ROBERT, LORD ROMNEY,

President ,>/ //?< So ctety ,//!,»// tuted at ._' London,

for the Encouragement of Arts, Manufactures, & Comme

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TRANSACTIONS

OF THE

SOCIETY

INSTITUTED AT LONDON,

FOR

ENCOURAGEMENT

OF

ARTS, MANUFACTURES, and COMMERCE,

WITH THE

PREMIUMS offered in the YEAR 1785.

VOL. III.

LONDON:

PRINTED AT THE

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TO BE HAD OF THE REGISTERR AT THE SOCIETY^ HOUSE IX *1VV* ADELPHI, AND SOLD BY

Msflrs. DODSLEY LOCKYER DAVIS, WHITE, BECKETT, JOHNSON, CADELL, ELMSLEY, WALTER, RICHARDSOS, and DERRETT .

M,DCC,iXXXV.

PREFACE.

A GENERAL fatisfaction has been expreſſed, not only by the Members, but *by* **the Publick** at large, at the annual appearance of a volume of the Transactions pf this Society, and disutility of fuch a publication has been fully evinced by the honourable and large encfeafe of members elected within the three laft years, a circumftance highly pleafing to every well-wi(her to the Arts, the Manufactures, and Commerce of **thefe** kingdoms, and which may reasonably be confidered as arifing, in some degree, from the circulation of thefe volumes, whereby the nature of the **inftitutton** has become more generally known, and the whole nation informed of their proceed 1 tigs, and acquainted **with** the general utility arifing from their labours, which are, and agreeably to the principles of the Society, ever have

have been exerted in encouraging and promoting thofe inventions that tend to the improvement of the ufeful Arts.

As among thofe Arts, Printing has ever been moft defervedly reckoned one of the chief, the Society have refolved to lend every affiftance in their power to forward the attempt to print books LOGOGRAPHICALLY, for which his Majefty's Letters Patent have lately been granted ; this volume of their tranfa&ions has therefore been printed at the prefs eftablifhed for working in that mod?; with what fupcefs the Publick are now well enabled to judge.

The following fheets will be found to contain, under the head of Agriculture, accounts of planting Timber, efpecially in the northern part of the ifland, in fuch great numbers as reflect the higheft honour on the owner of the foil, and will ferve, it is hopod, to ftimulate the pofleffors of large

large tra&s of barren and uncultivated lands tp adopt the fome pradtice, by which not only their eftates will in time become much more valuable, but will in a few years improve in beauty, and rendet the inhabitants more comfortable and happy; under this head are alfo inferted fome judicious obfervations on the culture of different kinds of Wheat, and of the Howard or Cluftered Potatoe, whofe great increafe is well known* and which has been long talked of for feeding Hogs, &c. but no decifive experiments on the excellency of this fpecics for fuch purpofe has till now publickly appeared.

In the clafi of Polite Arts, the account given of the pi&ures which ornament the room in which the meetings of the Society are held, it is prefumed will prove entertaining and inftru&ive, and ferve at the fame time to make known the eminent abilities of the Artift who executed them, and prove that

the

the finer Arts ftill continue objects of the attention and encouragement of the Society; the far greater part of the account now printed, is extrafted from a work publifhed by Mr. Barry, at the time of the exhibitions, but tLofe parts which do not immediately relate to the fubje£l of the feveral Pidlures are omitted, and a fliort hiftorical account of the procedings of the Society on the fubjeft of the Paintings introduced in its ftead.

Under the head of Manufactures will appear a letter on the preparing cloth from the ftalks or binds of Hops, which was written to the Society many years fince, in confequence of a premium then offered on that l'ubjeft. When it is recollected what vaft quantities of ftalks or binds of Hops are every year cut down and thrown on dunghills, it furely merits the attention Of the Society in garticjular, and of the public at large, to difcover if poflible a mode of applying them advantage-

oufly

oufly to ufe in fome manufactures of this country, and it has been judged proper to reft'ore in another form the premium formerly offered for making cloth from them in hopes they may be employed in that manner, but if that fhoulcl fail, the hint given of converting them to ufe, may perhaps lead ingenious men to turn their thoughts*to the difcovery fome other purpofes, to which they may be more adapted.

In the clafs of Mechanicks is inferted an account and print of a Crane, which under fome local circumftances, will certainly be found a very ufeful one. A Lock alfo of a conftruftion to render it fcafy in opening, and prevent its beingout of order, is defcribed, together with a fecret efcutcheon which being applied to the covering any defk, will aimoft infallibly fecure it from being picked or opened without the knowledge of the owner. And here it may not be amifs to recommend to the atten-

tion of every mechanick the little work entitled a Century of Inventions, by the Marquis of Worcefter, which on account of the feeming improbability of difcovering many things mentioned therein, has been too much neglefted; but when it is confidered that fome of the contrivances, apparently not the leaft abftrufe* have by clofe application been found to anfwer all the Marquis fays of them, and that the firft hint of that moft powerful machine the Steam Engine, is given in that work, it is unneceflary to enlarge oii the utility of it.

To (hew the feveral parts of the Crane, and the fecret Efcutcheon, two plates are inferted in this volume, executed by Mr. Laurie, whofe method of printing in colours is defcribed in the fecond volume of the Tranfadtions, page 145.

Thefe are fome of the principal matters in the following volume, and as the com*

(communications to the Society promife jto encreafe, and they are already in th© pofleffion of fome papers towards forming a future volume, there is reafon to believe thefe books will in time make a very valuable addition to every Library.

C O N T E N T S ,

ERRATA.

Page 83. Hue *J** from*ftie bottom, for *ninteenth* read *nineteenth**

12t. 9. for *ceremony forms* read *ceremony that forms**

149* 6. from the bottom, for *lanthtn-n* read *lantborns.*

178. line laft, for *be,* read Mr. *Fifprifi*

PAPERS

IN

AGRICULTURE.

AGRICULTURE.

IT is univerfally acknowledged, that promoting the growth of trees, is very highly deferving every approbation in the power of the Society tp beftow ; and it is with great fatisfa&ion they perceive, that a pra&ice fo conducive to the benefit of the public, is extending itfelf into thofe parts of the kingdom, which have long been disfigured by barren and fandy heaths. This has been eminently fhewn in Bedforclfhire, where the flourifhing plantations, made by Francis Moore, Efq. at Afpley Guife, of which an account is given in the firft volume of the Society's Tranfadtions, page 129 ; and thofe defcribed in the following letters, cannot fail of being particularly beneficial, whether we confider the plantations with refpeft to thofe trees intended to (land for

timber, or the underwood as fupplying fewel to a part of the countiy where that neceflkry article has hitherto been at fb high a price.

In the year 1782, the Society were informed a large plantation of wood had been made, by the Right Honourable the Earl of Upper-Oflbry, near Ampthill in Bedfordfhire ; and although no application had been made to the Society for any premium offered on that fubjedt, yet they judged proper to enquire into the nature and extent of thofe improvements ; and after receiving the information contained in the following letters, prefented to the Earl of Upper-Oflbry, their GOLD MEDAL, as a mark of their approbation of the extenfive plantations made by his Lordfhip near AmpthilL

jtmpthill,

AmpthilU Jan. 14, 1783.

SIR,

THE 24th of December laft, I was favoured with a letter from Mr. Small, with a requifition to know the nature, fize, and condition of Lord Offory's plantations, and to tranfmit the fame to you.—I immediately applied to his Lordfhip for in* formation, who ordered his park gardener to make out the account of the number of acres, &c. which I have here enclofed.

If the Society or yourfelf fhould want any further information, and will acquaint me with it, I will, with pleafure, obey their or ybur commands.

I am, Sir,

Your moft humble Servant.

L. HUMBERSTONE.

Mr. SAMUEL MORE,
Secretary to the Society
for Encouragement of
Arts. &c.

To MR. HUMBERSTONE.

Ampthill Park, Jan. 12, 1783.

SIR,

THE different plantations of the Earl of Upper-Oflbry,* that have lately been planted, confift of about forty-fix acres, and are planted with about one hundred and eighty-four thoufand trees, that is four thoufand per acre ; all of them are in a very flourifhing condition. Some of the above are within the park, others on barren ground contiguous to it,[1] and a few acres on one of his Lordfhip's eftates, a few miles diftant. The greater part are planted with Scotch-firs, mixed with Forfeft trees of all kinds, fuch as Oaks* Beeches, Spanifh-chefnuts, Hornbeam,, Birch, Sycamore, Lombardy-poplar* Larches, and Spruce-firs; one plantation excepted, which was planted laft year with

with forty-two thoufand Scotch-firs, and two thoufand Seedling Oaks and Spanifh-chefnuts.—The very wet places are planted with Afh and Alder, with Willows of different kinds intermixed. The age of the Scotch-firs, at the time of planting, is three years; that is, one year in the feed-bed, and two in tranfplanfed rows. The deciduous are from four to feven years old. There are alfo upwards of twenty acres planted, fomp years ago, with Scotch and Spruce-firs, Beech, and Spanifh-chefnuts. All his Lordlhip's plantations are well fecured from cattle, and while young, from hares and rabbits. There will be a great number planted this year, and as his Lordfhip intends planting every fcafon, they will foon be increafed to a very large extent. As his Lordfhip's fuccefs in planting is remarkably great, not having ten out of a thoufand die: if the Society wifhes for any information relating either to raifing or planting, or the growth of

the different trees on the various foils on which they are planted, I fliall be willing to communicate to them fuch circum-

ROBERT GIBBS,

Mr. SAMUEL MORE.

Ampthill Park, Dec. 22, 1783.

SIR,

I HOPE I fhall be readily excufed for not writing to you fooner, when I acquaint you that my only motive was to make fome further obfervations on what I had planted. As I would not willingly impofe on any private perfon, fo I would cautioufly guard againft impofitions on *z* Society

Society intended for public good. In my laft letter I gave fome account of the extent of his Lordfhip's plantations, with the number of plants, and the various forts they were planted with. This year I have almoft finifhed another plantation of about fourteen acres, planted with much the fame kinds as the former. The foil in general is dry> barren, fandy, and heathy, a few acres excepted, which are loamy, and a fmall quantity is very wet. Spanifh-chefnuts, Birch, Scotch-firs, Larches and Wey mouth-pines, thrive ex* ceedingly well on the dry and barren fand, as alfo do the Spruce-firs for a few years, as eighteen 6r twenty, after this time they begin to die at the top, fo that we have been obliged to cut vaft numbers down before they were of any fize or ufe, othef than for fpars and rails for fencing. On the loamy foil they ftill continue vigorous in their growth, and beautiful in appearance. I think the great fuccefs I have had in planting for his Lordfhip (and I believe

believe it will hold good in all *othet* plantations) is the care of the plants in the feed-beds and nurfery-rows, to keep them clean, and not too clofe together, to draw one another up. The Scotch-firs I plant out of the feed-bed at one year old, into beds of four feet wide, and fix or eight inches afunder: in thefe beds they ftand two years, which I find to be the beft age to enfure fuccefs; when fmaller the weeds are apt to injure them; when larger they have very few fibres, and are more hurt by the winds, and longer before they ftrike out frefh roots, and often are killed by the dry weather, before they get hold of the ground. When I take them up I fecure as much of the earth about them as will hang; putting them carefully into whatever carriage they are conveyed in, and ufing the fame care in laying them in their places where they are to be planted, which are holes eighteen inches diameter, putting the beft mould about their roots. The

Spruce-

Spruce-fir, and the Weymouth-pine, I order in the fame manner, with this difference only, that they will bear to ftand longer, two, three, or four years, before they are planted out, and at that age plenty of mould will hang to their roots, which is of effential fervice to plants in general; I alfo manage the deciduous trees in much the fame manner. I have planted fome Lombardy poplars in a poor fandy foil, which do very well, but thrive much better in a moift loam, on which I planted fome about feventeen years ago, and they are now near fixty feet high ; but in a very wet ground I cannot get them to grow at all: whereas A(h and Alder grow in fuch land amazingly quick. Oaks grow very faft among Birches and Firs, which I call nurfing-plants to them, fome of thofe I thus planted about ten years ngd, are now fixteen feet high ; I think they* will not make good timber on fo poor a foil, but will produce underwood, if cut down

down in time ; or, if they are fuffered *to* remain, may anfwer ordinary purpofes, and will fave the better timber for extraordinary ufes. Early planting is by far the beft for dry foils ; I generally finifli the greater part of both evergreen and deciduous, about the end of January*

If there is any other information wanted by the Society, that I have omitted, and is in my power to give, let me know, and I will fend an anfwer by the return of poft,

I am, &c.

ROBERT GIBBS,

Mr. SAMUEL MORE*

THE

THE thanks of the Society were ordered to George Rofs, Efq. for the following communication : He was requefted hereafter to favour the Society with an account of the fuccefs which may attend his plantation, and the GOLD MEDAL was prefented to him as a mark of the Society's approbation of his fpirited attention to the planting Oaks, and other Foreft trees, in Scotland.

Conduit-Greet) May 19, 1784*

SIR,

WHEN a proper opportunity offers you will be pleafed to lay the enclofed certificate before the Honourable Society to which you are Secretary, it will fhew them

them we are not altogether idle in the northern parts of Scotland.

About eighteen years ago, when I purchaled the eftate of Cromarty, furrounded by the famous bay of that name, *I* found upwards of four hundred acres of full grown Scotch-firs, and among them feveral Oak and other Foreft trees, which led me to introduce Oak-plants, by cutting out the Firs, leaving a certain quantity for ihelter to the Oaks, which fully anfwers my expe&ation, and will, I flatter my-* felf, be followed by my neighbours; and, in procefs of time, muft prove a public benefit, efpecially in a • country furrounded by the famous bay which the ancients called *Portus Safaris.*

I obferve from laft year's publication, you have had no correfpondents in North Britain, but I conclude no diftin&iou is made between South and North Britain ; and you will obferve that fix volumes have been lately publiflied in the name of a Mr. Wight, who furveyed the country

by order of the Commiflioners of annex* cd eftates, which are not unworthy of your perufal.

I am, Sir,

Your moil obedient,

Hujpble Servant,

GEORGE ROSS.

Mr. SAMUEL MORE.

Richmond^ Surry, Nov. 11, 1784.

S I R,

IN anfwer to your letter of the 9th, defiring to be informed, for the information

tion of the Committee, of the prefent ftate of my young plantations at Cromarty, you will be pleafed to know, that though I have not been there myfelf this fummer, my nephew, Mr. Gray, has, who reports that they are all in a very thriving condition, barring fome that in fo extenfive a plantation have failed, for the renewal of which orders have been given.

With refpeft to the account you defire of the age and fize of the Firs and Oaks I found upon the eftate when I made the purchafe, I beg leave to acquaint you that I found a large plantation, confifting of four hundred acres, fituated on the peninfula of that eftate, of the age of thirty years; and in cutting roads and walks through this plantation, feveral Oaks, Afti, and Elms, intermixed, and ftruggling in growth with the Firs, whicl* fatisfied me that the foil would produce fuch trees, and therefore I proceeded in cutting*down fome of the firs, and plant-

ing from my nurferies, from time to time, Oak, Afh, and Elm, under the flielter of the Firs left ftanding, and by that means, in procefs of time, that plantation will become a foreft of ufeful timber.

I am, Sir,

Your moil obedient and

Moft humble fervant,

GEORGE ROSS.

Mr. SAMUEL MORE.

By the certificate mentioned in the firft letter from Mr. Rofs, figned George Bavin, gardener, andattefted by Mr. Walter Rofs, it appears that there were planted, on the eftate of George Rofs, Efq. at Cromarty, in North Britain, from the month of March, 1783, to the month of

May, 1784, on ground well fenced, the following trees, viz.

OAKS.—Ninety thoufand three him* dred.

ELMS.—Thirty-one thoufand two hundred.

ASH.—Forty-two thoufand.

BEECH.—Thirteen thoufand two hundred.

SYCAMORE.—Two thoufand one hundred.

CHESNUT.—Four thoufand.

LARCH.—One thoufand nine hundred.

SCOTCH FIRS.—Three millions five thoufand.

Total.—Three millions, one hundred, eighty-nine thoufand feven hundred trees*

CULTURE OF WHEAT.

THE thanks of the Society were ordered to Mr. Boys of Betfhanger in Kent, for the following communications refpefting his experiments on the culture of different kinds of Wheat.

Betjhanger, Feb. 10, 1783.

SIR,

In order toafcertain what fort of Wheat is moft advantageous to be cultivated on a good dry loamy foil. I have made two experiments, which were purely for my own information ; but feeing they may tend to the public advantage by being made known, and having been encouraged by you, when I had the honour of waiting on

you in town, to communicate any thing I might have to offer, have enclofed an account of them, and requeft the favour of you, if you think them of fufficient importance, to lay them before the Honourable Society for the Encouragement of Arts, Manufactures, and Commerce.

I am, Sir,

Yours, refpe&fully.

J, BOYS*

Mr. SAMUEL MORE*

In the Autumn of 1776, I fowed five half acres with different forts of Wheat on a clover lay, in the middle of a field of fourteen acres, which was quite on a level

level and the foil exaftly the fame, all fowed in one day, and managed precifely in the fame manner, and laid feparately in the barn, and carefully threfhed and meafured.

In the autumn of 1781, the fame field being to be fown with Wheat; to prove whether **a** different feafon and different tilth, it being this time, a bean ftubble, might make much difference, not having any yellow Lajnm^s Wheat, I meafured out four half-acres about the fame place, and went on the fame as before with the other four forts, the accounts of each as follows;

Date.	Sorts of Wheat.	Produce. per half A\crc. Quar.	Bu/h.	Gall.	Produce per Acre. Quar.	Bufli.	Gall.	Value per Quar. j.	r/.	Value per Acre. £•	'•	d.
1777.	f Hoary White	I	6	If	3	4	3	45		7	19	7
	\Fulham	I	6	I	3	4	a	41		7	4	93
	v White Straw	I	6	O	3	4	0	43		7	10	6
	/ Yellow Lammas	I	4	O	3	O	O	44		6	12	o
	L Brown Lammas	I	3	6	^	7	4	44		6	9	3
178	r Hoary White	2	6	2	5	4	4	52	6	14	12	0¼
	jFulham	Z	6	0	5	4	0	48		13	4	o
	j White Straw	2	6	0	5	4	0	5°		13	15	o
	LBrown Lammas	2	3	0	4	6	0	51		12	2	3

The prices annexed were the value of the different forts as the markets were at the time of threfhing, according to the beft of my judgment. The bufhel contains eight gallons and one quart.

The crop laft year was the moft abundant I ever knew, which was owing to the wet fummer, as that fuits our dry foils very well; the produce in general is about three and a half quarters per acre.

It appears by thefe experiments, that the Hoary White is the beft to cultivate on fuch foil, and very far fuperior to the common Brown Lammas, which I believe is the fort moft generally fown.

The Fi\lham produces about the fame crop, but being a very coarfe Wheat with a thick bran, is of very inferior value; there is another fort of white Wheat which is by fome cultivated in this neighbourhood, called the Egg-fhell White, which I did not try, having a particular averfion to that fort, on account of its being fo free in the ear as to drop out in the

field, which would not fuit our hills that are much expofed to high winds, it is a fort much efteemed hy the Millers. If experiments of this kind are acceptable to the Honourable Society, you will prọbably hear further from

Your humble Servant,

J. Boys,

Mr. SAMUEL MỌRE*

DIBBLING,

DIBBLING WHEAT,

THANKS were returned to Mr. Wagftaffe, the writer of the following letter, for the information contained therein refpedting the mode of dibbling Wheat, as pra&ifed in Norfolk : and in confequence of the intimation therein given by him, a premium was offered for communicating to the Society the beft fet of experiments to afcertain the merits of that pra&ice in the culture of Wheat when compared with fowing it in broad caft, or drilling it in equi-diftant rows.

Ito the Society for the Encouragement of Arts ^ Manufactures^ and Commerce.

Norwich, Oft. 27, 1783*

GENTLEMEN,

I take the liberty to addrefs you on a fubjedt I conceive will be worthy your patronage, viz. the dibbling or dropping of Wheat, which though prevailingi n this part of the nation, feems little under-flood, or fcarcely apprehended, in the Southern, Northweft, and Midland counties.

Your encouragement hath been handed forth during fome years, for the beft fet of experiments to afcertain whether it is moft advantageous to cultivate Wheat by fowing it in the common broad caft way, or by drilling it in equidiftantrows; whether

ther you have had this comparative difference afcertained,is not neceffaryforme to enquire; my purpofe is a wifh that in handing forth a future encouragement, you might fee it eligible to conned this late mode of propagation with the two former ; I have been long perfuaded it is fuperior to either, and that, purfued on lands of a certain defcription, it will be productive of much national advantage, and with no hazard of a comparative lofs applied to any lands, experimentally known to be fuitable to this grain,

I fhall therefore beg leave to mention, having with you the good of the public in objeft, that being conne&ed by neighs bourhood, or bufinefs, with divers farmers, fetters of Wheat, and having tried it myfelf upon a fmall fcale, yet the largeft I was capable of, and been a clofe obferver from its beginning, through its fucceflive adoptions in the part of the country where it began ; I therefore hold myfelf

myfelf ready to communicate any intelligence to you, that may tend to your forming a fuitable judgment thereon, and as a ground for your future encouragement.

I may likewife add, though perhaps prematurely, that as the praftice is novel, and in fpeculation unpromifing, and has been confidered as a refinement by genius, at a diftance, I conceive it would be in my power, upon your compenfation for time and travelling, at a future feed time, to excite a dibbler, with one or two of his droppers to go to anyplace within fifty miles *of* London.

This I prefume would imprefs an adequate idea of its mode, make the praftice eafy to their imitators, and in due time give an evidence which fpeculation is fcarce capable of attaining, that the oeconomy of feed, tends to an increafe fomewhat proportionable to the houghing up nine tenths of a Turncp crop, which experience has evinced augments

their

their real produce, yet in the fetting of Wheat as in the thinning of Turneps, it muft be under a regulation, and precifion of judgment, which neverthelefs pradtice can render eafy, and an intelligent obferver foon acquire,

I am with great attention,

Your refpe&ful Friend,

JOHN WAGSTAFFE.

P. S. I can fcarce refrain obferving that this prefent feed-time more Wheat hath been fet and land referved for its continuance within the diftance of ten miles from Norwich than in any pre-ceeding year, and peculiarly fo in the hundred where it originated, while it is diffufing (though flowly) in every dire&ion, and is now extended into a neigh* bouring County.

HOWARD, OR CLUSTERED POTATOE.

IN the year 1779. The Silver Medal of the Society was voted to Arthur Young, Efq. of Bradfield Hall, near Bury, Suffolk, for the following account of the culture, produce, and application of the Howard or Cluftered Potatoe,

From the general tenor of the premiums offered by the Society, relative to the Howard Potatoe, I apprehend they wifli information not only in the mode of cultivating it, but the quantity of the* produce, and the ufes in feeding cattle, as they have at different times offered three diftindt premiums for thefe obje&s; my experiments on either of the three feparately taken, might not be worthy of their attention, I (hall therefore blend them into one account, though I by fo doing, fhall hazard that ftri£t compliance

with their conditions which they may require, and I (hall venture this the rather as I fhould otherwife be a candidate for three medals inftead of one-

EXPERIMENT I.

PRODUCTIVE QUALITY. April 4,1770. Having a fmall Howard Potatoe cut it, into four fets, planted them on a hillock of fandy loam, fcattered with two pecks of poultry dung; when they came up, earthed them with one peck of chalk, and foon after with two pecks of rotten yard dung, again with one peck of poultry dung, and a layer of loam. I was abfent a confiderable part of the Summer, and therefore could not mark the progrefs of the vegetation, whether checked or accelerated by thefe earthings; dug them up November 16, the produce, ninety Potatoes, meafuring two

two pecks* fome of them remarkably fine, weight thirty-one pound, the quantity of land occupied four fquare feet, the acreable produce one thoufand three hundred and iixty-one bufhels.

EXPERIMENT II.

COMPARISON WITH OTHER SORTS, March 20, 1771. Manured three furrows of ridges, four feet and a half broad, and feventy yards long, with fix loads of farm yard dung ; the foil a wet hungry gravel, naturally pooi;. · In 1770, it was manured feventy loads an acre, of earth and dung, drilled with Lucerne, but failing, it was fummer fallowed for Turneps, but not fown, through a fer~ vant's miftake, the dung for the Potatoes was laid in the furrows, and the frts upon it in a double row, twelve inches a part, and as much from fet to fet; on* bufhel

bufhel of feed. Covered them by reverfing the ridges with a plough. Alfo five ridges contiguous, dunged in the fame manner, with two bufhels and half a peck of Red Nofe Kidney, fuppofed at London, to be the moft prolific fort; alfo two other ridges dunged in the fame manner, with five pecks, a mixture of Golden Tags, and Golden Ruffets from Lancafhire.

The firft week in June hand-hoed the rows, the middle of the fame month horfe-hoed the intervals with a Berkfhire fhim, which cuts the furface but turns no furrow, followed this with a large doubfe mould-board plough which earthed up the rows, clearing the furrows, and leaving the land in beautiful order.

July 12, Hand-weeded the rows; the middle of Auguft repeated the fhimming and double mould-board plough ; the firft week in September, hand-weeded ; the latter end of O&ober ploughed them up.

Produce.	*Bujhels.*
Three ridges of Howards	24
Five ditto Red N. Kidney	16
Two ditto Tags and Ruffets	9

which per acre makes	*Bujhels.*
Howards	360
Kidnies	144
Tags and Fuffets	207

Account of the ftowards per acre,

	Expences.			/.	*s.*	*d.*
1770.	Four ploughings at 6s.			1		40
	Three harrowings at *yd.*			0	2	3
	Seventy loads of com-poft at as.			7	0	c
	Rent	0	8	0		
	Rates·	0	1	2		
	Repairs*	0	1	0		
	Fences*	0	1	6		
				on 8		
	Carried over			8	17	11

* This upon an average per annum over the whole ftrm.

