

The clergy-man's recreation: shewing the pleasure and profit of the art of gardening ... / By John Lawrence.

Contributors

Laurence, John, 1668-1732.

Publication/Creation

London : Printed for B. Lintott, 1717.

Persistent URL

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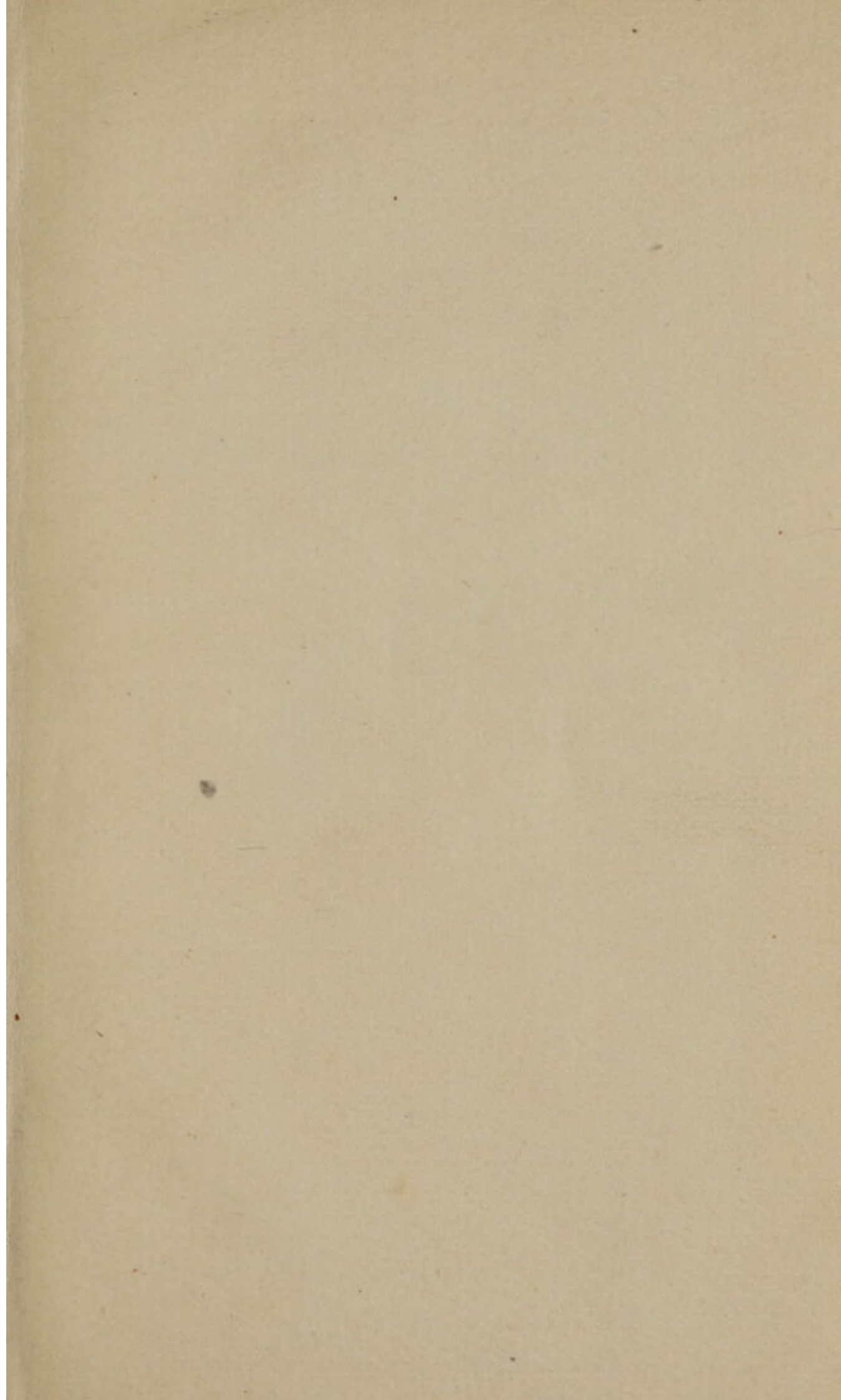
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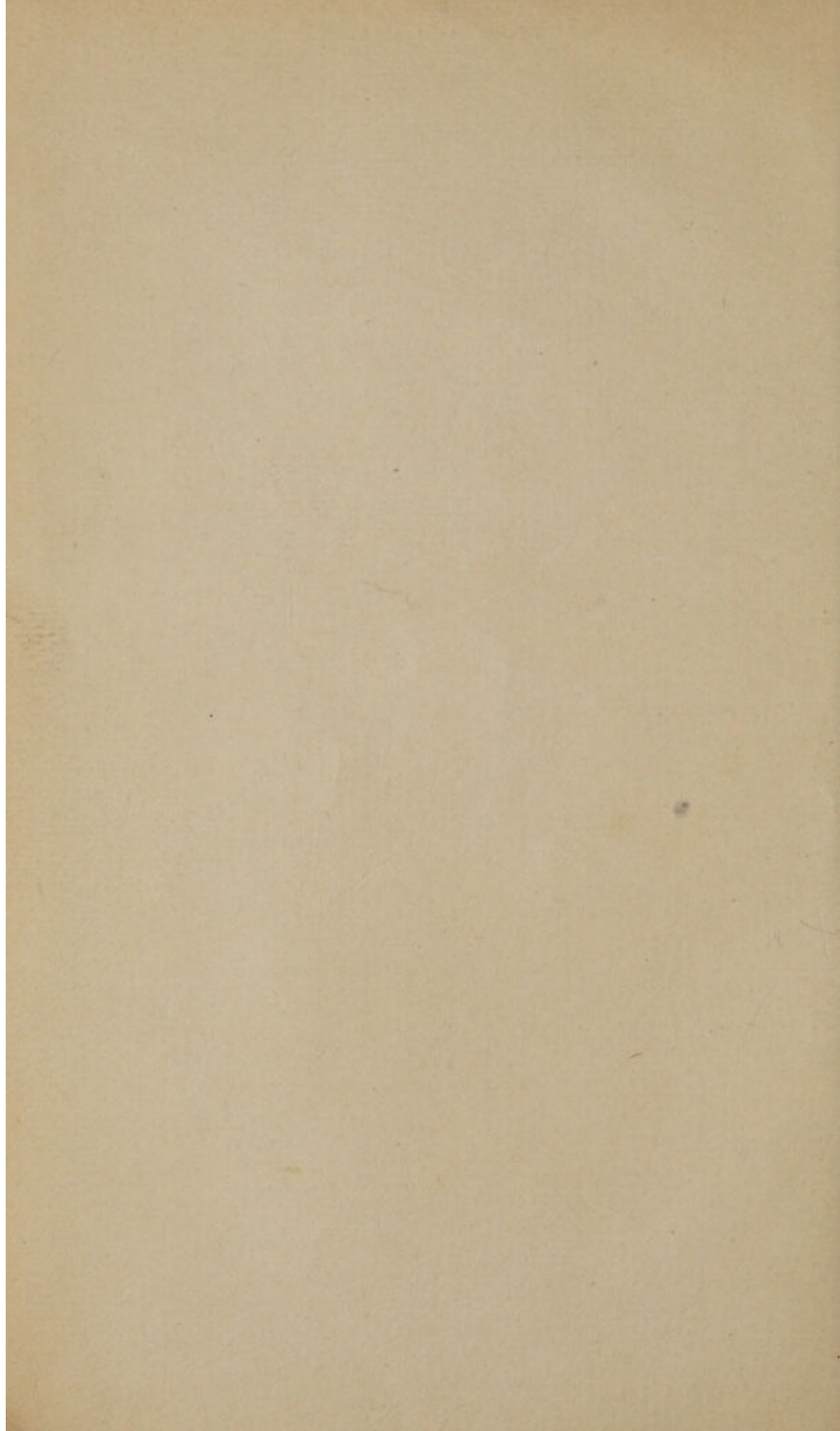


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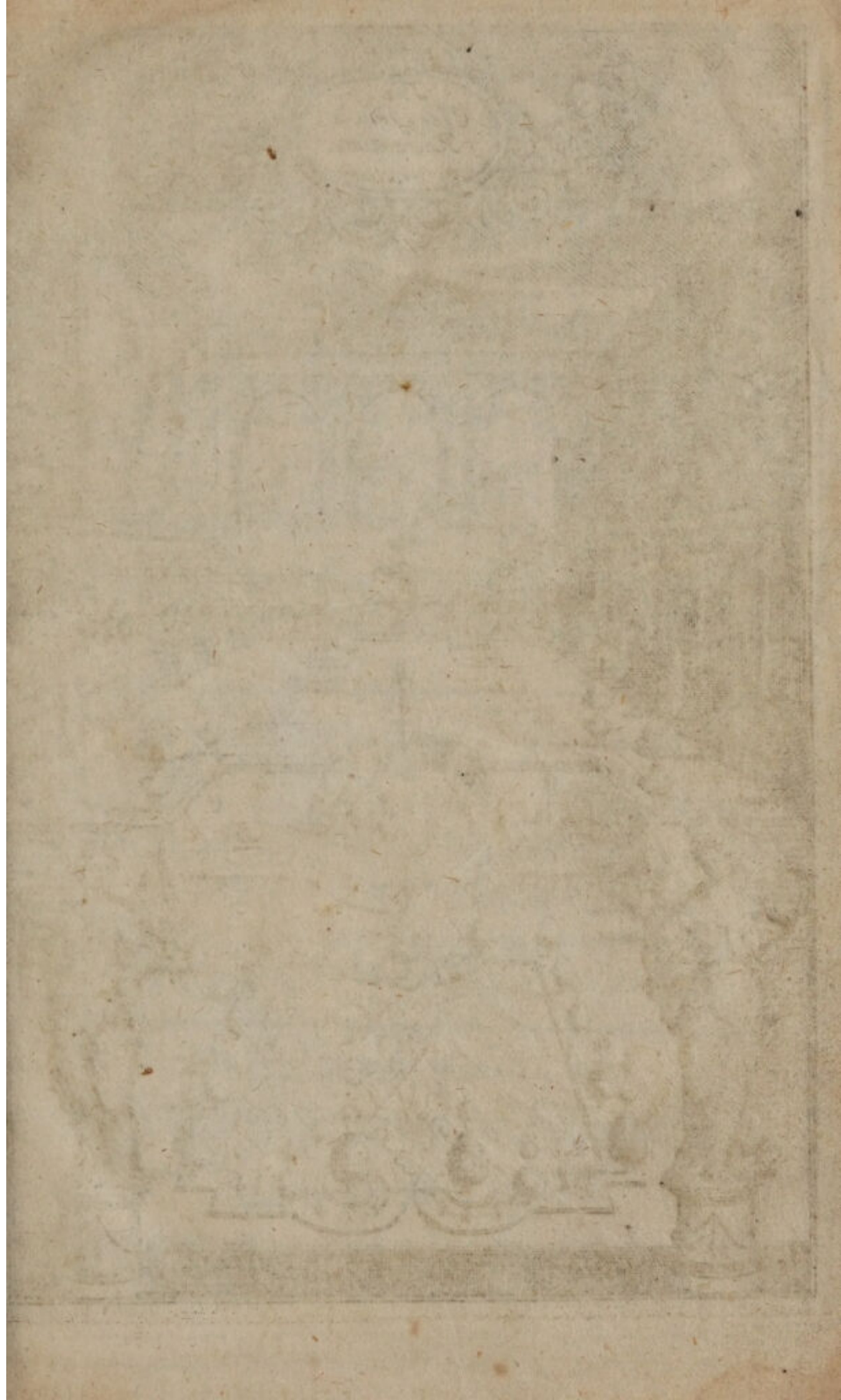
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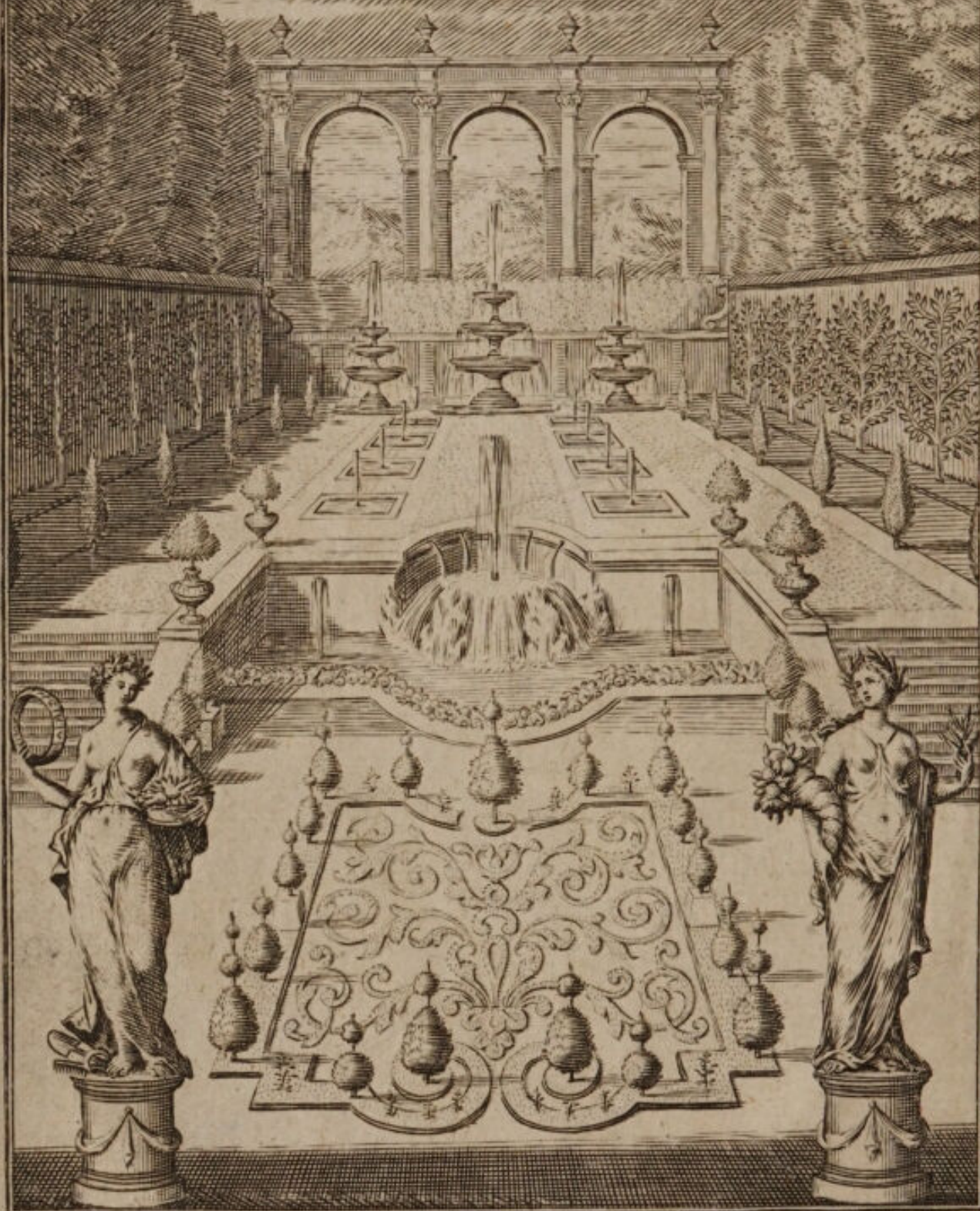
John W. Smith

1822



*The
Clergyman's
Recreation.*

Pr. for B. Lincolt



J. Goussier del.

T H E
Clergy-Man's Recreation:

Shewing the

Pleasure *and* Profit

Of the A R T of

G A R D E N I N G.

*Quare agite ô proprios generatim discite Cultus,
Agricolæ, fructusque feros mollite colendo.*

Virg. Georg.

By *JOHN LAWRENCE*, A. M.

Rector of *Yelvertoft* in *Northamptonshire*, and
sometime Fellow of *Clare-Hall* in *Cambridge*.

THE FIFTH EDITION.

L O N D O N :

Printed for *BERNARD LINTOTT*, between
the *Temple Gates* in *Fleet-street*, 1717.

19267



Mr. LINTOTT,

SO far as I am Judge, there is more of the Art of Gardening in this little Tract, than in all I have yet seen on this Subject.

March 15:
1713.

L. Loyd.





THE P R E F A C E.

GARDENING being of late Years become the general Delight and Entertainment of the Nobility and Gentry, as well as Clergy of this Nation: It is not with great Difficulty that I have comply'd with the Solicitations and Desires of many of my Friends, to communicate to the Publick some of that Skill which I have acquir'd therein, by the Observations and Experience of above Twenty Years.

I am not so vain as to think I am able to teach the great Masters in this Science any new Discoveries concerning the Management of the Orangerie, or the Meloniere; or to invent any new and costly Ways for laying out Platforms, and enlarging Gardens: This perhaps has been already done to a Fault; and 'tis this Excess which has ruin'd brave Estates, and consequently has made others afraid of engaging in it. For I could never be of the Opinion of a certain Noble Person, who spake very contemptibly of his own Garden, to one that admir'd it; Alas! (says he) This is a small inconsiderable Place, of only Thirty Acres; whereas my Lord——has above Fourscore.

If once we come to vye with one another, either for exquisite Niceness and Finery, or multitude of Acres, one may easily guess what the consequence of that will be. Now therefore the Design of this is neither to teach the Management of Exotick Plants for Green-Houses,

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Houses, nor to recommend any thing over-curious or costly; but only to lay down such Rules as may make Returns both of Profit and Pleasure: And to recommend the Art of Managing a Garden to those of my own Order, the Clergy; not to make them envy'd by Magnificence, but to make them happy, by loving an innocent Diversion, suitable to a grave and contemplative Genius. I would not be understood as if I thought a Divine might not innocently use many other Diversions; only this I suppose most People will allow, that as there are some Sports and Exercises not suitable to a Divine, so Gardening is a very agreeable and commendable Recreation, viz. Pruning, Planting, Sowing, Grafting and Inoculating, and sometimes digging ad Ruborem, tho' not ad Sudorem. For indeed, of all others, a Clergy-man, whose chief and most constant Business is sitting at his Study, most wants Relaxation, and some moderate Exercise, to preserve Health. For my own part, I must own, that 'tis the best and almost only Physick I take: and if through the rigour or wetness of the Season, I am denied the benefit of my Garden for some Days, and labour under Indispositions; God's Blessing, with a warm and Sunshiny Day that invites me out, soon sets me to rights again.

This perhaps is not every ones Constitution; but thus far almost all are agreed, that the Diversions and Amusements of a Garden, with moderate Exercise, are not only most delightful to those that love them, but most wholsome to those that use them. And because it must be supposed to be ignorance of the Times and Seasons, and the not knowing what to do in a Garden, when there, as to Planting, Pruning, Grafting, &c. which make so many regardless both of the Pleasure and Profit of this Art; And because I think also that
many

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many others have been horribly imposed on, either by the Unskilfulness of the Country Gardeners, or, which is worse, their Knavery, whereby they plant Trees of wrong sorts on wrong Stocks, or not in a right Method and Season, so as to be almost wholly discouraged by not receiving any Fruit of their Labour and Charge: For this reason I venture to communicate some Observations that I have made, which I conceive may be of use to my Brethren, or such other Gentlemen as desire to have a pleasant and profitable Garden, and yet may want Skill enough themselves to manage it with Success.

I confess, I cannot but with grief look into some Gardens where I find little more than Leaves or half-dead Trees, whilst yet the Owner, it may be, loves a Garden as well as my self, and has impatiently expected the Fruits of it for many Years; and yet has only at last bought his Experience with the loss of all that Time. This I speak as to the choicer sort of Fruit against Walls, where the Disappointment has proceeded from wrong Positions: as for Instance, the Bure-Pear against a North or North-East Wall; or from wrong Stocks, as the Apricot on the ordinary Plum-Suckers; or the being cheated in the sort of Fruit you send for, which is the most common Disappointment of all. And truly this has made me look on with great Compassion, to see Gentlemen thus defeated of their Hopes, almost discouraged against any farther Attempts; because they have already waited so long, even the best (as it is the earliest and most vigorous) part of their Lives without Success. For a wrong sort of Fruit or Fruit upon a wrong Stock, will, it may be, draw you on with Expectation for 4, 5 or 6 Years to taste its Fruit, and then possibly you find with grief, instead of an old Newington Peach, a dry insipid Nectarine, or instead of a

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rich French Pear, a gritty Choak-Pear or Warden; or else your Tree being on a wrong Stock, will make a shift to live 4 or 5 Years, and then die at last. So that in both these Cases, your best and only Remedy is to take them up and plant others; and, it may be, not without the same Fear of being deceiv'd again. And yet if they prove what you expect, here must be 3 or 4 Years more before you receive Fruit: And I need not tell any one what a Disappointment it is to lose 8 or 10 Years of the best part of our Lives in tired and fruitless Expectations. If therefore I shall be able in any measure to remove these Fears from those who would otherwise love these innocent Diversions, and give them better hopes, I desire what follows may not be thought impertinent or unseasonable, though coming from a Clergy-man.

I have often smil'd at the Rebukes I have met with from some Gardeners, who hate to be inform'd by a Scholar, or to be turn'd out of their beaten Road by any body; 'What, say they, does this Man come and pretend to teach us, to make our Masters think we do not understand our Business? How should he know what Stocks are best for Trees, or how to prune them? It is fitter for him to be at his Studies, a making Sermons. So that I assure you, if the Gentleman has not a great deal of Courage, he must be content to go on in the old Way, or very much disoblige his Gardener.

I am not in the least ashamed to say and own, That most of the time I can spare from the necessary Care and Business of a large Parish, and from my other Studies, is spent in my Garden, and making Observations towards the farther improvement thereof. For I thank God this sort of Diversion has tended very much to the ease and quiet of my own Mind; and the Retirement I find therein, by Walking and Meditation,
has

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has help'd to set forward many useful Thoughts upon more divine Subjects, as I may perhaps hereafter have occasion to inform the *World*. In the mean time I cannot but encourage and invite my reverend Brethren to the love of a Garden; having my self all along reap'd so much Fruit from it, both in a figurative and literal Sense.

By the good Providence of God, and the extraordinary uncommon Bounty of a generous Patron, which I always remember with Gratitude, I have been placed where I now am near fourteen Years: And it may not be amiss to relate what Difficulties I have all along laboured under, that others may see what is to be done with Care, even to the worst of Soils.

Adjoining to my House, I found what they used to call a Garden, of about 32 Yards square, mounded round with low Mud-Walls, quite over-run with Couch or Twitch-grass, Nettles and Gooseberry-bushes; and, which was a great deal worse, upon a wet white Clay, lying within half a Foot of the Surface. The earnest desire I always had to have a Garden, made me look on with Grief; but yet I instantly resolved to be doing something, that no time might be lost towards getting Wall-Fruit, if possible.

I was dissuaded by most of my Neighbours, as thinking it a very vain Attempt, and that I should lose all my Labour and Charge, as others have done. Not yet discouraged, I resolved to pull down the Mud-wall that faced the South-east, and to build a Brick one in the stead about nine Foot high, which I did by the kind help of my Neighbours the same Summer I came, and sent for my Trees from London in October, and planted the Walls with Apricots, best Pears, Vines, Figs, Plums, Cherries, a Peach and Nectarine. My next Care was to provide a Nursery of all sorts of Stocks for future Planting, as I made room for them.

What

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What Methods I used to give my self any Hopes of Fruit in a Garden, which, with respect to the Soil, was made almost invitâ Minervâ, will appear by the following Directions; but I only say here, to encourage my Friends, that in three Years time, if not sooner, I began to taste some of the Fruits of my Labours; the fourth Year I was rewarded with Fruit from almost all of them; and ever since I have had Plenty, even greater than I could reasonably expect, from all the several sorts except the Old Newington, which I most of all suspected by reason of the Soil; tho' even that flourished and bore, but the Fruit was watry and insipid. I have succeeded better in other Sorts since.

As to the Nusery that I formed chiefly from all sorts of Seeds and Stones, I have succeeded so well, that by Grafting and Inoculating thereon, I have for several Years had enough, not only for my own Use in all parts of my Orchard and Kitchen-Garden, but also to oblige my Friends, which is no small part of my Pleasure.

I give these short Hints to shew how adviseable it is when Persons first come to a Living or an Estate, to begin their Plantations without Doors first, and not, as is usual, fall to Repairs and Alterations within, to the neglect of the other. What we build or repair, generally speaking, may be finish'd in a Summer, and we enjoy the Conveniencies thereof as soon as finish'd, and the Workmen have left you: But you must wait some Years to see the Fruits of your Plantation, and therefore the sooner it is begun, the more reasonably you may hope to live to enjoy the Benefit and Pleasure of it.

But because I represented it as a very difficult and hazardous Matter to procure right sorts of Fruit, and upon good Stocks, it may be expected that I should give some Direction and Advice what to do, since it is of so great Consequence to be assured of a skilful as well

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well as a faithful Nursery-Man. To this I only say, that in such a case as this, the best way is to trust to Men of known Honesty, Skill, and Integrity, such as the late Mr. London and Mr. Wise have hitherto approved themselves to be; and their Names and Reputation are so well established amongst the Nobility and Gentry, that I hardly think the surviving Person, Mr. Wise, would willingly put a Cheat upon any one that would trust to him. However, I should not do justice to that honest Person I have so long dealt with, and so often recommended, if I should not take occasion here to say, that of above Five Hundred Fruit Trees bought of him, by my self and Friends, I do not remember I ever heard that one of them miscarried through his Fault, or proved otherwise than the Kind and Sort that was sent for; his Name is Nicholas Parker, Nursery-man at Strand-in-the-Green in Chiswick-Parish, near London; where I am well persuaded any Gentleman or other may be punctually and faithfully dealt with, though not known to him.

If any one shall now say, upon sight of this little Treatise, That, as a Clergy-man, I might have employ'd my Time much better than to write about Gardening; I answer, That it easily appears a great deal of Time has not been spent in composing it; indeed only a few leisure Hours in the Winter, for want of Company, by way of Diversion, not at all interfering with, much less interrupting my proper Studies, or the necessary Attendance on the Duties of my Parish, which I think ought always to be uppermost, and to lie next the Heart of us the Ambassadors of Christ, who have so great a Trust and solemn a Charge committed to us, as The Teaching others the way of Salvation.

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I hope therefore I need not say any thing further by way of Apology, except it be with respect to the Defects and Omissions of this small Tract; and These, I hope, will be pardon'd by the great Masters in this Science, as coming from a Clergy-man, who owns he has had greater things to mind. But if I have said any thing here to perswade those of my own Order to love an agreeable Exercise and Recreation, and have taught them how to make something of Interest and Pleasure of those little Parentheses of their Lives, which most commonly go for nothing; I shall have gain'd my End, and the Satisfaction I aim at.



