



G. W. F. Gregory.

Samuel
172

172

Ulrich Middeldorf

R

CV







Digitized by the Internet Archive
in 2018 with funding from
Getty Research Institute

T H E

Art of Painting In O Y L.

Wherein is included each particular Circumstance relating to the best and most approved Rules for preparing, mixing, and working of Oyl Colours.

The whole Treatise being so full Compleat, and so exactly fitted to the meanest Capacity, that all Persons whatsoever, may be able by these Directions, to paint in Oyl-Colours all manner of Timber-work; that require either Use, Beauty, or Preservation, from the violence or Injury of the Weather.

In which is also laid down, all the several Circumstances required in Painting of Sun-Dials, Printed Pictures, Shash-Windows, &c. In Oily-Colours.

The Fourth Impression with some Alterations, and many Matters added, which are not to be found in the Three former Editions.

To which is now added, The whole Art and Mystery of Colouring Maps, and other Prints, with Water Colours.

By *J O H N S M I T H*, C. M.

LICENSED,

Rob. Midgely.

L O N D O N :

Printed for *Samuel Crouch*, at the Corner of
Popes-Head-Ally in *Cornhill*, 1705.

THE HISTORY OF THE

REIGN OF KING CHARLES THE FIRST

BY JOHN BURNET

IN TWO VOLUMES

LONDON: Printed by J. Sturges, in the Strand, 1724.

THE SECOND VOLUME

CONTAINING THE

REIGN OF KING CHARLES THE SECOND

To the READER.

Reader,

THE three former Impressions of this Work having given very good satisfaction to several ingenious persons that were desirous of some Instructions in this matter, and the Books being all sold off, and a fourth Impression intended, I was desired to take some more pains to view and correct the Work, and to add such things as might be found wanting, to make it compleat; which I hope I have done, to the satisfaction of all that shall peruse this last Edition, there being not wanting in it any one material circumstance that is requisite to a work of this nature.

I suppose no Man will judge, that this Book is designed any ways to instruct those that are professed Painters, whose knowledge in these affairs must be supposed to out-strip these first Rudiments of this their own profession; no, the chief design of this work, is only to instruct other ingenious persons, who are desirous of some

TO THE READER.

insight into the nature of working in Oyl Colours.

Besides this, the Gentry that live far remote from great Cities, where Painters usually reside, may sometimes have occasion to play the good Husband, in preserving such Ornaments of their Habitations, as are most exposed to the violence of Rain and Wet; there being less trouble in the preserving what is already made, than in making new: When a Gentleman therefore has been at the Charge of fitting his Habitation with good Doors and Gates, has fenced it about with Palisadoes, and adorned his Garden Beds with Borders, and erected Seats and Arbours to rest in, and such like; it will be easie then for some of his Servants, by the Directions here given, to be able to colour over and Paint, these, or any other kinds of Timber-Work in Oyl Colours.

In Painting of Sun-Dials, I have been very particular, for this reason, that there being many Books extant that teach the way of drawing Dials, and many Gentlemen are very expert therein, but yet few or none are able to paint their Dial on a Plain when they have drawn the Draught;

To the READER.

Draught; therefore I thought it not time ill spent, to set down the several material particulars relating to that work; not doubting but all Persons that are Lovers of Art, will add this piece to that part of their Library that relates to Dialling.

In the whole Work, I have been careful to relate only matter of Fact, and set down such Rules and Observations, as by Experience my self hath found to be true, avoiding altogether things speculative, or what is only known by hear say; and therefore as to all the particulars of it, the Reader may rely upon them as true and certain; the stile I confess is mechanick and plain, but I consider that Discourses of this nature require not Eloquence to perswade; Knowledge being best communicated by clear and significant Expressions; and in this I have done my endeavour; and for the rest, if any shall take exception, I have this only to say, that my aim in it has been more for the Profit and Pleasure of others, than my own Advantage.

All that I shall add is, that since this Treatise hath found so good Acceptance, I will proceed to publish a Work of another Nature,

TO the READER.

Nature, containing a great number of particulars, of great use and advantage to most sorts of People, and such as relate to almost every Circumstance of human Life; all related with the greatest Faithfulness, Care, and Plainness, that each Particular is capable of: in the mean time, let us all be careful so far in our own Affairs, that while we strive to excel others in Knowledge, we fall not short of a Vertuous and a good Life: the end of all Science of this kind tends chiefly to a temporal Satisfaction; but he that also adds Vertue to his Knowledge, adds to the Felicities of this Life the Joys and Glories of the next World,

Farewel.

J. S.

THE

THE
CONTENTS
OF THE
SEVERAL CHAPTERS.

- Chap. I. *AN Account of the several Tools, or manual Utensils, that are used in the Art of vulgar Painting.* Page 1
- Chap. II. *A Catalogue of the several Colours used in Painting with Oyl; their nature and way of making.* P. 14
- Chap. III. *Of the burning of Colours, or preparing of them that require to be used.* P. 29
- Chap. IV. *How to wash such Colours as for their grittiness are not otherwise to be made fine enough for certain uses.* P. 31
- Chap. V. *How to grind Colours with Oyl.* P. 33
- Chap. VI. *How to order Colours for working after they are ground.* P. 35
- Chap. VII. *How to make a Size for the gilding both with Gold and Silver.* P. 41
- Chap. VIII. *The Practice of working Oyl-Colours, and Painting of Timber-Work, after the manner of vulgar Painting.* P. 42
- Chap. IX. *What Colours are most suitable, and set off best one with another.* P. 48
- Chap.

The CONTENTS.

- Chap. X. *Of Painting Sun-Dials, and first of the Plains on which Dials are drawn.* p. 51
- Chap. XI. *How to make the best Glue for gluing the Joints of Dial-Boards.* p. 55
- Chap. XII. *What Colours are requisite for the Painting of a Sun-Dial.* p. 57
- Chap. XIII. *The Practice of Painting Sun-Dials.* p. 59
- Chap. XIV. *How to guild with Gold on an Oily Size, either Letter or Figures, &c.* p. 64
- Chap. XV. *The way of Painting a Blue with Smalt, the only Colour that requires strowing.* p. 69
- Chap. XVI. *How to scour, refresh and preserve, all manner of Oyl Paintings.* p. 72
- Chap. XVII. *An Experiment of very near affinity to Oyl-Painting, but of great use to Travellers of some kinds: To the chief Officers of Camps and Armies, Seamen, and such like.* p. 77
- Chap. XVIII. *How to preserve all bright Iron-work from rust and other Injuries of a moist and corroding air, by an Oily Varnish.* p. 81
- Chap. XIX. *The Art of Back-Painting, Mezzotinto Prints, with Oyl-Colours.* p. 82
- Chap. XX. *The manner of Paintsng Cloth, or Sarsnet Shash-Windows.* p. 90
- Chap. XXI. *The whole Art and Mystery of Colouring Maps, and other Prints, with Water-Colours.* p. 93

THE
ART
OF
PAINTING.

CHAP. I.

*An Account of the several Tools, or
manual Utensils, that are used in the
Art of Painting.*

THE first is the Grindstone and Muller for grinding of Colours; the Stone must be a hard Rance, Marble, or some other of a close grain, not spongy or full of small Pores; for if the grain of the Stone be not close, but hollow and spongy, the Colours that are first ground on it, cannot so well be
B cleansed

cleansed off, but that some part will still remain in these hollow Pores of the Stone, which will spoil the beauty and lustre of those other Colours that are ground after it: this Stone for grinding ought to be about a foot and half square, and so thick, that its weight may be sufficient to keep it fast and steady, and not apt to be moved when Colours are grinding on it.

2. The Muller is a pebble Stone, of the form of an Egg, the bigger end of which is to be broken off, and with sharp Sand or Emery, it must be ground smooth and flat on some other hard flat Stone; and the Eges of it must be well rounded off, that the Colours may the better slide under it when it is moved round: this Stone ought to be about two Inches Diameter, or three at most, on the flat end, and about five Inches high, that so you may command it the more easily in the time of grinding.

For want of a spotted Marble (which is a Stone of a hable Colour, compact of a number of Kernels as it were in the Greet of it) you may make use of any kind of hard Marble, either white or black; some I have known to use a Slate,
such

such as in *Suffex* they cover their Houses with; some of which I have seen above two Foot square, and an Inch and a half thick; which kind of Slates for vulgar Paintings may serve very well.

When a good shap't Stone for a Muller is wanting, a fragment of any smooth sided Stone, cemented (with Rosen and Brick-dust mixt together) into a piece of Wood of a fit shape to hold it by, has performed the work as well as the best Muller sold in the Shops.

3. To these belong a Voider, being no other than a Lanthorn Horn, about three Inches one way and four the other; this Voider is to clear off the Colours from the Stone when ground, and also to keep them together in the time of grinding when it spreads too much.

For want of this, a smooth piece of Wood of the same size, cut thin and made very sharp and even on the edge may serve as well.

4. Pots and Pans must also be provided, either of Earth or Tinn, of several sizes, according to the quantity of Colours to be ground, into which they are still to be put as you grind, till you have ground so much Colour of each

4 The Art of Painting.

fort, as may be necessary about the work you design them for.