1771. One

		£.	s.	d.
Brought over		8	17	11
1771.	One ploughing	0	6	0
	Eighty-nine loads of compoft at 2s.	8	18	0
	Eighteen bufhels fets 2s.	1	16	0
	Planting	0	6	0
	Harrowing	0	0	9
	Hand-hoeing	0	2,	6
	Shimming	0	0	9
	Moulding Plough	0	5	0
	Weeding	0	1	6
	Horfe-hoeing repeated	0*	5	9
	Weeding	0	3	0
	Ploughing and picking	1	6	0
	Annual charges as before	0	14	8
		23	0	10

Produce.

	£.	s.	d.
Threehundredandfixtybufhels two Shillings the felling price, butfuppofe is.6d. the price of common Potatoes	27	o	o
Expences	23	o	10
Profit	3	19	2

Account of the Kidnies.

Produce.	£.	s.	d.
One hundred and forty-four bufhels, at is. 6d.	10	16	o
Expences, the fame, the fmall variation in the feed not worth noting	23	o	10
Lofs	12	4	io

Account of the Tags and Ruflets.

Produce.

Two hundred and feven buftielsat is. 6d.	15	10	6		
Expences	2	3	0	1	0
Lofs	7	10	4		

OBSERV-

OBSERVATIONS.

The foil above defcribed is perhaps the moft unfit of all others for common Potatoes, but being informed that the Howard would thrive where other forts would not, I purpofely chofe it; the event is remarkable, and proves clearly that on thefe wet tenacious gravels, great crops of that fort may be gained; the unfatisfa£tory circumftance is the value of the crop, a circumftance general with Potatoes, for their price varies exceedingly, and what is worfe, have fometimes no price at all for large quantities, confequently if they cannot be confumed at home by cattle profitably, the objeft is not an important one; two manurings being charged to one crop, render the expence very high. It muft however ftrike every perfon, that had the Potatoes no more than paid the expence; the return would have been prodigiouily advantage-*

ous, as the land is left in uncommon order for fucceeding crops.

IT is neceffary here to remark, that the value of two fhillings a load for the manure is for a one horfe three-wheel carriage or cart, which holds about eighteen bufliels, and is the average expence of my farm-yard compoft for fever al years paft. In thefummer I cart a layer of marie, turf, or mould over all my yard, and in the following winter fodder my cattle on it, cleaning the ftables, cow-houfe, and hog-ftiesontoit, bones, night foil, coalafhes, fullage of ftreets, or whatever manure I buy; in the fpring I turn the whole over, mixing well together, and cart it for Potatoes ; the two (hillings includes filling, fpreading, carting, and in a word, all expence whatever.

EXPERIMENT III.

IN ploughing up the preceding crop, two lands were thrown into one, and early

early in the fpring fplit again, after which one of them, where the Howards had been, coming up tolerably thick, from the fmall Potatoes left, I defifled from ploughing it up, in order to fee what the refult would be; it was hand-hoed once, and weeded twice, and being taken up in November 1772, the produce was fix bufliels, or per acre two hundred and feventy-fix, which at one (hilling and lixpence, is twenty pounds fourteen (hillings.

EXPERIMENT IV,

CULTURE, EXPENCES, PRODUCE, AND APPLICATION OF ONE HUNDRED AND TWENTY PERCH. 1772. The foil, a deep fandy loam ; it was under Carrots in 1771, and ploughed flat in Autumn ; the extreme wetnels of the fpring prevented my carting on the dung till the iixth of April, and then only thirty loads. Rain

coming the eighth, prevented going on with it. Spread the compoft, and on the thirteenth ploughed it into four feet ridges, ftrikirig the furrows immediately, with the double mould-board plough* at the fame time drew furrows at four feet diftance as paths for that large plough to open trenches to lay the dung in, that I might fee which method

over the land, or laying it in furrows under the crop; but heavy rains impeded the work ; the fourteenth it rained from five in the morning till ten at night, a cruel feafon for Potatoe planting; the piece ploughed the thirteenth did not work fa well as it ought; indeed the feafon had been fb wet, that no land except lays ploughed tolerably. April twenty-fecond and twenty-third went on with the manuring, and the twenty-aiinth planted part, laying the fets in double rows, at one foot, on the dung, and covered them immediately with the plough, reverfingthe ridges; the

part

part ploughed, with defign to dibble, baked too hard for it; ploughed i t therefore again, planting it in fingle rows: the plough firft turned a furrow from one fide of each ridge, and upon the back of this furrow the fets were laid, fix inches a-part; the plough then returning and taking a fimilar furrow from the oppolite ridge, covered the fets, which muft of courfe come up in the middle of the new ridge. The dung which was ſpread over the land fell on to the fets in ploughing, as I could wifli. May firft, finifhed and the fourth, planted it; during the fummer hand-hoed once, hand-weeded once, and horfe-hoed twice, once with fhim, and once with double mould-board ; nothing made a more beautiful appearance than thefe Potatoes throughout the feafon, the verdure and luxuriance of the herbage, notwithftanding the feverity of the drought which followed that wet fpring, was a moft pleafing fight, nor was there to be feen a weed throughout. November fourteenth,

began taking them up; eighteen rows and a half planted on the dung, one hundred and ten yards long by four feet broad, produced two hundred and thirteen bufliels, dirty, that fpace makes ninety fquare perch, the proportion per acre is, three hundred and fourteen bufliels, deducing one-fixth for dirt; fix rows, where the dung was fpread, produced fixty-four bufliels and a half dirty, clean fifty-three, one-fixth de-du&ed, proportion per acre, two hundred and ninety-two. Total produce, dirty, two hundred and feventy-feven bufhels. For fecuring them during the winter, I fpread the floor of a fmall barn with truffes of ftraw, clofe to each other, and the fame around the fides of the barn; the Potatoes were laid in with all the dirt that ftuck to them, fome were very wet; I did not open the heap till the end of Januáry, when the whole was one hard dry mafs, and the Potatoes very found and good; upon meafuring them clean, the produce was two hundred and forty-

fix

fix bufhels, the dirt therefore did not amount quite to one-fixth ; one hundred and twenty perch producing two hundred and forty-fix, is at the rate of three hundred and twenty-eight per acre.

Expences per acre.

		£.	s.	d.
1771.	Ploughing - -	0	6	0
1772.	Compoft one hundred loads at 2 s. -	10	0	0
	Ploughing - -	0	6	0
	Twelve buihels fetts at is. 6d. - -	0	18	0
	Slicing and planting	0	6	0
	Harrowing - -	0	0	9
	Hand-hoeing - -	0	10	0
	Hand-weeding -	0	3	0
	Horfe-hoeing (him	0	0	9
	Double mould-board	*	5	0
	Ploughing up -	0	6	0
	Carried over • - -	13	*	6

Brought

Brought over - - *JT.*	13	1	6
Picking up i^d. per bufh.	1	14	*2*
Carting home, drawing over and cleaning		100	
Annual charges -	o	11	8
Value afcertained	J6	7	4

February the eighth, &c. In a copper that held fix bufhels, boiled at feveral times feventy-five bufhels, with ninety bufh-faggots, turning them out of the copper into a tub, wherein they were mafhed, from this tub put the mafh without any liquor into a ciftern, adding, as it was done, nine bufhels of Barley in meal, a boy in the ciftern mixed them well together with a fpade ; bought five Hogs of the Chinefe breed, and weighed them alive,

No.	I	—	121 *Ib.*
	2	—	117
	3	—	103
	4	—	*95*
	5	-	98
			533

They

They cofl fix pounds, thirteen (hillings and three-pence, which is three-pence per pound alive. Upon finifting the Potatoes, they were weighed alive, killed, and fold, which was rather a difadvantage as none of them were quite fat, I did it however for the fake of gaining the knowledge I made the trial in fearch of; they weighed feven hundred and eighty-four pounds alive, and five hundred and ten pounds dead, which fold at fix-pence per pound, or twelve pounds, fifteen (hillings, this proportion is nearly twenty pounds alive, giving thirteen dead ; numbers one and two were weighed at different times, and gained the firft three weeks of fatting, two pounds and a quarter each, per diem, which is very confiderable, the expences were

			d.
Coft of the Hogs - -	6	13	3
Labour, wafhing Potatoes and boiling - - -	0	6	0
Ninety bufh-faggots, value	0	5	0
Nine buftiels Barley -		1160	
	9	o	3

Produce.	£•	j.	d.
Sold at - - -	I *»	15	0
Dedu£ - - -	9	0	3

Remains, which is the vahie paid for the Potatoes -	3	1	5	9

Or per bufhel one (hilling.

When I found the hogs thriving ib well, I expected the Potatoes to pay a higher value than this, not but a Shilling a bufhel in an application that goes to any quantity, is a great object.

But

But as the prices of Pork and Barley may vary, I (hall give the product of Pork yielded by this quantity of food.

	Ib.
The Hogs when killed fat, weighed	510
At putting up, they weighed alive 5331b. this would have been dead at 13 for 20 - - -	346
The gain of Pork was therefore -	164

Thus feveaty-five bufhels of Potatoes, and nine of Barley, yielded one hundred and fixty-four pounds of Pork, this is a fad which may be ufeful whatever the price of Barley is, and for whatever Pork may fell.

The mere increafe of dead weight is not the whole profit, or it would ljiot pay. the expence, there is befides, the profit on converting lean to fat, if bought at three-pence alive weight; but three hundred and forty-fix dead at fix-pence, 'would he eight pounds, thirteen

fhillings, whereas they coft but fix pounds thirteen fhillings.

The Society wiliobferve, that this value of one (hilling per bufhel, is found only from one experiment, which though it anfwers for fixing the amount of this crop, yet repeated ones muft be made to difcover what may be reckoned a ftandard value.

Produce.	*JT.*	*s.*	*d.*
Three hundred and twenty-eight bufliels at is. - -	16	8	o
Expences - ' - -	16	7	4

Hence therefore the crop paid the expences, which confidering the ample manuring and the great order the land i s left in muft be efteemed a very confiderable profit. The great obje&of tillage is to find a fallow crop which will pay its expences, manuring included. Every farmer knows thatTurneps, under the laft perfe&ionof culture, will never do this; but if Potatoes ufed at home can be made to do it, every beneficial purpofe is anfwered, for the

confumption by fattening Hogs raifes a large quantity of valuable dung.

EXPERIMENT V,

CULTURE, EXPENCES, PRODUCE* AND APPLICATION OF FOUR ACRES, 1773*

This field was at the end of its courfe, and now ready for a fallow, I determined to make Potatoes the fallow* having from the experience of the preceding trials, among fome others I had formed, been convinced of their importance. The foil, a poor gravelly loam, but not fo wet, tenacious, or fo bad as that mentioned in Experiment u. It was an oat ftubble on broad flat lands, thefe were ploughed into the four feet ridge the beginning of November 1772, and fo left for winter,

April the fourteenth, 1773, ploughed it again reverfing the ridges, and immediately on this ploughing carted two hundred and eighty-three loads of farm-yard

compoft made the preceeding winter, which was ready turned over and mixed for the purpofe, into the furrows, and planted the fets in one row, twelve inches afunder along the middle of the dung. It took feven bufhels an acre; this by women and children, and I found they did it very quick; a plough followed, which taking off a flice from the fides of each ridge covered the Potatoes and the dung; as in feveral parts of the field I found much grafs and weeds I did not complete the operation of reverfing the ridges then, that the fun might have the more power on the land, but did the fecond bout in a fortnight after, which left the ridges in their firft form.

The eighteenth and nineteenth of June, the plants being about fix inches high, I turned a furrow from the fides of each ridge, leaving the plants upon a flip of a foot wide. This part of the horfe-hoeing fyftem I thought neceflary before the hand-hoes went to work, for it

turns every large knot of grafs and weeds from the plants into the middle of the intervals, where they are much eafier deftroyed, and it leaves the plants far eafier to hoe. Upon this they were hand-hoed at two (hillings and fix-pence per acre, but being a hard job, the men had eleven (hillings. July the firft harrowed the intervals flat with the horfe-hoe harrow, fome parts of the field twice and thrice in a place to tear the Grafs in pieces, which it did fo effedlually, breaking the clods at the fame time, that the fun killed much of the rubbi(h.

July the fifth, began a fecond hand-hoeing; as this was the laft they could have, and every little weed to be eradicated, I had it done by the drag. As foon as the weeds of this hoeing were dead, began to earth up the rows with the double mould board plough.

Auguft twentieth, &c. hand-weeded them, Oftober thirteenth began to take them up, and finifhed the twenty-third. I

had the ftalks pulled up* and carted to the yard for dung, and then ploughed two ridges into one, and men with three pronged forks followed, who broke the furrows in pieces, each attended by a boy or girl, with a baflcet to pick up the Potatoes and carry them to three wheeled carts that ftood ready to receive them; the weather proved very fine, which is an article of great confequence in taking up Potatoes. The crop was one thoufand, five hundred and fixty-two bufhels; the expence in labour of taking up five pounds and one penny, or three farthings per bufhel, and four Horfes per day, added at feven (hillings and fix-pence, is three pounds fifteen fhillings, in all eight pounds, fifteen fhillings and one penny, which is five farthings per bufhel, a ploughing to the land included. The crop is per acre three hundred and ninety bufhels, and they were quite clean, a circumftance much depending *on* the drynefs of the feafon when taken up.

I pack-

I packed them into a barn in the fame manner as defcribed before,

	Expences.	£.	s.	d.
1772.	Ploughing at 6s. -	1	4	0
1773.	April ditto - -	1	4	0
	Two hundred and eighty three loads of com-poft at 2s. - -	28	6	0
	Twenty-eight bufhels of fetts at is. - -	1	8	0
	Planting and flicing	0	13	0
	Ploughing to cover	1	4	0
	Harrowing at 9d. -	0	3	0
	Slicing the ridges with plough at 3 s -	0	12	0
	Hand-hoeing * -	0	11	0
	Horfe-hoeing » -	0	4	6
	Second hand^hoeing	0	8	0
	Horfe - hoeing double mould-board plough at 5s. - »	1	0	0
	Carried over «• -	36	17	6

Brought over	36	17	6
Hand-weeding - «	o	10	o
Taking up and carting home - -	8	15	1
Annualexpences us. 8d.	2	6	8
Value afcertained •	48	9	3

November the ninth, I began to walh Potatoes in order for boiling, this is an operation of fbme trouble, efpecially with the cluftered fort; if it is not well done the dirt finks to the bottom of the copper, and flicks there till it burns. The feventeenth, began and boiled two hundred and fixty bufhels, the expence of fuel was one penny per bufhel, wafliing one penny, and labour boiling a halfpenny with the mafhed Potatoes in the manner before defcribed, thirty-three bufliels of Barley-meal were mixed, fix, four, and five Hogs were fucceflively put to this meat, their weight alive as follows :

No. 1

		lb.
No. i	—	134
2	—	120
3	~	100
4	—	140
5	~	122
6	—	116
7	~	112
8	—	118
9	—	124
10	--	126
II	<—	126
12	—	128
r3	—	9*
14	—	102
jç	—v	94
		1758

Seven of them I bred, the reft I bought, the latter coft me very near three-pence per pound alive, and I value the others accordingly. Total nineteen pounds fix fhillings.

December tenth, began to fat, and the middle of February, began to kill and fell them, the total live weight fat, two thoufapd five hundred and fifty-»fix pounds, they fold from five-pence to fix-pence yielding thirty-fix pounds fourteen fhillings and eight-pence, which upon an average is about five*pence farthing.

	£.	s.	d.
Coft an4 value of the Hogs	19	6	0
Wafhing	I	1	a
Firing	I	1	8
Boiling	O	10	10
Barley thirty-threebufhels at 4s. 6	12		Q
	38	12	2

Produce.	£-	s.	d.
Sold at	36	14	8
Pedud	*8	12	2

Remains value of the Potatoes which is per bufhel /id. 8 2 6

There

There were two reafons for the fall from one fhilling laft year, to feven-rpence halfpenny this. Pork did not fell fo well while Barley kept to its price, and there were four among the Hogs that did not thrive kindly; all fuch circumftances, however, it is right to include, as the ftandard value can only be afcertaiiied from the average of a variety of circumftances. But let the Society always remember that in addition to the value refulting from feeding Hogs, there is the dung arifing to be added, which is ai} pbjeft of the greateft importance.

Befides this trial to afcertain the exadt value, I had this winter an opportunity of examining how far this root might be ufeful to the common ftock of Swine which ran Joofe in the farm-yard, a large Boar, three Sows, and eight ftores, had no other food from November till the end of June, the Potatoes keeping perfectly well quite through that month; t^ rewas an eafe and expedition in feeding

ing them that pleafed me very much, a man with a fpade dug into the heap and threw them out of the barn-door twiee a day, which he performed in two minutes, for experiment fake I meafured them for fome weeks, and the quantity was two bufliels a day, which kept thofe hogs in very high order, they did not however eat the whole, for no attention could keep the cows and young cattle from partaking, which they did fo eagerly, that I was convinced they would prove a beneficial food to them.

Suppofe the Potatoe feafon fix months, or one hundred and eighty days, twelve middling Hogs would require three hundred and fixty bufhels,. or an indifferent acre, and they would certainly in a yard properly littered, raife dung enough to manure one acre very amply, which with the profit of their growth, would, I am confident, amount to more than (even-pence halfpenny a bufheL

I tried

I tried them with a Horfe this winter, who eat them readily, infomuch that I allotted him a peck a day, inftead of half a peck of oats, he was employed in common home work, and did as well on them as on the Oats ; but I cannot anfwer for the accuracy of the trial, as my fervants were alarmed at any idea of their doing for Horfes, they are prejudiced in favour of Oats, and apprehenfive of more trouble.

Produce.	£.	s.	d.
One thoufand five hundred and fix ty-two bufhels at7^d. - - "	48	16	3
Expences - - - -	48	9	3
	0	7	0

The Society will carry in their mind the importance of a fallow crop paying the expence of a rich manuring, for in that point, and not the expectation of a profit

profit befides, lies the incitement to cultivate this root.

EXPERIMENT VI.

CULTURE, EXPENCES, PRODUCE AMD APPLICATION OF SIX ACRES. 1774. The foil in part of this field much the fame as that of the laft Experiment, but the greater part inferior, a (harper gravel. In Autumn of 1773, ploughed it into four feet ridges, in which form I left it for the win-. Jer. April fccorid 1774, began to cart the winter compoft into it, fee page 38, and finifhed May twenty-firft, finishing the planting alfo on that day; the dung was laid in the furrows in the fame manner as before, and a fingle row of fets upon it, the quantity of manure five hundred thirty-two loads. Immediately covered the dung and fets, by one bout to every row as before; the twenty-fifth finifhed reverfing the ridges. June firft, harrowed them.

The twenty-fourth, fliced the ridges, turning a furrow on each from the rows. The twenty-ninth, began to hand-hoethe rows. July fifth, horfe-hoed and harrowed the intervals. July nineteenth, &c. repeated that operation, x^uguft twentieth, ftruck the intervals with double mould-board plough. O&ober twen-eighth, began to take up the crop. Heavy rains, November fixth and feventh, which interrupted us, but finished the fifteenth. The crop dry out of the barn, one thoufand fix hundred and fixty-feven bufliels, the expence of taking up which was performed exactly as laft year, feven pounds eighteen Shillings and a penny, or one penny one-eighth per bufhel, add fourteen days of four horfes, at feven (hillings and fixpence, five pounds five Shillings, in all thirteen pounds three fhillings and one penny, or near two-pence a bufhel, including the ploughing ; the produce per Acre two hundred .and feventy-feven. bufhels.

Expences.

	Expences.	£.	s.	d.
iyyS	Ploughing at 6s.	1	16	a
1774	April five hundred and thirty-two loads of Compoft at 2s.	53	4	°
	Forty-two buihels fets is. - - - - - - ,	2	2	0
	Cutting and planting	1	0	0
	Ploughing - - - -	1	16	o
	Harrowing twice	0	9	0
	Slicing ridges - - -	0	18	0
	Hand-hoeing - - -	o	14	o
	Horfe-hoeing - -	0	9	0
	Double mould-board plough 5s. - - - - -	1	10	o
	Taking up, carting home, and packing - - -	13	3	1
	Annual expences, at us. 8d.	3	10	o
		80	11	1

VALUE

VALUE ASCERTAINED.

THE middle of December put five of tny ftores to fatting, they weighed alive five hundred and fixty pounds, and I am to value them at three-pence per pound, or feven pounds ; confined them to a fmall yard by themfelves, well littered with clean wheat ftraw (an objedt effential to fattening Hogs.to profit) and gave them twenty bufhels of boiled Potatoes, no meal mixed with them, when they had finiftied that mefs$_t$ they had another ready, confifting of eighty buihels of Potatoes boiled, mafhed and mixed with the meal of eight bufhels of Barley, which completed their fattening, they were fpld alive for thirteen pounds ten Shilling's, and weighed, nine hundred and *{even* pound- Pork was at five-pence half-penny

Expences.

Expences.	£.	s.	d.
Value of the Hogs *	7	0	0
Eight buflicls of barley, at 3s. ibd. - *	1	16	8
Wafhing a hundred bufhels Potatoes i*d. -	0	1	2 6
Boiling id. - -	0	4	
Fuel id. - - -	0	8	4
	9	15	8
Sold at - - , -	13	10	0
Deduft - - - - -	9		8
Remains value of Potatoes	3	14	4

Which is per Bulhel nine-pence.

I fhould have made a larger experiment than upon five Hogs, had I not been ablent a good deal this winter, and at the farm only once a week for fome time ;. two of thefe hogs were Chinefe, and faf excelled the reft in the thriving.

Befides

Befides this trial, I attended to the lean ftock; ten ftores pigged the twenty-eighth of June preceding, with two large Sows and a Boar, were carried through the winter on Potatoes, thrown out of the barn, in the manner before defcribed, till the Clover was ready for them in May, and they eat jufl: two bufhels a-day, the ten were fold from the Clover in the O&ober following, at thirty fhillings each. I was very attentive to the progrels of thefe hogs, and I am clear, that by buying or taking one's own to Potatoes in November, when at the value of ten fhillings a ftore, they will be on an average thirty fhillings, from the following Clover, and I found this, on repeated obfervation, as well as on this trial. In this way they have fix months Potatoes and fix months Clover, an acre of good Clover which will fell in the country, out of the fphere of London hay markets, for forty fhillings, will carry fixteen Hogs that time, and afford fpod for a young Heifer, or Sreer. Befides

allowing for the (ize of the two Sows and the Boar, and alfo for the Potatoes eaten by Cows and other Stock, I am clear the two bufhels a-day would amply maintain fixteen Hogs.

	£.	s.	6d.
Profit oil fixteen Hogs, bought at ten /hillings, and fold at thirty	1	6	0 0
Deduft for one acre Clover	2	0	0
Remains value of the Potatoes - - - -	1	4	0 0
Which for three hundred and fixty bufhels is per buihel nine-pence farthing.			

Price depending partly on valuations, the Society may not approve it equally with fattening trials, but I am, from repeated obfervations, clear, that it is not above the truth, and I have been more than a dozen years largely in the hufbandry of feeding Hogs on Clover

Produce,	£.	s.	d.
One thoufand lix hundred and fixty-feven bufhels at9d. - - - -	62	10	3
Expences • - * •	80	9	1
Lofs - •* * - -	17	18	10

This produce was much inferior to what I had reafon to expeft; but, the ftate of the field confidered, the lofs of three pound per acre is not to be thought any alarming circumftance. There is no crop of Turneps in this country worth above three pounds, that crop would have left a balance againft me of more than forty pounds, and yet no body can affert that Turneps are not profitable; but the ftate which all thefe crops leave the land in is the great objeft.

EXPERIMENT VII.

COMPARISON OF MANURES FOR THE HOWARD POTATOE. April 5, 1774. Marked Twelve perch on a poor gravelly foil, but which in the preceding years had been very well drained and ploughed; made twelve fquare lazy beds of them, fpread the following manures on them, leaving a fmall fpace around for digging the trenches, laid the fets twelve inches afunder on the manure, then covered both about four inches deep out of the trenches.

No. 1 No manure for comparifon.
2 Five bufhels of night foil
3 Three ditto ditto
4 One ditto ditto.
5 Five bufhels of *hones*, broken fmall.
4 Three ditto ditto
7 One ditto ditto
8 Six bufhels of hog dung rotten

Three

\) Three ditto ditto
10 Six Buflieis of common yardcom-
poft
11 Twelve ditto ditta
12 Three ditto ditto
They were kept clean fry hand-weeding.

November 15, dug and meafurtfd,them immediately.

No. 1 Three pecks
a Three bufhels three pe<jk$:
3 Four ditto-and a quarter of a.peck
4 Three ditto and half dkto
5 Feur ditto and a quarter (tjtto
6 Four ditto
7 Three and a-half ditto
8 Three ditto
9 Three ditto
10 One ditto tljree pecks and a half
t\ Three bufk*l$
iz Three pecks and a half

Proportions per acre of Manure and Crop.

No.		*Crop no bujheh*
	% Night Soil ten wagon loads *	600
3	Ditto, fix ditto	650
4	Ditto, two ditto	500
5	Bones, ten ditto	650
6	Ditto, fix ditto	640
7	Ditto, two ditto	560
8	Hog dung, fixty cart loads* « -	480
9	Ditto, thirty ditto	480
xo	Yard Compoft, fixty ditto - - -	300
11	Ditto, one hundred and twenty ditto	480
12	Ditty), thirty ditto	140

The land remained through the winter untouched till April eighteenth, 1775, when dug the perches, and planted

* Of ninety-fix bufhels.

t As in the preceding Experiments.

them

them again as before, October nineteenth, dug them, the produce as follows:

		per acre.
No. 1	Three pecks and a half	140 *bujheh*
2	Four bufhels	640
3	Three ditto and half a peck	500
4	One ditto three pecks and a half	300
5	Four bufhels	640
6	Three bufhels and a half	560
7	One and half ditto	240
8	One bufhel three pecks and a half	300
9	One ditto	160
10	One bufhel and a half	240
11	One ditto, and three pecks and a half	300
12	Three pecks and a half	140

There are feveral circumftances in the refult of this trial, which cannot poffi..