THE



THE
Clergy-Man's Recreation;
SHEWING THE
Pleasure *and* Profit
OF THE
ART *of* GARDENING.

CHAP. I.

Concerning Preparing the GROUND *for*
PLANTING *and* SOWING.

THE Method that I shall observe in treating on this Subject, shall be the same that I would advise all Persons to proceed in, who intend to form a Garden of their own, where it may be there
are

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are little or no Preparations towards it. And I do not intend to direct you to any such costly Experiments and Rules as Monsieur *Quintinye* proposes to his Royal Master: But shall all along have regard not only to the cheapest, but also the most Expeditious Methods to procure you the Fruits of your Cost and Labour. Therefore for the sake of those who must either form a Garden out of their Home-sted, or (which is most common) do find a mounded Place for a Garden full of little else but noxious and spreading Weeds, I shall lay down the following Rules distinctly to each Case. To the first, who are to form a Garden anew, and intend to build Walls, I say that Thirty or Forty Yards square is abundantly enough for that you intend for your best Garden, where you would have your choicest Fruits and Flowers grow; for more would make you uneasy to have it kept and managed as it ought: If there be no great Inconvenience in it, it will be better

better to have your Walls face not the four Cardinal Points, but rather between them, *viz.* South-East, South-West, North-East, and North-West; for then the two former will be good enough for the best Fruit; and the two latter good enough for Plums, Cherries, and Baking Pears. Only observe this, that instead of building your Wall that faces the North-East, it may be adviseable (to save Charges) to plant a Crab Hedge of three Rows, which will be a good Mound, and will quickly grow up to be a better Fence than a Wall against the West and South West Winds, which make the greatest Destruction in a Garden; and according to the Observations I have made, do blow two parts in three of the whole Year. It may be adviseable also to plant here and there an Elm to be growing up to a greater height. For whatever you do, you must be sure to guard against the Westerly Winds, which blast your Fruit more than those from the East, as they are much more
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frequent. After your Platform is thus laid out, and you have disposed your Walks of Gravel and Grass, as your own Fancy leads you (for there is no Mode or Fashion in those things) you must then hasten to build your Walls, that your Fruit-Trees may be ready to plant in *October*, and in the mean time be digging your Ground to mellow all Summer and Winter.

There is some different Method to be used by those that find a Garden-place already mounded, full of noxious Weeds: For their first Care must be to destroy *them*; so that what is sown or planted afterwards may not perish by *their* spreading luxuriant Growth. Several Methods have been proposed towards destroying Weeds, such as sowing the Ground thick with Turnips, Hemp, &c. But I have found no way so certain and effectual as laying the whole Ground fallow all the Summer, by digging it over two or three several times, always observing to do it in the greatest Heats and Drought.

Drought. This not only certainly kills all the Weeds, but it likewise mellow and enriches the Ground exceedingly, as all Farmers know very well. Most are naturally desirous and greedy to make some Improvement of their Ground; but if they sow any thing with Expectation of Fruit, while 'tis full of Weeds, 'tis but loss of time, and they will repent it. I do not speak this with respect to your Plantation of Fruit-Trees, either Dwarfs or Wall-Trees. For I would have no time lost in the Planting of them, that you may the sooner taste their Fruit, neither will the Method propos'd in the least hinder this Design; for you may with little difficulty clear those particular places of all noxious Weeds (which yet must be done with care) where you intend to plant your Trees, and yet the rest of the Ground may lie fallow; which leads me to shew you under this Head, what is to be done before you plant your Trees: For except your Ground be extraordinary good indeed,

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you must dig a Hole of four Foot square, and two Foot deep, which must be filled up again with Dung and good Mould for each Tree you intend to plant. If your Ground be Marle or stiff Clay (which is my particular Misfortune) you must get all the Rubbish you can together, of Lime, Stone, small pieces of Brick and Tyle, Coal ashes, and Drift Sand to mix with your best Mould and Dung, so that the Clay may not convert it to its own Nature; fill up the Hole with this half a Foot higher than the rest of the Level, remembering to preserve some of the finest Mould near the Top (free from Dung) to plant your Tree in: But if your Soil be a not over-rich or hungry Gravel or Sand, you must fill up the Holes with the best rotten Horse and Cow-Muck you can get, together with the Richest Mould. Thus when your Holes are cleared from Weeds, and prepared and filled up according to the foregoing Direction, put an upright Stick in the middle of the Hole for a Mark where
to

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to plant the Tree in the Order you intend.

But because it is a thing of such great Consequence to have your Trees well planted, in order to secure their future Growth and Prosperity, I cannot but add one farther Direction about this matter, which long Experience has confirm'd to me to be a good one, *viz.* this; That nothing is more agreeable or suitable to the Roots of a young Tree than untry'd Mould or Earth, such I mean as has not within the compass of an Age been turn'd up either with Plough or Spade, which I suppose may easily be found in most Lordships: But I would recommend *that* particularly which is wont to be called a Waste or Common, whereon Cattle have used to stand either for Shelter or Convenience. The Nature and Richness of this having never been exhausted by the luxuriant Growth of Plants or Shrubs, or larger Weeds, there is a strange and uncommon Fertility in it; more, I think, than is ordinarily to be met with

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in any other rich Compositions of made Earths; at least 'tis such as I have found more suitable for the growth of young Trees; and therefore the more of this you put into the Places where you plant, the better; always observing to take off a thin upper Turf, and then dig only one Spade deep for this purpose; and if your Garden-Soil be Marl or Clay, remember (as I observ'd before) to mix Coal ashes or Drift-sand with it, otherwise all will quickly be converted to the native circumambient Soil, and thereby your Tree in ten or twelve Years time will languish, canker, and it may be, die.

I need not tell you here, that 'tis perfect murdering a young Tree to set it in the same Place and Soil where an old one had grown; and therefore more than ordinary care is to be taken to replenish the Place with this new untry'd Mould, as far as the old Roots went, or at least as far as new ones need to go.

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It may not be amiss also to add under this Head, that if your good Soil be very shallow, or that your Garden lie over-wet and moist, it is a very good and safe way to lay Tiles or Bricks all over the bottom of your Trench, to hinder the Roots from striking downwards, and so occasion the spreading into the good Soil. For 'tis a Rule in Gardening, that the more horizontally either Roots or Branches of Fruit-Trees run, the better they answer the Purposes of bearing Fruit; as I shall have occasion to observe further under the Head of *Pruning*. I shall conclude this Head with advising those who are so unhappy as to lie upon a spewy, wet, or clay Soil, to make a pretty many convenient Drains, which may be done at a very easy Charge, by only digging Trenches two or three Foot deep, leading to the lower Ground, and then pouring in Pebbles or any rough or rubbish Stones: Upon which lay some small green Boughs, and throw the Earth again

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gain upon them. This I have experienced to last many Years, and will effectually drain your Garden.



C H A P. II.

Of the METHOD of Planting FRUIT-TREES in your Gardens.

WHEN you have disposed your Borders according to the foregoing Directions, great Care must be had in the right ordering and disposing also your young Trees; for if they be not planted according to Art, *viz.* not rightly order'd in their Roots, nor set at their right Height or due Distances, your Expectations may be in great measure defeated. If therefore your Trees come from the Nurseries about *London*, (as what seems to me most adviseable) the first thing you have to do is to prune their Roots, by taking off all the small Fibres intirely, and shortning the bigger
Roots

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Roots to about six Inches from the Stem; and if they have received any Gall or Wound in their Carriage, that part of the Root must also be cut off: Two or three Spurs are sufficient; but if there be more good ones, they may remain pruned, as aforesaid. The next thing to be done, by reason of their having been out of the Ground several Days, and so are become very dry, is to steep them in some Vessel of Milk and Water, or Dish-water, for 24 Hours, which will supple the Roots, and make them apter to strike new Fibres into the Earth when planted. The Head also must be pruned; but that may be done any time before it begins to shoot in the Spring. A single Branch is sufficient for a Head, and it is not well to leave above two, pruned to about six Inches above the Place of Grafting or Inoculation. If it be a Dwarf, place it as upright as you can; if for the Wall, set the Foot as far from the Foundation as conveniently may be, leaning with its Top to the Wall.

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The foregoing Direction about pruning the Roots and Head ought to be particularly regarded, because it is the common Fault of young and unskilful Planters to be covetous of leaving as much Head as may be; thinking *That* to be the earliest and most ready way to cover their Walls and to have Fruit; whereas if it does not endanger the Life of the Tree, it is a certain means to retard its Growth, and keep the Walls bare and uncover'd towards the Bottom. Indeed, Reason as well as Experience tells us, that there should be a due proportion between the Roots and the Head; for Nature having receiv'd a great Check at the Removal of a Tree, its Roots being wounded, shortned, and expos'd to the Air, if the Tree should not be eas'd of that tall Head it got in its Prosperity, (now larger than the injur'd Roots can supply with Sap) the necessary Consequence would be, that if it should just live, yet it must continue in a weak, languishing and unthriving Condition.

How-

However it may easily be perceived, by what has been said, that there is a discretionary Power to be us'd by a Planter with respect to those Trees which are only removed from one part of the Garden to another, taken up with great Care, and most of the Mould about the Roots. Such I have my self frequently removed without either pruning Root or Branch, and have succeeded very well: But then this is hardly to be practis'd on any but small young Trees: And I sometimes do this designedly, with only this View, to check the luxuriant Growth of a too vigorous Tree running altogether into Wood, taking it up carefully, and immediately setting it down again in the very same place, for a Reason you'll hear more of, when we come to Pruning.

The different Nature of Soils is to be regarded, as to the Height you are to plant a Tree above the Level of your Walks. In a warm, dry Soil, a little Elevation does; but in a wet Clay you cannot ordinarily plant too high,
so

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so that you do but in any sort cover the Roots with the best fine Mould, and preserve it moist for one Year against the scorching Heats of the Sun, by which means it will be preserved from Canker, and thrive much the faster, even tho' there should appear some part of the bigger Roots above the Surface; and still remember to allow for the subsiding of the new Earth, which will deceive you three or four inches. Be careful to follow these Directions, observing to leave no Vacuities at the Roots, but press the fine Mould gently and closely with your Hand, and you need not fear hardly any sort of our Fruit-Trees growing and flourishing.

But it may not be amiss to say something concerning a safe Method to keep new-planted Trees moist and cool for the first Year, and, if need be, for the second. Mr. *London* and *Wise* recommend Fern and Straw laid five or six Inches thick, and two or three Foot every way from the Stem of the Tree, having

ving first laid half-rotten Dung all round the Tree. I very much approve of this, to keep them warm in Winter from the violent Frosts: But the Straw and Dung lying too long together engender Worms, Ants and other sorts of Vermin, very injurious to Roots of Trees: Therefore the best Method I have found to keep the Roots cool and moist in Summer is to lay Sand in a convenient Circle round the Stem of the Tree, and then pitch or pave it with small Pebbles, Flints, or any little smooth Stones, which will not only look beautiful to the Eye, but also effectually answer the end of keeping the Tree cool; and besides, when you water it in the Summer, will help to let in the Water, and keep the Earth from being wash'd away from the Roots.

It is also to be observed, that this Method of managing Trees in the planting them will be of the same use with respect to all Ever-greens, which are generally not over forward to thrive after a Removal. I say, you must *plant* them
after

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after the foregoing Rules, but not *prune* them, especially Hollies and Yews, which have matted Roots, and will hold the Earth to them, sufficient to convey them to small Distances; and if a greater Distance is required, they ought to be sent in Pots or Baskets, that neither Root nor Head may be touched with a Knife.

As to the Distance in which Fruit-Trees are to be planted against a Wall, *That* is in a great measure to be regulated by the height of the Wall. Four Yards Distance will do, if the Wall be ten or twelve Foot high, but if it be but seven or eight Foot high, five Yards distance is the least that can be allowed: Only you are to observe, that a Pear, a Plum, an Apricot and a Cherry, require something a greater Distance than a Peach or Nectarine; and therefore the lower Walls too are most suitable to the latter, if they have but a good Aspect. I cannot but recommend that frugal Method practis'd by most Gard'ners near *London*, of Planting tall Fruit-Trees, Cherries, or
Plums

Plums in the intermediate spaces of the Wall, so that both top and bottom will be well-nigh furnished in two or three Years time. And then as the Dwarfs spread and increase, they take away the tall ones quite, making Standards of them in Orchards; except you had rather chuse to plant Vines in those intermediate spaces, which will quickly run up to the top, and bear the second or third Year.

As to the best Season for Planting, the general Rule to be given for *that*, is from the middle of *October* to the middle of *March*; only you must be sure to avoid doing any thing of this nature in hard Frosts; and if your Trees in coming down happen to be overtaken by them, your only way is to carry them into Cellars, laying what Mould you can get over their Roots, and plenty of Straw over that, staying till the Frost be gone, that you may plant them safely. Tho' I have said that any time betwixt *October* and *March* be the season of Planting, yet I prefer Planting in Autumn rather

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ther than Spring, for these two following Reasons.

(1.) Because a Tree planted in *October* or *November*, if the Ground be not over-moist and cold, will make some little Progress towards its future Growth during the Winter Half-year, its Roots swelling and disposing themselves to put forth those several small Fibres, which are to nourish and support the Tree, and so prepare it for the kinder Influences of the Sun in the Spring? when also the Earth will be better fixed and settled about the Roots, so as to keep out the parching Winds of *March* and *April*, often fatal to young Trees, as well as new-removed Plants and Flowers.

(2.) Because the Spring is a time when the chief of a Gardener's Work comes on, Digging, Sowing all manner of Seeds, Grafting, and some Pruning and Nailing, therefore it is not desirable to have also the business of Planting Trees to do then, when most of his other Business falls together upon his Hands.

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Hands. We commonly say, what is done in a Hurry is seldom done well, and when Business is once put into good Order, 'tis nigh half done: It makes a great part of a Wise Man's Pleasure and Diversion, to have always something to do, but never too much. And methinks we should always chuse to have Amusements offer themselves to us, not in a Crowd, but in a regular and orderly Succession. Besides, some Intervals of Time betwixt one sort of Business in a Garden and another are very desirable to a good Man, who knows how to recapitulate all his Pleasures in a devout lifting up of his Hands, his Eyes, and his Heart to the great and bountiful Author of Nature, who gives Beauty, Relish, and Success to all our honest Labours. These grateful Thoughts, I own, these Contemplations in my own Garden, (with the Hopes of living in Paradise it self, where both Natural and Revealed Religion will be better understood than they are at present) give me a comfortable

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fortable Taste of the Divine Goodness and Bounty, which alone give the truest Relish to every Thing else.

But to return, and to conclude this Chapter: Your Trees being planted according to the foregoing Directions, and standing with their tall Heads till the beginning of *March*, tack'd to the Wall to prevent their being shaken with Winds, you are then to shorten their Heads according to the Rule already laid down; but great care must be had that it be done with a sharp Knife and a steady Hand, for fear of disturbing the Root: Cut it slopewise, the slope facing the Wall.



C H A P. III.

*Concerning the most agreeable Disposition
of a GARDEN.*

AFTER an early and diligent care to furnish our walls with Trees planted after the best Method, and in the properest Season, we will commit them
to

to the prolifick Blessing of Heaven, that gives Life and fruitful Seasons, and proceed to consider what is to be done next, to make the other parts of the Garden agreeable as well as profitable. My purpose is not to give you all the varieties of Platforms, nor to lay out great Designs. Every one may easily please himself in a Form that strikes most his own Fancy in so small a piece of Ground as I suppose a Garden need contain: Only, it may be, I may happen to give some useful Hints to those who are desirous to hear what others can say to direct their own Fancies.

I would say then, that if I were to chuse a Figure that could be as cheap and as easily had as another, it should be a Square, or rather an Oblong-square, leading from the middle of my House, a Gravel-walk in the middle, with narrow Borders of Grass on each side for Winter-use, and on each side of them Rows of all the Varieties of Winter greens set at due Distances, which will appear with an agreeable Beauty from the House all the

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Year. But then I say too, that I should be under no sort of Uneasiness to be confin'd to an irregular piece of Ground, which may be made to have its Beauties as well as the most regular. Strait Lines bring any thing into Order, and I see not but a Triangle in a Garden has its Beauty as well as a Square, and yet an irregular piece of Ground may be made to have Both by vertue of strait Lines, *viz.* Borders and Walks.

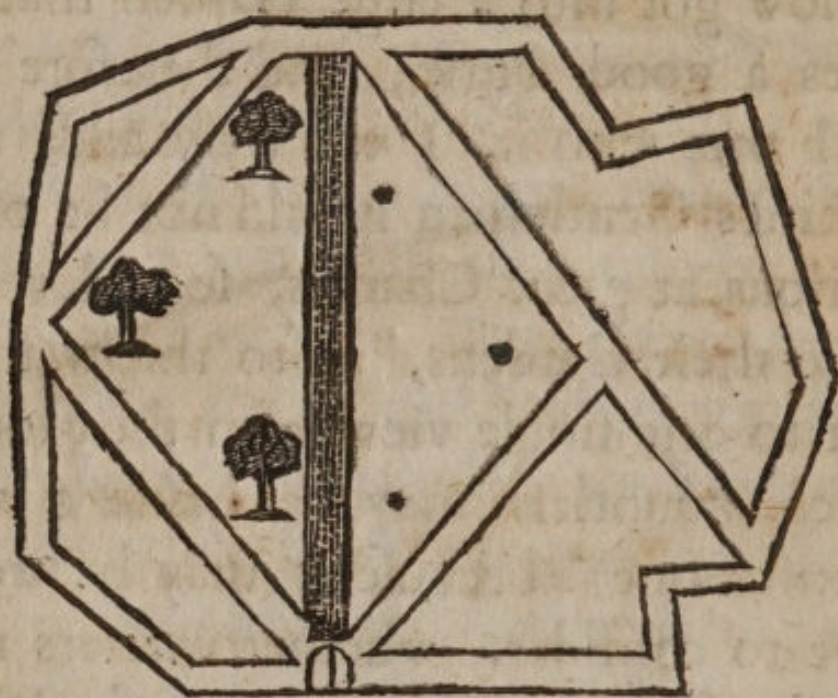
I confess indeed, an Irregularity is not so easily hid in a little Ground as it is in a Garden of larger extent, where long Walks and tall Hedges interrupt a distant and thorough View, and where, though the Walks and Hedges terminate in obtuse or acute Angles, no ways disagreeable to the Eye; yet you are insensibly led into new and unexpected Beauties still as you advance. Three or four Walks and double Rows of Hedges may be there contrived to open themselves at once to view, all terminating in the place where you stand; and the Triangular Spaces,

Spaces, by an ingenious Fancy, may be there agreeably disposed and filled up either with Borders of Flowers, or with Dwarf-Trees, or with Flowring Shrubs, or with Ever-greens? or lastly, with a little Wilderness of Trees rising one above another, till you come to the point of a tall one in the middle; this last may be made to look very beautiful with Charge and Care to clip them; for I am now got into a large Garden that requires a good Purse; and therefore before I part with it, I will only add, that methinks Gentlemen should not be oversolicitous at great Charges, so to level or square their Gardens, as to throw them open to one single view from the House; (which doubtless may be made a very beautiful one) because it may be worth while to consider, whether matters may not be so contrived, as to afford you many uncommon Prettinesses wholly owing to the Irregularity or Unevenness of the Ground; insomuch that every little advance you make, you shall be pre-

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sented with something new to strike the Fancy.

But altho' (as you see) Irregularities are best disguised and set off in a large Plot of Ground; yet even in a lesser Garden, and irregular Form, if it be not very awkward indeed, may be reduced to a Regularity sufficiently agreeable as well as useful, as may be seen by the following plain Scheme.



But it is seldom one shall meet with so irregular a piece of Ground ready Walled out and designed for a Garden; and it can hardly be supposed any Lover
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of Order would chuse to make it so, if he could easily help it.

As to the Walks, every one knows that both Grass and Gravel are very agreeable when they are well kept; and therefore it is convenient to have a mixture of both; and I think seven Foot wide is sufficient for either, in such a Garden as I am supposing. Only it may not be amiss to add, that it will be some advantage to your Fruit, if you contrive those Walks that run parallel to your South-east or South-west Walls to be Gravel, because the Sun will certainly thereby reflex an additional Heat to them. I have said nothing about the properest Materials for Walls, because I suppose every one will chuse to make use of such as are nearest at Hand, and what the Country affords. Brick is undoubtedly the handsomest and most commodious for Nailing; and considering what a great many Nails are used about Trees every Year, and that Lath-Nails will do for a Brick-wall, I believe 'twill ordinarily prove

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cheaper than that of Stone, whose Joints are larger, and require much bigger Nails. However, there is another sort of Wall very common in *Northampton shire* and *Leicester-shire*, viz. that made of Earth and Straw well tempered together, known by the name of Mud-walls, which (tho' not so handsome) I venture to affirm (contrary to what most have said) to be better than either of the two former for accelerating the ripening of Fruit, as I my self have found by Experience. The Fruit indeed is sometimes apt to be soiled by great dashes of Rain: But there is not much in that, and the Objection is wholly taken away in such Fruit as requires paring, as Peaches and Pears, &c. If the Walls be made of very good Earth, and well temper'd, Nails will do, otherwise I use Pegs of Wood, such as are used for bad Walls, for fast'ning the Branches. The large Copping of Straw that is laid upon these sort of Walls is no small Advantage to the Fruit in sheltering them, and keeping off all perpendicular Rains.

Rains. But, as I observ'd, they are not very slighty; and those who will regard Beauty should have Brick Walls.

It is not convenient to have the Borders under the Wall too wide; three Foot is sufficient, that you may not at every turn be forc'd to stand upon them to nail or gather. There are great Varieties of Aromaticks and other Plants recommended to support Borders, such as *Thyme*, *Winter-Savory*, several sorts of *Seduns*; but none I approve of so much as Dwarf-Box, in that it is so durable, and so easily kept with one clipping in a Year.

Great care must be taken that no sort of tall Trees be suffer'd to grow in any of the opposite Borders or intermediate Spaces, so that the Shade of them reach to any of the South-East or South-West Walls, whereby your Expectations of having good or early Fruit might be easily frustrated; those Places so near your Walls would be better filled with round Dwarfs kept hollow in the middle;

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or rather with flat ones, humouring the Borders with their Horizontal Branches; and what sorts are properest for these, I shall tell you in a Chapter by itself.

I never thought it any disparagement to my best Garden, where I make my Soil commonly better than ordinary, to sow in some of the intermediate Spaces some of those Reptiles useful in the Kitchen, *viz.* Carrots, Onions, Parsnips, Spinage, &c. that it may answer its purpose, a profitable as well as pleasant Garden; for these not growing tall, but kept clean from Weeds, are no unseemly sight at all, but rather make a pleasing variety amongst Trees and Flowers. Indeed, I commonly chuse to banish out of this Garden all those prouder taller things, Peas, Beans, Kidney-beans, and Cabbages, which are not so sightly, and look more ruinous; and therefore assign them a place by themselves at a distance.

It is needless to add any more Particulars under this Head; every one's own
Fancy

Fancy must supply what seems a Defect; for 'twould be endless to speak to all those Cases that an uneven irregular piece of Ground might seem to require.



CHAP. IV. Of NURSERIES.

AFTER we have given our selves some respite from the great Business and Concern of Planting and disposing the Ground according to our own Fancy, (for that's the Beauty that pleases most) we must by no Means forget, as soon as possible, to begin to raise Nurseries of all sorts of Trees, which will be growing up to exercise our Art and Skill, and supply all our future Wants, which also will still answer our purpose of Pleasure and Profit. And I am not for throwing such Nurseries too far from our daily and constant Inspection, but am willing, if possible, to let the chief of them have a place in the best Garden,
lest

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lest they be forgotten and neglected; for which purpose an irregular Figure in a Garden is peculiarly subservient, affording several little triangular Spaces proper to raise the several Nurseries we shall have occasion for.

Now there are at least two distinct Places to be allotted for the purpose of Nurseries, *viz.* one for tall Standards, Apples, Pears, Oaks, Elms, Ashes, Sycamores, and Limes, &c. which may be most proper to be at some distance from the House; and another for Dwarfs, such as you intend for Peaches, Apricots, Pears, Plums, and Cherries. And I would also have a third added for all sorts of Ever-greens by themselves. Now these two latter may be very properly made in some such by-places, as most Gardens will afford, and that with no interruption to the Beauty of it.

The Nursery you intend for the taller Standards should be made in a good rich light Soil, from the several sorts of Seeds peculiar to their kind, sown in *October* or
Novem-

November. Crabs and wild Pear-Kernels are not to be preferr'd for Stocks to make Apples and Pears. Limes and Elms are to be raised from planted Suckers; and if you sow Walnuts, 'tis adviseable to sow them with the Green Shell upon them, to preserve them from Mice in the Winter. If this Nursery be well managed, and kept clean from Weeds for two Years, the third Year the Crabs and Pears will be fit for Grafting and Inoculating, the Method of which I shall briefly shew you in a Chapter by it self.

It will be convenient to have the Nursery for Dwarfs by it self, that they may not be overtoppt by taller Trees. And you are to observe that the Stones of Peaches and Apricots are by no means proper to raise those sorts of Trees good or lasting: But for this purpose you must get together a good Quantity of Stones taken either from the Pear-plum, Muscle, or *Bonum magnum* Plum, which have been found by long Experience to be better and more lasting than any other.

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The not being careful about this matter has been the Occasion of great Disappointments; the Trees often dying after two or three Years, tho' the Stocks have been alive. Black Cherries also are the only Stocks whereon to raise all the several sorts of Cherries; but the best Plum will do on any ordinary Plum or Sucker: Tho' 'tis not so advisable to use Suckers, even from the best sorts, because they will be constantly apt to put forth such Plenty of Suckers themselves, and so the Vigour of the Tree may be too much exhausted that way.