But in Case you design to grind at one time so much of each Colour as may be sufficient to serve your occasions a long time together, as some do; then when you have ground of each so much as you think fit, let them be put up and tyed close in Ox Bladders, or in the Bladders of Hogs or Sheep, according as your quantities are; this will preserve them from drying or spoiling a long time together.

I remember I had a parcel of Colours given me in the Year 1661. by a Neighbouring Yeomen, that were, as he said, left at his House by a Trooper, that quartered there in the time of the Wars, about the Year 1644. This Man was by Profession a Picture-Drawer, and his Colours were all tyed up in Bladders, according to the Method before prescribed, and when I had opened them, I found them in a very good condition, and to my thinking as fit for use, when mixt with a little fresh Oyl, as if they had been but very lately ground, though they had remained in this condition about seventeen Years.

5. You

5. You must be also provided of Brushes and Pencils of all sorts and sizes; Brushes are always made of Hogs Bristles, they are of several sizes and shapes, some round, and others flat; the round ones are of all sizes, from two Inches Diameter to a quarter of an Inch; those of the largest size are for priming the Work, and for laying such Colours as are used in great quantities, and in Colouring over the superficies of all large Work, such as Posts, Pails, Wainscot, or such like: the smaller sort of Brushes are to use in such parts and places of any Work, as larger ones cannot well come to work in.

Flat Brushes are chiefly in use for drawing of Lines, and in imitating of Olive and Walnut Work.

6. As for Pencils, they are compounded of a finer and smaller Hair: these also are of several sizes, but all generally round, being for the most part fitted into Swans, Geese, or Ducks Quills, and from thence are termed Swans Quill, ficht or pointed, Goose Quills, ficht and pointed, Ducks Quills, ficht and pointed; besides these, there are a larger sort of Pencils in Tin Cases, and some

in Stocks like Brushes, all made of the fine Hair.

In the choice of Brushes and Pencils, observe these rules: For Brushes, observe whether the Bristles are fast bound in the stocks, and the Hair strong and lie close together; for if they don't lie close but sprawl abroad, such will never work well, and if they are not fast bound in the stock, the Bristles will come out when you are using them, and spoil your work; for such I have seen where the loose Hairs, from the Brush, have lain buried up and down in the Colours laid on, to the great disparagement of the work: to prevent this, if they are not fast bound, drive in some thin Wooden Wedges between the Thread with which they are bound round; and by thus doing the Bristles will be made tite and secure.

In chusing of Pencils, especially the pointed ones, do thus; put them into your mouth, and moisten them a little, then draw them forth between the Tongue and the Lip, and if they come out with an intire sharp point, without cleaving in twain, they are good; provided also, they be thick and full set next the Quill, and also fast bound; if they

they be thin and lean next the Quill, they never stand well to the work, nor draw sharp and clever.

To every one of these Case, or Quill Pencils, let a neat stock be fitted, about nine Inches in length at the least; for unless the Pencil be held a good distance from the hand, you shall never be able to command it well, nor work so neat, as when you have the true command of a Pencil, held thus at a large distance, your hand being supported, as is usual, by a Ruler, or small walking stick; one end of which you must hold in your left hand, and the other must rest on the work, but yet so as not to do it any Injury.

7. If you have, at any time, occasion to guild with Leaf gold, on an oily size, according to the usual practice of Painters, there does then belong to this work several distinct manual Tools: As first a Cushion upon which the Leaves of Gold must be laid, when they are to be cut into such forms as fit the work you are to guild; this gilding Cushion, is generally made of a smooth grained Basil Skin, the flesh side outward, this is to be nailed to the edges of a square wooden

8 The Art of Painting.

bottom, about six Inches square, and then well stuff out with Cotton or Wool, very hard, plain and flattish. Upon this guilding Cushion the Gold Leaves are to be laid; when you would cut them into such scantlings as will best fit the work you design to guild.

8. The Instrument you make use of to cut the Leaves, must be either a sharp smooth-edg'd Case-Knife, or else a slip of the hollow Spanish Cane, cut up to a smooth and sharp edge with a good Pen-knife; this Cane-knife is counted the best, because if well made, it will not only be very sharp, but also cut the gold leaf more naturally than any other; for a Steel-Knife, though it cut very well, yet the gold will stick to't, and so give you much trouble to part the Leaf from it, except you are careful to keep the edge very dry by continually wiping of it with a clean and dry Cloth; whereas a Cane-Knife will put you to no such trouble in the use of it, its substance being of such a nature, as not to retain any viscos or clammy matter, capable of making the Gold stick to it.

9. When by the use of these you have cut out the Leaves of Gold into
pro-

proper scantlings, it must then be taken from off the Cushion, and laid down upon the work you are to guild; to perform which, if the work be flat and plain, you must use the gilding Pallat, 'tis only a flat piece of wood about three Inches long, and an Inch broad, upon which is to be glewed a piece of fine woolen Cloth of the same length and breadth; upon this Pallat do but breath with your Breath, that the Cloth may be made a little moist by it, then if you clap it down gently on the Gold that is cut out, it will stick to the Pallat, and may from thence be readily conveyed to the work you are to guild, and laid down on it; but this kind of Tool is only for flat and plain work, in which Case if you are to cover any large quantity of work, your Pallat may be as large as the whole Leaf of Gold, and so you may transfer them from the Book to the Work, without farther trouble of cutting into small parts.

10. But if it be any hollow or carved work that is to be guilt, then Painters do usually take up their Gold, either from the Book or Cushion, with a bunch of Cotton-Yarn, a little moistned with their

their breath; for Cotton is a material very apt and fit to press into the hollowness of the work, with the gold upon it; in case you want Cotton, a bunch of good fine Wool may do as well.

But if this Gold be to be laid on within the hollows of carved work, then you must use a fine Camils Hair Pencil, of such a size as is futable, this, when moistned by breathing on it, will take up your leaf gold, and by the help thereof the gold may be laid in any hollow work.

Black lead Pencils are of so great use in drawing in some Cases, that a Painter can very ill want them; as also good Chalk; the Chalk must be such as is of a soft grain, that will easily spend it self on the work you draw upon; if the Chalk be of a hard stony nature, it will spoil whatever you draw upon, for you must press so hard to make it spend its self, that the work will be full of deep races, not to be after obliterated; a great damage to the beauty of the work.

11. For Black-lead Pencils; those that are right good, are not easy to be gotten; therefore that you may not be deceived in the choice of them, take notice,

tice, that the best Black-lead Pencil, is that, that spends its Colour freely, and draws Black with an easy and light stroke, the goodness of the Lead may also be known by the grain of it; the best Lead if you shave off a little of it with a sharp Knife, will appear smooth and shining as Glass, not hollow or spongy; that Lead that when cut appears not with a good glass, is of a dull Colour, and of a hollow spongy grain, is of little or no value, for the grain is so hard, it will never spend black, nor draw free.

Besides this, the common Pencils of the Shops are made up so deceitfully, that they are not good Lead half way up the stock; the best way therefore is to buy Black-lead in the lump at the Colour-Shop, and with a fine Spring-Saw, cut it into scantlings of the bigness of a Quill, into which you may fit it; and having fastened it in with glue, it will be found much better and cheaper, than to buy them at the Shops.

12. Besides all these before mentioned, there will be required, as necessary for Painting, Brass Compasses, for setting out and proportioning your work; they also
assist

assist you much in drawing all Figures that have a circular form; there is need also of Rulers of several lengths, as also Squares, Crucibles to burn Colours, and Bladders for Oyl.

The value of such of the foremention'd particulars, as are to be bought ready fitted.

A marble Stone for grinding, according to its size and bulk, will cost from half a Crown to five Shillings the Stone.

A Muller will cost eighteen Pence, or two Shillings.

The largest Brushes will cost six Pence a piece, the other sizes from four Pence to one Penny a piece.

The largest sort of Pencils made with fine hair, either in Tin Cases, or in wooden stocks, from eight to two pence a piece; those inclosed in Swans Quills, a penny a piece, and others in Goose or Ducks Quills are six pence a dozen, one with another, or a half penny a piece.

Black lead Pencils, the best in Cedar Cases, will cost three pence a piece; but an Ounce of the finest Black lead in the lump, cut out as before directed, will do

do as much service as any six Pencils which Ounce of Lead will cost you about six pence, if it be prime good.

Brass Compasses are from eighteen pence to six Shillings a pair, according to their size and goodness; a pair about eight Inches in the shank will cost about two shillings six pence, a pair of the same size made with three points, *viz.* a steel point, a pen point, and a black-lead point, will cost you, if well made, six shillings.

Crucibles will cost you about two pence a piece, if they are large; the other sizes are a penny a piece, and the smallest a half-penny.

Note, That a grinding Stone and Muller, and all kind of Pencils, are to be had at the Colour Shops; Brass Compasses and Squares at the Mathematical Instrument-makers; and Crucibles you shall find plentiful at the Ironmongers in *Fosterlane.*

C H A P. II.

A Catalogue of the several Colours used in painting with Oyl; their nature and way of making.

W H I T E S.