My be accounted for, which is generally the cafe with comparative ones of many parts; in general it {hews that animal manures are the beft in proportion to their ftrength, bones not only yield a rich nourifliment, but lighten the mould for the roots ; but night foil has not this effeft, unlefs from a ftrong fermentation; bones feem to be the preferable manure, and will certainly laft longer. The efficacy of rotten hog dung appears confiderable, and the advantage of a fecond crop of Potatoes is clearly eftablilhed, the latter of which not having the expence of manuring, muft neceffarily yield a very great profit.

EXPERIMENT VIII.

CULTURE, EXPENCES, Produce, AND APPLICATION OF FIVE ACRES. 1775. The ibil a fharp, wet, fpringy, miferable gravel,

•vel; the worft field on the farm, and not intrinfically worth five (hillings per acre* Began to plough it December twenty-eighth, 1774, only four feet ridges. April twenty-firft, 1775, began the manuring with the yard compoft of the preceding winter, Jaying the dung in the furrows as before, the whole quantity three hundred and twenty-fix loads ; finiflied May fifth, and the planting the thirteenth as before. Horfe-hoed the furrows with fhim, and double mould-board, finifhing June the third. July eleventh, turned a furrow from the rows, which Lcall flicing. The twentieth began to hand-hoe them, and finifhed in five days. The twenty-eighth horfe-harrowed the intervals, and afterwards ftruck them up with double mould-board plough. October tenth, began to take them up, finifhing the eighteenth; the crop, the pooreft I ever had, only feven hundred and fifty bufhcls, or one hundred and fifty per acre ; total expence

taking

taking up, carting, &c. fcvcn pounds five {hillings.

	Expenccs.	£.	s.	J.
1774	Ploughing 6s. * -	r	10	o
	Water furrowing -	0	6	6
1775	Compoft three hundred and twenty-fix loads as.	33	12	o
	Slicing and planting -	o	15	o
	Thirty-tfive bufhels	1	15	o
	Ploughing - - r -	1	1	0	0
	Horfe-hoeing, fhirn *gd.*	0	3	9
	Double mould board 5s.	1	5	0
	Slicing 3s. - - - -	o	15	o
	Hand-hoeing - -	o	jo	o
	Horfe-hoe harrowing	0	3	9
	Double mould board	1	5	0
	Taking u p - - - -	7	5	0
	Annual expence us. 8d.	2	18	4
	Value afcertained	52	14	4

Three ftore$ of the true Chinefe breed were in December weighed alive, the weight two hundred and ninety-feven pounds, which at two-pence half-penny, the

the price I fold others at, came to three pound one (hilling and ten-pence; thefe were put to fattening; having boiled fixty bufhels of Potatoes, and mixed the mafh with fix of barley meal, the food done, they were killed, not being at home myfelf till afterward, the fervants negle&ed to weigh them alive, but the dead weight was three hundred and fourteen pound, which at fix-pence a-pound, the price then, is feven pounds feventeen fhillWs.

	£.	s.	d.
Value of the Hogs	3	1	10
Six bufliels meal, 4s.	1	4	0
Wafhing fixty bulhels Potatoes id.	0	5	0
Fuel id.	0	5	0
Boiling a halfpenny	0	2	6
	4	18	4

Value fat - - -	7 1 7 0
Deduft - - - - -	4 18 4
Remains being the value of Potatoes - -	2 18 8

Or per buftiel eleven-pence half-penny.

I attribute this high value, very much to the breed of the Hogs, which makes a greater difference than many perfons would without experience conceive.

Befides this trial I had in the fupport of my ftore Hogs this winter, ample reafon to be fatisfied with this Potatoe, I had twenty-four Sows, Boars, and half-grown ftores, all which I carried through the winter, a ftock larger than was to be found on any farm in the country four times as extenfive as mine. My crop however not being fo abundant as in preceding years, I did not give them Potatoes till January the twenty-third, it being then a moft fevere froft. They had fubfifted upon

upon Turneps and Acorns, the latter of which I had bought at one fhilling a bufhel; twenty-one Hogs in the yard eat juft a cart load, eighteen bufhels, of Turneps and one bufhel of Acorns a day, but the latter being finifhed, and the Turneps quite frozen, I then fully experienced the convenience of the Potatoe ftore, without which all my flock muft have been fold. Upon their being done, which was in April, I bought brewer's grains for them, but the Hogs fell off in their looks fo much, that I was forced to add an allowance of Barley for them, the Stores were turned in May to Clover, and I am clear that the Potatoes in this application paid me at leaft nine-pence a bufhel, I would not have fold them at the barn-door during the froft at one fhilling and fix-pence*

	£.	s.	d.
By fattening * -	0	0	ill'
By lean ftock - -	0	0	9

Average ten-pence farthing.

Produce.

Produce.	*JT*.	*s.*	*d.*
Seven hundred and fifty bufhels at io^d- - -	32	o	7
Expences - -	52	14	4
Lofs - -	20	13	9

I deferve much more condemnation than the Potatoes for this lofs; the foil was not to be trufted to, and accordingly gave me the worft crop I ever had.

EXPERIMENT IX.

CULTURE, EXPENCES, AND PRODUCE OF HALF AN ACRE, 1775. In the yearsr 1773 and 17741 I had tried fome very fmall experiments, in order to afcertain the moft profitable diftance at which to place the rows of the Howard Potafoc. They were not in the refult attended with any abfolute decifion, but I collefted from them that I had hitherto given my

crops

crops too much room to have a large produce. Thefe little trials, which are very ufeful by way of hints, though not often worth keeping detailed accounts of>, led me to try half an acre in another mode, the foil a good dry fandy loam; the operations were moft of them performed at the fame time as thofe defcribed in the preceding experiment, as the implements, &c. went from one to the other. It was a barley ftubble left through the winter, on which fifty loads of the compoft were fpread over the whole fur face, the plough then went in, and in reverfing the former flat lands, every other furrow was planted, the fetts at twelve inches afunder, and as the plough carried nine inches, the Potatoes of cotirfe were in rows eighteen inches apart, five bufhels planted the half acre ; A^oxmen laid, not dropped, the fetts clofe to the unploughed fide of the furrow to efcape as much as might be the hoxfes feet, as footi as finifhed harrowed

the

the land twice, than rolled with a barley-roller, and harrowed once again, leaving it in fine order. In about a fortnight, or a little more, there was great appearance of Seed Weeds coming up; as thefe threat^ cned a heavy expence of hoeing, I thought of cutting them all off by going over the furface with the horfe-hoeing fhim, which I did with my own hands, being apprehenfive that if it went too deep, the fhoots of the Potatoes which did not yet appear might be cut; no-thing could anfwer better than this operation, which however fliould never be ventured but in dry weather. I then harrowed it; when the Potatoes were three inches high, the rows were hand-hoed, and diredlly after, the intervals horfe-hoed with a (him, that cut only twelve inches wide. Both thefe operations were repeated once more afterwards, and the end of Auguft a hand-weeding was given, the crop carried a moft fuperior appearance. In taking them up the men

with

with their three-pronged forks worked every furrow. The produce two hundred and fevfenty-five bufhels, or per aere five hundred and fifty.

Expences per acre.	£	s.	d.
One hundred loads of com-			
poft at 2 Si - -	IO	o	o
Ploughing - -	o	os.	o
Slicing and planting	b	4	6
Ten bufhels of fets -	o	IO	o
Three harrowings at 9d. -	o	2	3
Rolling - -	0	0	z
Shimming the furface -	o	z	o
Harrowing - -	o	o	9
Hand-hoeing - -	o	6	6
Horfe-hoeing with (him -	0	i	6
Second hand-hoeing -	o	5	o
Shim - - -	o	i	6
Hand-weeding * -	o	3	o
Taking up, &c. - -	3	8	9
Annual expences -	o	II	8
	16	3	i

Produce*	£.	s.	d.
Five hundred and fifty bufhels at iojd. - -	23	9	9
Expences - -	16	3	1
Profit - - .	7	6	8

OBSERVATIONS.

Every circumftance of this crop convinced me that the mode purfued was far preferable to what I had hitherto pra&ifed, unlefs a field fhould be exceedingly full of root-weeds, in which cafe the wide intervals are ufeful, but then I fhould recommend Turneps in preference; the produce of this trial is great, and the profit of above feveli pounds an acre, after paying a manuring of ten pounds, muft be confidered as one of the moil beneficial crops that can be put into the ground, and would eftablilh the utility of the hulbandry, if there were not the after-advantages of the ufes in railing dung.

EXPERIMENT X.

CULTURE, EXPENCES, PRODUCE, AND APPLICATION OF FIVE ACRES. 1776.

Part of the field gravelly, but not very wet, the reft a good fandy loam; the firft fortnight in November ploughed it on to the two bout ridge, a-crofs the ufual way of ploughing the field, and water furrowed it thoroughly, April 4th, &c. drew thofe ridges into balks at one bout to each. The ninth, harrowed a-crofs the balks, leaving the furface of the field fmooth. The next day began the manuring, and finifhed it the eighteenth; three hundred and feventy-thrce loads were carried to it. The ninteenth began to plough it into flat lands the ufual way of ploughing the field, planting every other furrow in the manner defcribed in the preceding experiment, and I found on trial, that four women werejuft fufficient to plant fo as to keep one plough at work*

finiflied the twenty-fixth, harrowed and rolled the furfacc alternately, the weather being remarkably fine and dry, till it was very fine and fmooth. Thus far I perfonally attended putting them in, but being abfent the whole fummer, I muft confult the regifter of the work done in my abfence, for the operations they had whilft growing; I ordered them not to (him the furface as I had done the year before, left they (hould time it wrong, or cut too deep; they were twice harrowed, once horfe-hoed with narrow (him, and once hand-weeded ; the twenty-firft of O&obcr, they began taking up, working every furrow, and finifhed the fourteenth of November. I returned the twelfth. Produce two thoufand one hundred and twelve bufhels; expence of taking up, eleven pounds five (hillings and four-pence. The account returned to me was certainly accurate, from the above quantity of clean Potatoes arifing in the winter, corrcfponding with their grofs return of two thou-

thoufand four hundred and thirty; which is a feventh for dirt, as much as it would be in that field*

	Expences	*J[.*	*s.*	*d.*
1775	Ploughing 6s,	1	10	p
	Water furrowing	o	10	o
1776	Balking at 3s.	o	15	o
	Harrowing twice 9d.	0	7	6
	Three hundred feventy threeloads of compoft 2s.	3	7	6 0
	Ploughing 6s.	1	10	9
	Cutting fets and planting - »	o	16	o
	Harrowing four times 9c!.	o	15	o
	Rolling twice 2d. -	0	1	8
	Two hand-hoeings 10s.	2	10	o
	Horfe-hoing with (him 9d. ^ ^	o	3	9
	Hand-weeding 3s. -	o	15	o
	..Taking up, &c, *.	1	1	5 4
	Annual expences us. 8d.	2	1	8 4
	Value afcertained	6	1	3 7

Not expe&ing to be able to be fo much at my farm this winter as I afterwards was, I made no preparations for fattening Hogs; yet I never had, that article excepted, a more various experience of their importance. I began the winter with thirty-five ftock Hogs, afterwards encreafed to fixty-three by Pigs, The Stores, the running ftock of twenty-three, were fupported in the farm-yard, in the manner before defcribed, and I cannot but repeat once more, that keeping fuch a number, with no other trouble than twice a day opening a barri>door, throwing out four bufhels of Potatoes, two bufhels in the morning, and as much more in the evening, is fuch a convenience, that thofe who have not tried will fcarcely believe it.; this general application of the crop to lean Hogs, I have every reafbn to continue to value at ninepence a bufhel,

December fixteenth, &c. in order to fee what quantity Hogs of different fizes

would confume, as many as they would eat were given them; tried five of a fize from twenty-five pound to feventy pound alive, and they eat fcarcely one bufhel a day; at the fame time tried a very large Northamptonihire Boar, and four Sows, they eat a bufliel and three quarters a day, thirteen Stores, from-forty to eighty pound each- eat two bufhels a day. Thefe are very ufeful hints towards enabling a farmer to proportion his crop to his ftock ; they had no other food whatever; at the fame time I found that one trufs of wheat ftraw, forty pound, per diem, was fufficient to litter thirty-five in their different fties, they would have made more into dung, but this fufficed to keep them clean and healthy for a winter of one hundred and eighty days, this is five loads; the quantity and goodnefs of the clung are well known.

Befides Hogs, I met the winter with nine Cows, a Ball, and Heifers, befides fix yearling Calves, and I never was worfc

provided with hay or ftraw; if it had pot been for my barn being fujl of Potar toes, the quantity of Hay I mufthave bought, would have been a heavy article, I put three of the Yearlings to Hay, and at the fame time the three others to a very Jjyttle Straw and Potatoes, it was not an experiment eafily reduced to figiires, but this I can fay, that valuing Hay in the yar4 at two pounds two {hillings a load, or a farthing a pound, the Pptatqes the Calves eat at two-pence the half peck, I thought equally paid by the Calves doing as well as on the Hay; thqugh I {houid repiark that I have before this had yearling Calves that fcoured much pn them, and others that did not thrive, I don't mention (ho trial therefore as qonclufive. The Cows had large quantities, and did very well, two Horfes that hacj beeij quite wprke4 down, put to Hay and Potatoes No-vember eighteenth, and had a bufhela day between them ; they throve very well, and foon recovered their looks, and I am

convinced from this, as well as other trials, that they would prove a beneficial food, but much depends on their being wafhed perfectly clean. It will coft two-pence a bufhel for wgfhjng the cluftered fort clean enough for horfes, thofe much cluftered fhould be thrown by for other ufes, as they will not wafh well.

Produce,	£.	s.	d_f
Two thoufand one hundred and twelve bufhels at 9d.	79	4	Q
Expences — — —	61	3	7
Profit, 3 1 2 o per acre	18	o	5

The refult of this crop fhews that the mpde of planting I am now in is preferable to the old way pf furrows, the produce is confiderable, apd the profit, after paying the manuring, muft be efteemed larger thap can on fuch land be had from any other fallow crop.

Recapitulation of Value.	£.	s.	d.
By Experiment No. 4, Fattening Hogs —	0	1	0
By ditto No. 5, ditto —	0	0	7 ;
By ditto No. 6, ditto —	0	0	9
By ditto No. 6, lean Hogs	0	0	*gl*
By ditto No. 7, Fattening Hogs — —	o	o	uj
By ditto No. 7, lean Hogs	0	0	9
By ditto No. 9, ditto	0	0	9
By ditto No. 9, Calves	0	0	8

Average nine-pence farthing.

Rejefting the fra&ion, and calling the value at nine-pence, I am clear we (hall not exceed, and that, they who do not make that, muftbe bad managers at firft, Who will arrive at, and perhaps exceed it afterwards. Let me next confider what crop it muft be to pay expences at the valuation, I will fuppofe the latter and beft mode of culture ; ten pound an acre for dung, and the land good enough to have the annual expences twenty (hillings,

mine

mine are only eleven (hillings and eight-pence, but then it is much below the ftandard to be defired for Potatoes. I will fuppofe the expences as follow:

	£	s.	d.
Manure — —	10	0	0
One ploughing —	0	6	0
* Ten bufliels Seed —	0	10	0
Cutting and planting —	0	3	6
Three harrowings — —	0	2	3
Rolling — —	0	0	2
Going over the furface with (him — —	0	2	0
Two hand-hoeings —	0	10	0
Horfe-hoeing with (him	0	1	6
Hand-weeding —	0	4	0
Taking up, &c. —	2	5	0
Annual Expences —	1	0	0
	*5	4	5

* The trouble of picking over, and forting the Potatoes included. I think one lhilling a bufhel a fair valuation ; I always keep thofe moft duftered for feed.

Hence

Hence, therefore, we find that four hundred buftiels, at nine-pence, will juft pay thefe expences, upon tolerable land, with ten pounds worth of manure. I think the Society will believe that there is hardly a doubt of receiving fuch a produce, a much greater I am confident might be expe&ed, but if the expence of fo ameliorating a crop, the confumption of which raifes fo much dung, were only paid, I believe there is no Farmer that would not think himfelf well off.

And here I cannot but call the Society's attention to the extreme infignificance of the article rent, among the expences; I am clear there are foils let at twenty (hillings an acre their value, which without any manure at all, would give better crops than my eight (hilling gravels would do with fuch manurings as I have defcribed, for all the branches therefore of elaborate cultivation, a Renter (hould feek for the beft natural foil, one may almoft affert that he cannot pay too dear for it,

fincc

lince if he attempts by manuring to make a poor foil equal to it, he will find the expence enormous, and almoft endlefs; there are vaft trails in England of dry found, mellow, friable loams, at twenty (hillings an acre, landlord's rent, which with only common management yield large crops of Turneps, fix quarters of Barley, fevenof Oats, and four of Wheat, thefe are products which forty (hillings per acre per annum expended on my wet gravels, would never make them equal to. Thofe are the foils upon which this Potatoe culture would make a figure.

Recapitulation of Profit and Lofs.

	£.		
Experiment No. 2. Profit per acre — —	3	*9	2
No. 4, ditto —	0	0	8
No. 5, ditto — —	0	1	10
No. 8, ditto —	7	6	8
No. 9, ditto —	3	12	0
No. 6, J^ofs per acre	2	l9	9
No. 7, ditto —	4	2	9

Courfes

COURSE OF CROPS IN WHICH IT IS ADVANTAGEOUS TO INTRODUCE THE HOWARD POTATOE.

The two experiments upon which I chiefly found what I have to obferve under this head, are the fifth and the fixth in the preceding account, as in thofe I trufted to the Potatoe crops as a fallow, previous to laying down to meadow, which demands as clean and careful a fallow as any objedt poffibly can. After the crops of thofe fields were taken up, the land was well water-furrowed, and repeated tillage given in the fpring for Barley, with which on the four acres of experiment No. 5, were fown.

Forty pounds of White Clover.
Forty pounds of Rib Grafs.
Thirty-five pounds of Cow Grafs.
Five pounds of Marie Grafs.
Five pounds of Common Red Clover.

The Marie and Common Red were on lands by themfelves for experiment, the Barley yielded five quarters an acre, the above

above feeds took perfectly well, and made a clean, and for the foil, valuable meadow. After Potatoes on the fix acres of experiment No. 6, Barley was alfo fown, except half an acre which had a bufliel of Ducket's Spring Wheat; the Barley yielded four quarters and a half an acre, the Wheat was fcarce worth reaping; with them the following feeds:

One hundred pounds of Rib Grafs.
Seventy pounds of Cow Grafs.
Sixty pounds of Yellow Trefoil.
Twelve pounds of White Clover.

The three firft equally over the whole field, the laft only over two acres of it, to fee the difference, the whole field formed, for the country, a very clean good meadow anfwering to my wifh, I may therefore aflert the fallow of this Potatoe equal to the preparation for meadow.

But for a common courfe of crops I fhould recommend Wheat to follow Potatoes, herein.however, as far as the preceding

preceeding trials extend, I fpeak from theory, for none of theirf wefe followed by that grain, but from attending particularly to the ftate in wliich thefe cfops left the foil, as well as frofri other trials; I am induced to think that the proper managemeilt in this cafe, the Wheat fttould be fown as the plcfugh goes upon the land turned by the plough, not ifl the furrow or path of it, before the men break it with their fhree-pronged forks; in taking up my cro'p that operation covers* the Wheat effe&uallv without burying it too deep, and leaves it admirably put in. The following is the fucceffion of crops I recommend on this plan.

Firft, Potatoes.
Second, Wheat.
Third, Turneps.
Fourth, Barley.
Fifth, Clover.
Sixth, Wheat,

All

All the dung beftowed in the fix years to be laid on for the Potatoes ; and this courfe, I am inclined to think, take it for all in all, is the befl: and raoft profitable that can be pra&ifed on all foils that will do for thofe two roots and for thefe reafons.

One third of the arable land is every year in Wheat which is as much as poffibly can be fown in any profitable courfe. It contains fpring corn, the ftraw of which is neceflary for Cattle, the Turneps do for the Sheep of the farm, and the Clover will feed in fummer the ftock Hogs, fupported in winter by the Potatoes, with this great advantage, the two crops of Wheat are put in at fcarce any expence, one ploughing of the Clover land, no other expence on Potatoes than mere fowing, fince all the reft is done in order to take up that crop; the only apparent objection is this, that you choofe the dryeft feafon to take up the Potatoes, but a wet one to put in

Wheat, on foils fo very dry that rains are neceffary for the Wheat (owing, the land muft be left, and the feed harrowed in; but on the dryeft lands I have farmed, no rain is wanted to put in Potatoes. The praftice alfo of fowing Wheat in the wet is often carried much too far; upon the whole, I venture to recommend this courfe as one which includes on a farm every circumftance that is eflential. The Norfolk hu(bandry of firft Turneps ; fecond Barley, third Clover, fourth Wheat, is excellent, but it has this great objection, that the fmall value of the Turneps will not pay for manuring, and I con(ider it effential to a courfe that the fallow crop fliould pay its own expence including manure.

I am fenfible the preceding experiments are very incomplete, and my knowledge of it prevented my fending the account to the Society in 1777; I meditated farther trials, in a (ituation that would permit me to difcover the effedt of the cultivation

here

here recommended, upon a very good dry loam; but being repeatedly difappointed in that expectation, I think it better to venture to the Society's examination without longer waiting for uncertain circumftances. If this firft opening of my practice on the Potatoe fhould inftigate others to make experiments, who are better able to pufli the culture vigouroufly; I may then be the means of ferving the public, though flightly.

The ingenious Author of the foregoing Obfervations on the Howard or Cluftered Potatoe, has communicated to the Society an account of his further Experiments on the ufes of that root, continued to the year 1784; which are intended to make part of a future volume of the Tranfa&ions of this Society,

PAPERS

IK

POLITE ARTS,

POLITE ARTS.

AN account of the proceedings of the Society refpe&hig the PICTURES painted by JAMES BARRY, Efq. R. A. and Profeflbr of Painting to the Royal Academy, for the decoration of their Great Room, with a defcription of the feveral fubje&s of thofe Pictures.

IN the Firft Volume of the Tranfactions of this Society, page 60, and in the Second Volume, page 250, mention is made of the Pictures then painting for the decoration of the Society's Great-Room, by James Barry, Efq. R- A. and Profeflbr of Painting to the Royal Academy; and a promife given, that in fome

future volume a full defcription of the feveral fubjedts of the Pictures, and alfo a detail of the proceedings on this head, fliould be laid before the public.

The prefent feafon is judged moft proper for the introdu&ion of this account, the Society having now refumed their meetings in the Great Room, which to prevent any inconvenience the Artift might have been fubje&ed to, had they aflembled therein during the profecution of the work, were three feafons held in the Committee-Room.

"In the month of March, 1777, The Society received, from Valentine Green, Efq. a propofal, made by a Member of the Royal Academy, to decorate their Great Room, with a feries of Pi&ures analogous to the views of the Inftitution. The price of Cloths, Stretching Frames, and Colours, which the Society engaged to pay, was eftimated at one hundred pounds, and the further expence of thirty pounds for Figures, which the Artift

offered

offered to pay himfelf, they alfo agreed to defray. It foon after appeared that the Artift who had made this generous offer, was JAMES BARRY, Efq. R .A. and he was empowered to call on the feveral neceflary tradefmen, and furnifh himfelf with Figures, agreeable to the fefolutions of the Society.

In the year 1778, the Pi&ures being far advanced, and the Artift having arrived at that part of the work, which is modern, national, and immediately relating to the Society itfelf, where a few of the Portraits of its Members are neceflarily to be introduced, the Society refolved, that the Prefidency of the Society fliould be fele&ed for that purpofe.

In that Pi&ure to which this refolution particularly refers, and which is the fifth in the feries, the Artift has fince added feveral other Portraits of the more celebrated perfons of the prefent time, as will be fully enumerated in the fubfequent account of the fubjeft of each par-

ticular Picture. This year, alfo, during the recefs of the Society, the key of their Great Room was intrufted to Mr. Barry, in order to prevent his being in any manner interruptedin theprofecution of his laborious undertaking.

During the latter part of the year 177c}, and the beginning of the year 1780, the meetings of the Society were held in their Great Room, the Pidtures being occafionally covered with canvas; but in the year 1781, the Society, ftill further to prevent every inconvenience that might arife to the Artift from their aflembling in their Great Room, difcontinued their Meetings therein, which were afterwards held only in their Committee-Room, till O&ober 1784. In the year 1781, Frames for the Pi&ures, according to the defign and direction of Mr. Barry, were ordered by the Society to be made by Mr. Adrian Mafkens, of Compton-ftreet, Soho, at the expence of one hundred pounds, feventeen (hillings. The Society, confcious

of

of the merit of the Pidtures, did alfo in the year 1781, Refolve, That Mr. Barry have leave to make an exhibition of the Pi&ures for his own emolument, which exhibition was propofed to continue during the fpace of four months, and to defray the expence, the Society agreed to advance the fum of one hundred and feventy-four pounds, at the fame time the fum of fifty pounds was voted to Mr. Barry, to be applied to fuch purpofes as he fhould judge proper.

The only alteration that took place in the difpofal of this money, was, that inftead of one exhibition to continue four months, in one feafon, the Society confented that the time of exhibiting the Pi&ures 'fhould be divided, and one exhibition of two months be permitted in their Great Room, in the year 1783, and another for the fame period in 1784, and to defray the expence of the fame, the fum of eighty-ieven pounds was each year paid by them, making together the fum

of one hundred feventy four pounds originally voted.

In the fpring of the year 1783, and again in the fpring of the year 1784, the pi&ures were publicly exhibited. Each year, previous to thefe exhibitions, the Society received a polite invitation from Mr. Barry, and having aflembled in a General Meeting, viewed the paintings, and Refolved, That the feries of Piftures, illuftrating in their defign the progrefs of human knowledge, and the advancement of ufeful and elegant Arts, from a very early period to the prefent sera, is a work of great excellence of compofition, mafterly execution, and clafllcal information, and muft be deemed a national ornament, as well as a monument of the talents and ingenuity of the Artift. The Society, therefore defirous of giving the moft ample teftimony of his eminent abilities, unanimoufly voted him their thanks, and ordered that this refo* lution be publifhed in the newfpapers.

The

The two Exhibitions being clofed, and Mr. Barry having delivered up the key of the Great Room, the Meetings of the Society recommenced on the twenty-feventh of October, 1784, and have fince that time been conftantly held therein.