The third Nursery also that I mentioned, of all sorts of Ever-Greens, is a very pleasant and profitable one, and deserves a place in our Garden; but it requires something a different Management from the two former. For which Purpose you must provide your self with a sufficient quantity of the Seeds, or Berries of Holly, Yew, and Juniper, which you may put into distinct but ordinary Pots or Boxes, putting also some fine Mould

Mould over them in the Pot, and so bury them for one Year. For if you should sow them (as other Seeds) immediately, they would not come up the first Year: by which means you would lose the Ground that Year, and have besides the trouble and charge of keeping it clear from Weeds: Whereas by thus laying them in heaps for one Year in any by-place, you will have them all ready by the following Spring to sow out in order, and they will come up as other Seeds; only you must be very careful to keep these Beds clean from Weeds, which do so easily choke all Plants of so slow a Growth. A slow Growth indeed they have for the first two Years; but after that, they will recompence all your Labour and Care, by their Beauty, Usefulness, and vigorous Growth: Whereas should you content your self to get these sorts of Plants out of the Woods or Hedges, they will mightily deceive you. The greatest part of them will die; and the rest will only toll you on with Expecta-

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pectations of their Growth, and yet will rarely prove vigorous and thriving Plants.

This last Nursery will be of great Use to give new Beauties to your Gardens as Occasion serves, or as your Fancy shall lead you to adorn it with several sorts of Ever-green Hedges: Among which, none in my mind is to be compar'd to the Yew, which is (as I say) so tonsile, and grows so very thick and beautiful with clipping, and withal bids defiance to the hardest Winters, that it is the best and most lasting Ornament in a Garden. To make one in love with these Hedges, you need only take a walk either in Paradise or the Physick-Gardens at *Oxford*, where you are presented with all that Art and Nature can do to make these things most agreeable to the Eye. Indeed, the Yew is a Plant that loves Uniformity, and is naturally apt to grow regular, and withal so intire that it is no very difficult matter to dispose it either for Hedges or Pyramids.

Your

Your Hollies will be best employed for Stocks to raise the several variegated sorts by Grafting and Inoculation, which, tho' now common, are no inconsiderable Ornament to a Garden, making their best Shew, when all other things have lost their Glory; especially when they happen to be full of Red Berries, which make a most pleasing mixture with white, or yellow, and green Leaves.

I ought to tell you in this place, that Firrs and Pines are to be raised from those little Seeds taken out of their large Apples, and they will come up the first Year, and will quickly make beautiful Trees, especially in a cold Clay. *Philerea's* and *Pericanthia's* will do best from Layers. And as for Vines and Figs, the Culture and Encrease of them is so easily had from Layers and Suckers, that you need not give your self any farther trouble about them.





C H A P. V.

Of PRUNING.

IT is of all others the most important Concern of a Lover of a Garden, to know how to prune his Fruit-Trees seasonably, and according to Art; that when he comes to examine them at the time of Fruit, he may find something more than Leaves or Wood. And yet I can by no means think it so difficult a matter to do, as Monsieur *Quintinye* would make one believe, by his tedious and enigmatical way of Writing on this Subject, which (as far as I can see) has rather perplex'd than inform'd his Reader. I have had twenty Years Experience in this Matter; and if I can but speak intelligibly, (as I hope I may) I question not but to make others perform and practise as successfully as I have done my self. So great a desire have I that the Love of Gardening may prevail, that it be not tired with great Charge and
little

little Profit, but be rewarded with good as well as much Fruit! Now in the Business of Pruning, it is a hard matter to speak to all Cases in exact Method, or in the Order of Time; I shall therefore first lay down some general Rules as the fix'd Laws whereby every one should govern himself in the Management of his Fruit-Trees, either Dwarfs, or those against the Wall, and then proceed to some other particular Directions that ought to be well regarded for each particular sort, tho' they have not ordinarily been taken notice of. To which purpose it is to be observ'd;

(1.) That the more the Branches of any Tree are carried Horizontally, the more apt and the better disposed that Tree is to bear Fruit; and consequently the more upright and perpendicular the Branches are led, the more disposed that Tree is to encrease in Wood, and less in Fruit.

This is what I have long experienc'd to be true; and (as I conceive) the rea-

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son

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son of it seems to be, That by bending down the Branches of a Tree from a Perpendicular to an Horizontal posture, you thereby check the Sap, or free Circulation of it; (for that it doth circulate, I shall shew you in another place) which Circulation when Nature performs most freely, tends to growth and encrease in Wood; but when it any way suffers a check either by Art or by Accident in the Body or Root, less vigorous and luxuriant Shoots are form'd, and consequently more bearing Buds.

(2.) As a Consequence of the foregoing Proposition, you are ever to take care to keep the middle of a Tree free from great Wood, or thick Branches; but as these encrease and grow upon you, cut them out intirely; there is no fear but the place will be filled up again quickly with better and more fruitful Wood. In Dwarfs you are to keep all open, intirely free from Wood, leaving only Horizontal Branches: And in your Wall-Trees, if you do but take care to fur-

furnish your Wall with Horizontal Branches, Nature will make an abundant provision for the middle; and therefore you must chuse discreetly such as are not over-vigorous Shoots, to furnish you with bearing Branches; a defect of which, or the want of plenty of Blossoms in any Fruit-Tree, is (generally speaking) a Reproach to the Skill of the Gardener. For tho' he cannot command Fruit from Blossoms, on the account of bad and unkind Seasons, and so cannot have it *when* he pleases, yet he may in a manner have it *where* he pleaseth, and keep almost all parts of the Tree in a bearing state.

(3.) Another general Rule to be observed is, to take care your Tree be not over-full or crouded with Wood, no, not even with bearing Branches, as is too frequently seen in the management of Peaches, Nectarines, and Cherries. Nature cannot supply a sufficient quantity of suitable Juices for them; and then the consequence will be, that none of them

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will be well supply'd, but the Blossoms will either drop off, or the Fruit will dwindle to nothing. However, this is certain, that a convenient space between one Branch and another is most proper; a multitude and confusion of Branches crouding one upon another, producing neither so much nor so good Fruit. So, crossing one Branch over another is reckon'd very unseemly, and is indeed contrary to the Rules of Art. But yet this is not to be thought so frightful a Sight, that we must constantly avoid it, even to the suffering void Spaces and Barrenness in the Wall, which is a greater evil. A slender-bearing Branch may often well enough steal behind the main Body of the Tree, or some of its larger Branches, and not offend the Eye at all; but may gratifie the Taste at the End of the Year. But still this Practice must not be made too bold with, for fear of Confusion.

Lastly, I shall only add for a general Rule, that all strong and vigorous Branches are to be left longer than weak
and

and feeble ones on the same Tree, consequently the Branches of a sickly Tree are to be pruned shorter, and fewer in number, than those on a strong healthful Tree. Methinks I need not add that all Branches shooting directly forward from Trees growing against a Wall, are to be cut off close to the Branch from whence they come; as also all Branches proceeding from the Knob, whereon the Stalk of a Pear grew, are to be intirely taken off; but not the Knob itself. After having given these general Directions, I am perswaded an ingenious Lover of a Garden, by the help of some Observations that he must have made of his own, might manage the Business of Pruning with tolerable good success; But because there are some Peculiarities belonging to the Management of almost every kind of Fruit-Tree, (such, I now mean, as grow against a Wall) I shall speak distinctly and particularly to each of them, what I have found by Experience to be a good and safe Method of Pruning.

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The V I N E.

I shall begin with the Vine, which of all others needs Pruning most; and tho' it is the easiest performed, yet (as far as my Observation has gone) it is least understood. Our Climate is not so favourable, or the Sun over-bountiful of his Ripening Heats, but there is need of all the Care and the greatest Art to cultivate and help Nature forward in bringing Grapes to any degree of Perfection in *England*. However, this is to be done most Years with some Diligence and Skill. We will then begin with the Vine, in the condition it is commonly left in *November*; which, if the Tree has any thing of Youth and Vigour, is confused and ruinous enough, tho' it has been carefully managed the preceding Summer, the Vine putting out the most and the longest Shoots of any other Tree. After therefore you have taken special notice of the First and Third general Directions already laid down, you must observe
this

this also peculiar to the Vine, That the lesser and weaker Shoots never bear any Fruit, and therefore must intirely be cut off, inasmuch as they would only tend to weaken the Tree, in drawing away that Sap that should go to nourish the Fruit-branches, which are those of the most vigorous sort; and therefore must carefully be preserved, leaving only 4 or 5 Buds or Eyes of the last Year's Shoot; for if you should leave more, they would only exhaust the Sap in vain, the first and second Eyes only bearing Fruit, and sometimes the third, from the extreme part of the Branch. Indeed, when a Vine has put forth a more than ordinary vigorous Shoot, and you can carry it Horizontally into a void place, it will sometimes bear in 5 or 6 of the extreme Eyes, and so may be left longer; but this is not ordinarily to be practis'd. A Vine must lie thinner of Wood than any other Tree, therefore you must carefully view what old Wood may be intirely spared, and how you can conveni-

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ently fill that Space with Neighbouring vigorous Shoots, still observing every Year to preserve the new Wood, and to cut out the old. This first Pruning of the Vine may be done at any time before *February*; but later than that is not adviseable, lest it bleed in the Spring, which it will be very apt to do at those places where you have cut off any thick Branches.

There is also a second and third Pruning to be performed on a Vine: The second is to be done about the middle of *May*, when the Bunches of Grapes are perfectly formed, and the Branch has shot 2 or 3 Foot long; then pinch off the Branch about six Inches above the Fruit, and nail or any way fasten it close to the Wall, so that the Fruit may touch, if possible. The fruitless Branches may be let alone to the third Pruning at *Midsummer*, when all must be re-examin'd; for then you are to unburthen the Vine of that multitude of luxuriant Branches it is apt to put forth, and to shorten them to a convenient length, to let in the Rays of
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the Sun towards Ripening the Fruit : Tho' you are to take notice, that it is not convenient to have the Fruit too much exposed, for fear of cold Nights and Rains.

A vigorous Vine will still require a fourth Pruning about *August*, when it will have shot out long Shoots from the extremity of the last Pruning ; which therefore must be shortned again, and some of the Leaves discreetly pluck'd away from before the Fruit.

There is a more than ordinary Necessity for carefully minding and managing the Vine, because all we can do is little enough to get ripe Fruit, especially some Years, and on a bad Soil : But even with both those Disadvantages, with a little Diligence and timely Care, there has seldom been a Year but I have had good Grapes, and most Years great Plenty. I have try'd some Experiments for accelerating the Ripening of Grapes, as putting the Fruit in *June* into an empty Flask, and running the Branches upon the Tiles of the House, or on a Slope-wall,

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wall, but neither answer'd my Expectation. The Grapes indeed ripen'd in the Flask rather sooner, but then they were apt to be mouldy, for want of free Air, and had an insipid Taste; and the Slopes, tho' they admitted more of the Sun's Rays, yet they subjected the Fruit more to the Rains, Dews, and cold Nights, which (as far as I could see) overpower'd the greater Blessing of the Sun. To so little Purpose is it for Men of Theory * to philosophize about these Matters, without having had some Experience and Knowledge in the Practice.

The PEACH and NECTORINE.

Both these require the same Culture and Management, and therefore I put them together; and if the general Rules already laid down be but carefully observed, there will not need much to be said towards the Government and successful Pruning of these, which are so apt to

* As an Ingenious Author has done, who has wrote a Book in Quarto to shew in a Mathematical Way the great Advantage of Slope-Walls.

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put forth plenty of bearing Branches after the second or third Year of Planting, that you may easily make choice of those that are good and healthful. If these Trees make too much haste to bear, *that* is a bad sign of Weakness, and they must be managed accordingly, by plucking off all or most of the Blossoms or Fruit, and pruning short. This is a very easie Management; all the Difficulty is, when a Peach is over-vigorous, for then Nature is apt to make great Confusion, and it requires some Skill to know what to refuse. You must therefore be sure what to chuse, and to cut out what great Wood can conveniently be spared, and what remains must be left the longer, ten or twelve Inches of the last Year's Shoot, not forgetting that in two or three Years it must be cut intirely out, when you can otherwise furnish your Wall with smaller Wood. Fruit-bearing Branches, which are very easie to be known by their full and swelling Buds, are not generally to be suffered above five or six Inches. These
(as

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(as I observed) are always of the weaker sort, and of the preceding Year's Shoot. You must take care to cut out all dead Wood, and yellow sapless Shoots; which that you may be sure to do, it is good for this and other Reasons to stay till the hard Frosts are over before you prune a Peach, which must be done with a sharp Knife too, otherwise Strings of the Bark will be left behind; a Pen-knife indeed is most proper for the small-bearing Branches. All *Autumn* Shoots must be rejected as useless and unprofitable. When you have thus trim'd and form'd your Tree into Beauty and Order, you have little else to do at it (except the thinning your young Fruit where more than two grow of a heap together) till *Midsummer*, when you must shorten the Shoots discreetly, and fasten them to the Wall, no matter in what Order, because that must be alter'd the next Pruning, only you must take care to let the Fruit see the Sun as soon as 'tis partly come to its

its bigness, which will give it its proper beautiful Colour, and Maturity also.

After what has been heré said, I cannot think it necessary to add any thing particularly with respect to the Apricot, that requiring the same Management as the Peach, except that there is no Danger of its bearing too soon, and that it is something more apt to run into Wood, which therefore must be particularly consider'd, and guarded against.

The P E A R.

There is no Tree requires the exact and careful Observation of those general Rules laid down, so much as the Pear, which in free and rich Soils is apt to be unruly and ungovernable, running altogether into Wood and luxuriant Branches. It is commonly too proud for a Wall; but yet for the sake of that noble Fruit which some Kinds produce by the Help of a Wall, it is worth while to humble him and keep him in Order. For which purpose (besides what has been already said)

said) I sometimes plash the most vigorous Branches, cutting them near the place from whence they shoot, more than half through, which effectually checks its Vigour, and consequently renders it more disposed to make weaker Shoots, and form bearing Buds. This Method of Plashing is also of singular Use, when you would avoid Barrenness, and have only an awkward Branch to make use of to fill the Vacancy: For by this means you may reduce it to what Order you please, so as to answer your purpose, and reward you with Fruit. But you are to take notice that this is not to be practised on any Tree but the Pear and Plum; the Trial would be too dangerous on the Peach or Apricot, because they would be apt to put out Gum at those Places, and so endanger killing the whole Branch.

I am aware that many recommend Grafting the Pear on a Quince stock, which indeed effectually cures too great Luxuriance and Growth, and may for a time

time answer the Purpose of bearing quickly, (which therefore may make it worthwhile for them that have a great deal of Room to have some of these) but they are not long-liv'd, do not bear such fair large Fruit, nor make such handsome regular Trees, as those grafted on a Pear stock, which I therefore chuse to recommend to all those who have not room to try doubtful Experiments.

You will easily distinguish the bearing Buds of a Pear-tree as soon as the Leaves are off in *November*, which are much fuller and more swell'd than others; which is to be carefully minded, that you do not cut them off in your Pruning. All false Wood, or, as others call them, Water-shoots are to be taken away, being easily distinguished by their having Eyes at much greater distance than ordinary from one another: These are found in most vigorous Trees, especially Peaches. The Cock-spur is also to be taken off, *viz.* the Extremity of the last Year's Pruning. It is to be managed as the Peach in the Summer.

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The F I G.

As this Fruit is commonly little known, and less valued by any but those who have *Gustum Eruditum* (in *Petronius's* Phrase); so (as far as my Observation has gone) the Management of the Tree seems to be as little understood. For as I have hitherto given Directions for the right Pruning of other sorts of Trees, so I must here direct and recommend the not Pruning at all. The not understanding of which has, to my Knowledge, been the occasion of that Barrenness, so visible in many Noblemen's and Gentlemen's Gardens. There is no Tree that doth generally produce more certain and plentiful Crops than this, if it be rightly manag'd, or rather if you keep the Knife from it.

But when I say it must not be pruned, I only mean that its tender Branches are not to be shortned, as in other Trees; because it is plain it puts forth its Fruit chiefly at the Extremities of the last Year's Shoot,

Shoot, commonly at the three last Eyes; any part of which if you take away, you cut off and destroy so much Fruit. But yet this must not be suppos'd to hinder you from taking out the great Wood entirely, to avoid Confusion, and also to cut some of the weak smaller Shoots close to the great Wood, these being of no Use but to exhaust Sap. Whatever therefore you cut from the Fig, you must do it as close to the Root, or any great Wood as you can, and that no earlier than the latter end of *March*, for fear of Frosts and cold Rains: Only it is adviseable to tack its best and biggest Branches close to the Wall in *November*, that they may be the better shelter'd from the extreme Frosts in the Winter. Be sure to keep it free from Suckers, which this Tree is apt to put forth plentifully. And I think there need nothing farther to be said for the Government of this Tree, if the three first General Rules be but observed as they ought.

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Cherries and Plums require little Skill to make them bear against a Wall in almost any Soil, and therefore there needs nothing to be added to the general Observations laid down. I shall only take notice, before I conclude this Chapter, that both Winter and Summer *Bon-Cretien* Pears want more Room to spread and extend themselves than any other; and therefore if you expect them to bear, you must allow them Elbow-room and Height too; for if you should confine them by short Pruning, they will grow Knotty, and full of Wood without Fruit. I have myself seen the Summer *Bon-Cretien*, in the Garden of my worthy Friend Dr. *Wickart*, now Dean of *Winchester*, bear plenty of noble large Fruit, betwixt twenty and thirty Foot high. There also I have eaten excellent Figs, from a prosperous Tree, even the same that afforded some to King *James I.* near a Hundred Years ago, as appears (I think) from a *Memorandum* on the Wall.



C H A P. VI.

Of GRAFTING and INOCULATING.

THese two Operations in Gardening are pretty Philosophical Entertainments to a Lover of Curiosities in Art and Nature; and therefore, tho' they have been fully treated of by others, yet because they make up so great a part of a Gardener's Diversion and Pleasure at two several Seasons of the Year, I shall describe and explain the Method of performing both distinctly, that this small Treatise may not be thought defective in so considerable a Point.

There are several ways of Grafting, but I shall mention only two, that I think most proper to the several Kinds of Trees. The first is that common way of Slit-grafting, which is performed on Pear, Cherry, and Plum-stocks, especially if they are of any bigness; by first chusing a smooth Place in the Stock where you would graft, cutting the Head off slope-

wise; then *even* the Top of the Slope Horizontally with your Knife, making a Slit down the middle of the Stock discreetly with a strong Knife, or otherwise; then prepare your Scion taken from a vigorous Shoot of the foregoing Year, sloping it on each side from a Bud or Eye, so that it may conform it self to the Slit in the Stock, the Bark of Scion and Stock closing exactly. Let it be daub'd pretty thick over with Clay temper'd with short Hay, taking care not to disturb the Scion, which must not be left with above three or four Eyes above the Stock. The other way is much preferable to this, but can ordinarily be perform'd only on Apples and Hollies, the Bark in others not handsomely parting from the Wood, as it must. The way is to cut off the Head of the Stock slope-wise, &c. as before, and instead of slitting the Stock, slit only the Bark a little above an Inch on the back-side of the Slope; then prepare your Scion made with a flat Slope about an Inch long ending on

a Point, and begun from the back-side of an Eye ; but because it may disturb the thin end of the Scion to raise the Bark of the Stock, where you made the Slit, get any other piece of smooth Wood cut slope-wise as the Scion, and thrust it down betwixt the Wood and the Bark, which you will find readily to part, and then put in your Scion ready prepared, the Top of the Slope being thrust as low as the Top-surface of the Stock. Clay it over as before, and leave as many Eyes. This I find to be almost a never-failing way for Apples and Hollies ; and I prefer it to the other, because it doth not give so grievous a Wound to the Stock by flitting it, which sometimes proves fatal. Besides, in this last way the Scion does much sooner heal over and cover the Stock, whereby the Union is entirely compleated.

The first Operation must be perform'd on Pears, Cherries, and Plums, the latter end of *February* or beginning of *March*, but Hollies and Apples must not be

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grafted till the beginning of *April*; it is convenient that your Scions be cut off a Fortnight or three Weeks before you use them, and laid in the Shade.

But notwithstanding both these Ways may prove safe and proper Methods for propagating those several kinds of Fruits, yet I much rather prefer, and therefore recommend that other Operation called Inoculation or Budding, the Method of which I shall now describe: Cut off a vigorous Shoot from a Tree you would propagate any time a Month before, or a Month after *Midsummer*; then chuse out a smooth Place in your Stock (which should not be of above three or four Years growth) making a downright Slit in the Bark of it a little above an Inch long, and another crose-wise at the bottom of that, to give way to the opening the Bark. Then with your Penknife (not too sharp at the point) loosen gently the Bark from the Wood on both sides, beginning at the bottom; which done, prepare your Bud taken from
the

the aforesaid vigorous Shoot, which must be cut off with a sharp Penknife, entering pretty deep into the Wood, as much above as below the Bud, to the length of the slit in the Stock as near as you can guess. After the Bud is thus cut off with the point of the Penknife and your Thumb, take out the woody part of the Bud; and if in doing this the very Eye of the Bud come out, and leave a deep Hole, throw it away, and take another. Then put this Bud in between the Bark and the Wood of the Stock at the cross-slit already opened, leading it upward by the Stalk where the Leaf grew, 'till it exactly closes: Then bind it about with coarse woollen Yarn, the better to make all parts of it close exactly, that the Bud may incorporate itself with the Stock, which it will do in three weeks time, when you must loosen the Yarn, that it do not gall the place too much, as it will be apt to do in a vigorous Stock. This Operation is best perform'd in a cloudy Day, or at an

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Evening; and you are to observe, the quicker it is done, the better it will succeed. For tho' a pretty many words are necessary to describe the Method of doing it, yet after a little Practice, and that you are become ready at the work, thirty Inoculations may be done in an Hour: But you may take notice, that it is convenient to put in two or three Buds into one Stock, especially Peaches and Nectorines, that you may have the better hazard of having one Hit, which is enough.

Peaches, and Nectorines, and Apricots are not to be raised any other way but by Inoculation; and as for Pears, Cherries, Hollies and Plums, tho' (as I have shewn you) they may be Grafted, yet I prefer Inoculating them, for these following Reasons.

(1.) Because it is the surest and less hazardous way; nay, if the Stock be but vigorous, and not over-big, it is almost a never-failing way; for by putting in two or three Buds into one Stock, it will
 fel-

seldom so happen but one of them will hit, and that's enough; whereas in Grafting you are forc'd to make a dangerous Experiment, by cutting off the Head of the Stock; and if the Scion do not take, the Season is lost, and your Stock maimed.

(2.) I prefer Inoculation, because it may be performed by any Gentleman himself, with more Pleasure and less danger to his Health. It requires no daubing with Clay, only a Penknife and a little woollen Yarn, which are both portable, and therefore always ready to be made use of, whenever his Meditations shall give way to his Pleasure. Besides, this Operation is perform'd in Summer and warm Weather, when it is healthful as well as pleasant to be busied in a Garden with some such little Amusement. Whereas the season of Grafting is in the Spring, when there is more Danger of taking Cold in a Nursery, where you must expect wet Feet and dirty Hands.

Lastly,

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Lastly, if you begin to bud in *June*, and you find it doth not succeed, (as you may find in three Weeks) you may make a second Attempt the same Year on the same Stock, and that with very good Success: For in some cases a Disappointment is very undesirable; as when you would change the kind of Fruit on a Stock against a Wall, the sooner your End is compass'd, the better.

However, if you are forc'd to practise upon large Stocks, you must be content to graft, because when the Bark is become thick and stubborn, it will not readily part, nor so handsomely close upon the Bud. But if the Graft happen to miss (as it will be very apt to do in large Stocks, if you do not take care to leave a leading Branch to carry up the Sap which would otherwise choak the Scion) those slender Shoots which shall be made near the Grafting-place will do right well to inoculate on, sometimes even in the same Year.

The Cherry, Plum, and Pear, but especially the latter, if the Stocks be any thing vigorous, almost never fail to answer your Expectations in Budding; and there is one more Advantage here, above what can be had in Grafting with respect to the Plum, *viz.* That you may inoculate pretty surely any Plum on a Damson, or Wild-Plum-stock, which yet will be sure to fail you if you Graft on it. But yet this General Rule is always to be regarded, with respect not only to this, but all other Stocks; that 'tis a vain Expectation to hope for Success if the Sap do not run well (as we say) that is, if the Bark will not readily be persuaded to part from the Wood of the Stock by the help of the Penknife.

No sort of Fruit is more untoward, and more apt to deceive you in Budding than the Apple, because the Bark is not so ready to part as in other Fruit. Yet I have my self practis'd it several times with Success on vigorous Shoots put forth near the Place where the Graft failed.

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Any time between the beginning of *June* and the latter end of *August*, Allowance being made for different Seasons, you may Inoculate most Trees ; nay, I have several times Inoculated Pears in *September* with good Success. But it must be taken notice of, that the Branch or Shoot which you make choice of for Buds to inoculate with, must not lie by any time (as in Grafting) but must be immediately made use of, as before directed.

The several Kinds of Oranges, Lemons, strip'd Philarea's and Jessamines, are to be propagated by Inoculation. And now I mention the Jessamine, I cannot but take notice to you what a noble Demonstration, the yellow strip'd Jessamine has afforded us, of the as certain Circulation of the Sap in a Tree, as of the Blood in the Body of an Animal ; which matter, altho' it has been believ'd by some, yet it has been denied by others. And therefore because it has not as yet (as far as I can learn) been brought

brought to any Certainty or Demonstration, I shall here relate the Means of this noble Discovery by virtue of Inoculation.

Suppose a plain Jessamine Tree, spreading itself into two or three Branches from one common Stem near the Root. Into any one of these Branches in *August* inoculate a Bud taken from a yellow strip'd Jessamine, where it is to abide all Winter; and in the Summer, when the Tree begins to make its Shoots, you will find here and there some Leaves ting'd with Yellow, even on the other Branches not inoculated, till by-degrees in succeeding Years the whole Tree, even the very Wood of all the tender Branches, shall be most beautifully strip'd and dy'd with Yellow and Green intermix'd. It is not material whether you cut off the Branch above the Inoculation to make the Bud itself shoot; for it will have the same Effect of tinging by degrees all the Sap of the Tree, as it passes by or through this Bud, and communicating its Virtue to the most distant and opposite Branches, tho'

tho' the Bud it self should not shoot out. Nay I have my self several times experienc'd that if the Bud do but live two or three Months, and after that happen to die, or be wounded by any Accident, yet even in that little time it will have communicated its Virtue to the whole Sap, and the Tree will become entirely strip'd. This Discovery undoubtedly proves the Circulation of the Sap. *Q. E. D.*

What farther Uses and Observations may be made from hence, I leave to other Philosophical Genius's and curious Enquirers into Vegetable Nature; and shall only add to this Chapter, that when you find in the Spring, or the time when the Tree begins to shoot, your Inoculation takes, and the Bud looks green and fresh, you must not forget in all cases (except this of the strip'd Jessamine) to cut off the Head of the Stock slopewise about an Inch above the Bud, the slope ending on that side where the Bud is. It may not be amiss also to add, that where you put in more than one Bud, it is not
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convenient to place them just one above another, but sidewise.



