeding;—and what is the ſmalleſt incloſure that can with propriety

be alotted for this purpoſe?—With what kind of food ſhould the incloſure be ſown or planted?—How many per acre, on good land, can be kept?—alſo, what would be the cheapeſt mode of fencing?

You will be ſo good as to procure information *from experience*, in order that the queſtion may be fairly aſcertained, whether hares are apt to rot by being confined; as well as whether they are equally good for the table.

Indeed as hare-ſkins are very valuable, and as no law exiſts againſt confining hares in incloſures, I am not clear whether it might not be a valuable way of applying ſome kinds of land.

There would however be another advantage, ſhould hares and other game bred in rather a confined ſtate, be equally good for the table; they would become ſo plentiful as effectually to prevent poaching; and as by that means one inducement to idleneſs and diſhoneſty would be removed, a real benefit would accrue to the country.

In hopes that theſe queſtions will receive indulgent attention from your readers,

I remain,

Sir, your obedient Servant,

A COUNTRY GENTLEMAN.

June 20th, 1802.

ON THE WEST INDIA AND LONDON DOCKS, THE COMMERCIAL ROAD, AND THE PROJECTED CANAL FROM PADDINGTON TO ST. GEORGE'S IN THE EAST.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

YOUR Commercial readers, who have not of late viſited the Metropolis, will, I preſume, have no objection to be informed of the progreſs that has been made in the projected improvements of the port of London; and I have the ſatisfaction of informing them, that the advance, which has been made in the various works, exceeds even the expectation of perſons warmly intereſted in their completion. The Import-Dock, in the Iſle of Dogs, 30 acres in extent, is entirely walled in and completed, and forms the grandeſt excavation of the kind in the world. Three of the immenſe warehouſes, with which this dock is intended to be ſurrounded, (as appears in the plan given in your Magazine for the month of September, 1800,) are covered in, chiefly with copper, and three others are in nearly the ſame ſtate of forwardneſs. The entrance baſons are likewiſe both finiſhed, and of the locks, two at the Blackwall end of the docks, and two at the Limehouſe end, are alſo nearly conſtructed; and it is intended to fill the above dock with water, prior to the 12th of July, and on that day to admit the firſt ſhip, in due form. A ſhip of Alderman Hibbert's,

just arrived from the West Indies with sugar, is to have the honour of first admission.

The excavation of the Export-Dock is not yet begun.

The canal across the Isle of Dogs is cut, and its embankments completed.

These works at the Isle of Dogs, denominated the West India Docks, although admirably well calculated to facilitate and enlarge the commerce of this port, are only a part of a grand plan, which is here projected for the accommodation of the British merchant. For, besides the very extensive docks now forming at Wapping, the formation of a grand Commercial Road, from the West India Docks to the centre of the City of London, is about to receive the sanction of Parliament; and a level has likewise been taken, to prove the practicability of making a Canal, which may effect a junction between the Paddington Canal and the above-mentioned docks. This Canal, it is said, is intended to be brought in a direct line from Paddington to the field below the New River-head; then to proceed across the City Road, and skirt Shoreditch and Spitalfields parishes, through the centre of Bethnal Green parish, and then to cross Whitechapel parish at the Mount, and to communicate with the Commercial Road, and likewise with the London Docks, in the parish of St. George's-in-the-East. Thus an expeditious, easy, and safe conveyance will be afforded by inland navigation, for every species of merchandise, from the Port of London, to almost any part of our Island.

Another momentous portion of the above grand plan is the formation of what are called the London Docks, chiefly in the parish of Wapping. In this work, I am glad to see that all the great obstacles, which it has had some time to contend with, are entirely surmounted. The excavating part of the labour is begun, the foundation of the wall, which is meant to surround the whole, is chiefly formed, and the first stone of one of the Locks, it is said, is to be laid in a few days, by the Chancellor of the Exchequer, or by Lord Hawkesbury, with a degree of solemnity suited to the magnitude and consequence of this great undertaking. *

Since the commencement of the above works, the landed property in the vicinity of all of them has increased in value in an astonishing degree. I am your humble Servant,

London, June 18th, 1802. A MERCHANT.

* Parliament has given due encouragement to this momentous national concern; and Government has stipulated to pay to the Proprietors of the London Docks 15,500l. per annum for twenty years, provided the said Dock Company shall provide sufficient Warehouse room for all the tobacco imported by Government. The shares in this concern, which have for some time been considerably below par, now bear a premium; and these Docks, from their situation, will probably soon become the favourites.

Three stones were laid in different parts of these Docks on the 26th instant, by the Lord Chancellor, the Chancellor of the Exchequer, and the Speaker of the House of Commons. E.

THE DUTCH METHOD OF DYEING BLACK.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

The Dutch Method of Dyeing Black would, I ſhould ſuppoſe, be acceptable to the readers of a Commercial Magazine, and will therefore need no apology for troubling you with it.

THE chief article uſed by them is the common Sorrel, in botany a ſpecies of the Rumex, which grows in paſtures and meadows, and is well known to every one, and which they cultivate for its uſefulneſs in the dyeing of woollen cloths black. Neither does this mode of dyeing in the ſmalleſt degree injure the texture of the cloth, which continues to the laſt ſoft and ſilky, without that hardneſs to the touch, which it acquires when dyed black by means of copperas.

Let the ſtuff to be dyed be well waſhed with ſoap and water, and afterwards completely dried; then of the common broad-leaved Sorrel boil as much as ſhall make an acid decoction, of ſufficient quantity to let the ſtuff to be dyed lie in it open and eaſy to be ſtirred. The greater quantity of Sorrel that is uſed, the better will the colour be; and therefore if the pot or cauldron will not hold enough at once, when part has been ſufficiently boiled, it muſt be taken out and wrung, and a freſh quantity be boiled in the ſame juice or decoction. When the liquor is made ſufficiently acid, ſtrain it from the Sorrel through a ſieve, put the cloth or yarn into it, and let it boil for two hours, ſtirring it frequently. If ſtockings be among the ſtuff to be dyed, it will be expedient, after they have been an hour in the boiling liquor, to turn them inſide out; and at the end of the ſecond hour let the whole be poured into a tub, or any other veſſel. The pot or cauldron muſt then be waſhed, and water put into it, with half a pound of logwood chips for every pound of dry yarn or cloth. The logwood and water ſhould boil ſlowly for four hours, and then the cloth or yarn being wrung from the ſame liquor, and put into the logwood decoction, the whole muſt be ſuffered to boil ſlowly for four hours; ſtockings, if there be any, being turned out at the end of two hours. Of this laſt decoction there muſt, as of the former, be enough to let the cloth lie open and eaſy to be ſtirred whilſt boiling. At the end of the four hours the cloth muſt be taken out, and among the boiling liquor (firſt removed from the fire,) muſt be poured a gallon of ſtale urine for every pound of dry cloth or ſtuff to be dyed. When this compound liquor has been ſtirred, and become cold, the cloth or ſtuff muſt be put into it, and ſuffered to remain well covered for twelve hours, and then dried in the ſhade; after which, to diveſt it of ſmell, it may be waſhed in cold water, and dried for uſe.

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

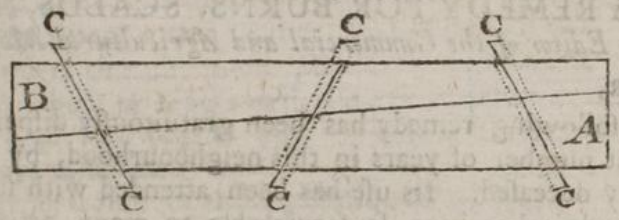
FURTHER INFORMATION ON THE COMBINATION OF TIMBER.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

IN your laſt Magazine I obſerve Mr. Smart has favoured the public with a deſcription of his late invention for preventing a waſte of timber, and rendering it more durable in buildings. The ſimplicity of the invention, as well as its ingenuity, deſerve not only the thanks, but the reward of the public, more eſpecially as he ſo handſomely offers to forego all the profit ſecured to him by the Patent-Right.

Perhaps any ideas on the ſubject, offered by a perſon who does not profeſs himſelf by any means maſter of mechanics, will be thought ſomething like preſumption; but as it appears to me that Mr. Smart's invention is ſtill capable of improvement, I truſt I ſhall ſtand excuſed to the generality of your readers: firſt of all premiſing, that what I bring forward is by no means an invention of my own, nor do I know who is the inventor, but have ſomewhere heard that a Patent has been taken out for it; which, if added to Mr. Smart's new method of combining timber, would, I think, be very highly beneficial to the public.



A and B, a repreſentation of the butts reverſed, as ſhewn by Mr. Smart's plan, Figure 4. C C, the improvement I would recommend in faſtening the timber together, conſiſts ſimply of two wedges, which being driven in a mortiſe, one from each ſide, muſt of courſe gain the greateſt mechanical power it is poſſible for a wedge to attain to; and the mortiſes being ſlanted or bevelled alternately from each ſide alſo, as ſhewn by the dotted lines in the ſketch; it will be an utter impoſſibility, that timber ſo kēyed together and combined, can ever part; and its ſimplicity, durability, and real mechanical ſtrength muſt be far ſuperior to either botts or dowels.

I am, Sir, your humble ſervant,

MECHANICULUS.

SOLUTION TO QUERIES IN LAST NOVEMBER'S MAGAZINE, ON THE DISORDER OF SHEEP.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

IN your Magazine for November laſt a Correſpondent, at Colcheſter, propoſes the following Queries for ſolution, viz

First, What effect has bleeding on fatting animals? Does it haſten or retard their fatting?

Second, Which is the beſt cure for the blood in ſheep, bleeding or phyſic?

Although I do not by any means wiſh my opinion to be conſidered as concluſive, I cannot refrain from offering the few ideas which ſtrike me on the ſubject, not having ſeen any other of your numerous Correſpondents willing to notice it.

With regard to the firſt Query, I conceive (and my opinion is ſtrengthened by its meeting the approbation of an eminent medical man) that frequent bleeding, in ſmall quantities, will have a tendency to promote the fatting of animals; ſuch, at leaſt, are its effects on the human conſtitution: and as to the ſecond Query, there cannot be a doubt but phyſic (any cathartic) is more prejudicial to any fatting animal than bleeding, for this reaſon, that its effects being longer felt, it will require a longer time to recover that degree of ſtrength it formerly poſſeſſed, and will conſequently oppoſe the Farmer's intereſt, by not being ſo ſoon ready for the ſhambles.

I am, Sir, yours, &c. T. P.

A REMEDY FOR BURNS, SCALDS, &c.

To the Editor of the Commercial and Agricultural Magazine.

Sir,

THE following remedy has been gratuitouſly diſperſed for a great number of years in this neighbourhood, by a worthy lady lately deceaſed. Its uſe has been attended with ſuch great ſucceſs, and it has been ſo ſerviceable to many artificers and labourers, that I hope by the publication of it in your Magazine, many humane perſons will have it in their power to confer great benefits at little expenſe. The preparation of it is ſimple and eaſy; and I ſhall give diſtinct directions for its application, to prevent any difficulty or heſitation that might otherwiſe ariſe.

It is hoped this publication will fall into the hands of commanders in the navy, and maſters of ſhips, on purpoſe that they have always ready prepared a cheap and valuable remedy for many diſorders and accidents, that are often incident to that moſt invaluable ſet of men, the Britiſh ſailors. It is hoped alſo that when the public have experienced its qualities, it will be employed in the army, in Hoſpitals, and come into general uſe.

It is not offered to the world on principles of quackery, but publiſhed from the following circumſtance, that it has been above ſeventy years in the poſſeſſion of a family, who gave it with incredible ſucceſs to many ailing perſons; and that many who had been diſmiſſed from Hoſpitals as incurables, have, by ſubſequent uſe of this preparation, been cured of their complaints.

It is a plaiſter or ſalve, which, when applied to burns or ſcalds, abſorbs heat and giveth eaſe; in chilblains it extracts the froſt from the diſeaſed parts; in ſwellings or gatherings, it either diſcuſſes the tumor, or promotes ſuppuration; when applied after the removal of bliſters with a little ſallad oil on its ſurface, it promotes a diſcharge of matter, and heals the ſore kindly. In ſore throats it is an admirable external application. In white ſwellings it acts as a diſcutient, relieves from pain, and often removes the diſeaſe.

Applied on ſprained limbs, it affords relief, and haſtens the cure. In ſome caſes its operations may be aſſiſted by additions, or modifications; viz. in hard deep ſwellings, it may be neceſſary, when the ſwelling appears ready to break, to bring it forward by applying a white-bread poultice, with onions and honey. In ſprains, anoint the parts often with warm oil, uſing gentle friction with the hand, and then apply the plaiſter. When a bliſtering plaiſter is removed, apply this plaiſter gently warm. In inflammatory ſore throats, ſometimes blood-letting, opening phyſic, &c. are neceſſary to aſſiſt the plaiſter. In chilblains it never faileth, if the parts are well bathed in lime-water before the application of the plaiſter.

In burns or complaints in the leg, a little ſweet oil ſhould be put on the plaiſter (with a feather), and often repeated. In many other diſorders this diſcutient plaiſter is remarkably beneficial, ſuch as ſcrophula or king's evil, ſore eyes, fiſtula in the ano, &c. In ſwelled or ſore breaſts after child-bed, its ſucceſs has been almoſt beyond belief.

The general rule for the application of the plaiſter, is to ſpread it on linen larger than the ſore, and apply it freſh and warm every twenty-four hours.

Preparation of the Plaiſter.

In a dry clean ſtone jar, put twelve ounces avoirdupoiſe weight of the beſt ſmooth-grained honey; place the jar in warm water over the fire to diſolve the honey; then take of olive oil free from rancidity eight ounces or half a pint, by wine meaſure; of yellow wax, cut ſmall, four ounces avoirdupoiſe weight; of diachylon plaiſter with the gums, ſix ounces avoirdupoiſe weight; let theſe ſimmer, but not boil, over a very ſlow fire, ſtirring them conſtantly till all is diſolved; then pour them into the jar to the warm honey, ſtirring them all the time, and continue ſtirring them till the ſalve is quite cold; then preſerve it in a dry cool place.

When it is uſed to ſores or wounds, let a little of the ſalve be ſpread on lint, and put upon the ſore as an ointment, and a plaiſter of it ſpread on linen applied over: if the ulcers have fungus or proud fleſh, duſt on them a little burnt allum every dreſſing, till even with the ſound parts. The beſt mode of applying this ſalve is in the manner of a plaiſter ſpread on linen, and applied freſh every day, with warm dry flannel over it. The dimenſions of the plaiſter ought to be larger than the ſwelling or diſeaſed part.

In impoſthumations and formations of matter, it will be very ſeldom that lancing is neceſſary when this ſalve is uſed. If burnt allum is wanted, it may be made thus: Lay common allum on a red-hot iron heater till no bubbles come from it; then powder it, and put it into a muſlin rag.

The inſtructions above given, it is expected, will be amply ſufficient to prove its efficacy, which has been already well confirmed by facts in this town, and county.

I am, Sir, a well-wiſher to your Magazine,
And your humble Servant,

Mancheſter, June 15, 1802. G. H.

RECEIPT FOR MAKING SHOES AND BOOTS WATER-PROOF.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

TO the gentleman who ſuperintends his own Agricultural Improvements, the Farmer, or Mechanic, the comfort (if not importance, when health is taken into conſideration) of walking about with dry feet is ſo ſelf-evident, that it will not need any argument.

The Receipt I now ſend you has been found by me after repeated trials perfectly efficacious, after having given innumerable Recipes alſo a fair trial in vain.—I ſhall only further add, that after having been in low wet lands and woods ſhooting for a whole day, at my return in the evening, on taking off my boots, my feet have been as dry, and of courſe warm, as when I firſt put them on. I am, Sir, yours, &c.

R. P.

Receipt for making Shoes and Boots Water-proof.

Take one pint of drying oil, two ounces of yellow wax, two ounces of ſpirits of turpentine, and one ounce of Burgundy pitch, melted carefully over the fire. With this compoſition, when but barely warm, (for if it be too hot it will burn the leather,) new ſhoes and boots are to be rubbed, in the ſun, or a diſtance from the fire, with a ſponge, as often as they become dry, until they are fully ſaturated. The leather is then impervious to wet, the ſhoes and boots laſt much longer, and acquire ſoftneſs and pliability.

AN EXCELLENT RECEIPT FOR THE CHOLIC IN A HORSE.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

TAKE one table ſpoonful of ginger beat and ſifted, two or three table ſpoonfulls of flour of muſtard, half a pint of gin, and a quart of warm ale; mix them together, and give them in a horn to the horſe. In an hour or two walk the horſe out, and repeat it the following day. Care ſhould be taken that the horſe drinks nothing but warmiſh water for two or three days.

Receipt to kill Bugs.

Diſſolve half a drachm of corroſive ſublimate in a quarter of an ounce of ſpirits of ſalt; mix this with one quart of ſpirits of turpentine; ſhake the whole well together, and waſh all the places where the Bugs are ſuppoſed to lodge, with a bruſh well wet in this mixture.

To prevent being Bit by Bugs.

Make a ſaturated ſolution of camphor in ſpirits of wine, and on going to bed pour a little in the palms of your hands, and rub your knees and ſhoulders therewith: it will prevent the Bugs from biting; or if applied to a place previouſly bitten, will take off the inflammation.

REMARKS ON THE DUKE OF BEDFORD'S DISCONTINUING HIS PREMIUMS TO THE NEW LEICESTER AND SOUTH-DOWN BREED OF SHEEP, AND ON LORD SOMERVILLE'S AND DR. PARRY'S ENCOURAGEMENT OF THE SPANISH BREED.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

I HAVE for a few days experienced no ſmall degree of pleaſure on hearing that a letter was read at the Woburn ſheep-ſhearing, from the Duke of Bedford, in which his Grace ſtated, that it was the determination of the late Duke to diſcontinue the uſual premiums which were given, at this meeting, to the new Leiceſter and South-Down breeds of ſheep, and to extend them to all breeds alike; and that his Grace intended to act in ſtrict conformity in future with the expreſſed wiſh of his brother. Thus I had reaſon to hope that the unreaſonable and injurious partiallity, which has too long been ſhewn in favour of ſmall breeds of ſheep, had received a fatal blow. But behold this my hope has juſt met with a temporary check, for this morning I ſee, in a newſpaper, a public notice, in the name of Lord Somerville, "that his Lordſhip propoſes, for the improvement of Britiſh wool and ſtock," (only obſerve, not only wool, but *ſtock* is to be improved by Spaniſh rams,) "to put under the care of the Secretary of the Bath Agricultural Society, during the enſuing ſeaſon, from two to four Spaniſh rams, of the pureſt Merino breed, procured in Spain by his Lordſhip. The proportion of ewes to be 60 head only per ram, at one guinea each, with reaſonable expences to the Secretary for keep and careful attention. The number of ewes to each ſubſcriber not to exceed 20. The Ryeland, South-Down, and Leiceſter races, are ſuggeſted particularly as valuable croſſings. Gentlemen intending to ſubſcribe are requeſted to ſignify the ſame to Mr. Bradley, the Secretary, on or before the 12th of July next."

How directly these two public notices oppose each other, and how unfortunately! as both come from the highest agricultural authority. The Duke commenced his experiments upon sheep with a view to improve both our wool and our stock; but experience had taught him, that he had misplaced his partiality, and had actually mistaken his object. This appears from his own declaration and practice, for his quondam favourite breeds are absolutely given up. Are we then again to be amused with experiments, which have already been made by consummate skill and precision? Is quality forever to be the order of the day, and are we never to look to quantity? Only consider the present value of a pound of coarse wool, and of a pound of coarse mutton. Why should the fineness of wool be esteemed the chief object in our attempts to improve our stock? To direct our whole attention to such an object appears to me as preposterous, as it would be to reap a crop of corn before the grain is formed, merely to improve the quality of the straw; or to make straw bonnets of more consequence than bread. Is one pound of the finest wool that can possibly be produced here of equal value with five pounds of the coarsest? and will this fineness compensate for the diminution that must necessarily take place, both in fleece and carcase, by these new fangled, irrational crosses? Can a farmer ever hope to pay his rent with a flock of deformed, unthrifty, diminutive sheep, and a few tods of bastard wool? This, it may be said, is only asking a few pert questions, without giving a reason or stating a fact in favour of the argument which is here meant to be supported. These questions, I grant, may appear pert to such enthusiasts as Dr. Parry; but to every experienced agriculturist in this island, I flatter myself they will be allowed to be at least pertinent. The Doctor, by the numberless daring affirmations with which his book on wool is replete, must have had the merit of first misleading Lord Somerville, and then of prevailing upon him to make the above extraordinary proposal; or his Lordship surely would never have been induced to intimate to the world, that the British sheep, the best in the universe, can possibly be improved by crossing with the Spanish; or that wool, as good as Spanish, can ever be produced in England; or that one pound of high-flavoured mutton is of equal value with two from a coarse sheep. There is one outrageously bold expression in the Doctor's book, page 10; i. e. that British clothiers "are not acquainted with the difference between coarse and fine wool before it is washed." This his Lordship could not have seen, or he must have suspected the validity of every subsequent affirmation in the book. No manufacturers, every one will allow, pay more attention to, or examine with nicer inspection, the articles which they use, than the English clothiers: to say then, that these men, who have been in the daily habit, for many years, of handling, of smelling, and of

viewing, both with the natural eye and with glaſſes, every ſpecies of wool which is either raiſed here or on the continent, and that too both before and after it is waſhed, "are not acquainted with the difference between coarſe and fine wool before it is waſhed," appears to me extremely audacious. Now it ſo happens, that any perſon, who poſſeſſes the ſenſe of ſmelling, can immediately diſcover Spaniſh wool from Engliſh *before* it is waſhed, but not afterwards. The Doctor ſurely, in the above expreſſion, meant the reverſe of what he ſaid. After many more ſweeping clauſes of a ſimilar complexion with this, Dr. Parry draws a moſt captivating concluſion, which, I fear, has had too much influence upon the minds of ſanguine men, that the profit of his mock Spaniſh breed is more than treble what it would have been if the ſame quantity of land had been ſtocked with Engliſh ſheep; and this from a compariſon of the wool only, excluſive of any allowance for improvement of the carcaſe. Now it is well known that a wether of the Ryeland and Spaniſh breed, even when kept in a fatting way, will ſeldom produce more than two pounds of wool; and yet this quantity is pronounced to be of more value than the fleeces of three Engliſh ſheep, which, if both breeds are kept in the ſame condition, will be eight pounds of wool from each of the three Engliſh ſheep. This, if I miſtake not, is ſaying, that two pounds of the Doctor's non-deſcript wool is of more value than twenty pounds of Engliſh wool. Credat Judæus! I hope and truſt, that ſuch information as we find in the above book will never be ſuffered, either in the eſtimation of Lord Somerville, or of the community at large, even to be placed in the balance againſt the authority of the impartial, diſcriminating, and judicious Duke of Bedford.

I am yours,

PRACTICUS.

MR. COKE'S SHEEP-SHEARING, AND THE TURNIP CROP.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

MR. Coke's annual ſheep-ſhearing has juſt been held at his ſeat at Holkham, in Norfolk, and drew together a very large company of Gentlemen and practical Farmers. An improved drill for turnip-ſowing, calculated by alternate cups to deliver from the ſame barrel, both the ſeed and oil-cake manure, into one tube, and through which it was depoſited in the earth by the ſame coulters, effecting it with apparent certainty and eaſe. At this meeting likewiſe a practical Farmer propoſed to diſcloſe a method of preventing the ravages of the fly in the turnip-crop, provided he received a ſubſcription of two hundred guineas, which ſhould be paid to him on the diſcloſure of the ſecret, pro-

vided it was approved of by the ſubſcribers. On Wedneſday, at dinner, the ſecret was declared, and met with general approval; which is, to ſow 2 pounds of raddiſh-ſeed on every acre of turnip-land, together with the turnip ſeed and the young raddiſh-plants, the inventor declared, will ſo attract the fly, as to prevent its proving at all injurious to the turnip.

Theſe two inventions, Mr. Editor, appear to me to merit an honourable place in your Magazine. Every thing reſpecting the turnip-crop is intereſting in a national view.

I am yours,

Norfolk, June 25th, 1802. A FARMER.

ON THE CUSTOMS, TRADE, &c. OF MANCHESTER.

The Editor is much obliged to the Gentleman who favoured him with the following communication relative to the Cuſtoms and Trade of Mancheſter; and which, from inquiries, he has reaſon to believe are correct, or nearly ſo. He has a hope of the narrative being continued to the preſent time, and of its comprehending many important changes, which have taken place in that populous and enterpriſing town.—He would be glad to receive from his correſpondents in Coventry, Birmingham, Liverpool, or other large trading towns, any intelligence relative to their particular Cuſtoms, or the riſe and progreſs of their trade and commerce.

To the Editor of the Commercial and Agricultural Magazine.