Having thus given a fhort hiftory of the proceedings of the Society refpecting the Paintings, which now decorate their Great Room; it becomes neceflary to lay before the Public, a general defcription of the fubjedt of the Pictures, with their feveral dimenfions, and fubjoin thereto an account of the particular fubject of each Picture feparately. The far greater part of this defcription is extracted from a work publifhed by Mr. Barry, under the title of An account of a feries of Pictures in the Great Room of the Society, for Encouragement of Arts, Manufactures, and Commerce at the Adelphi.

It may be proper to obferve, that the rooni in wnicn'tJtfeiF'jr^ctures are'placed, is

is in length, from Eaft to Weft, forty-two feet five inches, in breadth, from North to South, thirty-five feet feven inches, and lighted only by a dome at the top.

GENERAL SUBJECT.

THIS feries confifts of Six Piftures on ufeful and agreeable fubje&s, fo QDIN ne&ed as to illuftrate this great maxim, or moral truth, viz. THAT THE OBTAINING HAPPINESS AS WELL INDIVIDUAL AS PUBLIC, DEPENDS ON CULTIVATING THE HUMAN FACULTIES. To prove ihe truth of this do&rine, the firftPi&ure exhibits mankind in a favage ftate, full of imperfe&ion, inconvenience, and mifery. The fecond represents a Harveft Home, or Thankfgiving to Ceres and Bacchus. The third, the Vi&ors at Olympia. The fourth, Navigation, or the Triumph of the Thames, The fifth, the Distribution of

of Rewards by the Society. And the fixth, Eljzium, or the State of final Retribution. Three of thefe fubje&s are truly poetical, the others hiftoricaL

The Pi&ures are all of the fame height, viz. eleven feet ten inches ; and the fir ft, fecond, fourth and fifth, are fifteen feet two inches long; the third and fixth, which occupy the whole breadth of the room, at the North and South ends, are each forty-two feet long.

Between the upper edge of the Pictures, and the cornice of the room, runs a fcroll of palm branches, which, with the frames, are of burniftied gold*

FIRST PICTURE.

ORPHEUS.

THE fcenery of this Pi&ure exhibits a view of a mountainous and defert country ; near the centre of the piece, is **Orpheus,**

pheus, holding in his left hand a lyre, and extending his right hand towards Heaven, repref'cnting him as he really was, the founder of the Grecian Theology.

Ths ftory of Orpheus has exercifed the pencils of many Painters, who, by realizing the poetical metaphor, have overlooked every thing valuable in it, but Mr. Barry, inftead of furrbunding him with fuch auditors as Trees, Birds, and wild Beafts, has united in his character the Legiflator, the Divine, and the Philofopher, and has placed him in a wild and favage country, furrounded by people as uncultivated as the land they inhabit, whilft he, as a meflenger from the Gods, to whofe manfions he feems pointing, is pouring forth fongs of inftru&ion, which he accompanies with the mufic of his lyre.

By the a&ion of Orpheus, the fong appears the principal, and the mufic an acceflary part; his hearers, who are re-

prefented

prefented in what is called a ftate of nature, are moft of them armed with clubs, and clad in the fpoils of wild beafts, alluding to their being poffeffed of courage and ftrength to fubdue lions and tigers, but wanting wifdom and ikill to prevent retaliation on themfelves, or their feeble offspririg. This latter circumftance is finely illuft rated by a woman at fome diftance, on the other fide of a river, milking a goat, her two children fitting near her, at the entrance of their habitation, a cave where they are but poorly fenced againft a lion, who difcovers them, as he is prowling about for prey; ftill further in the diftance, are feen two Horfes, one run down by a Tyger; by this incident is clearly pointed out, that the want of human culture is an evil, whicb extends beyond our own fpecies, to all animals intended fordomeftication, and which have no other defence than the wifdom and induftry of Man.

It is a circumftance often obferved by travellers, that the value and eftimation of women, increafes according to the growth and cultivation of fociety, and that among favage nations, they are in a condition little better than beafts of burthen, all offices of fatigue and labour, war and hunting excepted, being referved for them. It is to prove the truth of this obfervation, that a woman is leaning on her male companion, and carrying a dead fawn on her fhoulder. As Orpheus is laid to have taught the ufe of letters, the theogony or generation of the Gods, and the worfhip due to them, there are placed near him, papers, the mundane egg, a lamb bound, a fire kindled, and other materials of facrifice; in the extreme diftance, Ceres appears as juft lighting on the world. The countenances of thofe favages, who are fuppofed to have profited by the divine leflbns of Orpheus, are happily contrafted with thofe of another group, who have not

yet

yet attended to his doftrine, and fhew,. with peculiar energy, the effeft of thofe benefits which accrue to mankind from philofbphy and religion.

SECOND PICTURE*

A GRECIAN HARVEST-HOME.

THE warm glow of colouring fpread over this pifture, and the elegance of the figures in the more confpicuous parts of it, form a ftriking and beautiful contraft to the pi&ure already defcribed. The feafon is, as the title expreffes,[4] that of harveft, and as moft of the perfons re-prefented are employed in ruml fports, the evening is chofen as the moft proper for fuch relaxation from the labours of the field.

In the fore-ground is a double terminal figure of. Sylvanus and Pan, with their proper attributes, round which young

men and women in beautiful forms and lightly habited, are dancing to the muiick of a rural pipe, and feem in the language of the Poet to

"———trip it as they go
" On the light fantaftick toe."

behind them, are oxen with a load of corn, and other chara&eriftic emblems of the feafon of the year. On one fide of this happy group, appears the father, or matter of the feaft, with a fillet round his head, and in his hand a ftaft; with him his aged wife, as entering to behold and partake of the feflivity of the fcene.

In the oppofite corner of the pi&ure, are fome ruftics fitting with the fruits of the earth, and implements of liuf-bandry near them ; thefe might ferve as a foil, if any foil were neceflary, to the beautiful dancing figures already de-fcribed.

The diftant parts of this pleafing pi&ure, exhibit a view of a fertile cul-tivated country, with a farm-houfe, near

near which, there are men wrcftling, one of the lookers on has a *difcus* under his arm, and aged men are fitting and lying along, difcoiirfing, and enjoying a view of thofe athletic fports, in which they can no longer engage ; here alfo are feen the various employments of a country life, as binding corn, tending bees, courtfhip, marriage, and a number of children every where ; in (hort, whatever can beft point out a ftate of happinefs, fimplicity, and fecundity; in which, though not attended with much eclat, the duty we owe to God, our neighbours, and ourfelves, is perhaps much better attended to, than in any other ftate of life. Still further to embellifn this pifture, the Artift has introduced fitting: on a pent-houfe, a peacock in fine plumage, and at the top of the pi&ure, Ceres, Bacchus, Pan, &c. are looking down on the innocent feftivity of their happy votaries, behind them is a limb of the zodiac,

with the figns Leo, Virgo, and Libra, which mark the feafon of the year,

THIRD PICTURE.

THE VICTORS AT OLYMPIA.

IN this fuperb picture, the Artift has happily chofen that point of time, when the vidtors in the feveral games, are paffing in proceffion, before the Hellanodicks, or Judges, where they are crowned with olive, in the prefence of all the Grecians. At the right hand corner of the piece, the three Judges are feated on a throne, ornamented with medallions of Solon and Lycurgus; and with trophies of the vi&ories of Salamis, Marathon, and Thermopyle; near the foot of the throne, is a table, at which a perfon appears writing on a fcroll of parchment, the name, family, and country of the conqueror; near this table, a vi&or, in the foot-

foot-race, having already received a branch of palm, which he holds in his. hand, is crowning by an inferior Hellanodick; next him is a foot-racer, who ran armed with a helmet, fpear, and fhield; clofe following is feen a manly group, formed of two young athletic figures, bearing on their fhoulders their aged father; the one of thefe reprefents a Pancratiaft, the other the viftor at the ceftus; the old man is Diagoras of Rhodes, who having in his youth been celebrated for his victories in the games, has, in his advanced age, the additional felicity of enjoying the fruit of the virtuous education he has given his fons, amidft the acclamations of the people of Greece; fome of whom are ftrewing flowers around the old man's head, while one of his friends is grafping his right hand, and fuppofed to be making the celebrated fpeech recorded on this occasion, "Now, Diagoras, die, for " thou canft not be made a God." A child has hold of the arra of one of the

viftors, and is looking up with joy in its countenance, at the honours conferred upon his parent; near this beautiful group are feen a number of perfons, the chief of whom reprefents Pericles, fpeaking to Cymon. The Painter has in the perfon of Pericles, introduced the likenefs of the late Earl of Chatham. Next appears in the front of the Picture, a horfe-racer, and clofe to him, a chariot drawn by four horfes; in the chariot is Hieroof Syracufe; round the Chariot are feveral perfons, with mufical inftruments, accompanied by many youths, forming a chorus, which is led by Pindar, playing on a lyre.

As at one end of this Pi&ure, there is a figure of Minerva in chiaro ofcuro; fo at the other end, is a ftatue of Hercules, painted in the fame manner, which are comprehenfive exemplars of that ftrength of body and mind, which were the great obje&s of Grecian education. On the bafe of the ftatue of Hercules, the

Artift

Artift has introduced his own portrait, holding in his hand a pi&ure conformably to the hiftory of Timanthus, as related by Pliny.

The diftance in this capital Pićture, is ornamented with a view of a beautiful Grecian temple, the town of Elis, and the river Alpheus, as truly chara&eriftic of the fpot on which the ceremony forms the fubjedt of the pi&ure, may be fuppofed to have been performed.

FOURTH PICTURE.

THE THAMES.

THE praftice of perfonifying rivers, and reprefenting them by a genius, a* dapted to their peculiar circumftances, is as antient as the arts of Painting and Sculpture; and in conformity to this prać tice, the ingenious Artift has in this picture rep re fented the Thames, of a ve-

nerable, majeftic, and gracious afpeft, fitting on the waters in a triumphal car, fleering himfelf with one hand, and holding in the other the Mariner's Compafs, by the uiẽ of which, modern navigation conne&s places the moft remote, and has arrived at a certainty, importance, and magnitude unknown to the antient world. The car is borne along by our great navigators, Sir Francis Drake, Sir Walter Raleigh, Sebaftian Cabot, and the late Captain Cook, of amiable memory; in the front of the car, and apparently in the a&ion of meeting it, are four figures, reprefenting Europe, Afia, Africa, and America, ready to lay their feveral produftions in the lap of the Thames.

Sir John Denham, in his celebrated eulogium on this River, has exprefl̈ed this circumflance very happily.

" Nor are his bleffings to his banks
" confin'd,
" But free and common, as the fea or
" wind,
" When

" When he to boaft, or to difperfe his
" ftores,
" Full of the tributes of his grateful
" (hores;
" Vifits the world, and in his flying
" tow'rs,
" Brings home to us, and makes both
" Indies ours;
" Finds wealth where 'tis, beftows it
" where it wants,
" Cities in defarts, woods in cities
" plants,
" So that to us no thing, no place is
" ftrange,
" While his fair bofom is the world's
" exchange.

Over-head is Mercury, the emblem of Commerce, fummoning the nations together; and following the car, are Nereids, carrying feveral articles of the manufactures of Manchefter, Birmingham, &c. the fportive appearance of fame of thefe Nereids, gives a variety to the pi&ure, and is intended to fhew, that an extenfive com-

commerce is fometimes found fubverfive of the foundations of virtue.

In this fcene of triumph and joy, the Artift has introduced Mufic, and for this reafon, has placed among the Sea-Nymphs his friend Dr. Bnrney, whofe abilities in that line are univerfally acknowledged.

In the diftance is a view of the Chalky Cliffs on the Englifh coaft, with fliips failing, highly charadteriftic of the commerce of this country, vvhich the pidture is intended to record.

FIFTH PICTURE.

THE SOCIETY.

THIS Pi&ure reprefents the diftribution of the rewards in the Society, founded for the noble purpofe of introducing and perfecting thofe ufeful Arts in this country, for which we were formerly obliged

to

to have recourfe to other nations. Not far advanced from the left fide of the Picture, ftands Lord Romney, the Prefident of the Society, habited as all the other Noblemen are, in the robes of his dignity; near the Prefident ftands his Royal Highnefs the Prince of Wales; and fitting at the corner of the Pidture, holding in his hand the inftrument of the Inftitution, is Mr. William Shipley, ." whofe 4i public fpirit gave rife to this Society."* One of the Farmers who are producing fpecimens of Grain to the Prefident, is Arthur Young, Efq. near him is Mr. More, the prefent Secretary, diftinguifhable by the pen he holds; on the right hand of Lord Romney, ftands the Hon. Charles Marfham, V. P. and on the left Owen Salulbury Brereton, Efq. V. P. Towards the center of the Pifture is feen

*** Tliefc words arc engraven on the Gold Medal voted to Mr. Shipley in the year 1758.**

that

that diftinguifhed example of female excellence, Mrs. Montague, who appears recommending the ingenuity and induftry of a young female, whofe work fhe is producing. Near her are placed the late Duchefs of Northumberland, Earl Percy, V. P. Jofhua Steele, Efq. V. P. the late Sir George Savile, Bart. V. P. Dr. Hurd, Bifhop of Worcefter, Soame Jennings, and James Harris, Efqrs. and the two Ducheflès of Rutland and Devonfhire ; between thefe Ladies, the late Dr. Samuel Johnfon feems pointing out this example of Mrs. Montague, to their Grace's attention and imitation.

Farther advanced is his Grace the Duke of Richmond, V. P. and near him Edmund Burke, Efq. Still nearer the right-hand fide of the Picture, is Edward Hooper, Efq, V. P. and the late Keane Fitz Gerald, Efq. V. P. His Grace the Duke of Northumberland, V. P. the Earl of Radnor, V. P. William Lock, Efq. and Dr. William Hunter are examining

fome

fome drawings by a youth, to whom a premium has been adjudged; behind them is another youth, in whofe countenance the dejedtion he feels at his bejng difappointed in his expedition of a reward, is finely exprefled; near the right fide of the piece are feen the Lord Vifcount Folkftone, firft Prefident of the Society, his fon the late Earl of Radnor, V. P. and Dr. Stephen Hales, V. P. In the back ground appears part of the water-front of Somerfet Houfe, St. Paul's, &c. ferving to characterize this as the Society inftituted at London; and as a very large part of the rewards beftowed by the Society, have been diftributed to promote the Polite Arts of Painting and Sculpture. The Artift has alfo moft judicioufly introduced a Pi£ture and a Statue ; the fubjeft of the Pi&ure is the Fall of Lucifer, defigned by Mr. Barry, when the Royal Academy had fele&ed fix of the members to paint Pi£tures for St. Paul's Cathedral. The Statue is that of the Grecian Mother dy-

ing, and in thofe moments attentive only to the fafety of her child.

SIXTH PICTURE.

ELIZIUM, OR THE STATE OF FINAL RETRIBUTION.

IN this fublime Picture, which occupies the whole length of the Room, the Artift has, with wonderful fagncity, brought together thofe great and good men, of all ages and nations, who have acted as the cultivators and benefa&ors of mankind. This Pidture is feparated from that of the Society diftributing its rewards, by palm trees, near which, on a pedeftal, fits a pelican, feeding its young with its own blood, d. happy type of thofe perfonages reprefented in the pidture, who had worn themfelves out in the fervice of mankind. Behind the palms, near the top of the pidhire, are indiftin&ly

diftinftly feen, as immerfed and loft in the great blaze of light, Cherubijns veiled with their wings, in the aft of adoring and incenfing fomething not feen above them, and out of the pi&ure, from whence the light and glory proceeds, which are diffufed over the whole piece, By thus introducing the idea of the divine efc fence, by effeft, rather than by form, the abfurdity committed by many Painters is happily avoided, and the mind of every intelligent fpe&ator, is filled with awe and reverence. The firft group in this pidture, confifts of Roger Bacon, Archimedes, Defcartes, and Thales; behind them ftand Sir Francis Bacon, Copernicus, Gallileo, and Sir Ifaac Newton, who are looking at a Solar Syftem, which two Angels are unveiling and explaining to them; near the inferior Angel is Columbus, and clofe to him, Epaminondas, Socrates, Cato the younger, the elder Brutus, and Sir Thomas More; a Sextumvirate, to which Swift fays, all ages have

not been able to add a feventh ; near Brutus is Mr. William Molyneux. and behind Columbus is Lord Shafte{bury, John Lock, Zeno, Ariftotle, and Plato ; and in the opening betwéen this group and the next, are Dr. William Harvey, the difcoverer of the circulation of the blooil, and the Honourable Robert Boyle. The next group are Legiflators, where King Alfred the Great is leaning on the fhoulder of William Penn, who is (hewing, his Code of Laws to Lycurgus. On the other fide of Penn ftands Minos, Trajan, Antoninus, Peter the Great of Ruffia, Edward the Black Prince, Henry the Fourth of France, and Andrea Doria of Genoa ; here too are introduced thofe Patrons of Genius, Lorenzo de Medicis, Louis the Fourteenth, Alexander the Great, Charles the Firft, Colbert, Leo the Tenth, Francis the Firft, and the Earl of Arundel; juft before this group, on the rocks which feparate Elizium from the Infernal Regions, are placed the angelic

gelic guards, fee Milton, book iv: verfe 549; and ia the moft advanced part an Arch-Angel, whofe countenance and action bear evident marks of concern, is weighing what is not feen; behind this figure is another Angel, explaining fomething to Pafcal and Bifhop Butler.

Behind Francis the Firft and Lord Arundel, are Hugo Grotius, Father Paul, and Pope Adrian.

Near the center towards the top of the picture, fits Homer, on his right hand Milton, next him Shakefpeare, Spencer, Chaucer, and Sappho; behind her fits Alcaeus, who is talking with Offian; near him are Menander, Moliere, Congreve, Brutus, Confucius, Mango Capac, &c. Next Homer on the other fide, is the Arch Bifliop of Cambray, with; Virgil leaning on his fhoulder; near them Taffo, Ariofto, and Dante; behind Dante, Petrarch, Laura, Giovanni, and Boccacio, In the fecond range of Figures, over Ed-

ward the Black Prince and Peter the Great, are Swift, Erafmus, and Cervantes; near them Pope, Dryden, Addiibn, and Richardfon; behind Dryden and Pope are Sterne, Gray, Goldfmith, Thompfon, and Fielding; and near Richardibnjnigo Jones, Sir Chriftopher Wren, and Vandyke; next Vandyke is Rubens,.with his hand on the fhoulder of Le Seur,; behind him is Le Brim ; next are Julio Romano, Dominichino, and Annibal Carrachi, who are in converfation with Phidias, behind whom is Giles Huffey. Nicolas Pouflin and the Scycionian Maid are near them, with Callimachus, and Pamphilus} near A* pelles is Corregio; behind Raphael ftand Michael Angelo, and Leonardo da Vinci; and behind them Ghiberti, Donatello, Maflachio, Brunalefchi, Albert Durer, Giotto, Cimabue, and Hogarth.

In the top of this part of the Pi&ure, the Painter has happily glanced at what is called by Aftronomers the *Syjletn of Syftems*, where the fixed ftars, confidered asfo many

tnany funs, each with his feveral planets, are revolving round the *Great Caufe* of all things; and reprefenting every thing as effe&ed by *Intelligence*, has (hewn each fyftem, carried along in its revolution by an Angel; though only a fmall portion of this circle can be feen, yet enough is fhewn to manifeft the fyblimity of the idea.

In the other corner of the Pi&ure, the Artift has reprefented Tartarus, where, among cataradla of fire and clouds of fmoke, two large hands are feen, one of them holding a fire fqrk, the other pulling down a number of Figures, bound together by ferpents, repref enting War, Gluttony, Extravagance, Detra#ion, Parfimony, and Ambition; and floating down the Fiery Gulph, are Tyranny, Hypocrify, and Cruelty, with their proper attributes; the whole of this excel-* lent pi&ure proving, in the moft forcible jnanner, the truth of that great maxim,

which has been already quoted, but cannot be too often inculcated :

THAT THE OBTAINING HAPPINESS, AS WELL INDIVIDUAL AS PUBLIC, BOTH IN THIS WORLD AND HEREAFTER, DEPENDS **ON CULTIVATING TfiE HUMAN FACULTIES***

AFTER this account and defcription of the Pi&ures painted by Mr. Barry, there remains only to ftate the fums expended by the Society on this occafion, with a view, not fo much to the ornamenting the Room in which their meetings are held, as to prove to the world, in the moft convincing manner, that the elegant Arts are not confined to any country, but that under due encouragement and pro-te&ion, they will profper as well in England as in the warmer climate of Italy.

Expen-

Expenditure on account of the Pictures painted by Mr. Barry.

For canvas, colours, frames, and other incidental charges — —	315	2	o
Expence of two exhibitions, including catalogues,	224	o	o
	539	2	o

Befides the pictures already mentioned, the room is ftill further ornamented by two whole length portraits,, the one painted by Mr* Gainfborough, of the Lord Vifcount Folkftone, the firft Prefi-' dent of the Society, the other painted by Sir Joflnia Reynolds, of Lord Romney, the prefent Prefident. On the South fide of the Room are (prefented by John Bacon, Efq. R. A.) two Cafts in plaifter from ftatues, the one of Mars, the **other** of Venus, defigned and executed in marble by that excellent Artift, and for which

two Premiums offered by the Society, for promoting the art of Statuary in this country, had been adjudged to him ; and over one of the chimnies is a clock of a curious conftruftion, a gift of the late Mr. Thomas Grignion.

PAPER

P A P E R

I N

M A N U F A C T U R E S . .

MANUFACTURES.

IN the year 1760, the Society offered premiums for making cloth from Hop Stalks, or binds, and fubjoined to the advertifement fome dire&ions to be purfued in preparing the Stalks, and obtaining the fibres in a fit ftate for manufacturing. No proper claim was ever made for thefe premiums, but as the want of fuccefs feems to have arifen, not fo much from the impra&icability of doing it, the practice being known, and in ufe in Sweden, as from the want of proper information refpefting the conducting the procefs; it has been judged proper to print the following letter, which may ferve to ftimulate ingenious perfons to make further trial of a material produced in fuch great quantities in this kingdom, and hitherto employed to no profitable purpofes; and as a ftill greater inducement,

ment, the Society have again offered a premium for the making cloth from Hop-ftalks,^ as may be feen in this volume under the head of premiums for encouraging and improving manufactures.

The procefs alluded to in the following letter was published by the Society in 1760, as follows :

"The Hop-ftalks or binds, are to be "colledted in Autumn, put into water "and covered therewith the whole win* "ter; in March they are to be taken "out, dried in a ftove and drefled as "Flax. The prepared filaments will be "fine, fbft, and white, and may be "fpun into cloth; Hop-ftalks require a "longer time to rot than, Flax, and if "not completely macerated, the woody "part will not feparate, nor the cloth "prove white or fine."

33ut thefe dire&ions having been found inadequate to the purpofe intended, the Society in fome fubfeqiient publications,

added

added the following *Nota Bena* to their advertifements. " It not being exactly
<4 known how long time the Hop-binds
44 require to be fteeped in water, in the
" manner Hemp is, in order to feparate
44 the fibrous parts from the reft, it is
44 recommended to the candidates for
€6 the premium, to examine the Hop-
“ binds from time to time, during their
cc fteeping and to take them out, before
" the fibres appear to be too much weak*
44 ened for the ufe intended; they are
44 then to be dryed, on a kiln, or in fomc
44 other way, and it is required of each
44 candidate to produce to the Society an
*4 exa& account of the manner of treat-
44 ing the Hop-binds."

London^

London, December 14/^, 1761.

SIR,

HAVING attempted the making Cloth from Hop-ftalks, in purfuance of the premium and procefs, published by the Society, I have, by defire of feveral Members, left fome fpecimens of the manufa&ure with the Regifter; I beg leave to trouble you with an obfervation or two that may be proper to be attended to, if this fubjeft fhould again be taken into conlideration.

Firft, That the faid fpecimens are fufficient to evince that Hop-binds will afford a material for making cloth.

Secondly, That the fpecies of cloth intended to be made from the material produced, would very well anfwer the purpoie of fine facking, and coarfe bagging for Hops.

Thirdly,

Thirdly, That the fole caufe of my not producing a ftronger material, and a fufficient quantity to have entitled me to the premium propofed, was, that the material was too long immerfed under water, and its texture was thereby deftroyed*

Fourthly, That fuch binds as I took occafionly from the large quantity I had put to foak, at the end of about fix weeks or two months, afforded filaments fufliciently fine and ftrong, for any purpofe.

Fifthly, That the time neceffary to reduce the inner fubftance of the Hop-binds to a fitnefs for ufe by maceration, will abfolutely decay the outer coat as appears from thofe which have continued under water above a year.

My attempts and endeavours in this matter fail very fhort of the fuccefs and perfection hoped for by the Society, and myfelf

myfelf, and allow me no pretence *for* claiming the premium propofed,

I am, Sir,

Your moft obedient,

Humble Servant,

H. COOKSEY,

To Dr. TEMPJ-EMAN,
Secretary to the Society for Encouragement of Arts, Manufactures and Com* xnerce.

P A P E R S

I K

M E C H A N I C K S .

MECHANICKS.

IN the year 1776, Mr. William Shipley of Maidftone, whofe benevolence is univerfally known and acknowledged, and who has already been mentioned in this volume, page. 125, prefented to the Society a contrivance, called by him, *a Floating Light* for faving the lives of perfons who fall over-board in the night; this contrivance appearing to the Society ingenious, and the intention humane, the Society voted their thanks and a filver medal to Mr. Shipley, who left with them one of the floating lights, which is preferved in the Society's repofitory, and of which, the following is a defcription.