C H A P. VII.

Concerning the proper Disposition of Trees against a Wall; the best Kinds of each; their Order, and Time of Ripening.

IN speaking to these several Points, there are great Allowances to be made for the great variety and difference of Soil, which as to the ripening and perfecting of Fruit has more in it than most People are aware of. For I question not but a good Soil, *viz.* a rich, deep, sandy, mix'd Earth, in fifty four Degrees of Latitude, will do more towards accelerating the Ripening the best Fruit, than a bad one, *viz.* a stiff cold Clay, will do in fifty one. And so a North-west Wall in an extraordinary good Soil will do as well for a Buree or a Vine, as a South-west Wall will do for the same in a bad one

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one in equal Degrees of Latitude. The Rules therefore that I should lay down must be calculated for the common State and Condition of most Places in *England*, which generally want all the Advantages that Art can give them to Ripen the best and latest Fruit. Most that know any thing of Gardening can tell, that a Peach, an Apricot, and a Vine are to be set against their best Walls; but as for Figs and Pears, tho' of the best *French* sort, they are ordinarily crouded into any Corner, or against a North east or North-west Wall; whereas in truth many of them deserve the very best Place in the Garden, especially in such a Garden as lies upon the moist Clay, which yet may be made, by the Directions already laid down, *Chap. 1.* agreeable enough to the best Pears, Figs, and Plums. And truly those who have the Misfortune of a cold Soil, I cannot but advise not to strive too much against Nature, in aiming to have the late Frontiniack Grapes, or the choicest Peaches, especially if they lie
open

open and unguarded from the cold Winds, their Expectations will be quickly tired with watry, unripe Fruit; whereas if they did but suit their Soil with proper kinds, they might be rewarded with something good: For I am of Sir *William Temple's* Mind, that a good Plum is much better than a bad Peach.

As to an exact and proper Catalogue of the best kinds of the several sorts of Fruit, no other can be expected than what the Author most approves of himself, who, in this case, can be supposed to act no otherwise than is common with a Physician as to his general Rules and Directions in Diet for preserving Health, *viz.* to prescribe what he loves himself. If then there is not found in this small Catalogue (suited to the Garden and Persons designed) that particular favourite Sort which some Persons may expect, let it not be concluded that all others but what are here named are condemned as naught; but rather that it is thought advisable not to perplex a Lover of Fruit

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with

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with an unnecessary number and variety of sorts, when he has room only for a few good ones of each Kind. He that has room, and would encrease his Collection, may have recourse to Monsieur *Quintinye*, or to the Abridgement by Mr. *London and Wise*, and he will quickly have his Curiosity satisfied. In the mean time I shall satisfy my self with such a Collection as seems most proper and suitable to the Garden I am supposing. But before I begin it, I ought to say thus much first, That it must not be thought strange, if sometimes the Fruit here recommended do not answer, but prove watry and insipid, there being a certain agreeableness of Soil peculiar to almost every kind of Fruit; at least thus much is certain, that a good sort of Fruit may prove bad in such a Soil as will make another good sort excellent in its kind; and the best Peaches may prove bad, where Pears and Apricots will excel; neither ought we too hastily to conclude and give judgment against what may
only

only prove bad from an unkind Season. But when it is found by Experience that the Soil and the Kind do not agree, the best way is to lose no more time, but either prepare another for his place, or alter the sort by Inoculation, which is very easie and quickly to be done, if the Stocks be good, and not too big

The best Peaches to be planted against a South-Wall, (or inclining to the East or West) as follow in the Order of their Ripening :

	<i>Ripe.</i>
The White Magdalene,	{ Middle of <i>August.</i>
The Minion,	
The Right Old <i>Newington</i> ,	{ Beginning of <i>Sept.</i>
The Chevreux,	
The Admirable,	{ Middle of <i>September.</i>
The Nivet,	
The Red Roman	{ Middle of <i>September.</i>
Nectorine,	

Apricots will do against East and West-Walls.

Ripe.

The Masculine Apricot, Middle of *June*.

The Orange Apricot, Middle of *July*.

Figs must be planted against a South-East or South-West Wall. Only two sorts good,

The White Fig, } End of *August*.
The long Purple Fig, }

The long Purple Fig,

A Catalogue of the best *French* Pears that require the best Wall and Aspect you can give them, and will not be ripe till some time after they are gathered.

Ripe.

The Summer Bon Cre- } Beginning of
tien, } *September.*

The Buree du Roy, End of *Sept.*

The Verte-Longue, Octob.

The St. Germain, Novemb.

The Spanish Bon Cretien, *Novemb.*

The Ambret, Decemb.

Colmar, Decemb.

Chryſan,

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Chrysan, *Decemb.*

The Winter Bon-Cretien, *March.*

Some other good Pears that will do on North-East or North-West Walls;

The Orange Bergamot, }

The St. Katherine, } *Septemb.*

The Roussellet, }

The Black Pear of Worcester, }

The Pound Pear, } *for Baking.*

Peculiarly good for Dwarfs;

The Swan's Egg, [*Nulli secundum*] *Octob.*

The Bergamot, } both well known in

The Windsor, } *England.*

The foregoing sorts, recommended for North-East and North-West Walls, will also do well for Dwarfs, if occasion be; as there are also many other sorts might be added: but needless Varieties I recommend not.

It is very adviseable to plant in such Places as are most exposed to Comers and

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Goers, those Kinds of Winter-Pears that are hard and unpalatable, whilst they are on the Tree; otherwise the Owner will reap little else but Disappointment and Vexation. That side of the House, or indeed any of the Out-houses, which is exposed to the South, will do singularly well for the Ambret, the St. Germain's, but especially for any of the *Bon Cretiens*, (except the Summer, which is too tempting) these loving room and height; and as delicious Fruit as they are, will not abide to be tasted a second time when newly taken from the Tree. The Winter *Bon Cretien* is remarkable for keeping longest, and all the sorts of them are as remarkable for answering so well the Purport of their Name *Bon Cretien*, or *Good Christian, Sound at Heart*; (the right sort alas! hard to be met with) for as in time they begin to decay and rot in the outward parts or pulp, so it is observ'd that the Core or Heart continues generally sound to the last.

There

There are several sorts of Grapes, and most of them in some good Years will ripen in *England*; but I think the white Muscadine and the black Cluster Grape are the only sorts that one may depend upon to have some pretty good almost any Year. I need not say that all of them expect the best Wall and Aspect we can give them, to help them to that Maturity and dulcedinous Juice which make it either pleasant or safe to eat them in any quantity. But let the Wall or Aspect be never so good, yet I must repeat it, that if it lie open and expos'd, without any break of Hills or Wood at a distance, you will certainly be deceiv'd in your expectations of good Fruit.

The white Raisin-Grape, admirable for Tarts, where there is room enough.

There are also a great variety of Plums, and some of them so good as to deserve the best Walls, as the blue and white Perdrigons and Imperial Plums; but such as follow are those I recommend for Dwarfs,

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Standards, or North-East and North-West Walls:

The Orleans,

The Muscle,

The Queen-Mother, } Plums.

The Damascene,

The Violet,

Fothering, a good Bearer, fine Plum.

Perdrigon, blue and white, very good.

Le Royal, the best Plum that grows;
but a bad Bearer.

Drop of Gold, a yellow Russet, good.

The white Bonum Magnum, } for Ba-
The Pear-Plum, } king.

The Damson every one knows to be good, and it is to be raised from the Stone, or by Suckers without grafting, best a Standard. There are many other good sorts which I mention not, because they are generally idle ill Bearers.

Most Cherries will do on Dwarfs or Standards, but are mended against a Wall:
As,

The

The Orleans or Bloody Heart, } on East or West
 The *May-Duke*, } Walls.
 The Morella on a North Wall.

But the Common Flemish is quite spoil'd against a Wall.

It will be necessary before I conclude this Chapter to add, That the time of Fruit's Ripening is very different in different Years ; and tho' I have fix'd the general time, yet it must not be wonder'd at if a bad Year make some Fruit, especially Winter-Pears, a Month or two later before they come to their Maturity ; only I have observed, when they much exceed their usual time of Ripening, they are never so good, and have not their true rich Taste.

N. B. When it is advised here to plant such a Tree against a South Wall, if that Wall happen to decline some few Degrees to the East or West it is never the worse, but altogether as good, provided the Declination be not above fifteen or
 twenty

twenty Degrees, because in that Case the Wall would enjoy the same Time, and as many Hours of Sun-shine: But when I say an East and West Wall will do for an Apricot, 'tis supposed that there is not the least Declination towards the North; for that would wholly defeat the Design and Expectation of the Planter; so that if it have any Declination, it were to be wish'd it had it toward the South.

N. B. An East Aspect is better for all sorts of Fruit than a West; not that it can be supposed to have more Hours of Sun-shine; but because the early Rays of the Sun take off those cold Dews which are apt to fall and hang upon Fruit in the Night, which in the Case of a West Wall are not taken off till later in the Day, and consequently the Fruit is more subject to be chill'd. Whether this will be thought a good Reason or the only Reason I cannot tell; but thus much is certain in experience, that an East Wall
is

is better and kinder for all Fruit than a West ; and I cannot easily be brought to believe that there are any peculiar inherent Virtues and Qualities in the Eastern Rays of the Sun that should cause this difference in Vegetation.

N. B. I have said nothing about the Management and Culture of Raspberries, Strawberries, Gooseberries and Corants, because little Skill is required, besides this one Rule, that they are not to stand too long in a place, nor above four or five Years before they be renewed, especially Strawberries, which must be kept clear from Runners all the time of their Bearing.

N. B. It is of very mischievous, if not dangerous Consequence, to let Rosemary grow too near any of your Fruit-Trees, especially if they be young ; for that will not fail to rob them of so much of their proper Nourishment, as that they will be infallibly weaken'd, if not in danger of being kill'd.

The CONCLUSION.

I Have now gone over some of the most considerable Particulars relating to the Art of *Gardeniug*, and (I hope) not *mal à propos*. Thus much, at least, I have endeavoured, To speak intelligibly, to lay down my Rules and Observations in a tolerable Method, and to avoid unnecessary Prolixity: All which I have constantly had in my Eye, that I might in some degree attain the End I aim at, *viz.* To make those Persons (especially those of my own Order, who may not have had so much Experience in this particular Science, in love with so innocent, so agreeable, and so profitable a Diversion.

I might have added (as some others have done) a Chapter about the several Diseases which the different sorts of Trees are subject to; but except a proper Remedy were also added, it is to little purpose

pose to mention the Disease : And as far as my Observation has gone, I plainly perceive most are incurable, and therefore have always chose to have recourse to my Nursery for another to put in the place. The Gum and Canker are plainly incurable, and the part affected must be cut off, except there remain a sound part sufficient to convey the Sap : Wet cold Soils are most subject to these ; and therefore in such Case, the best preventing Physick you can give, is to plant high. Moss shou'd be carefully rubb'd off with the back of a Knife or piece of Hair-cloth, after a Showre of Rain.

Because both Grass and Gravel-walks are so much the Ornament and Beauty of a Garden, and do afford so considerable a Pleasure to a thoughtful, contemplative Person, I cannot but here insert a speedy effectual Method of destroying Worms, those filthy Annoyers and Spoilers of the Beauty of all Walks.

At any time in Autumn fill a Cistern or any large Trough with Water, putting

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ting thereinto a large quantity of Walnut-Leaves, where let them steep at least a Fortnight or Three Weeks; in which time the Water will have received such a Bitterness, that if you pour gently a small quantity of it on such places as are most annoyed with Worms, by that time the Water can be supposed to reach them, you will find the Worms hurrying in great Confusion out of their Holes, so as to crawl in great plenty under your Feet upon the Ground, where they may be gather'd up and thrown away. They may indeed be taken by a Candle and Lantern in a Summer's Evening after Rain; but this may be practised at any time in the Day with pleasure, and it will certainly destroy them, if it be but carefully practised and repeated: Only be sure to put Walnut-Leaves enough, that the Water be very bitter, otherwise it will do no good.

It is very convenient to have such a large Cistern or Stone-Trough as I here speak of, as for the foregoing Use, so also
for

for a Treasury of Rain Water, wherewith to refresh your Flowers and new-planted Trees in the Droughts of *April* and *June*. And for this Reason it should be fix'd under such Parts of the House where the greatest plenty of Rain-water is made to descend, where also it will be found to be not a little serviceable to the Family in the Winter. And if it shall be thought difficult (as indeed it is) to procure such a sort of Stone as will indure the hard Frosts in the Winter ; as a Remedy for this, I myself made an Experiment upon a very brittle Stone-Trough, which the Mason himself told me would not endure the Frost, and it succeeded according to my Expectations. I used it for salting Meat in the House for two or three Months, till I thought it was thoroughly soak'd with Brine, and then set it abroad, and it has already endured six Winters, and defied even the great Frosts in 1708.

N. B. I have said nothing concerning Apples, because they are generally Standards,

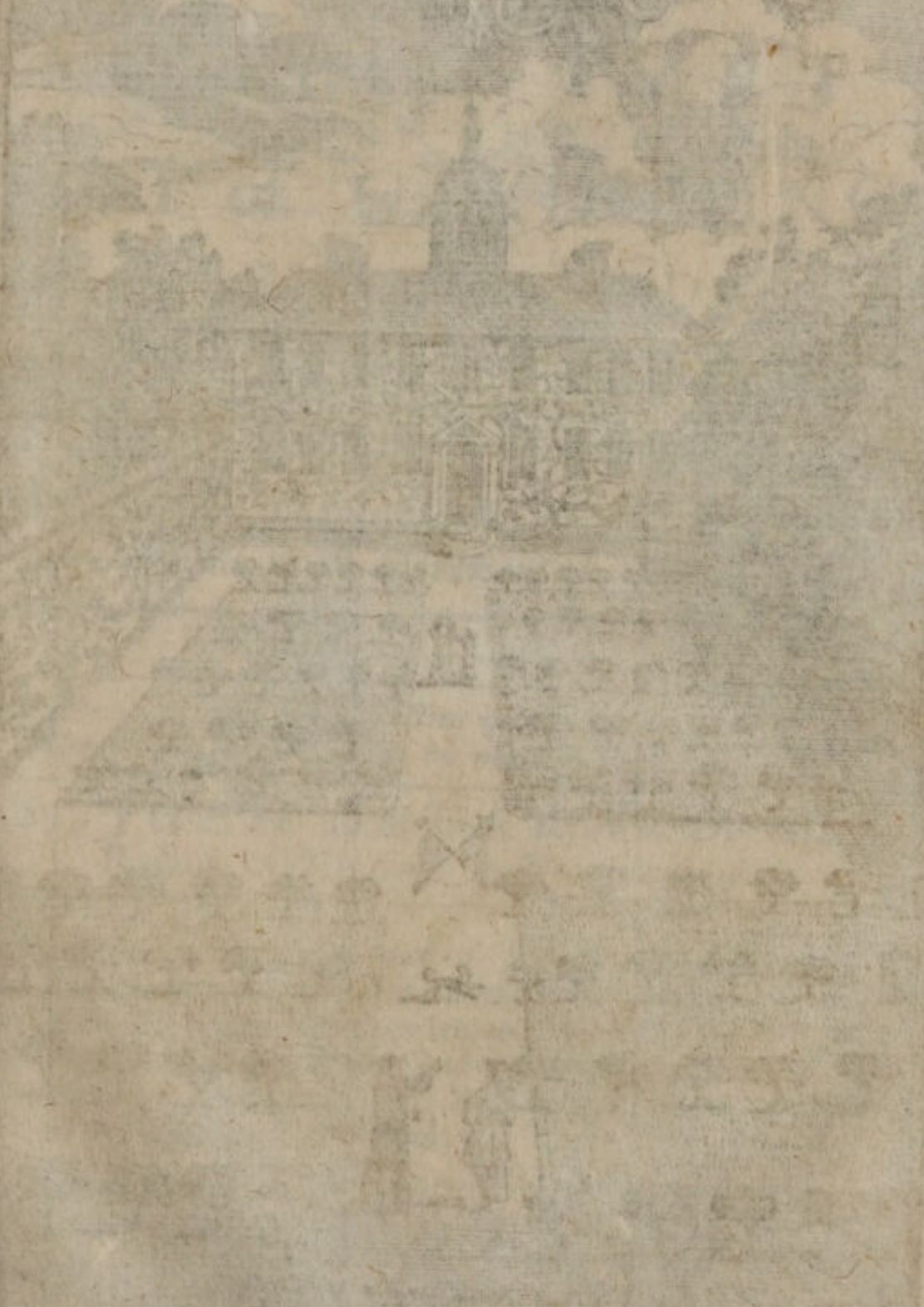
84. *The Pleasure and Profit, &c.*

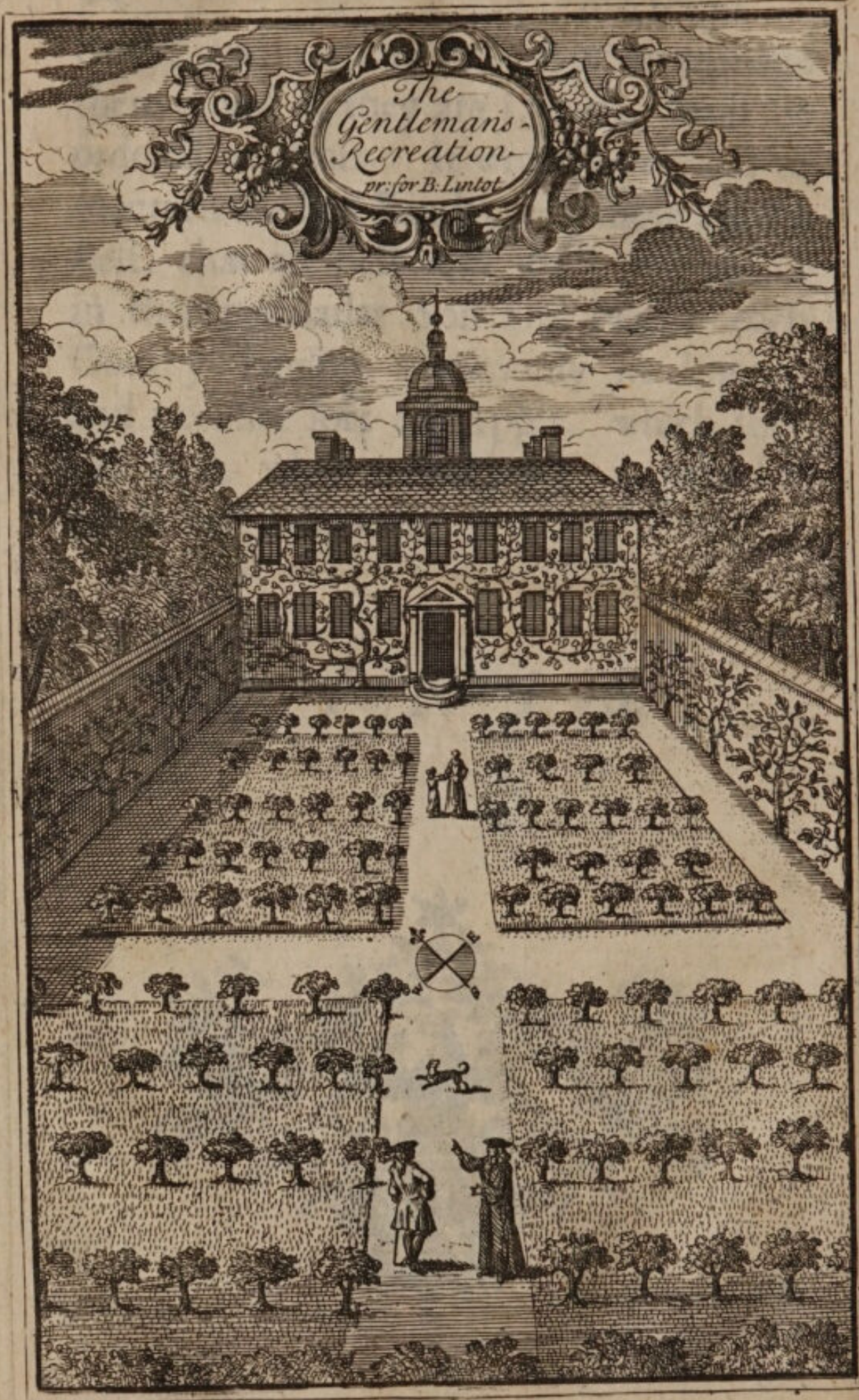
dards, and require little Art to manage them; and if they are Dwarfs, must be ordered as Pears. It would be endless to mention the best Kinds; For those are the Best, that are best and most prosperous in that particular Soil and Place: each County having commonly its known and peculiar sort of Apple, which they call Best, which would not, it may be, prove best in another.

F I N I S.



THE
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OF
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— *Si quid novisti rectius istis,
Candidus imperti; si non, his utere mecum.*

Hor.

By JOHN LAURENCE, M. A.
Rector of Yelvertoft in Northamptonshire.

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The SECOND EDITION

LONDON: Printed for BERNARD LINTOTT
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treating the Walls with Mortar &c.

Illustrated with Copper Plates.
By JOHN KILPATRICK ESQ.
Gentleman of the Court, in the
Hon.

BY JOHN KILPATRICK ESQ.
Gentleman of the Court, in the

to which is added a new and
entire way to dress a garden
this part relating to the
and the best manner of
to the best of the

THE SECOND PART
OF THE ART of GARDENING
IMPROVED.



T H E
PREFACE.



THE Encouragement and favourable Reception which my former Treatise of Gardening hath met with in the World, makes me here engage a second time on the same Subject, and venture to enlarge on some Experiments and Observations, which the Nature of that intended short Essay suffered me only just to touch upon.

I was afraid of engaging too far at first, lest I should not be able to make an honourable Retreat: But since the Gentlemen as well as Clergy, have been pleas'd to accept and like what I have delivered in a plain and familiar manner, and

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have generally honoured it so far as to complain only of its Brevity; Decency and good Manners oblige me to remove those Complaints, and to address my self now to the Gentlemen, as I have already done to those of my own Order, persuading them also to love a Garden by the same two powerful Motives of Pleasure and Profit.

The Apology for engaging in these Matters as a Clergyman, I will not repeat, because it hath been very kindly admitted: Neither indeed do I look upon this Science so remote from the Business of a Clergyman, as is generally thought. It is a mix'd Subject; and the Moral is, as it were, interwoven with the vegetable World. Man having an active, busy Principle within him, it is of great Consequence what sort of Entertainment and Exercise of the Mind he chooseth; for, according to that Choice, he either dignifies or dishonours his Nature.

It is no small Felicity to a Man, when his Pleasure tends also to his Perfection:

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fection: For most Men's Pleasures are such as debase their Natures; and we commonly gratifie our lower Faculties, our Passions, and our Appetites; and these do not improve, but depress the Mind.

All the extravagant Pursuits of Ambition and Avarice, of Lust and Revenge, of Luxury and Intemperance, do of themselves tend to debase Man's Nature, and sink it down into a great Resemblance of that of the Beasts below him. Whereas on the other side all the manly Exercises of Reason and Religion, of Devotion and Contemplation, of Justice and Charity, give such Beauty and Lustre to human Nature, that it is raised thereby to a very near Resemblance of the Angelick Order: So that indeed according to the way of Life, such is Man's Nature; either made worse, or much improved.

'Tis true, we know not the Nature and Laws of the Union of Soul and Body, and therefore cannot easily determine how the Thoughts of our Minds and the Mo-

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THE PREFACE.

templative Genius, and produce a virtuous and useful old Age.

Had Man continued in the Garden of Eden, as he came out of the Hands of his Maker, I doubt not at all but Contemplation and Devotion would have been his chief Exercise and Delight; as most suitable, not only to the State, but to the Place of Innocence: And I as little doubt, that if Angels were confined to these lower Regions, they would seek the Retirement and Pleasure of a Garden, as most agreeable to their heavenly Dispositions.

** How soon and in what manner a Palingenesia or Renovation of Things is to be expected in the Millennium is not my proper Business here to enquire: But thus much is to my present Purpose to say, that the more we accustom our selves to the several intellectual Pleasures of Meditation, Contemplation and Devotion, the fitter shall we be to regain Paradise; those divine Exercises raising Men's Minds into*

** Isa. 65. 17. Mat. 19. 28. Act. 3. 21. 2Pet. 3. 13. Rev. 20. 4. Ch. 21. 1, 2, &c.*

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*a greater Similitude of the divine Nature, that so, in Irenæus's * Sense, paulatim affuescant capere Deum, they may by degrees accustom themselves to receive God.*

The Exercise of a Garden and the Entertainments of Contemplation will appear still the more desirable, if one considers how difficult and dangerous a thing Conversation is now become, and indeed made so by the corrupt Passions and Humours of Mankind. For how difficult is it, for even the wisest and most cautious Man, to start a Subject in Conversation that shall be pleasing and inoffensive? To talk of the Weather is low, mean, and peasanly. To extol the Excellencies of Friendship, and to enumerate one's Friends is good; but how hard are they to be met with? To rail at our Enemies, and to detract from those we envy, how unchristian is that Practice, and truly offensive to a great and generous Soul? And then I suppose I need not tell a thinking Man the Uneasiness of being ty'd to the impertinent Con-

** L. 5. Cap. 32.*

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versation of such, as can talk all Day and say nothing.

Indeed the Subject of Philosophy, or any real useful Point of Learning, is pretty, if one could but ordinarily hope to find Philosophers or learned Men. Besides, (shall I not say?) It is not every Point of Learning that must be started or will be born with. Divinity for instance; especially any of the more nice and abstruse Points thereof, is one of the *Noli me tangere's*. Articles of Faith explain'd, which the Church is in Possession of, are held by a sort of entailed Right from the fourth Century down to the present Times: How much improved, I will not say. Infallibility is indeed plainly disclaim'd by Protestants: but yet, strange as it may seem, an indisputable Authority in the Church will be maintain'd, and private Persons will not be suffered to doubt of, or dispute so sacred a thing as a long Tradition.

What now is to be said to these things? Learned Men are not to be met with e-
very

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very Day, and Texts of Scripture are already settled: There remains hardly any general Topick of Discourse but Politicks; and yet, tho' every one pretends to much Skill in it, that of all others requires the greatest Prudence to enter into it, or to manage it without danger of Offence to one side or other. For except a Man can resolve to be thorough-paced, to go through thick and thin with a Party, he will hardly escape being charged with want of Zeal or want of Courage; tho' all wise By-standers may easily perceive, that there are Numbers of both Parties will run into very unjustifiable Extremes. The Church, without any certain Idea or determinate Meaning of the Word, is always made the outward Mark of Zeal of one side and t'other: And if the Measures that are concerted for the promoting her Interest are not lik'd, you will not fail to be branded (if not for an Enemy to the Constitution, yet) for a Renegado or a False Brother.