SIR,

BEING originally born near to, and ſerved my apprenticeſhip to a noted woollen-draper in Mancheſter, and having left that neighbourhood when about twenty-two years of age, and been abſent from it, in London, and on the Continent, near 50 years; I have been induced by a natural attachment to viſit the place of my nativity, to enquire for the companions of my youth, and to examine the changes which have there taken place within the period above-mentioned. I had occaſionally kept up a correſpondence with a perſon about my own age; but our concerns being chiefly on mercantile buſineſs, I knew little or nothing of the topical changes which had happened, and was therefore probably more ſtruck with them than a ſtranger would have been. The impreſſion lately made has been ſo ſtrong upon my mind, that I have compriſed my obſervations in a ſhort narrative, which I have ſent you, and which will be found to contain ſome intereſting facts relative to the cuſtoms, manners, and manufactures of this town and neighbourhood. You muſt not, however, expect to find my language very poliſhed, being only a plain detail of the matters which have occurred. Without further apologies, I ſhall proceed to inform you, that I left London about three months ago, in a mail-coach, at half paſt ſeven in the evening, and arrived in Mancheſter the next day at eleven at night, at the principal inn, called the Bridgewater Arms. This houſe, which is remarkable as the only one fronted with ſtone in the town, (the

buildings being univerſally of brick,) I recollected to have been the reſidence of a perſon who has been formerly largely engaged in the manufacture of hats, and concerned in the American trade, previous to the American war. The tranſition led me to moraliſe a little upon the changes incident to human nature, which occupied my mind inſtead of ſleep a great part of the night. I roſe early, and remembering the name of the ſtreet in which my friend reſided, I concluded, from the idea I had of the town, it was eaſy to find him; and taking my ſtick in my hand, I hobbled out after breakfaſt, with intention of making him a viſit. As you, Mr. Editor, may not be acquainted with the ſtreets of Mancheſter, it would be no entertainment to you to relate the particular difficulties I encountered from the alterations, before I had got even one hundred yards from my inn: it will be ſufficient then to ſay, that inſtead of green fields and gardens, which I had formerly left, I was loſt in a labyrinth of ſtreets and houſes; and inſtead of a ten minute's walk, as I reckoned upon, I was an hour and half before I reached my friend's houſe; whether it was owing to my embarraſſment in the ſtreets, my ſurpriſe at the variety of new objects, or my natural infirmities, it is difficult to determine; but ſuch was the fact, and though on leaving the town, I ſuppoſe I knew every perſon in it, there was not now a ſingle perſon that I met of whom I had the leaſt recollection; and I have no doubt but my anxiety of mind was ſo ſtrongly expreſſed in my countenance, that many perſons regarded me as an object fit for a lunatic-hoſpital.

On reaching my friend's houſe, I had the mortification to hear that he was from home; but was informed that he had gone in his carriage to his ſon's country houſe the morning before, as a ſponſor for a grand-ſon, but would certainly return that evening. Having left a note, requeſting he would not fail to come to me immediately on his return, I walked quietly back to my inn, ſurpriſed to obſerve the number of gentlemen's carriages I met with in going and returning, as the only one of that kind in uſe when I left Mancheſter, was one belonging to a lady Bland.

The alterations I met with in the ſtreets and houſes were ſo great, that if it had not been for the old collegiate church, and the Bluecoat Hoſpital, I could not have perſuaded myſelf that it was really Mancheſter.

Having eat my dinner, called for a glaſs of punch, and got my pipe of tobacco, I had ſcarce taken a whiff, before I was joined by my old friend. The furrows of old age diſplayed upon his brow recalled to my recollection my own infirmities, and rather clouded the pleaſures of our meeting, particularly when the anſwers I received to inquiries after my former acquaintance generally were, that they were dead! dead! dead! But a few friendly glaſſes having paſſed, we became more chearful. I requeſted my friend to furniſh me with a general narrative of matters which had happened before and dur-

ing my abſence, particularly thoſe in the trade, and the manufactures of the town and neighbourhood. After filling his pipe, gravely ſhaking his head, and informing me that things were ſtrangely altered from what we remembered, he began his ſtory as follows. "I have underſtood, *ſaid he*, that the firſt manufactures of piece-goods which were eſtabliſhed in this county, were begun at Wigan, and conſiſted chiefly of bed-ticks, checks, rugs, and blankets; but the regulation of a corporate town occaſioned ſome reſtrictions, which induced ſeveral perſons to attempt eſtabliſhments at Mancheſter, which was ſoon found to be equally ſuitable, and, indeed, more advantageous for the purpoſe.

The buſineſs in Mancheſter was carried on in three branches; viz. fuſtians, checks, and ſmall wares: under the firſt were compriſed herring-bones, pillows, cotton-ribs, and paragons, which were cut out with ſheers like woollen cloths. Tufts and coarſe thickſets with linen warps, the threads on the ſurface of which goods were divided with a knife; all of which articles, about 60 years ago, were dyed aſh colour, or yellow brown; the firſt commonly called drabs, the ſecond olives. At that time the dying of other colours on cotton was not known. The materials uſed for the purpoſe were oak ſaw-duſt, fuſtic, and copperas; and all the utenſils neceſſary for a dyer, was a pump to ſupply water, a copper to boil his water, ſaw-duſt, and fuſtic, and a tub of cold water to diſſolve this copperas in. The goods to be dyed were wet out in warm or cold water, in a half rum-puncheon, or ſimilar veſſel, then entered in warm ſaw-duſt liquor; the piece afterwards laid in folds, and well beat with a long pole, or wool-beater, and then paſſed through copperas liquor, and the piece drained and dried. Chance rather than judgement produced the ſhade of brown colour, and the addition of a decoction of fuſtic made it incline to the olive caſt. No regard was paid to preciſe ſhades of theſe colours; and the goods thus dyed were laid by in a rude ſtate till they met with a purchaſer, when the ſhorn goods were callenderd, made up, and tufted, or piled goods bruſhed and folded.

Beſides theſe dyed fuſtians, ſome white fuſtians were made, as janes for waiſtcoat linings, narrow ſtriped dimities, and figured diapers. The above articles compriſed nearly the whole of the fuſtian buſineſs.

Articles made in the check buſineſs, were bolſter and bed-ticks, chequered blue and white linens for women's aprons, and ſailors ſhirts, and ſtriped hollands. Yellow canvas and buckram were alſo made by the check manufacturers. The ſmall-ware manufacturers fabricated laces, filletings, tapes, and garters.

The manufacturers, as I have noticed before, were generally engaged in one only of the above branches, viz. were either fuſtian, check, or ſmall-ware manufacturers.

The greateſt part of the goods made in Mancheſter at this time were uſually purchaſed by Chapman, who kept gangs of

pack horſes, and ſold them in different parts of the kingdom, bringing back to Mancheſter, malt from Northamptonſhire, feathers from Lincolnſhire, and different products from other counties. The roads throughout the kingdom were in general too bad to admit of waggons or carts, and a journey to London was then looked upon as a more ſerious buſineſs, than a voyage to the Eaſt Indies would at preſent. On ſuch an occaſion, a formal parting took place amongſt relations, a will was prepared, and executed, and the traveller mounting his horſe, and covering his coat-laps with linen bags, made for the purpoſe of keeping them free from mud on the road, ſet out and arrived in London in ten or twelve days. His return home was attended with congratulations, and his neighbours liſtened with great attention to the miraculous accounts related, of his looſing his road on Braſſington Moor, or ſome other of the many unincloſed Commons on his way to London, his dreadful dangers from having been benighted, and other ſimilar adventures. I obſerve you ſmile," ſaid my old friend, "at the recollection of theſe circumſtances, ſo different from the preſent ſtate of things; and indeed my grand-daughter bluſhed, and ſaid, 'lord! grand-papa, you muſt be miſtaken,' when I told her that her grandmother and the ſmarteſt young ladies in Mancheſter, uſed to walk to the aſſemblies in pattens, put on their dancing ſhoes in an adjoining room, and return in the ſame manner, after the evening's amuſement, in a ſcarlet cloak, attended by a female ſervant. You muſt have remarked, added he, the difference betwixt the ſervant maids of thoſe and the preſent day, and have remembered that after due attention to divine ſervice on a Sunday, in a ſtuff gown and a neat round-eared cap, the ambition of a ſervant was not to ſhow off in a flouriſhing kickſhaw head-dreſs, but to diſplay the cleaneſt pail and ſmarteſt check jacket, or bed gown, in carrying water from the conduit near the market place home for the monday morning's family waſh."

Here my friend was interrupted by a meſſage, acquainting him that his return was hoped for at home, as the evening air was dangerous for his health. We therefore parted with reluctance, and agreed to meet ſoon and often. The converſations which followed, relative to the change of cuſtoms and trade in the town, I ſhall, if acceptable, furniſh you with at other opportunities.

I am, Mr. Editor, your humble Servant,

Mancheſter, June 21ſt, 1802. S. R,

ON FRAUDS IN THE SALE OF HORSES.

To the Editor of the Commercial and Agricultural Magazine.

SIR, *March 15th*, 1802.

OWING to the many frauds which are daily practiſed in the ſale of horſes, and the difficulty, tedioufneſs and expenſe of obtaining redreſs, under the preſent laws, being ſo great as in moſt caſes to deter the injured party from any attempt of that

ſort; it appears to me deſirable that parliament, by a law to be enacted, ſhould give an option to the party aggrieved, either to take the preſent legal remedy, or, within one month after the tranſaction, to apply to a Juſtice of the Peace, reſiding within 20 miles of the place of ſale of the horſe, who ſhall hear and determine in a ſummary way, upon the oath of one witneſs, the merits of the caſe, and to award damages, not exceeding half the conſideration given for the horſe, as he may judge fit.

I truſt ſome of your correſpondents will furniſh us with their ſentiments on the ſubject; and if I find my plan meets approbation, I will hereafter communicate my thoughts to you more fully on the ſubject.

† The Editor begs pardon of the Author of this note, for having miſlaid it, which cauſed the delay of its appearance.

ENUMERATION OF PATENTS LATELY ENROLLED.

1802, *April* 2. ELIZABETH DUKE, of Queen-ſquare, Moorfields, Middleſex, and James Jacks, of Cornhill, in the city of London, Merchant, Taylor, and Draper; for an invention communicated to them by a perſon reſiding in America, whereby they are enabled to render all ſorts of woollen, cotton, and linen cloths, canvas, ſilk, hats, paper, and other manufactures, waterproof.

——— 3.—Stephen Wells, of the pariſh of St. Mary, Lambeth, Surry; for hinges upon a new conſtruction.

——— 6. John Leach, of Merton Abbey, Callico-printer; for a method of uſing madder in dying of callicos, linens, and ſtuffs, whereby a great ſaving is made in the conſumption of that root or drug.

——— 7. James Power, of Baron's-buildings, St. George's Fields, Gentleman; for a machine for the purpoſe of raiſing weights, and for various other purpoſes.

——— 8. Thomas Parker, late of Broomwarſt, Lanarkſhire, and now of the city of Glaſgow, in North Britain, William Telfer, and Alexander Alfeck, of the ſaid city, Mathematical Inſtrument-makers; for their farther improvements in preparing and manufacturing flax, hemp, ſilk, and other materials.

——— 8. Iſaac Birch, of Abernant, Glamorganſhire, Engineer; for improvements in, or additions to, the furnace as hitherto uſed for ſmelting and making pig-iron.

——— 10. John Charlton, of Duckmanton, Derbyſhire, Agent to the Adelphi Colliery; for a punch or prop for ſupporting the roofs of mines.

——— 13. John Harriott, of Wapping, Middleſex, Eſquire, and Thomas Strode, of Wapping aforeſaid, Smith; for an engine for raiſing or lowering weights of all kinds, and for working mills, and other ſimilar purpoſes.

——— 15, James Pearſon, of the townſhip of Walton-le-Dale, Lancaſter, Cotton-ſpinner; for a machine for beating and dreſſing cotton, wool, or flax.

PREMIUMS offered by the SOCIETY, *instituted at* London, *for the Encouragement of Arts, Manufactures, and Commerce, for the Year* 1802.

TO THE PUBLIC.

THE chief objects of the SOCIETY are to promote the Arts, Manufactures, and Commerce of this kingdom, by giving rewards for all such useful Inventions, Discoveries and Improvements, (though not mentioned in this book,) as tend to that purpose; and, in pursuance of this plan, the SOCIETY have already expended near FIFTY THOUSAND POUNDS, advanced by voluntary subscriptions of their members, and legacies bequeathed.

The manner in which this money has been distributed may be seen by applying to the Secretary or other officers of the SOCIETY, at their house in the *Adelphi*. The Register of the Premiums and Bounties they have given will shew the very great advantages which the Public have derived from this Institution.

The meetings of the SOCIETY are held every *Wednesday*, at seven o'clock in the evening, from the fourth *Wednesday* in *October* to the first *Wednesday* in *June*. The several Committees meet on other evenings in the week during the session.

In order still farther to promote the laudable views of this SOCIETY, it may be necessary to explain the mode by which its members continue to be elected.

Each member has the privilege, at any weekly meeting of the SOCIETY, of proposing any person who is desirous to become a member, provided such proposal is signed by three members of the SOCIETY.

Peers of the Realm or Lords of Parliament are, on their being proposed, immediately ballotted for; and the name, with the addition and place of abode, of every other person proposing to become a member, is to be delivered to the Secretary, who is to read the same, and properly insert the name in a list, which is to be hung up in the SOCIETY's room until the next meeting; at which time such person shall be ballotted for; and, if two-thirds of the members, then voting, ballot in his favour, he shall be deemed a *perpetual member*, upon payment of *Twenty Guineas* at one payment; or a *subscribing member*, upon payment of any sum not less than *Two Guineas* annually.

Every member is entitled to vote and be concerned in all the transactions of the SOCIETY, and to attend and vote at the several Committees. He has also the privilege of recommending two persons as Auditors, at the weekly meeting of the SOCIETY; and, by addressing a note to the Housekeeper, of introducing his friends to examine the various models, machines, and productions, in different branches of arts, manufactures, and commerce, for which rewards have been bestowed; and to inspect the magnificent series of moral and historical paintings so happily contrived and completed by JAMES BARRY, Esq. which, with some valuable busts and statues, decorate the Great Room. He has likewise the use of a valuable Library; and is entitled to the annual Volume of the SOCIETY's Transactions.

The time appointed for admission to the paintings or models, is from ten to two o'clock, *Sundays* and *Wednesdays* excepted.

PREMIUMS IN AGRICULTURE.

THE public are requested to take notice that the SOCIETY abide by the premiums offered in the 18th volume of their Transactions, for the setting of acorns, and planting of timber-trees, although such premiums are not here reprinted.

Class 1. FOREST-TREES.

To the person who shall have inclosed and planted, or set, the greatest number of acres (not less than ten) of land, that is incapable of being ploughed, such as the borders of rivers, the sides of precipices, and any land that has too many rocks, or that is not calculated to repay the expence of tillage, owing to the stiffness or poverty of the soil, the surface being too hilly, mountainous, or otherwise unfit for tillage, with the best sorts of forest-trees, namely, oak, Spanish chesnuts, ash, elm, beech, alder, willow, larch, spruce and silver fir, with or without screens of Scotch fir, adapted to the soil, and intended for timber trees, between the 1st of October, 1801, and the 1st of April, 1802, the gold medal.

2. For the second greatest quantity of land, not less than seven acres; the silver medal, or twenty guineas.

3. For the third greatest quantity of land, not less than five acres, the silver medal. A particular *account* of the methods used in making and managing the plantations, the nature of the soil, the probable number of each sort of plants, together with proper *certificates* that they were in a healthy and thriving state two years at least after making the plantation, to be delivered to the SOCIETY on or before the first Tuesday in November, 1805.

4, 5, 6. The same premiums are extended

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one year further. *Certificates* to be produced on or before the first Tuesday in Nov. 1806.

7. ASCERTAINING THE BEST METHOD OF RAISING OAKS. To the person who shall ascertain in the best manner, by actual experiments, the comparative merits of the different modes of raising oaks for timber, either from acorns set on land of the foregoing description properly dug or tilled, from acorns set by the spade or dibble, without digging or tillage, either on a smooth surface, or among bushes, fern, or other cover; or from young plants previously raised in nurseries, and transplanted; regard being had to the expense, growth, and other respective advantages of the several methods; the gold medal. The *accounts* and proper *certificates* that not less than one acre has been cultivated in each mode, to be produced to the Society on or before the first Tuesday in November, 1802.

8. The same premium is extended one year farther. The *accounts* and *certificates* to be produced on or before the first Tuesday in November, 1803.

9. OSIERS. To the person who shall have planted, between the 1st of October, 1801, and the first of May, 1802, the greatest quantity of land, not less than five acres, with those kinds of willows, commonly known by the names of osier, Spaniard, new-kind, or French, fit for the purpose of basket-makers, not fewer than twelve thousand plants on each acre; the gold medal, or thirty guineas.

10. For the second greatest quantity of land, not less than three acres; the silver medal, or ten guineas. *Certificates* of the planting, and that the plants were in a thriving state five months at least after the planting, to be produced to the Society on or before the last Tuesday in November, 1802.

11. The same premiums are extended one year farther. *Certificates* to be produced on or before the last Tuesday in Nov. 1803.

*** *The candidates for planting all kinds of trees are to produce certificates that the respective plantations are properly fenced and secured, and particularly to state the condition of the plants at the time of signing such certificates. Any information which the candidates for the foregoing premiums may choose to communicate, relative to the methods made use of in forming the plantations, or promoting the growth of the several trees, or any other observations that may have occurred on the subject, will be thankfully received.*

12. SECURING PLANTATIONS OF TIMBER-TREES, AND HEDGE-ROWS. To the person who shall give to the Society the most satisfactory account, founded on experience, of the most effectual and least expensive method of securing young plantations of timber-trees, and hedge-rows, from hares and rabbits, as well as sheep and larger cattle, which at the same time shall be least subject to the depredations of wood-stealers, the silver medal, or twenty guineas. The *accounts* and *certificates* of the efficacy of the method to be produced to the Society on or before the first Tuesday in November, 1802.

13. The same premium is extended one year farther. The *accounts* and *certificates* to be produced on or before the first Tuesday in Nov. 1803.

14. PREVENTING THE BLIGHT, OR RAVAGES OF INSECTS, ON FRUIT-TREES AND CULINARY PLANTS. To the person who shall discover to the Society the most effectual method of preventing the blight, or ravages of insects, on fruit-trees and culinary plants, superior to any hitherto known or practised, and verified by actual and comparative experiments; the gold medal, or thirty guineas. The *accounts*, with proper *certificates*, to be delivered to the Society on or before the second Tuesday in November, 1802.

15. The same premium is extended one year farther. The *accounts* and *certificates* to be delivered on or before the second Tuesday in November, 1803.

16. REMOVING THE ILL EFFECTS OF BLIGHTS, OR INSECTS. To the person who shall discover to the Society the most effectual method of removing the ill effects of blights, or insects, on fruit-trees and culinary plants, superior to any hitherto known or practised, and verified by actual and comparative experiments; the gold medal, or thirty guineas. The *accounts* and *certificates* to be delivered to the Society on or before the first Tuesday in February, 1803.

17. COMPARATIVE TILLAGE. For the most satisfactory set of experiments, made on not less than eight acres of land, four of which to be trench-ploughed*, and four to be ploughed in the usual manner, in order to ascertain in what cases it may be adviseable to shorten the operations of tillage, by adopting one trench-ploughing, for the purpose of burying the weeds, instead of the method, now in common use, of ploughing and harrowing the land three or four times, and raking the weeds together and burning them; the gold medal, or forty guineas. It is required that every operation and expense attending each mode of culture be fully and accurately described, and that proper *certificates* of the nature and condition of the land on which the experiments are made, together with a circumstantial account of the appearance of the subsequent crops during their growth; and also of the quantity and weight of the corn and straw under each mode of culture, or, in case of a green crop, the weight of an average sixteen perches, be produced to the Society on or before the first Tuesday in Feb 1803.

18. COMPARATIVE CULTURE OF WHEAT, BROAD-CAST, DRILLED, AND DIBBLED. For the best set of experiments made on not less than twelve acres, four of which to be sown broad-cast, four drilled, and four dibbled, the two latter in equi-distant rows, in order fully to ascertain which is the most advantageous mode of cultivating wheat; the gold medal, or forty guineas. It is required that every operation and expense of each mode of culture be fully described; and that proper *certificates* of the nature and condition of the land on which the experiments are made, to-

* It is a common practice among gardeners, when they have a piece of very foul land, to dig it two spits, or about eighteen inches deep, shovelling the weeds to the bottom. This they call trenching.

gether with an *account* of the produce of the corn, the weight per bushel, and also of the straw, be produced to the Society on or before the first Tuesday in February, 1803.

19. SPRING WHEAT. To the person who, between the 10th of January and the 10th of April, 1802, shall cultivate the greatest quantity of wheat, not less than ten acres; the silver medal, or twenty guineas. It is required that the time of sowing and reaping be noticed; also a particular *account* of the species, cultivation, and expense attending it, with proper *certificates* of the nature and condition of the land on which the experiments were made, and the name of the crop, if any, which the same land bore the preceding year; together with an *account* of the produce, the weight per Winchester bushel; and a sample, not less than a quart, be produced to the Society on or before the second Tuesday in February, 1803.

It is supposed that sowing wheat early in the spring will not only allow more time to till the land but less for the growth of weeds; thus rendering the wheat as clean as a barley crop, and exhausting the soil much less than autumnal sowing. It may be seen in the 19th volume that the wheat usually sown in autumn may be put into the ground, with great success, so late as February or March, thus giving time to clear the ground from turnips, or to avoid a bad season.

20. BEANS AND WHEAT. To the person who shall have dibbled or drilled, between the 1st of December, 1801, and the 1st of April, 1802, the greatest quantity of land, not less than ten acres, with beans, in equi-distant rows, and hoed the intervals twice or oftener, and shall have sown the same land with wheat in the autumn of the year 1802; the silver medal, or twenty guineas. It is required that an account of the sort and quantity of beans, the time of dibbling or drilling, and of reaping or mowing them, the produce per acre threshed, the expense of dibbling or drilling, hand or horse hoeing, the distance of the rows, and the quality of the soil, together with *certificates* of the number of acres, and that the land was afterwards actually sown with wheat, be produced on or before the second Tuesday in March, 1803.

21. BEANS. To the person who, in the year 1801, shall discover and cultivate, either by the drill or dibbling-method, on not less than five acres, a species of horse-beans or tick-beans, that will ripen their seeds before the 21st of August; the silver medal, or twenty guineas. It is required that a particular account of the bean, the cultivation, and the expense attending it, with proper *certificates* of the nature and condition of the land on which the experiments are made, together with an *account* of the produce, the weight per Winchester bushel, and a sample of not less than a quart, be produced to the Society on or before the first Tuesday in December, 1802. It is apprehended that, if a bean should be brought into cultivation with the habits of the hotspur, or other early peas, that it would, in a great measure, escape the danger arising from the collier-insect, or other insects, and allow more time for the farmers to till the land for the subsequent crop of wheat. The *accounts* and *certificates* to be delivered on or before the first Tuesday in December, 1802.

22. The same premium is extended one year farther. The *accounts* and *certificates* to be delivered on or before the first Tuesday in Dec. 1803.

23. COMPARATIVE CULTURE OF TURNIPS. For the best set of experiments made on not less than eight acres of land, four of which to be sown broad-cast, and four drilled, to ascertain whether it is most advantageous to cultivate turnips by sowing them broad-cast and hand-hoeing them, or by drilling them in equi-distant rows, and hand or horse-hoeing the intervals; the silver medal, or twenty guineas. It is required that every operation and expense of each mode of culture be fully described, and that proper *certificates* of the nature and condition of the land, on which the experiments were made, together with the weight of the turnips grown, on a fair average sixteen perches of land, under each mode of culture, be produced to the Society on or before the first Tuesday in March, 1803. The object which the Society have in view in offering this premium is experimentally to ascertain the most advantageous method of growing turnips. To do this in a satisfactory manner, both the drilled and broad-cast crops should have the advantage of the most perfect cultivation, consequently the drilled crops should have the intervals between the rows worked by the horse or hand-hoe, or by both these implements; and the rows should be either weeded or hand-hoed, or both weeded and hand-hoed. The broad-cast crop should have every advantage which weeding and hand-hoeing can give it, consistently with leaving the soil a flat surface.

24. The same premium is extended one year farther. *Certificates* to be produced on or before the first Tuesday in March, 1804.

25. PARSNIPS. To the person who, in the year 1802, shall cultivate the greatest quantity of land, not less than five acres, with parsnips, for the sole purpose of feeding cattle or sheep; the gold medal, or thirty guineas. *Certificates* of the quantity of land so cultivated, with a particular *account* of the nature of the soil and weight of the produce on sixteen perches, and also of the condition of the cattle or sheep fed with the parsnips, and the advantages resulting from the practice, to be produced to the Society on or before the second day in Nov. 1803.

26. BUCK WHEAT. To the person who shall cultivate the greatest quantity of land with buck wheat, not less than thirty acres; the gold medal. It is required that the time of sowing and reaping be noticed, also a particular *account* of the species, cultivation, and expense attending it, the manner of reaping it, thrashing it, and housing the grain, with proper *certificates* of the nature and condition of the land on which the experiments were made, and the name of the crop, if any, which the same land bore the preceding year, together with an *account* of the produce, and a sample of the seed, not less than a quart, be produced to the Society on or before the second Tuesday in January, 1803.

27. For the next greatest quantity, not less than fifteen acres, on similar conditions; the silver medal. Information respecting its application to the feeding of cattle, hogs, and poultry, and other of its uses, is also desired. It is known to be particularly serviceable in furnishing honey to bees.

28. Raising Grass Seeds. To the person who shall raise the greatest quantity of each or any of the following named grass seeds, *viz.*—Meadow fox-tail (alopecurus pratensis), sweet scented vernal grass (anthoxanthum odoratum), Timothy grass, meadow Fescue grass, smooth-stalked meadow grass (poa pratensis) rough-stalked meadow grass (poa trivialis); the silver medal, or ten guineas. It is required that *certificates* from persons who have viewed them in a proper state, to identify that they are one or other of the seeds above-mentioned, indicating clearly the particular species, and noticing the quantity produced of such seeds, free from weeds or mixture of other grasses, together with proper samples of the seeds, be produced to the Society on or before the first day of February, 1803.