The machine coniifts of a kind of boat made of tin-plates, two feet four inches long, twelve inches wide, and twelve inches deep* the cover of this boat is fol-

dered down, fo that the whole cavity is water and air tight, but left by any accident the boat fhould be bulged, and confequently funk in the water, theinfide is filled with bladders blown up with air, if therefore a hole fhould chance to be beaten through the fidei one or two of the bladders at moft would be injured, and the remainder would be fufficient to keep the machine floating on the water. That any unfortunate perlbn who falls over-board in the night may have an opportunity of difcovering the machine, there rifes from the cover or deck of the boat four upright pieces of tin, ferving to fupport a circle which is foldered to them, within this circle is another moving on two axes, in the manner fea compafTes are hung, and fupporting the lanthorn which is thus kept in its perpendicular pofition, notwithftanding any irregular motion of the boat. There are alfo fixe4 to the fides qf the boat two proje&ing handles for the perfon to lay hold of, in order

order to fupport himfelf till he is brought to the (hip's fide by the means of a rope, which being made faft to the tin boat, and the other end remaining on board the fhip, the people may with eȧfe hawl the aparatus and man towards them.

Thus far may ferve as a general defcription of the floating light, but in order to facilitate the faving the man, another contrivance is added, confiding of a lanthorn, to be let down from the {hip by a rope, and having a rope-ladder fattened to it, whofe ufes are rnqre fully defcribed in the annexed paper, as fent by Mr. Shipley with the machine.

It may be proper to obferve that to prevent the light in the lanthorn being put out by the fpray of the fea, their tops are made double, which, though they are pierced full of holes for the purpofe o? admitting air, will effe&ually prevent that accident.

AN Account of the ufe of a Floating Light calculated to fave the lives of fuch perfons as have the misfortune to fall over-board in the night.

It is propofed in order to make this float ufeful that it be every night under the care of thole officers who are on the watch, and that its lamp be frequently trimmed and fupplied with frefh oil and its fnufF moiftened with oil of turpentine, that it may take fire with the leaft touch of a lamp or candle, and whenever the Ihip is alarmed by any of the failors falling over-board in the night, the officer on watch may light the lamp in the lanthorn belonging to the float as expeditious as poffible, and let the float down by the fmall cord into the water, till it has floated about one fecond of time, and the float is a little way out of the perpendicular of the fmall cord, he is then to fatten the cord to the reel for

the

the line and tofs it over-bpard which will fink down and pull the line almoft perpendicular, and thus it will not be liable to entangle the perfon when he fwims to the float, who, when he has got hold of the handles of it, may move it very faft which way he will, only by ftriking his legs in the fame manner as he does when he fwims, and as the light of the lamp will be a certain direction for the perfon over-board to find the float, fb it will alfo diredt them in the (hip to find the man and float, and when the ftiip has tackt about, and is come t9 thb float, then the following method 15 propofed to take up the man and float into the (hip, viz, the Ian thorn with the rope-ladder may be let down from the end of a pole with a cord and pulley, till the crofs bar below the lanthoru touches the water, which may be feen \>*y* them in the (hip by means of the light from the bottom of the lanthprn, and thus the man in the water *may* la/ hold of the

crofs bar and fix his feet on one of the fteps of the rope-ladder, and he may then lay hold of the iron-bale of the float with one hand and hang it on the hook of the rope above the crofs bar, which being done, by the help of a pulley fattened to the end of a pole, the man and float may be both fafely lifted into the fhip.

Maid/tone, Jan. yth9 1777.

GENTLEMEN,

I have received the filver medal which you were pleafed to order me for contriving a floating light calculated to fave the lives of them who fall over-board in the night at fea, which I fuppofe may ferve as a hint for fome mechanick artift who is well verfed in fea affairs to improve from, by making a floating light fo per fed as to anfwer all its wifhed for purpofes.

This medal from you is by me more efteemed than a very considerable pecuniary

niary reward would be from any other body of gentlemen, and I believe that nothing can give me more pleafure than this honorary mark of your approbation has done, unlefs it is to hear that my floating light is fhortlyufed at fea, and is a means of faving the lives of feveral of that clafs of people whom all maritime powers efteem very valuable members of fociety, and that it may then be ranked amongft the many ufeful contrivances that have been introduced to the public under your patronage,

I am, with the greateft regard,
Gentlemen,
Your verv humble Servant.
WILLIAM SHIPLEY.

To the Society for the Encouragement of Arts, ManufadtureS) and Commerce*

If any perfon defirous of conftru&ing a machine for this humane purpofe, (hould find the foregoing defcription wanting in any particulars, he may eafily examine the complete apparatus which was prefented by Mr. Shipley, and is referved in the repofitory of the Society for the ufe of the public.

IN the fecond volume of the Tranfaftions, page 191, an account is given of the invention of the Gun-harpoon, and the means taken by thl* Society for promoting the ufe of it; the following certificate will ftill further prove its utility, and fliew that all the attention paid by the Society to the introdu&ion of that kind of Harpoon, among the veffels employed in the Greenland fifhery, has anfwered every expectation the Public expedted from it,

I Sin-

I Sinclear Halcrow, Mate and Harpooner of the Ship Marianne, Captain William Brown, on the twenty-eighth day of June laft, in latitude feventy-nine North, perceived a Whale at about three hundred yards diftance from the boat, which we immediately purfued.

The fifh fwam about five hundred yards, and had nearly efcaped by finking ftern or tail foremoft, and was entirely under water, except about four feet of her head, when I fired a harpoon from a fwivel gun fixed to the bow of the boat, which ftruck the fifh in the crown-bone of the head, into which it entered about four inches; the Mh was much ftunned, nnd lay motionlefs a little under the iurface of the water, about a minute, when (he funk herfelf entirely, and ran out fix lines, each containing upwards of one hundred and forty fathom;.in about a quarter of an hour {he appeared above water, at nearly three quarters of a mile diftant from the boats, which having

having approached her, fhe ftruck one of them a blow with her tail, which broke her keel in two, and ftove feveral of her planks, by which the boat immediately filled with water, and the people were faved by the other bpats and carried to a piece of ice where they remained till the fifh was killed.

The fifh went down again and ftaid under water but a fhort fpace, when fhe came up fhe appeared in great agonies and flounced and beat herfelf about fo as frequently to render any approach to her extremely dangerous; in a fecond attempt fhe ftove another boat, but not fo as to render it entirely ufeler^.

The harpooner of this lecond boat fixed a hand-harpoon in her, and having by this time plenty of affiftance from the fliips Achilles and Induftry belonging to the fame owners, they fixed three other harpoons into her, and feveral lances, which enabled us to kill her, about four hours after fhe was firft ftruck.

This

This fifh meafured from her nofe to her tail near feventy feet, her jaw-bones, which now lie in Greenland Dock, meafure twenty-feven feet. She filled fixty butts of blubber; her principal bone meafured twelve feet and a half, and weighed twenty-fix hundred weight.

It would have been utterly impoflible to have fecured this fifh without the aid of the gun-harpoon, and if we had had another gun and harpoon in any of the other boats, the fifh might have been killed in a fqurth part of the time, and that without any danger to the lives of the men.

The above I declare to be in every particular ftrictly true.

SINCLEAR HALCROW.

Lower Shadwell,

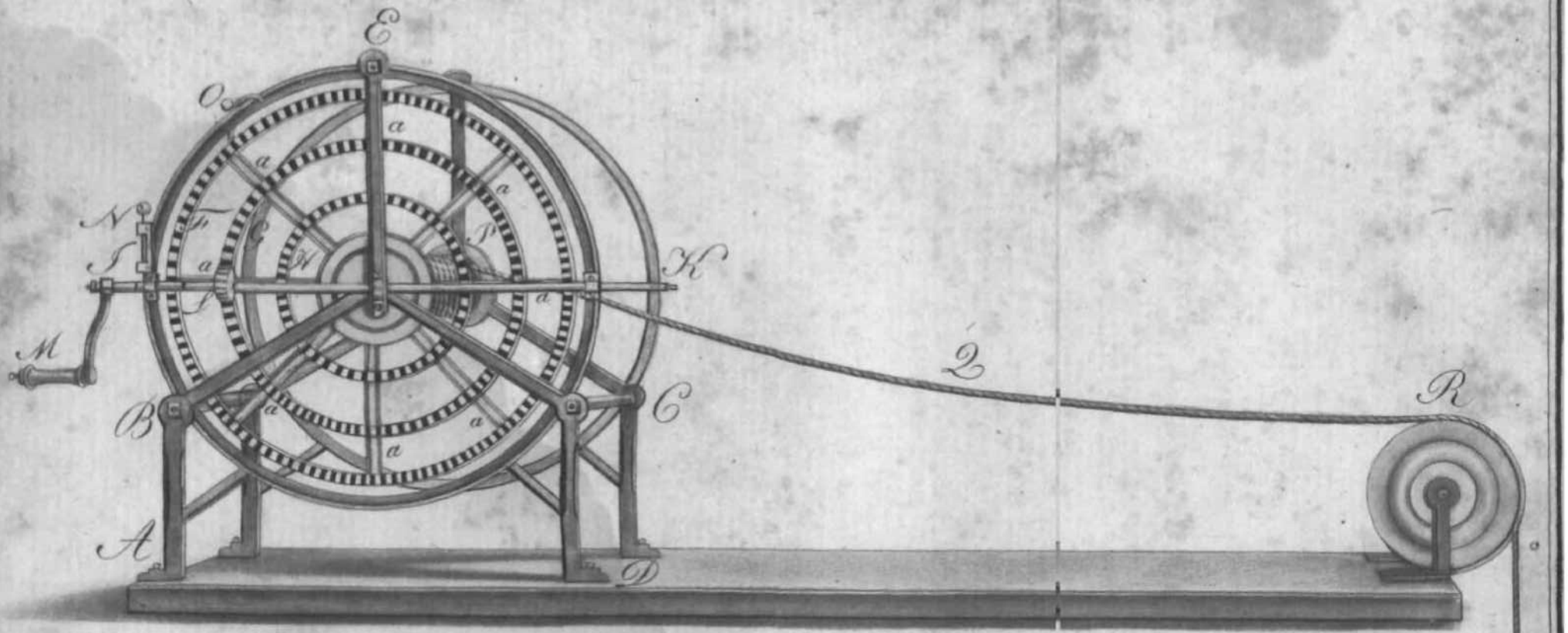
Dec. 17, 1783.

In confequence of this certificate, Mr. Halcrow received two guineas offered as a premium for ftriking a Whale by the gun-harpoon in the year 1783.

. . The

THE gold medal, or twenty guineas, having been offered as a premium for the beft crane for wharfs, was adjudged to Mr. John Braithwaite, who chofe the gold medal, and of whofe crane the *foU* lowing is a defcription.

The frame, which is wholly of cuft iron, is formed of two circles, held together by three fcrewed bars, and ftanding on four feet; the crane-wheel, which is cnclofed within the frame, confifts of three concentric toothed-face wheels, joined together by ftrong bars, whofe axle is the barrel on which the rope is coiled; in the front of the face wheels runs a fhifting arbor, on this arbor is a pinion, which may be brought to work in the teeth of either of the face-wheels, and thereby " the power employed at the



Mr. John Braithwaite's Improved Crane.

wynch, may be applied to raife a greater, or leffer weight occaiionally.

The model produced in claim of the premium is referved in the Repofitory of the Society, for the infpeftion of the Public.

Defcription of the Plate of Mr. JOHN BRAITHWAIT'S improved Crane.

A B C D E a frame of caft iron* *F G H* three concentric face wheels, united together by the eight ftraight bars, *a a a.* *I K* a fliding arbor, on which is fixed the pinion *L.* *M* the wynch or handle. *N* a ftop which when lifted up permits the fliding arbor to be moved backward or forward, but when down, retains it in its proper place. O a pall or ftop, which prevents the crane running back, but may be discharged at pleafure. *P* the barrel on which the rope is coild. ^ the rope patfing over the pulley, *R.*

A fhort Account and defcription of Mr. Marfhal's fecret Efcutcheon, for which the Society voted him a bounty of ten guineas, February the 4th, 1784.

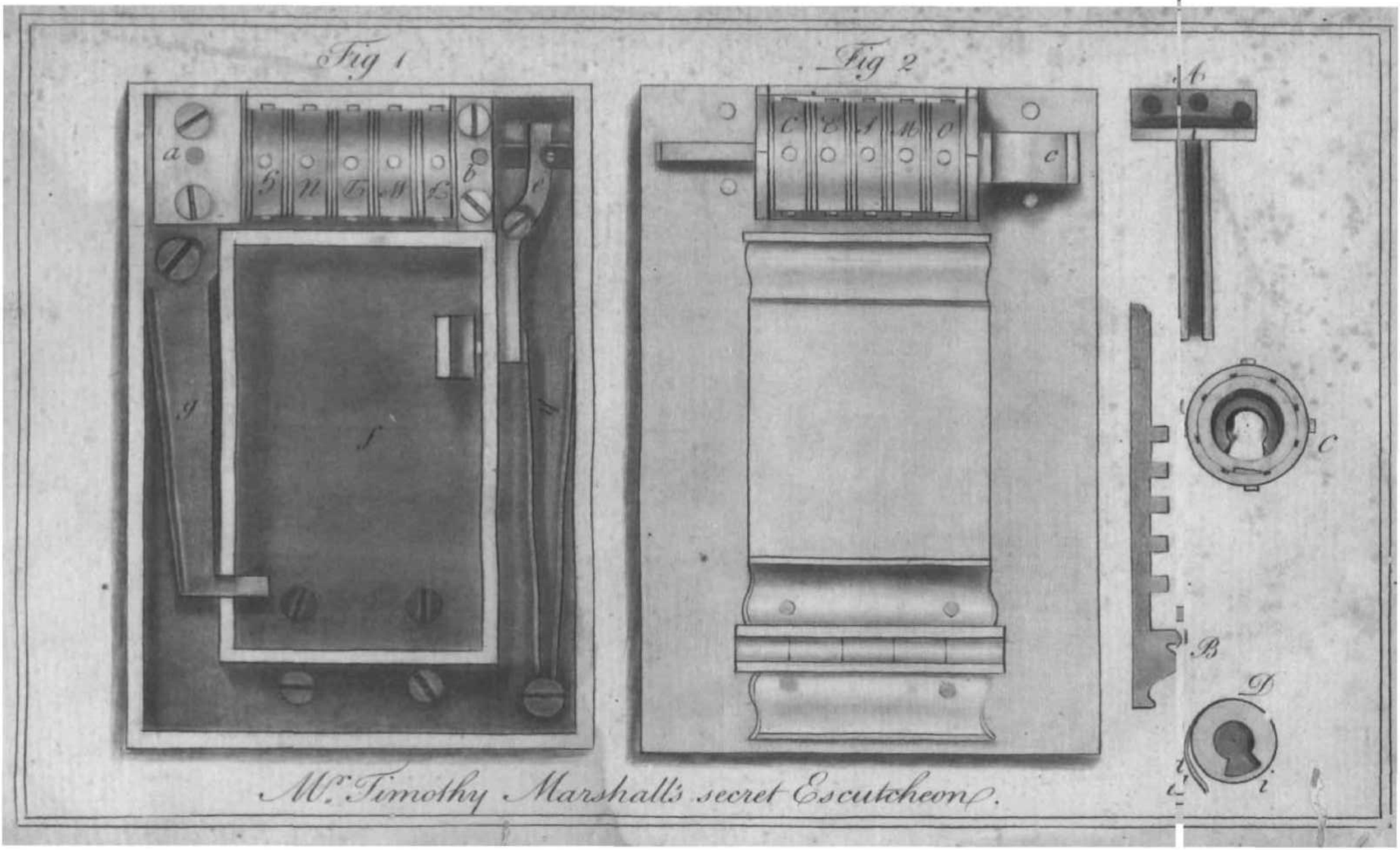
THE Marquis of Worcefter in his century of inventions No. 72, after having fpoken of three kinds of locks invented by him, fays " an efcutcheon to be
44 placed before any of thefe locks with
44 thefe properties:
44 The owner, though a woman, may
44 with her delicate hand vary the ways
44 of coming to open the lock, ten mil-
44 lions of times beyond the knowledge
44 of the fmith that made it, or of me
*4 who invented it."

Many attempts have been made to form a machine equal in its properties to the defcription here given, and from thence it

it is probable, arofe the kind of padlock which have been long made in this country in great numbers, which having feveral letters on different rings can only be opened when a certain fet of thofe letters are arranged in one order, but this was in no degree equal to the end propofed, for befides the workman who made it being at all times informed of the pofition the letters muft be in, and confequently enabled to open it; the letters and rings admitting of no variation of place, at the will of the owner, referving at the lame time a power of opening the locks, whenever the proper arrangement became known, the fecret was divulged, and all fecurity at an end; but by the improvement made by Mr. Marlhall, the letters or figures allowing an almoft infinite variety of changes, the owner may in one minute, alter the fecret in fuch a manner, that even the maker would be as unlikely to open it, as he would be of gaining the higheft prize in a lot-

tery, by the chance of a fingle ticket; thus this kind of efcutcheon is infinitely more' fecure than any hitherto in ufey efpecially as the alteration of the letters may be made every day for years, without recurring to their firft ftate, and as the owner may at one time chufe to truft a friend or a domeftic with the fecret, fo' that they might have recourfe to his va–luables, &c. he may alfo at another time, wifh to exclude them from that privilege, which this contrivance renders very eafy to be done. As this improvement relates only to the efcutcheon, it is obvious that every attempt to pick the lock it covers, or to open it by means of falfe keys, is prevented, a circumftance of no fmall importance, when locks of a curious conftru&ion, and with a number of fine wards are made ufe of.

The efcutcheon for which the bounty was given is refervcd in the Rcpofitory of th*



Mr. Timothy Marshall's secret Escutcheon.

tlie Society for the infpe&ion of the Public.

Defcriptibn of the Plate of Mr. Marshall's fecret Efcutcheon.

A the barrel in which the bar *B* flides; jpartof this barrel is concealed within the rollers but the ends of it appear at *a* and *b* fig. 1.

B the bar with proje&ing teeth by which the rollers *C* prevent its being drawn back till the nick in the recefs is brought exaftly over the tooth, the fquare end of this bar is feen at c_9 fig; 2;

C a roller, of which there are five; each compofed of two circles, the outer circle having four rows of letters at equal diftancfes engraved on its fur face, with fmall knobs, for the niore commodioufly turning the rollers round, the inner circle *D* being movable within the outer one on the barrel *A*\ to the fur face of each of the inner circles, is fattened a fmall

fpring, *d* ferving to keep the outer circfe in its place, till an alteration in the pofition of the letters which are the foundation of the fedret, is intended to be made; and within the inner circle is a recefs to prevent the bar *B* being drawn back, unlefs the teeth and the nick are in their proper fituations, at which time by drawing back the bar by the fquare end, c_9 iig. 2. which is otherwife retained in its proper place by means of the feather-fpring *b*, the catch e_9 fig, i. is releafed, and the door *f* of the efcutcheon, is thrown open by the fpring, *g*.

When an alteration of the arrangement of the letters on which the fecret depends, is defired, the bar *B* muft be held back by the fquare end c, while one or more of the outer circles are turned round till the letters chofen are uppermofl; the efcutcheon cannot afterwards be opened till that fame arangement is again made, and fo on according to whatever fituation of the letters the owner may chufe ;

chufe; hence it is evident that which ever of the letters have been chofen muft at the time of opening the efcutcheon be brought in one line to the upper furface of the rollers, and then the bar being drawn back, the door of the efcutcheon will be thrown open.

Fig. 1. Reprefents the under or inner fide of the efcutcheon, and fig. 2, the upper or outer fide, and appears as when fixed over a lock, and covering the key-hole,

Nov. 24, 1784,

THE filver medal was voted to Mr, Taylor, of Petworth,forhis improvement of Latch Locks, of which the following is an account, extra&ed from his letter on that fubje£t:

The latch, or fpring bolt of door locks on the common conftruftion (whether

mortice, cafe, or rimmed locks) is very liable to be out of order, as foon as the oil is dried up between the tumbler and tail of the latch, from the erroneous manner in which the tumbler is made to aft, and more efpecially, when the lower arm of the tumbler is engaged, for then the fridtion is very great, and the bolt very hard to be moved. To remedy thefe defefts, I beg leave to fubmit to the judgement of the Society, a method I have

verfed, fo that the curved fide of the tumbler acts againſt two ſtubs fixed on the tail of the latch, and thrufts it eafily back, whether the knob is turned to the right or left in opening the lock; behind the tail of the latch is alſo fixed a guide, having within it a groove, wherein runs a ſmall friction wheel, ſerving to keep the latch in its direct ſituation, and leſſen its friction; the arms of the tumbler are not ſo long as they are generally made, becauſe the latch or ſpring bolt muſt move the eaſier by their being ſhorter.

By the above conſtruction, thoſe parts of the tumbler and tail of the latch, that are on contact, move in a line, theneareſt to the chord of a circle, whoſe radius is the arm of the tumbler, and conſequently paſs over the greateſt ſpace under the leaſt angle poſſible. The friction wheel before-mentioned, being placed on a ſtub riſing from the tail of the latch, and in a line with the centre of the tumbler, and having the ſpring that puſhes the latch or bolt

forward, touching alfo in the fame line with the fri&ion wheel, is a ftill further improvement for all kind of latch locks, though low-priced locks will do very well according to this conftruftion without it.

It is prefumed the foregoing defcription will enable any workman to make thefe locks, but left that fliould not be the cafe, one of them is referved in the Society's Repofitory for the infpe&ion of the publick.

AN

A N

A B S T R A C T

O F T H E

P R O C E E D I N G S

O F T H E

S O C I E T Y .

In the YEAR M,DCCLXXXIV.

AGRICULTURE,

A LETTER from the Abbé Mann of Bruffels, addreſſed to Sir Joſeph Banks, Bart. P. R. S. was communicated to the Society; in this letter a ſtraw hive for Bees is defcribed, conſiſting of two cylinders, , ſeparated from each other by lattices invented by the Sieur Ricour, gardener to the Baron 4ePaederli. The inventor commends this Hive above all others he has met with, for collecting the honey without deſtroying the Be^s. It differs in ſome degree from thoſe employed in England for the ſame purpoſe, as may be perceived by examining a drawT ing ſent with the letter, and preſerved in the Society's colle&ion.

The thanks of the ſociety were given to Sir Joſeph Banks and Abbé Mann, for his communication.

THE

THE thanks of the Society were given toMr.Leatham, of Barton, nearMalton, **fnr an arrrnint- *r\f* his mpthnri nf ni an tin or** quickfet hedges, on dry, gravelly, or thin foils. The caufes which render quickfet hedges on fuch foils poor and bad, the author Qonfiders to be, firft, the fetting them too low or flat on the furface, by which their roots only occupy a little depth of the foil. Secondly, when fet higher, they are generally too near the flope of the bank, hence they do not receive the benefit of the rain which falls on them; to remedy thefe inconveniencies, two lines arc marked out, twelve feet diftant from each other; from three feet within each line, the upper part of the foil is taken, and caft into the centre of the fpace, fo as to form a flat bed, three feet broad, in the centre of which the quicks are planted; the remaining eighteen inches on each fide is filled up with earth, gravel, or fand, taken out of the ditches on either fide; this extends the

the bed to five feet, allowing fix inches for the flope of the bank; the quicks planted in this body of foil, will find fufficient nourifhment, before the tap root reaches the barren gravel below, and the earth thus placed, will retain fufficient moifture to nourifli the plants. Quicks thus fituated will, at an early age, form a fence, and by raifing the bank on each fide higher^ at pleafure, may, at a fmall expence, be defended from the ill effe&s of fharp winds, or the air of the fea. The author fays, it may be alledgcd, that the fpace of land here allowed is extravagant, but as on fuch low priced ground, it amounts to little, an ample compenfation is made, if a good and thriving fence is obtained. The work, agreeable to the faid dimenfions, coft him fifteen pence per rood of fevcn yards in length.

THE

THE thariks of the Society were giveii to Nathaniel Jarman, Efq. of Brehley-houfe, Kent, from whom the following letter was received, for having laid be-fbre the Society the largeft root of Rhu-barb hitherto produced, and for his' great attention td the culture of Rhubarb in this! country.

***Brenley H6ufe> O5i.* 17, 1784.**

SIR,

ON Friday laft I ordered my gardener to take up a root of Rhubarb, produced From one of the feeds fent by Dr. Moun^i fey, to the Society for the encouragement *of* Arts, Manufactures, and Commerce; in *i* 764, atad planted by my dire&ion the fame year:

Sixty feeds fell to riiy lot as a Member of the Society, from which were produced forty-five plants, thirteen of which arc ftill remaining in the ground, and fome of them annually produce feed. I have this year railed upwards of an hundred

and

and twenty plants, in the common ground, from feeds of the preceding year. The two roots I fent a few years paft to the Society, one of them weighed twenty-eight, the ottar thirty pounds. The largeft root I ever remember to have heard of being produced, was that taken up lbme years fince by Sir Alexander Dicky which weighed forty-two pounds j the weight of the root now fent being *fd* touch more than any before taken up, I requeft you will lay it before the Society for their infpe&ion ou Wedncfday next.

I am, Sir, &c,

NATHANIEL JARMAN.

N. B. The laft root weighed four or *five* pounds lefs a few days after it was taken out of the ground, than it did at the time of taking it up, I have therefore fent a certificate of the weight of the root which accompanies this letter.

To Mr. MORE, By

By the before-mentioned certificate, fignedby Mr. Edward Jacob, Surgeon, at Feverfham, and dated O&ober 16,1784, it appeared, that the exa& weight of the root was then fifty-fix pounds; and the fame root being apain accurately weighed before a committee on November the eighth, was found to weigh only forty-eight pounds.

A CLAIM was this year received for the premium offered for cultivating the greateft quantity of *Rheum Palmatum*, or true Rhubarb, but the candidate not having fully complied with the terms of the Society's advertifement, he was not entitled to the gold medal, being the premium offered; yet in confequence of the quantity planted, thefilver medal was voted to him.

By the certificate fent it appeared that Mr. Robert Davis the Younger, of Minehead, in the county of Somerfct, merchant, had, in the fpring of the year 1779, fowed fome feed of the *Rheum Palmatum*, or deeply-

deeply-indented-leaved Rhubarb, received from Dr. Brocklelby, of London, and that he had planted out feven hundred and twenty of the plants, at the diftanc6 of five feet afunder. The foil in which they were planted, was for the moft part fandy and light, the reft a deep black loamy garden ground, both well expofed. From the time of planting to that of the taking up, a great number of plants on the firft foil, decayed and died, from what caufe it is difficult to fay, but thofe on the latter continued for the moft part luxuriant and vigorous, and produced larger roots than the other, although not fuperior, if equal in quality, but it did not appear that the diftance of five feet did in any refpefl: incommode or injure the moft luxuriant plants.