Who

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Who would now chuse to thrust himself into Company, when Company and Conversation are become so ensnaring and dangerous to an Honest Man? I confess, if Preferment be the thing a Man aims at, as what he either wants or waits for, if he have but Wit and Parts, he may in time compass it, by going all the Lengths of a Party: But I am now speaking to Gentlemen of Honour and Probity, who would serve their Country by those two Principles, and themselves with every thing that is innocent, safe, and entertaining. And shall I need to tell such, that all the best and noblest Entertainments are to be met with in a Garden? There a Man may converse with his God, by contemplating his Works of wonder in each Flower and in every Plant: And then the devout Admirer cannot but lift his Eyes and his Heart in praise of the great Creator of all Things.

There a Man may converse with himself, and consider, that whilst he is uncorrupted by vain Conversation, whilst
he

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he is busie and innocent, his Garden is his Paradise, a sort of Heaven upon Earth, that gives him a Disdain to those low sorry Principles of Ambition and Avarice, that hurry on other Mortals to pursue the vain Phantoms of Honour and Wealth.

Others may plot, dissemble, and struggle to get Authority and Power, and All, it may be, to no purpose too; but here a Man is Lord of All, the sole despotick Governor of every living Thing. The tallest Cedar, as well as the lowest Shrub, is subject to his Government and Care. Faults may be found and mended without any repining or starting at Alterations. The Wanderer may be reduced, and the Crooked made strait by easie and gentle Methods: And because the Strength and Prosperity of any Government consists in the Multitude of People, the Barren may be made to rejoice in a numerous Issue.

In short, whatever Government even the Fancy can paint to him to be either better or more beautiful, that Form is presently submitted to. This is no imaginary
Pleasure

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Pleasure neither, but real and personal ; a Garden affording such pleasing Morals in all the Parts of it, that nothing but the greatest Stupidity could carelessly pass them by unapply'd.

However, it is not my Business here so much to act the Part of the Divine as the Politician ; not so much to direct the Application of these Things to the Mind, as to lay down such Rules of Government, as may serve to heighten the Satisfaction of a thinking Genius : A Man must needs of course form pleasing Ideas to himself, when he finds Heaven and Earth, Art and Nature all conspire to make him happy in his Retirement, and each Subject of his Care to make obedient Returns of Profit and Increase.

I own my self to be no Judge of Politicks out of a Garden, as what I take to be none of my Business ; and whether in it I have drawn any pleasing Picture of Monarchy, or said any thing to the purpose of good Government, I must leave to the Judgment of all those ingenious Gentle-

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Gentlemen, to whom I here address my self; and shall only add, That I have the rather perswaded my self to engage in this Subject, with this View and Hope; that what I have said of the Pleasure and Profit of a Garden, may in some degree serve to abate the prevailing Vices of Ambition and Revenge, and re-instate a more manly Pleasure, in the room of some boisterous Exercises and fashionable Diversions, which too often end in the Dishonour of Almighty God and our Holy Religion.



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T H E

Gentleman's Recreation :

Being a SECOND PART of
the Art of GARDENING
Improved.

The INTRODUCTION.



NOTHING is of greater Con-
sequence to any Gentleman
that is a Lover of a Gar-
den, than to have a Piece of
Ground near him of a pliant, fertile
Nature, a Soil easy and kind to all
sorts of Trees and Plants, either na-

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tural

2 *The Pleasure and Profit of*

tural or made so by Art; because then he has the Pleasure of seeing every thing prosper and flourish, that he either sows or plants. Whereas the Want of such a Blessing gives continual Uneasiness to him that has waited long, and still waits in vain for the desired Fruits of his Labours; especially if it hath been attended with great Cost and Charge ill apply'd. Happy indeed are those Persons that have a good Soil, where Nature itself performs so liberally, that there needs little Labour, Cost or Care to make both their Kitchen and their Fruit Garden to abound with Plenty of every thing best in its kind; such Persons are not so much concern'd with what I have here to offer to the World, as those are, who have many other Difficulties and Discouragements superadded to the constant and necessary Care required in a Garden either of Pleasure or Profit. However I flatter my self the following

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ing Instructions may give some general and useful Hints to such a Genius, as loves to *improve* and *assist* Nature, and has a true Relish of the Beauty of Prosperity and Plenty in a Garden. For which Purpose I have always endeavoured to consult the Inclinations of Nature, that the most *natural* Methods might be taken to have the most and the best of its Products. For I think 'tis a Rule amongst Naturalists, that we should *follow* Nature and not *leave* it. Though we may safely do many things, which Nature *would not* or *could not* do; yet we are never to hope for Success, if we do any thing contrary to Nature *.

* I could never understand, why some Persons should take so much Pains to invert the Order of Nature, in making the Branches of some Trees take root, and then dig up the Roots to convert them into Branches; which if it *could* be done, so as to continue, could be of no manner of use; and must be reckoned among the *Difficiles Nuge*. The like may be said of those Attempts of grafting Apples on Pear-Stocks, or Vines on Cherries, &c.

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In my former Treatise on this Subject I endeavoured, not only to speak plainly and intelligibly, what I thought proper to assist Nature in all its Productions; but also to range what I said in Order, and put it into some agreeable Method. Whereas in this, which I design rather as an Appendix to the former, as it consists of some additional Improvements and Observations, I hope it will not be expected that I should observe a very exact Method. All those ingenious Gentlemen, for whose sake I have been persuaded to communicate some farther Thoughts on this Subject, will, I presume, excuse and pardon that Defect; provided their Expectations be but in some sort answered, by meeting with something *new* and *instru-ctive*: And yet I desire nothing may be embraced for its *Novelty*, except at the same time it be supported by *Reason* as well as *Experience*. So that I humbly hope, if I do venture to go
out

out of the common Road, it will not be interpreted to be any sort of *Heresy* in this Science; because I now address my self to the politer Part of the Laity, to the Gentlemen of good Sense and Judgment, who are not so apt to *shrink* and be *affrighted* at new Discoveries of undeniable and rational Truths, as some others are, who by their Profession are commonly tied down all their Lives to one particular Set of Thoughts; whereby their Understandings and Judgments are often cramp'd, and are not suffered to act out of their own narrow Sphere.

If this small Essay for some farther Improvements in the Art of Gardening, happen to fall into the Hands of some such *μικρόψυχοι*, narrow-soul'd Persons, I easily guess the Reception it will meet with. But for others, Gentlemen of a liberal Education and general Knowledge, with such I have been so well acquainted, especially

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since the Publication of my former Treatise, and have received so many singular Favours from many of them unknown before, that as I think my self here obliged to acknowledge their undeserved Civilities, so I must also say, that I fear no Hardships or ill Treatment from that Quarter. I am very easy to think, that this small Essay, humbly submitted to the Judgment of wiser Persons than my self, will not fare the worse for coming from a * Clergyman, who always owns these Things to be the Fruits of his *Diversion*, not of his *Study*; having other Cares of much greater Moment always upon his Hands, and that lie next his Heart, even the difficult Charge of instructing and *leading* many Hundreds of Souls in the Way to Heaven.

* It may not be amiss to take notice here of the Answer which a profess'd Gardiner gave to a worthy Gentleman, a Friend of mine, who happen'd to ask him how he liked the *Clergyman's Recreation*. *Why alas!* Sir (says he) *the Author is a Parson.*

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Having premised thus much; before I proceed to give any particular Directions and Rules, I would have it yet observed, that the Design of the following Treatise is to put Gentlemen into a Method of having the *most* and the *best* of all sorts of Fruit, and that in the *easiest*, the *cheapest* and most *expeditious* way. Such an Attempt, I presume, will not be *unacceptable*; and those who have vast Gardens, much Walling, and a Multitude of Trees, and at the same time not Fruit sufficient for their Table, will think it very *seasonable* and *necessary*. I suppose I need not make an Apology for this; there are so many Gentlemen that have a feeling Sense of it. It will therefore be worth while, first to assign the general Reasons and Causes of that Defect, and then we shall be the better able to seek for a Cure and apply a Remedy.



The First General CAUSE of
BARRENNESS.

ONE great Cause of the want of Fruit in many Gardens, is, a lying too much open and exposed to the Winds, especially the *West* and *South-West* Winds, which in many Parts of the Year made terrible Havock and Desolation in our Island; not only by *blasting* the Fruit in the Spring; but by *chilling* and *starving* the Fruit all the Summer, so as to hinder its coming to any due Maturity. And with respect to Standards and Dwarfs, there is no little danger of the Fruit being torn off before 'tis ripe by the Violence of unguarded Winds. There are commonly many Causes concur to the increasing this great Evil. As for instance; an open Vale betwixt two Hills at a distance; a long Canal with tall Trees on each side; or some Groves of Trees with
large

large Opens or Visto's between them. These, with many other accidental Causes of Buildings, &c. do many times occasion such perpetual and violent Currents of Wind, that 'twere a vain Expectation to hope for either *much* or *good* Fruit in a Garden that lies open and exposed to such external Violence. I need not therefore say that the first and earliest Care must be taken to guard against this dangerous Enemy, by planting Limes or Elms in a *Quincunx* order at a convenient distance from the Garden; but as near to one another as may be, that no time may be lost in procuring the desired Fence and Security.

However I am well aware, that the Situation of a Garden may be such, that this Evil may be in a manner incurable; and a Gentleman may have the Misfortune to find his Garden upon such a Hill, and so exposed on all sides to the Violence of Winds, that no artificial Shelters *can* secure him.

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him. In all such Cases, there is no other Remedy, but to change Place, to look out for a more convenient Situation at some greater distance from the House, where a proper Piece of Ground may be allotted for a Fruit-Garden and nothing else; whence even Flowers and all unprofitable Weeds should be banish'd. Neither ought this to be look'd upon as a chargeable Scheme, attended with any doubtful View of Success: For I can easily make it appear, that in many other Cases besides this of being without Remedy subject to blasting Winds, it is the surest and most unexceptionable Method, to have a peculiar Piece of Ground allotted by it self, distinct from that which is properly called the Garden of Pleasure: The Description whereof I shall reserve to its proper Place; and shall only observe here, with respect to the particular Point I am upon, that there are these following Advantages attending

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tending the present Scheme. For,

(1.) This will once for all effectually cure the Evil complained of: Inasmuch as it cannot well be imagined that any Gentleman's Seat should be destitute of a small Piece of Ground sufficiently well shelter'd from Winds, either by Trees, or Buildings, or both, if it be chosen discreetly for that Purpose.

(2.) Another Benefit in this Scheme will be ; That you will have a Fruit-Garden exactly to your Mind, neither too little nor too big, and exactly right as to its proper Situation and Exposition to the Sun, in all respects answering the Purpose of a profitable Fruit Garden, to be managed according to Art, with Trees, both Wall and Dwarf, set at their proper distances.

(3.) Here will be an Opportunity given for the building new Walls with *Horizontal Shelters*, which (as I shall shew presently) are attended with incredible

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credible Advantages, both for the securing the Fruit in the Blossom from Frosts and Blasts in the Spring, and for accelerating its ripening afterwards.

(*Lastly.*) Another very considerable Advantage still in the Choice of a new Garden, is, that there will be an untry'd Soil to work upon, which will infallibly produce vigorous healthful Trees, if it be rightly managed and chosen, and the Trees themselves afford early, large, and beautiful Fruit, if they be pruned and ordered as they ought. To all which I need not add, that by Means of such a little retired Garden, you will have the Fruits of your Care and Charge secured to you from all Comers and Goers, which in a large and spacious Garden of Pleasure is found to be a Matter of some Difficulty.

But before I leave this first general Cause of Barrenness in a Fruit-Garden, *viz.* lying too much exposed,

fed, I cannot but here take Occasion to add, by way of Remedy and Cure; That there is commonly a very great Mistake committed in building Garden Walls too high, even to the Height of 14 and 16 Feet. Which hath these two great Evils attending it, besides the unnecessary Charge of it; it subjects the upper Part of the Trees to the blasting Winds; and it tempts the Gardener to run up the Branches of the Trees direct and perpendicular, in order to cover the Wall as soon as may be. This Method indeed will soon cover the Wall with Wood; but as it is contrary to the Rules of Art, there will soon plainly be discerned a Defect and Want of Blossoms and Fruit in the Middle Part of the Tree, which will be more visible in the Pear than in any other sort of Tree. But this being not the proper Place to rectify this Mistake in Pruning, what I am here to observe and take notice of at present is only this;

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this ; That nothing but a manifest Want of Room can excuse or justify the building Garden Walls too high, when it is plain there is a certain Charge for a very uncertain and doubtful Profit. I have always thought that Eight or Nine Feet high is sufficient to answer the Purpose of the most vigorous Tree, provided it have but Elbow-room enough ; and I suppose too that that Height will be thought a sufficient Guard against * foreign Invaders of Property ; if at the same time you will but make this general Exception, That nothing is ordinarily strong enough, not even the

* It may not be amiss here to relate, That at my first coming to my Parish, I found some difficulty to preserve my Fruit from Robbers : Hereupon I resolved upon this Stratagem. I ordered the Smith to make a large Iron Trap with formidable Teeth to close one within another, which was to be called a *Man-Trap*. This was hung up several Weeks at the Smith's Shop *in terrorem*, giving it out, that now there would be great danger, if any one should attempt to rob my Garden. This, without setting the Trap, succeeded according to my Wish, and I have not been since robb'd these 12 Years. *Note*, Refrain'd, I hope too, not altogether by Terror, but from better Principles.

Grace

Grace of God, to stop and conquer the Perverseness of Man's Will and his wicked Inclinations.



The Second General CAUSE of
BARRENNES S.

HAVING under the foregoing Head pointed at one great and manifest Cause of Unfruitfulness in many Gardens, and directed, as I hope, a sufficient and proper Remedy, I shall now assign a second general Reason for the same Defect, and I hope also I shall be able to apply an easy and effectual Cure. The Reason that I would here assign for Barrenness, is, the having too much Walling and too many Trees. This may look at first Sight like a strange Paradox ; That because a Gentleman has great Variety of Walling and Abundance of good Trees, that *therefore* he should have but little Fruit. But as strange as this may seem, Experience

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perience will justify the Truth of it, and I doubt not at all but to make it appear, there are good Reasons to be assigned, why it must, generally speaking, have that Effect.

For let it but be well considered what little Care is taken in a very large Garden, that every Tree have its due and proper Pruning, and we shall not wonder if they do not bear their proper Quantity of Fruit; nay, frequently that they bear little else but Leaves. The Grass and Gravel Walks shall not want their seasonable Mowing and Rolling: The several sorts of Ever-Greens shall not want their due Clippings to preserve their Beauty and Figure. The several sorts of Flowers are planted in their proper Earths, and removed at their proper Seasons, to give them all the Variety of Colours to please the Eye; All these Parts of a Garden are respected with, as it were, a religious Care, and complemented with their timely

timely Dressings and Culture, to give only an entertaining Prospect and pleasant View. And excepting the Case of some sweet-scented Flowers and Shrubs, there is but one Sense gratified with the Expence of nine Parts in ten of a fine Garden. For alas, after the Attendance that is given these things I have been speaking of, what a little Portion of Time and Labour will be afforded the Fruit-Trees against the Wall, or the Dwarfs wherever they are? If the Wall-Trees can but be perswaded to be brought within the Compass of a *Semicircle*, and the Dwarfs made a little *Concave*, all is generally thought to be well enough, without any great Regard had to what is proper to be chosen, and what to be refused; much more, without any Care to put the Tree into a bearing State for another Year. Nay it is but too commonly seen, that even the best sorts of French Pears against the best Walls in some Gardens, shall have

no other sort of pruning, than what a good Pair of *Sheers* affords them; whilst it may be the Gardener would blush to have a *Weed* found in his Borders. I confess this sort of unequal Management sometimes raises Indignation in me, and I cannot here forbear to expostulate the Case a little with such who are nicely careful to maintain Beauty and Regularity in all other Parts of the Garden, wherein they are to be commended; but will not be persuaded to allot a due Proportion of Care and Labour to the noblest and most profitable Part.

For let us here but reflect a little, and resolve (as we ought) to proportion our Value and Esteem to the intrinsic Worth of Things, as they more or less serve to entertain the Senses, and answer the innocent Appetites of human Nature. Do the several Colours in Flowers serve to strike the Eye with their Variety and Beauty,

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ty, and thereby form pleasing Ideas in the Imagination and Fancy? What less than all this can we think the several Fruit-Trees, cloathed with their different colour'd Blossoms, will do? If they be managed with Art, what a pleasing Entertainment is it to the Eye, to behold the Apricot in its full Blossom, white as Snow, and at the same time the Peach with its crimson-colour'd Blooms, *both* beginning to be interspersed with green Leaves? These are succeeded by the Pear, the Cherry and the Plum, whose Blossoms and Leaves make a very beautiful Mixture in the Spring; and it cannot be a less pleasant Sight to see Clusters of swelling Fruit all the Summer, as the Earnest of the full Gratification of another Sense in Autumn. And now we are come hither, what Painter can draw a Landskip more charming and beautiful to the Eye, than an old *Newington* Peach-Tree laden with Fruit in *August*, when the

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Sun has first begun to paint one side of the Fruit with such soft and tempting Colours? The Apricot, the Pear, the Cherry and Plum, when they appear in Plenty as they ought, present themselves to the Eye at the time of ripening in very inviting Blushes. In short, all the several sorts of Fruit-Trees have such pleasing Varieties, that were there no other Sense to be gratified but the *Sight*, they may vie with a Parterre even of the finest Flowers. But then when we come to consider, that all this Beauty rewards the careful Pruner with Plenty also of the most delicious *Fruit* to gratify the *Taste*, there can be no Comparison admitted, and no Excuse can be made for the least Want of Care, to assist Nature in her kind and generous Inclinations.

However it is the Observation of this *Want* of Care, and the manifest *Neglect* of the best and most profitable Part of a Garden, which has made
me

me thus expostulate the Case, and with what View I have done it, may easily be perceived. For if, where there is much Walling, and Fruit-Trees abound in great Plenty, there is yet so unequal a Portion of Time and Art allotted for their Management, a necessary Consequence of that must be *Barrenness*, which is the Disease I am inquiring into. Having therefore here in some measure discovered the Cause of it, we are now to seek out for a proper Remedy and Cure.

Now there are but two ways of curing this evil of Barrenness, proceeding from a too great Abundance of Trees: Either first to allow a proportionable Help and Assistance, for the due and careful Management of so many Trees; or else secondly to *reduce* the Fruit-Garden, and bring it into a much less Compass, that every Tree may be sure to have its proper seasonable pruning and nailing. But why I prefer

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this latter Method, much rather than the former, I shall give these following Reasons.

(1.) There is more Care and Attendance required for the due Management of a single Fruit-Tree, than is commonly thought on or expected. The Pear and the Vine especially, which require the best Walls, will not be put off with any *superficial* Pruning. The former must be frequently check'd, and even *maimed* in its most vigorous Parts, to hinder its luxuriant Growth; and the great Wood, especially in the middle, must be ever carefully rejected: And as for the Vine, *that* will not be satisfied with less than four several Prunings and Nailings within the Year. And shall I need to tell the vigilant Gardener, how much Business it is, to dispose according to Art the several tender Branches of a Peach or an Apricot? Now where there are great Numbers of such Trees in a Garden,

as

as far as my Observation has gone, they are generally neglected, and put off with much less Care and Attendance than they require; the necessary Consequence whereof is *Barrenness*. To Cure which therefore, I should think it a much better way to lessen the Number of such Trees, to confine the best Fruit-Garden to a narrower Compass, than to allow a proportionable Help, and what will be thought an extravagant Charge, for the proper Government of so many Trees; especially if,

(2.) It be considered, that *that* may easily be shewn to be an *unnecessary* Charge and Trouble: Because, as will appear presently, the End and Purpose of having a sufficient Quantity of Fruit may be obtained in a *less* rather than in a *large* Garden; and consequently at a much easier and cheaper rate. I always take it for granted, that every one covets to have as much Fruit as he wants, with

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as little Charge, and in as small a Compass of Ground as may be; that is to say, in short, to have a great deal of good Fruit in a little room. If there are some who will not grant me this, I desire that what follows on this Head may go for nothing; but where it will be granted, I hope the following Reasons, Arguments and Calculations will be particularly considered, and I doubt not at all, but it will plainly appear, that many Gentlemen have hitherto been under great Mistakes, when they have enlarged their Gardens with that particular View and Expectation of having *more* Fruit.

To make this Matter then as clear and intelligible as I can, I have here annex'd two distinct Schemes or Plots, both furnished in such Order and with such Fruit-Trees, as are proper to their different Situations and Aspects to the Sun; whereby it will appear what Variety and what Quantity of good Fruit, may

may with Reason and great Probability be expected from a little Spot of Ground, allotted solely and particularly for the Purpose of a Fruit-Garden. If it be here objected and wondered at, as I expect it will, that I should allot so little walling, and so small a Space of Ground, as only 40 Yards square to serve a plentiful Table with Variety of the best Fruit, I desire it may be particularly considered and examined, what probable Quantity of Fruit a Tree pruned and managed according to Art, may reasonably be supposed to bear, and then I am persuaded the Objection and Wonder will very much cease, if not wholly vanish.

Let us then begin with the Peach, which in a bearing Year, and when the Tree hath well-nigh covered the Wall, will ordinarily bear a hundred or more of large fair Fruit; and if the Tree be in a prosperous State, kept free from great Wood in the Middle, and hath the Advantage of
Hori-

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Horizontal Shelters (of which more presently) you need hardly ever fear having such a Quantity from every single Tree. But because that Number may be thought too great to be depended upon, let us take only half, and suppose every Peach-Tree to bear fifty fine large Peaches. An ample annual Reward for Care and Diligence ! Now in both Schemes I have allotted Seven Peaches on the best Walls, the Product whereof at a moderate Computation, will be 350 of the best and largest Fruit, which ordinarily succeeding one another in their ripening, even on the same Tree, will afford a regular and daily Gratification to the Taste in this one Article of the Fruit-Garden: But lest even this Abundance should not be thought sufficient, more Peach-Trees may be set in the Room of the two Vines in the one Plot, and the Winter Bon Crétien and the La Chassere in the other ; because there are other Places
may

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may be found for *them*, as I shall observe presently. And indeed I placed *them* there, rather with a View of their being removed, as Occasion might require, or as Sickness and Mortality in other Parts may make necessary for a present Supply of more Peaches.

Let us next consider the Apricot; which, whatsoever Monsieur *Quintene* is pleased to say of it, as if 'twas fit only for Compotes, is really a good and much valued Fruit in *England*. I mean not the early Masculine Apricot, which is indeed worth nothing; but the large Turkey Apricot, which hath a noble Flavour, and is a constant Bearer. If therefore in the one Plot I have allowed only *three*, because a *South-west* Wall is rather too good, and in the other *five*, as a sufficient Supply, it is not because I despise it, but because I know *five* such Trees will ordinarily bear an incredible Quantity of Fruit, if they be

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be managed as they ought. I have now two Apricot-Trees, that have been several Years in their Prosperity and at full Growth, and I cannot say that in all that time I can remember a Year, when they have afforded me less than a Bushel of Fruit. And alas! my Soil and Situation will not give me leave to boast of any Security from Blasts, Canker, &c.

It will not sure be thought too great a Complement, that I allow Room on the best Walls for four or five of the best *French* Pears, which are so little inferior to any of the Stone Fruit, and yet come to their Maturity when the other are gone, which is no inconsiderable Recommendation. And on the other side, it ought not to be wondered at by those that admire them, that I allow so few; because with good Management each Pear-Tree will ordinarily bear no less than half a Bushel, as I have had long Experience; indeed not seldom

as much more. However there is so ample a Provision made of excellent sorts among the Dwarfs, that there can never be found any Deficiency of good Pears in this Plan.

I have allowed Room for some of the best Plums on the *East, West, and South-West* Walls; because I think they very much deserve it, especially the two *Perdrigans* and the *Roch Corbon*. They will by no means do well *without* a pretty good Wall; but *with* that Assistance they are incomparable Fruits, and have a noble vinous Flavour, such as must be agreeable to every one that has not an Aversion to a Plum, or will not always think it a *peasantly* Fruit.

Upon the whole, here is a square Plat of Ground set out and walled round, supposed to be only 40 Yards square, which, at 4 Yards distance for every Tree, will afford 40 Trees, every several sort suitable to its several Aspect to the Sun; which, with
good

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good and skilful Management, may reasonably be supposed to afford every Year a sufficient Variety, as well as Quantity of the best Fruits; If we take in what I am going next to speak to, *viz.* that great additional Help of the Dwarfs in the middle.

Which Dwarfs I make to consist only of Three sorts of Fruit, as most proper for our present Scheme, *viz.* Pears, Plums and Cherries, leaving even the best Apples to their more proper Place in the Orchard: except the eight Non-Pareilles on Paradise Stocks, which may be observed to be set in the intermediate Spaces on the 4 sides, where, never growing above a Foot high, they will have room enough.

Now one side of the Square may be observed to contain no less than 28 Dwarf Pears: allowing every Tree four Yards square for its horizontal Branches to spread in, which is very sufficient, supposing the Place not to be
crouded

eroded with any thing else; no not with Flowers or Legumes, which is what I always take for granted. If then every single Tree doth but in any sort answer the Proportion of Fruit, which my own Experience hath furnished we withal, here will be greater Plenty and Abundance than can well be disposed of. I have only one Dwarf of the Swan's Egg Pear, which is indeed (as I have termed it) a *Nulli secundum*, and, if my Memory fail not, hath for these last five or six Years afforded me no less than two Bushels; Nay, this last Year I had betwixt three and four Bushels from it, most of them excellently good. However, because this may seem something extravagant, and more than can ordinarily be expected, let us suppose every Dwarf-Pear to afford only half a Bushel a-piece one with another, the Product of Twenty eight Trees, on one side of the Square only, will be Fourteen Bushels of the best Summer and Autumn Pears of five or six sorts.