29. The same premium is extended one year farther. *Certificates* to be produced on or before the first day of February, 1804.

30. Rotation of Crops. To the person who shall, between the 10th of August, 1801, and the 10th of September, 1803, cultivate the greatest quantity of land, not less than forty acres, in the following rotation, *viz.*—1st, winter-tares; 2d, turnips; and 3d, wheat; and apply thet wo former crops, in the best and most farmer-like manner, to the rearing, supporting, and fattening horses, cattle, sheep, or hogs, on the land which produced the crops; the gold medal, or one hundred guineas.

31. For the next in quantity and merit, on not less than thirty acres; the silver medal, or fifty guineas.

32. For the next in quantity and merit, on not less than twenty acres; the silver medal. It is required that every operation and expense be fully described, and that satisfactory *certificates* of the nature and condition of the soil on which the crops have grown, together with an *account* of their appearance, the number of horses and cattle, sheep or hogs, fed by the two green crops, and, as near as possible, the improved value of the live stock by the consumption of those crops, and also the quantity of wheat per acre, and its weight per bushel, be produced to the Society on or before the first day of November, 1804.

It is presumed that very great advantages will arise to such agriculturists as shall adopt this rotation of crops on a dry soil. They will be enabled, with the addition of a few acres of turnip-rooted cabbage for spring-food, to keep such large flocks of sheep and herds of neat cattle as may secure a sufficient quantity of manure to fertilize their land in the highest degree, and in every situation. It is farther conceived that wheats which will bear sowing in the spring will be particularly suitable for this premium.

33. The same premium is extended one year farther. *Certificates* to be delivered on or before the first day of November, 1805.

34. Preserving Turnips. To the person who shall discover to the Society the best and cheapest method of preserving turnips perfectly sound, and in every respect fit for the purpose of supporting and fattening sheep and neat cattle, during the months of February, March, and April; the gold medal, or thirty guineas. It is required that a full and accurate *account* of the method employed, and the expense attending the process, together with *certificates* that the produce of four acres at the least have been preserved according to the method described, and applied to the feeding of sheep and neat cattle; that the whole were drawn out of the ground before the first day of February, in order to clear the greater part of it previous to its being prepared for corn, and to save the soil from being exhausted by the turnips; and also of the weight of an average sixteen perches of the crop; be produced to the Society on or before the first Tuesday in November, 1803.

N. B. *It is recommended to those who may be induced to try the necessary experiments for obtaining this and the following four premiums to consider the method employed for the preservation of potatoes in ridges, (which the growers call pies,) and also the propriety of adopting a similar method in cases where they are previously frozen. It is supposed that, in the latter instance, the addition of ice or snow, and the construction of the ridges upon a large scale, may be sufficient to preserve the freezing temperature till the vegetables are wanted for the use of cattle or sheep, at which time they may be thawed by immersion in cold weather, and the* rot *which a sudden thaw produces may be prevented.*

35. For the next in quantity and merit, on not less than two acres, the silver medal, or fifteen guineas.

36. Preserving Cabbages. To the person who shall discover to the Society the best and cheapest method of preserving drum headed cabbages perfectly sound, and in every respect fit for the purpose of supporting and fattening sheep and neat cattle during the months of February, March, and April; the gold medal, or thirty guineas.

37. For the next in quantity and merit, on not less than two acres, the silver medal, or fifteen guineas. Conditions the same as for preserving turnips, *Cl.* 34. And the *accounts* to be produced on or before the first Tuesday in November, 1803.

38. Preserving Carrots, Parsnips, or Beets. To the person who shall discover to the Society the best and cheapest method of preserving carrots, parsnips, or beets, perfectly sound, and in every respect fit for the purpose of supporting horses, and fattening sheep and neat cattle, during the months of February, March, and April; the silver medal, or fifteen guineas. Conditions the same as for preserving turnips, *Cl.* 34. and the *accounts* to be delivered in on or before the first day in November, 1803.

39. Preserving Potatoes. To the person who shall discover to the Society the best and cheapest method of preserving potatoes, two or more years, perfectly sound, without vegetating, and in every other respect fit for the purpose of sets and the use of the table, and, consequently, of supporting and fattening cattle; the silver medal, or twenty guineas. It is required, that a full and accurate *account* of the method employed, and the expense attending the process, with *certificates* that one hundred bushels at the least have been preserved according to the method described, and that one or more bushels of the same potatoes have been set, and produced a crop without any apparent diminution of their vegetative power; and also that they have been used at table, with entire satisfaction to the person who eat of them, together with a sample of one bushel, be sent to the Society on or before the first Tuesday in November, 1804.

40. Making Meadow-Hay in wet Weather. To the person who shall discover to the Society the best and cheapest method, superior to any hitherto practised, of making meadow-hay in wet weather; the gold medal, or thirty guineas. A full *account* of the method employed, and of the expense attending the process, with not less than fifty-six pounds of the hay; and *certificates* that at least the produce of six acres of land has been made according to the method described, and that the whole is of equal quality with the samples; to be produced on or before the first Tuesday in January, 1803.

41. Harvesting Corn in wet Weather. To the person who shall discover to the Society the best and cheapest method, superior to any hitherto practised, of harvesting corn in wet weather; the gold medal, or thirty guineas. A full *account* of the method employed, and of the expense attending the process, with not less than two sheaves of the corn, and *certificates* that at least the produce of ten acres has been harvested according to the method described, and that the whole is of equal quality with the samples, to be produced on or before the first Tuesday in January, 1803.

42. Ascertaining the component Parts of arable Land. To the person who shall produce to the Society the most satisfactory set of experiments to ascertain the due proportion of the several component parts of rich arable land, in one or more counties in Great Britain, by an accurate analysis of it; and who having made a like analysis of some poor arable land, shall, by comparing the component parts of each, and thereby ascertaining the deficiencies of the poor soil, improve a quantity of it, not less than one acre, by the addition of such parts as the former experiments shall have discovered to be wanting therein, and therefore probably the cause of its sterility; the gold medal, or forty guineas. It is required that the manurings, ploughings, and crops, of the improved land, be the same after the improvement as before; and that a minute *account* of the produce in each state, of the weather, and of the various influencing circumstances, together with the method made use of in analysing the soils, be produced, with proper *certificates* and the chemical results of the analysis, which are to remain the property of the Society, on or before the last Tuesday in November, 1803.

It is expected that a quantity, not less than six pounds, of the rich, of the poor, and of the improved soils, be produced with the *certificates*.

43. Improving Land lying waste. For the most satisfactory *account* of the best method of improving any of the following soils, being land lying waste or uncultivated, viz. clay, gravel, sand, chalk, peat-earth and bog, verified by experiments on not less than fifty acres of land; the gold medal, or thirty guineas.

44. For the next greatest quantity, not less than thirty acres, the silver medal, or twenty guineas. It is required that the land before such improvement be absolutely uncultivated, and in a great measure useless, and that, in its improved state, it be enclosed, cultivated, and divided into closes. *Certificates* of the number of acres, of the quality of the land so improved, with a full *account* of every operation and expense attending such improvement, the state it is in as to the proportion of grass to arable, and the average-value thereof, to be produced on or before the first Tuesday in February, 1803.

45. Manures. For the most satisfactory set of experiments, to ascertain the comparative advantages of the following manures, used as top-dressings on grass or corn land, viz. soot, coal-ashes, wood-ashes, lime, gypsum, night-soil, or any other fit article; the gold medal, or the silver medal and twenty guineas. It is required that the above experiments be made between two or more of the above-mentioned manures, and that not less than two acres of land be dressed with each manure. An *account* of the nature of the soil, quantity and expense of the manure and crops, with *certificates*, to be produced on or before the last Tuesday in February, 1803.

46. The same premium is extended one year farther. The *accounts* and *certificates* to be produced on or before the last Tuesday in February, 1804.

47. Gaining Land from the Sea. To the person who shall produce to the Society an account of the best method, verified by actual experiment, of gaining land from the sea, not less than twenty acres, on the coast of Great Britain or Ireland; the gold medal. *Certificates* of the quantity of land, and that the experiments were begun after the 1st of January, 1796, to be produced to the Society on or before the first Tuesday in October, 1802.

48. The same premium is extended one year farther. *Certificates* to be produced on or before the first Tuesday in October, 1803.

49. The same premium is extended one year farther. *Certificates* to be produced on or before the first Tuesday in October, 1804.

50. Machine for dibbling Wheat. To the person who shall invent a machine, superior to any hitherto known or in use, to answer the purpose of dibbling wheat, by which the holes for receiving the grain may be made at equal distances and proper depths; the silver medal,

or twenty guineas. The *machine*, with *certificates* that at least three acres have been dibbled by it, to be produced to the Society on or before the second Tuesday in January, 1803. Simplicity and cheapness in the construction will be considered as principal parts of its merit.

51. MACHINE FOR REAPING OR MOWING CORN. For inventing a machine to answer the purpose of mowing or reaping wheat, rye, barley, oats, or beans, by which it may be done more expeditiously and cheaper than by any method now practised, provided it does not shed the corn or pulse more than the methods in common practice, and that it lays the straw in such a manner that it may be easily gathered up for binding; the gold medal, or thirty guineas. The *machine*, with *certificates* that at least three acres have been cut by it, to be produced to the Society on or before the second Tuesday in December, 1802. Simplicity and cheapness in the construction will be considered as principal parts of its merit.

52. THRESHING-MACHINE. To the person who shall invent a machine by which corn of all sorts may be threshed more expeditiously, effectually, and at a less expense, than by any method now in use; the gold medal, or thirty guineas. The *machine* or a model with proper *certificates*, that such a machine has been usefully applied, that at least thirty quarters have been threshed by it, and of the time employed in the operation, to be produced to the Society on or before the last Tuesday in February, 1803.

53. DESTROYING THE GRUB OF THE COCKCHAFER. To the person who shall discover to the Society an effectual method, verified by repeated and satisfactory trials, of destroying the grub of the cockchafer, or of preventing or checking the destructive effects which always attend corn, peas, beans, and turnips, when attacked by those insects; the gold medal, or thirty guineas. The *accounts*, with proper *certificates*, to be produced on or before the first Tuesday in January, 1803.

54. DESTROYING WORMS. To the person who shall discover to the Society an effectual method, verified by repeated and satisfactory trials, of destroying worms, or of preventing the destructive effects they occasion on corn, beans, peas, or other pulse; the gold medal, or thirty guineas. The *accounts*, with proper *certificates*, to be produced to the Society on or before the first Tuesday in January, 1803.

55. DESTROYING THE FLY ON HOPS. To the person who shall discover to the Society an easy and efficacious method of destroying the fly on hops, superior to any hitherto known or practised, on not less than four acres of hop ground, the gold medal or thirty guineas. *Accounts* and *certificates* to be delivered to the Society on or before the first Tuesday in February, 1803.

56. CURE OF THE ROT IN SHEEP. To the person who shall discover to the Society the best and most effectual method of curing the rot in sheep, verified by repeated and satisfactory experiments; the gold medal, or fifty guineas. It is expected that the candidates furnish accurate *accounts* of the symptoms and cure of the disease, together with the imputed cause thereof, and the actual or probable means of prevention, which, with proper *certificates*, must be delivered to the Society on or before the first Tuesday in February, 1803.

57. PREVENTING THE ILL EFFECTS OF FLIES ON SHEEP. To the person who shall discover to the Society the most effectual method of protecting sheep from being disturbed and injured by flies; the silver medal, or twenty guineas. It is required that the method be ascertained by repeated experiments, and that a *certificate* of its efficacy be delivered to the Society on or before the first Tuesday in December, 1802.

58. PROTECTING SHEEP. To the person who, in the year 1802, shall protect the greatest number of sheep, not fewer than one hundred, by hovels, sheds, or any other means, and give the most satisfactory account, verified by experiment, of the advantages arising from the practice of protecting sheep from the inclemency of the weather, by hovels, sheds, or any other means; the silver medal, or twenty guineas. A particular *account* of the experiments made, with the advantages arising therefrom, together with the expense, and *certificates* of its utility, to be produced to the Society on or before the first Tuesday in March, 1803.

59. The same premium is extended one year farther. The *accounts* and *certificates* to be delivered on or before the first Tuesday in March, 1804.

N. B. It is required that the *certificates* shall specify the length of time the sheep were so protected, and the manner in which they were maintained during that time; together with the general method of managing them.

60. IMPROVING THE CONDITION OF THE LABOURING POOR, BY ERECTING COTTAGES, AND APPORTIONING LAND. To the person who, in the year 1801, shall erect the greatest number of cottages for the accommodation of the labouring poor, and apportion not less than two acres of land to each cottage; the gold medal. The *accounts* and *certificates* to be delivered to the Society on or before the first Tuesday in February, 1803.

61. The same premium is extended one year farther. The *accounts* and *certificates* to be delivered to the Society on or before the first Tuesday in February, 1804.

62. The same premium is extended one year farther. The *accounts* and *certificates* to be delivered to the Society on or before the first Tuesday in February, 1805.

63. IMPROVING THE CONDITION OF THE LABOURING POOR BY APPORTIONING LAND TO COTTAGES. To the person who, in the year 1802, shall apportion to the greatest number of cottages, already built upon his or her estate, any quantity of land, not less than two acres to each cottage, for the better accommodation of the respective inhabitants; the gold medal. The *accounts* of the number of cottages, and of the quantity of land apportioned to each, to be delivered to the Society, with proper *certificates*, on or before the first Tuesday in February, 1803.

64. The same premium is extended one year farther. The *accounts* and *certificates* to be de-

livered on or before the first Tuesday in February, 1804.

65. The same premium is extended one year farther. The *accounts* and *certificates* to be delivered on or before the first Tuesday in February, 1805.

66. Raising Water for the Irrigation of Land. To the person who shall discover to the Society the cheapest and most effectual method of raising water in quantities sufficient to be beneficially employed for the purposes of irrigating land, superior to and cheaper than any other method now in use; the gold medal, or thirty guineas. A model on a scale of one inch to a foot, with *certificates* that a machine at large on the same construction has been used, specifying the quantity of water delivered in gallons per hour, and the height to which it was raised, to be produced to the Society on or before the first of March, 1803.

The same premium is extended one year farther. *Certificates* to be produced on or before the first of March, 1804.

67. Culture of Hemp in certain parts of Scotland. The Society for the Encouragement of Arts, Manufactures, and Commerce wishing to encourage the growth of hemp for the use of the navy, in certain parts of Scotland, comprehending the whole county of Argyle, that part of Perthshire situated to the north of the river Tay, and west of the Military Road (see Ainslie's Map of Scotland) leading from Logierait to the County of Inverness, and such other parts of Scotland as lie north of Inverness-shire, offers to the person who shall sow with hemp, in drills at least eighteen inches asunder, the greatest quantity of land in the above mentioned district, not less than fifty acres statute measure, in the year 1802, and shall at the proper season cause to be plucked the summer hemp (or male hemp bearing no seed) and continue the winter hemp (or female hemp bearing seed) on the ground until the seed is ripe; the gold medal, or fifty guineas.

67*. To the person who shall sow with hemp, (in drills at least eighteen inches asunder) the next greatest quantity of land in the same above-mentioned district, not less than twenty-five acres statute measure, in the year 1802, and shall at the proper season cause the same to be plucked as above-mentioned; the silver medal, or twenty-five guineas. *Certificates* of the number of acres, of the distance of the drills, of the plucking of the hemp, with a general account of the soil, cultivation, and produce, to be delivered to the Society, along with fourteen pounds of the hemp, and two quarts of the seed, on or before the second Tuesday in January, 1803.

PREMIUMS FOR DISCOVERIES AND IMPROVEMENTS IN CHEMISTRY, DYING, AND MINERALOGY.

68. Preserving Seeds of Vegetables. For the best method of preserving the seeds of plants in a state fit for vegetation a longer time than has hitherto been practised, such method being superior to any known to the public, and verified by sufficient trial, to be communicated to the Society on or before the first Tuesday in December, 1802; the gold medal, or thirty guineas.

69. Preventing the Dry-Rot in Timber. To the person who shall discover to the Society the cause of the dry-rot in timber, and disclose a certain method of prevention superior to any hitherto known; the gold medal, or thirty guineas. The *accounts* of the cause, and method of prevention, confirmed by repeated experiments, to be produced to the Society on or before the second Tuesday in December, 1802.

70. Preserving salted Provisions from becoming rancid or rusty. To the person who shall discover to the Society the best, cheapest, and most efficacious method of preserving salted provisions from growing rancid or rusty; the gold medal, or thirty guineas. A full description of the method, with proper *certificates* that it has been found, on repeated trials, to answer the purpose intended, to be produced to the Society on or before the first Tuesday in February, 1803.

71. Clearing Feathers from their animal Oil. To the person who shall discover to the Society the best and most expeditious method, superior to any hitherto practised, of clearing goose-feathers from their offensive animal oil, for the use of upholders, in making beds, cushions, &c. the silver medal, or twenty guineas. A quantity of such feathers unstripped and so cleared, not less than forty pounds weight, with a full *account* of the process, to be produced to the Society on or before the first Tuesday in February, 1803.

72. Refining Whale or Seal Oil. For disclosing to the Society an effectual method of purifying whale or seal oil from the glutinous matter that incrusts the wicks of lamps and extinguishes the light, though fully supplied with oil; the gold medal, or fifty guineas. It is required that the whole of the process be fully and fairly disclosed, in order that satisfactory experiments may be made by the Society to determine the validity of the claim; and *certificates* that not less than twenty gallons have been purified according to the process delivered in, together with two gallons of the oil, in its unpurified state, and two gallons so refined, be produced to the Society on or before the second Tuesday in February, 1803.

73. Manufacturing Tallow-Candles. To the person who shall discover to the Society a method of hardening or otherwise preparing tallow, so that candles may be made of it which will burn as clear and with as small a wick as wax candles, without running, and may be afforded at a less expence than any at present made with spermaceti; the gold medal, or thirty guineas. *Certificates* that 112 lb. of such tallow have been made into candles, and 12 lb. of the candles made thereof, to be produced to the Society on or before the second Tuesday in January, 1803.

74. Candles from Resin or other Substances. To the person who shall discover to

the Society the best method of making candles of resin, or any other substance, fit for common use, at a price much inferior to those made of tallow only; the gold medal, or thirty guineas. Six pounds at least of the candles so prepared, with an *account* of the process, to be delivered to the Society on or before the first Tuesday in December, 1802.

75. METHOD OF SEPARATING SUGAR IN A SOLID FORM FROM TREACLE. To the person who shall discover to the Society the best method of separating sugar from treacle in a solid form, at such an expense as will render it advantageous to the public; the gold medal, or fifty guineas. A quantity of the sugar so prepared in a solid form, not less than thirty pounds weight, with an *account* of the process, and *certificates* that not less than one hundred weight has been prepared, to be produced to the Society on or before the first Tuesday in February, 1803.

76. PROOF-SPIRIT. To the distiller who, in the year 1802, shall make the greatest quantity, not less than one hundred gallons, of a clean marketable spirit, from articles not the food of man or cattle, equal in strength or quality to the proof-spirit now in use, and at a rate not higher than the spirit produced from corn or melasses; the gold medal, or one hundred guineas. Ten gallons of the spirit, together with proper *certificates*, and a full *account* of the expense and mode of making it, to be produced to the Society on or before the first Tuesday in January, 1803.

77. INCREASING STEAM. To the person who shall invent and discover to the Society a method, verified by actual experiments, of increasing the quantity or force of steam, in steam-engines, with less fuel than has hitherto been employed, provided that in general the whole amount of the expenses in using steam-engines may be considerably lessened; the gold medal, or thirty guineas. To be communicated to the Society on or before the first Tuesday in Jan. 1803.

78. SUBSTITUTE FOR TAR. To the person who shall invent and discover to the Society the best substitute for Stockholm tar, equal in all its properties to the best of that kind, and prepared from materials the produce of Great Britain; the gold medal, or one hundred guineas. A quantity of the substitute, not less than one hundred weight, with *certificates* that at least one ton has been manufactured, and that it can be afforded at a price not exceeding that of the best foreign tar, together with an *account* of the process, to be delivered to the Society on or before the first Tuesday in March, 1803.

79. PREPARATION OF TAN. To the person who shall prepare in the most concentrated form, so as to be easily portable, and at a price applicable to the purposes of manufactures, the largest quantity, not less than one hundred weight of the principle called by the French *tannin*, which abounds in oak-bark and many other vegetable substances; the gold medal, or fifty guineas. *Certificates* of the above quantity having been prepared, and a sample of not less than 28 lb. to be produced to the Society on or before the last Tuesday in January, 1803.

80. PREPARATION OF A RED STAIN FOR COTTON CLOTH. To the person who shall communicate to the Society, the cheapest and most effectual method of printing or staining cotton cloths with a red colour, by an immediate application of the colouring-matter to the cloth, equally beautiful and durable with the red colours now generally procured from decoctions of madder; the gold medal, or thirty guineas. *Certificates* that the above process has been advantageously used on ten pieces of callico, each twenty-one yards or upwards in length, one piece of the callico so printed, a quart of the colour in a liquid state, and a full *account* of the preparation and application, to be produced to the Society on or before the second Tuesday in January, 1803.

81. PREPARATION OF A GREEN COLOUR FOR PRINTING COTTON CLOTH. To the person who shall communicate to the Society the best and cheapest method of printing with a full green colour on cotton cloth, by an immediate application of the colouring-matter from a wooden block to the cloth, equally beautiful and durable as the colours now formed from the complicated process of the decoction of weld on alumine and the solutions of indigo by earths or alcaline salts; the gold medal, or thirty guineas. *Certificates* and conditions as for premium 80.

82. SUBSTITUTE FOR THE BASIS OF PAINT. To the person who shall produce to the Society the best substitute, superior to any hitherto known, for the basis of paint, equally proper for the purpose as the white lead now employed; such substitute not to be of a noxious quality, and to be afforded at a price not materially higher than that of white lead; the gold medal, or one hundred guineas. A quantity of the substitute, not less than 50 lb. weight, with an *account* of the process used in preparing it, and *certificates* that at least one hundred weight has been manufactured, to be produced to the Society on or before the first Tuesday in January, 1803.

83. RED PIGMENT. To the person who shall discover to the Society a full and satisfactory process for preparing a red pigment, fit for use, in oil or water, equal in tone and brilliancy to the best carmines and lakes now known or in use, and perfectly durable; the gold medal, or thirty guineas. One pound weight of such colour, and a full disclosure of its preparation, to be produced to the Society on or before the first Tuesday in February, 1803.

N. B. It is not required that the colour should resist the action of fire or chemical applications, but remain unaltered by the common exposure to strong light, damps, and noisome vapours.

84. ULTRAMARINE. To the person who shall prepare an artificial ultramarine, equal in colour, brilliancy, or durability, to the best prepared from lapis lazuli, and which may be afforded at a cheap rate; the gold medal, or thirty guineas. The conditions are the same as in the preceding premium for the red pigment.

85. ANALYSIS OF BRITISH MINERALS. To the person who shall communicate to the Society,

the most correct analysis of any mineral production of Great Britain, hitherto either unexamined or not examined with accuracy; the gold medal. The analysis and sufficient specimens to be produced to the Society on or before the first Tuesday in January, 1803.

86. PREPARATION OF SULPHURIC ACID FROM SULPHUR WITHOUT THE USE OF ANY NITRIC SALT. To the person who shall prepare the largest quantity (not less than one ton) of sulphuric acid from sulphur, without any nitric salt, of a specific gravity, not inferior to the best sulphuric acid of commerce; the gold medal, or fifty guineas. *Certificates* that not less than the above quantity of such an acid has been prepared, together with a sample, to be produced to the Society on or before the first Tuesday in January, 1803.

87. PREPARATION OF ANY ALKALINE OR EARTHY NITRATE. To the person who shall prepare, in Great Britain, the largest quantity, not less than one hundred weight, of any salt of nitric acid, with either earths or alkalies, by a method superior to those hitherto practised; the gold medal, or one hundred guineas. *Certificates* of the above quantity having been prepared, and a sample of not less than 28*lb.* to be produced to the Society on or before the last Tuesday in January, 1803.

88. FINE BAR-IRON. To the person, in Great Britain, who shall make the greatest quantity of bar-iron, not less than ten tons, with coak, from coak-pigs, equal in quality to the best iron imported from Sweden or Russia, and as fit for converting into steel; the gold medal, or fifty guineas. Samples, not less than one hundred weight, with *certificates* that the whole quantity is of equal quality, to be produced to the Society on or before the first Tuesday in January, 1803.

89. PRESERVING IRON FROM RUST. To the person who shall invent and discover to the Society a cheap composition, superior to any now in use, which shall effectually preserve wrought iron from rust, the gold medal, or fifty guineas. A full description of the method of preparing the composition, with *certificates* that it has stood at least two years unimpared, being exposed to the atmosphere during the whole time, to be produced to the Society, with ten pounds weight of the composition, on or before the first Tuesday in January, 1803.

90. REFINING BLOCK-TIN. To the person who shall discover to the Society the best method of purifying or refining block-tin, so as to render it fit for the finest purposes to which grain-tin is now applied, and not higher in price; the gold medal, or fifty guineas. *Certificates* that not less than three tons have been refined or purified, with a full detail of the process, and a quantity, not less than one hundred weight, of the tin so refined, to be produced to the Society on or before the first Tuesday in January, 1803.