In the fummer of 1783, the whole plantation above defcribed was taken up, and although the number of roots could not be afcertained, yet it was believed there were near, if not quite four hundred.

The whole produced three hundred pounds of dried Rhubarb.

The thanks of the Society were given to Mr. Vifpré for tWo letters received from him on the Cultivation of Vines for making wine in. England.

In the firft of thefe letters Mr* Vifpré, after obferving that moft Erigliflh writers on gardening, have recommended the planting vineyards in England, and thar the failure of thofe plantations has probably arifen from the too clofely following the praftice of countries fituated in very different climates from that of England, mentions, that the late Mr. Hamilton, of Pains-Hill, whofe vineyards wete formerly well known, complains of two inconveniencies he met with, viz. The frequent want of length of fummer to ripen the grapes, and the ftill more frequent blights in fpring; and as ftoves and mats have been fouiid to prevent thefe inconvenielicies in fmall, he propofes to obviate them

them in the open ground, by training them along the ground itfelf, fattening the branches down with pegs; and at the end of May, or in June, when the fruit begins to appear, he advifes to follow the method purfued at Bergerac, which is to dig a hole under each bunch, and peg down the (hoot, fb that the bunch may hang in the hole, and be fecure from rotting; the earth fhould be raifed a little round the edge of the hole, to prevent the rain getting in; as an improvement of this method, he propofes to cover the holes with tile, flate, or glafs, by which means the grapes will ripen much better and fooner than if exoofed to the ooen air. To prevent the blights on Vines, he fays, as they are, according to Jiis method to be trained along the ground horizontally, it will be very eafy to protect them by coverings of hay, ftraw, fern, &c.

In the fecond letter dated November the twenty-fourth, 1784, Mr. V fpré informs the Society that he had tried

his method of cultivating Vines at & Vineyard dt Chelfea: as foon as the bunches were formed, he covered them with pieces of tiles or flate, this caufed them to blofflbm fome days fooner than thofe that were expofed ; till the middle of June the covered grapes vifiblygrew fafter than the uiicovered ones, when a cold rain came on which held to the end of July, at which time it was found that the uncovered Grapes advanced fafter than the covered ones, which he fufpe&ed to be owing to the moifture that had penetrated into the gi'ound and hindered the growth of the latter$ notwithftanding the ill fuccefs of this experiment, Mr. Vifpré propofes to renew his trials at another feafon, and will relate the fuccefs to the Society*

POLITE ARTS.

IN the fecond volume of thefe Tranf-* a&ions, page two hundred and forty ; the attention paid by the Society to the obtaining cor reft Maps of the feveral Counties of this Kingdom has been mentioned, and this year a furvey of the County of Suffolk having been produced to them, the Gold Medal was voted to Mr. Jofeph Hodfkinfon for this furvey, which appeared by very fatisfa&ory evidence to be accurately laid down and neatly executed; and one of the Maps prefented by Mr. Hodlkinfqn is referved in the Society's colle&ion.

To Mifs Williams Thanks were given for producing to the Society a piece of Work in Cloth, reprefenting a dog.

Mr. Hurter of Great Marlborough Street, having fubmitted to the confider-

ation of the Society fome pictures painted by him in Enamel, in a manner nearly refembling the method of painting in oil, which blends and unites the colours, and gives to the pictures the force and tranf. rency of oil paintings.

The Thanks of the Society were returned to Mr. Hurter for this communication, and as a rjiark of their approbation of his works.

Two boxes of Ink in cakes, made in imitation of Indian-Ink, the one by Mr. Reeves of Holborn Bridge, the other by Mr. Reeves of the Strand, having been produced to the Society, and trial made of them by fome of the moft celebrated artifts, who all agreed the ink was fuperior to any hitherto made in England in imitation of Indian-ink,

Thanks were returned to the Meffrs. Reeves for the communication, who were informed of the artifts opinion, and the

boxes

boxes prefented by them are referved in the Society's colle&ion,

A box of Water Colours in cakes was alfo prefented to the Society from Mr. Cowen of Dublin, to whom Thanks were ordered, and the box i§ referved in the Society's collection,

Mr. William Birch having produced to the Society fome Pi&ures painted by him in Enamel and alfo fqme proofs of a colpur invente4 by him, which appeared likely to anfwer very good purpofes in Enamel painting, the Greater Silver Pallet was voted to him, and the proofs of his new colour referved for the in-r ſpection of the Curious,

MANUFACTURES.

A pair of Ruffles and a Shirt-bofbm, were fubmitted to the confideration of the Society by Mrs. Plagavin, who had worked them entirely with needles in imitation of lace; and Thanks were returned to Mrs, Plagavin for the communication, but it appeared on a full examination, that a manufa&ure on the principles on which thefe Ruffles, &c, are made, cannot be profitably eftabliſhed in this kingdpm.

MECHANICKS.

Mr. Maling of Scarborough, having fent to the Society an inftrument contrived by him, and called *a Perpendicular*\

to

tote ufed inftead of a quadrant of altitude with the artificial globes; the Society voted him their Silver Medal for the fame. With the inftrument was fent a defcription of it, and feveral problems, to the folution of which it may be advantageoufly applied. This inftrument, made of wood, confifts of a bafe concentric with the globe it is intended to be applied to, and muft move fo along the wooden horizon; an edge marked on the inftrument *(a)* (hewing the azimuth, or amplitude, from this bafe rifes the perpendicular, on which is marked a fcale of fines to the radius of the globe for which it is made; up or down this perpendicular moves a flider, through which pafles a fmall beam, whofe extremity next the globe, is cut in fuch manner as to form a point at the lower edge, which point may be made to touch the globe at pleafure, and the lower edge, fhows the fine of the altitude on the perpendicular; a fmall fcrew at the back

of the flider ferves to fix it at any required diftance from the bafe. It appeared that this contrivance was new, and ingenious, and folves many problems more readily than the quadrant of altitude; but the fblution depending on a line of fines, could not be fo accurate, as by an inftrument made by Mr. Wright, Mathematical Inftrument Maker in Leadenhall Street, who having been prefent at the Committee when the Perpendicular was examined, produced to the Society a Quadrant of a circle, to ftand and be movable on the wooden Jiorizon, and marked with degrees and minutes, the idea of which Mr. Wright alloyed to have arifen in his mind from haying feen Mr. Maling's contrivance; one of Mr. Wright's improved inftrujnents w^s alfp prefented to Mr. Maling.

A pair of Stirrups, for which a patent had been granted to Mr. Hay ward, of Kelvedon Hall, Eflex, were prefented to the

the Society by him, and referved in the Repofitory.

The Thanks of the Society were given to Mr. Thomas Dornforth, for prefenting to them a fmall model of what he terms a Wind Waggon, fimilar in moft refpe&s to one defcribed by Bifhop Wilkins in his Mathematical Magick, page 160.

Ten Guineas were voted to Mr. John Hayward, of Gooch-ftreet, as an encouragement to his profecuting his work of qarving iron, which appeared ingenious and ornamental, and of which a guard iron for preferving the backs of coaches from injury, is referved in the Society's Repofitory.

The Thanks of the Society were given to Nathaniel Jarman, Efq. for having laid before them the Gun Harpoon, with which the whale was ftruck by Sinclear

Halcrow, to whom the premium was this year adjudged, fee page i *$$*. This Harpoon was much bent by the blow, and in part broken.

The Thanks of the Society were given to Sir Jofeph Senhoufe for having fub* mitted to their confideration a model of a Machine to be worked by wind for boring cannon.

The Thanks of the Society were given to Mr. Hunter, of Portland Road, for producing a model, fliewing a method of preventing any inconvenience from doorsj paffing over carpets; the model repre* fented a door, having at the bottom a mortice, in which a piece of wpod rifes by a fpring when the door opens, and is preffed down when the door (huts, \?*y* a fmall tongue forcing againft the infide of the frame of the door*

The

The Silver Medal and 'i wenty Guineas were voted to Mr* Furft, in confidera-tion of the utility of a contrivance pro* duced by him, and of which trial was made, for increafing the effedt of Engines for extinguifhing fires; a complete model remains in the Repofitory of the Society, of which the following is a fhort defcrip-tion: From a platform rifes an upright pole or maft of fuch height as may be judged neceflary, up this pole or maft flides a gaft, and along the upright pole and gaft the leather hofe from the Engine is conveyed, at the extremity of the gaft the branch of the Engine proje&s; to-wards this extremity is fixed an iron frame whence hang two chains, and from them ropes ferving to give a hori-zontal dire&ion to the branch, whilft Other ropes running through proper pullies, and being thus conveyed down the maft ferve alfo to communicate a Vertical motion to it, by thefe means the branch or nofe pipe of the Engine is con-

v\eyed

veyed into the window of any room where the fire more immediately rages, and the effeft of the water difcharged therefrom applied in the moft efficacious manner to the extinguifhing it.

REWARDS

REWARDS

ADJUDGED BY THE

SOCIETY,

IN M,DCC,LXXXIV.

REWARDS

BESTOWED IN

AGRICULTURE.

HPO the Earl of UPPER OSSORY, for his extenfive plantations near Ampthill, Bedfordfhire. The GOLD MEDAL. See page 4.

Clafs 87. To Mr. ROBERT DAVIS, jun. of Minehead, Somerfet-(hire, for cultivating Rhubarb. The SILVER MEDAL.

Clafs 68. To Mr. WILLIAM GREEN-HILL, of Eaft Ham, Eflex, for cultivating eighty-one acres of Potatoes for the table. The GOLD MEDAL.

To GEORGE ROSS, Efq. for his extenfive plantations of timber trees in Scotland. The GOLD MEDAL, fee page 13.

N POLITE

POLITE AND LIBERAL ARTS.

Clafs 127. HONORARY PREMIUM, to Lady KATHERINE POWLETT, fora Drawing. The GOLD MEDAL. Subjeft, A LAUGHING GIRL.

Clafs 130. HONORARY PREMIUM, to Mr. JOHN POLLARD, Gould-fquare, for a Drawing. The SILVER MEDAL. Subject, PORTRAIT OF MRS. SIDDONS.

Clafs 131. HONORARY PREMIUM to Miss SMITH, Great George-ftreet, Weftminfter. The GOLD MEDAL, Subject, PORTRAIT OF A GENTLEMAN.

Clafs 132. HONORARY PREMIUM, to Miss CATHERINE BLACKWOOD, Somerfet-ftreet, Portman-fquare. The SILVER MEDAL. Subject, ST. JOHN.

The foregoing premiums were given in Confequence of the Society's advertifements publifhed

lifhed in 1783; the following in confequenceof thofe publifhed in 1784.

Clafsucj. To Mr. GEORGE SAMUEL, Fofter-Lane. The SILVER MEDALLION, given in conformity to the will of JOHN STOCK, Efq. Subjeft, FRONT OF THE SOCIETY'S HOUSE itf THE ADELPHI.

Clafsi2o. To Mr. THOMAS LANGDON, Vere-ftreet. The GREATER SILVER PALLET, for drawings of outlines. Subje£t, the LAOCOON.

Clafs 121. To Mr. EDWARD DAVIES, at Mr. Dickenfon's, New Bond-ftreet. The LESSER SILVER PALLET, for drawing of outlines. Subjedt, THE BOXERS.

Ckfs 124. To Mr. WILLIAM PALMER, Mercer-ftreet, Long-Aere. The GREATER SlLVERPALLET, fot drawings of machines. Subjeft, Mr. LLOYD'S CIDER MILL.

This premium was adjudged to Mr. George Samuel, but he having obtained the premium clafs 119, could not this year receive another.

Clafs 125. To MTSS CATHARINE CHARLOTTE RAPER, Chelfea. The LESSER SILVER PALLET, for drawings of beafts. Subject, LIONS FROM THE LIFE.

Clafs 129. To Mr. CHAR. AUGUSTUS EDWARDS, Morden, Surry. The GREATER SILVER PALLET. Subjeft DRAWING OF FLOWERS.

Clafs 130. To Mr. JOHN WILLIAM LEWEN, Fenchurch-ftreet. The LESSER SILVER PALLET. Subjeft, DRAWING OF FRUIT., To Mr. WILLIAM BIRCH, James-ftreet, Covent-Garden, for painting in Enamel, and producing a new Colour for the ufe of Enamel painters, a fpecimen of which is referved

in the repofitory for the infpe&ion of the curious, the GREATER SILVER PALLET.

MECHANICKS.

TO Mr. GEORGE MALING, Scarborough, for his invention of an inftrumciit to ferve more advarttageoufly the purpofe of the Quadrant of Altitude. The SILVER MEDAL, fee page 184.

Clafs 167. To Mr. JOHN BRAITHWAITE. The GOLD MEDAL, for an improved Crane for wharfs, fee page 158.

Clafs 160. To Mr. SINCLEAR HALCROW, Two GUINEAS for finking a whalb with the gun harpoon, fee page 154.

To Mr. TIMOTHY MARSHALL, Bury-ftreet, St. James's, for his invention of a fecret eicntcheon, fee page 160.

To Mr. JOHN HAY WARD, Gooch-ftreet, for his ingenuity in carving iron, exemplified in a guard for coaches, reſerved in the Society's Repoſitory. TEN GUINEAS.

To Mr.——— TAYLOR, of Petworth, Suſſex, for an improvement in latch locks, fee page 165. TheSiLVERMEDAL.

To Mr SOLOMON FURST. The SILVER MEDAL and TWENTY GUINEAS, for his contrivance to increaſe the effedt of Engines for extinguishing Fires, a model of which is reſerved in the Society's Repoſitory for the uſe of the publick.

PRESENTS

PRESENTS

RECEIVES BY THE

SOCIETY,

In the YEAR M,DCCLXXXIV.

With the Names of the DONORS.

Monf. Le Due de CHAULNES, F. R. S.

M MEMOIRE fur la mainère de peindre des Chinois.

Mémoire fur la veritable entrèe du Monument Egyptien.

Nouvelle Methode pour faturer l'eau d'air fixe.

Lettre de M. Le Due de Chaulnes a M. L'Abbé de Saint-Non, et la reponfe.

Mont de MARCORELLE BARON D'ESCALE.

HTNTS for neutralizing neceffary houfes at a fmall expence in French and Englifli, prefented by Thomas Mortimer, Efq.

JOHN HOWARD, ESQ^ F. R. S.

The ftate of the Prifons in England and Wales, with an account of fome foreign prifons and hofpitals, third edition.

MR. HENRY EMLYN.

A propofition for a new order of Architecture, with rules for drawing the feveral parts. Second edition, folio.

THE SOCIETY FOR INTRODUCING USEFUL KNOWLEDGE INTO MAIDSTONE AND ITS ENVIRONS.

A pamphlet entitled, Relief from accidental Death, &c.

MONS,

PRESENTS, ?oi

MONS. L'ABBE ROZJER.

Two volumes entitled Obfervations fur laPhyfique, for 1782, with a fupplement. Two vols. ditto for 1783. One volume for the firft fix months of the year 1784.

ARTHUR YOUNG, Esq.

Annals of Agriculture, and other ufeful arts, firft volume*

PRINTS,

MONS. LE Due DE CHAULNES.

Of an apparatus for making experiments on natural eleftricity without any danger.

MR. RICHARD SAMUEL.

A view of Ramfgate pier from the cliff.

A view of the bathing place at Ramfgate.

MISCEL-

MISCELLANEOUS ARTICLES.

MR. THOMAS REEVES.

A fmall box Britifh Ink, made to imitate Indian Ink.

MR, WILLIAM REEVES.

A fmall box Britifh Ink, make to imitate India Ink.

MR. GEORGE COWEN, DUBLIN.

A fmall box of water colours in cakes.

A CATALOGUE

OF THE

MODELS AND MACHINES

Received fincc the publication of the fecond volume of the Society's Tranfa&ions, with the numbers as they are arranged in the clafs to which they belong.

CLASS IV,

XCI. A NEW conftrudted Latch Lock, by Mr. Taylor, of Petworth, for which he had the filver medal, 1784,

XCII. A carved iron Guard for the back part of a coach, by Mr. John Hayward, for which he had a bounty of ten guineas, 1784.

A model

XCIII. A Model of a Wind Waggon, prefented by Mr. Thomas Dornforth, **1784.**

XCIV. A Model of a Crane, prefented by Mr. Bunce, for which he had the filver medal, 1784.

XCV. A Model of a Machine for increafing the effeft of Engines for extinguishing fires, by Mr. Solomon Furft, for which he had **the** filver medal and twenty guineas, 1784.

A LIST

A LIST

OF THE

OFFICERS OF THE SOCIETY.

And CHAIRMEN

OF THE SEVERAL

COMMITTEES.

PRESIDENT.

ROBERT Lord Romney, L. L. D. F. R. S.

VICE-PRESIDENTS.

Charles Duke of Richmond, &c. F. R. S.
Hugh Duke of Northumberland, F. R. S.
Jacob P. Earl of Radnor
Hugh Earl Percy
Hon. Charles Marfliam, F. R. S.

Sir

Sir George Auguftus Eliott, K. B.
Edward Hooper, Efq. F. R. S.
Owen Salufbury Brereton, Efq. F. R. S. and A. S.
Sir Herbert Mack worth, Bart. F. R. S,
James Davifon, Efq.
Sir William Dolben, Bart.
Sir Watkin Lewes, Knight.

SECRETARY,

Mr. Samuel More.

ASSISTANT-SECRETARY.

Mr. Richard Samuel.

REGISTER.

Mr. George Cockings.

CHAIRMEN

CHAIRMEN OF THE SEVERAL COMMITTEES.

Ele&ed November 3, 1784,

ACCOMPTS.

A/TR. Hebert,
1 V 1 Mr. Wingfield.

CORRESPONDENCE AND PAPERS,

Mr. Chavany
Mr. Pourcin.

POLITE ARTS.

Mathew Duane, Efq.
Valentine Green, Efq.

AGRICULTURE,

Nathaniel Jarman, Efq,
John Pratt, Efq.

MANUFACTURES.

Mr. Charles Smith
Mr, Baynes.

MECHA-

MECHANICS; s.

Jofeph Hurlock, Efq.
Samuel Ewer, Efq.

CHEMISTRY, &c.

Mr. Gibbes
Mr. Kendrick.

COLONIES AND TRADE.

Caleb Whiteford, Efq.
Mr. Lindfell.

MISCELLANEOUS MATTE S

Mr. Hebert
Mr. Jacob

A LIST

A LIST

OF

CONTRIBUTING MEMBERS,

ELECTED SINCE THE PUBLICATION OP THE SECOND VOLUME OF THE SOCIETY'S TRANSACTIONS.

N. B. Thofe marked with a * pay Three Guineas annually; and thofe with P are Perpetual Members.

A

ABDY, Reverend Mr. *Cooper's Sale, Effex.*

Affleck, Admiral Sir Edmund, Bart. *HoWs-Jtreet, CavendiJIj-Squarc.*

Affleck, Captain William, *Hollis-Jtreet, Cavenclijlo-fquare.*

Affleck, Captain Philip, *TVimpok-Jtreet.*

Allen, William, Efq. *Southampton-Row.*

Armftrong, Mr. Moftyn John, *Norwich.*

B

Baldwin, Richard, Efq. *Wejl Smithfield.*

Bacon, John, Efq. *fiirjl Fruits-Office, temple.*

Beaufoy, Henry, Efq. *Great George* Jfreet9 Wejiminfler.*

Braithwaite, Daniel, Efq. *Po/l-Office**

Brown, Mr. Jofeph, *George-Tard, Lom* bard-Jlreet,*

Bucknall, Thontas Skipp, Efq. *Con- duit-Jlreef.*

Bulcock, Mr. William, Surgeon, *John* Jireet9 Adelphi.*

Byfield, Mr. George, Architect, *Man* cbejer Buildings;*

C

Cardiff, Right Hon. Lord,

Compton, Right Hon. Lord.

Campbell, Major General Archibald, *Governor of Jamaica.*

Collins, Thorn is, Efq. *Berner's-jlteet,*

Crowder, William Henry, Efq. *Mid- dle Temple.*

Darch,

D

Darch, Major Thomas, *Suffolk-Jlreet? **Cavendijh-Square.***

De Berdt, Dennis, Efq; Merchant^ ***New Broad-Jlreet.***

Douglas, Captain Peter, *Robert-Jtreet>* ***Adelphi.***

Duval, Mr. John Peter, *Hackney.*

E

Evans, Mr. John *Ely Place.*

Evans, Morgan, Efq. *Lincoln's Inn.*

F

Ferrers, Earl.

Frankland, William, Efq. *Gray's Inn.*

Frankland, Roger, Efq*. *Chrift-Church,* ***College, Oxford.***

Franks, William, Efq. *Percy-Jireet,* ***Rathbone-place.***

Freeman, Stephen, M. D. *Strand**

G

Gauflen, Samuel, Efq. *Bedford* ***Square.***

Gordon, James, Jun. Efq. *Moor-* p/ace, Herts.*

Gregory, Mr. Henry, Mathematical **Inftrument Maker,** ***Leadenhall-Jirtet.***

H

Hawke, Lord.

Hartley, Mr. Thomas, Wholefale **Glover,** ***Fijh-Jlreet Hill.***

Heavifide, Richard, Efq. *Peterborough*-* ***Houfe, Fulham.***

Henderfon$_y$ Chriftopher, Efq. *Robert-* ***Jlreet^ Adelphi.***

Hodges, William, Efq. *§{ueen-Jlreet$_r$* ***May-Fair.***

Huffey, John. Efq. *Cheljea Uofpital*

I

Jackfon, Henry, M. D, *Hanover-* ***Jlreet, Hanover-Square.***

P Jebb, Sir Richard, Bart. *Great George-* ***Jireet, JVeJlminJlef.***

Jones, Sir William, Bart. *CavendiJIj-* ***Square.***

K

Kemiett, Mr. Benjamin, Jun. *Eflix-Jlreet, Strand.*

Keyfall, John, Efq. *%ueen-Square, Holbourn**

L

Leicefter, Earl of

* Landaff, Richard, Lord Bifliop of

Lewis, Percival, Efq. *Lincoln's Inn.*

* Loveden, Edward Loveden, Efq. *Covdtyt-Jlreet,*

Lunardi, Vincent, Efq. *Poland-Jtreet.'*

M

Macknanjara, John, Efq. *Portmfln-fquare.*

Miers, Mr. John, merchant, *Canon-flreeL*

;Montolieu, Lewis, Efq. *Lower Grof-vpnor-Jlreet.*

N

Newburgh, Earl-of

Nicholas, Robert, Efq. *JJbton Krynes, Wit/hire.*

O

Oldham, Mr. James, Ironmonger^ *Brook-Jireet, Holborn.*

P

Parker, Mr. Samuel, *Earl-Jtreet, Black-. Friars.*

Parifli, •——, Efq. *Tower of London.*

Parry, William, Efq. *Norton Hall\ Wilts.*

Pourcin, Mr. Jofeph, *Tavijlock-freet.*

Proby, Charles, Jun. Efq. *Inner Temple.*

R

Rawlinfon, Abraham, Efq. *Lanca/ter.*

Reeves, Mr. William, Colpurman^ *Strand.*

S

Saye and Sele, Lord

Scales, Mr. Bernard, Surveyor, *Great Wharley, Efex..*

Smith, Jofhua, Efq. *Great George-Jtreet, JVeJimin/ler.*

Spackman,

Spackman, Mr. James, Merchant^ ***Jewry-Jtreetj Aldgate****

Spencer, Henry, Efq. *Dulwich.*

Stephens, Francis, 3Efq. *Sheernefs.*

Steventon, Anthony, Efq. *Ely Place% **Holborn.***

T

Thomas, David, Efq? *Pay Office, **Horfe-Guards.***

Trotter, Mr. John, *Tavi/tock-Jlreet_f_ ***Bedford-fquare**

V

Vere, Mr. Samuel, Tallow Chandler **to his Majefty, *Clare-Jtreet, Clare-jnarket.***

W

Walter, Mr. John, Printer, *Black-**Friars.***

White, Mr. William Wood, Whole-**fale Hofier, *Leadenhall-Jlreet.***

Williams, Thomas, Efq. *Uanidan, Akf a.*

Williams, Mr. Owen, *at* No. 12, *Aldermanbury.*

Wilfon, Mr. Walter, Cabinet-maker, *Strand.*

Wright, Mr. Gabriel, Mathematical **Inftniment-maker,** *Leadenhall-Jireet**

MEMBER omitted in the Firft Volume^

William Pococke, Efq. *Devon/hire-Jtreet, Red Licn-fquare.*

A LIST

A LIST

OF THE

CORRESPONDING MEMBERS,

Elected fince the publication of the Second Volume of the Society's Tranfactions.

DERTIER, Monf. *Intendant General de Paris.*

Billardiere, Monf. De la, M. D. *Paris.*

Bombelles, Le Marquis De, *Brigadier des Armies du Roy de France, Commandeur de l'Ordre de St: Lazare et Miniftre du Roi pres de la Diete Generale de l'Empire.*

Magnin, Mr. Simeon, *Mechanifte a Commugnij dans he Pays de Vaud in Swijji'*

Marcorelle, Monf. Baron D'Efcalc, *cf Narbonne.*

Pelham, Henry, Efq. *Battgreen, Six-Mile-Bridge, County Clare, Ireland*'

PREMIUMS

OFFERED BY THE

SOCIETY

FOR THE ENCOURAGEMENT OF

ARTS, MANUFACTURES,

AND

COMMERCE,

IN THE

YEAR MDCCLXXXV.

TO THE

PUBLICK.

ADELPHI-BUILDINGS, *April* n, 1785.

THE chief obje&s of the attention of the Society for the encouragemetit of Arts, Manufactures, and Commerce, in the application of their Rewards, are Ingenuity in the feveral branches of the Polite and Liberal Arts; ufeful difcoveries and improvements in AGRICULTURE, MANUFACTURES, MECHANICKS* and CHEMISTY, or the laying open any fuch to the Publick; and in general, all fuch ufeful inventions, difcoveries, or improvements (though not mentioned in the Book of Premiums) as may appear to have a tendency to the advantage of Trade and Commerce; the Society therefore, in purfuance of their plan, propofc to beftow the following premiums:

Premiums

Premiums for Planting and Hujbandry.