The

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The other side of the Square is filled with the best Plums and Cherries, at least the best of those sorts, that will do without the Help of a Wall, 28 also in Number; which, with tolerable Management, and a reasonable Allowance for Quantity, will make an abundant Provision for the Table, throughout the whole Season of Cherries and Plums. Only it may not be amiss here to observe, that it will be very proper to suffer the one half of the Dwarf-Trees to grow higher than ordinary: That is to say, all those several Trees in both Squares, that are planted nearest to the *North*, *North-East*, and *North-West* Walls, may be suffered to be what we call *Half Dwarfs*, where their taller Heads will not do any harm by overshadowing any of the best Walls. And indeed the Half Dwarfs, where they can be suffered, are the most constant Bearers with the least Trouble, and greatest Plenty; the

the other requiring a very vigilant Eye to correct Luxuriance, and seasonably to remove all perpendicular and useless Branches. This indeed must be done in the Half Dwarfs, as well as the other; but the Confusion that a vigorous Tree makes is much greater in the low Dwarfs, and so the proper Remedies must be oftener apply'd. Besides, I have observed, that none of the sorts of Plums and Cherries especially, will well endure *violent Corrections: Unmerciful Loppings* is a sort of *Persecution* to them, and they answer the End of their Nature much better under a *moderate and gentle Government*.

By this time I suppose it will be thought by many, that I have forgot two or three considerable Articles in a Fruit-Garden, and have made no Provision for them in the present Scheme, *viz.* Vines, French Winter-Pears, and Figs: But indeed *these* I have with Design left out of the Plan, and refer-

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ved them for more proper and convenient Places. All the Southern Aspects of the Dwelling-House, Stables, and other Out-Houses, which every Gentleman's Seat is plentifully furnished with, will do singularly well for these. For all the several sorts of Bon Crêtiens, the Summer, Autumn and Winter, &c. require more than ordinary Height and Room to spread in; and here they may be allowed *Elbow-room* and *Height* enough to answer the End of bearing *much* Fruit; tho' if the Soil be any thing inclinable to too much wet or a cold Clay, it must not be expected to be *good* Fruit: And therefore in such Cases, it is adviseable, rather to be contented with such as will do well enough; as the Winter-Thorne, Amador, Virgulee, or La Chassere, which are excellent in their Kind. However, I ought to say here that if the Soil be warm and suitable to the several Bon Crêtiens; yet they produce

produce much better and larger Fruit on a Quince than on a Free Stock; which perhaps is peculiar to this sort of Pear: tho' it must not be expected such Trees should be very long-lived.

The several sorts of Grapes are also reserved and allotted for the Southern Aspects of Buildings near the House, where they may have room to spread themselves, and will soon cover such Walls with Plenty of Fruit. Not that the Vine doth really need (as is commonly thought) any such great Height to make it produce Fruit; but that it will *sooner* and *better* cover such *tall* Walls as are a natural Security of the Fruit against *ordinary* Endeavours to taste it.

As for Figs in the last Place, which I have reserved for Walls that lie open to Comers and Goers, they will do singularly well there. For tho' both the blue and the white sort are the richest and noblest Fruit a Garden

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affords, yet it seldome strikes the Fancy nor suits the Palate of the meaner sort; insomuch that there is little danger of being deprived of this Delicacy by any rapacious Hand. And indeed it is for this reason also, that I advise the planting the best of the Winter-Pears in such exposed Places; because whilst they are growing on the Tree, they are in no great danger of being tasted a second time.

Thus I conceive we have effectually found what we were in Quest of, *Multum in Parvo*; which I always suppose to be a very acceptable Thing; to such wise Men especially, as have learn'd the *divine Art* of dedicating the Overplus of their Time and Estate to God.

What some modern Authors mean by putting Gentlemen upon Grand Designs, and vilifying all others as *crimping*, *diminutive*, and *wretched Performances*, I could never understand. I believe it will be found that
nothing

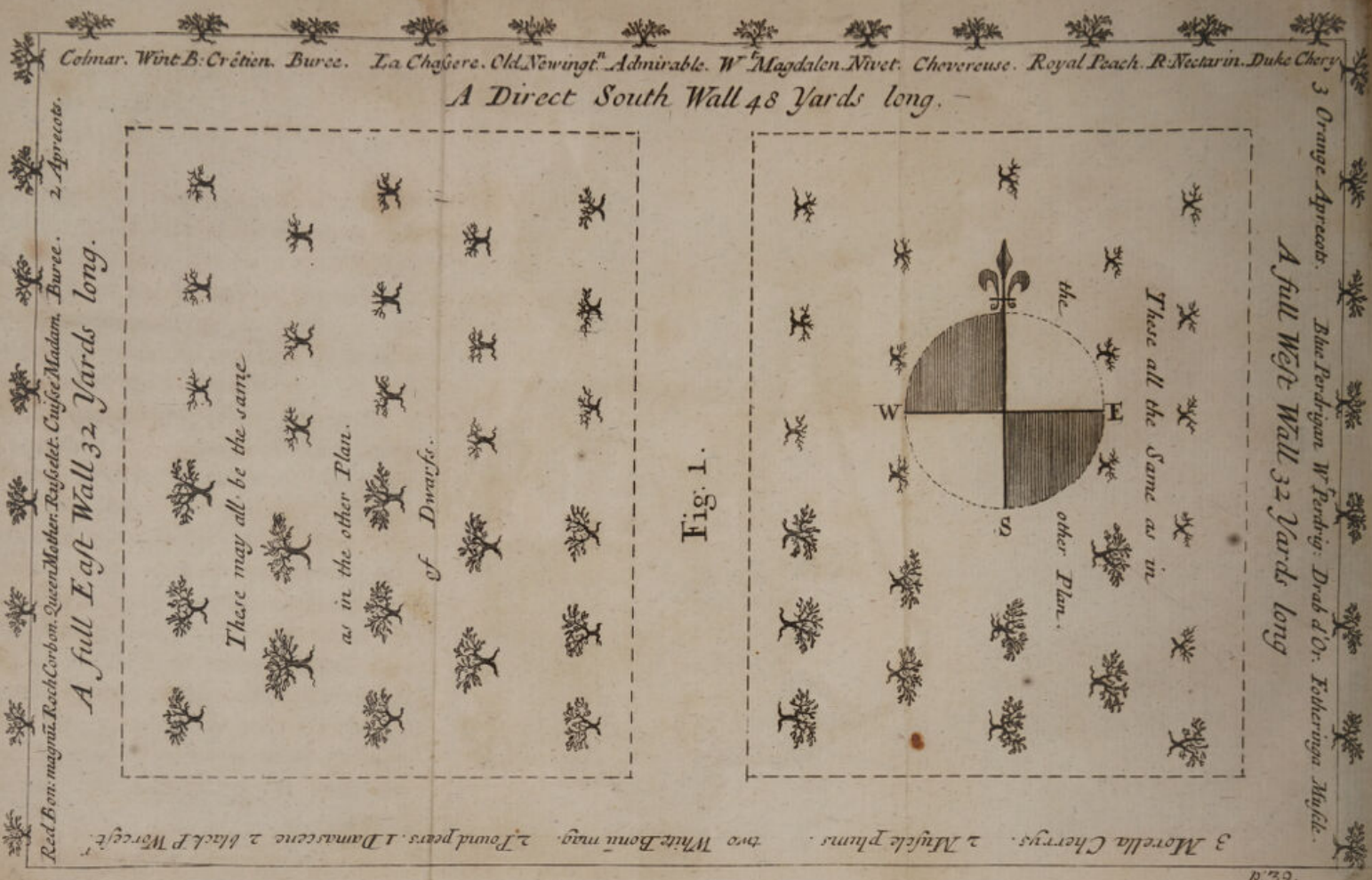
nothing hath more tended to the Ruin of brave Estates, than these *proluted Gardens*, as they call them, and a fond Affectation of imitating a vain People in what they call *La Grand Manier*. Our English Gentlemen have always been famous for more substantial Realities, without separating the *Fucundum* from the *Utile*; and can relish a profitable Design, tho' it doth not resemble *Ingentia Rura*. If Gardens are only to be valued for their largeness, there will be no end of multiplying the Number of Acres, till Gentlemen have got to the End of their Estates: So that I cannot but think, there must be great Defect in the Contrivance, if a very beautiful and magnificent Garden of Pleasure and Profit too, be not formed out of a very few Acres. I am pleased however to think *Horace's* Wish agrees so well with my present Scheme,

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*Hoc erat in Votis; Modus agri non
ita magnus*

Hortus ubi,-----

and that I have reduced the Fruit-Garden to less than half an Acre, sufficient to furnish any Gentleman's Table with all the Variety of good Fruits in their several Seasons. This ought to be the more acceptable, in that it is proposed as a Remedy to cure Barrenness proceeding from too great a Compass of Ground and too many Trees; which, as far as my Observation has gone, do generally serve to enhance the Charge and lessen the Profit. For what an entertaining and comfortable Visit may we suppose a Gentleman every Day to make to this little Garden; where he will find himself encompassed and surrounded with Plenty, and may behold a charming Variety of what is most pleasing to the Eye and Taste, at once the
Reward



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et. O Newington Peaches 2. Roman Nectarines 2. Minion P. Admirable. Vine. Red Magdalen.
A South East Wall 48 Yards long or peach

A South-East Wall 48 Yards long

A South = West Wall 32 Yards long

vine. Colman's Apricot. Apricot. Blue Periwinkle. W. Periwinkle. Kohl's Periwinkle.

Swans Egg Pears six
Targont Pears five.

Swan's Egg Pears six

Targonet Pear's five.

Bergamot Pears six

Burce Pears five.

Orange Bergamots three

Orange Bergamots three

Non parelle *Non parelle*

Non parolle

Fig. 2.



2 Damascenes.

3 Violet Plums.

3 Bonum magnum Plums.

3 Myrtle plums.

3 Violet Phums.

2. *Damascenes*.

3 Mistle plums.

Orlance plums

viz.

Bleeding Hearts five.

May Duke Cherry six.

Non parette

Non parelle

A North-East Wall 32 Yards long

2 Orleans plums. Muscle. R 1 bonu Magnu. 2 White bonu mag. 2 New duke Cherry.

Bix Morella Cherys. two Queen Mother Plums. 1 Pound pear. 1 Russet 2 Fotheringa plums. A North-West Wall 48 Yards long

A North-West Wall 48 Yards long

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Reward of his Care and Diligence, and the Fruit even of his Recreation.

I suppose I need not add any thing farther on this Head, the two different Plans I have hereto annex'd, the one exactly according to, the other crossing the Quarters, will make every thing easy and plain *. And the Moral of the whole I should think is not less plain. For if our innocent *Recreations* are thus surprizingly rewarded with Pleasure and Profit, how can an ingenuous Mind forbear thankfully to adore the God of Nature for temporal Blessings, and more chearfully to expect a greater Reward in the next World for such *Virtues*, as lay a Foundation for it in this?

Fig. 1. and Fig. 2.



A Third General CAUSE of
BARRENNESS,

IS an unskilful Ordering and bad Management of Fruit-Trees, both in their *Planting* and *Pruning*. The Case is much the same here in the *vegetable* as it is in the *moral* World. Every one knows how fatally Youth is commonly enslaved to bad Courses, for want of setting out right at first, and being well instructed and seasoned with virtuous Principles. Corrupt Nature will soon over-bear the *weak* and *tender* Dispositions to Goodness in Youth, without an early Care and wise Government: By the Help whereof head-strong Passions are subdued, and all the wild Sallies of a vicious Inclination are kept within due Bounds? And so by the Blessing of God, the Man thereby becomes fruitful in good Works, and useful in his Generation.

So

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So also here in the *vegetable* World; it is of great Consequence to the Goodness and Prosperity of a Fruit-Tree, that it be rightly managed and kept in due Order from the beginning; that the extravagant Growth of Nature, and its Tendency to Wood and *fruitless* Branches, may be kept under and subdued in time, before it become too head-strong and ungovernable: by which means the *weak* and *tender* Shoots will begin more and more to discover themselves, as the joyful Appearances of Fruit and Plenty. An Error and Mistake in the beginning proves often fatal, and is not so easily rectified afterward, without great and too dangerous Violences. But let us examine this Matter a little more particularly, that we may the better know how to apply the proper Remedy.

As one Cause of Barrenness, I have here taken Notice of a common Defect in the Management of Fruit-Trees;

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Trees; both in *planting* and *pruning* them. To speak a little methodically,

First, A wrong Method of *planting* is a very untoward Beginning, and proves oftentimes of very ill Consequence, with respect to future Hopes of any great Plenty. And yet there are these three several ways of *planting* too often practised, which seem to me to be contrary to the Rules of Art, as well as Nature; *viz.* Planting Trees too deep; too near one another; and against a wrong Exposition.

(1.) There is no one Mistake in the Art of Gardening, that I have observed to be more general and common than this, of planting Fruit-Trees too deep in the Ground; and yet nothing is more fatal to them, especially in some Grounds too much subject to Moisture in the Winter, and nothing tends more to keep Trees in a sickly, unthriving Condition, and consequently from bearing either *much* or
good

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good Fruit. Indeed where the Soil is naturally exceeding dry, and lies on a Declivity that will quickly carry off the Winter-Wets, the Fault may be less dangerous: But except there be a sufficient Depth of natural good Earth above the Rock or Gravel, the Evil complained of will there quickly discover itself, after four or five Years, when the Roots of the Tree will be starved by a hungry Gravel, Sand, Chalk, or Rock, or whatsoever the Bottom be, that lies too near the Surface. On all Accounts therefore it is much the better and safer way to plant *high*, provided Care be but taken the first and second Year, to keep the Roots tolerably cool and moist; for which I have already given Directions in my former Treatise *. To which and what I have there said about Planting, I shall only add here on this Head: That because I am

* *Pag.* 14. *Edit.* II.

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well assured, nothing is more fatal to Fruit-Trees, the tenderer sort especially, than planting them too deep, and thereby subjecting their Roots to too much Wet in the Winter; (for Summer-Wets never hurt them) I cannot but advise to let the top Surface of the Borders under the Walls be at least seven or eight Inches above the common Level; setting that part of the Tree, where it begins to root and divide its Spurs, exactly even with the upper Surface of the Border. Only still it must be observed (as I have elsewhere directed*) that there must be added another Semicircle of good Earth or rich Sand of about three or four Inches deep round the Tree, paved with small Pebbles, to keep it cool and moist for the two first Years. If this Method is carefully put in practice, there will be no need of mending the Borders above one Foot deep;

* *Pag. 15. former Treatise.*

no matter how wide, to encourage the Roots to spread horizontally. I cannot but here repeat, and earnestly recommend the making use of the best *untry'd Earth* that can be got, for filling up the Trenches, both for Wall-Trees and Dwarfs; having had long Experience that no sort of Composition made with Cost and Art, can exceed the Riches of this Earth, or will make more vigorous, healthful and lasting Trees*. But,

(2). There is another common Mistake committed in planting, which is attended with very unhappy Consequences, and that is planting the Trees too near one another; the Mischief whereof is very manifest these two ways: First, after 5 or 6 Years, they begin to crowd and shoulder one another, and for want of room the Gardener is tempted to run the Branches perpendicularly, which is the

* See more of this Pag. 5. Part 1.

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high Road to Ruin; at least it is the way to increase the Wood, and lessen the Quantity of Fruit; for the bottom and middle Part of the Tree will quickly be found to be altogether barren; and in the Peach and Apricot the Evil will be absolutely irrecoverable; *they* not putting out young Shoots, when the great Wood is cut out, by reason of the Thickness of their Bark. Whereas when Trees are kept thin of Wood in the middle, and have room to spread their horizontal Branches, every Part of a Tree may with Care be kept in a bearing State. But besides, there is another Mischief attends this Mistake of planting too near; which is, that the Roots of the Trees will quickly meet, and so rob one another of the proper Nourishment they should receive, and when once the Borders begin to be worn out, and lose their Richness and Fertility, *that* is never to be recovered, but by taking away the Tree, putting
in

in new Earth, and planting another. Whereas when Trees are planted at their due Distances, their Roots do still receive new Succour and fresh Nourishment, as they advance, and as the Head of the Tree increaseth to require it; whereby an agreeable Health and Vigour is retained a long time even for 20 or 30 Years. Now, though Pears may ordinarily require something more, especially if they be upon free Stocks; yet I have assigned only four Yards, as a mean distance proper only for Fruit-Trees, either for the Wall or Dwarfs. *More* Room would generally leave too great Vacancies in the Wall, and *less* would subject the Trees to the Evil here complained of. In my former* *Treatise* I have indeed recommended the planting tall Trees in the intermediate Spaces: But this I suppose to be done with great Discretion, chiefly

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betwixt Pears whose Strength and Vigour are not so easily impaired; or if they are placed between other Trees, they are supposed to stand only 2 or 3 Years at most, and then to be removed into the Orchard for Standards.

For the very same Reason that I disallow of Trees standing too near together, that the Riches of the Borders be not wore out, I also by no means approve of a bad Practice in some Gardens, of letting Rosemary, Lavender, Stock-Gilliflowers and Iris's, &c. grow on the Borders, where the choicest Fruit-Trees are, which yet in a little time will not fail to impoverish the Ground, and give the Trees, if they be young, occasion to *complain*, by making only weak and languishing Shoots. But then again,

Lastly, There is yet another great Mistake, that I find very frequently committed in the planting a Fruit-Garden;

Garden; and that is, putting Trees on a wrong Exposition, which must be owing to Ignorance, either of the Nature and Quality of the Tree, or of the true Disposition of the Ground and its exact bearing to the Sun. The Ignorance of either one or t'other, or both, must needs be of bad Consequence, and prove a great Disappointment to the Planter; who it may be for want of being rightly informed, has put a Vine, an Apricot, or a Peach on a *North-East* or a *North-West* Wall; and it may be has been so unfortunate, as to put a meally Summer Pear, or an indifferent Plum against a *South East* or a *South-West* Wall. This is no airy Supposition; for I have very often my self found it so, and complained of it with some Uneasiness. It is a very common Practice with some to thrust many of the best sorts of French Pears, the Buree, the Verte-longue, the Virgulee into any Corner of a *North-East*

or *North-West* Wall; or if the Wall faces any Point of the *South*, it shall be shaded by some neighbouring Wall or Building for 3 or 4 Hours; inso-much that if the Trees do bear any Fruit, it will prove small, wat'ry and insipid; the general Consequence of which is, that the sort of Fruit shall be exclaimed against and condemned, without having had proper Justice done to it.

Indeed it is not seldom that Apricots and Peaches and Vines are *supposed* to be set against *East* and *West* Walls; when upon Examination the Exposition is found to bear several Degrees towards the *North*: In which Case the Disappointment must be very great, when after several Years waiting, the Trees are found to bear little else but Leaves, or small insipid Fruit? For indeed no other can well be expected from such an Exposition, as declines any thing to the *North*; except in a more than ordinary hot Summer

Summer and Soil, or with the Help and Advantage of some artificial Heat, as the back of a Kitchen Chimney, or the like.

To prevent therefore the inconvenience of this Mistake, it is very advisable when a Fruit-Garden is once pitch'd upon, and the Walls built, to know by an exact Meridian Line, the proper Bearings of each Wall, before they are Planted; and their true Declinations. Now tho' there are several easy ways of doing this, yet because every Gentleman may not happen to be acquainted with them, and to make this Treatise as useful to the Publick as I can, I have inserted the following short and easy Method of finding an exact Meridian Line.

Take a Stone of about 18 or 20 Inches square made exactly plain and smooth. Bore a hole near one of the Corners, wherein fix an Iron Pin about 14 Inches long *clear*, drawn to a Point on the top: No matter whe-

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ther it be exactly perpendicular. Place this Stone in some open Part of the Garden exactly horizontal by a Level, that Corner where the Pin stands and its Opposite bearing as near as you can guess, *North* and *South*, the Pin on the *South*. This done, about 2 a Clock in a clear Day, draw a Semicircle from the extreme Point of the Shadow of the Pin, which may be done with a steady Hand by the help of a narrow thin piece of Fir, made sharp at one end with the Point of a Nail, fixing the flat side on the top of the Pin; so that the Point of the Nail may just reach the extreme Part of the Shadow, where you are to make a Point or Mark. Then at about 3 a Clock the same Day, observe exactly when the Shadow of the Pin comes again to the Semicircle; from which Moment allow one Minute for the Sun's annual Motion, and then make a Mark exactly at the Extremity of the Shadow, which will be

be something beyond the Semicircle. Draw a Line strait from one Point to the other, and then *half* it exactly; and from this middle Point raise a Perpendicular which will be the exact Meridian Line.

N. B. It is convenient to make 3 or 4 of these Semicircles both before and after 9 a Clock, for fear the Sun prove in a Cloud, when the Observation is to be made in the Afternoon; and then if one miss, the other may hit. Only great Care must be taken that the corresponding Points in the *same* Circle be made use of, that there be no Mistake. It is also proper to do this in the Summer Quarter, when the Pen-Umbra of the Shadow's Point is least, and the *exact* Point may be best taken and more nicely observed.

N. B. This exact Meridian may with ease be transferred to any other more convenient Place about the House; as the upright Stanchel of a Window or any perpendicular

E 3 Transome

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Transome or Jaume, shadowing on the Floor or Window Board; this Meridian being of singular use throughout the whole Year for regulating Clocks and Dials, and taking Declinations. Which last Operation being to our present Purpose, may be very readily performed by only applying the side of the Quadrant to the Wall, and then holding up a Plum-Line exactly at 12; whose Shadow may pass thro' the Centre, and will at the same time give the Degrees of Declination on the Rim of the Quadrant; only a Western Declination must be counted *forwards* from left-Hand to right, and an Eastern *backwards* from right-Hand to left, on the Edge of the Quadrant, as the ingenious Inquirer will soon observe.

As to the Mistake of planting Trees on a wrong Exposition for want of knowing the proper Aspect every Tree requires; to remedy this I was once thinking to insert a Catalogue of all the

the most known Fruits, with their suitable Aspects over against them, as also which are properest for Walls, and which for Dwarfs; but that I consider'd I have already effectually done this in the very Plan I have given above*; where at one View may be seen what I have judg'd proper for that very Purpose with respect to all the best and most approv'd sorts of Fruit; and the kind Reader will, I know, excuse me from all needless Repetitions.

Secondly, I come now according to my Method, to take Notice of some common Mistakes in the *pruning* of Fruit-Trees, which I suppose to be a great Cause of their Barrenness. But before I enter upon this difficult Point, I must be forced to say something to rectify a common Mistake, even in one of the first Things a Gardener takes in hand, and that is his *Pruning*

* Fig. 1. and 2.

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Knife; the true Make and Shape whereof I venture to affirm, with due Respect to the Judgment of preceding Ages, hath hitherto been quite mistaken. For the Blade of a common pruning Knife is known to be shaped and fashioned like a Hawk's Bill; and yet according to the Observations I have made of the real use of a pruning Knife, this is quite wrong and unnatural. If indeed the Branches of a Fruit-Tree against a Wall grew generally *downwards*, this kind of Shape might be of some use for the cutting off some of the stronger Branches; but as they generally grow *upwards* and *side-ways*, such a shaped Knife becomes almost of no use; at least it must be used very awkwardly.

Besides, in all Cases that require much Strength, a Mallet and Chisel are without Comparison best, safest, and most exact; and in other Cases also too stubborn for the Knife alone, a Stroke of the Hammer on the back
of

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But it may not be amiss to add here, that such a Knife ought to be made with a good thick Back, the better to bear the Stroke of a Hammer upon occasion, and if possible of Razor-Mettal well tempered, that it may always have a good Edge, and be used as a Penknife, as well as for Pruning.

Having now settled this Point, the first Mistake in Pruning that I observe is, letting a Tree from the beginning run out into vigorous Wood and Branches all on one side; and because the Shoots on the other side are weak and unthriving by reason of Blast or Canker, the other are wont to be continued, and the Trees suffered to grow in a very irregular and unhandsome Fashion; whereby it comes to pass, that a great Part of the Wall is unfurnished with Branches, and by a continued Neglect, the proper Beauty and desired Fruitfulness is not capable

pable of being restored, but by planting a new Tree. Whereas had this Evil been observed and remedied in time, *all* might easily have been reduced into the greatest Beauty and Order imaginable; as may be seen by the two foregoing Figures. For when Branches are young and tender, they are *ductile* and *governable*, and you may with Care *lead* them backwards and forwards, as Occasion and Necessity require. Neither is this Method any the least Blemish or Hindrance to the future Prosperity and Fruitfulness of the Tree, but rather a Furtherance by reason of that early Check it received in its most vigorous Part, which (as I have elsewhere observed) throws it sooner into a bearing State. And it is also to be observed, that such a Check does not in the least hinder its Prosperity: For there is this difference between a weak sickly Branch, and a vigorous Branch made

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made weaker, rectified and subdued by Art: The one is in a dangerous dying Condition, for want of proper Wood and Pores to convey the Sap and Juices in their continued Circulation *; the other has its Ducts and Passages only a little straitened, by being horizontally bent and bow'd down; lest it spend its Vigour all at once, and die the sooner afterwards. In short, the one is dying and generally past Recovery; the other would

* What I have said in my former Treatise (Pag. 64.) amounts to a plain Demonstration of the Circulation of the Sap in the Jessamine, tinged all over by Inoculation. For tho' (as hath been objected) that Operation hath not the same Effect in the painted Philirea and Holley; and tho' we could not account for the Reason of such a different Phænomenon; yet still the Proof is undeniable in the Jessamine. But indeed the true Reason of that Difference seems to be plainly this; The Bark and Leaves of those Ever-Greens are so tough, hard and stubborn, that they do not easily suffer any adventitious Juice to alter their natural Colour; and we find some sorts of them will hardly retain the Stripe, made even from the Shoots of the Bud itself. Whereas the Jessamine hath a marvellous thin Bark and silky Leaves, which easily receive an Impression and Change of Colour from a ting'd or poison'd Sap, continually circulating through their Veins or Pores.

live

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live too fast, if not kept within due Bounds and wholesome Rules, which give true Life to the *vegetable*, as well as the *moral* World. This Reduction of a young Tree, which I am speaking of, chiefly respects the Peach and Apricot; no other Tree that I know of being so subject to decay by Blast and Canker on one side and not on the other. And now I have mentioned *them*, before I leave them, I shall take notice of a Defect in Pruning, more peculiarly prejudicial to these, than to any other sorts of Fruit-Trees; and that is, leaving the Wood-branches of the foregoing Year too long. This, tho' it is a general Fault in Pruning; yet it is of worse Consequence in the Peach and Apricot, their Bark, after two or three Years, growing so thick and tough, that they will not put forth new and tender Shoots any more after they are shortened, as the Pear and Plumb will do; which is the true Reason of
that

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that Barrenness so frequently visible in Peach-Trees toward the bottom, having been suffer'd to grow too fast, and run into long Wood-branches in their Youth. I am sensible several Persons are very regardless of this; especially such as are blessed with a more than ordinary warm good Soil; and are apt to triumph with their Plenty, without minding the strict Rules of Art, or, it may be, attribute their Success to their own particular Skill. Whereas Nature itself, with little Art in such Soils, will do Wonders for a time: But then they must remember, that their Trees will be shorter-liv'd: And accordingly in such Cases, as I have observed, great Barrenness in time will be discovered in the middle and bottom of the Walls, as a Fore-runner of Death. It is a certain Truth, *good pruning* not only procures *Fruit*, but makes *lasting Trees*.