91. GLAZING EARTHEN-WARE WITHOUT LEAD. To the person who shall discover to the Society the cheapest, safest, most durable, and most easily-fusible, composition, fit for the purpose of glazing the ordinary kinds of earthen-ware, without any preparation of lead, and superior to any hitherto in use; the gold medal, or thirty guineas. Specimens of the ware so glazed, with proper *certificates* of its having succeeded, and a sample of the materials made use of, to be produced to the Society on or before the first Tuesday in February, 1803.

92. REFINING COPPER FROM THE ORE. To the person who shall discover to the Society the best method of separating, purifying, and refining copper from the ore, so as to render it fit for the finest purposes to which fine copper is now applied, and by a process superior to any hitherto known or in use, and not higher in price; the gold medal, or fifty guineas. *Certificates* that not less than three tons have been so prepared or refined, and a quantity not less than one hundred weight of the copper so refined, to be produced to the Society on or before the first Tuesday in February, 1803.

93. MINERALOGICAL MAP OF ENGLAND AND WALES. To the person who shall complete and publish an accurate mineralogical map of England and Wales, on a scale of not less than ten miles to an inch, containing an account of the situation of the different mines therein, and describing the kinds of minerals thence produced; the gold medal, or fifty guineas. *Certificates* of the accuracy of such map, together with the map, to be produced to the Society on or before the first Tuesday in February, 1804. The map to remain the property of the Society.

94. MINERALOGICAL MAP OF IRELAND. The same premium is offered for a mineralogical map of Ireland on similar conditions.

95. MINERALOGICAL MAP OF SCOTLAND. The same premium is offered for a mineralogical map of Scotland on similar conditions.

96. NATURAL HISTORY. To the author who shall publish, in the year 1802, the natural history of any county in England or Wales; the gold medal, or fifty guineas. It is required that the several natural productions, whether animal, vegetable, or mineral, peculiar to the county, or found therein, be carefully and specifically arranged and described, in order that the public may be enabled to judge what arts or manufactures are most likely to succeed in such county. The work to be delivered to the Society on or before the last Tuesday in January, 1803.

PREMIUMS IN POLITE ARTS.

97. HONORARY PREMIUMS FOR DRAWING, BY NOBILITY. For the best drawing, of any kind, made with water colours, crayons, chalk, black lead, pen, Indian Ink, or bister, by young gentlemen under the age of twenty-one, sons or grandsons of peers, or peeresses in their own right, of Great Britain or Ireland, to be produced on or before the first Tuesday in March, 1803; the honorary medal of the Society in gold.

98. The same in silver for the next in merit.

99, 100. The same premiums will be given, on

the like conditions, to young ladies, daughters or grand-daughters of peers, or peeresses in their own right, of Great Britain or Ireland.

101. HONORARY PREMIUMS FOR DRAWING, BY GENTLEMEN. For the best drawing, of any kind, made with water-colours, crayons, chalk, black-lead, pen, Indian ink, or bister, by young gentlemen under the age of twenty-one; to be produced on or before the first Tuesday in March, 1803; the gold medal.

102. For the next in merit, the silver medal.

103, 104. The same premiums will be given for drawings by young ladies.

N. B. As the foregoing honorary premiums are intended only for such of the nobility and gentry as may hereafter become patrons or patronesses of the arts; persons professing any branch of the polite arts, or any business dependent on the arts of design, or the sons or daughters of such persons, will not be admitted candidates in these classes.

105. DRAWINGS OF OUTLINES. For the best outline, after an original group or cast, in plaster, of human figures, by persons of either sex, under the age of sixteen, the principal figure not less than twelve inches; to be produced on or before the third Tuesday in February, 1803; the greater silver pallet.

106. For the next in merit; the lesser silver pallet.

N. B. These drawings are to be made on paper, and the original either to be produced to the Society, or to be referred to for their examination.

107. DRAWINGS OF LANDSCAPES. For the best drawing of a landscape after nature, by persons of either sex, under twenty-one years of age, to be produced on or before the third Tuesday in February, 1803; the greater silver pallet.

108. For the next in merit, the lesser silver pallet. Each candidate must mention, on the front of the drawing, whence the view was taken; and the drawings must be made with chalk, pen, Indian ink, water-colours, or bister.

109. HISTORICAL DRAWINGS. For the best historical drawing, being an original composition, of five or more human figures; the height of the principal figure not less than eight inches; to be made with crayons, chalk, black lead, pen, Indian ink, water-colours, or bister, and to be produced on or before the third Tuesday in February, 1803; the gold pallet.

110. For the next in merit; the greater silver pallet.

111. CHINTS PATTERNS FOR CALICO-PRINTERS. For the best original pattern in a new taste, of light or dark ground chints for garment-work, fit for the purposes of calico-printers, by persons of either sex; the gold medal. To be produced to the Society on or before the second Tuesday in January, 1803; the pattern to which the premium is adjudged to remain the property of the Society.

112. For the next in merit; the silver medal, on similar conditions.

113. COPPER-PLATE PATTERNS FOR CALICO-PRINTERS. For the best pattern, in a new stile, fit for the purposes of calico-printers for garment work; the silver medal. To be produced to the Society on or before the second Tuesday in January, 1803. The pattern to which the premium is adjudged to remain the property of the Society.

114. LINE ENGRAVINGS OF LANDSCAPES. For the best line engraving of a landscape, published in the year 1803, the size of the engraving not less than eighteen inches by fourteen; the gold medal. To be produced to the Society on or before the last Tuesday in January, 1804; and the impression to which the premium is adjudged to remain the property of the Society.

115. For the next in merit; the silver medal, on similar conditions.

116. LINE ENGRAVINGS OF HISTORICAL SUBJECTS. For the best line engraving published in the year 1802, of an historical subject, the size of the engraving not less than eighteen inches by fourteen; the gold medal.

117. For the next in merit; the silver medal. Conditions, &c. the same as in classes 114 and 115.

118 MODEL IN CLAY OR PLASTER. For the best model in clay or plaster of an ornamental design for the purpose of embellishing works of Architecture; the silver medal, or twenty guineas. To be produced to the Society on or before the last Tuesday in January, 1803. The model not to be less than thirty inches by twelve.

THE FOLLOWING PREMIUM (CLASS 119,) IS OFFERED IN CONFORMITY TO THE WILL OF THE LATE JOHN STOCK, OF HAMPSTEAD, ESQ.

119. ORNAMENTAL DRAWINGS FOR ARCHITECTURAL DESIGNS. For the best ornamental drawing for the purpose of embellishing architectural designs; a silver medallion with the following engraved inscription: *The Premium given by the Society for the Encouragement of Arts, Manufactures, and Commerce, in conformity to the Will of John Stock, of Hampstead, Esq.* The drawing to which the premium is adjudged to remain the property of the Society,

120. For the best model in clay or plaster of a design for the same purpose; the silver medal. The performances in these two classes not to be less than thirty inches by twelve, to be made by persons under the age of twenty-one years. To be produced to the Society on or before the last Tuesday in January, 1803.

121. PERSPECTIVE DRAWINGS OF MACHINES. For the best perspective drawing of machines by persons under eighteen years of age; the greater silver pallet. To be produced to the Society on or before the last Tuesday in January, 1803.

122. For the next in merit; the lesser silver pallet, on similar conditions.

123. ENGRAVING ON WOOD, OR METAL.

BLOCKS. For the best engraving on wood, or metal blocks, of a subject or allegorical decoration for a volume of the Society's Transactions, proper to be prefixed to the premiums offered by the Society, and capable of being worked with the letter press; the gold medal. The engraved wood or metal block, and two or more impressions from it, to be produced to the Society on or before the second Tuesday in February, 1803, and the engraved wood or metal block to which the premium is adjudged to remain the property of the Society. The engraving to be of a proper size to form an octavo page in the volume.

124. For the next in merit; the silver medal on similar conditions.

125. STATUARY MARBLE. To the person who shall discover, within Great Britain or Ireland, a quarry of white marble fit for the purposes of statuary, and equal in all respects to those kinds now imported from Italy; the gold medal, or one hundred pounds. A block of at least three feet in length, two in height, and two in width, with an account of the situation of the quarry, and *certificates* of its possessing considerable extent, to be produced to the Society on or before the first Tuesday in February, 1803.

N. B. In order to prevent useless expence or trouble to the claimant in forwarding so large a block, the Society will be ready to examine any smaller specimen of the marble, and express their opinion of its value to the candidate before the block required by the above premium is produced.

126. BRONZES. For the best drapery-figure or group cast in bronze; if a single figure, not less than twelve inches high; and, if a group, not less than nine inches; and which will require the least additional labour to repair; the gold medal, or the silver medal and twenty guineas. The cast to be exhibited to the Society before it is begun to be repaired, with the original figure or group, on or before the first Tuesday in February, 1802, together with a full explanation of the whole process.

PREMIUMS FOR ENCOURAGING AND IMPROVING MANUFACTURES.

127. MACHINE FOR CARDING SILK. For the best machine, superior to any now in use, for carding waste silk equally well as by hand; to be produced, together with a specimen of the cardings, on or before the first Tuesday in November, 1802; the silver medal, or twenty guineas.

128. CLOTH FROM HOP-STALKS, &c. To the person who shall produce to the Society the greatest quantity, not less than thirty yards of cloth at least twenty-seven inches wide, made in Great Britain, of hop-stalks or bines, or other raw vegetable substances, the produce of Great Britain or Ireland, superior to any hitherto manufactured from such substances, and which can be generally afforded as cheap as cloth of equal quality and appearance now made from hemp, flax, or cotton, and much finer in quality than any hitherto manufactured in England from hop-stalks, &c. the gold medal, or thirty guineas. One pound of the thread of which the cloth is made, and thirty yards of the cloth, together with proper *certificates* that the whole is manufactured from hop-stalks or bines, &c. to be produced to the Society on or before the first Tuesday in December, 1802.

N. B. The Society is already in the possession of cloth made in England from hop-stalks or bines, which may be inspected by application to the housekeeper.

129. WICKS FOR CANDLES OR LAMPS. To the person who shall discover to the Society a method of manufacturing hop-stalks or bines, or any other cheap material, the growth of Great Britain, so as to render them equally fit for the purpose of supplying the place of cotton, for wicks of candles or lamps; twenty guineas. Samples, not less than five pounds weight, of the wicks so prepared to be produced to the Society, with *certificates* that the whole quantity is equal in quality to the sample, on or before the second Tuesday in January, 1803.

130. PAPER FROM RAW VEGETABLE SUBSTANCES. To the person, in Great Britain, who shall, between the first of January, 1802, and the first of January, 1803, make the greatest quantity, and of the best quality, (not less than ten reams) of good and useful paper, from raw vegetable substances, the produce of Great Britain or Ireland, of which one hundred weight has not been used in manufacturing paper previous to January, 1801, superior to any hitherto manufactured from such substances, and which can be generally afforded as cheap as paper of equal quality and appearance now made from rags; twenty guineas.

N. B. The object of the Society being to add to the number and quantity of raw materials used in this manufacture, it is their wish to include every useful sort of paper, and to introduce such natural products as can be easily and cheaply procured in great quantities. The Society are in possession of two volumes containing a great variety of specimens of paper made from raw vegetable substances, *viz.*—nettles, potatoe-hawlm, poplar, hop-bines, &c. which volumes may be inspected by any person on application to the housekeeper.

Certificates of the making such paper, and one ream of the paper, to be produced on or before the second Tuesday in January, 1803.

131. TRANSPARENT PAPER. To the person who shall discover to the Society a method of making paper from the pulp that shall be perfectly transparent, and of a substance and body equal to fools-cap, that shall take and bear common writing ink with the same facility and correctness as writing paper generally in

use; the silver medal, or twenty guineas. *Certificates* of the making such paper, an *account* of the process, and one ream of the paper, to be produced on or before the second Tuesday in January, 1803.

132. TAKING PORPOISES. To the people in any boat or vessel, who, in the year 1802, shall take the greatest number of porpoises on the coast of Great Britain, by gun, harpoon, or any other method, not fewer than thirty, for the purpose of extracting oil from them; the gold medal, or thirty pounds. *Certificates* of the number, signed by the persons to whom they have been sold or delivered for the purpose of extracting the oil, to be produced to the Society on or before the last Tuesday in January, 1803.

133. OIL FROM PORPOISES. To the person who shall manufacture the greatest quantity of oil from porpoises taken on the coast of Great Britain, in the year 1802, not less than twenty tons; the gold medal, or thirty pounds. *Certificates* of the oil having been made from porpoises actually caught on the coast of Great Britain, and two gallons of the oil as a sample, to be produced to the Society on or before the last Tuesday in February, 1803.

PREMIUMS IN MECHANICS.

134. GUNPOWDER-MILLS. To the person who, in the year 1802, shall invent and bring to perfection the most effectual method of so conducting the works of gunpowder-mills, in the business of making gunpowder, as to prevent explosion; the gold medal, or one hundred guineas. *Certificates* and *accounts* of the method having been put in practice in one or more gunpowder-mills in this kingdom, and that it promises, in the opinion of the best judges concerned in such works, to answer the purpose intended, to be produced to the Society on or before the first Tuesday in Feb. 1803.

N. B. As an encouragement to persons to turn their thoughts to improvements of this nature, if any should be made on the present method of conducting the business of gunpowder making, which fall short of the total prevention of explosion, and they are sent to the Society for the sake of humanity, the papers so sent in will receive due consideration, and such bounty or reward will be bestowed thereon as they appear to merit.

135. TRANSIT-INSTRUMENT. To the person who shall invent and produce to the Society a cheap and portable transit-instrument, which may easily be converted into a zenith-sector, capable of being accurately and expeditiously adjusted for the purpose of finding the latitudes and longitudes of places, and superior to any portable transit-instrument now in use; the gold medal, or forty guineas. To be produced on or before the last Tuesday in Jan. 1803.

136. TAKING WHALES BY THE GUN-HARPOON. To the person who, in the year 1802, shall strike the greatest number of whales, not fewer than three, with the gun-harpoon; ten guineas. Proper *certificates* of the striking such whales, and that they were actually taken in the year 1802, signed by the master, or by the mate when the claim is made by the master, to be produced to the Society on or before the last Tuesday in December, 1802.

137. FAMILY MILL. To the person who shall invent and produce to the Society the best constructed mill for grinding corn for the use of private families, or parish-poor; the construction to be such as to render the working of the mill easy and expeditious, and superior to any hitherto in use; the gold medal, or thirty guineas. The mill, and *certificates* of its having been used to good effect, to be produced to the Society on or before the first Tuesday in February, 1803.

N. B. Cheapness and simplicity will be considered an essential parts of its merit; and the mill, or the model, to remain with the Society.

138. MACHINE FOR RAISING COALS, ORE, &c. &c. To the person who shall invent a machine for raising coals, ore, &c. from mines, superior to any hitherto known or in use, and which shall produce the effect at a less expense than those already known or in use; the gold medal, or fifty guineas. A model of the machine, made on a scale of not less than one inch to a foot, with a *certificate* that a machine at large on the same construction has been advantageously used, to be produced to the Society on or before the second Tuesday in February, 1803.

139. MACHINE FOR RAISING WATER. To the person who shall invent a machine on a better, cheaper, and more simple construction than any hitherto known or in use, for raising water out of wells, &c. from a depth of not less than fifty feet; the gold medal, or forty guineas. *Certificates* of the performance of the machine, and a model of it, on a scale of not less than one inch to a foot, to be produced to the Society on or before the first Tuesday in February, 1803.

140. MACHINE FOR MAKING BRICKS. To the person who shall invent the best and cheapest machine for making bricks, superior to any hitherto known or in use, whereby the labour and expence of making bricks in the usual mode, by hand, may be greatly diminished; forty guineas. A model, with *certificates* that a machine at large, on the same construction, has been used to good effect for the purpose of making bricks, and that at least one hundred thousand statute-bricks have been made therewith, to be produced to the Society on or before the first Tuesday in March, 1803.

141. BORING AND BLASTING ROCKS. To the person who shall discover to the Society a

more simple, cheap, and expeditious method than any hitherto known or in use of boring and blasting rocks in mines, shafts, wells, &c.; the gold medal, or thirty guineas. *Certificates* of the method having been practised with success, with a full description thereof, to be delivered to the Society on or before the first Tuesday in January, 1803.

142. HEATING ROOMS FOR THE PURPOSES OF MANUFACTURERS. To the person who shall invent and discover to the Society a method of heating rooms, superior to any hitherto known or in use, and at a moderate expence, for the purposes of painters, japanners, and other manufacturers, so as to avoid the necessity of iron or copper tunnels going through the rooms to convey the smoke, whereby the danger from such tunnels may be prevented; the gold medal, or forty guineas. A model, or complete drawing and description of the method, with *certificates* that it has been successfully practised, to be delivered to the Society on or before the last Tuesday in March, 1803.

143. IMPROVED VENTILATION. To the person who shall invent and produce to the Society a mode of permanently ventilating the apartments in hospitals, workhouses, and other crowded places, superior to any now known or used; the gold medal, or fifty guineas. A model of the apparatus, and a full account of the means by which the effect has been produced, with proper *certificates*, to be delivered to the Society on or before the last Tuesday in February, 1803.

144. MILL STONES. To the person who shall, between the first of February, 1802, and the first of February, 1803, prepare and bring into use the greatest number of mill stones, taken from any quarry in the United Kingdoms, equal in quality to the French burrs, not less than thirty pairs; the gold medal, or thirty guineas. *Certificates* that the said mill stones were all taken from the same quarry, with their prices and dimensions, that they are equal to the French burr, not less than three feet eight inches diameter, and are actually in use, to be produced to the Society on or before the third Tuesday in February, 1803.

145. For the next greatest quantity, not less than twenty-five pair; the silver medal, or fifteen guineas, on similar terms.

146. PREVENTING ACCIDENTS FROM HORSES FALLING WITH TWO-WHEELED CARRIAGES. To the person who shall invent and produce to the Society a method superior to any hitherto known or in use, to prevent accidents from the falling of horses with two-wheel carriages, especially on steep declivities; the silver medal, or fifteen guineas. A model of the apparatus, and a full account of the means by which the effect has been produced, with proper *certificates* that the same has been used with success, to be delivered to the Society on or before the second Tuesday in Jan. 1803.

147. CLEARING THE TURNPIKE AND OTHER ROADS IN WINTER FROM MUD, AND IN SUMMER FROM DUST. To the person who shall discover to the Society the most effectual and the cheapest method, verified by experiments, of clearing the turnpike and other roads of great resort, in winter from mud, and in summer from dust, or most effectually preventing the accumulation of either; the gold medal, or fifty guineas.

148. For the second best account; the silver medal, or twenty guineas. It is required that an accurate *account* of the method used, and every expense attending it, together with satisfactory *certificates* of its being effectual, be delivered to the Society on or before the first Tuesday in March, 1803.

PREMIUMS OFFERED FOR THE ADVANTAGE OF THE BRITISH COLONIES.

149. NUTMEGS For the greatest quantity of merchantable nutmegs, not less than ten pounds weight, being the growth of his Majesty's dominions in the West Indies, or any of the British settlements on the coast of Africa, or the several islands adjacent thereto, and equal to those imported from the islands of the East Indies; the gold medal, or one hundred guineas. Satisfactory *certificates*, from the governor, or commander in chief, of the place of growth, with an *account* of the number of trees, their age, nearly the quantity of fruit on each tree, and the manner of culture, to be produced on or before the first Tuesday in December, 1802.

150. CLOVES. For importing into the port of London, in the year 1802, the greatest quantity of cloves, not less than twenty pounds weight, being of the growth of some of the islands of the West Indies subject to the crown of Great Britain, or any of the British settlements on the coast of Africa, or the several islands adjacent thereto, and equal in goodness to the cloves brought from the East Indies; the gold medal, or fifty guineas. Samples, not less than two pounds weight, with *certificates* that the whole quantity is equal in goodness, together with satisfactory *certificates* signed by the governor, or commander in chief, of the place of growth, with an *account* of the number of trees growing on the spot, their age, and the manner of culture, to be produced to the Society on or before the first Tuesday in January, 1803.

151. PLANTATIONS OF BREAD-FRUIT-TREES. To the person who shall have raised in any of the islands of the West Indies subject to the crown of Great Britain, or in any of the British settlements on the coast of Africa, or

the several Islands adjacent thereto, between the 1st of January, 1801, and the 1st of January, 1802, the greatest number of bread-fruit-trees, not fewer than one hundred, and properly fenced and secured the same, in order to supply the fruit to the inhabitants; the gold medal, or thirty guineas. Proper *accounts* and *certificates*, signed by the governor, or commander in chief, of the methods made use of in cultivating the plants and securing the plantation, and that the trees are in a growing and thriving state at the time of signing such certificates, to be produced to the Society, with samples of the fruit, on or before the first Tuesday in January, 1803.

152. KALI FOR BARILLA. To the person who shall have cultivated, in the Bahama-Islands, or any other part of his Majesty's dominions in the West Indies, or any of the British settlements on the coast of Africa, or the several islands adjacent thereto, in the year 1801, the greatest quantity of land, not less than two acres, with Spanish kali, fit for the purpose of making barilla; the gold medal, or thirty guineas.

153. For the next greatest quantity, not less than one acre, the silver medal, or fifteen guineas. *Certificates*, signed by the governor, or commander in chief, for the time being, of the quantity of land so cultivated, and of the state of the plants, at the time of signing such certificates, to be delivered to the Society, with samples of the kali, on or before the second Tuesday in January, 1803.

154. The same premium is extended one year farther. *Certificates* to be produced on or before the second Tuesday in January, 1804.

155. DESTROYING THE INSECT COMMONLY CALLED THE BORER. To the person who shall discover to the Society an effectual method of destroying the insect commonly called the borer, which has, of late years, been so destructive to the sugar-canes in the West India islands, the British settlements on the coast of Africa, and the several islands adjacent thereto; the gold medal, or fifty guineas. The discovery to be ascertained by satisfactory *certificates*, under the hand and seal of the governor, or commander-in-chief, for the time being, and of some other respectable persons, inhabitants of the islands, or other place, in which the remedy has been successfully applied; such *certificates* to be delivered to the Society on or before the first Tuesday in January, 1803.

156. CULTIVATION OF HEMP IN UPPER AND LOWER CANADA. To the person who shall sow with hemp the greatest quantity of land in the province of Upper Canada, not less than six arpents (each four-fifths of a statute acres, in the year 1802, and shall at the proper season cause to be plucked the summer hemp (or male hemp bearing no seed) and continue the winter hemp (or female hemp bearing seed) on the ground until the seed is ripe; the gold medal, or one hundred dollars.

157. To the person who shall sow with hemp the next greatest quantity of land in the same province of Upper Canada, not less than five arpents, in the year 1802, in the manner above-mentioned; the silver medal, or eighty dollars.

158. For the next greatest quantity of land, in the same province, and in a similar manner, not less than four arpents; sixty dollars.

159. For the next greatest quantity of land, in the same province, and in a similar manner, not less than three arpents; forty dollars.

160. For the next greatest quantity of land, in the same province, and in a similar manner, not less than one arpent; twenty dollars. *Certificates* of the number of arpents, the method of culture, of the plucking of the hemp, with a general *account* whether sown broad-cast or in drills, the expense, soil, cultivation, and produce to be transmitted to the Society, certified under the hand and seal of the governor or lieutenant-governor, together with 28 lb. of the hemp, and two quarts of the seed, on or before the first Tuesday in November, 1803.

161, 162, 163, 164, 165. The same premiums are extended one year farther. *Certificates*, &c. as before-mentioned, to be transmitted to the Society, on or before the last Tuesday in February, 1804.

166 to 176. Premiums exactly similar in all respects to those held out for the province of Upper Canada, are also offered for the province of Lower Canada, and are extended to the same period.

177. IMPORTATION OF HEMP FROM CANADA. To the master of that vessel, which shall bring to this country the greatest quantity of marketable hemp, not less than one hundred tons, in the year 1803, the produce of Upper or Lower Canada; the gold medal.

178. To the master of that vessel which shall bring the next quantity, not less than fifty tons; the silver medal. *Certificates* satisfactory to the Society to be produced by the master of the vessel on or before the first Tuesday in February, 1804, to testify that such hemp was grown and prepared in Canada.

PREMIUMS OFFERED FOR THE ADVANTAGE OF THE BRITISH SETTLEMENTS IN THE EAST INDIES.

179. BHAUGULPORE-COTTON. To the person who shall import into the port of London, in the year 1802, the greatest quantity, not less than one ton, of the Bhaugulpore cotton, from which clothes are made in imitation of nankeen, without dying; the gold medal. A quantity of the cotton, not less than five pounds weight in the pod, and five pounds carded, to be produced to the Society, with proper *certi-*

ficates, signed by the secretary to the board of trade of Bengal or Bombay, on or before the last Tuesday in February, 1803.

180. ANNATTO. To the person who, in the year 1802, shall import into the port of London, from any part of the British settlements in the East Indies, the greatest quantity of annatto, not less than five hundred weight; the gold medal. A quantity of the annatto, not less than ten pounds weight, to be produced to the Society, with proper *certificates*, signed by the secretary of the board of trade of the respective settlement, that the annatto is the produce of such settlement, on or before the last Tuesday in February, 1803.