1. ACORNS. For fetting or fowing the greateft quantity of land, not lefs than ten acres, with acorns between the firft day of O&ober, 1784, and the firft of January, 1785; and for fencing and preferving the fame effe&iially, in order to raife timber ; the gold medal.

2. For the fecond greateft quantity of land, not lefs than five acres, fet or fown with acorns, agreeably to the above conditions ; the filver medal.

CERTIFICATES of the fetting or fowing agreeably to the above conditions; and that there are not fewer than one thoufand plants on each acre, to be produced to the .Society, on or before the firf£ Tuefday in November, 1785.

3. 4. The fame premiums are extended bne year further, certificates to be produced

on or before the firft Tuefday in November, 1786.

5. RAISING OAKS. To the perfoii who (hall raife the greatefl number of oaks, Hot fewer than five thoufand, either from young plants, or from acorns, in woods, parks, or forefts, that have long been under timber, and effedtually fence and preferve the fame, in order to fecure a fucceflion of oak timber in this kingdom *i* the gold medal.

6. For the next greateft quantity, not fewer than three thoufand; the filver medal.

CERTIFICATES and accounts to be produced on or before the firft Tuefday in January, 1788.

7, 8. The fame premiums are extended one year further.

CER-

CERTIFICATES to be produced on or before the firft Tuefday in January, 1789.

9. CHESNUTS. For fetting or fowing the greateft quantity of land, not lefs than fix acres, tfith Spanifh Chefnuts, before the firft day of May, 1785, and for effe&ually fencing and preferving the fame, in order to raife timber; the gold medal.

10. For the fecond greateft quantity, not lefs than four acres; the filver medal.

11. For the third greateft quantity, not lefs than two acres; the filver medal.

CERTIFICATES of fetting or fowing agreeably to the above conditions (and that there are twelve hundred Spanifli Chefnut plants, at leaft, on each acre) muft be delivered to the Society on or before the firft Tuefday in November, 1785.

12, 13,

12, 13,14. The like premiums will be given for fetting or fowing Spanifh Chefnuts before the firft of May, 1786.

CERTIFICATES to be delivered on or before the firft Tuefday in November, 1786.

15. ELM. For planting the greateft number of the Englifh Elm, not lefs than eight thoufand,between the twenty-fourth of June, 1784, and the twenty-fourth of June, 1785, and for the efFedlually fencing and preferving the fame, in order to raife timber; the gold medal.

16. For the fecond greateft number, not lefs than five thoufand; the filver medal.

17. For the third greateft number, not lefs than four thoufand; the filver medal

CERTIFICATES of having planted agreeably to the above conditions, and fpecifying the diftance of the trees, muft be delivered to the Society, on or before the firft Tuefday in November, 1785.

18, 19, 20. The fame premiums are extended one year further.

CERTIFICATES to be delivered on or before the firft Tuefday in November, 1786.

21. LARCH. For planting out, from the twenty-fourth of June," 1784, to the twenty-fourth of June, 1785, at a diftance not more than five feet, the greateft number of Larch-trees, not lefs than five thoufand; the plants to be between two and four years old when planted out, and for effe&ually fencing and preferving the fame, in order to raife timber; the gold medal*

22 For

22. For the fecond greateft number, not lefs than three thoufand; the filvef medal.

CERTIFICATES of planting according to the above conditions, to be delivered on or before the laft Tuefday in November, 1785.

23, 24. The like premiums will be given on the fame conditions, for planting out Larch trees, between the twenty-fourth of June, 1785, and the twenty-fourth of June, 1786.

CERTIFICATES to be produced on or before the laft Tuefday in November, 1786.

25. HUNTINGDON WILLOW. For the greateft number of acres, not lefs than three, planted in the year 1785,with Huntingdon Willows; the number of cuttings to be at leaft one thoufand on each acre,

properly fenced and fecured; the. gold medal.

CERTIFICATES to be produced on or before the laft Tuefday in December, 1785.

26. The fame premium is extended one year further.

CERTIFICATES to be produced to the Society on or before the laft Tuefday in December, 1786,

27. ALDER. For the greateft number of acres, not lefs than fix, planted in the year 1784, with Alders, to be at leaft one thoufand on each acre, properly fenced and fecured.

CERTIFICATES to be produced to the Society, on or before the laft Tuefday in December, 1785, of the faid planting, and

and that the trees were then growing on the land; the gold medal.

28. The fame premium is extended one year further.

CERTIFICATES to be produced on or before the laft Tuefday in December, 1786,

29. UPLAND OR RED WILLOW. For the greateft number of acres, not lefs than three, planted before the end of April, 1785, with Upland or Red Willow, properly fenced and fecured, the number of plants on each acre to be at leaft twelve hundred; the gold medal.

CERTIFICATES to be produced on or before the laft Tuefday in April, 1786*

It is well known that this fpecies of Willow thrives well on dry fandy land.

30. The fame premium is extended one year further^

CERTIFICATES to be produced on or before the laft Tuefday in April, 1787,

31. ASH. For planting the greateft number of acres, not lefs than fix, in the year 1785, with Afti for timber; the plants to be at leaft two years old, properly fecured and fenced; the number of plants on each acre to be at leaft twelve hundred; the gold medal.

32 For the next greateft number of acres, not lefs than four; the iilver medal.

CERTIFICATES to be delivered on or before the fecondTuefday in March, 1786.

33* 34* ^e ^ame premiums are extended one year further.

CER.

CERTIFICATES *to* be delivered on or beforethefecondTuefdayinDecember,i787.

35. LOMB ARDY, OR PO POPLAR. For planting in the year 1784, the greateft number of the Lombardy Poplar, or Po Poplar, properly fenced and fecured, for raifing timber; the gold medal.

CERTIFICATES; to be produced on or beforg the fecond Tuefday in November, 1785.

The quantity of land to be not lefs than fix acres, and not fewer than twelve hundred plants on each acre.

N. B. This tree is called by fome the Pine Poplar.

36. MIXED TIMBER TREES. To the perfon who fhall enclofe, and plant or fow the greateft number of acres, not

lefs than ten, with the beft forts of Foreft Trees, for timber, between the firft of October, 1784, and the firft of May, 1786; and fhall deliver to the Society an account of the methods ufed in making the plantations, together with proper Certificates that the trees are then in a thriving condition on the, land ; the gold medal.

The Accounts and Certificates to be produced to the Society on or before the firft Tuefday in November, 1788.

37. The fame premiuui is extended one year further.

Accounts and Certificates to be produced on or before the firft Tuefday in November, 1789.

38. MULBERRY CUTTINGS. For railing the greateft number of white or black Mulberry Trees, for feeding Silk Worms, not lefs than three hundred, from

from cuttings in the year 1785, the gold medaL

CERTIFICATES of the railing and growth, with the manner of culture, and that the plants were growing in September, 1788, to be produced on or before the firft Tuefday in November, 1788.

39. MULBERRY CUTTINGS. To the perfonwho fhall form in the year 1785, the largeft, plantation, not lefs than one acre of Mulberry Cuttings for the purpofe of feeding Silk Worms; the gold jnedal.

CERTIFICATES of the quantity of land, and the method of culture, that the Mulberry Plants are not more than three feet afunder, and that they were growing in the month of September, J788, to be produced on or before the firft Tuefday in December, 1788-

It is propofed that this plantation he continually kept in a low ftate, to the intent that the gathering the leaves may always be within the reach of women and children.

% "The Candidates for planting all kinds of trees, are. to certify', that the rejpeftive plantations are properly fenced and fecund, and particularly to Jiate the condition the plants were in at the time of Jigning fuch Certificates.*

Any information which the Candidates for the foregoing premiums may chufe to communicate, relative to the methods made ufe of in forming the plantations, or promoting the growth of the feveral trees, or any other obfervations that may have occurred on the fubject) will be thankfully received.

40 TREES FOR USE WHEN EXPOSED TO THE WEATHER. To the perfon who (hall fend the moft fatisfadion

jtisfe&ory account, verified by expert ments, to determine which of the following trees is of the greateft utility for timber or poles, for ufe when expofed to the weather, viz

Larch, Black-Poplar,
Afh, Spanilh-Chefnut,
Willow, Alder,
Lombardy-Poplar,

The gold medal.

The Accounts to be produced on or before the fecond Tuefday in December, 1785.

41. The fame premium is extended one year further.

The Accounts to be produced on or before the fecond Tuefday in December, 1786.

42. PRESERVING ACORNS. To the pcrfoti who fhall produce to the Society

ciety the moft effc&ual method of preventing Acorns when fown or planted for timber, being injured by Mice ; the gold medal.

The Accounts verified by a&ual experiments, with proper Certificates that the methods made ufe of have been fully fufficient for the purpofe, to be produced on or before the laft Tuefday in November, 1785.

43. PRESERVING CHESNUTS, and SEEDS of other FOREST TREES. To the perfon who (hall produce to the Society, the moft effectual method oY preventing Chefnuts, and the Seeds of other Foreft Trees, when fown or planted for Timber, being deftroyed by Mice ; the filvcr modal.

The Accounts verified by actual experiments, with proper Certificates that the methods made ufe of have been fully fufficient

ficient for the purpofe ; to be produced on or before the laft Tuefday in November, 1785.

44, 45, 46. The premiums for preferviug Acorns, Chefnuts, and other Seeds, are extended one year further; the Accounts to be produced on or before the laft Tuefday in November, 1786.

47. PLANTING BOGGY OR MORASSY SOILS. For an account of the beft fet of experiments feait by the planter, or his reprefentative, to afcertain the comparative advantages of planting boggy or moraffy foils, with White Poplar, Black Poplar, Lombardy Poplar, and Willow; the gold medal.

It is required that not lefs than half an acre be planted with each, and the plants to be not more than four feet afunder.

It is alfo required that the plantation ftand fourteen years, at the end of which,

to

to be all cut down and meafured, or accurately meafured {landing, the Certificates of the meafure and value, and that the whole is properly fenced and fecured; to be produced on or before the firft Tuef* day in January, 1792.

N. B. Any information relating to *tht* ftate of the Plantation, if fent to the Society, between the time of planting and claiming the premium, will be thankfully received.

48 • The fame premium is extended one year further.

CERTIFICATES to be produced on or before the firft Tuefday in January, 1793.

49. The fame premium is extended one year further.

CERTIFICATES to be produced on or before the firft Tuefday in January, 1794.

50. The

50. The fame premium is extended to the year 1796.

CERTIFICATES to be produced on or before the firftTuefdayin January, 1797*

51. ROOTS OF CORN. To the perfon who fhall afcertain from obfervation* and by experiment, the fucceffion of the different Roots of Corn (diftinguifhing the times when fuch fucceffion of roots takes place) particularly thofe which fhoot out at or near the time the plants go into ear; fliewingalfo from fa&s, the injury arifing from the failure of thofe particular roots, and the mod effectual means of preventing fuch misfortune; the gold medah

To be produced on or before the fir ft Tuefday in January, 1786*

52. The fame premium is extended one year further. Accounts to be delivered on or before the firft Tuefday in January, 1787.

N. B. Thefe

N. B. Thefe premiums are extended to Scotland and Ireland.

53. COMPARATIVE CULTURE OF WHEAT. Fbr the beft fet of experiments to afcertain whether it is moft advantageous to cultivate Wheat, by fowing it in the common broad-caft way, by drilling it in equi-diftant rows, or by dibbling, hoeing the intervals; the gold medal.

It is defired that the diftance between the rows, may not exceed eleven inches, and that an account of the nature and condition of the land on which the experiments are made, together with an account of the produce of the Corn, be produced to the Society, on or before thefirft Tuefday in February, 1786.

54. The fame premium is extended one year further*

The Accounts to be produced to the Society, on or before the firft Tuefday iii February, 1787:

53. BEANS AND WHEAT. To the jperfon who fliall plant or drill between the firft of December, 1785, and the firft bf March, 1786, the greateft quantity of land, not lefs than ten acres, with Beans, and (hall fow the fame land with Wheat in the fame year, 1786; ten guineas.

It is required that an Account of the fort and quantity of Beans, the time of planting or drilling, and of reaping or mowing them, the produce per acre threfhed, the application of the ftraw, the expence of planting or drilling, hand or horfe-hoeing, the diftance of rows and the quality of the foil, together with Certificates of the number of acres, and that the land was aftually fown with Wheat in the year 1786, to be produced on or before the firft Tuefday in November, 1787.

N. B. The Society have been informed that Beans may be drilled or planted fo early as the month of December^ from whence may be derived the advantage of an early harveft, in which cafe, the ftraw will be far more valuable than that from a Itfttef planting or drilling,

54- TURNEPS. For the beft account of experiments made on at leaft fix acres of land, to determine the comparative advantages of the drill, or broad-caft method in the cultivation of Turneps; the gold medal.

The Accounts to be delivered in, on or before the third Tuefday in April, 1786.

55. TURNEPS. For the beft account of experiments made on at leaft fix acres of land, to determine the comparative advantages of the drill, or broad-caft method,

fchod in the cultivation of Turneps ; ten guineas.

The Accounts to be delivered in, oft or before the third Tueiday in April, 1787.

56; GREEN VEGETABLE FOOD. For the beft account confirmed by experiments, of the vegetable Food, (Cabbages and Turneps excepted) growing in the months of March and April, that will moft increafe the milk in mares, cow9, and ewes, at that feafon; provided fuch food can be cultivated at an expence that will admit of its being applied to the above purpofes; the gold medal.

CERTIFICATES to be produced on or before the fecond Tuefday in November, 1785.

57. The fame premium is extended one year further.

CERTIFICATES to be produced on or before the fecond Tuefday in November, 1786.

58. TURNEP-ROOTED CABBAGE. For railing, and having duly cultivated Turnep-rooted Cabbage, in the year 1783, for the feeding cattle or fheep, on the greateft number of acres, not lefs than ten, and giving an account of the foil, culture, time, and manner of feeding off, produce, and the effe&s on cattle or (heep, fed with it; the gold medal.

$9. For the next greateft number of acres, not lefs than five; the filver medal.

CERTIFICATES. of the quantity of land, with the accounts, to be produced on or before the laft Tuefday in October, 1785.

60. The

60. The fame premiums are extended one year further.

CERTIFICATES to be produced on or before the laft Tuefday in October, 1786.

61. TURNEP-ROOTED CABBAGE. for railing and having duly cultivated Turnep-rooted pabbage, in the year 1785, for the feeding cattle or flieep on the greateft number of acres, not lefs than ten, and giving an account of the foil, culture, time, and manner of feeding off, produce, and the effects on cattle or fneep fed with it; ten guineas.

62. For the next greateft number of acres, not lefs than five; five guineas.

CERTIFICATES of the quantity of Land, with the acpounts, to be produced on or before the laft Tuefday in October, 1787.

63. TURNEP-ROOTED CABBAGE. To theperfon who fhall havi' raifed in the Year 1784, the greateft quantity, per acre, of Turnep-rooted Cabbage, on not lofs than four acres; the gold medal.

CERTIFICATES of the number of acres, and produce by weight, free from, leaves and dirt, and before houfing, with an account of the foil, preparation and culture, to be produced on or before the firft Tuef-* day in November, 1785.

64. CULTIVATING ROOTS AND HERBAGE FOR FEEDING SHEEP AND BLACK CATTLE. For the moft fatisfadory experiments made between Michaelmas, 1785, and the firft of May, 1786, in order to afcertain which of the following plants can be cultivated and houfed, or otherwife fecured for winter fodder, to the greateft advantage, viz.

Turnep-rooted Cabbage,	Carrots,
Turnep Garbage,	Parfneps,
Turneps,	Potatoes.

The Accounts to be produced on or before the firft Tuefday in November, 1786 ; the gold medal.

It is required that the above roots be taken off the land by the laft day of October, 1785 ; that a Crop of Wheat may be fown in the fame ground, and the particulars of the fowing and planting, taking up, produce, prefervation, and application to the feeding Sheep and Black Cattle, be fpecified. The comparative experiments muft be made between two or more of any of the aboyementioned plants, *md not lefs than two acres be cultivated with each particular kind of plant.

N. B. Great advantage will arife to the Farmer occupying land in the neighbourhood of extenfive commons, from the

conveniency of keeping large/ flocks of fheep, and herds of cattle; if the difficulty of fupporting them through the winter was obviated by a due knowledge pf this practice.

65. The fame premium is extended one year further.

CERTIFICATES to be produced on or before the firft Tuefday in November, 1787.

66. MANAGING BEES. To the perfon who fhall produce to the Society the moft fatisfadtory account verified by experiments, of managing Bees to the greateft advantage in this climate; the gold medal.

To be produced on or before the fecond Tuefday in January, 1786.

67. CUL-

67. CULTIVATING THE TRUE RHUBARB. » For raifing, before the end of the year 1785, the greateft number of plants, not lefs than three hundred, of Rheum Palmatum, or true Rhubarb; *the* gold medal.

68. For the next greateft quantity, not lefs than two hundred plants; the filver medal.

CERTIFICATES of the number of plants, that they ftand at leaft fix feet afunder, that they have been in a thriving ftate during the preceding fummer, with an account of the foil, culture, and afpedt, to be produced on or before the fecond Tuefday in February, 1786.

69, 70. The fame premiums are extended one year further, the plants to ftand at leaft four feet afunder.

CER-

CERTIFICATES to be produced on or before the ſecond Tueſday in Februaryy 1787,

71, RHUBARB. For the greateſt quantity of Rhubarb of Britiſh growth, not leſs than twenty pounds weight, equal to ſuch as is commonly ſold in the ſhops, under the name of Turkey OF Ruſſia Rhubarb; five pounds of which to be produced as a ſample, with certificates that the remainder *is* of equal goodneſs; and a particular account of the manner of culture, and cure, on or before the firſt Tueſday in November, 1785; the gold medal.

72, For the next greateſt quantity, not leſs than ten pounds weight; the *Silver* medal.

73, 74, The ſame premiums are extended one year further. The ſamples and certificates to be produced on or be*

lore the firft Tuefday in November, 1786.

75. ASCERTAINING THE COMPONENT PARTS OF ARABLE LAND. To the perfon who fhall produce to the Society the moft fatisfa&ory fet of experiments, to afcertain the due proportion of the feveral component parts of Arable Land, in one or more counties in Great Britain, by an accurate analyiis of it, and who having made a like analyfis of fome poor land, fhall, by comparing the component parts of each, and thereby afeertaining the deficiencies in the poor foil, improve a quantity of it, not lefs than two acres, by the addition of fuch parts as the former experiments (hall have difcovered to be wanting there^ in, and therefore probably the caufe of its fterility; the gold medal.

It is required that the manuring*, ploughing^, and crops of the improved land*

land, be the fame after the improvement as before, and that a minute account of jhe produce in each ftate; of the weather, and of the various influencing circumftances, together with the method made ufe of in analyfing the foils, be produced, with proper certificates, and the chymical refults of the analyfes, which are to remain the property of the Society, on or before the laft Tuefday in November, 1788,

It is expected that a quantity, not lefs than fix pounds, of the rich, of the poor, and of the improved foils, be produced with the certificates.

N. B. Among the methods or procefTes made ufe of by Chymifts, and called *dry* or *moijt*, the latter only appears adapted to the afcertaining the refpective proportions of the component parts of arable earth.—Dr. Shaw, in his Chymical Lectures.—Dr. Home, in his Principles of

of Agriculture.—Dr. George Fordyce, in his Elements of Agriculture, and Sir Torbern Bergman, in his *Dijertation furies Terres geoponiques* **have treated of** thefe fubje&s.

76. The fame premium is extended one year further; the accounts to be produced on or before the lafl Tuefday in November, 1789.

77. The fame premium is extended one year further; the accounts to be produced on or before the lafl Tuefday in November, 1790.

78. The fame premium is extended one year further ; the accounts to be produced on or before the lafl Tuefday in November, 1791.

79. IMPROVING LAND LYING Wz'iSTE. For the beft account of a method of improving any of the following

lowing foils, being land lyipg wafte *at* uncultivated, viz. Clay, Gravel, Sand, Chalk, Moor, or Peat-earth, and Bog; verified by experiments on not lefs than ten acres of land, to be produced on or before the fecond Tuefday in December, 1785; the gold medal for each.

80. For the next in merit, the filver medal.

The Soil, manner of improvement, expence, and produ£t, are required to be fully explained.

81, 82. The fame premiums are extended one year further.

The Accounts to be produced on or before the fecond Tuefday in December, 1786.

83, 84. The fame premiums are extended one year further.

The

The accounts to be produced on or before the fecoad Tuefday in December* 1787.

85. MANURES. To the perfoii who fhall give the moft fatisfadtory account, verified by accurate experiments, oil what foil the application of Marie, Chalk, Lime, or Clay, feverally, as manures* be moft beneficial; the gold medaL

It is required that each experiment be made on one acre, and that they be continued four yeai's, the fame kind of Grain being fown the fame year on the feveral fpots.

It is alfo required, that if different manures are compared, the experiments be made on fimilar foils, lying near each other.

An account of the nature of the foil, manure, and the quantity laid on, with

all

all expences and crops to be delivered, with fpecimens of the foil and manure, on or before the firft Tuefday in January, 1786.

86. The fame premium is extended one year further.

The accounts and fpecimens to be produced on or before the firft Tuefday in January, 1787.

87. The fame premium is extended one year further.

The accounts and fpecimens to bd produced on or before the firft Tu<?fday in January 1788*

88. MANURES. For the moft fatisfattory fetof experiments, to afcertain the comparative advantage of the following Manures, ufed as Top-Drefiings* on Grafs or Corn Land, viz. Soot, Coal-

Afhes, Wood-Afhes, Lime, Night-Soil; the gold medal.

It is required that not lefs than half an acre of land be appropriated to each Manure, the foils fimilar, and lying near each other, and if the Manure be ufed on Corn Land, then it is required that the fame kind of grain be fown the fame year on each fpot; the experiments to be continued not lefs than two years.

An Account of the nature of the Soil* quantity, and expence of the Manure and Crops, with Certificates to be produced on or before the firft Tuefday in December, 1787*

89. ASCERTAINING THE BEST COURSE OF CROPS ON CLAY SOIL. To the perfon who (hall give the moft fatisfa&ory accountf verified by comparative experiments, in order to afcertain the courfe of Crops, which with

or without a fallow, fhall, during the fpace of eight years, prove moft profitable, and (hall leave the land in the beft ftate, on a Clay Soil; the gold medal, or fifty pounds*

r It is required that fuch comparative experiments be made on three acres at leaft. in each mode ; the foil to be as contiguous and fimilar as poflible. An account of the Soil, Management, and Crops, to be delivered on or before the firfl Xuefday in January, 1786.

90. COURSE OF CROPS ON STRONG LAND, For the moft fatisfaftory account, verified by experiments, made on not lefs than five acres of Clay, or wet Loam, toafcertain the advantages of the following courfe of crops, viz. Firft, Beans drilled, or planted and hoed: Secondly, Wheat the gold medal.

A Thefe

Thefe experiments to be continued Hvo courfes, or four years;

CERTIFICATES, with an account of the Soil, Culture* and quantity of Manure, if any, laid on, to be produced on or befoi&tWc'laft Tuefday in March, 1788.

N. B. THe fuccefs of this courfe of crops* much depending- On the land be* ing kept entirely clean; it is erxpe&ed that each crop of the Beans be horle-Iioed or hand-hoed, at leaft three times.

91. IMPROVING WASTE MOORS. For the improvement of the greateft number of acres of Wafle Moor Land,- nbt lefs than one hundred ; the gold medal.

It is required that the land before improvement, be abfolutely uncultivated, in a great meafure ufekfs, not let to any tenant, and without any building upon it except cottages or huts. Ti:atin its

improved ftate, it (hall be enclofed, cultivated, and divided into fields, with buildings ere&ed thereon, fufficient for the ufe and refidence of a tenant.

CERTIFICATES of the number of acres, of the quality of the Moor fo improved, of the mode and expence of the improvement ; the ftate it is in as to the proportion of grafs to arable ; and the rent at which it is let; to be produced on or before the firftTuefday in February, 1786.

92. The fame premium is extended one year further.

CERTIFICATES to be produced on or before the firftTuefday in February, 1787*

93. The fame premium is extended one year further.

CERTIFICATES to be produced on or before the firft Tuefday in February, 1788.

94. GAIN-

94. GAINING LAND **FROM THE** SEA, To the perfon who fliall produce to the Society an account of the beft method, •yerified by a&ual experiment, of gaining Land from the Sea, not lefs than twenty acres, on the coaft of Eng* land or Wales, the gold medal.

CERTIFICATES of the quantity of Land, and that the experiments were begun after the firft of January, 1780, to be produced to the Society, on or before the firft Tuefday in Q&ober, **1785,**

N. B. The Society have been credibly informed, that Land hasbeen gairiedon the coaft of Holland, by fixing rows of whifps of ftraw upright in the fand, at about a foot diftant from each other, or by fixing ftakes at proper diftances from each other, and whatling ftraw bands between them.

95. The fame premium is extended oae year further.

CERTIFICATES to be produced on or before the firfl Tyefday iix Odtober, 1786.

96. The fame premium is extended one year further.

CERTIFICATES to be produced on or before the firfl: Tuefday in Oftober, *17*7-*

97. The fame premium is extended one year further.

CERTIFICATES to be produced oq or before the firfl Tuefday in Oftober, 1788,

98. The fame premium is extended oiy? year further.

CERTIFICATES to be produced on or before the firft Tuefday in O&ober, 1789.

99. DRILL

99. DRILL PLOUGH FOR HORSE BEANS. Fpr the beft drill Plough for Horfe Beans only; being an improvement on thofe already in the poffeffion of the Society, or generally known; to be produced to the Society, on or before the firft Tuefday in January, 1786; the filver medal, or ten guineas.

It is expected the plough be ftrong and cheap, no variation of depth or diftance being required.

The Plough to which the premium is adjudggd, is to become the property of the Society.