THE principle of all Whites is the *White-lead*; this Colour owes its original to the common Plummers Lead, of which it is made; the manner is thus: At *Venice*, where they make the greatest quantities, they take Sheet-lead, and having cut it into long and narrow slips, they make it up into Rouls, yet so as a small distance remains between every spiral revolution; these Rouls they put into Earthen Pots, so ordered, that the Lead may not sink down above half way or better in them; these Pots have each of them very sharp Vinegar in the bottom, so full as almost to touch the Lead; when the Vinegar and Lead are both conveyed into the Pot, 'tis cover'd up close, and so left for a certain time;

time, in which space the corrosives fumes of the Vinegar will reduce the superficies of the Lead into a white Calx, which they separate by knocking upon it with a Hammar: A more particular Description of the whole Process you may find communicated to the Royal Society, by Sir *Philberto Vernatti*, and Printed in the Philosophical Transactions.

Of this Colour there is two sorts at the Colour Shop, the one called Ceruse, which is the most pure and clean part, the other is called by the plain name of white Lead; they are Colours that work with very much ease, and will be ground as fine even as the Oyl it self, in comparison, if you will take time enough in the grinding; it lies very smooth, and binds very hard, on what work soever it be laid on. If you paint with it any kind of Timberwork or Stone, that you would preserve from the weather, it is best to work it in Lined Oyl, for that will bind it extream hard; if you lay it upon the work very stiff; but if you use White lead alone within Doors, 'tis then best to mix it with drying Nut Oyl, for Lined Oyl within Doors will turn Yellow,

low, and spoil the beauty of it; which inconvenience Walnut-Oyl made to dry prevents; for that makes it keep a constant whiteness.

Besides White-Lead and Cerus there is another sort to be met with sometimes at the Colour Shops, which they call Flake-white, which is by some accounted the best white of all others, but the reason of that I don't well understand, except it be, because it is scarce and dear; this Colour is said to be found only under the Lead of some very old Buildings, where time has by the assistance of some sharp quality in the air, thus reduced the undermost superficies of the Lead in this white Calx, which proves a very good White, but in my opinion not exceeding the best Cerus, which is as white as the other, and a great deal cheaper.

B L A C K S.

L *Amp black*: This Colour is no other than a Soot raised from the roseny and fat parts of Fir-Trees, it comes mostly from the Northern Countreys, as *Sweden* and *Norway*; 'tis a Black that is

is more generally used than any other, because of its plenty and cheapness, and proves a very good black for most uses; 'tis of so fine a Body, that if tempered only with Linsed Oyl, it will serve to work with on most common occasions without grinding, but thus used, 'twill require a long time to dry; unless you mix much drying Oyl with it; or, which is better, some Verdigrease finely ground, this and the drying Oyl together will make it dry in a little time: Some add also Oyl of Turpentine; and without these it will not dry in a long time; for in the substance of the Colour is contained a certain greasy fatness that is an Enemy to drying, to remedy which, burning in the fire till it be red hot and cease to smoke, will consume that fatness, and then it will dry much sooner; but when 'tis burnt it must then of necessity be ground with the Oyl, for else 'twill not work fine; for the Fire is of that nature, that it's apt to harden most Bodies that pass through it; this Colour is usually made up in small Boxes and Barrels of Deal, of several sizes, and so brought over to use.

Besides, this black, there is another sort of Black, and this is the foot of a Lamp; which I have heard very good Artills commend, as a much better Black for any use than the Lam-black, it being of a finer Body and brighter Colour; but I think not to be gotten in very great quantities; and therefore used only in very fine work.

Ivory-Black, is made of the Comb-makers Raspings, and other waste Fragments of Ivory; these are burnt or charred to a black Coal in a Crucible close stopt up, this proves a very delicate Black when ground very fine; you have it at the Shops well prepared, and levgated or ground very fine with Water on a Marble-Stone, and then dryed in small Lumps; being thus prepared, 'tis the more easily ground in Oyl, with which it will lie with as smoth a Body, as most Colours do; but 'tis something dear, and therefore not used in any common Work.

Some use Willow-Charcoal; this if ground very fine, does in Oyl make a very good Black, but being not so easy to be gotten as the Lam-black, 'tis seldom used.

RED S.

Vermillion is the most delicate of all light Reds, being of it self a perfect Scarlet Colour, 'tis made artificially out of Quicksilver and Brimstone, in the manner following: Take six Ounces of Brimstone and melt it in an Iron-Ladle, then put two Pound of Quicksilver into a Shammy Leather, or double Linnen-Cloth, squeeze it from thence into the melted Brimstone, stirring them in the mean time with a wooden Spatula, till they are well united, and when cold, beat the mass into a Powder, and sublime it in a glass Vessel, with a strong Fire, and it will arise into that red substance which we call artificial Cinaber, or Vermillion; the whole process you may see more at large in *Lemery's Chymistry*. This Colour is of a delicate fine Body, and if pains be bestowed on it, 'twill grind as fine as the Oyl it self; and then it makes a most excellent Colour: but if it be not ground very fine, the Glory of it will not appear, for it will look dull and work course; but if it be ground very fine, no Colour in the

World looks better, nor works smoother, nor bears a better body than Vermilion does, nor goes farther.

Lake, especially the richest sorts, is the best of all dark Reds, being a most pure Crimson; 'tis a Colour that will grind very fine, and lies with a good Body, but there must be good store of Pains taken with it in the grinding, for if it be not well and thoroughly ground, its Colour will want much of its glory; and besides this, 'twill work with some difficulty, being apt to cling together like a Jelly, after 'tis laid on, just as you see warm Water does upon a greasy Trencher, when 'tis washed in it; to prevent which, grind it well, and temper it as thin as you can well work it; of this Colour there be divers sorts at the Colour-Shops, very different, some being of a more dead and pale Colour; 'tis made of the tincture of a Vegetable, that stains a red, but of what, or how done, I cannot as yet learn perfectly; only note, that the best sorts come from *Venice* and *Florence*.

Red Lead is the lightest of all Reds now in use; 'tis a sandy harsh Colour, and such an one, as is not easily ground
very

very fine, although you bestow much labour on it; this Colour is made out of common Lead, by first reducing it to a Litharge, and that Litharge being afterward ground to Powder in a Mill, is afterward conveyed into a hot Furnice, for that purpose, where 'tis continually kept stirring with an Iron Rake, till it has attained to the Colour of a fine pale red; the whole process you may see more at large in Mr. Ray's Appendix to his Catalogue of hard English words. Note, that this, though it be a Sandy Colour, yet it bears a very good body in Oyl, and binds very fast and firm, being also a quick dryer.

Spanish Brown, is a dark, dull red, of a Horseflesh Colour, 'tis an Earth, it being dug out of the ground, but there is some of it of a Colour pleasant enough to the Eye, considering the deepness of it: 'tis of great use among Painters, being generally used as the first and priming Colour, that they lay on upon any kind of timber-work, being cheap and plentiful, and a Colour that works well, if it be ground fine, as you may do with less labour than some better Colours do require; the best sort is the deepest Colour,

lour, and freest from Stones; the other sorts are not so good to give a Colour to the Eye, but yet they serve as well as any others for a priming Colour, to season the Wood to lay other Colours upon.

Y E L L O W S.

Y*ellow Oaker*, is of two sorts, one called *Plain-Oaker*, and the other *Spruce Oaker*, the one is much a lighter Colour than the other; 'tis a certain concret or stony substance, found among stiff Clays in divers parts of this Kingdom; but those parts that contain most of it, is the *Shotover Hills* near *Oxford*, from whence most of the *Yellow-Oaker*, that is sold in *England*, is dug out; 'tis a Colour, that with pains, will grind very fine, it bears an excellent body, and resists the weather well.

Pink-Yellow, is the Tincture of a Vegetable, whose substance being reduced to a Musclage, and after dried, becomes a good light Yellow, a little inclining to a Green; 'tis a Colour that grinds very easy, and bears a good body.

Orpiment is that Colour that some call Yellow Arsenick; 'tis a good Colour for some uses, but very troublesome to grind, being a Mineral stony substance of a poysonous nature; therefore take care that the fumes of it don't offend the Brain in the time of grinding.

Masticote, is a good light Yellow for most uses, especially in making Greens, of which several sorts may be framed out of this Colour, being mixt with Blues; 'tis a Colour that grinds fine, and bears a good body.

G R E E N S.

V*Erdigrease* is the best and most useful Green of all others; 'tis a Colour made out of Copper, being no other than the rust of that mettal promoted by the fumes of sour Wine, and the rape of Grapes; the process of which, as 'tis performed at *Montpelier* in *France* (where the best is said to be made) as you may find in Mr. Ray's Travels, pag. 454. 'Tis a delicate Green inclining to a Bluish, but with a little Pink-Yellow, it makes the delicatest Grass Green in the World; 'tis a Colour that will grind
 C 4 very

very fine, but not without some pains; and when ground fine, it lies with a good body, and works well, at the Colour-Shops there is a sort of it that they call distilled Verdigrease, being a sort that is wholly purified from dross and filth, of good use in fine work, but too dear in vulgar Painting.

Green Bice is a Colour of a sandy nature, and therefore not much used; *Green Verditer* is also a sandy Colour, neither of them bear any good body, and are seldom used, except in Landskip, where variety is required.

B L U E S.