181. TRUE COCHINEAL. To the person who, in the year 1802, shall import into the port of London, from any part of the British settlements in the East Indies, the greatest quantity of true cochineal, not less than five hundred weight; the gold medal. A quantity of the cochineal, not less than ten pounds weight, with proper *certificates*, signed by the secretary of the board of trade of the respective settlement, that the cochineal is the produce of such settlement, to be produced to the Society on or before the first Tuesday in February, 1803.

CONDITIONS FOR THE POLITE ARTS.

No person who has gained the first premium in any class shall be admitted a candidate in a class of an inferior age; and no candidate shall receive more than one premium in one year; nor shall they, who for two successive years have gained the first premium in one class, be again admitted as candidates in that class.

No person shall be admitted a candidate in any class, who has three times obtained the first premium in that class.

No more than one performance in any class shall be received from the same candidate.

All performances (to which premiums or bounties are adjudged) shall remain with the Society till after the public distribution of rewards in May, when they will be re-delivered unless mentioned in the premiums to the contrary.

No performance shall be admitted, that has obtained a premium, reward, or gratification, from any other society, academy, or school, or been offered for that purpose.

All performances that obtain premiums in the Polite Arts must have been begun after the publication of such premiums, except line engravings.

To encourage real merit, and prevent attempts to impose on the Society, by producing drawings made or retouched by any other person than the candidate, the Society require a specimen of the abilities of each successful candidate in classes 97 to 122 inclusive, under the inspection of the Committee of Polite Arts, in every instance where such proof may appear necessary.

All candidates in the Polite Arts are required to signify, on their drawings, their age; and whether the performances are originals or copies; and if copies, whence they were taken.

SOCIETY'S OFFICE, ADELPHI, JUNE 1st, 1802.

ORDERED,

That the several Candidates and Claimants to whom the Society shall adjudge Premiums or Bounties, do attend at the Society's Office in the Adelphi, on the last Tuesday in May 1803, at Twelve o'Clock at Noon precisely, to receive the same; that Day being appointed by the Society for the Distribution of their Rewards: And before that Time no Premium or Bounty will be delivered, excepting to those who are about to leave the kingdom.

In Cases where the Society may think fit to admit Excuses for not attending in Person, Deputies may be substituted to receive the Rewards, provided such Deputies are either Members of the Society, or the superior Officers thereof.

GENERAL CONDITIONS.

As the great object of the Society in rewarding individuals is to draw forth and give currency to those inventions and improvements, which are likely to benefit the public at large, candidates are requested to observe, that if the *means*, by which the respective objects are effected, do require an expense or trouble too great for *general purposes*, the Society will not consider itself as bound to give the offered *reward*; but, though it thus reserves the power of giving in all cases such part only of any premium as the performance shall be adjudged to deserve, or of withholding the whole if there be no merit, yet the candidates may be assured the Society will always judge liberally of their several claims.

It is required that the matters for which premiums are offered, be delivered in without names or any intimation to whom they belong; that each particular thing be marked in what manner

each claimant thinks fit, such claimant sending with it a paper sealed up, having on the outside a corresponding mark, and, on the inside, the claimant's name and address; and all candidates are to take notice, that no claim for a premium will be attended to, unless the conditions of the advertisement are fully complied with.

No papers shall be opened, but such as shall gain premiums, unless where it appears to the Society absolutely necessary for the determination of the claim; all the rest shall be returned unopened with the matters to which they belong, if inquired after by the mark, within two years; after which time, if not demanded, they shall be publicly burnt, unopened, at some meeting of the Society.

All models of machines, which obtain premiums or bounties, shall be the property of the Society; and, where a premium or bounty is given for any machine, a perfect model thereof shall be given to the Society.

All the premiums of this Society are designed for Great Britain and Ireland, unless expressly mentioned to the contrary.

The claims shall be determined as soon as possible after the delivery of the specimens.

No person shall receive any premium, bounty, or encouragement, from the Society, for any matter for which he has obtained, or purposes to obtain, a patent.

A candidate for a premium, or a person applying for a bounty, being detected in any disingenuous method to impose on the Society, shall forfeit such bounty, and be deemed incapable of obtaining any for the future.

The performances which each year obtain premiums or bounties are to remain with the Society until after the public distribution of rewards.

No member of this Society shall be a candidate for, or entitled to receive, any premium, bounty, or reward, whatsoever, except the honorary medal of the Society. The candidates are, in all cases, expected to furnish a particular account of the subject of their claims; and, where certificates are required to be produced in claim of premiums, they should be expressed, as nearly as possible, in the words of the respective advertisements, and be signed by persons who have a positive knowledge of the facts stated.

Where premiums or bounties are obtained in consequence of specimens produced, the Society mean to retain such part of those specimens as they may judge necessary, making a reasonable allowance for the same.

No candidates shall be present at any meetings of the Society or committees, or admitted at the Society's rooms, after they have delivered in their claims, until such claims are adjudged, unless summoned by the committee.

N. B. The Society farther invite the communications of scientific and practical men upon any of the subjects for which premiums are offered, although their experiments may have been conducted upon a smaller scale than the terms of each require, as they may afford ground for more extensive application, and thus materially forward the views of the Society and contribute to the advantage of the public. Such communications to be made by letter, addressed to the Society, and directed to Mr. CHARLES TAYLOR, the Secretary, *at the Society's Office, in the Adelphi, London.*

The models required by the Society should be upon the scale of one inch to a foot. The Winchester bushel is the measure referred to for grain; and, as the acres of different districts vary in extent, it is necessary to observe, that the Society mean Statute Acres, of five and a half yards to the rod or pole, when acres are mentioned in their list of premiums; and they request that all communications to them may be made agreeably thereto.

The Society desire that the Papers on different subjects sent to them may be full, clear, explicit, fit for publication, and rather in the form of Essays than of Letters.

*** To persons inclined to leave a sum of money to this Society by will, the following form is offered for that purpose:

Item. I give and bequeath to A. B. and C. D. the sum of upon condition and the intent that they, or one of them, do pay the same to the collector for the time being, of a Society in London, who now call themselves the Society for the Encouragement of Arts, Manufactures, and Commerce; which said sum of I will and desire may be paid out of my personal estate, and applied towards the carrying on the laudable designs of the Society.

By Order of the Society,

CHARLES TAYLOR, *Secretary.*

C. Whittingham, *Printer*, Dean Street, Fetter Lane, London.

HISTORY.

National Transactions.

GREAT Britain begins at length, again to enjoy the benefits of peace The farther reduction of her naval and military eſtabliſhment will tend to alleviate the burthens with which the nation has been oppreſſed. Our late enemies opening their eyes to their real intereſt, and, actuated by a more liberal ſpirit of policy, no longer oppoſe obſtacles to an unreſtrained intercourſe between the two nations. The French government has deputed M. Cocquebert Montbret, to arrange with our Miniſtry ſuch commercial regulations as will be attended with reciprocal benefit to both countries. The meaſures adopted on this head by the Batavian government likewiſe will afford ſufficient proof of its deſire to cultivate the relations of amity with Great Britain. The preſent proſpect of the ſituation of this country is conſolatory and cheering. The apprehenſions ſhe entertained for her Weſt India Iſlands are diſpelled, and diſpoſitions are making for the improvement of her new acquiſitions. The ports of the Continent will be again open to her manufactures; the produce of the Peruvian mines, and the wealth of kingdoms will be poured into her lap, whilſt the ſmiling plains promiſe an ample reward to the toil of the huſbandman.

The following are the principal ſubjects that have engaged the attention of the Parliament of the united kingdom during the laſt month:

June 3, the Houſe of Commons reſolved that the Iriſh 6 per cent. duties on the importation of Britiſh goods ſhould ceaſe. Mr. Corry, who explained their origin, having ſtated that they did not produce above 10,000l. per ann.

In the Committee of Supply, on the 9th of June, Mr. Elliott moved, that 70,000 men, including 14,000 marines, be granted for the ſervice of the navy for ſeven months, from the 25th of June to the 24th of December.

The Houſe then voted,	for Victuals . . .	£. 931,000
	For Wear and Tear . .	1,470,000
	For Ordnance on board the Ships .	122,500
		£. 2,523,500

The army eſtimates for the remainder of the year were then propoſed by the Secretary at War. He ſtated that the number of men already diſbanded amounted to 65,184, which created a ſaving of 3,327,975*l.* The total number it was propoſed to keep up for the ſervice of Great Britain and Ireland was 70,299, the expence of which amounted to 2,473,220*l.* Three foreign corps were likewiſe to be retained, which, including the charge neceſſarily incurred whenever they might be diſembodied, would create an additional expence of 221,000*l.* Mr. Addington, in his defence of this eſtimate, in the debate upon it, ſaid, that Ireland alone required a force of 25,000 men, and that an equal number was neceſſary for our colonies, including the new acquiſitions. The ſaving to the country by the preſent reduction would be 5,000,000*l.* and when he took into view the difference of the army extraordinaries it would not be leſs than 7,000,000*l.* It was intended, even when a farther reduction ſhould take place, to keep the army conſiderably above the eſtabliſhment of 1791. The following reſolutions were then put and agreed to:

For guards and garriſons	£. 764,391
Land forces in Ireland	439,035
Plantations, &c.	352,844
Four troops of dragoons	3,227
Ditto, recruiting for India	17,229
Recruiting ſervice	77,500
Recruiting cavalry	174,000

General and ſtaff officers, Great Britain	£.13,847
Ditto ——————, Ireland	13,868
Staff hoſpitals, Ireland	7,981
Supernumerary officers, Great Britain	27,754
Ditto ——————, Ireland	1,200
Civil officers, agency, accounts, &c.	100,875
Muſter maſters, Ireland	5,191
Beer money, Great Britain	140,000
Ditto, Ireland	60, 13
Reduced officers, Great Britain	35,035
Ditto, Ireland	6,211
Half-pay officers, Great Britain	144,500
Ditto, Ireland	26,109
Ditto militia officers	45,205
States General	736
Chelſea Hoſpital	166,511
Kilmainham Hoſpital	26,193
Officers' widows, Great Britain	16,171
Ditto, Ireland	3,873
General ſtaff, Great Britain	17,232
Volunteers, Great Britain	72,000
Ditto, Ireland	68,966
Barracks, Great Britain	297,182
Ditto, Ireland	136,100
Foreign corps	321,800
Salaries of the Governor, &c. of the Military College	6,369
For the Royal Military Aſylum at Chelſea	13,000
Medicines, bedding, &c. for military hoſpitals	16,191
When there were granted for the ſervice of the ordnance of Great Britain for ſix months, from the 1ſt of July next	272,266
For charges in that department, not provided for by Parliament	17,888
Arrears due to the officers of ordnance, for the land ſervice for 1801	122,917
For the ordnance ſervice of Ireland for ſix months	53,078
Mr. Corry moved, that there be granted to his Majeſty for the diſcharge of the Iriſh Treaſury bill for 1802	372,158
For defraying the expence of printing the Journals of the Houſe of Lords of Ireland	2,325
Printing the Journals of the Houſe of Commons of Ireland	6,951
For making an Index to the latter	3,584
The above reſolutions were all agreed to, and a bill was brought in for equalizing the rate of poſtage on French and Dutch letters.	
On the 11th of June, Mr. Addington, in the committee of ſupply, after explaining the cauſes of the deficiency of the conſolidated fund, moved, that to cover the deficiency for laſt year, a ſum be granted not exceeding	2,676,280
For paying off Exchequer bills, iſſued in the 39th and 40th of his preſent Majeſty	1,166,000
For bills drawn by the Colony of New South Wales	30,000
For corn bounties in Scotland	23,082
For military roads in Scotland	6,012
To the Agricultural Society	3,000
To the Veterinary College	1,500
To the managers of the Britiſh Muſeum	3,000
To Mr. James Edwards, for the like ſum advanced on the loan of 1795	1,108
The Houſe then voted for the ſupport of the Sierra Leone Company's eſtabliſhment	10,000
For repairing the Church of St. Margaret, Weſtminſter	4,500

For defraying the expence of the Iriſh yeomanry corps till the 24th of December, 1802 . . . . £.30,000

In the Committee of Ways and Means Mr. Addington ſtated, that the firſt article he ſhould propoſe towards making good the ſupply, was the ſum of 4,500,000*l.* the probable ſurplus of the produce of the conſolidated fund to the 5th of April, 1803, according to the following documents.

The permanent taxes produced	20,566,000
Diſtilleries and corn bounties	2,500,000
New taxes	2,400,000
Arrear of Income tax	2,500,000
——— miſcellaneous taxes	300,000
Unredeemed land tax	1,300,000
So that the income of the year would amount to	29,566,000
The charges upon the funds were	25,038,318
Leaving a ſurplus of	4,527,682

This reſolution being agreed to, was followed by three others voting to be raiſed by Exchequer bills . . . 1,500,000

Out of the ſubſidy granted to Portugal	99,887
Surplus grants	114,000
Total	£.6,241,569

In the Committee of Supply of June 14, Mr. Elliott moved, that 637,316*l.* be granted for the ordinary eſtabliſhment of the navy for ſeven months, from the 25th of June to 24th of December, 306,236*l.* for the extraordinary ſervice for the ſame period, 608,548*l.* 16*s.* 1*d.* for the tranſport ſervice, and 12,000*l.* for priſoners of war.—Mr. Addington then moved the remaining ſupplies for the year as follow:

To the army and navy, as an equivalent for the Dutch ſhips which ſurrendered to Admiral Mitchell in September, 1795, £.195,812

Secret ſervice money	90,000
African ſettlements	70,000
Police offices	5,903
Commiſſaries under the American treaty	11,948
Printing the Journals of Parliament	4,605
——— Votes	12,000
Publiſhing the records	4,707
Expence attending the returns of the population of Great Britain	612
Alterations and repairs of both Houſes of Parliament	19,000
Repairing office of the Duchy of Cornwall	698
Encreaſed half-pay to the officers of the navy, commencing July 1, 1802,	30,000

Mr. Corry moved, that 50,000*l.* be granted to defray the civil contingent ſervices of Ireland.

After a few remarks from Mr. Tierney, the above reſolutions were agreed to.

The Houſe having gone into a Committee of Ways and Means, Mr. Addington recapitulated the various heads of ſupply, and of ways and means already granted this ſeſſion: Theſe amounted in the whole to 40,168,682*l.*

The ways and means by which they were provided for were

The duty on penſions	2,000,000
——— on malt	750,000
Lottery	370,000
Surplus of ſubſcription on Exchequer bills funded	180,874
——— grants 1801	114,000
——— grant for Portugueſe ſubſidy	19,886
——— conſolidated fund	4,500,000
Exchequer bills on the aids of 1803	5,000,000
Ditto for a moiety of the ſum advanced by the Bank	1,500,000
Loan	23,000,000

Total of the ways and means for England . .	37,514,760
Of this Ireland had to provide . .	3,815,718
Giving a total for both countries of . .	41,330,478

and yielding a ſurplus over the eſtimate of ſupplies of 161,796*l.*—The permanent taxes, Mr. Addington continued were 32,853,000, from which deducting the permanent charges for the intereſt of debt, &c. being 23,520,000*l.* there would remain a ſurplus applicable to the public ſervice of 9,333,000*l.* which was conſiderably more than 3,600,000*l.* beyond the amonnt in 1792.

Mr. Corry, the Chancellor of the Exchequer for Ireland, then roſe and ſtated the ſeparate and joint charges for that country, and the means for defraying them. The whole conſtituted a ſum of 7,429,000*l.* Iriſh money. The ways and means he ſtated at 7,592,000*l.* affording a diſpoſable ſurplus of 163,000*l.* The only new tax he propoſed was on imports and exports, to the amount of 99,244*l.* From the import duty are exempted aſhes, ſmalts for glue, flax-ſeed, hemp, tow, and foreign ſalt uſed in curing proviſions; and from the export duty, cotton goods, and corn. The tonnage duty he had abandoned from the conſideration that 5-6ths of the ſhipping employed in the Iriſh trade were actually the property of Britiſh ſhip owners.

On the 15th the French poſtage and the Wet Docks bill were read a third time, and paſſed.

Bills were brought in for repealing the duties on oil; for granting a penſion to Lord Hutchinſon; for extending the proviſions of the Southern Whale fiſhery.

On the 17th, the Lord Chancellor's ſalary bill, the Iriſh 6 per cent. duty repeal bill, and ſeveral others, were read a third time and paſſed.

Nothing of particular moment has ſince engaged the attention of the Houſe.

The court of Sweden, it is ſtated ſtill harbours ſentiments unfriendly to the Convention of 1801, and that it was compelled only by imperious neceſſity to abandon the principles of the Northern Confederacy, and to accede to the above Convention. Hence we may ſuſpect that the ſame ſubject is likely again to prove a cauſe of contention in any future war.

The King has aboliſhed the impreſs for the land ſervice, and decreed that no Swede ſhall hereafter be compelled to bear arms.

The Batavian government has given unequivocal proofs of its deſire to eſtabliſh an amicable intercourſe with this country. It propoſes to admit the free importation of Britiſh goods, upon paying the ſame duties as before the war. In the reduced ſtate of Dutch commerce, this meaſure muſt be highly acceptable to the mercantile part of that republic, and the liberal ſpirit indicated by it, gives room to expect a commercial treaty between the two countries.

The attention of the Dutch legiſlature is engaged with the re-eſtabliſhment of their fiſheries, one of the principal ſources of the former greatneſs of that republic.

AUSTRIAN DOMINIONS.—The Emperor of Germany has met the Diet of Hungary. All the meaſures propoſed tend to increaſe the power of the ſovereign. The principal of them are: to regulate the army of inſurrection, a kind of militia. The levy of recruits, that in future it may be carried into effect by order of the King alone, and not by that of the provincial meetings. The eſtabliſhment of a heavy duty on ſalt. The union of Dalmatia to Hungary and of the counties of Liſſenſtadt, Oldenburgh and Waſſelburgh to Auſtria, &c. The augmentation of the revenues of the Crown, by two millions of florins, about 90,000*l.* The facility with which the ſtates have complied with the laſt demand, augurs that the others will not meet with much oppoſition.

At Vienna, the monaſtic orders and eccleſiaſtical inſtitutions which Joſeph II. conceived he had for ever annihilated, are again eſtabliſhed. The lectures of the profeſſors are attended by ſpies, and the utmoſt precautions are taken to prevent the introduction of obnoxious principles. The prohibition on certain books is continued, and the capital of Germany is diſgraced by meaſures calculated for the meridian of the 15th century.

The adjuſtment of the indemnities in Germany, appears to proceed but ſlowly. The King of Pruſſia, diſguſted, it is ſaid, with this delay, is about to ſeize, by force, thoſe diſtricts deſtined to encreaſe his dominions. An army of 30,000 men is ſtated to be in readineſs to aſſert his claims to Hildeſheim, Paderborn, the duchy of Weſtphalia, and the diſtricts of Eichsfeld and Erfurt.

From the ſame authority, we are informed that Oſnaburgh is to be united to the Electorate of Hanover, that Auſtria is to have Salzburg, Paſſau, and ſome eccleſiaſtical poſſeſſions in Suabia; Wirtemberg, ſome of the Suabian imperial cities; the Grand Duke of Tuſcany, Venice; Bavaria, Bamberg, and Wurzburg; the Prince of Orange, Corvey and Fulda; the Landgrave of Heſſe Caſſel, Wetzlar, Amoneburg and the electoral dignity, and Heſſe Darmſtadt, the biſhopric of Munſter.

Switzerland is ſtill the theatre of factious diſcord and internal commotions.

A new conſtitution has been propoſed for the Helvetic republic, ſuppoſed to be agreeable to the French government, and will, it is thought, reſtore tranquillity to theſe cantons; the following is an abſtract of it:

The Chriſtian religion in the Catholic and Proteſtant communions is the religion of the ſtate. The former diviſion of the republic, into eighteen cantons, is preſerved. The public powers are compoſed of a Diet, a Senate and Executive Council. The Diet to conſiſt of repreſentatives in the proportion of one out of every 25,000 ſouls, and its functions are to diſcuſs, adopt or reject plans of laws ſubmitted to it by the Senate. The Senate conſiſts of a Landamman, two Statthalters, and twenty-four other members, propoſes laws, treaties, &c. to the Diet, and regulates the public expenditure. Each Senator has a ſalary of 4000 francs. The Executive Council compoſed of the Landamman and the two Statthalters, has under it five ſecretaries of ſtate. The members of the Executive Council are appointed for nine years. It ſuperintends the execution of the laws, and appoints to civil and military offices. The Landamman's ſalary is 15000 francs, the Statthalter's 6000. Each canton regulates its internal government and expenditure.

Zurich, Bern, and other places have been viſited with a ſmart ſhock of an earthquake, rather an uncommon phænomenon in that part of the Continent.

The government of France, ſeems at length eſtabliſhed on a firm baſis for the preſent. Bonaparte has been appointed Conſul for life, without oppoſition; and this military ſovereign has adopted all the etiquette of a court. The ſcarcity of corn is an object of conſiderable uneaſineſs to the government, which diſplays a laudable ſolicitude to alleviate it. Commerce begins to reſume its wonted activity, and the reduction of Touſſaint, will afford ſcope for a ſpirit of mercantile adventure. Bonaparte has declared himſelf favourable to the freedom of trade, and a commercial treaty with England, appears to be in ſerious contemplation.

General Andreoſſi whoſe military talents have procured him deſerved celebrity, is appointed Ambaſſador to the Court of London; and his predeceſſor, M. Otto, goes in the ſame capacity to America.

The moſt liberal encouragement is given to arts and manufactures, and the ſum of 150,000 francs has been ſet apart for the improvement of machinery for ſpinning cotton.

The breeding of ſheep is likewiſe an object of ſerious attention to the preſent rulers of France.

Turkey exhibits the ſpectacle of a ſtate no longer capable of maintaining internal order and tranquillity. Excepting in the capital, diſorder, confuſion, nay, even anarchy, prevail throughout every part of that extenſive empire. It

is not, therefore, matter of ſurprize, that the Porte is unable to collect a force ſufficient to chaſtiſe the Pachas, who are revolting, one after the other.

It is very doubtful whether the Porte can maintain its authority in Egypt. The laſt accounts mention, that the refractory Pachas are in great force, and that the Grand Vizier has not been very ſucceſsful againſt them. The utmoſt efforts are making to reinforce the Grand Vizier's army. In the preſent diſtracted ſtate of affairs, it is not improbable that Egypt may again fall under the yoke of the Beys.

The rumour of a confederacy for the partition of the Ottoman Empire, and of preparations for that enterprize, appear at preſent deſtitute of foundation, but that ſome great changes in that quarter are not far diſtant, is the general opinion.

The Turkiſh Ambaſſador has arrived at Paris, where he has been received in a diſtinguiſhed manner.

The Spaniſh government has taken the advantage of the interval ſince the peace, to tranſport to the mother country the colonial treaſures deſtined for her; 40,000,000 dollars have arrived at Cadiz ſince the concluſion of the definitive treaty.

The King has united the Langues and effects of the order of Malta in his ſtates, to the royal domains, and declared himſelf Grand Maſter of that order in Spain. What effect this will have on the new order of Malta, created by the treaty of Amiens, cannot yet be determined.

From Italy we learn, that the government of the Italian republic is now organized, and that the three colleges have aſſumed their functions.

The territory of Genoa is ſtill infeſted by brigands, who under the command of a chief, called *the Devil*, commit the moſt daring depredations, but troops have been ſent to ſtop their outrages.

The rumoured partition of the kingdom of Naples is without foundation. That court is cultivating the friendſhip of the Spaniſh Monarch, by a renewal of their former family connections.

An earthquake in the north of Italy has done conſiderable injury. The city of Crema has ſuffered much, and the village of Menquin about forty miles from it, with all its inhabitants, and a lake ten miles in circuit have been ſwallowed up.

The Pope has choſen the Ruſſian Count Tommaſi, to be Grand Maſter of Malta; the Ruſſian troops have ſailed from that iſland to Corfu.

The King of Etruria, ſeems determined to diſpoſe of his perſon and his dominions to the Roman Pontiff. Eccleſiaſtical juriſdiction is re-eſtabliſhed in the plenitude of power poſſeſſed by the church in the ages of barbariſm and ignorance. The rumours of his depoſition are certainly premature, but it is extremely probable that this devout ſubmiſſion to the Holy See will give umbrage to the ruler of France, whoſe interference will be required to counteract its effects.

The war in St. Domingo is probably terminated. Touſſaint, Chriſtophe, Deſſalines have ſurrendered, and all the magazines and artillery have fallen into the hands of the French. The rebel negroes thus deſerted by their leaders cannot it is imagined oppoſe any effectual reſiſtance.

By a proclamation of General Leclerc, French ſhips are to pay only half the duty of foreign ones at St. Domingo, and goods not manufactured in France are to pay 20 per cent. Theſe regulations have given great diſſatisfaction in the mother country, and the merchants of Havre have petitioned the government againſt them, as ruinous to the colony.

The rebuilding of the Cape proceeds rapidly, and no exertions are ſpared to reſtore the colony to its former ſtate of proſperity.

In the Britiſh Weſt Indies, a circumſtance of a very unfortunate nature has lately taken place. We allude to the mutiny of the black regiment at Prince Rupert's bay in Dominica. It was not till they had killed ſeveral of their officers, that Governor Johnſton ſucceeded in quelling it by the aid of the

military. The negroes defended themſelves obſtinately, and loſt above 100 men in the conteſt. It is ſuppoſed to have originated in an attempt to diſband them, and an apprehenſion that they were to return into ſlavery to private maſters.

The reduction of Touſſaint in St. Domingo, is conſidered a circumſtance of great importance to the tranquillity of our Weſt India poſſeſſions.