100. MACHINE TO ANSWER THE PURPOSE OF REAPING OR MOWING CORN. For inventing a Machine to anfwer the purpofeof mowing or reaping \yheat, Rye, Barley, Oats, or Beans, by which it may be doije more expeditioufly and cheaper, than by any

method now pra&ifed, provided it does not fhed the Corn or Pulfe, more than the methods in common pra&ice, and that it lays the ftraw in fuch manner as may he eafily gathered up for binding; ten guineas.

The Machine with Certificates that at leaft three acres have been cut by it, to be produced to the Society on or before the fecond Tuefday in December, 1785,,

Simplicity and cheapnefs in the conftruftion, will be confidered as principal parts of its merit.

IOX. CURING SCAB IN SHEEP. To the perfon who fhall difcover to the Society the moft efficacious method of curing the diforder called the *Scab in Sheep** verified by repeated trials; the filver medal, or ten guineas,

CER-

CERTIFICATES of the cure, with an account and defcription of the difeafe, to be delivered to the Society, on or before the fecond Tuefday in January, j 786.

102. DESTROYINGTHE GRUB OF THE COCKCHAFER, To the perfon who fliall difcover to the Society an effectual method, verified by repeated and fatisfa&ory trials, of deftroying the Grub of the Cockchafer, ib deftru&ive to the roots of all forts of Corn, Peafe, Beans, and Turneps; the gold medal.

The Accounts to be produced on or before the firft Tuefday in January, 1786,

Premiums

Premiums for Difcovenes and Improvement inChymiJlry, Dying, and Mineralogy.*

103. KELP. For the greateft quantity, not lefs than four tons of Kelp, containing a much larger proportion of Alkaline Salt than any kelp now made for fale; twenty pounds.

A fpecimen of one hundred weight, to be produced on or before the firft Tuefday in January, 1786; together with Certificates that the whole quantity is equal to the fpecimen, and made in Great-Britain or Ireland, of Sea Weed.

104. BARILLA. For the greateft quantity of merchantable Barilla, not lefs than half a ton, made from Spanifh Kali, raifed in Great-Britain ; the gold medal.

A fampleofnot lefs than twenty-eight pounds, with a Certificate that half a ton has

has been made, to be produced on or before the firft Tuefday in January, i 786*

105. PRESERVING SEEDS OF VEGETABLES. For the beft method of preferving the feeds of plants in a ftate fit for vegetation, a longer time than has hitherto been pra&ifed, fuch method being fuperior to any known to the publick, and verified by fufficient trial; to be communicated to the Society on or before the firft Tuefday iu December, 1785 ; the gold medal.

106. DESTROYING SMOKE. For the beft accovmt^.afcertained by proper experiments, of a method of deftroying or burning the fmoke of fires belonging to fteam Engines, Furnaces employed in calcining or fmelting metals, or other large works, in order to prevent annoyance to the neighbourhood; to be produced on or before the firft Tuefday in January, 1786 ; the gold medal.

107. SUB-

107. SUBSTITUTE OR PREPARATION OF YEAST. For difcovering to the Society an effe&uil Subftitute for Yeaft, or Preparation of Yeaft, for fermenting liquors, and railing bread, that may be preferved for ufe, better than any hitherto generally known; the gold medal, or twenty pounds.

Specimens of the Subftitute, or of the Preparation of Yeaft, fufficient for trials, together with a paper fealed up, and containing an account of the compofition of the Subftitute, or method of preparing the Yeaft, to be produced on or before the laft Tuefday in November, 1785.

108. INCREASING STEAM. To any perfon who fhall difcover to the Society, a method verified by aftual experiments, of increafing the quantity, or the force, of Steam, in Steam Engines, with lefs fuel than is ufually employed, provided that in general the whole amount

of the expences in ufing Steam Engines may be confiderably leflened; the gold medal.

To be communicated to the Society on or before the firft Tuefday in January, 1786.

N. B. As it is well known there are fnethods of preventing the ebullition of liquids, by the addition of particular matters in the boiling, it is fubmitted to the confideration of the ingenious, whether by the addition of fome matters, or by fome mechanical operations, the boiling and evaporation may not be increafed.

109. The fame premium is extended one year further. To be communicated to the Society on or before the firft Tuefday in January, 1787.

110. METHOD

no; METHOD OF COMPARING SWEETS. To the perfoit who fhall difcover to the Sociely an Index or pratti-cal method of comparing, meafuring^ and afcertaining the degrees of Sweetnefs in faccharine fub/lances; the gold medal*

To be produced on or before the fir/l Tuefday in January, 1786.

in. PREVENTING THE DRY ROT IN TIMBER. To the perfon who **fhall** dilcover to the Society, the caufe of the Dry Rot in Timber, and difclofe a certain method of prevention, fuperior to! any hitherto known ; the gold medal.

The accounts of the caufe and method of prevention, confirmed by repeated experiments, to be produced to the So-ciety on *or* before the fecond Tuefday *hi* December, J785*

112. Thtf

113. The fame premium is extended one year further.

. The Accounts to be produced on or before the fecoud Tucfday in December, 1786.

113. BRONZE FOR COPPER MEDALS. To the perfon who fliall difcover to the Society a method of bronzing Copper Medals, equal to that pradlifed in France; the gold medal.

To be produced to the Society on or before the fecond Tuefday in December, 1-85.

Premiums

Premiums for Promoting the Polite Arts.

114. HONORARY PREMIUMS FOR DRAWINGS. For the beft draw* ing of any kind, made with crayon§i chalk, black lead, pen, Indian ink, *ot* biffcer, by young gentlemen uhder the age of twenty-one, fons or grandfotis of Peers or Peereffes, in their own right, of Great-Britain or Ireland; to be produced on or before the firft Tuefday in March, 1786; the honorary medal of the Society in gold.

115. The fame in (ilver for the fecohd in merit.

116, 117. The Same premiums will be given on the like conditions, to young ladies, daughters, or grand-daughters of Peers or Peereffes, in their own right, of Great-Britain or Ireland*

118. HONO-

118, HONORARY PREMIUMS FOR DRAWINGS. For the beft drawings of any kind, made with crayons, chalk, black lead, pen, Indian ink, or bifter; by young gentlemen under the age of twenty-one.

To be produced on or before the firft Tuefday in March, 1786; the gold medal.

119, For the next in merit; the filver medal.

120, 121. The fame premiums will be given for drawings by young ladies.

N. B. Perfons profefling any branch of the Polite Arts, or any bufinefs dependant on the arts of defign, or the fons or daughters of fuch perfons, will not be admitted candidates in thefe cl^ffes.

The following premium is offered in confor mity to the Will of the late John Stock, of Ham/lead, Efq.*

122. DRAWING OF STATUES. For the beft finifhed Drawing, after the Statues of Mars and Venus, executed by Mr. Bacon, in the Society's pofleffion, the figures to be not lefs than fixteen inches high, to be made with chalk, black lead, pen, or Indian ink, and to be produced on or before the third Tuefday in O&ober, 1785; the filver medallion, with the following engraved infcription: *7*he premium given by the Society for thz Encouragement of Arts, Manufactures, and Commerce, in conformity to the Will of John Stock, of Ham/lead, Efq.*

N. B. Such candidates as propofe to draw for this premium, will be admitted by the Regifter, any day, Sundays excepted, from twelve to two, from Monday

day June 13th, to Saturday O&ober 8th, 1785 inclufive.

The drawing to which the premium is adjudged is to remain the property of the Society.

123. DRAWINGS OF OUTLINES. For the beft Outline after an original group or caft in plafter of human figures, by perfons of either fex under the age of fixteen, the principal figure not lefs than twelve inches; to be produced on or before the laft Tuefday in Odtober, 1785; the greater filver pallet.

124. For the next in merit; the lefler filver pallet.

N. B. Thefe drawings are to be made on paper with chalk, black lead, Indian ink, or bifter; and the originals either to be produced to the Society, or to be referred to.for their examination.

125. DRAWINGS AFTER PICTURES. For the beft drawing after a Pifture of a Group of human figures, the principal figure not lefs than fixteen inches, by perfons of cither fex under the age of fixteen; to be produced on or before the laft Tuefday in October, 1785 ; the greater filver pallet.

126. For the *next* in merit; the lefler filver pallet-

The drawings to be made with Indian ink, chalk, or black lead, and of a different fize from the original, tvhich muft be produced at the fame time.

127. DRAWINGS OF MACHINES. For the beft perfpeftive drawing, by perfons of either fex, under the age of twenty-one years, of the Piedmont Silk Reel, in the Society's Repofitory, the greater filver pallet; to be produced on

or before the third Tuefday in **Oftober, 1785.**

3&J B. Such candidates as propofe to draw for this premium will be admitted by the Regifter any day (Sundays or Wednefdays excepted) between the hours of pen and twp«

The drawing to which the premium is adjudged, is to remain the property of the Society,

128. DRAWINGS OP BEASTS. For the beft drawing and compofition of three or more beafts after nature, the principal figure to be not lefs thaji eighteen ipches, by perfpns of either fex, under the age of eighteen years. To be made with chalk, black lead, pen, Indian ink, bifter, crayons, OF watter colours ; to be produced on or before the third Tuefday in October, 1785; the greater (ilver pallet.

129. For the next in merit; the leflèr {ilver pallet.

130. DRAWINGS OF BIRDS- For the beft drawing and compofition after nature of not lefs than three different birds, to be made with crayons or water-colours, by perfons of either fex, under the age of eighteen years ; to be produced on or before the third Tuefday in O&o* ber, 1785 ; the greater filver pallet.

131. For the next in merit; the leflèr fifver pallet.

132. DRAWINGS OF FRUIT, FLOWERS, OR PLANTS. For the beft drawing after nature, of fruit, flowers, or plants, to be made with crayons, or water-colours, by perfons of either fex, under the age of fixteen; to be produced on or before the third Tuefday in October, 1785; the greater filver pallet.

133. For the next in merit, the leflèr filver pallet.

134 DRAWINGS OF LAND-SCAPES. For the the beft drawing of Land-fcapes after nature, by perfons of either fex under twenty-one years of age, to be produced on or before the third Tuefday in O&ober, 1785; the greater filver pallet,

135. For the next in merit; the leffer filver pallet.

Each candidate muft mention, on the front of his drawing, from whence he took his view; and the drawings muft be made with chalks, pen, Indian ink, or bifter.

136. HISTORICAL DRAWINGS. For the beft Hiftorical Drawing, being an original compofition of five or more human figures; the height of the principal figure not lefs than eight inches. To be made with crayons, chalk, black lead, pen, Indian ink, or bifter, and to

be produced on or before the third Tuek day in Odtober, 1785 ; the gold pallet.

137. For the next in merit; thę greater filver palleț.

To

*7*0 the Mq/iers of Academies or Schools.*

138. TEACHING LANGUAGES. Whereas jt has been obferved that the living languages, or languages fpoken in Schools, are much fooner acquired than the dead languages^ which are only taught grammatically.

The Society, defirous to improve the prefsnt mode of education, hereby offers the gold medal to the matter of any Academy, or School for boys, fituated within, *qr* not more than thirty miles diflant from Lqndon, who fhall within threp years, from the date of this advcrtifeflient, teach the greeted number qf fphplars, not lcfs than four, to >vrite, antf to fpeak Latin, in common coiiYerfation, frorrectly and fluently.

139, 140, *14.1.* Alfo the gold medal for teaching in the like manner, each,

each of the following languages," viz. the German, the Spanifli, and the Italian, being commercial languages, not ufually taught at fchools in England,

The matters who propofe to be candidates for the above premiums, are to fend notice of their intention to claim them, to the Society, at their houfe in the Adelphi, on or before the fecond Tuefday in November, 1786. Soon after which the Society will appoint a day for examining the young gentlemen, and for adjudging the faid claims.

• 142, 143, 144. And in order to encourage affiduity in the fcholars, whofe matters apply for the above premiums, the Society will give to the greateft proficient in each of the faid languages; the filvcr medal.

N. B. Any information for the further improvement of the education of youth, in languages, will be thankfully received.

CONDI-

CONDITIONS.

No perfon who has gained the firft premium in any clafs, will be admitted a candidate in a clafs of an inferior age; and no candidate (hall receive more than one premium in one year; nor will they, who, tor two fucceffiveyears, fhall gain the firft premium in one clafs, be ever again admitted as candidates in that clafs

No perfon (hall ever be admitted a candidate in any clafs, in which he has three times obtained the whole of the firft premium.

No candidate (hall fend in more than one performance in any one clafs.

All the claims which are produced each year, before the Committee of Polite Arts (to which premiums or bounties are adjudged) are to remain with the Society iijc weeks after the determination, unlefs the

the candidates, for particular reafons, do apply to have the performance returned.

No claim for a premium in the Polite Arts will be admitted, chat has obtained, pr has been produced in order to obtain a premium, reward or gratification from any pther Society, or aiiy academy or fcliQol.

All performances that obtain premiums in the Polite Arts, muft be begun after the publication of fuch premiums.

Purpofely to encourage real merit, and to prevent any attempts to impofe on the Society, by producing drawings which lhall have been made or retouched by any other perfon than the candidate, the Society is refolved upon all occafions, with refpeft to the fuccefsful candidates in clafles 122 *to* i37inclufive, to prove their abilities, by requiring a fpecimen made under the infpeftion of the Committee of Polite Arts, in every inftance where fuch j>roof can be obtained.

Premiums for encouraging and improving Manufactures.

145. SILK. For the greateft quantity of merchantable Silk, not lefs than five pounds, produced by any one perfon in England, in the year 1785; the gold medal.

Specimens of the Silk, not lefs than one pound, with Certificates that the whole is of equal quality, and produced in England; to be delivered to the Society on or before the firft Tuefday in January, 1786,

146. For the fecond greateft quantity, not lefs than two pounds, the filver medal.

147. MACHINE FOR CARDING SILK. For the beft machine, fuperior to any now in ufe, for carding wafte Silk, equally well as by hand; to be produced together

together with a fpecimen of the Cardings, on or before the firft Tuefday in November, 1785; the gold medal, or twenty pounds.

148. WEAVING FISHING NETS. For the beft fpecimen of plain netting, for Fifliing Nets, not lefs than twenty yards long, and fix feet deep, woven in a loom, or other machine; to be produced to the Society on or before the fecond Tuefday in January, 1786; twenty guineas.

N. B. It is expected that the fpecimen produced, be made in fuch a manner, as to be cut and joined without more lofs than ufual, that it have fuch a plain felvage as the common fifliing nets, and that the knot be equally faft with thofe in nets in common ufe, and as eafily repaired.

149. PAPER

149. PAPER FOR COPPER PLATES. To the perfon who fhall eftablilh in England or Wales, a manufacture of paper, equal to the paper imported from France, proper for receiving impreffions from mezzotinto, and other engraved copper-plates, and produce to the Society, one ream, of the dimenfions of the French *fuper-royal*, on or before the firft Tuefday in November, 1785; the gold medal.

CERTIFICATES muft be produced to the fatisfa&ioir of the Society, that the paper was inade in England or Wales.

150. A ftrong CLOTH being prepared in SWEDEN, from HOP STALKS, or BINDS, the Society will give the gold medal, or twenty pounds, as a premium for the heft and gfeateft quantity of fuch Cloth, not lefs than twenty-five yards, made in England, and produced to the

Society on or before the fecond Tuefday in December, 1787.

One pound at leaft of the Thread to be produced with the claim.

Premium

Premiums fof Invention in Mtchanich.

151. TRANSTy INSTRUMENT. To the perfon who (hall invent and pro* duce to the Society, a cheap and portable Tranfit inftrument, which may eafily be converted into a Zenith Se&or, capable of being accurately and expeditioufly adjufted for the purpofes of finding the latitudes and longitudes of places, and fuperior to any portable Tranfit inftrument now in ufe; the gold niedal; to be produced on or before the laft Tuefday iti January, 1786.

152. GUN HARPOON. For every Whale taken by means of the Gun Harpoon ; to the perfon who firft ftrikes fuch fifh therewith ; two guineas,

N. B. Proper Certificates of the taking fuch Whales, in the year 1785, figned *by* the mafter or by the mate, when

the claim is made by the mafter; to be delivered to the Society on or before the laft Tuefday in December* 1785.

tS3. GUN FüR THROWING HARPOONS. To the perfon who fhall produce to the Society, the beft improvement in the confirmation of a gun for throwing Harpoons, fo as to render it more manageable than thofe at prefent in ufe; the (ilver medal or ten guineas.

To be delivered to the Society on or before the firft Tuefday in December, 1785.

154. HARPOON TO BE THROWN BY A GUN. To the perfon who fhall produce to the Society, the beft improvement in the conftruftion of a Harpoon to be thrown by a gun; the Harpoon to be fo contrived, that it mav ftrike and hold the fifh with more certainty and greater effect than any hitherto made ufe of; the filver medal, or ten guineas.

To be delivered to the Society on or before the firft Tuefday in December, 1785.

155. MACHINE FOF* TRANSPORTING TIMBER. To the perfon **who (hall produce to the Society a model of the beft, moft fimple, and cheap Machine or Carriage for tranfporting Timber, or other heavy Materials, on foft or clayey roads, at the leaft expence ; to be lent in on or before the laft Tuefday in November, 1785; twenty guineas.**

156. IMPROVEMENT OF THE HAND VENTILATOR. To the perfoh who fhall produce to the Society, *on* **or before the laft Tuefday in February, 1786, a portable Ventilator, to be worked by hand, better adapted and more efficacious for extra&ing foul air from gaols, prifons and fhips, than any now known or in ufe ; the gold medal.**

157. ENGINE FOR WORKING LOOMS. To the perfon who (hall invent and conftruft an Engine for the purpofe of working at one time, the greateft number of looms, not fewer than three for weaving filk, woollen, linen, or cotton goods (equally well, and more expedioufly than by hand, or by any other method now in ufe) each piece to be not leis than half a yard wide; the gold medal, or thirty guineas.

CERTIFICATES of the working fuch Engine, with famples not lefs than one yard long, to be produced on or before the firft Tuefday in January, 1786.

158. CRANES FOR WHARFS. To the perfon who ihall invent and produce to the Society, a model of a crane for Wharfs, on a fcale of not lefs than one inch to a foot, the conftruftion to be fuch, that the power may be varied according to the weight to be railed, in a more

more fimple and effe&ual manner than by any now known or in ufe; the gold medal or twenty guineas.

To be produced on or before the firft Tuefday in February, 1786,

N. B. The model fhould neither be of the walking wheel nor capftan kind.

159. MACHINE FOR CLEARING RIVERS, For the beft model of a machine fuperior to any now in ufe. for Clearing Navigable Rivers from Weeds, at the leaft expence; ten guineas.

To be produced to the Society on or before the firft Tuefday in February, **1786.**

Premiums offered for the Advantage of the Britijio Colonies.

160. NUTMEGS. For the greateft quantity of merchantable nutmegs, not lefs than five pounds weight, being the growth of his majefty's dominions in the Weft Indies, and nearly equal to thofe imported from the iflands of the Eaft-Indies; the gold medal, or one hundred pound?.

Satisfactory certificates from the governor, lieutenant-governor, prefident of the council, or fpeaker of the houfe of aflembly, 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 firft Tueir day in January, 1786.

161. The

161. The fame premium is extended one year further.

CERTIFICATES to be produced on or before the firft Tueiday in January, 1787.

N. B. Any perfon defirons of information on the fubjeft of Nutmeg Trees, may obtain it from a memorial on the fru&ification of the Nutmeg, and the fureft method of cultivating it to advantage, by the King's Gardener, at the Ifle of Bourbon, inferted in Mr. Maty's review, for Auguft, 1783,

162, 163. BREAD FRUIT TREE. To the perfon or perfons, who bet\veen the firft of June, and the fifteenth of Auguft, 1786, fhall bring into the port of London the greateft number of plants of one or both fpecies of the Bread Fruit Tree, in a growing ftate, not lefs than three of either fpecies; the gold medal.

164, 165. The fajne premiums are extended one year further; the plants to be brought into the port of London, between the firft of June, and the fifteenth of Auguft, 1787.

N. B. The plants which obtain the premiums are to be the property of the Society, to be difpofed of according to their difcretion.

THE SOCIETY being informed that a confiderable quantity of oil can be obtained from the Seed of Cotton, and that after the expreflion of the oil, the remaining cake will afford a ftrong and hearty food for cattle; and likewife, that the apparatus for the operation can be applied to the mill for fugar canes, and worked in the rainy feafon, at a moderate expence, have refolved, for the foregoing reafons, that the procuring oil from the Seed of Cotton is a proper objeft of a premium, confidered as an encouragement

ment for planters to extend the cultivation of Cotton, an article eſſentially requiſite to increaſe. the manufadhire of fhat commodity in this country.

Thp Society therefore offer as follows:

166. OIL FROM COTTON SEED, To the planter iu any of the Britifh Iflands of the Weft Indies, who fhall expreſs oil from the feed of Cotton, and make from the remaining feed hard and dry cakes, as food for cattle ; the gold medal.

CERTIFICATES that not lefs than one ton of the oil has been expreſſed, and five hundred weight of the cakes obtained, to be produced to the Society, with two gallons of the oil, and two dozen of the cakes, together with a full account of the procefs, on or before the laft Tueſday in November, 1785.

167. For

167. For the next greateft quantity not lefs than half a ton of oil, and two hundred weight of the cakes ; the filver medal.

168, 169. The fame premiums are extended one year further.

CERTIFICATES and famples, to be produced on or before the laft Tuefday in November, 1786.

170, 171. The fame premiums are e\> tended one year further.

CERTIFICATES and famples to be produced on or before the laft Tuefday in November, 1787,

172. SPIRIT FROM THE PULP OF THE COFFEE BERRY. To the Planter in any of the Britifti Iflands in the Weft Indies, who ihall diftil the greateft quantity of Spirit, from the Pulp of the Coffee

Coffee Berry, not lefs than thirty gallons, and produce to the Society one gallon of the Spirit, together with an account of the procefs ufed in the making it; the gold medal.

173. For the next greateft quantity, not lefs than fifteen gallons; the lilver medal.

CERTIFICATES iigned by the governor, lieutenant-governor, or fome pcrfbns of known credit in the ifland, to be delivered to the Society on or before the fir ft Tuef* day in January, 1786.

174. The fame premiums are extended one year further.

• CERTIFICATES and famples to be pro* duced on or before the firft Tuefday ia January, 1787.

175. SENNA.

175. SENNA. To the perfon who fhall import into the port of London, in the year 1786, the greateft quantity of Senna, not lefs than two hundred weight, the growth ot any of the Britifh Iflands in the Weft Indies, and equal to the *Alexandrian Senna,* now ufed for medicinal purpofes j the gold medaL

CERTIFICATES of the growth and method of culture, to be produced to the Society, on or before the firft Tuefday in February, 1787.

• 176. The fame premium is extended one year further.

CERTIFICATES to be produced on or before the firft Tuefday in February, 1788

GENERAL

GENERAL CONDITION^

Notwithftanding the Society referve to themfelves the power of giving, in all cafe*, fuch part only of any premium as the performance (hall be adjudged to defence, or of with-holding the whole, if there be no merit; yet the* Candidates may be aflured, the Society will always judge liberally of their feveral 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, fuch claimant fending with it a paper fealed up, having on the outfide a correfponding mark, and on the infide the claimant's name and addrefs.

No

No papers (hall be opened, but fuch as (hall gain premiums, unlefs where it appears to the Society abfolutely neceffary for the determination of the claim ; all the reft fhall be returned unopened, with the matters to which they belong, if inquired after by their marks within two years ; after which time, if not demanded, they fhall be publicly burnt, unopened, at fome meeting of the Society.

All models of machines, which obtain premiums or bounties, for the future, fhall be the property of the Society*

All the premiums of this Society are defigned for that part of Great Britain, called England, the dominion of Wales, arid the town of Berwick upon Tweed, imlefs exprefsly mentioned to the contrary*

The claims fhall be determined as foon as poffible after the delivery of the fpecimens*

No

No perfon (hall receive any premium, bounty, or encouragement, from the Society, for any matter for which he has obtained, or propofes to obtain, a patent.

A candidate for a premium, or a perfon applying for a bounty, being detefted in any difingenuous method to impofe on the Society fhall forfeit fuch premium or 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 the end of May, except as mentioned in the conditions annexed to the premiums offered for pro*-moting the Polite Arts.

No member of this Society fliall be a candidate for, or entitled to receive any premium, bounty, or reward whatfoever, except the honorary medal of this Society.

Where

Where Certificates are required to be produced in claim of premiums, they ihould be expreffed as nearly as poffible in the words of the fefpeftive advertifements, and fhould not be 'from the candidate, (folely) but from fome other perfon, or perfons, who have a pofitive knowledge of the fa&s certified.

Where ^premiums, or bounties, are obtained, in confequence of fpecimcns produced, the Society mean to retain fuch part as they may judge neceffary, making a reafonable allowance for the fame.

No Candidates fhall be prefent at any meetings of the Society or Committees, or admitted at the Society's rooms, after they have delivered in their claims, till fuch claims are adjudged, unlefs fummoned by the Committee.

N. B. .Any information-or advice that may forward the defigns of this Society for

for the publick good, will be received thankfully, and duly considered, if communicated by letter, addreſſed to the Society, and directed to Mr. More, the Secretary, at the Society's office, in the Adelphi Buildings, London.

£ In caſe any perſon ſhould be inclinable to leave a ſum of money to this Society, by will, the following form is offered for that purpoſe:

Item. I give and bequeath unto A. B, and C. D- the ſum of upon condition and to the intent, that they or one of them, do pay the ſame to the Colle&or for the time being, of a Society in

London, who now call themfelves the Society for the Encouragement of Arts, Manufadtures, and Commerce; which faid fum of I will, and defire may be paid put of my perfonal eftate, and applied towards carrying on the laudable deiigns of the Society.

By order of the Society,

SAMUEL MORE, Secretary.

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DIRECTIONS TO THE BOOK-BINDER.

I>lace the Portrait of Lord R<>mney as Frontispiece to the Volume.

Plate of Mr. Lraithwaitc's Crane to face page 159.

Plate of Mr. Marfhall's Secret Efcutcheon to face page 163.