Having

Having given this Caution, I need not add any thing farther concerning Rules for the Government of the Peach and Apricot, if what I have already said in my former Treatise, be but well minded and considered. Only before I leave this Head, I have something particular to say with respect to the Government of the Pear and Plum, both those against the Wall and Dwarfs, which will in a great measure cure the Defect of bad pruning in old Trees, and prevent the Danger of Barrenness in young ones, arising from too great a Degree of Vigour, which these Trees are most subject to.

For *First*; As to the Case of a young Tree, that discovers an extraordinary Vigour after planting, nothing so effectually brings it into a bearing State, as some way or other checking the Sap in its free Circulation, either in the Root or Branches. Now tho' I have sometimes practised
this

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this with Success on the Roots, by shortning several of them with a sharp Spade ; yet because this working *under Ground* is a blind and uncertain Remedy, I rather prefer practising upon the Branches with my Knife ; where I can see what I do, and make a Wound as little and as big as I please. In the Case therefore here supposed, I cut the most vigorous Shoots two parts in three through, with a pretty large Notch, lest it heal over again too soon, and recover an undesirable Vigour. Beside the Advantage of bringing a Tree sooner to a bearing State, there is this farther Benefit to be had by this Method, *viz.* you may lay all *untoward* Branches just as you please, humouring the Notch so, that the Branch may fall handsomely into the Place desired ; so likewise all perpendicular Branches, and all such as grow forward, may, if occasion be, easily be reduced horizontally, and nailed close to the Wall in a void Place

Place where they are wanted; and if it is a Dwarf, this *Incision* is of singular use to rectify *aspiring* Nature, to keep down all perpendicular Branches, and to give the Tree its exact open Air, and that proper Beauty and Form, which a Dwarf requires. There need not be much fear of making the Wound too big; for provided there be but any little reasonable Quantity of the outward Bark or Rind left uncut, a Branch of a *Pear* *especially* cannot ordinarily be killed, but will soon, *too soon* recover its Vigour. Only with respect to Dwarfs it must be observed, that where the Incision is made pretty large, and the Branch much weakened, it is very convenient to strengthen it for a time by a Prop, against the Violence of Winds; till the Wound is a little healed over, and it recover a sufficient Strength to support itself; which yet it will be observed to do in one Summer.

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Secondly, When the Pear and Plum have been suffered several Years to run into Wood and many thick perpendicular Branches, (the Effect of bad Pruning and the certain Cause of Barrenness) after some of the biggest Wood is intirely cut out, the best Remedy that I could ever yet find, is to make these *Incisions* with a Mallet and Chisel, on some of the largest and most upright Branches that are left; sometimes *two* or *more* even in the same Branch. This I have often experienced to produce Plenty, sometimes the first Year, but most commonly the second after the Operation. But indeed it is not always a Sign of bad Pruning, if vigorous Trees need such Checks as these; for the Pear on a free Stock is hardly to be kept within Bounds, or pruned with any constant Success *without* them: But *with* these Helps and a due Regard to the Rules of Pruning, which I have already laid down (Part 1.) there is little danger of

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they will often die with Gum, this must not be made a common Practice of, and ought only to be used in those Cases, where their dying is only the Loss of such Shoots, as would otherwise have been of no use. But the Pear and Plum are of so strong and hardy a Nature, that you cannot ordinarily hurt them by *Incision* or any *moderate* breaking of their Branches. I know not whether I need to add, that the Vine and Fig will by no means endure such course Treatment, the ingenious Observer well considering, that *Discipline* is always to be suited and proportioned to the *Strength* or *Weakness* of Nature.

N. B. Although this Operation of managing young vigorous Branches by *Breaking*, and the larger ones by *Plashing* or *Incision*, be to be practised any time of the Year; yet I prefer doing it in the Spring, especially making the larger Wounds, on the Account of the Winter Wets and
Frosts,

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Frosts, which will then be over; tho' any danger from thence may easily be prevented, by only applying a little Cow-dung to the Wound. As to the *general* Practice, a watchful Eye will see Cause to use this Method, not only in the Winter, but all the Summer Season too, as Occasion and Necessity require.

N. B. A dry Summer naturally disposeth almost all Trees to bear well the following Year; therefore in a wet Summer, Fruit-Trees require more than ordinary Care and Art, to hinder their running into Wood and fruitless luxuriant Branches.

N. B. The Art of checking the Sap both in Root and Branches, may be very successfully apply'd to such flat Dwarfs, as are intended to be only about two Feet high, humouring the Borders, whether they be Apples, Plums or Pears: tho' it is most proper the Apples should be on Paradise-Stocks, and the Pears on Quinces, the more

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to overcome, by *Housing* them a Nights in the Spring, and setting them pretty deep in the Ground in the Summer, on a good Exposition, allowing them plentiful Wat' rings.

But the Success of this being uncertain, I shall say no more of it; but shall leave this, and what else I have said on this Head to the Judgment of all ingenious Improvers of Art and Nature; whose modest Enquiries ought the rather to be encouraged by all wise and good Men; because the more we search, the more we still discover of the divine Bounty and Goodness to Mankind.



The Fourth and last General CAUSE
of BARRENNESS.

There remains in the last Place to say something of a very different Cause of Unfruitfulness from any that have hitherto been taken notice of; and that is *cold unkind*

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Seasons ; but especially *Frosts* and *Blasts* in the Spring. This will readily be granted to be, not the *Fault* but the *Misfortune* of the Gardener ; and such a *Misfortune* too, as they who live on the Continent are not so subject to, and therefore in a great measure peculiar to us who live in an Island.

However, to remove all Cause of Complaint, and to keep us from repining, Providence has been very liberal to us in some peculiar *Blessings* other ways. We are not subject to the Excesses either of Cold or Heat ; and Nature assisted by Art produces for us the choicest Fruits : We abound in that which is properly the *Staff* of Life ; and, which crowns all other Blessings, we live under such an happy Government, that what we *have* we *enjoy*.

These Circumstances so desirable to us, and so much the Envy of our Neighbours, are by no means to be forgot

forgot by us, when we remember the Infelicity of some unkind Seasons. And yet because these Frosts and sudden Blasts are so much the real Grief of the ingenious Gardener, when he sometimes sees all the Fruit of his Labour, and his Expectations brought to nothing even in one Night, it may be well worth the while to enquire, whether a better Remedy than what hath hitherto been thought on or practised, may not be found out to cure this great Evil and dangerous Enemy.

The general Method hitherto used by careful Gardeners to preserve Blossoms and tender Fruit from the Blast in the Spring, is to hang up Balsmats or other warm Coverings, which are rolled up in the Day-time, and let down in the Evenings, when most danger is suspected. This Practice hath sometimes succeeded very well, and preserved some of the choicest Fruit: But there are these four Inconve-

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conveniencies attend it. First, it is very chargeable to provide so many large distinct Mats, as every full grown Tree requires. Secondly, it mightily increaseth the Gardener's Care and Trouble to manage and adjust so many Mats every Morning and Evening; even in the most busy time of all the Year. Thirdly, Frosts do oftentimes come so unexpectedly, and even so late in the Year as the middle of *May*, that if the Mats happen not to be let down or continued, all former Care is lost, and most of the Fruit destroyed even in one Night. And yet, Fourthly, when the Mats *are* ordered and disposed as they should be, if high and black Winds arise, I have often found, that the Mats have done more harm than good, by their continual beating off the Blossoms and tender Shoots.

These Inconveniencies have put me often upon considering, whether a better and more effectual Remedy might

might not be found to prevent the Mischief of these destroying Frosts; for which Purpose, if the following Discoveries and Directions prove of any real Service to the general and publick Good, I freely own the first Hints were made and given me by a very ingenious Gentleman and worthy Friend, himself a great Lover and Improver of vegetable Nature.

Now these Hints proceeded, I think, upon a right Supposition, that most of our Frosts and Blasts both in Spring and Autumn, *fall perpendicularly*; that is to say, the condensed Vapours *falling* from the upper Region do form themselves at Night toward the Surface of the Earth in Dews or wat'ry Drops, subject to be frozen by the Coldness of the Air: and therefore the more any thing lies open and exposed to this perpendicular *Descent* of Vapours, the more will it be subject to be *frozen*, or (which is the same thing) *blasted*. The Truth of which
is

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is confirmed to us both by Reason and Experience. As when a Fruit-Tree hath been set against a Slope-Wall, for the Convenience of receiving more of the Sun's Rays, we always find that *that* is the first and most blasted both in Spring and Autumn.

This therefore being the true State of the Case with respect to most of our destructive Blasts, a little Philosophy will teach us, that *horizontal Shelters* are the best Guard and Defence against *perpendicular Frosts*. And this is that which my worthy Friend made Experiment of in artificial ones made of Tiles or thin bits of Board fastened in the Wall, which he found (as I have myself also found since) to answer to a Wonder, and to secure the Fruit where-ever they were placed.

However these artificial Shelters thus *occasionally* placed, were rather used by way of Trial and Experiment, than

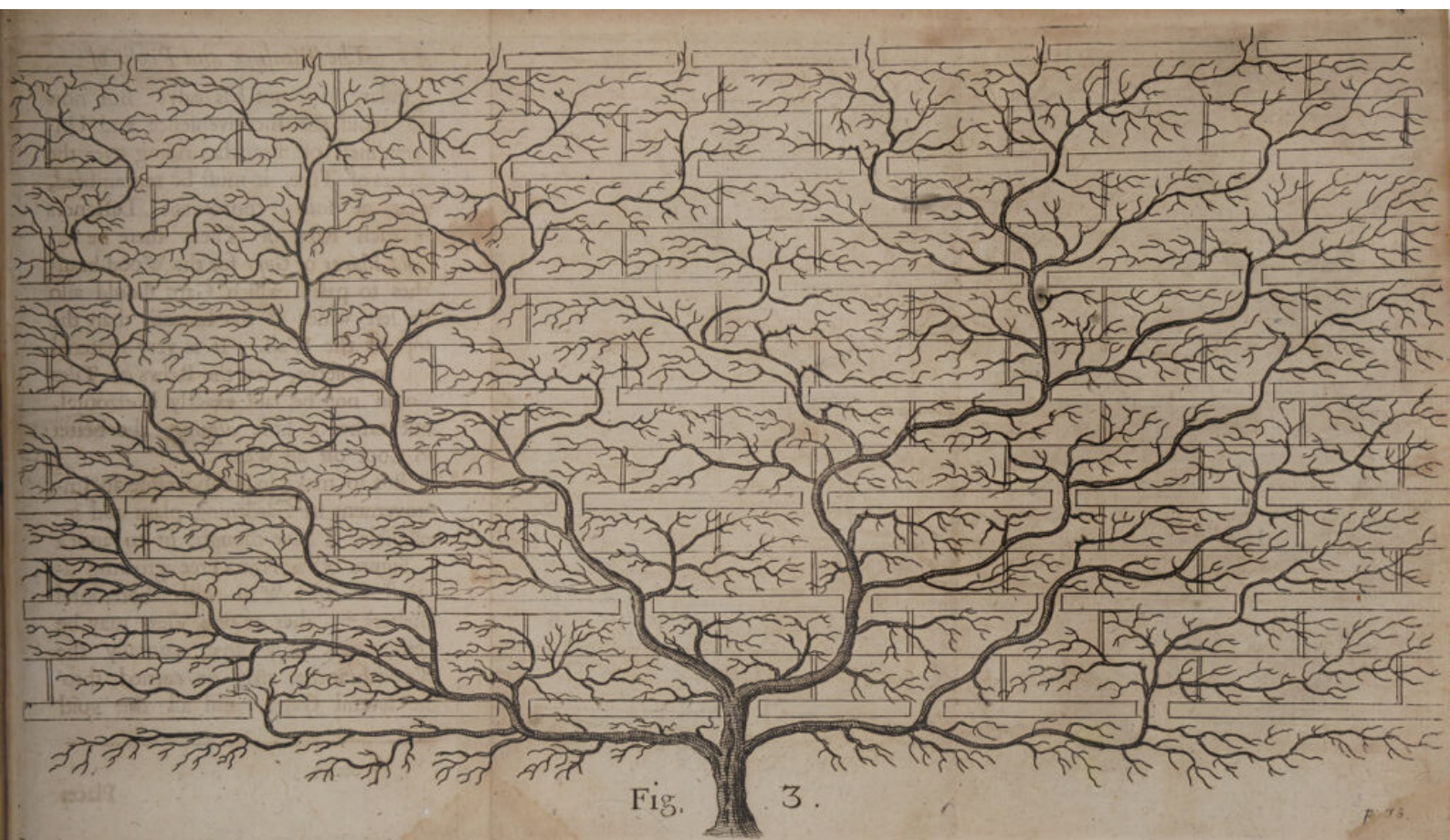
than with any View to have them generally made use of in that manner. I have therefore since considered with myself, how these *horizontal Shelters* may be so contrived, as to make either little Trouble or Charge, and to be of general use ; especially to such as have a Fruit-Garden, such as I have above described, yet to make ; or are willing to make new Walls for the greater Security of having Fruit.

Now the most plain and easy Method of doing this, so as to answer our Purpose all at once, is to lay Rows of Tiles in the Structure of the Wall at certain Distances one above another, the Tiles jetting forward and hanging over the Plane of the Wall about an Inch and half. This is neither a difficult nor a chargeable Practice, if the Wall be of Brick, to place, betwixt every two or three Rows of Bricks, these horizontal Shelters of Tile ; and if the Wall be of Stone, if the Joints be any thing regular,

regular, it is not less easy. But now to avoid the Inconvenience and Unseemliness of Branches riding over the Edges of Tiles, it must be remembered, that at some convenient Distances in each Row of Tiles, there be left *void Places* or *Gaps* for the Wood-branches to pass; which Gaps should also be left wider at the bottom than the top of the Wall. It is very material also to observe, that the Rows of Tiles should not be laid exactly horizontal, but rather a little *dipping*, the better to shoot off all Wet.

But to make so considerable an Improvement in Gardening plain and intelligible, I have thought fit to annex a Figure of a Fruit-Tree growing against a Brick-Wall with horizontal Shelters *; that at one View may be seen, not only how naturally the Wood-branches may be carried thro' the several Gaps, and all the void

* See Fig. 3.



Places of the Wall filled; but also how a Tree managed according to Art, ought to grow and spread with horizontal Branches, and form itself in every part regularly.

How these *horizontal Shelters* of Tile may be fix'd to Walls already built, I am not so well able to say; tho' I believe it *may* be done, especially on Stone Walls where the Joints are generally wide enough to admit the Thickness of a Tile: But because the Benefits attending this Method of Improvement, are still more and greater than any I have yet taken notice of, it will be necessary to be a little more particular, to encourage the building these Walls. For,

(1.) By the Help of these Shelters, even in the most difficult Year, a good Quantity of the choicest Fruit may *almost* be depended upon, from such Branches and Blossoms as are well sheltered by the Tiles, as Experience hath sufficiently shewn.

(2.) And,

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(2.) And, which is very considerable, Fruits thus sheltered from perpendicular Colds and Blasts, I have experienced to be much *larger, better fed and finer tasted*, than those on the same Tree that are more exposed. And as a Consequence of this,

(3.) They are also *forwarder* and much *earlier ripe* than others; which is no inconsiderable Advantage; especially with respect to all late ripe Fruit, such as Peaches, Figs and Grapes, which in many cold Summers, without such or the like Helps, would never be ripe at all. For tho' one might be tempted to think rather the contrary, on the Account that some of the Meridian Rays of the Sun can hardly be supposed to reach the Fruit most sheltered; yet considering that the very Branch on which the Fruit grows hath the utmost Degree of Heat; that the Fruit itself, tho' not so much directly shone upon, is yet fed with the freest Circulation

culatation of Sap, and kept in a more even Degree of Warmth; and lastly, that the Fruit thus sheltered receives no small additional Help by the Reflection of the Sun's Rays from the Row of Tiles below it: On all these Accounts it should not seem strange, that *horizontal Shelters* do really accelerate the ripening of Fruit, especially when it is so well confirmed by Experience.

(*Fourthly and Lastly;*) Walls built with these Rows of Tiles, will effectually cure that common Mistake in Gardeners, of leading Wood-branches perpendicularly; for if the Gaps be left, as they ought, not one directly over another in the several Rows, the Branches will unavoidably be disposed, as they ought, something horizontally, and the middle of the Tree kept free from great Wood. Indeed the Gardener must have a very unhappy Genius, if he can in these Cases prune a Fruit-Tree amiss. For if he do not

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leave the new Shoots too long, the *Necessity* of leading the Branches backward and forward (as may be seen in the Figure) will of Consequence produce bearing Wood.

N. B. It is of great Consequence to be pretty exact in keeping the *Projection* of the Tiles to about an Inch and half. For if *more* were allowed, and the Tiles stood farther out, too much of the Sun's Rays and Heat would be kept off from the Fruit and Branches; and if *less*, it would not be a sufficient Shelter. Either Extreme would be worse: And I believe it will be found that the middle Proportion here mentioned will best answer the Purpose of this Improvement.

N. B. In the Case of *black Wind-Frosts*, which come more horizontally, altho' these *Shelters* will be of singular Advantage; yet it may not be improper in *Extremities* to hang up Mats against some of the tenderest Nectarines and Peaches. The danger
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of having the Blossoms and tender Shoots beaten off by the Wind, will be effectually prevented by the *Projection* of the Tiles.

Note, Lastly. The foregoing Account of the *falling* of Vapours and forming themselves in Mists or Dews subject to be frozen, will serve to explain that very odd Phænomenon I have often taken notice of: *viz.* the Leaves and tender Shoots of a tall Ash-Tree in one of these blasting Mists may be observed to be frozen, and, as it were, sing'd in all the *bottom* and *middle* Parts, whilst the *upper* Part of the Tree, that is exalted above the Influence of the Mist, shall be left free and untouch'd.

I need not apply the Philosophy of this to the Purpose of our *horizontal Shelters*: And a good Man need not be told, that tho' he is allow'd to guard himself by all prudential Methods against Misfortunes; yet his *safest* and *wisest* way is always to look

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upward; to pray for and expect the supernatural Aids of divine Grace to sweeten and allay the Miseries of Life.

Thus I have gone thro' the Substance of what I at first purposed in this Treatise; *viz.* to point out the chief and most general Causes of Barrenness in a Fruit-Garden, and to provide proper Remedies against them. And how far that Design hath been answered in the foregoing Pages, I must leave to the candid Reader to judge: Only taking notice here, that what remains to be said in the concluding Part of this Treatise, shall be only some farther Observations and Improvements, relating to the Art of Gardening, loosely set down, without any great Regard to Order or Connexion.



Concerning



Concerning the Great USE and Admirable QUALITIES of Untry'd EARTH.

Without intending in the least to derogate from what the ingenious Mr. Evelyn and others have said, concerning the several sorts of Earths and their Improvements, I think my self obliged to repeat and explain more largely, what I just hinted at in my first Part of Gardening; *viz.* the surprizing Success which I had from the use of *untry'd Earth*, both with respect to what has been sowed and planted in it.

By *untry'd Earth* I mean such warm, mellow, rich Soil, as lies next the Surface (after the Turf is pared off) about six or seven Inches deep, in such Places where neither Plough nor Spade hath ever come. Neither is this so difficult to be had as some may

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think,

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think, most Lordships (as far as my Observation has gone) affording it in one Place or other in sufficient Quantities ; either in the lower Grounds and Meadows sometimes overflow'd, and so enrich'd with drift Sand ; or in the several Wafts, Commons, or other By-places frequented by Cattel ; and this Earth will in great measure discover itself to skilful Judges, in the several *Gramens*, by the Turf which grows upon it.

Taking it therefore for granted, that this rich *untry'd Earth* may be had without any great Charge or Difficulty, from the Experience I have had of its surprizing Productions, I cannot but again and again recommend the Use of it for *Amendments* and *Improvements* both in the Fruit and Kitchen Garden. This I am aware will be thought strange by all those who have a Fondness for Dung, and think no Riches can be had without it. But I am well satisfied no sort
of

of *Composition* made with Art, can be brought to exceed in all Respects *this* which Nature offers so freely to our Hands. For if you plant the choicest Fruit-Trees in this Earth, they presently discover an uncommon Healthfulness and Vigour: If you sow any of the tender sorts of annual Plants, if the Earth be discreetly chosen and made fine by a Sieve, you may presently perceive they *like* the Soil by their flourishing Looks and Colour. Even Mellons and Cucumbers, which are usually nursed with the greatest Art, and complemented with the richest artificial Mould, do prosper *here* to a wonder; and if they have but equal Care in other respects, need no other Compost than this *untry'd* Earth.

Nay farther, in a Case where Dung has alway been thought to be wanted in greatest Abundance, (and it is accordingly *loaded* in at a great Expence) I mean, in the making an Asparagus

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Bed, here all or most of that Expence is saved, and the Purpose as well, if not better, answered by the sole Use of *untry'd Earth* laid a Foot and half deep.

But lest it should be thought that I intend this *Nostrum* as a sort of *Catholicon*, or Quack-Pill, to serve all Purposes alike, I think my self obliged to say, that I know of no extraordinary Excellence in this Earth with respect to Flowers; especially the nicer and more tender sorts, but rather the contrary: So also for the several sorts of Exoticks and choice Shrubs, a proper artificial Composition may be much better and more suitable to *them* than this rich Earth: But then in all such Cases and Instances, as serve to make a Garden fruitful and profitable (which is to my present Purpose) as far as my Experience reaches, this *untry'd Earth* is much preferable to rotten Dung or the common artificial Composts, for these following Reasons.

First ;

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Whereas Earth taken from under an old Turf, having a sufficient Quantity of Nitre or Sulphur or both, sufficient for the Purpose of Vegetation, hath all its Parts well mixed and incorporated, all its Juices are mellowed and refined by Age, and want only to be exposed to the Air to exert themselves. For which Purpose Monsieur *Quintiney* rightly observes, that the Sense of smelling is a proper Judge of the Goodness of Earth; because an *ill Smell* will be sure to give an *ill Taste*.

This Matter is made plain to a Demonstration in the Quality of Asparagus planted in and about *London*; where having Plenty of Dung, they form their Beds altogether of it at a great Depth; the Effect whereof is, that they have indeed exceeding large Asparagus; but of a Colour so *unnatural*, and a Taste so *strong* and *unsavoury*, that none who have tasted our finer and more natural sort in
the

the Countrey, will cover the former. And yet if it were any Recommendation of it to have it so very large, *untry'd Earth* may boast of Productions equal to those at *London*: But indeed to me it seems a Fault, to have Asparagus too large as well as too little, for this reason; because being subject to a sort of Pith and Hollowness in the middle, when it is very large, the Water it is boiled in is apt to lodge there, and gives a wat'ry insipid Taste to it. But still I may add,

Thirdly, That tho' most of the artificial Composts come nearest to the excellent Qualities of this *untry'd Earth*, especially when they have had sufficient time to mellow and incorporate; yet this is cheaper; always ready at hand, and immediately fit for use: By which means the greater Quantity of Dung will be spared and allotted for the Pasture and Corn Land.

N. B. A

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N. B. A Coat of this *untry'd Earth* laid only two Inches deep, is sufficient for most sorts of annual Plants from Seed, such as Beans, Peas, Lettuce, Spinage, Onions, Kidney Beans, &c. (except Carrots, Parsnips, &c. which require more) and will last well three or four Years without any other Amendment: And longer still, if only a little Coat of Dung be allowed as a Foundation for this Earth.

N. B. The Parings of Turf taken off where this Earth is found, if not otherways required, should be laid on Heaps to rot two or three Years; and this will produce incomparable Soil for Amendments; the oftner it is stirred, the better.

If it shall here be wondered at, that I say no more of the Management and Improvement of the Kitchen Garden, I have only this to say, That Subject seems to have been already exhausted, by the many several Authors that have treated of it.

Besides,

Besides, there seems to be nothing difficult in it; Every Man that can but handle a Spade, being able and ready to give Instructions for what is proper to be done in all the several Parts of the Year. Only there is one thing relating to the Management of Hot-Beds, whereon Mellons and Cucumbers, &c. are wont to be raised, which it may not be amiss here to take notice of; because, tho' it hath been practised with Success by some of the Gardeners near *London*; yet other Persons curious in that Matter, not being apprized of it, may think themselves obliged for the Relation.

Instead of making the Glass Frames, as is usual, open at the bottom, they may be made with strong Wires crossing one another, so as to be able to support a Bed of Earth four Inches deep for the several Plants to grow in: And thus the whole may be lifted by four Men from one Hot-Bed to another,

another, as occasion serves. This Method has these two very considerable Advantages attending it. First, this saves the Trouble and prevents the Danger of *transplanting*, which oftentimes proves fatal; but always proves a great Check to the Growth of these tender Plants: Secondly, here is no Intermission in the Growth of the Plants, nor any artificial Heat of the Hot-Bed lost or wasted, which in the ordinary Methods cannot be avoided; for there you must wait 6 or 7 Days, till the great Heat be abated, lest the tender Roots of the Plants be scorched: Whereas in the Case before us, you may allot just what Degree of Heat you please; for when the Heat is too violent, the Frame may be placed something hollow from the Bed; when it abates, it may wholly rest upon it; and when the Bed grows too cold, the Frame may be carried to another.

But

But I leave this Matter with the Curious to apply it as they see occasion, and to make farther Improvements; intending here only to give some short Hints of what I suppose may be made useful to the Publick, and acceptable to all contemplative and ingenious Gentlemen. Hoping therefore that what follows may also prove so, I will add some Particularities relating to the raising and managing Fruit-Trees not yet touch'd on.

Experience having made it plain, of how great Consequence it is to have all the tenderer sorts of Fruit put upon right and proper Stocks by Inoculation, especially where the Soil is cold and wet: And it being also found to be a Matter of some Difficulty to make the Stones of the larger sorts of Plums to grow, seeing they commonly fail by being kept either too wet or too dry, I have thought upon and practis'd an Expedient, that doth, I think, effectually answer the present

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present Purpose, *viz.* to inoculate the common ordinary Plum-Stocks or Suckers with the Pear, Muscle or Bonum magnum Plums, and then upon the Shoots of these to put the Peach, Nectarine, or Apricot, as you desire: And the Operation may be performed upon the first Years Production from the Plum-Stock; so that little Time need be lost.