A commiſſion has been appointed to ſurvey Trinidad, and that iſland will no doubt ſhortly exhibit a very different aſpect from what it did in the hands of its former indolent poſſeſſors.

The American States enjoying an uninterrupted period of peace, are rapidly encreaſing in wealth and commercial conſequence. The augmentation of the revenue from poſtage, may ſerve to demonſtrate this. In the year 1797, it amounted to 46,000 dollars, in 1798, to 57,000. In 1799, it was only 36,000 dollars, in conſequence of the great depredations ſuſtained in that year by the commerce of America. In 1800, it amounted to 80,000 dollars, whereas before the year 1797, it had never exceeded 53,000.

Congreſs has voted the ſum of 2,644,000 dollars, for carrying into effect the convention between the United States and Great Britain.

The American merchants complain heavily of the injuries and loſſes ſuſtained by their trade to St. Domingo, by the French. General Leclerc, however, juſtifies the harſh meaſures enforced againſt them, on the ground that they had ſupplied the negroes with ammunition.

In the Eaſt Indies, an event has taken place, which has occaſioned much animadverſion at home, and is likely to become the ſubject of ſerious diſcuſſion. The Company advancing gradually in their ſcheme of territorial aggrandizement, has compelled the Nabob of Oude to ſurrender in perpetual ſovereignty certain portions of his dominions, yielding an annual revenue of 1,350,000*l.* in commutation to the ſubſidy payable to the Company.

Commercial Affairs.

COALS imported into the coaſts of the ocean from Antwerp incluſively, not comprehending la Somme, are to pay for the ton of 22 quintals, 15 francs (12s. 6d.) from the entrance of the department of la Somme and from Rhedon as far as Sables d' Olonne, as well as in all the ports of the Mediterranean, 10 francs (8s. 4d.) in all the other ports the duty is to be 8 francs (6s. 8d.)

The dearneſs of corn has raiſed the price of rice in France, and the news from St. Domingo, and accounts of other inſurrections of the negroes, have likewiſe enhanced the price of colonial produce.

By the information preſented to the Houſe of Commons, reſpecting the Iſland of Trinidad, it appears that 400 allotments of land had been appropriated under the Spaniſh Government, and that there remains at the diſpoſal of our Government, the vaſt tract of 2720 diviſions of land of 320 acres each, equal to 370,400 acres. The white inhabitants were 2151; free people of colour 4476: ſlaves 10,009; and Indians 1082.

The amount of the ſums received by the Commiſſioners for the reduction of the national debt, in the year ending 5th January laſt was 5,310,511*l.* 9s. 6d.

A valuable mine of manganeſs has been diſcovered lately near the city of Exeter: manganeſe is a porer ſort of iron ore much uſed by linen and cotton bleachers.

There never was known ſo great an activity in the manufacture of Blackburn calicoes, as at preſent; the orders for them being immenſe. Many weavers at this time earn from 45s. to 50s. per week; and numbers of boys and girls, of 12 years of age, can earn a guinea per week at the loom.

A perſon poſſeſſing conſiderable property in St. Domingo, has lately pre-

ſented to the Athenæum of Arts at Paris, a quantity of Cochineal Sylveſtre, the produce of his own eſtate, affording as fine a dye as the Mexican inſect. Many experiments have proved it to be of equal excellence in every reſpect, and the Athenæum has reſolved (at the requeſt of the donor) to preſent two yards of ſcarlet cloth, dyed with this cochineal, to the Firſt Conſul, as a proof that the Iſland of St. Domingo, independent of its ſugars and coffee, may become a ſource of conſiderable advantage to the mother country. The revenue received a duty of 18 millions of livres from cochineal, before the war.

Long wool has declined in price within the laſt ſix weeks, from 5s. to 6s. a tod, and the beſt Southdown wool is now ſelling at 1s. 9d. per pound. Even at theſe reduced prices the raw material is much higher than the manufactured article will bear.

In conſequence of the Bookſellers' petition to the Houſe of Commons for an abatement of the tax on paper, the duty on papers of the firſt quality has been reduced from 5d. to 3d. per pound, and on papers of the third claſs from 2d. to 1½d. per lb.

The current prices of cotton, twiſt, and weft, at Blackburn, are as follow: Twiſt, No. 20, 2s. 4d. to 2s. 6d.—Weft, No. 18, 2s. to 2s. 2d.—Ditto, No. 30, 2s. 10d. to 3s. od.—Ditto, No. 40, 3s. 5d. to 3s. 6d.

Bread is kept down in Paris, to 18 ſous (9d.) for the loaf of 4 pounds, but this is done at an expence to government of not leſs than 30,000 livres per day. In the provinces where the bakers are not indemnified, the price has riſen to 24 ſous.

It will ſhew to what degree of luxury we are arrived in England, and in what requeſt the wines of France are held, when we ſtate that the cellar of a conſiderable merchant, ſold by public auction, as follows:

Champaigne de Sillery, at	18½ guineas per dozen
Claret . .	15
Hock and Madeira	12
Port . . .	5

And all his other wines in the ſame proportion.

The duty of three gilders fifteen ſtivers on every cwt. of butter exported from Holland, is ordered by that Government to be collected till the end of November, 1802.

The King, with the conſent of the city of London, has granted permiſſion to the Earl of Darnley to eſtabliſh a new market in the vicinity of Finſbury-ſquare, for the accommodation of the metropolis.

By an account laid before the Houſe of Commons, the amount of permanent taxes, including thoſe exiſting before and impoſed ſince the war, for the year ending April 5, 1802, is 22,599,198l. 5s. 7¾d. viz. in the firſt quarter, 5,718,550l. 7s. 4¾d.—Second quarter, 6,638,101l. 5s. 1½d.—Third quarter, 5,329,180l. 14s. 6½d.—Fourth quarter, 4,910,365l. 18s. 7¾d.

A perſon of Northumberland, has this year made a web from the ſtems of nettles, in appearance reſembling linen, and promiſing equal duration.

From the Hague, we learn, that the importation of foreign teas into the Batavian Republic, is prohibited.

The following is an account of the number of cargoes of fiſh brought to the port of London, and ſold at Billingſgate market during the four laſt years, ending 25th March:

				Cargoes.
March 1798	to March	1799	——	1407
—— 1799	——	1800	——	1623
—— 1800	——	1801	——	2167
—— 1801	——	1802	——	2668

The manufacturers of cloth, kerſeymere, &c. at Limburg, have reſolved to invite Engliſh artiſts to ſettle there, to perfect that branch of national induſtry, which has been for ſome years in a declining ſtate. The manufacturers of Leyden adopted the ſame meaſure ſeveral years ago, and now feel the beneficial effects in the great improvement of their kerſeymeres, &c.

Agriculture.

ON June 14, the grand annual Sheep-Shearing commenced in the Park Farm-yard, at Woburn, agreeably to the appointment of the late Duke of Bedford. The preſent Duke having abſented himſelf for obvious reaſons, Lord Somerville undertook the management.

The premiums offered for this year, were:

To the perſon, in Bedfordſhire, who ſhall, between June and Chriſtmas, 1801, expend the largeſt ſum, (not leſs than 60 guineas), in the purchaſe of breeding ewes or theaves of the new Leiceſter or South Down breed, and put them upon a tup of the ſame ſort in the years 1801 and 1802, a premium of fifty guineas.

All other candidates for the preceding premium, who appear to have expended a ſum not leſs than 60 guineas, ſhall have the uſe of a ram, in the year 1802, of the ſame breed as the ewes purchaſed, gratis.

To the perſon who ſhall breed and produce, at Woburn ſheep ſhearing, June, 1802, the beſt two-ſhear fat wether, the premium of a ſilver cup, value ten guineas.

To the perſon who ſhall breed, in Bedfordſhire, and produce at Woburn ſheep ſhearing, 1802, the beſt two-ſhear fat wether, five guineas. The ſame perſon not to have both premiums.

To the perſon who ſhall breed, in Bedfordſhire, and produce at Woburn ſheep ſhearing, the beſt theave, a ſilver cup, value ten guineas.

To the perſon who ſhall produce the ſecond beſt theave, a ſilver cup, value five guineas, The ſame perſon not to have both premiums.

To the perſon who ſhall produce the beſt boar, five guineas.

To the beſt ſhearer, five guineas.

To the ſecond beſt, four guineas.

To the third, three guineas.

To the fourth, two guineas.

To the fifth, one guinea.

If there ſhould be more than ten candidates for theſe premiums, they were to draw lots, and to ſignify their intention of ſtanding before laſt Saturday.

To the perſon who ſhall produce the beſt and moſt uſeful newly-invented implement uſed in agriculture, the ſum of twenty guineas.

To the perſon who ſhall produce the plough, which ſhall, with the leaſt force, turn the cleaneſt and deepeſt furrow, a ſilver cup, value ten guineas.

About ten o'clock Lord Somerville and the reſt of the company left the Abbey, and proceeded to the Park Farm yard, and inſpected the ſhearers, who were at work in a very convenient place appointed for the purpoſe.

Mr. Salmon, the reſident ſurveyor, has invented a very capital thraſhing mill, which is ſo portable, that it can be all taken into a waggon, and completely fixed up in a barn in the courſe of a few hours.

There was an exhibition of very fine Leiceſter rams and Hereford cattle, which was followed by a ſale of Leiceſter ewes.

About three o'clock the company retired to the Abbey to dinner, where Lord Somerville preſided as chairman. About five o'clock they returned to the Park farm, where moſt of the Leiceſterſhire rams ſhewn in the morning were let at good prices. Ten Herefordſhire cows and two bulls were ſold at a high rate. The company did not leave the Farm till between eight and nine o'clock.

Second Day, June 15.—About ten o'clock, the company left the Abbey, and proceeded to the Park Farm yard, and inſpected the ſheep ſhearers.

Five three-ſhear tups were ſhewn in exhibition, and ten two-ſhears. Two hundred and forty breeding South Down ewes and theaves were then exhibited in the pens in the Park, and ſold by auction, by the Bailiff; they

were ſold in lots of ten and twenty each ; and ſuch an opinion had the company of the breed, that ſome of them actually fetched 4l. 10s. per head. Some of them ſold at 1l. 18s. a head ; but upon the whole they fetched very high prices.

The late Duke had extended the objects of this truly noble fête, not only to practical agriculture, but likewiſe to the liberal and uſeful arts ; and we were pleaſed, on the preſent occaſion, again, to ſee ſuch a number of intelligent and ingenious men, as we ſaw from all parts of the United Kingdom, mingling with the agriculturiſts and breeders, and exhibiting their reſpective arts and inventions. Among theſe Mr. Garrard, from London, had a fine exhibition of caſts or models of the moſt celebrated breeds of cattle and ſheep belonging to well-known breeders. For his ingenious invention, the late Duke was the means of procuring him an Act of Parliament to ſecure his right to the different models. He alſo exhibited his publication of large drawings from the ſame accurate ſources.

Mr. Smith, a land ſurveyor and drainer, from Bath, exhibited his map, now in very conſiderable forwardneſs, of the ſtrata of different earths, ſtones, coals, &c. &c. which conſtitute the ſoil of this iſland ; the extraordinary degree of patient reſearch and inveſtigation, which Mr. S. has for many years carried on, promiſes to give his work a degree of ſcientific certainty, hitherto unattained in mineralogical and geological publication : he was particularly noticed by Sir Joſeph Banks.

Captain Bragge, an officer in the army, attended, with the intention of exhibiting, and bringing into notice ſeveral inſtruments, by an ingenious but unfortunate man, of the name of Hewling, who has a patent for them, but whoſe poverty has prevented him from deriving any benefit from it. One of theſe inſtruments is for determining direct diſtances at one ſtation, applicable, alſo to meaſuring heights, and likewiſe land ; another for meaſuring ſtanding timber was much admired. Two patent ploughs of Lord Somerville's were exhibited ; one for making a furrow narrow or wide, by only the application of a ſcrew ; the other for making two furrows.

Mr. M'Dougal, from London, exhibited a churn, which works in ſuch an eaſy manner, that a child of five or ſix years of age may work it. Mr. Cartwright exhibited a plough calculated to make one, two, or three furrows, or all of them at the ſame time. Mr. Salmon, the reſident ſurveyor, exhibited a very ingenious machine for weighing ſheep ; it works on a ſteel centre, and will weigh from an ounce to 300 lbs. with the greateſt accuracy. Mr. Pickford, the waggon maſter, of Market-ſtreet, exhibited a ſow pig not two-years old, which weighed about 70 ſtone, which had been principally fed on peaſe. He likewiſe exhibited a boar for the prize, not nine months old.

At three o'clock the principal part of the company adjourned to the Abbey where an elegant dinner was provided for above two hundred perſons. After dinner a letter was read by Mr. Arthur Young, from the Duke of Bedford, in London, ſtating his Grace's intention of continuing this meeting and carrying into effect, in their fulleſt extent, the deſigns of his late brother ; and as he knew it was his brother's intention to diſcontinue the premiums for the encouragement of the South Downs and the Leiceſter ſheep, as he was perſuaded his object had been anſwered by the extenſion of thoſe breeds, he ſhould therefore diſcontinue thoſe premiums, but ſhould offer premiums for all diſtinct breeds of ſheep, for the purpoſe of trying experiments : he therefore propoſed to purchaſe twenty of every breed of ſheep throughout the country, and to pay all travelling expences of any breeder from any part of the country, who choſe to ſend them, to be delivered at Woburn between the 15th of September and the 15th of October, and the effects of the different experiments to be made known at the ſheep ſhearing, 1803. It was ſtated to be his Grace's intention to continue the premiums to ſhearers, being convinced that neat and cloſe clipping was a conſiderable ſaving, and of national utility.

The letter was received with great applauſe, and after ſeveral toaſts, the company returned to buſineſs. The meeting was more numerouſly attended than the preceding day.

Third Day, June 16.—At the ſheep-ſhearing, laſt year, a wager of 50 guineas was laid between Captain Moore, of Aſpley, and Mr. Bithrey, of Turvey, who ſhould produce, at this ſheep-ſhearing, the beſt wether, the determination to be left to Lord Somerville and Mr. Weſtcar, a well known breeder, of Buckinghamſhire. They accordingly produced a fat wether each; after dinner yeſterday his Lordſhip and Mr. W. went to examine them, after which, the ſheep were ſlaughtered and weighed. This morning the judges decided in favour of Mr. Bithrey. Captain Moore loſt upon the whole bets to the amount of 180 guineas. The following is the weight of the ſheep dead and alive.

Mr. Bithrey's two-ſhear ſheep weighed June 15, alive 171lb. 12 oz.

	lb.	oz.
Skin	10	12
Head and Pluck	9	10
Blood	6	0
Entrails	10	2
Fat	14	15
Fleece	4	5
Offal weight	54	14
Carcaſe	119	8

Mr. Moore's two-ſhear ſheep weighed alive 171lb. 4 oz.

	lb.	oz.
Skin	11	6
Head and Pluck	10	2
Blood	6	2
Entrails	15	13
Fat	13	12
Fleece	9	11
Offal weight	66	14
Carcaſe	104	3

Fifteen tups were let by auction, in the exhibition room. About 250 South Down ewes and theaves were ſold by auction from pens in the Park, in lots of ten and twenty. They did not fetch ſuch high prices as thoſe ſold in the morning.

About ten o'clock this morning, the company left the Abbey and inſpected the ſhearers in the Park Farm.

Mr. Leſter exhibited a thraſhing machine.

Between twelve and one o'clock, the company adjourned to Crawley heath, where the different implements offered for the premiums were tried; and in addition to thoſe already mentioned, were Mr. Salmon's drilling machine, calculated to drill five rows of any ſort of corn without the poſſibility of going crooked; Mr. Wild's patent harrow and ſcufflers; and Mr. Runciman's plough.

At three o'clock, the company went to the Abbey to dinner, after which, Mr. Coke, as one of the managers, declared the premiums to have been adjudged as follows: to Mr. Smith, of Northampton, for the beſt fat wether, a cup value ten guineas. To Mr. Bithrey, of Turvey, for the beſt two-ſhear fat wether bred in Bedfordſhire, five guineas. They were ſheared, weighed alive, killed, weighed dead, and due attention paid to wool, carcaſe, and tallow. To Captain Moore, of Apley, for the beſt theave, bred in Bedfordſhire, a cup value ten guineas. To Mr. Bithery, of Stoke-mill, for the ſecond beſt theave, bred in Bedfordſhire, a cup value five guineas. To Mr. Clayton, of Speedwell-farm, for the beſt boar five guineas. To Mr. Salmon, of Woburn, for his two horſe thraſhing machine, twenty guineas. To Mr. Runciman, of Birchmore, for a plough, which turned the cleaneſt and deepeſt furrow, a cup, value ten guineas.

The judges were Mr. Elman, from Suſſex; Mr. Wakefield, from Eſſex; Mr. Higgins, of Turvey; and Mr. Quarterman.

While the company were at dinner, the candidates for the premiums for the beſt ſhearers were ſet to work; eight of them had four ſheep each, and forty minutes allowed them for each ſheep, within which time they accompliſhed the operation with the greateſt eaſe; after which, Mr. Elman, Mr. Wakefield

and another gentleman examined them, to decide the premiums. The premiums, &c. offered by the Duke for the next year, were made public at the Exhibition-room. About forty Devon, Kent, and Suſſex cattle were then ſold by auction; they fetched very high prices, but not in proportion to the South-down ewes and theaves ſold yeſterday. The South-down three ſhear tups were let

			Two ſhears.	
No.	1,	for 35 guineas.	No. 6,	for 35 guineas.
	2	20	7	20
	3	40	8	40
	4	30	9	40
	5	25	10	35

His Grace has offered for premiums for the ſheep-ſhearing, 1803, for two fat wethers, two theaves, the boar, five ſhearers, the beſt improved implement in agriculture, the beſt plough, and various other premiums.

It ſhould be recommended to the farmers this ſeaſon, to ſee that their ſheep are well ſhorn, as the great want of wool certainly requires that none ſhould be waſted, or that the preſent high price ſhould be encreaſed.

In Germany there is an appearance of a moſt abundant harveſt, and corn begins to fall in price.

The deſign of the medal about to be ſtruck by the Board of Agriculture, in honour of the late Duke of Bedford, is by Milton, and is worthy of that Board, of which his Grace was ſo diſtinguiſhed a member. One ſide repreſents a profile buſt of the Duke, ſurmounted with a ducal coronet, and encircled with this appropriate inſcription: *Francis C. Dux Bedfordiæ Agricolar. Facile Princep:* the reverſe repreſents Ceres with emblematical decorations, reclining over an urn, and round it, *Boni lugent prematurè ademptum*; and at the baſe of the urn *Agricolarum Cœtus Conſulto.*

At Stockholm is to be ſeen a cabinet of models or repoſitory of machines, which is perhaps the moſt complete collection of the kind that exiſts. The models are either new inventions or improvements in machinery; they are kept in a ſpacious room, and arranged in a very elegant manner. Among the models for rural economy may be obſerved, various kinds of mills, inſtruments for ſowing grain, for ſhearing, gathering the crop and thraſhing it; hydraulic machines, ſtoves uſed in the mines and pumps with their apparatus. It may ſeem hardly credible, but is nevertheleſs true, that in Sweden, a mechanical overſeer has been invented to perform the duties of ſuperintendant over workmen. A conſiderable part of the labour in the mines conſiſting in working the pumps, a clock has been invented for marking the number of ſtrokes given by the pumpers; ſo that the proportion of work they have performed is readily aſcertained. Our limits will not permit us to enumerate many other equally ingenious contrivances, that may be ſurveyed in this curious repoſitory.

In Sweden and Denmark, no ſtraw or other bedding is uſed for horſes; but the animals ſtand or lie on perforated boards. In conſequence of this beneficial practice, no lame or foundered horſes are to be ſeen there, their feet being free from thoſe diſorders, which in other countries are produced by ſtanding in a hot-bed of their own litter.

The Eſſex Agricultural Society, held their general meeting at Chelmsford, for the adjudication of the Society's prizes for various cattle. Mr. Ellman of Glyn, and the Rev. B. Dudley, were choſen the judges: after cloſely examining the ſtock, they adjudged as follows:

To T. B. Bramſton, Eſq. M. P. for the beſt pen of yearling South-down ewes, ſweepſtakes purſe. To —— Wakefield, Eſq. for the beſt pen of long, or combing yearling ewes, the ſweepſtakes purſe.

To Filmer Honeywood, Eſq. for the beſt ram, growing a fleece coming under the denomination of fine or clothing wool, the ſilver medal.

To C. C. Weſtern, Eſq. M. P. for the beſt ram, bred by him, within the county, and growing a fleece, coming under the denomination of long and

combing wool, which he ſhall engage to uſe, or cauſe to be uſed the enſuing ſeaſon within the county, the ſilver medal.

To Filmer Honeywood, Eſq. for the beſt ram, bred by him, within the county, and growing a fleece, coming under the denomination of fine clothing wool, which he ſhall engage to uſe, or cauſe to be uſed the enſuing ſeaſon, within the county, the ſilver medal.

To Mr. Clarke, for the beſt fat ox, his own property, having had the ſame twelve calendar months, the ſilver medal.

To Mr. Wyburn, for the beſt bull (being two years old or more) his own property, and which he ſhall engage to uſe during the enſuing ſeaſon, within the county, the ſilver medal.

The ſilver medals were alſo adjudged to Mr. Briton, for the beſt cart ſtallion, and to C. C. Weſtern, Eſq. for the beſt boar.

After the buſineſs of the day was over, the company dined together at the Black Boy (Lord Petre in the chair) and paſſed the remainder of the day in conviviality. A toaſt was given from the chair, "To the memory of the late Duke of Bedford." After which was read a letter from the Preſident of the Royal Society (Sir Joſeph Banks) requeſting the co-operation of the Eſſex Society, with the general committee appointed to conſider of, and report the beſt means for erecting a ſtatue to the memory of that diſtinguiſhed nobleman. A ſubſcription was immediately ſet on foot, and a committee nominated to further the laudable undertaking without loſs of time.

The following are the dimenſions of a remarkably large ox, ſlaughtered at Whitehaven; from the tail to the noſe, 11 feet 8 inches; round the belly, 10 feet 9½ inches; acroſs the hips, 3 feet 1 inch; the ſhoulders ſquared on each ſide, acroſs, 2 feet 9 inches; over the firſt rib of beef 8½ inches, round the leg below the knee 10½ inches; from the breaſt to the ground, 1 foot 9 inches; the height 5 feet 6 inches. This ox which was a beautifully ſhaped animal, exceeds the prize ox ſhewn in London, in the following particulars, from the tail to the noſe by 8 inches; in girth round the belly, 1½ inch; round the leg, ¾ inch. From the breaſt to the ground, it was three inches higher than the prize ox, the whole height of which is not mentioned.

The weſtern part of the kingdom affords a very cheering proſpect; the hay harveſt though perhaps later than uſual, will be very abundant, and all kinds of grain never looked finer, nor were in a more forward ſtate.

From Kent, we learn that the ſeaſonable rains at the commencement of the month, have much improved the vine, particularly in the young grounds; the fly that has for ſome time made its appearance, ſtill continues, and rather encreaſes.

In a diſtrict of the department of Nievre, in France, a moſt deſtructive blight took place, in the night between the 25th and 26th of Floreal; but which it is hoped extended to no great diſtance. The atmoſphere had been extremely dry the two preceding days, and overcaſt with thick clouds. In the morning a hoar froſt was obſerved here and there, but only local. The north-weſt wind blew in ſtrong guſts. At ſix o'clock in the morning, the thermometer was 4½ degrees above o according to an obſervation mad at Nievre.

In the morning thoſe parts of the vines that were not ſheltered from this wind, were obſerved to droop and turn brown, in the evening the leaves became black, and fell to powder on being touched. Thoſe that were ſkreened from the wind ſuſtained little or no injury. The vines turned towards the weſt and ſubject to the current of the wind, ſuſtained more injury than others ſituated towards the eaſt, but where the wind had more obſtacles to encounter.

Moſt of the fruits experienced the ſame fate, not excepting thoſe indigenous to the climate, as plumbs, ſtrawberries and gooſeberries.

The air being dry, and the earth having been without rain for ſome time, this diſaſter cannot properly be attributed to the effect of froſt, for in damp places it was not more ſeverely felt than on hills and eminences expoſed to the uninterrupted action of the wind. Oaks even were obſerved on the banks of a rivu-

let, which remained uninjured, whilſt thoſe on dry hills were ſtripped of every leaf, ſo that it may undoubtedly be attributed more to the drying nature of the wind than to the intenſeneſs of the cold.

Rye had juſt begun to flower, many fields have been more or leſs injured, but none entirely loſt.

The vine, blighted more or leſs, according as it was expoſed to the action of the wind. It may be calculated that two-thirds of the vines in the diſtrict are deſtroyed.

The walnut, moſt of them totally blighted, the others leſs injured.

Plumb, apple, pear, cherry, &c. Almoſt the whole of the fruit loſt, the buds were not damaged. Gooſeberries, half of the fruit loſt; upon the ſame buſh, and even branch, only part of the fruit was deſtroyed.

Aſparagus, the young ſhoots and tops blighted.

Potatoe, entirely blighted.

The oak, the extremity of the buds blighted, and others entirely.

The water plaintain, blighted, the only aquatic plant obſerved to be damaged.

The ſtrawberry, moſt of the fruit deſtroyed; that called the Virginia ſuffered the leaſt.

Hemp, a few fields blighted.