B *Lue Bice* bears the best body of all bright Blues used in common work, but 'tis the palest in Colour, it works indifferent well, but inclines a little to be sandy, therefore it requires good grinding, and that on a very hard stone; 'tis a Blue that lies best near the Eye of any now in use, except *Ultra-Marine*, a Colour produced from the Tincture of *Lapis-Lazuli*; the process of doing which, you may find in a Book called, *Modern Curiosities*; but this is so vastly dear,

dear, that 'tis not to be used except in pieces of great price.

Blue Verditer is a Colour of no good body, but something sandy, and of no very good Colour of it self, being apt to turn greenish, and being mix with Yellow, make a good Green.

Indigo is a dark Blue, if workt by it self, to remedy which, whites are usually mixt, and then it makes but a very faint Blue; this Colour is the tincture of a Vegetable called by that name, much growing in both the *Indies*, the Leaves of which being put into wooden Cesterns, filled with Water, are often violently stirred about till the greatest part be reduced to a slime or, or muscelage, which being separated from the Water, when sunk to the bottom, and dried, produces that substance which we call Indigo; 'tis a Colour that grinds very fine, and lies with a good body, and is very much used in vulgar Painting.

Note, That the longer this Colour is ground, the more beautiful and fair it looks.

Smalt is a lovely Blue, if it lie at a distance, but it must be only strowed on upon a ground of White Lead, for it is
a Co-

a Colour that carries no good Body in Oyl it is so sandy ; besides Oyl changes the Colour; and makes it look quite Black, except Whites be mixed, and they spoil the Beauty of the Colour and makes it faint ; therefore the best way to lay it on is by strowing (*as I shall shew in the following Work*) and then there is not a more glorious Colour in the World.

Note, That of this Colour there is two sorts, the one much finer than the other, but the coarsest gives the most glorious Colour of all, it lookt on at a distance, for near the Eye the Beauty is not so great ; the finest is that which is called Oyl Smalt, which is ground with White-Lead, may be laid in Oyl ; but it bears not a good body, and besides works with much difficulty.

Umber is a Colour that really has no affinity with the others before mentioned, being neither a White, Black, Red, Yellow, Blue or Green, yet is a Colour of as great use as any of the rest in vulgar Painting ; 'tis an Earth or Mine, dug out of a certian Island in the *Mediterranian Sea*, being of the Complexion of that which among us is called a Hair Colour;

Colour; it grinds very fine, and bears the best body of any Earthy Colour that's now in use, and when burnt becomes the most natural shadow for Gold of all others, and with a mixture of white, it resembles the Colour of New Oaken-Wainscot the nearest of any Colour in the World; it dries quickly, and with a good Gloss.

A Term Explained in the fore-going Notes, about bearing a Body.

Some may say, What is to be understood by a Colour's bearing a Body? I say then, to bear a Body, is, to be of such a nature as is capable of being ground so fine, and mixing with the Oyl so intirely, as to seem only a very thick Oyl of the same Colour; and of this nature are White-Lead, and Cerus, Lam-black, Ivory-Black, Vermillion, Lake, Pink, Yellow-Oaker, Verdigrease, Indigo, Umber, and Spanish Brown; Blue Bice and Red-Lead are not so fine, but yet so fine as they may be said to bear a very good body: all these may be ground so fine as to be like, even Oyl it self, and then they also may be said

to work well, spreading so smooth, and covering the body of what you lay it upon, so intirely, as that no part will remain visible where the Pencil hath gone, if the Colour be work't stiff enough.

Whereas on the Contrary, Verditors and Smalts, with all the grinding imaginable, will never be well imbodied with the Oyl, nor work well; indeed Bice and Red-lead will hardly grind to an Oily fineness, nor lye intirely smooth in the working, yet may be said to bear an indifferent body, because they will cover such work very well that they are laid upon; but such Colours as are said not to bear a body, will readily part with the Oyl, when laid on the Work; so that when the Colour shall be laid on a piece of Work, there will be a separation, the Colour in some parts, and the clear Oyl in others, except they are temper'd extream thick.

C H A P. III.

*Of the burning of Colours, or preparing
of them that require to be so used.*

OF this nature there be divers sorts; as first Lam-black, a Colour of so greasy a nature, that except it burnt, 'twill require a long time to dry.

Secondly, Umber if you intend it for the Colour of a Horse, or to be a Shadow for Gold, then burning fits it for that purpose, by making it darker.

Lam-black must be burnt, or rather dried thus: put it into an Iron-Ladle, or a Crucible, and set it over a clear Fire, letting it remain till it be red hot, or so near it, that there is no manner of smoke arises from it.

Umber must only be put into the naked fire in large Lumps, and not taken out till they be thoroughly red hot. if you are more curious you may inclose it in a Crucible, and then put it into the fire till it be red hot, then take it out,
and

and when cold, put it up for use.

Ivory must be burnt also to make a Black as thus: Fill two Crucibles with Ivory Shavings, then clap their two Mouths together, and bind them fast with an Iron Wire, and lute the Joints close with Clay, Salt, and Horse-dung, well beaten together, then set it in a Fire, covering it all over with Coals, and let it remain therein, till you are sure the matter inclosed in the Crucibles be thoroughly red hot, then take it from the fire, but open not the Crucible till they are perfectly cold, for if you should open them while hot, the matter would turn to Ashes; the same will be done if the Joints are not luted close, for 'tis only the exclusion of all Air that prevent any matter whatever that's burnt to a Coal, from turning to a white ash, and preserves the blackness.

C H A P. IV.

How to wash such Colours as for their grittiness are not otherwise to be made fine enough for certain Uses.

SOME Colours are of such a gritty sandy nature, that it's impossible to grind them so fine as some curious works do require; therefore to get forth the flower and fineness of the Colour, you must do thus; Take what quantity of Colour you please to wash, and put it into a Vessel of fair Water, stir it about till the Water be all coloured therewith; then if any filth swim on the top of the Water, scum it clean off, and when you think the grossest of the Colour is settled to the bottom, then pour off that Water into a second Earthen Vessel that is large enough to contain the first Vessel full of Water four or five times; then pour more Water into the first Vessel, and stir the Colour that remains till the Water be thick; and after it is a little settled, pour that Water also into
the.

the second Vessel, and fill the first Vessel again with Water, stirring it as before: do thus so often till you find all the finest of the Colour drawn forth, and that none but coarse gritty stuff remains in the bottom; then let this Water in the second Vessel stand to settle till it be perfectly clear, and that all the Colour be sunk to the bottom; which when you perceive, then pour the Water clear from it, and reserve the Colour in the bottom for use, which must be perfectly dried before you mix it with Oyl to work.

The Colours thus ordered, are Red-Lead, Blue and Green Bice, Verditer Blue and Green, Smalt, and many times Spanish Brown, when you would cleanse it well from Stones for some fine work; as also Yellow Oaker, when you intend to make Gold-Size of it.

Take Notice also, That unless you intend to bestow some cost, you need not be at the trouble to wash your Colours; but use them for coarse ordinary work; as you buy them at the Shops.

THE END OF THE FIRST PART OF THE ART OF PAINTING.

C H A P. V.

How to grind Colours with Oyl.

WHen you come to grind Colours, let your Grinding-stone be placed about the height of your Middle; let it stand firm and fast, so that it joggle not up and down; then take a small quantity of the Colour you intend to grind (two Spoonfuls is enough) for the less you grind at a time, the easier and finer will your Colour be ground: lay this two Spoonfuls of Colour on the midst of your Stone, and put a little Linseed Oyl to it, (but be sure you put not too much at first) then with your Muller mix it together a little, and turn your Muller five or six times about, and if you find there be not Oyl enough put a little more to it, and grind it till it come to the consistence of an Oyntment; or appears free from any sort of lumps, and smooth as the most curious sort of Butter; for then when stifiish it grinds much better and sooner than when it's

D

so

so thin as to run about the Stone: and you must oftentimes, in the grinding, bring your Colour together with a piece of Lantern Horn, in the middle of your Stone; and when you find you have ground it fine enough by the continual Motion of your Muller about the Stone, holding it down as hard your strength will permit (which you must also move with such a height, as to gather the Colour under it) and that no knots, nor grittiness remains, but that 'tis become as fine even as Butter, then with your Horn cleanse it off the Stone into a Gallipot, Pan, or whatever else you design to put it into, and then lay more Colour on your Stone, and proceed to grinding as before: do so thus often till you have ground as much of this same Colour, as shall serve your occasions; and if you grind other Colours after it, let the Stone be well cleansed from the first Colour with a Cloth and fine dry Ashes, or Sand.

Some grind at one time so much of every Colour, as may be sufficient to serve a long time together, which they keep tyed up close in Oxe or Sheeps
Blad-

Bladders; and by this method a Man shall prevent the daubing of himself too often by grinding of Colours.

Those that list not to be at the trouble of grinding Colours themselves, may have of any sort, ready ground, at the Colour-shops; at reasonable rates, either in smaller or larger Quantities as they have Occasion, from an Ounce to any weight they desire.

CH A P. VI.

How to order Colour for working after they are ground.

WHen you have thus ground your Colours (if you observe my Directions in grinding) they will be too thick for use without the Addition of more Oyl; therefore when you have ground those Colours you desire, and intend to use them, either simply by themselves, or mixt and compounded with others, according as your fancy or occasions require, you must then add more Oyl to them, till they be so thin as not

to let the ground on which they are laid be seen through them; for if it be so thin as to let the ground be seen through them, or to run about when it be laid on, it is not good, and will also require to be coloured the oftner before your work be perfect and substantial; whereas if your Colour be as stiff as it ought to be, your work will be done with more speed; once doing being then more than twice doing with thin Colour.