The Propriety and Reasonableness of this Procedure is founded upon common Experience and Observation; that the Miscarriage of these sorts of Fruit put upon wrong Stocks is always at the Place of Inoculation; where they either put out Gum and die, by being not exactly incorporated; or else so very much swell and overgrow the Stock, that the Head is not duly nourish'd; for want, I suppose, of proper Ducts and sufficient Juices below. I mention Plum-Suckers, not that I prefer *them*; but only that I think by frequent Removes in the Nursery,

fery, they may be made to do well enough.

Altho' it be certainly known, that Grafting and Inoculation are the general Methods of *propagating* the several Kinds of Fruit already in being; yet *neither* of those Operations tend to the Production of any new Species; the Scion or Bud *always* following the Nature and Kind of the Tree from whence it was taken. From whence it follows, that all those several Species and different sorts of the same Fruit which our Gardens furnish us withal, were originally, (and in a *good Sense* accidentally) raised from the Seed, Stone, or Kernel of every *common Genus*, whether Pear, Apple, Plum, or Cherry, &c.

I have not my self had Leisure nor many Opportunities of making Experiments of this Nature; but thus much is certain, that in the Productions of Fruit from the Seed or Kernel, Nature *commonly* and *for the most*

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part degenerates, and you have *ordinarily* from such Seed or Kernels a much worse sort than that which was sowed. But then there is this *comfortable* Circumstance to be added, that *now and then* you have a sort proves altogether as good as the kind sowed; and *sometimes*, tho' not often, *much better and more excellent*; which has encouraged the Nursery Men to try Experiments, and has afforded those several *excellent* sorts we daily hear of, to invite the Curious to taste the Fruit.

However, not satisfied with this general Knowledge, my Curiosity has led me to enquire of others, of more Leisure and longer Experience, particularly as to Pears and Apples, whether they had observed the Degeneracy to be greater and more universal in the Seed sowed from grafted Fruit, or that which was taken from good fruit *naturally* raised. The Answer I had from one Friend was;
That

That he could never observe the *latter* would much degenerate; for tho' 'twas often *different*, sometimes much *the same*, and sometimes, tho' rarely, *better*; yet that it hardly ever proved a Crab or Wilding: Whereas in the *former* Case, even from Fruit of the best sorts grafted, the Production was commonly worse, and for the most part did partake of the Nature of the Stock, and proved a Wilding or Crab.

On the other side I have now by me a Letter from a worthy Clergyman in *Worcestershire*, which tho' it gives a seemingly different Account from the former; yet because there are some curious Experiments in it, I shall here insert it for the sake of the Publick.

Reverend Sir,

I Have now before me a Letter from a Friend, in which he tells me you have heard of my having Experience in raising Fruit-Trees by Kernels, and

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that the same Seed hath produced Plants of different Kinds; you desire to know whether that Experiment hath been made with the Kernels of Fruit that was grafted, as well as of that raised by Seed, and what difference I have observed between them. I have rais'd great Numbers of Fruit-Trees from Kernels, both from the grafted Fruit, and from those raised from Seed. And from the Kernels only of three or four sorts of Apples, I have, I believe, an hundred different sorts; some resembling the Fruit sowed; some abundantly better both in Colour and Taste, and some of them perfect Crabs; but all of them distinguishable from each other; and, according to my Observation, the greater Number of the different Species come from the Kernels of the grafted Fruit. If this will be of any Service to you, I am sure it will be a great Satisfaction to,

*Sir, Your very affectionate Brother,
and most humble Servant,*

Edw. Whitcombe.

If

If these two different Accounts may be reconciled on a Supposition, that Mr. *Whitecombe's* Observations were made from the Kernels of Fruit grafted, not on *Crab-Stocks*, but on some of the *natural Apples* raised from Seed: Then the proper Use to be made from the whole, will be; That for all Persons curious in the Art of Nursery, the way that is most likely to succeed in getting new sorts, is to use the Stones or Kernels of the *natural* sorts that are good, or rather the Kernels of the good *natural* sorts, improved by grafting or Inoculation. But this also I leave with the ingenious Inquirers into vegetable Nature, for their farther Observations and Improvements, and proceed to

Note, Another thing worth remarking; *viz.* a very convenient Practice relating to the fastening the Branches of Fruit-Trees on old Walls. This I have observed to be done with great Expedition, by using only small Wil-

lows in the Winter, and Rushes in the Summer turned over the Branch, and then twisted about a Nail already fastened in the Wall. Now the great Benefit and Usefulness of this Method will quickly appear to all such, as have no better than old Walls, composed of indifferent Stone with large Joints, for Fruit-Trees to grow against: For these sorts of mould'ring Walls are found to be much decayed and weakened, by the continual *draw-
ing* the Nails every Season, but by this Method are observed to last many Years.

I cannot well omit describing here a very useful Instrument, contrived by a very ingenious Gentleman and Neighbour, for the more safe and ready transplanting Trees out of the Nursery, or from one part of the Garden to another, as occasion requires. It is made exactly in the Shape of a little Tub, cut perpendicularly down the middle into two semicir-

semicircular Halves, something less at the bottom than the top: Which Semicircles being held together by Iron Hoops distinctly, are so contrived, as when they are used, to be held together only by Iron Hooks on one side, and drawn together by a long Iron Screw on the other. For after the circular Trench is made round the Tree, it will easily be perceived, that such an Instrument must be of great Use, to hold a sufficient Quantity of Earth about the Roots, and make its Removal safe, or very little injurious. I consider my Title Page, so need not use many Words: *Sapienti Verbum.* Once more.

Because the Grape is so noble a Fruit, when full ripe, some Years so difficult to be obtained, and therefore deserves our greatest Art to encourage it, I would recommend planting the Vine on such a *South* Exposition of the House or Out-houses, as (if possible) may have the Advantage of a

Slope falling to the *South* : Which Slope (especially if it were paved with Brick, Stone or Quarrs, which is very adviseable) collecting and receiving more of the Sun's Rays, will consequently afford greater and stronger Reflections of the same from the several Angles of Incidence ; and thereby much accelerate the ripening of the Fruit. I cannot easily be brought to think any Soil or Situation can be too dry for the Roots of a Vine, after having seen at *Barnwel* near *Oundle* in *Northamptonshire* a flourishing Vine grow from between the Joints of an old Castle Wall near 20 Feet high from the Ground, its Branches hanging downwards : And (as I was told) when it was carefully pruned and managed, it produced admirable Grapes.

N. B. Because the chief Beauty of Trees planted in Rows for Avenues consists in their being streight, regular and upright ; and because there
are

are many other Cases wherein it is very undesirable to have a Tree grow crooked and irregular, it may not be amiss to inform the Curious, that cutting such a Tree in the Ham or Bend of the Crook with a Knife perpendicularly, 6 Inches above and 6 below in two or three Places, will strangely facilitate its Reduction, and in three or four Years perfect its Cure, provided the Tree be but pruned up, and freed of all its Branches below and a little above the Bend, and care be taken every Year to renew the Slits.

N. B. Although it be contrary to common Practice and the Rules of Gardening to set Apple Trees against a Wall; yet it may not be improper on some *West* Wall, where there is room to spread, to afford a Place for a golden Pippin, for the sake of that surprizing large Fruit it will afford, so much beyond the ordinary Size; which may not perhaps be thought *better*: But if it be *bigger* and not *worse*, it cannot

cannot sure be unacceptable to behold and taste such a *Bonum Magnum*.

Two glorious Qualities in whatsoever subject they meet, and are always in some Degree or other a Resemblance of the Divine Fountain of Goodness; even of him who is the One supreme, self-existent, independent, unoriginated
 ὁ μόνος ἀγαθός, ὁ παντοκράτωρ, ὁ Θεός:
 * To whom be Honour, Glory, Dominion and Power by Christ Jesus throughout all Ages, World without End: *Amen*.

* Rom. 16. 27. Eph. 3. 21. 1 Pet. 5. 10, 11.





A P P E N D I X.

The following Letter was sent me from a Brother of mine in London. The Method he there gives for finding a Meridian Line appears to be the most accurate of any that I know of.

Dear Brother,

UNderstanding you intend to direct a Method for finding a Meridian Line in your Book of Gardening, it may be you may think it of Use to the Publick to have (beside yours) a short Description of a new and familiar way of doing it very exactly by the Pole-Star; Thus,

First, Adjust your Clock or Watch, as near as may be, by a Quadrant, or otherways. Then fix a strong Pole of about 14 Foot long as near as you can perpendicularly, and at 12 a Clock make a Mark at about 5 Foot distance

distance in the Shadow, where you are to fix another Pole of the same Height as before, which two Poles will be nearly in a Meridian. Then at the top of each of these Poles nail Pieces of Wood or Iron about 2 Foot long, yet so as to be moved upon occasion. At the ends of these fasten Lines of fine Cat-gut with leaden Weights at the end of them with a Liberty of slipping backward and forward, till the Eye, the two Strings, and the Pole-Star are in a right Line, at such time as the Pole-Star comes to the Meridian. To find which observe the following Directions.

Subtract the right Ascension of the Sun (which is found by the following Table for every Day in the Year) from the right Ascension of the Pole-Star (which is now 37 Minutes in time, and increaseth 1 Minute and 16 Seconds in 10 Years) the Remainder will correspond to the time of the Pole-Star's coming to the Meridian
above

above the Pole, and near 12 Hours before or after will be the time of its coming to the Meridian under the Pole. Thus because $11^{\circ}. 0'$ in Aries corresponds to 37 Minutes in time of right Ascension; when the Sun is there (which is *March 20.*) the Pole-Star comes to the upper Meridian at Noon. And because $191^{\circ}. 0'$ of the Ecliptick (where the Sun is *Sept. 22.*) hath $12^h. 37^m.$ in time of Ascension, the Pole-Star comes to the same Meridian at Midnight: And in both Cases its Hours from that Meridian agree with the ordinary reckoning of Hours with us. At other times it comes sooner than the Sun, *viz.* about 4 Minutes every Day or an Hour in 15 Days. Thus *April the 22d* last Year, the Day of the great Eclipse, the Sun's right Ascension was $2^h. 41^m.$ in time; which deducted from 37 Minutes, or $12^h. 37^m.$ the Remainder is $9^h. 56^m.$ which shews that the Pole-Star came to the upper Part of the Meridian at

9 a Clock and 56 Minutes before Noon; and at 9 at Night and about 54 Minutes past to the lower Part of the Meridian, which is nearly 4 Minutes for a Day or an Hour for 15 Days along the Ecliptick, and so in all other Cases whatsoever.

N. B. When the Sun's right Ascension exceeds 12 Hours 37 Minutes, you are to remember to add 24 Hours to the right Ascension of the Pole-Star; the former being subtracted from the latter gives the time in the Afternoon of the Pole-Star's coming to the upper Meridian. Thus *Jan. 5.* the Sun's right Ascension is $19^h. 52^m.$ which subtracted from $24^h. 37^m.$ leaves $4^h. 45^m.$ and thereby shews that the Pole-Star came to the upper Meridian at $\frac{3}{4}$ past 4 in the Afternoon.

Your two Strings being placed in the true Meridian, you may with great Exactness know when the Sun is in the Meridian, *viz.* by the Help of a smok'd Glass (to prevent the Sun's glaring in
your

your Eyes) bring your Eye close to the *Northern* String, and when your Eye, the two Strings, and the Centre of the Sun are all in a right Line, you may be assured 'tis exactly 12 a Clock. And because the Sun's Azimuth is swiftest at that time, you may in a few Seconds observe its Motion from the Strings.

N. B. If you set two Vessels of Water, so that each Weight at the two Strings be just covered, they will hang much the steddier; and if your Observation is made when 'tis very dark, it will be Convenient to have a Candle held at the *Northern* String.

An exact Meridian thus obtained being not supposed to continue in that manner, it may not be amiss to direct the transferring it within-side the House, in order to answer readily and exactly all future Purposes, and assist the Curious to adjust Clocks, Sun-dials and Watches; to find the true bearing of all near or distant Places; and
(which

(which is very considerable) to find the exact Latitude of the Place, as will be easily observed by any one that hath but the least Skill in Trigonometry.

In order then to transfer your Meridian within-side the House, make or drill a hole in one of the upper Panes of Glass in a high Window, painting the Glass back in a Circle 3 or 4 Inches round the hole. This done, cause a Signal to be given when the Sun is exactly in your Meridian, and at that Instant make a Mark where the Centre of Light falls on the horizontal Floor. Then by the Help of a Plum-Line, bring your Eye, the Mark made on the Floor, and the Hole in the Glass all in a right Line, and the String will direct you to another Point in the same Line; from which two Points draw a strait Line made visible, and this will be a most exact Meridian. I am,

Dear Brother, yours affectionately,

London, Jan. 5.
1716.

EDWARD LAURENCE.

A Table

A Table of the Sun's right Ascension in Time for every Day in the Year.

D.	Jan.		Feb.		March		April		May		June	
	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.
1	19	35	21	43	23	29	1	21	3	15	5	20
2	19	39	21	47	23	32	1	24	3	19	5	24
3	19	43	21	51	23	36	1	28	3	22	5	28
4	19	48	21	55	23	40	1	32	3	26	5	32
5	19	52	21	59	23	43	1	36	3	30	5	36
6	19	56	22	3	23	47	1	39	3	34	5	41
7	20	0	22	6	23	51	1	43	3	38	5	45
8	20	4	22	10	23	54	1	47	3	42	5	49
9	20	8	22	14	23	58	1	51	3	46	5	53
10	20	13	22	18	00	1	1	55	3	50	5	57
11	20	17	22	21	00	4	1	58	3	54	6	2
12	20	21	22	25	00	8	2	1	3	58	6	6
13	20	26	22	29	00	12	2	5	4	2	6	10
14	20	30	22	33	00	16	2	9	4	6	6	14
15	20	34	22	37	00	20	2	13	4	10	6	18
16	20	38	22	40	00	23	2	16	4	14	6	22
17	20	43	22	44	00	26	2	20	4	18	6	27
18	20	47	22	48	00	30	2	24	4	22	6	31
19	20	51	22	52	00	34	2	28	4	27	6	35
20	20	55	22	55	00	37	2	33	4	31	6	39
21	20	59	22	59	00	41	2	37	4	35	6	43
22	21	3	23	3	00	44	2	41	4	39	6	47
23	21	7	23	7	00	48	2	44	4	43	6	51
24	21	11	23	10	00	52	2	47	4	47	6	55
25	21	15	23	14	00	55	2	51	4	51	6	59
26	21	19	23	18	00	59	2	55	4	55	7	4
27	21	23	23	21	1	2	2	58	4	59	7	8
28	21	27	23	24	1	6	3	2	5	3	7	12
29	21	31	23	27	1	10	3	6	5	8	7	16
30	21	35	—	—	1	14	3	11	5	12	7	20
31	21	39	—	—	1	17	—	—	5	16	—	—

The Table continued.

D.	July		August		Sept.		Octob.		Nov		Dec.	
	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	m.
1	7	24	9	26	11	20	13	9	15	9	17	17
2	7	28	9	30	11	24	13	12	15	13	17	21
3	7	32	9	34	11	28	13	16	15	17	17	25
4	7	36	9	37	11	32	13	20	15	21	17	30
5	7	40	9	41	11	35	13	24	15	25	17	34
6	7	44	9	45	11	39	13	27	15	29	17	39
7	7	48	9	49	11	42	13	31	15	33	17	43
8	7	52	9	53	11	46	13	35	15	37	17	48
9	7	56	9	56	11	50	13	39	15	42	17	52
10	8	1	10	0	11	53	13	42	15	46	17	57
11	8	5	10	4	11	57	13	46	15	50	18	1
12	8	9	10	7	12	1	13	50	15	54	18	5
13	8	13	10	11	12	4	13	54	15	59	18	10
14	8	17	10	15	12	8	13	58	16	3	18	14
15	8	21	10	18	12	12	14	1	16	7	18	19
16	8	25	10	22	12	15	14	5	16	11	18	23
17	8	29	10	26	12	19	14	9	16	16	18	27
18	8	33	10	29	12	22	14	13	16	20	18	32
19	8	36	10	33	12	26	14	17	16	24	18	36
20	8	40	10	37	12	30	14	21	16	29	18	41
21	8	44	10	40	12	33	14	25	16	33	18	45
22	8	48	10	44	12	37	14	29	16	37	18	50
23	8	52	10	47	12	40	14	33	16	42	18	54
24	8	55	10	51	12	43	14	37	16	46	18	58
25	8	59	10	55	12	47	14	41	16	50	19	3
26	9	3	10	58	12	51	14	45	16	54	19	7
27	9	7	11	1	12	54	14	49	16	59	19	12
28	9	11	11	5	12	58	14	53	17	3	19	16
29	9	15	11	9	13	2	14	57	17	8	19	20
30	9	18	11	13	13	6	15	1	17	12	19	25
31	9	22	11	16	—	—	15	5	—	—	19	29

A Table

A Table shewing what Angle the Pole-Star makes from the Meridian at every Hour and half Hour before and after the Time of its coming to the Meridian both above and below the Pole.

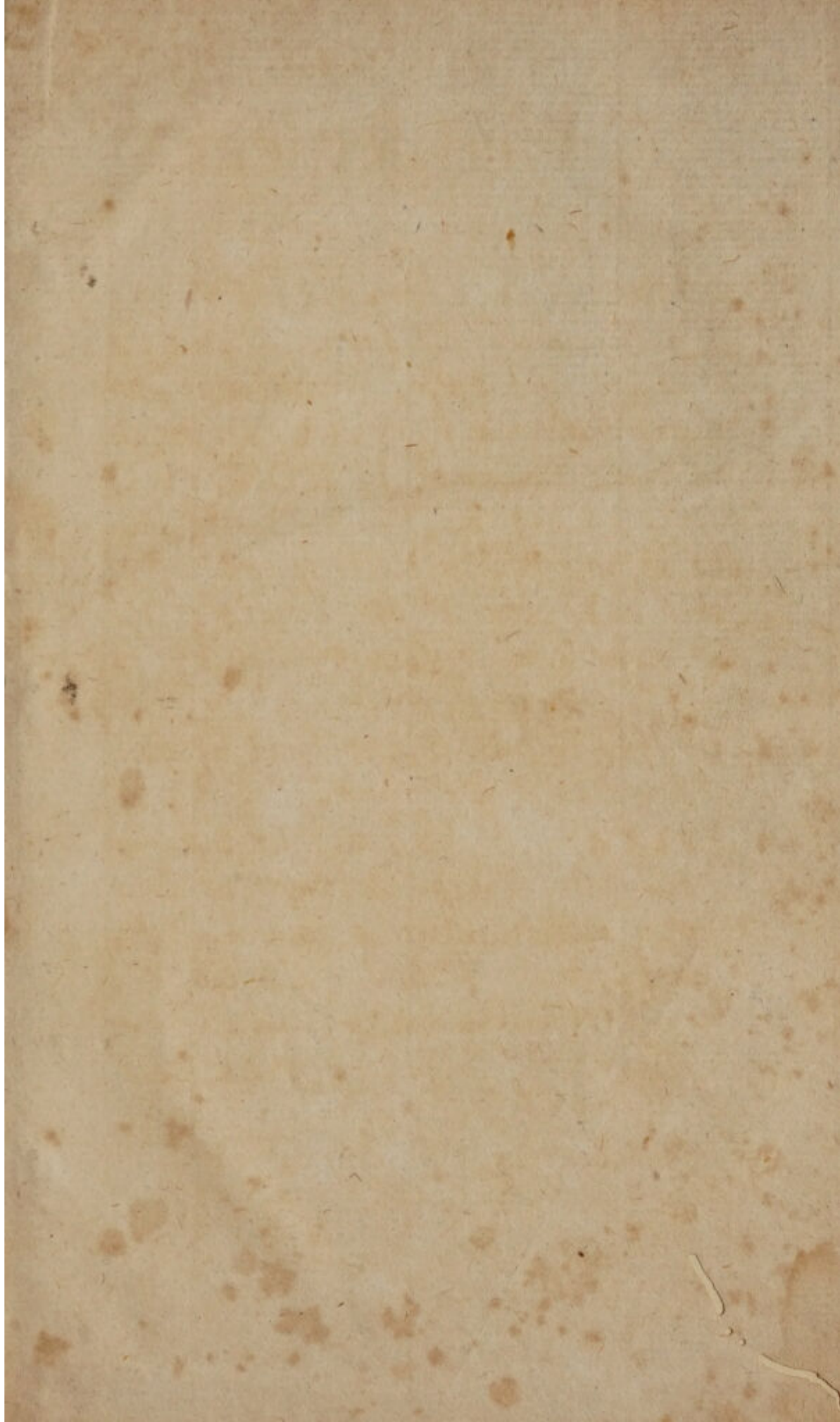
Hours.		Distances from the North above the Pole.		Hours.		Distances from the North below the Pole.	
		0				0	
12	12	0	00	6	6	3	41
$\frac{1}{2}$	$\frac{1}{2}$	0	30	$\frac{1}{2}$	$\frac{1}{2}$	3	38
11	1	1	00	5	7	3	31
$\frac{1}{2}$	$\frac{1}{2}$	1	29	$\frac{1}{2}$	$\frac{1}{2}$	3	21
10	2	1	56	4	8	3	07
$\frac{1}{2}$	$\frac{1}{2}$	2	21	$\frac{1}{2}$	$\frac{1}{2}$	2	50
9	3	2	42	3	9	2	31
$\frac{1}{2}$	$\frac{1}{2}$	3	00	$\frac{1}{2}$	$\frac{1}{2}$	2	09
8	4	3	17	2	10	1	46
$\frac{1}{2}$	$\frac{1}{2}$	3	28	$\frac{1}{2}$	$\frac{1}{2}$	1	21
7	5	3	37	1	11	0	55
$\frac{1}{2}$	$\frac{1}{2}$	3	45	$\frac{1}{2}$	$\frac{1}{2}$	0	27
				12	12	0	0

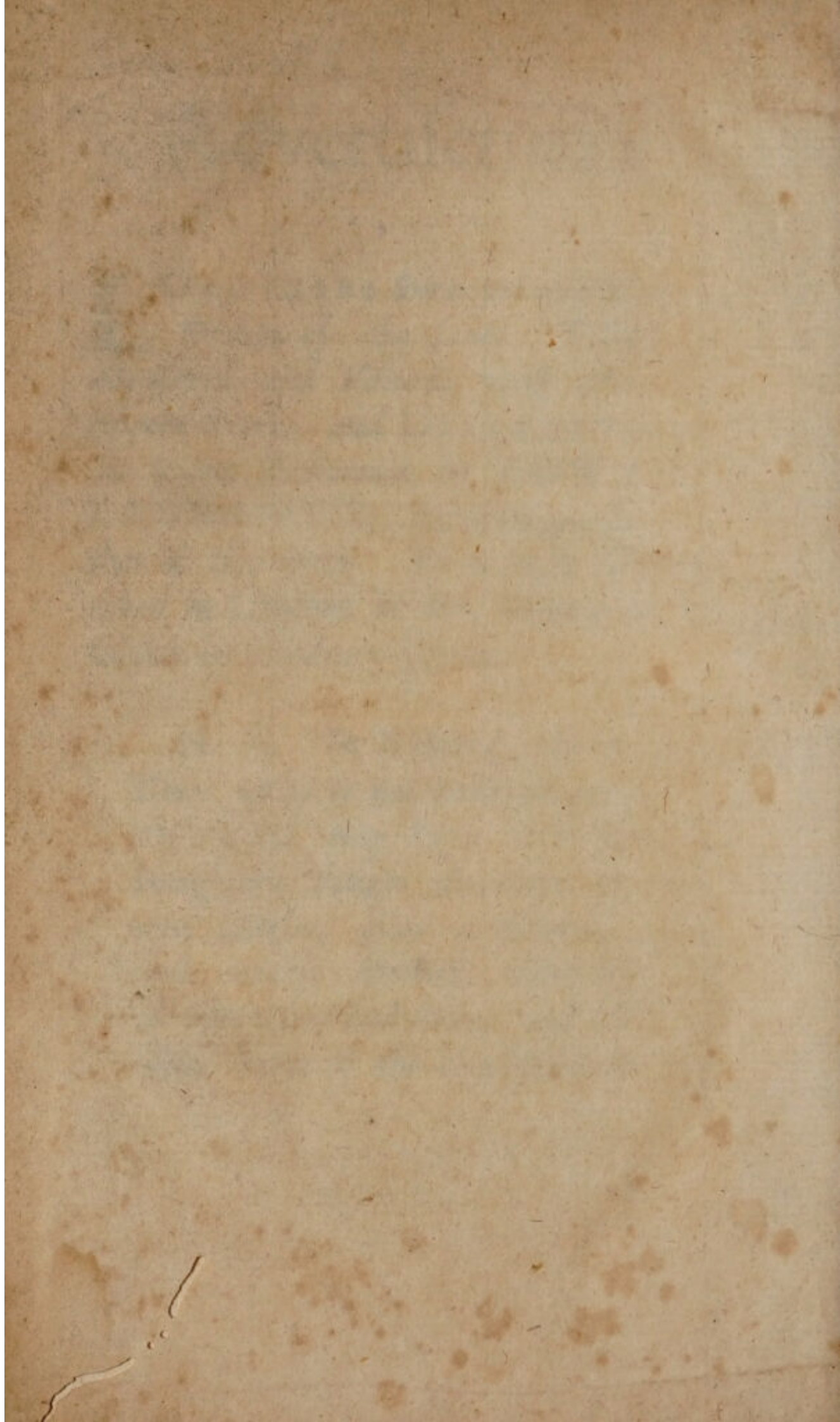
The Reader may observe by this Table, that if his Observation was made $\frac{1}{8}$ part of an Hour before or after the time Pole-Star's coming to the Meridian, the Difference in finding a true Meridian by this Method will not be sensible.

Advertisement.

LORDSHIPS Surveyed and MAPS Drawn of the same. TIMBER Measured and Valued, with other Artificers Work; and DIALLING in all its Parts Performed by EDWARD LAURENCE, Brother to the Author of this Book. He is to be heard of when in London at Mr. Senex's at the Globe in Salisbury-Court.

N. B. In Winter, and at such Times as he is not Surveying, GENTLEMEN may have their Sons or Daughters Taught Accompts at their own Houses, after a natural, easy, and concise Method, with the Use of the Globes and Maps, and all other useful Parts of the MATHEMATICKS.





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