The fig-tree, the buds blighted, but many of the fruit ſuſtained no injury. This is the more remarkable, as in general the fruit has been more injured than the leaves.

This blight, which is not equalled by any ſince that of 31ſt of May, 1793, was foretold by C. Lamark, in his *Annual Meteorology*, a freſh proof in addition to many others in favour of his ſyſtem.

TURIN, SOCIETY ON AGRICULTURE.—At Turin, in the ſitting of the Society of Agriculture of the 27th pluvioſe, C. Decaroli read to the Society a very intereſting memoir on the advantages that would accrue to the ſix departments of the 27th diviſion, 1. by promoting in ſituations the moſt ſuſceptible of it, the cultivation of larch trees, (*pinus larix*) which grow in the mountains of Piedmont, and to introduce the uſe of its wood for ſeveral purpoſes mentioned by him. 2. By cauſing their trunks or planks to be tranſported to the plains upon the different rivers or ſtreams iſſuing from theſe mountains, as practiſed already in ſome places.

A long memoir was then preſented, in which it was propoſed to eſtabliſh and encourage manufactories for ſpinning cotton and to eſtabliſh them, particularly in the different poor houſes, wherever it was practicable. This project led to a long diſcuſſion on the manufactures which ought preferably to attract the attention and encouragement of the government in the 27th military diviſion. It was obſerved, that before one ought to think of manufactures of foreign productions, one ought to cauſe the moſt valuable articles of its own produce to be manufactured in the country; as ſilk, hemp and wool, particularly ſuperfine wool, the production of which is continually encreaſing.

The Society appointed a commiſſion to examine the great object of the manufactures moſt ſuitable to Piedmont, the means of encouraging them, and the places moſt proper for their eſtabliſhment.

AGRICULTURAL SOCIETY OF DEUX SEVRES.—In Floreal of the year 11, the Agricultural Society of Deux Sêvres will adjudge a prize of 150 fr. to the Farmer who ſhall have bred the greateſt number of aſſes; and another of 100 fr. for the next greateſt number. A third prize is deſtined for whoever ſhall have planted the moſt land with wood.

AGRICULTURE AND VETERINARY ART.—Citizen Seſſier commiſſioned to give the hiſtory of the Spaniſh ſheep of the beautiful breed of merinos imported into France, has ſhewn that the early importations had not ſucceeded from ignorance of the method of managing theſe precious animals. Since thoſe attempts, three remarkable importations have taken place; one through

the laudable exertions of the worthy and much eſteemed Trudaine; the ſecond for the eſtabliſhment at Rambouillet; the third for private individuals, and to form a new national eſtabliſhment at Perpignan. The importation for Rambouillet ſucceeded beyond expectation. Citizen Teſſier has detailed all the reſults, and given an account of all the reſearches on animal economy which they have occaſioned, the prejudices they have done away, and the benefits derived from them by French agriculture. He has proved that from the flock at Rambouillet alone there now exiſt in France 10,000 ſheep of the pure breed, and above a million improved by croſſing the Merino rams with the common breed. The importation by Trudaine muſt have produced ſimilar advantages, and in its eſtabliſhments of Rambouillet, Pompadour and Perpignan, government has upwards of 1600 Merinos, from which the French Farmers will derive flocks of handſome and profitable animals.

This work of citizen Teſſier reminds the friends of agriculture and commerce of the gratitude they owe to the venerable Daubenton, whoſe whole life was devoted to the public benefit, and particularly to the improvement of the breed of ſheep. A new edition of his celebrated *Inſtructions for Shepherds and the Proprietors of Flocks*, has been printed, ſince his deceaſe, by order of government: it is enlarged from the author's manuſcripts, and it is enriched with very uſeful notes and additions, by citizen Huzard.

SCHOOL FOR THE DESTRUCTION OF MOLES.

The prefect of Seine and Oiſe, in conſequence of a letter of citizen Cadet de Vaux, on the plan of a ſchool deſtined for the deſtruction of Moles, and the report of the Agricultural Society of that department, has iſſued an order for each ſub-prefect to ſelect, in his diviſion, an intelligent citizen to be inſtructed by citizen Lecourt, at Pontoiſe, in the highly beneficial methods practiſed by him to deſtroy moles; the number of pupils is not to exceed five, and the time for their inſtruction is not to be above four decades; each of the pupils will during that time receive one franc 50 ſous per day; the pupils are to ſucceed each other by fives, till the number ſhall be thought ſufficient to propagate throughout the whole department, the inſtructions of citizen Lecourt who ſhall likewiſe receive a gratuity proportionate to the trouble he ſhall have taken with theſe pupils, and the proficiency of the latter, according to the atteſtation of the Mayor, and the information of the ſub-prefects.

Citizen Mongez has communicated to the National Inſtitute part of a memoir on the inſtruments of Agriculture of the ancients, and particularly on ploughs. At a moment when the general attention is directed towards this art which ſupports mankind, whilſt learned ſocieties intereſt themſelves in the improvement of ploughs, he has endeavoured to make the ancients concur in a work of ſuch utility and importance to every nation.

The inventor of the plough is unknown, although various traditions name Oſiris, Bacchus, Triptolemus, Buziges, Minerva, Boarmia, Prometheus, Dagon, Abis, &c.

In the earlieſt ages of Greece, both the ſimple and complex plough were uſed. Heſiod, cotemporary with Homer, mentions both. The firſt is made of a ſingle piece of curved wood; the ſecond is formed by the connection of ſeveral parts. Theſe two kinds of ploughs have been diſcovered by C. Mongez in above 25 ancient monuments. By the aſſiſtance of theſe repreſentations, he has explained a paſſage of the commentator of the Argonautics; a ſecond, of Proclus, the commentator of Heſiod; a third of Juſtin Martyr, which the ſtudy of antiquity alone could render intelligible.

He has explained, with the ſame facility, the deſcriptions of the plough to be found in Heſiod and in the Georgics. In 1786, he ſtated, that the uſual attribute of Oſiris, imagined by Kircher to be an hieroglyphic alpha, was the ſimple plough, of which that god was conſidered the inventor. The aſſertion of C. Mongez is confirmed by the paintings diſcovered by the French in the catacombs of the ancient Eileithyia, not far from Apollinopolis magna.

Citizen Mongez has not confined himſelf to a deſcription of the ploughs re-

preſented in medals, marble antique bronzes. He has endeavoured to aſcertain what kind of theſe inſtruments was employed in different countries. Babylonia, Egypt, Africa, Spain and Campania, appear to have been the countries in which the light plough was uſed. Ciſalpine Gaul and Greece, countries unequal in their ſituations and productions, employed the complex plough. Nothing poſſitive can be advanced on this head, reſpecting the reſt of Gaul, Germany and Pannonia.

He next treats of the different animals that draw the ploughs, and the methods of yoking them. On all the monuments he met with, the oxen are yoked only over the flanks, and are never faſtened by the horns. Columella reprobates this ridiculous and injudicious method.

TURIN.—Citizen Charles Giulio writes in the journal of Turin as follows: I have been to viſit the flocks, which yield the ſuperfine wool, bred by citizen Provana near Colegno. As I intend publiſhing as extenſive and complete a work as poſſible on the different flocks of merinos and mongrel breeds, raiſed in different parts of the 27th military diviſion, I ſhall here ſpeak only of that breed of mongrels which deſerves the greateſt attention; which is produced by ewes of the diviſion of Bielle, and rams of the Segovian breed. The wool of the native ſheep of that diviſion being the fineſt of any of the ſub-alpine breeds, its improvement by croſſing them with Spaniſh rams was the more ſpeedily and completely effected. Citizen Avogadro La Motte de Verceil has already aſcertained by numerous experiments, that, the wool of mongrel ſheep from the breed of Bielle, and Spaniſh rams is equal to that of the fineſt Spaniſh breeds. The various trials of this kind made by citizen Provana at Colegno, afford the moſt ſatisfactory reſults. From theſe obſervations, it follows, that the improvement of the ſheep of Bielle ſhould be particularly attended to. Citizen Cerutti a Member of the Agricultural Society, who, with me, examined citizen Provana's flocks, was ſo ſtruck with the beauty of the wool from the mongrel breed, produced by Bielle ſheep and Spaniſh rams, that he determined to introduce this improvement into the diviſion of Bielle, of which he is a native. In the hands of ſo ſkilful an agriculturiſt as citizen Cerutti, theſe trials cannot fail of ſucceſs, and by this undertaking, which will be attended with great advantages to himſelf, he may become the benefactor of the diviſion of Bielle, the proſperity of which once conſiſted in its woollen manufactures.

Manufactures and Useful Arts.

THE Society of Arts, Manufactures and Commerce, at the Adelphi, held their laſt meeting of that ſeſſion on Wedneſday the 2d inſtant. We noticed in our laſt Magazine the premiums and bounties beſtowed by them on the 25th of May laſt, ſince which time they have adjudged the following rewards:—To John Somerfield, Eſq. of Packington, Coventry, for a ſtroke engraving, the ſubject Rubens and his wife, cl. 98, the gold medal.

To William Hall Timbrel, Eſq. of Streatly, in the County of Berks, for an improved herniary truſs, and new invented callico cuſhion, the gold medal.

To Mr. John Webb, of Dorrington-ſtreet, for an invention in gun-locks, to prevent accidents in uſing guns or piſtols, and to guard againſt their being improperly fired.

The following Gentlemen have alſo ſince been admitted members of that uſeful Society, viz. Mr. George Arnoldi, Cuthbert Sharp, Eſq. Robert Drury, Eſq. Capt. F. M. Keith.

The Society have now adjourned their meetings to the fourth Wedneſday in October.

A letter from Milan mentions the arrival at that place of ſeveral caſes filled with machines, invented by the ingenious Moroſi, Profeſſor of Mechanics in the Univerſity of Breſcia, and which are now his property. The uſe of theſe machines is for beating, carding and ſpinning cotton, ſo as to reduce it to an

almoſt imperceptible fineneſs. Children from three to fourteen years of age, are employed in working them.

Another of theſe machines conſiſts of a frame on which three pair of ſtockings may be wrought at once, of a texture as perfect as thoſe of Engliſh manufacture.

A third, which is put in motion by water, is formed for making ribbands of every kind. A few young girls can with this machine make many thouſand fathoms in a day, and it poſſeſſes this peculiar advantage, that if a ſingle thread breaks, its motion is entirely ſuſpended.

The following particulars relative to the preparation of Soda, at Alicant in Spain, will, not, we preſume be unacceptable to our readers:—Soda, it is well known, is extracted from a great number of maritime plants; but the two excluſively cultivated for that purpoſe, at Alicant, are the parilla (*ſalſola ſativa L.*) and the ſoſſa (*ſalſola ſoda L.*) They are both cultivated in the ſame manner, but the former requires a better ſoil, and yields ſoda of a much finer quality. After having ploughed the ground ſeveral times and manured it, the barilla is ſown in November: the ſeed is almoſt covered with earth, and this operation is performed at ſuch times when the weather ſeems to threaten rain. Towards the end of winter the weeds are collected from the field as often as it is found neceſſary. The barilla is ready for gathering in November, but that intended for ſeed is left ſtanding a month longer. The plant is eaſily pulled up, as it has very ſmall roots, it is then thrown in a heap, to dry, for the ſpace of a month. It is burned about the beginning of October. Spherical holes are made in the ground, capable of maintaining about thirty quintals of ſoda; acroſs the top of it are laid two bars of iron to ſupport the plant, which is mixed with ruſhes and ſtraw, whilſt burning. A day is choſen for this purpoſe, when the wind is not too high, for the ſoda would then burn too rapidly, and could not eaſily be reduced to a ſolid maſs; nor muſt the air be too calm, as the ſmoke would not riſe well, and would blacken the ſoda. The barilla, in burning, undergoes a kind of fuſion; it is reduced to a red matter, reſembling melted metal, and muſt be ſtirred once or twice, to render the fuſion more complete. When the hole is filled, which commonly requires a whole night, the maſs is covered with earth, and left ten or twelve days to grow cold: the cake thus formed is uncovered, broken into large lumps with clubs, and conveyed to the merchants' warehouſes. Whilſt the barilla is burning, the ſweepings left from former years are thrown into the hole that they may melt and combine with the maſs. The ſoſſa and barilla are cultivated not only on the ſea coaſt, but even in La Mancha, forty leagues diſtant from it, but the ſoda of La Mancha, it is true, is inferior in quality to that of Alicant.—Has the cultivation of theſe valuable plants never been attempted in England?

An advertiſement has appeared from the Soho Manufactory, Birmingham, announcing that it will not in future be ſhewn. This muſt have been occaſioned by ſome extraordinary circumſtance, as during the laſt forty years it has been the practice to ſhew it to all ſtrangers, but a few ſecret ſhops were never ſhewn. Though the manufactory is the greateſt in England of the kind, yet in Birmingham ſimilar manufactories may be ſeen on a ſmall ſcale, excepting for ſome few articles. The ſhewing it coſt annually many hundred pounds, but many connections and much trade were likewiſe procured by it.

The fleet of ſhips which lately arrived from Bombay is principally rigged with cordage made in India, equal in durability to that manufactured in this country. A conſiderable quantity of the raw material has alſo been ſent home;

LONDON PRICES OF GRAIN for *June*, 1802.

MARK-LANE, *Monday, May* 31.

Monday, May 31.——We have had but a middling ſupply of Wheat this day, and having a few buyers, cauſed that article to go off rather dearer than this day ſe'n-night Moſt of the foreign cargoes of laſt week have gone off for exportation.——Though the Malſters and Diſtillers are leaving off work for the ſummer, Fine Barley is a trifle dearer, having no great deal at market.——Oats began in the fore part of the morning rather dearer, but towards the cloſe of the market, they were heavy ſale, and with no alteration in price.——Peas and Beans are very ſcarce, and dearer.

Price of Grain, on board Ship, as under:

Wheat	56s to 65s	Malt	42s to 53s	Grey Peas	33s to 38s
Fine	70s to 72s	Oats	16 to 20s	Sm. Beans, new,	34s to 36s
Rye	30s to 35s	Fine	to 23s	Ticks,	30s to 32s
Barley	25s to 28s	Polands	to 25s 6d	Fine	28s
Fine	35s 6d	White Peas	36s to 39s		

Monday, June 7.——We have had a pretty good ſupply of Grain at market this day, but there being many buyers, cauſed Wheat to advance in price full 2s. per quarter on fine ſamples, ſince this day ſe'nnight.——Barley and Malt are much the ſame, and very dull.——We have had a good ſupply of Oats, but which maintain their prices, owing to the dearneſs of Hay.——White Peas are heavy ſale, Grey dearer.——Tick and Small Beans are very dull ſale.——Flour as laſt week.

Wheat	56s to 65s	Fine	to 35s	Polands	25s
Fine	to 70s	Malt	42s to 50s	White Peas	30s to 39s
Superfine	to 73s	Fine	to 53s 6d	Grey Peas	32s to 37s
Rye	30s to 36s	Oats	17s to 21s	Sm. Beans,	34s to 37s
Barley	25s to 30s	Fine	23s	Ticks,	30s to 32s

Monday, June 14.——We have had a good ſupply of Corn in ſince this day ſe'n-night. Fine ſamples of Wheat went off full 1s. per quarter dearer, owing to ſome cargoes going to France.——Rye is much the ſame.——In Barley and Malt little or no alteration.——Oats are very dull, and 1s. per quarter cheaper.——Peas and Beans are rather lower.——Flour is 5s. per ſack dearer.

Wheat	56s to 70s	Malt	46s to 45s	Polands	23s 6d
Fine	to 76s	Fine	53s	White Peas	35s to 39s
Rye	30s to 35s	Oats	18s to 21s	Grey Peas	30s to 35s
Barley	22s to 28s	Fine	to 23s	Small Beans	35s to 37s 6d
Fine	34s			Ticks,	30s to 33s 6d

Monday, June 21.——We have had a great deal of freſh Corn in ſince this day week.—Wheat has declined in price from 8s. to 10s per quarter.—Barley and Malt are very dull, and cheaper.—Having a good many Oats at market, thoſe of fine quality are full 1s. cheaper; and inferior ſorts are hardly ſaleable.—Peas and Beans are very plentiful, and lower; the former about 2s. and the latter 3s. per quarter.—Flour is 5s. per ſack cheaper.

Wheat	56s to 60s	Malt	42s to 52s	White Peas	34s to 37s
Fine	68s	Oats	13s to 20s	Grey Peas	30s to 33s
Rye	30s to 35s	Fine Oats	21s	Small Beans	32s to 33s 6d
Barley	23s to 28s	Polands	22s 6d	Ticks,	25s to 29s
Fine	33s				

Monday, June 28.—We have had a ſmall ſupply of Corn in for this day's market, which has cauſed Wheat to go off, in the early part of the morning, full 2s. dearer, but towards the cloſe of the day, they rather gave way.—Barley and Malt much the ſame in price.—Good Oats went off rather briſker ſale, inferior dull.—Peas and Beans are each dearer, the former 1s. and the latter 2s.—Flour the ſame as before.

Wheat	56s to 65s	Malt	42s to 48s	White Peas	30s to 33s 6d
Fine	68s to 72s	Fine	52s	Grey Peas	30s 33s 6d
Rye	30s to 35s	Oats	13s to 21s	Small Beans	32s to 34s
Barley	22s to 28s	Fine Oats	23s	Tick,	25s to 30s
Fine	32s				

Prices of Hops, Meat, Seeds, Leather, Tallow, &c. for June 1802.

	First Week	2d Week	3d Week	4th Week	5th Week
Price of Hops.					
Bags.					
Kent — —	*s.* *s.*	*s.* *s.*	*s.* *s.*	*s.* *s.*	*s.* *s.*
	80 to 120	80 to 124	76 to 120	95 to 126	90 to 130
Suſſex — —	80 to 112	80 to 116	70 to 112	— to —	90 to 120
Eſſex — —	80 to 110	80 to 12	70 to 112	— to —	90 to 120
Pockets.					
Kent — —	95 to 120	90 to 130	90 to 130	100 to 130	100 to 135
Suſſex — —	90 to 120	90 to 126	80 to 120	— to —	100 to 126
Farnham — —	105 to 147	105 to 147	120 to 147	— to —	120 to 160
Seeds.					
Canary Seed (per cwt.)	78 to 80	78 to 82	78 to 82	78 to 80	78 to 80
Red Clover ditto —	— to —	— to —	— to —	— to —	— to —
White Clover, ditto —	— to —	— to —	— to —	— to —	— to —
Trefoil, ditto —	— to —	— to —	— to —	— to —	— to —
Carraway (per laſt) —	36 to 40	36 to 40	36 to 40	36 to 39	36 to 39
Coriander ditto —	26 to 30	26 to 30	26 to 30	26 to 29	26 to 29
Turnip, (per buſhel) —	— to —	— to —	— to —	— to —	— to —
Rye Graſs, (per quarter)	— to —	— to —	— to —	— to —	— to —
Cinque Foil, ditto —	— to —	— to 12	— to —	— to —	— to —
Rape Seed, (per laſt) —	311 to 331	321 to 351	321 to 351	331 to 351	331 to 351
Meat at Smithfield,	*s.d.* *s.d.*	*s.d* *s.d.*	*s.d,* *s.d.*	*s.d.* *s.d.*	*s.d.* *s.d.*
To ſink the offal, p. ſt. 8lb.	4 4 to 5 8	4 6 to 5 8	5 6 to 6 0	4 8 to 6 0	4 4 to 5 6
Beef — —	5 4 to 6 4	5 8 to 6 4	5 4 to 6	5 4 to 6 4	5 0 to 5 6
Mutton — —	5 0 to 6 8	5 0 to 6 6	5 0 to 6 6	4 6 to 6 0	5 0 to 6 0
Veal — —	4 4 to 6 0	5 0 to 6 4	5 0 to 6 4	5 0 to 6 0	5 0 to 5 8
Pork — —	7 0 to 8 0	7 0 to 8 0	7 0 to 8 0	6 6 to 8 0	
Lamb — —	1,800	1,100	2,000	1,800	1,800
Head of Cattle—Beaſts about	8,000	6,500	6,000	5,500	9,000
——— Sheep and Lambs					
Price of Leather.	*d.* *d.*	*d.* *d.*	*d.* *d.*	*d.* *d.*	*d.* *d.*
Butts, 50lb. to 56lb. each	17½ to 19½	18 to 19½	18 to 19	17 to 19½	17 to 19½
Ditto, 60lb. to 66lb. each	21 to 23	21 to 23	21 to 23	21 to 23	20 to 22
Merchants Backs —	17 to 18½	17 to 18½	17 to 18½	17 to 19½	17 to 18
Dreſſing Hides —	14 to 15½	14 to 16	14 to 16	14 to 16	15 to 16
Fine Coach Hides —	15½ to 17½	16 to 17½	16 to 17½	16 to 17½	17 to 18
Crop Hides for cutting	18 to 19½	18 to 20	18 to 20	18 to 19½	18 to 19½
Flat Ordinary —	15½ to 17½	16 to 17	16 to 17	16 to 17	16 to 17
Calf Skins, 30 to 40lb. p. doz.	20 to 30	25 to 32	25 to 32	22 to 30	22 to 32
Ditto, 50lb. to 70lb. do.	25 to 29	25 to 30	25 to 30	25 to 30	25 to 30
Ditto, 70lb. to 80lb. do.	25 to 27	25 to 27	25 to 27	24 to 27	24 to 27
Sm. Seals (Greenland)	33 to 39	32 to 36	32 to 36	36 to 40	34 to 40
Large do.	51 to 71	51 to 71	100 to 140s	51 to 71	51 to 71
Tanned Horſe Hides	18s to 30s	18s to 30s	18s to 30s	18s to 30s	18s to 32s
Goat Skins *per* doz.	21s to 65s	— to —	—s to —s	21s to 65s	21s to 65s
Price of Tallow.	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
St. James's Market —	3 8	3 8½	3 9	3 8½	3 9
Clare Market — —	3 8½	3 8½	3 9	3 8½	3 9
Whitechapel Market —	3 8	3 7½	3 7	3 8	3 7
Per ſtone of 8lb. Average	3 8	3 8	3 8½	3 8½	3 8½
Town Tallow — —	62 6	63 0	63 6	63 6	63 6
Ruſſia ditto (Candles) —	63 0	62 0	62 0	61 62s	60 0
Ruſſia ditto (Soap) —	60 0	61 0	61 0	60 —s	60 0
Melting Stuff — —	55 0	55 to —s	55 0	55 —s	55 0
Ditto rough — —	40 0	40 0	40 0	40 0	40 0
Graves — — —	19 0	19 0	19 0	19 0	19 0
Good Dregs — —	11 0	11 0	11 0	11 0	11 0
Yellow Soap — —	72 0	72 0	72 0	72 0	72 0
Mottled ditto — —	80 0	80 0	80 0	80 0	80 0
Curd ditto — —	84 0	84 0	84 0	84 0	84 0
Candles, per dozen, —	10 6	10 6	10 6	10 6	10 6
Moulds — — —	11 6	11 6	11 6	11 6	11 6

	First Week	2d Week	3d Week	4th Week	5th Week
Raw Hides.	*s.d. s.d.*	*s.d. s.d.*	*s.d. s.d.*	*s.d. s.d.*	*s.d. s.d.*
Beſt Heifers & Steers, pr ſt.	3 4 to 3 6	3 4 to 3 6	3 4 to 3 6	3 4 to 3 6	3 4 to 3 6
Middling — —	2 8 to 2 10	2 8 to 2 10	2 8 to 2 10	2 8 to 2 10	2 8 to 2 10
Ordinary — —	2 4 to 2 6	2 4 to 2 6	2 4 to 2 6	2 4 to 2 6	2 4 to 2 6
Market Calf — —	9 0	9 0	9 0	9 0	9 0
Eng. Horſe — —	12s to 16s	12s to 16s	12s to 16s	12s to 16s	12s to 16s
Lamb Skins — —	2 6 to 3 6	2 0 to 3 3	2 6 to 3 4	2 0 to 3 3	2 0 to 2 3
Sheep Skins — —	1 2 to 0 0	1 2 to —	1 2 to 0 0	1 0 to 0 0	1 0 to 0 0
Prices of Hay and Straw.	*l. s. d.*	*l. s. d.*	*l. s. d.*	*l. s. d.*	*l. s. d.*
St. James's—Hay —	4 10 0	4 16 9	4 14 0	4 19 0	5 0 0
Straw —	1 19 0	1 18 3	1 19 0	1 19 0	2 2 0
Whitech.—Hay —	5 — 0	5 4 0	5 2 0	5 8 0	5 12 0
Clover —	6 10 0	6 16 6	6 16 6	7 0	7 5 0
Straw —	1 16 0	1 17 0	1 14 0	1 18 0	1 18 0
Uxbridge.					
Wheat per load — —	16l to 18l	13l to 19l	17l-20l 10s	16l to 20l	14l to 18l
Barley — — —	28s to 34s	30s to 34s	30s to 34s	30s to 34s	30s to 34s
Oats — — —	22s to 28s	22s to 28s	22s to 28s	22s to 28	22s to 28s
Old Beans — — —	—s to —s	—s to —s	—s to —s	—s to —s	—s to —
New ditto — — —	33s to 37s	33s to 37s	33s to 37s	33s to 37s	33s to 37s
Peas — — — —	38s to 42s	38s to 40s	38s to 42s	38s to 42s	38s to 42s
Newbury.					
Wheat — — —	50s to 68s	52s to 70s	50s to 71s	52s to 74s	50s to 66s
Barley — — —	24s to 31s	25s to 32s	26s to 30s	27s to 30s	22s to 29s
Beans — — —	32s to 36s	34s to 37s	33s to 36s	34s to 37s	33s to 38s
Oats — — — —	19s to 23s	19s to 22s	18s to 27s	16s to 22s	18s to 22s
Peas — — — —	33s to 35s	34s to 36s	—s to 35s	36s to 38s	34s to 36s

BANKRUPTCIES AND DIVIDENDS,

Announced between the 20th of May 1802, and the 20th of June 1802.