And here by the way, take notice of the fraud and deceit of common Painters, who commonly agree to do work by the Yard at a certain price, to be coloured three times over, which they commonly paint with such thin Colour (*to avoid the labour of grinding, a little Colour serving a great deal of Oyl, and besides it works with less pains, and takes up less stuff*) that all three times doing over it is not so substantial as one time would be, if the Colour had a thick and substantial Body. and I'll maintain, that three times colouring with substantial and well bodied Colour, shall last ten times as long as that which is wrought thus slightly by common Painters.

But

But if the Colour be your priming Colour, (*that is the first Colour you lay on*) it ought to be made very thin, that it may have Oyl enough to pierce into the Wood, which is much for its preservation; but after your first Colour is laid, let your next be thicker, as before is taught.

Some Colours will be a long time before they be dry, if mixt only with plain Linseed Oyl; to remedy which, *there is a way to prepare Linseed Oyl by art*, to make any Colour dry that is mixt with it; *As for Example*, To a Quart of Linseed-Oyl, add two Ounces of the Lithrage of Lead, which may be had at every Drugster's Shop (some use Red Lead) powder it finely before you put it to the Oyl, when you have mixt it, set it on the Fire in an Earthen-Pan, and let it boyl for near an hour, more or less, till the Oyl be grown fat, or almost of the thickness of Treacle that comes from Sugar; then set it on the fire with a lighted Paper, and stir it well while burning, then put out the Flame after it hath burnt a Minute or two, and let the matter stand till it be thoroughly cold, and the Litharage well

settled to the bottom, then pour off the clear Oyl, and keep it for use in a Bladder close tyed up, or for want of that, in a Glass Bottle.

When you mix up your Colours for working, put three parts of plain Linseed Oyl, and one part of this drying Oyl, together in a Pan, and mix them well together, and with this temper up your Colours; this fat-drying-Oyl shall not only make your Colours dry sooner than plain Oyl, but it shall also add a beauty and lustre to the Colours; so that they will dry with a gloss, as if they had been varnished over.

Some Colours indeed don't need to have their drying hastened by a fat Oyl, and such are Red Lead, Verdigrease, and Umber; these being very drying in their own nature, but yet fat Oyl added to these also, do add a great beauty and lustre to the Colour.

Some Painters to make their Colours dry, take Copperas, and having beaten it to powder, burn it in a Fire-shovel, as people do when they burn Allum; that is, they set it on the fire, till being melted with the heat, it be continued thereon so long, till all the moisture be exhaled,

haled, and the matter remain a dry white Calx; some of this powder of burnt Copperas, being added to the Colours in grinding, will make the Colour dry very well.

The way before recited for making of drying Oyl, has one inconvenience in it, that it makes the Oyl of a deep red- ish Colour, which in some Cases may alter the native beauty of some Colours, as Whites, which be apt to become Yellow, also Blues may by this means become greenish.

To prevent this, a drying Oyl may be prepared, as shall be clear and white of Colour, in the manner following.

Put the afore mentioned quantity of Linseed-Oyl to the like quantity of Litharage; put the mixture into a Glass, and set it in the hot Sun, for a Month, in the Summer time, stirring the Litharage and the Oyl well together, twice a Week during the whole time, and you shall not fail in that time to obtain not only an Oyl, very white and clear (*for the Sun takes away all Colour, either from Linseed, or Walnut-Oyl*) but also, it will become in that time very fat and thick, and attain to a very drying quality.

By the same methods may Nut-Oyl be made too dry as well as that of Linseed, it being preferred before that of Linseed, for all White Painting that is not exposed to the open Air, for 'tis observed, that in all close places, Linseed Oyl is apt to make White Lead turn Yellow.

Take Notice, That all simple Colours used in House Painting, appear much more beautiful and lustrous, when they appear as if glazed over with a Varnish, to which both the drying Oyl before-mentioned contributes very much, and also the Oyl of Turpentine that the Painters use to help to make their Colours dry soon, but Experience teaches, that some good clear Turpentine, dissolved in the aforesaid Oyl of Turpentine, before it be mixt with the Oyl Colours, will make those Colours shine much when dry, and preserve their beauty beyond most other things, drying with an extream glasy surface, more smooth than Oyl alone, and shall also better resist the Injuries of Air and Weather, provided too much be not put in.

C H A P. VII.

*How to make a Size for the guilding
both with Gold and Silver.*

THE Operation is thus for the making of Gold Size; Take Yellow-Oaker and grind it on a Stone with Water till it be very fine, and afterwards lay it on a Chalk Stone to dry; this is the common way: or you may wash it as is taught in the Fourth Chapter. For when it is washed, to be sure nothing but the purest of the Colour will be used; and besides, it's done with less daubing.

When your Oaker is thus prepared, you must grind it, as you do other Oyl Colours, only with fat drying Oyl, but it's something more laborious work, and must be ground very fine, even as Oyl it self: for the finer it is, the greater Lustre will your Gold carry that is laid on it.

Here *Note*, That you must give it such a quantity of your fat Oyl, that it may not be so weak as to run when you
have

have laid it on; nor so stiff, that it may not work well; but of such a competent Body, that after it is laid on, it may settle it self smooth and Glasfy, which is a chief property of good Size.

Silver-Size is made by grinding White Lead with fat drying Oyl; some adding a very little Verdigrease to make it bind.

The practice of gilding with either Gold or Silver, I shall refer to Chapter XIV.

C H A P. VIII.

*The Practice of working Oyl-Colours,
and Painting of Timber-Work, after
the manner of vulgar Painting.*

THAT which I here call vulgar Painting, is only the way and manner of Colouring all manner of Wainscot, Doors, Windows, Posts, Rails, Pails, Gates, Border-Boards for Gardens, or any other material that requires either beauty or preservation from the violence of Rain, or injury of weather; the method of doing which I shall here lay down as plain

as I can. Suppose then that there be a set of Palisadoes, or a pair of Gates, or some Posts and Rails to paint, and I would finish them in a Stone Colour; first look over the work, and take notice whether the Joints be open in the Gates, or whether there be any large Clefts in the Posts; for if these are not secured the wet will insinuate it self into those defects, and make the quicker dispatch in rotting the whole Work; let the first business therefore be to stop up these places smooth and even, with a substance by the Painters called Putty, made of Whiting and Linseed Oyl, well beaten together on the grinding stone, or with a Wooden Mallet, to the Consistance of a very stiff Dow, and with this let all the Crannies, Clefts, and other Defects be perfectly filled up, that it may be equal to the Surface or outside of the Stuff; then proceed to the priming of the Work with some Spauish-Brown well ground and mixt very thin with Linseed Oyl; with this do over the Work, giving it as much Oyl as 'twill drink up; this in about two days will be indifferent dry; then if you would do the Work substantially, do it over again with the same prim-

priming Colour ; when this is through dry, then take White Lead well ground and tempered up, but not too thin, for the stiffer you work it, provided it be not too stiff, the better Body will be laid on, and the longer 'twill last ; let this Colour be well rub'd on, with a large Bristle Brush, and the whole surface of the Work be so intirely covered, that there remain no crick nor corner bare, which you may easily do by jobbing in the point of a Bristle Brush: Let this first Colouring dry, and then go over it a second time, and if you please a third also ; the charge will be a little more, but the advantage will be great in the Duration.

This Course is sufficient for any kind of Timber-work that requires only a plain Colour ; whether you thus cover the Work with a Stone Colour, or else with a Timber-Colour in Umber and White, or a Lead-Colour with Indico and White, that with White being the cheapest of the three by much ; nay, I have known some lay over their Work only with a coat of Spanish-Brown, by tempering it up more stiff than was done for the two first primings, which in some respects

respects is cheapest of all, and preserves the Timber perhaps as well as any. Now he that is able to bring the work thus far on, has proceeded to the highest pitch of that vulgar Painting that aims at preservation beyond beauty, though something of Beauty is necessarily included in this also; but this is not all, for he that is arrived thus far, is in a fair way to other perfections in the Art of Painting; but for the Pannelling of Wainscot with its proper shadows, and for imitating Olive and Walnut-Wood, Marbles and such like; these must be attained too by ocular inspection, it being impossible to deliver the manner of the Operation by Precept without Example, and I am bold to affirm, that a Man shall gain more Knowledge by one day's Experience, than by a hundred spent to acquire it some other way.

I advise therefore all those that desire an insight into this Business, to be a little curious, if opportunity offers, in observing the manner of a Painter's working, not only in grinding his Colours, but also in laying them on, and working in them; in all these observing the motion of his Hand, in the manage of any kind
of

of Tool ; and by this means, with a little imitation, joined to the directions here given ; I doubt not but in a short time you may arrive to great proficiency in the business of vulgar Painting.

Note, That if when you have made use of your Colours, there be occasion for a small Cessation till the Work be finished ; in this Case 'tis best to cover the Colour; if any remain in your Pots with Water, for that will prevent their drying, even in the hottest time.

And for your Pencils, they ought, so soon as you have done working, to be well wash'd out in clean Linseed Oyl, and then in warm Soap Suds ; for if either Oyl or Colours be once dryed in the Brush or Pencil, 'tis spoiled for ever.

It has been observed, that Timber laid over with white, when it has stood some time in the weather, the Colour will crack and shrink up together, just as Pitch does if laid on any thing that stands in the Sun ; the Cause of this is for that the Colour was laid on with too stiff a body, for being wrought too thick at once, it will dry with a Skin on the outside, which will keep the inside moist,
and

and prevent its binding firm, from whence those Cracks proceed.

For the close of this Chapter take Notice, that if you shall at any time have occasion to use either Brushes that are very small, or Pencils, as in many cases there will be occasion, you ought then to dispose of the Colours you use upon a Pallet (*which is a wooden Instrument, easy to be had at any Colour-shop*) and there work and temper them about with your Pencil, that the Pencil may carry away the more Colour; for *you are to note*, that if a Pencil be only dipt into a Pot of Colour, it brings out no more with it than what hangs on the outside, and that will work but a little way, whereas if you rub the Pencil about in the Colour, on the Pallet, a good quantity of Colour will be taken up in the Body of the Pencil; and besides all this, you may work your Pencils better to a point on a Pallet, than you can do in a Pot; the point of a Pencil being of greatest use in divers cases, especially in drawing of Lines and all kind of Flourishing.

C H A P. IX.

What Colours are most suitable, and set off best one with another:

BY setting off best, I mean their making each other look most pleasant; for two of some particular Colours put together, or one next the other, shall add much to the Beauty of each other, as Blue and Gold, Red and White, and such like: But Green and Black put together, look not so pleasant, neither do Black and Umber, or Haw-Colour, and such like.

All Yellows set off best with Blacks, with Blues, and with Reds.

All Blues set off best with Whites and Yellows.

Greens set off well with Blacks and Whites.

Whites set off well enough with any Colour.

Reds set off best with Yellows, and Whites and Blacks.

Gold looks well upon a White ground, especially if the matter to be gilt be carved.

Gold and Black also shew very well.

Gold on Timber-Colour, shews also very well.

So does Gold and a Horse Flesh Colour, made with the brightest Spanish Brown.

But the most glorious ground of all others for Gold are the Vermillion Red, the Smalt-Blue, and the Lake, laid on a light ground.

Of some Colours that arise from mixture.

Ash Colour is made of White Lead and Lam-black; if a deep Ash Colour, then take the more Black, but if a light one, then take but little White, and most Black.

A Lead-Colour is made of Indico and White.

A Colour resembling new Oaken Timber, is made of Umber and White Lead.

A Flesh-Colour is compounded of Lake, White Lead, and a little Vermillion.

50 **The Art of Painting.**

A Buff-Colour, is made of Yellow-Oaker and White-Lead.

For a Willow-Green take Verdigrease alone.

For a light Willow Green, take Verdigrease and White.

For a Grass Green, take Verdigrease and Pink.

A Carnation is made of Lake and White.

Yellow-Oaker, and Red-Lead, make an Orange Colour.

For a Light-Timber-Colour, mix Spruse-Oaker and White, and a little Umber.

Red-Lead, a little White and Yellow-Oaker, make a Brick Colour.

For a Straw-Colour, take White and a little Yellow-Oaker.

Olive-Wood is imitated with Oaker, and a little White veined over with burnt Umber.

Walnut-Tree is imitated with burnt Umber, and white vein'd over with the same Colour alone, and in the deepest places with Black.

Pales and Posts are sometimes laid over only with White, which they call a Stone Colour.

Some-

Sometimes Post and Pales are laid over with Indico and White, which is called a Lead-Colour.

Window-Frames are laid in White, if the Building be new, but if not, then they generally are laid in Lead-Colour, or Indico and White, and the Bars with Red-Lead.

Doors and Gates, if painted in Panels, then the shadows of a White ground are Umber and White, but if laid in a Lead-Colour, then the shadows are list'd with Black.

'Tis not possible to set down all those varieties of Colours that may be produced by mixture; but those which I have here given an account of, are sufficient for common Painting.

C H A P. X.

Of Painting Sun-Dials, and first of the Plains on which Dials are to be drawn.

Dial-Plains are of two sorts, first such as are made on the Wall of

a Building, or secondly, such as are drawn on Tables of Wood, vulgarly called Dial Boards.

The first sort, if they are made on Brick Work, is done by Plastering on the Wall with Lime, Sand, and Hair mixt; this, if well drencht with Linseed Oyl, after 'tis dry, or as long as it will drink in any, and then with Oyl and White Lead, may be durable enough.

But a better way is to temper the Lime, Sand and Hair with Ox Blood, which will be no great charge, but of great advantage; for this mixture will equal in time the hardness of a Freestone, and keep the surface as free from the injuries of Weather; but you must afterwards paint it White.

If you were to work on a Stone, the best way is to drench the Stone with Linseed Oyl and White, very thin, 'till twill drink in no more, then shall the Dial you paint upon it, last longer and be the better prepared against the ruins of time.

Now for Tables or Dial-Boards of Wood, they being the most Common, I shall give such Directions for the making

king of them, as I have always found most profitable and fit for this purpose.

The Woods that I find best for this use are the clearest Oak, and the reddest Firr, provided it be not Turpentiney; between these two Woods I find little difference, as to their alteration by the weather, both being subject to split in case they are bound, and have not free liberty to shrink with dry weather, and swell with wet; but as to their lasting, I judge Oak to be the better: how long Firr will last when secured and defended with Oyl-Colours, I have not yet experienced; but we may judge that good Red Firr, that is hard, will last the Age of any ordinary Man, if it be secured as things of this nature ought to be.

In working any of these kind of Woods, I advise, that first your Boards be cut to such a length as you intend your Dial-Board shall be of, and so many of them as may make up the breadth designed; then let them be jointed on the Edges and plained on both sides, and afterwards set to dry (*for 'tis observed, That though Board have lain in an House never so long, and are never so dry, yet*

when they are thus shot and plained, they will shrink afterwards beyond belief, if kept dry :) when you think they are dry enough and will shrink no more, let them be again shot with good Joints, and let every Joint be secured by two Wooden Dove-Tails, let in cross the Joint on the Back side; but let this be done when the Boards are glewed together and well dried, and what a Dove-Tail is every Joiner knows. After it is thus glewed, and the Joints be sufficiently dry, then let the face of the Board be very well plained and tryed every way, that it may be both smooth and true, and the edges shot true, and all of a thickness, as Pannels of Wainscot are commonly wrought, the edges must be thus true and even, that they may fit into the rabet of a moulding put round it; Just as a Panel of Wainscot doth in its Frame. This will give liberty to the Board to shrink and swell without tearing; whereas Mouldings that are nailed round the edge, as the common way is, doth so restrain the Motion of the Wood, that it cannot shrink without tearing: but Boards made this way will last a long time without either parting
in

in the Joints, or splitting in the Wood.

Dials are sometimes drawn on Plains lined with Copper or Lead, that they may be free from splitting or tearing; but I prefer a Board (*if it be made as above is directed*) before them in many respects: As first, it is much cheaper: Secondly, Lead (*and Copper too a little*) will swell with the heat of the Sun, and grow in time hallow outwards, or Convex, instead of a perfect flat; so that the Truth of its shadow will be much injured. Thirdly, the Colours will be apt to peel from the mettal, and the Dial will by that means be in danger to be sooner defaced than if it were painted on a wooden Plain.

C H A P. VI.

How to make the best Glue for gluing the Joints of Dyal-Boards.

THis may by some perhaps be counted needless to be inserted, especially in these parts, where few Men that work in Timber, can be ignorant of it;

But supposing a Gentleman that lives in the Country, have a mind to have a Dial-Board made, and being not willing to send to *London*, imploy his own Carpenter; I must tell you, that many Country Carpenters scarce understand the right way of making or using Glue, to whom such a direction as this may prove very welcome.

Take then a Quart of Water, and set it on the fire, then put in it about half a pound of good Glue, and boyl them gently together on a soft fire, till the Glue be wholly dissolved, and of a due consistance; for if it be too thin, the Wood will so drink it up, that there will not remain a Body sufficient to bind the parts together; on the contrary, if it be too thick, 'twill not give way for the Joint to shut close enough, to be strongly joined; for though 'tis Glue that makes the Joints stick, yet where there is so much of it, that the Joint can't close exactly, 'twill never hold firmly.

Whenever you come to use Glue, take care that it be first thoroughly hot; for Glue that is not hot, never takes firm hold of the Wood.

Be sure also, that the Substance you are to glue, have not been touched with Oyl, nor injured with Grease; for where these have before touched, Glue will never take fast hold: But note, that after a thing is once glued fast, no Grease nor Oyl can then hurt it.

Your Glue being made ready, and the Joints of your Boards shot true, set both the faces of the Joint close together, and both also turned upwards, then dip a Brush in the Glue, and besmear the faces of both Joints, as quick as possible, then clap the two faces of the joint together, and slide or rub them long ways one upon another, two or three times to settle them close, and so let them stand till they are firm and dry.

C H A P. XII.

*What Colours are requisite for the
Painting of a Sun-Dial.*

FOUR Colours are sufficient for this Work, *viz.* Spanish Brown, for the priming or first Colour.