(The Solicitors Names are between Parentheſes.)

BANKRUPTCIES,

ANTELL, J. Highgate, dealer in coals. (Clark, Sadler's hall

Avery, A. New Brentford, linen draper. (Atkinſon, Caſtle ſtreet, Falcon ſquare

Aldis, J. and C. Atkinſon, Littleport, ſhopkeepers. (Taylor, Gray's inn

Bloomfield, J. M. Manſell ſtreet, Goodman's fields, money ſcrivener. (Hague and Poole, Borſet court

Bateman, W. jun. Copmanthorpe, corn factor. (Egerton, Gray's inn

Buſhel, Joſeph M'Cormack, Eaſt ſtreet, Red lion ſquare, tea dealer. (Tebbett, Devonſhire ſtreet, Queen's ſquare

Beſly, W. Barnſtaple, clothier. (Santer, New inn

Benſon, J. Lancaſhire, merchant, linen draper, and mercer. (Partner with J. Benſon, and J. Bradley, N. Moore, and J. Wilkinſon). (Maſon and Wilſon, Lancaſter

Benſon, J. Lancaſter, merchant, linen draper, and mercer, (Partner with J. Benſon, and J. Bradley.) (Maſon and Wilkinſon, Lancaſter

Butler, J. Rickmanſworth, corn factor. (Roſe and Munnings, Gray's inn

Beaton, Sarah, Yeovill, haberdaſher and milliner. (Gregory and Brookes, Wax Chandler's hall

Brentnall, F. Derby, grocer. (Ward and Locket, Derby

Biſhop, T. Birmingham, ſtationer and bookſeller. (Palmer, Birmingham

Blackburn, T. Hopton, Mirfield, clothier. (Battye, Chancery lane

Becks, A. Barkley, Green ſtreet, Groſvenor ſquare, upholder. (Palmer and Tomlinſon, Warnford court

Bolton, Geo. Witney, brandy merchant. (Impey and Whitman, Temple

Caſtle, R. Abingdon, coal dealer. (Kynderley, Lung, and Ince, Symond's inn

Candliſh, M. Whitehaven, mercer and draper. (Allen and Exley, Furnival's inn

Crichton, P. Duke on horſeback alehouſe, Woolwich, victualler. (Banton, Blackman ſtreet

Colley, P. Hanley, ironmonger. (Lowe, Rayenhurſt, Birmingham

Cowliſhaw, T. Aſhborn, currier. (Barbor and Brown, Fetter lane

Cory, G. Great Yarmouth, upholder. (Pinero, Charles ſtreet, Cavendiſh ſquare

Dennington, N. jun. London, merchant. (Huxley, Temple

Donlevy, C. Charles ſtreet, Hatton Garden, jeweller. (Gale, Bedford ſtreet

Dagg, T. Southfields, ſhip owner. (Atkinſon, Chancery lane

Dyſon, D. Tottenham, grazier. (Jeſſopp, Clifford's inn

Freebairn, R. late of Crown court, now of Coleman ſtreet, inſurance broker. (Partner with C. Freebairn). Swain and Stevens, Old Jewry

Finegan, J. Hatton court, Threadneedle ſtreet, merchant. (Birket, Walbrook

Graydon, E. Sunderland, ſpirit merchant. (Elſtob, Catha-rine court

Greatwood, R. Glouceſter, grocer. (Jenkins and James, New inn

Harriſon, J. Workington, ſail maker. (Bell, Temple

Houlding, J. and J. W. Sowerby, Liverpool. (Lace and Haſlam, Liverpool

Hartley, S. Heckmondwike, carpet manufacturer. (Cardale, Halward, and Spoar, Gray's inn

Hardy, W. Glouceſter, linen draper. (Jenkins and James, New inn

Horton, J. Cockhill, St. Paul's Shadwell, cheeſemonger. (Mitchell, Union court, Broad ſtreet

Hatfield, J. Tiverton, merchant. (Taunton, Temple

Jones, P. Little Queen ſtreet, taylor. (Jopſon, Lincoln's inn

Kemp, W. Colcheſter, merchant. (Naylor, Great Newport ſtreet

Kilpatrick, J. Pope's Head alley, merchant. (Lee, Tanfield court, Temple

Keir, L. Throgmorton ſtreet, merchant. (Falcon, Temple

Leigh, P. Charles ſquare, Hoxton, merchant. (Gregſon and Smart, Angel court, Throgmorton ſtreet

Lathropp, R. W. Felton, otherwiſe Sir R. Murray Brown Clarke, late of Portland place, banker, co-partner with T. Leviſon Preſcot, and J. King, under the firm of Sir R. Murray Brown Clarke, Leviſon Preſcot, and Co. (Paterſon, Furnival's inn

Leyburn, J. late of Bombay, now of Hackney, merchant, broker, and mariner. (Hand, Temple
Moore, N. Lancaſter, merchant, (Partner with J. Benſon, J. Wilkinſon, and R. Pondleton). (Maſon and Wilkinſon, Lancaſter
Mac Gowran, F. Parſon's ſtreet, Ratcliffe Highway, grocer. (Weſton, Fenchurch ſtreet
Mills, P. Hereford, butcher. (Bird and Nichols, Hereford
Mundell, E. Scarborough, corn dealer and ſpirit merchant. Burgh, Pipe office, Somerſet place
Pullen, H. and T. Roberts, Exeter, coal merchants. (Follet, Temple
Paſmore, G. Kenſington, ſtationer. (Knight, Kenſington, and Tucker, Staple inn
Preſton, R. Liverpool, merchant. (Clements, Liverpool
Rutherford, Robert, Sunderland, maſt and block maker. (Thompſon, Biſhop-Wearmouth
Ridgway, T. A. Dodſon, and S. Ridgway, Liverpool, merchants. (Blackſtock, Temple
Roberts, R. Liverpool, brick maker. (Windle, Bartlet's buildings
Ringroſe, G. Welton, ſtuff manufacturer, &c. (Caſtle, Lyon's inn
Rowſon, J. Shepherd, Tower hill, linen draper. (Farrer Lacey, Stedman, and Wall, Bread ſtreet
Ryley E, St. Helens, Lancaſter, linen draper. (Holland, Manchester
Reed, W. Barking Churchyard, London, and Weſt Green, Tottenham, merchant. (Few, Red lion ſquare
Robinſon, J. Old Gravel lane, cheeſemonger. (Burt, Terrington ſtreet
Seefeldt D. Greek ſtreet, taylor. (Price, New inn
Simpſon, T. W. Taylorſon, J. Sanderſon, and J. Granger, Stokeſley, bankers. (Willis, Warnford court
Speight, M. Streetſide, Dewſbury, clothier. (Sykes, New inn
Smith, S. Liverpool, merchant. (Crumps, Liverpool
Sewell, W. late of Guernſey, now of Falcon ſquare, London, merchant. (Shelton, Seſſions houſe
Sweetland, D. Topſham, coal merchant. (Baxter and Martin, Furnival's inn
Sharp, T. Walthamſtow, ironmonger and coal merchant. (Holloway, Chancery lane
Smith, T. Liverpool, woollen draper. (Williamſon, Liverpool
Scott, J. and G. Scott, South ſtreet, Finſbury ſquare, merchants. (Swain and Stevens, Old Jewry
Smart, J. Wolverhampton, bookſeller. (Brigg and Robins, Hatton Garden
Twentyman, J. Middleton, Liverpool, cooper. (Windle, Bartlet's buildings
Towel, T. and J. Jackſon, Newgate ſtreet, haberdaſhers. (Shelton, Seſſion's houſe
Wilkinſon, J. Lancaſter, merchant. (Partner with J. Benſon, N. Moore, and R. Pendleton.) (Maſon and Wilſon, Liverpool
Wagner, P. Great Mancheſter ſtreet, merchant. (Gatty, Angel court, Throgmorton ſtreet
Whitley, Abraham Brown, Northfields, merchant. (Hall, Carey ſtreet
Wilſon, W. jun. Hay park, corn factor. (Ellis, Curſitor ſtreet
Willmot, Devonſhire, Helmon, Briſtol, druggiſt. (Lewis, Inner Temple
Whitaker, T. Kighley, innkeeper. (Watſon and De la Fare, Kighley
White, W. (Partner with J. Jarvis) Southampton buildings, brandy merchant. (Jones, Salisbury ſquare

DIVIDENDS ANNOUNCED.

Aſhdowne, Cliffe, near Lewes, mercer, June 29
Andrews, John, King ſtreet, Bloomſbury, bridle cutter, July 6
Bean, S. Lawrance Poultney lane, merchant, June 29
Blany, T. of the Walthamſtow Eaſt Indiaman, and Bouverie ſtreet, June 12
Beal, G. Great Surry ſtreet, cheeſemonger, June 2
Bradley, H. Birmingham, merchant, (Partner with G. Shipton, Madrid) ſeparate Eſtate of Bradley, and jointly of Bradley and Shipton, June 18
Boyer, A. and R. Kenyon, Liverpool, merchants, ſurviving Partners of Peter Holme, June 24
Boult S. and J. Maynard, Staines and Windſor, coach makers, June 26
Burden, W. Chatham place, ſcrivener, June 19
Bagley, J. Beaton, Ipſwich, grocer, June 29
Blackmore, R of the Colonnade, Foundling Hoſpital, glazier, &c. July 6
Beethom, J. jun. Lancaſter, liquor merchant, July 5
Buddicom, R. J. Liverpool, merchant, as partner of M. Cullen and R. Martin, July 6
Brice, J. Trowbridge, clothier, July 5
Becton, W. March, Ely, millwright, &c. July 5
Broughall, S. Yeaton, miller, July 5
Bird, H. Briſtol, tea dealer, July 24
Burford, J. Holborn bridge, linendraper, &c. July 8
Brown, G. Old Cavendiſh ſtreet, taylor, July 31
Bailey, W. Mamsbury, victualler, July 15
Cuming, P. Union court, Broad ſtreet, merchant, June 19
Cheyney, J. Oxford ſtreet, linen draper, Partner with J. Summerſet, and J. Dawſon, July 6
Currie, H. and J. and J. Cock, Liverpool, merchants, June 26
Corniſh, J. Broadway, Deptford, butcher, July 3
Cantrill, W. Burton on Trent, druggiſt, July 6
Corniſh, P. Taunton, cooper, &c. July 5
Cooper, T. Henley, ſcrivener, July 20
Comber, R. Lewes, watchmaker, July 17
Colecom, J. Row ſtreet, bricklayer, July 6
Child, Eleanor. South ſtreet, St. Luke's, dealer, July 8
Courneſs, J. Hurſtperpoint, ſhopkeeper, July 15
Damerum, J. Portſmouth, baker, June 14
Drury, T. and R. Gilbert, Bread ſtreet, ribbon weavers, June 19
Dorrill, W. Bridgewater ſquare, watchmaker, June 29
Deacon, John Eden, New Bond ſtreet, linen draper, July 13
Emmons, J. Abingdon, carrier, June 12
Eſſe, W. Fleet ſtreet, warehouſeman, July 13
Freethy, J. Strand, jeweller, June 22
Farmer, W. Walſall, grocer, June 24
Firth, J. Waſhway, Lambeth, dealer, July 3
Fozard, J. ſen. Letitia Fozard, and James the younger, Aug. 28
Furbor, J. and T. Warrington, Warnford court, merchants, joint and ſeparate Eſtates, July 10
Fiſher, R. Bedford ſtreet, Covent Garden, taylor, July 10
George, B. Pope's Head alley, fiſhing tackle maker, June 26
Greenby, W. Hereford, hop merchant, July 5
Hopwood, D. Union ſtreet, St. Mary le bone, grocer June 8
Harling E. Almondbury, York, merchant, June 14
Holmes, W. Pudſey, dryſalter, June 17
Hewiett, W. and W. Pember, Briſtol, dealers, Aug.
Hatch, J. Robert ſtreet, Bedford row, cabinet July 3
Healey, J. Biſhopſgate ſtreet, tobacconiſt, July 3
Hicklon, W. Knout's Hall, tanner, July 8
Illingworth, A. Stockport, cotton manufacturer, J ne final.
Jackſon, R. and J. Hankin, Oxford ſtreet, rectifiers, joint and ſeparate Eſtate, June 29
Johnſon, T. Liverpool, linen and woollen draper, July 7
Jones, W. Briſtol, Brightſmith, July 21
Jones, J. Wigmore ſtreet, coach maker, July 24
Keyte, J. Kidderminſter, builder, June 17
Keighly J. Engliſh, Finley Ferguſſon, and Wm. Armſtrong, London, merchants, joint and ſeparate Eſtates, June 22
Kelly, J. Woolwich, ſawyer, July 10
Levy, M. Stamford ſtreet, merchant, june 26
Lowe, H. Liverpool, hardwareman, June 22
Lucus, J. Fulham, inn keeper, June 26
Lodge, J. Cornhill, merchant, June 26
Lattimoore, R. Liverpool, linen draper, july 8
Lupton, J. Middleham, dealer, June 29
Long, W. Pontefract, linen draper, June 28
Mattingly, T. Stanford on the Vale, corn dealer, June 15
Manwaring C. Mancheſter, ſhoemaker, june 24
Marriot, J. Uxbridge, ſhopkeeper, june 19
Maſon, W. Holbeck, tanner, July 12
Neale, E. Grantham, linen draper, June 15
Newton, S. Mancheſter, corn factor, June 24
Noble, E. Heatley, Birmingham, merchant, June 14
Nathan, H. Sheerneis, ſlopſeller, July 3
Owen, R. and W. Mardie, Houndſditch, copper ſmith, ſeparate Effects of R. Owen, June 12
Oſborn, J. jun. Gainſborough, druggiſt, &c. July 9
Penn, H. jun. formerly of Kidderminſter, late of Golbrook, worſted and woollen yarn manufacturer, June 18
Porter, W. Kidderminſter, broker, &c. june 18
Parker, R. Little Argyle ſtreet, fiſhmonger, July 6
Pretyman, W. Great Tower ſtreet, cooper, july 13
Pattmore, J. Leiceſter, linen draper, July 10
Palmer, J. Thavies inn, ſcrivener, July 31
Rothery, J. Chriſtopher alley, Moorfields, cabinet maker, june 12
Richards, W. jun, Walworth, ſhip broker, July 3
Riches, G. Queen ſtreet, Cheapſide, warehouſeman, July 17
Strong, E and W. Harvey, Liverpool, anchorſmiths, &c. july 5
Sikes, S. Huddersfield, and A. Hide, Aſhton under Line, bankers, june 17
Silveſter Sikes, Huddersfield, banker, june 17
Sivett, T. Park lane, victualler, june 26
Shynn, B. T. Purleigh, ſhopkeeper, June 17
Sale, J. Rylands, and James the younger, Liverpool, coal merchants, june 23
Simmonds, J. Canterbury, linen draper, June 26
Sealy, B. Bolwell court, ſcrivener july 3
Tollody, J. Minley, corn merchant, june 18
Turing, J. Newton, cornfactor, June 29
Tanſley, J. Great Mary le bone ſtreet, glaſs ſeller, June 29
Tomkins, E. and R. Deretend, Birmingham, plated inkſtand makers, july 5
Thacker, A. Upwell, corn merchant, July 5
Turner, G. Strand, ſhoemaker, july 6
Taylor, J. and John Barker March, Wigmore ſtreet, linen drapers, July 6
Varley, R. Darcey Lever, cotton ſpinner, June 30
Wilſon, R. Colchester ſtreet, Savage Gardens, merchant, june 15
Wigzell, T. Jewry ſtreet, wine merchant, june 15
Wells, J. and T. Belt, Mancheſter, ſoap boilers, partnerſhip, and ſeparate Eſtates, June 21
Wilkins, W. Wapping wall, grocer, June 22
Weſt, J. and T. Davies, New Bond ſtreet, ſilverſmiths June 19
Wilmot, T. Woolwich, linen draper, July 10
Walmiſley, R. and J. Filkington, Farnworth, cotton manufacturer, june 23
Wilmot, G. Sutton on Trent, Nottingham, corn factor, July 3
Weſt, J. Drury lane, taylor, July 3
Yates, T. Stockport, partner with C. Lewes, muſlin manufacturer, July 10
Zamira, J. Bevis Mark, merchant, June 12
Zurhorſt, H. Baſinghall ſtreet, merchant, lately carrying on buſineſs with J. and E. Reilly, and J. Morris, Goſwell ſtreet, brewers, joint Eſtate of Zurhorſt, and the ſaid J. Morris, June 15

PRICES OF COALS AT THE COAL EXCHANGE, LONDON,
For JUNE, 1802.

Names of Coals.	Mon. 1st	Wed. 2d.	Frid. 4th	Mond. 7th	Wed 9th	Frid. 11th	Mond. 14th	Wed 16th	Frid. 18th	Mond. 21st	Wed. 23rd	Frid. 25th
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Adair's Main							36 3					
Allen's												
Allerton												
Baker's Main										31		
Bedford Main										35 6		
Benton		39 9										
Beamish So. Moor												
Benwell												
Biddick Main			33									
Bigg's Main							42			38 6		
Blackfell												
Bladon Main												
Blyth		35 6										
Boundry		35 6	35									
Bourn Moor			35	34 6	34 6		34	33				
Bowes Main								35	34 6			
Brandling												
Byker												
Byker, High & Low												
Cowpen	41	39 6					39 3	37 6		36 6		
Dewsbury Main		35 6	35				34			33 6		
Eden Main												
Flockton												
Greenwich Moor							39	37	37 9			
Haraton								39 6		36		
Hartley										38		
Heaton Main	40 6						42			38		
Hebburn Main		42 9										
Holywell							42	40				
Hutton Main										38	39	
Kenton Main												
Lambton's Low dit.												
Marley Hill												
Methley Park										35		
Montague Main												
Mount Moor												
Newbottle												
Old Ducks												
Pitt's Tansfield M.										31 6	32 6	
Primrose	36 6									30 9		
Rectory			34 6	31 6	30 3							
Russel's Main		35	34 3	34	34		33 6					
Simpson's Pontop												
Silver Tops										33 6		
Sheriff. Hill												
South Moor										30 9		
Stanley Main												
St. David							32 9					
Team												
Toft Moor												
Tyne Main										33 9		
Usworth Main												
Walbottle Moor									37 9	39 6		
Walker							42					
Wall's End		43 6	44				43	40 6		38		
Wharton												
Willington							41 9	40		35 9		
Windsor's Pontop									35 6	36		
Windsor's Tandf. M.												
Wylam Moor							33			31		
Wentworth												
Whitefield												
Wooler Main												

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

From the Returns received in the Week, ended JUNE 19, 1802.

INLAND COUNTIES.

COUNTIES.	Wheat.		Rye.		Barley.		Oats.		Beans.		Peas.		Oatmeal.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Middlesex	73	11	33	9	32	3	24	3	33	9	37	10		
Surrey	72	6	32	0	33	8	23	0	39	6	36	0		
Hertford	62	4	38	6	32	2	23	0	35	9	36	10		
Bedford	64	9	55	2	34	6	21	2	32	0				
Huntingdon	65	2			32	0	16	6	29	0	33	7		
Northampton	62	10			26	9	16	0	32	0				
Rutland	67	6	36	0	32	0	17	0	36	0			59	1
Leicester	69	3			32	3	18	0	33	6	33	0	35	9
Nottingham	74	8	48	0	35	6	20	4	39	0				
Derby	78	0			39	6	20	2	37	4	36	0	26	7
Stafford	73	7			40	2	22	5	47	9			28	0
Salop	72	6	49	4	37	0	22	9	44	4			64	11
Hereford	64	0	41	7	31	7	23	9	36	7	35	8	71	3
Worcester	72	4	46	2	37	6	28	4	37	6	44	4		
Warwick	75	3			37	6	23	6	38	2	34	9	39	1
Wilts	66	4			28	4	20	6	37	8	36	0		
Berks	70	6			30	10	23	11	34	6	36	9		
Oxford	65	0			29	9	20	9	33	5	38	6		
Bucks	67	6			35	5	19	9	33	0	37	6		
Brecon	62	4	43	2	31	1	16	0					36	10
Montgomery	65	8			32	2	16	0					38	2
Radnor	70	8			32	2	21	10					60	5
Maritime Counties.														
Essex	71	8	31	6	30	4	24	0	31	0	34	0		
Kent	69	6			32	0	23	10	31	4	34	0		
Sussex	72	0			27	0	24	3	34	0				
Suffolk	67	1			29	6	19	4	28	6	34	6	59	4
Cambridge	65	8			27	0	16	5	29	10				
Norfolk	67	9	34	0	28	6	18	9	28	6	36			
Lincoln	70	1	46	6	30	2	16	0	30	7				
York	67	9	43	0	25	11	16	11	32	3			36	7
Durham	74	6					20	8						
Northumberland	74	8	42	1	27	1	18	2			33	7		
Cumberland	75	2	49	4	30	6	18	3						
Westmorland	79	3	56	0	30	8	20	4					17	6
Lancaster	74	11					20	11	38	0			17	11
Chester	69	4					25	3					17	6
Flint	76	5			42	10								
Denbigh	73	1			38	4	20	6					35	7
Anglesea														
Carnarvon	71	8	40		33	4	16	6					33	4
Merioneth	69	6	44		37	4	19	0					32	6
Cardigan	54	4					10	0						
Pembroke	52	6			23	11	13	4						
Carmarthen	56	0			28	0	12	0						
Glamorgan	61	3			26	8	16	4						
Gloucester	66	2			30	2	21	6	32	0				
Somerset	62	10			29	11	15	4						
Monmouth	61	8			31	10								
Devon	61	5			23	10	19	0						
Cornwall	59	10			24	11	16	5						
Dorset	62	0			24	4	24	3	38	0				
Hants	65	3			27	6	22	5	35	7				

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

Days	Bank Stock.	3perCt. Red.	3perCt. Consols.	4per Ct. Consol.	5perCt. Navy.	5perCt. Loyalty	Long Ann.	Short Ann.	Imp. 3 per Ct.	Imperial Ann.	Irish 5perCt.	Omnium.	Exchq. Bills.	Consols for acct.	Tickets.
31		73 5/8	Shut	88 1/4	104 3/8	104 1/4	20 13-16	4 15-16	72			1		75 5/8	
June 1															
2	182 1/4	73 3/4		88	104 3/4	104 7/8	20 3/4	4 15-16	71 1/8		100 1/4	3/4 par	1 3 dis.	75 7/8	
3		72		87 5/8	Shut.	103 1/2	20 3/8			11 13-16		par 1 1/2	3 dis.	74 1/4	
5				85 3/4		102 7/8	20 5-16	4 15-16		11 3/4		1 1/4 dis.	3 1	74 5/8	
9		71 3/4		86 1/2		102 3/4	20 1/2	5 15-16	70 3/8			1 3/4		73 3/8	17 5
10	181	71 3/8		86 1/2		102 7/8	20 5/8	5	71	12		1/4 dis.		74 1/2	17 5
12		72 3/8		87 1/4		103	20 5/8			12 1-16	99	1 1/4 dis.		74 3/8	17 5
14		72 3/8		87 3/8		103 1/8	20 5/8	4 7/8	71 7/8			1 1/4 dis.		74 1/8	17 7
15	183	72 1/2		87 1/2		103 1/4	20 5/8	5	71	12 1-16		1 1/4 1 dis.		74 1/2	17 7
16	184	72 7/8		88		103 5/8	20 3/4	5	71 3/8	12 1/8		1 1/4 dis.		74 3/8	17 7
19	184	73 3/8		88 7/8		104 3/8	20 15-16	5	71 1/2	12 3-16	100 1/4	1 1/4 dis.		75 1/8	17 7
17		73 3/4		89 1/8		104 5/8	20 15-16	5	72 3/8	12 3-16	100 1/4	1/4 to par		75 1/4	17 8
18		74 1/8		89 5/8		105	21 1/8	5	72 7/8	12 1/4		1 1/2 pr.	par 1 pr.	75 3/4	17 8
21		74 3/8		89 1/2		105 1/8	21 1-16	5	73			3/4 pr.		75 1/8	17 8
22		74 5/8		89 3/8		105 5/8	21 1/4		73 1/4	12 5-16	102	3/4 pr.	1 2 pr.	76	17 8
23		75 3/4		90 5/8		1 5 7/8	21 1/4		73 5/8	12 1/4	102 5/8	1 1/2 pr.		76 1/8	17 8
25		74 3/8		90 3/8		1 0 1/4	21 3-16		73 1/4	12 3- 16		1 1/4 pr.		76 3/4	17 8
26		74 1/8		90		105 1/4	21 3-16	5		12 1/4		1 1/2 pr.	1 2 pr.	75 7/8	17 8

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

ALPHABETICAL INDEX,

TO THE

SIXTH VOLUME

OF THE

COMMERCIAL AND AGRICULTUAL

MAGAZINE.

* R. stands for Reviewed.

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COM RCIAL
AND
AGRICUL URAL
MAGAZINE

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Centimetres
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Farbkarte #13
B.I.G.
Blue
Cyan
Green
Yellow
Red
Magenta
White
3/Color
Black