Whiter

58 **The Art of Painting:**

White Lead, for the second Colour and finishing the face of the Table.

Vermillion, for drawing of the hour Lines.

And Lam-black, for the Figures in the Margent, respecting the Lines of every Hour, if it be a plain Dial.

But if you intend to guild the Figures, then there is required some others, as Gold, and the Size to lay it on, and Smalt for a Blue ground, if you intend a rich Colour; but some lay the ground, where the Figures are guilt, with Vermillion, and that shews well, if the Figures are list'd with Black, and a Black Moulding round the Dial.

The next particular should be the practice of Painting the Dial, but before that can be done, the Draught must be drawn; and therefore I think a word of advice may not be unseasonable, if it directs you to the best Authors that have written of that Subject.

To which purpose I place first *Stirrup's* Dialling, as being of excellent use to acquaint a young Learner with the knowledge of the Sphear, that he may understand the nature and reason of Dials.

The next in order shall be *Collin's* Di-
alling; a Book of great worth through-
out.

The third *Leybourn's* Dialling, in
which you have the best ways for draw-
ing East and West Dials, and Far De-
cliners: He is excellent also in the In-
strumental way.

The fourth is *Collin's* Sector on a
Quadrant, in which you have commu-
nicated the Cut of a Scale, that by
knowing the Declination, gives all the
rest of the requisites of an upright De-
cliner, by inspection only, with as
great exactness, as by the nicest Calcu-
lation: Besides, it teaches the way of
drawing the Hours of a Dial by the Tan-
gent Line, and also by the Scale of Hours;
two of the best and most expeditious
ways that ever were yet found out.

C H A P. XIII.

The Practice of Painting Sun-Dials.

When according to the Rules given
in the Books aforementioned,
you

you have drawn on Paper the draught of your Dial; and that your Board be ready, and your Colours prepared according to the Directions before given, you must then in Painting of your Dial proceed thus; Take Spanish Brown that is well ground and mixed somewhat thin, and with a large Bristle Brush, dipt therein, Colour your Board or Plain all over, both on the Back as well as Fore-side, to preserve it the better, so that you leave no part uncoloured; this is called the Priming of your Dial: When this first Colour is dry, do it over again with more of the same Colour, tempered somewhat thicker; and when this is also dry, you may, if you please, do it over again with the same Colour, your Work will be the substantialler, and last longer.

When this last time of Colouring with your Priming is dry, then with White Lead colour the face of your Plain over, and when it is dry, work it over again three or four times more, successively after each drying, so shall the face of your Plain be sufficiently defended against the many years fury and violence of weather.

When

When the last Colouring of your White be dry, you must draw on your Plain (with a Black-Lead Pencil) a Horizontal Line so far distant from the upmost edge of your Dial, as your discretion shall think fit, or your Experience finds to be most becoming your Plain; then set out the Margin of your Dial with boundary Lines for the Hour, half Hour, and quarter divisions of your Dial (as in most Dials you see it done:) when you have thus set out the Margin and Boundary Lines of your Dial, then take your Paper draught fairly drawn, and place the Horizontal Line thereof on that which you before drew on your Plain: in doing of which, observe to place the Center according as the Situation of your Plain for Convenience sake requires: thus: If your Dial be a full South Dial, then let the Center be exactly in the middle of your Plain: but if your Dial decline from the South, either East or West, then place not the Center of your Draught in the Center of your Plain, but nearer to one side or other of it, according as it declines, having also respect to the quantity of its declination.

For Example : If your Dial decline Eastwards, then let the Center of your Draught be plac'd between the Center and the Eastern side of your Playn, the quantity thereof must be according as your Dial declines; if it decline but a little, then place the Center of your Draught but a little from the Center of your Plain; and if it declines much, place the Center of your Draught the more out of the Center of your Playn : The reason of my advising this, is, that by so doing you may gain a greater distance for those Hour-Lines, which in declining Playns fall nearer together on one side than they are on the other; for which reason I always use it in all declining Playns, except they decline far, as between 80 and 90 Degrees : for then we commonly draw them without Centers, to gain the more distance for the Hour-Lines.

When your Paper Draught is thus Artificially placed on the Playn, and fastened with Pins or small Tacks; then let the Draught thereof be transferred to the Playn, by laying a Ruler over every Hour, half Hour, and Quarter Division : and where your Ruler shall cut or
inter-

intersect the boundary Lines of your Margin, there make marks, by drawing Lines with a Black-Lead Pencil, of such a length as each division requires (*or is designed by your boundary Lines*) observing always to draw the Hour, and half Hour Lines quite through your Margin, that they may be guides for the right placing of the Figures, and for a small spot that is usually placed in the Margin, right against the half Hour.

When your Dial Draught is thus transferred to the Playn it self, you must not forget to draw the subtil Line according as it lyeth in your Draught, to be your guide for the right placing your Still or Cock; for you must in every particular be very exact, or else your Dial cannot be good.

When you have taken every thing that is required from your Draught, and have transferred it to the Playn, then take your draught off, and with Vermillion very well ground and prepared, as before is taught, let the boundary Lines of your Dial, as also the Hour, half Hour, and Quarter Divisions be drawn therewith; let your Colour be as
thick

thick and stiff as you can possible work it, so as to draw a clear and smooth Line, because this is to be done but once.

When your Vermillion Lines are drawn, then with Lamp-Black let the Figures be made, and a spot in the middle of the Margin right against the half Hour Line; and if you please, in the Margin, at the top of your Playn you may put the date of the Year, your Name, or some Sentence, as it is usual in things of this nature: then fit in your Cock so as to make right Angles with the Playn, so shall your Dial be drawn and finished in all respects as a plain Dial ought to be.

C H A P. XIV.

How to guild with Gold on an Oily Size, either Letter or Figures, in Dials or any other Works.

WHatsoever you would guild must first be drawn with Gold Size (of the making of which, see Chap. 7.) accord-

according to the true proportion of what you would have gilt, whether Figure, Letter, or whatever else it be; when you have thus drawn the true proportion of what you would have gilt, let it remain till it be sufficiently dry to guild upon, which you shall know by touching it with the end of your Finger; for if your Finger stick a little to it, and yet the Colour come not off, then it is dry enough: but if the Colour come off on your Finger, then it is not dry enough, and must be let alone a little longer; for if you should then lay your Gold on, it would so drown it, that it would be worth nothing: but if your Size should be so dry as not to hold your Finger as it were to it, then is it too dry, and the Gold will not take; for which there is no remedy but new Sizing; therefore you must watch the true time that it be not too wet or too dry; both extremes being unfit for laying the Gold on it.

When your Size is ready for gilding, take your Book of Leaf Gold, and opening a Leaf of it, take it out with your Cane-Plyers, and lay it on your gilding Cushion, and if it lye not smooth, blow on it with your breath

which will make it lye flat and plain; then with a Knife of Cane, or for want of it, an ordinary Pocket Knife (*that hath a smooth and sharp edge; being wiped very dry on your Sleeve that the Gold stick not to it*) let your Leaf Gold be cut into such pieces, or forms as your Judgment shall think most futable to your work.

When you have thus cut your Gold into convenient forms, then take your Tool that was before described in *Num. 9. of Chap. 1.* and breath upon it to make it dampish, that the Gold may stick to it; with this Tool take your Gold up (*by clapping it down on the several pieces you had before cut into forms*) and transfer it to your Size, upon which clap it down according to discretion, and your Gold will leave your Tool, and cleave to your Size; which you must afterwards press down smooth with a bunch of Cotton, or the bottom of a Hares Foot: and thus you must do piece by piece till you have covered all your Size with Gold; and after it is fully dried, then with your Hares Foot brush off all the loose Gold, so will your gilding remain fair and beautiful.

If your Work to be gilt, be very large, open your Book of Leaf-Gold, and lay the Leaf down on your Work, without cutting of it into pieces, and so do Leaf by Leaf till you have covered quite over what you intend to guild: and if some particular places should miss, take up with a small bunch of Cotton a piece of Leaf-Gold, cut to a fit Size, and clap it on, that the Work may be intirely covered; and if the Gold be to be laid in the hollows of Carved Work, you must take it up on the point of a Camel-Hair Pensil; and convey it in and with the said Pensil, dab it down till it lie close and smooth.

Note, That after your gilding is thus perfectly laid on, you may, if you please, Diaper or flourish on it with thin burnt Umber, whatsoever shall be suitable to your design: Let the Umber be tempered but thin, so that the Gold may appear through it; the form and order of which take from Examples which are abundant, where Painting and Gilding are found.

Note further, that a Book of Gold contains 24 Leaves, each Leaf being three Inches square; the price of each Book

is two Shillings at the Gold-Beaters; one Book will cover 216 square Inches of work; for so many square Inches is contained in 24 Leaves, that are three Inches square, every Leaf containing nine square Inches superficial in Gold: the right understanding of this will much guide you in judging how many Books of Gold will serve to guild that work, whose superficial content in square Inches may before be known.

How to guild with Silver.

IN laying on Silver upon an Oily Size, the same method in all respects is required as for gilding with Gold; save only in this, that the Size upon which Silver is laid, ought to be Compound-ed of a very little Yellow Oaker, and much White-Lead; for the Size being of a light Colour, the Silver laid on it will look more natural, and retain its own Colour better, the whiter the Size is.

Note, That the Common Painters do now generally in gilding use more Silver than Gold, in most Works that are not much exposed to the Air, to which they

they afterwards give the Colour of Gold, by means of the Laker Varnish, whose use is now so common, that if they guild any thing that stands free from the weather, they only guild with Silver, and so give it the Colour of Gold with a Laker Varnish, made of Gum-Lake, dissolved in Spirit of Wine, and laid over it.

C H A P. XV.

The way of Painting a Blue with Smalt, the only Colours that requires strewing.

SMalt being a Colour that gives its greatest lustre by the way of strowing only, I shall lay down the true method of performing this work: first temper up White-Lead pretty stiff with good clear drying Oyl; let it be as stiff as it well can be to spend well from the Pencil, with this white Colour cover overs the Superficies of the work you intend to strow with Smalt; and if it be the Margent of a Dial whose Figures

are already Gilt with Gold, let every part between the Figures, and where there is no Gold laid on, be done over, and be very exact in the work, for the Smalt takes no where but on this new and moist ground; then take Smalt, and the Work to be done over with it lying flat, strowing it thick on the thing to be coloured, and with the feather edge of a Goose-Quill stroke over it, that it may lie even and alike thick on all Places; and then with a Bunch of Linnen Cloath, that is soft and plyable, dab it down close, that it may take well upon the ground to be thoroughly dry, then wipe off the loose Colour with a Feather, and blow the remainder of it off with a pair of Bellows, so is your Work finished. And thus you have a Method for Colouring any kind of work, by the way of strowing with Smalt, provided the work be such as requires only the plain Colour.

But in Case you design to paint any kind of Body in Smalt, that requires shadow for the more perfect resembling the thing you intend. As suppose it were a Blue Bell, or a Blue Boar, or the like. In this Case, when you have drawn

drawn out the perfect Simetry of the shape you intend, and have covered it with a ground of White Lead, well and stily tempered with clear and fat Linseed Oyl, then proceed to give it those necessary shadows you intend, with good Black well tempered; and when you have finished these shadows, then strow on your Smalt, as before was directed; and when the whole is dry, and the superfluous part be taken away; the Work will appear, with all its shadows, as exact as possible.

Note, That the Work upon which you lay on this ground, for to be strowed on with Smalt, ought first to be sufficiently primed and laid also over once with white before you lay on the ground, that you may be sure the ground be perfectly white; for a white ground is the only thing that gives beauty and glory to the Colour of the Smalt.

In all other Cases, where the Work to be strowed over with Smalt does not lye flat, you must take Smalt up upon a flat bunch of Linnen Cloath, and so dab it upon the ground you are to lay it upon.

C H A P. XVI.

How to scour, refresh and preserve, all manner of Oyl Paintings.

TH E Oyl Paintings that I here intend, are only such as are kept from the injuries of weather; for such Paintings as endure the fury of Rain and Storms (such as Sun-Dials, Posts, Pales, &c.) are not any ways to be renewed or refreshed, but by being new coloured with the same Colour in which it was at first wrought, because that the body and strength of the Colour is worn out by the continual assaults of wasting time, and cannot be made fresh, unless new done over once in 4 or 5 Years, or more according as the Weather is found to wear it off, and make it look dull.

But as for such Painting that is sheltered from weather, as all In-door Paintings are, they still keep their Body and Colour, although their beauty may be much impaired by dust, smoak, fly-shits, and the like, which will in time soyl
and

and tawnish them; To remedy which, take these few Rules:

If your Painting be Wainscotting, or any other Joynary or Carpentry Work that is painted in Oyl, take Wood ashes well sifted, which mix with Water somewhat thickly, then take a large strong bristle Brush, and dip it in the moistened ashes, and therewith rub and scour your Painting all over very gently in all places alike, and when you find that all the Soyl is taken off, then wash it clean with fair Water, and let it dry; and you will find your Painting to be near as fresh as when laid on.

But if your Painting be more Curious, whether Figures of Men, Beasts, Landskip, Frutage, Florage, or the like, then let your Picture be gently scoured, and then cleanly washed off with fair Water: after it is well dry, let it be run over with Varnish made with white of Eggs, and you will find the Beauty and Lustre of your Picture much recovered.

The whites of Eggs before mentioned, are only to be beaten to an Oyl, and then curiously rubbed on either with a clean Linnen-Cloath, or a Pensil.

But

But *Note*, That this scouring of Pictures ought not to be practised but very seldom (*as when your Picture is very much soiled*) because often and too frequent doing this must needs wear off a little of the Colours; therefore strive what you can to preserve their first beauty, by keeping them free from smok, and by often striking off the dust with a Fox-Tail; as likewise preserving them from Flies, by burning Brimstone sometimes to kill them, or by dressing up your Rooms with green Boughs, to which the Flies will gather themselves, and so not hurt your Pictures. Sir *Hugh Platt* in the First part of his *Garden of Eden*, and 17 page, tells us of an *Italian Fancy* for this purpose, by hanging in the Roof and sides of the Room small Pompions or Cucumbers stuck full of Barley, which will sprout into green Spiers on which the Flyes will lodge. *Query*, Whether Vessel of Tin made round about full of holes filled with Earth, and every hole planted with a Corn of Barley, and watered as need requires, would not be more beautiful and useful to this purpose.

Another Note worth Observation is, That all Pictures (*especially those that are wrought with mixtures of White Lead*) are apt to tarnish and grow rusty, as is seen in all ancient Pieces; To prevent which, in the Months of *May* and *June* let your Pictures be exposed sometimes to the hot Sun, for this will draw off much of the tawnyish, and make the Colours more fresh and beautiful. and thus doing from year to year will preserve them wonderfully.

Although in the beginning of this Chapter I mentioned Dials among those things that are not to be refreshed but by new Painting; yet her take notice, That I think it not convenient at all to lay new Colouring upon the old ground of a Sun-Dial (*or to draw the old Lines and Figures over again in the same posture wherein they were drawn before*) but rather to take the declination anew, and according thereunto make a new Draught of your Dial, and proceed in the Painting of it in all respects as if it were a new Dial: For it is observed, That Dials which were made fifty or sixty years ago (*which we believe went true when first made*) will not give the
true

true Hour now, but go very false, which is caused by some secret Motion of the Earth not hitherto taken notice of, which apparently alters the declination of all Playns. If any ones requires more satisfaction herein, let him repair to some old Dial that was made many years ago, and according to the distance of the Substile from the Meridian, let him find out the declination when first made, as any Man, that is an Artist, can easily do; then let him take the declination of the Plain by the Sun, and he shall find these two declinations to differ considerably; according to the number of years contained between your observation and the time of the Dials first making; so that a Plain that stood full South, sixty years ago, shall now decline some degrees either to the East or West, which perhaps may be a Cause of the Variation of the Compass, which is found by Observation, to differ much in the same Country, in the space of 50 or 60 years, as all skilled in Astronomy know very well.

C H A P. XVII.

An Experiment relating to Oyl Colours of great use to Travellers of some kinds : To the chief Officers of Camps and Armies, to Seamen and such like.

THis Experiment is no other than a discovery of the way and mystery of making Oyl-Cloth, now used for Hat-Cases, and that is this : Take of the drying Oyl mentioned in Chap. 6. set it on the fire, and dissolve in it some good rosen, or (*which is better, but dearer*) Gum-Lack; let the quantity be such, as may make the Oyl thick as a Balsom, for it must not be so thin as to run about, if spread on a Cloath: when the Rosen or Gums are dissolved, you may either work it of it self, or add to it some Colour, as Verdigrease for a Green, or Umber for a Hair-Colour; or Indico and White for a light Blue.

This

— This Varnish, if spread on Canvas, or any other Linen Cloth, so that the Cloth be fully drenched and intirely glased over with it, and suffered to dry throughly, is Impenetrable for all manner of wet; and if Carriers and such kind of persons that are necessitated to travel in all manner of weathers, had but little light Canvas Cloaks made for them, of such Cloath and Hats lined on the out-side with the same, these Cloaks and Hats would secure them from wet as well as if they remained still in their own Houses; for as I said before, no wet will penetrate through it; four and twenty hours rain would make no more impression upon it, than if it had never rained at all.

The Officers Tents in an Army or Camp, if covered over with this Varnisht Cloath on the top, would preserve them as securely from all wet, as the best Houses, and be as warm and dry; neither will there follow any great inconvenience in decamping; for Cloath so Varnished, is almost as plyable as the naked Cloth, and not very much more weighty, especially if the Varnish be laid on plain, without any Colour
mixt

mixt with it; for that is both the lighter and more pliable.

The same advantage may Seamen reap by it, or any other persons that must necessarily attend in Storms and rain.

A Sheep-Skin Boot well liquored with this Varnish after the Boot is made, and so thoroughly done over as to lye with a glass on the outside, shall endure more wet than the best Neats-Leather Boot, being also much more plyable, easy and light; the same may be said of Shoes in great part.

The great reason why the Oyl-Hat-Case has not been more often in use, is by reason of the difficulty required to form it into Garments, and then the very Hat-Case themselves do let Water in at the Seams; but this Varnish being laid on in the Seams after the Garments are made, does so intirely secure every part, as there's no possibility or place for the wets admittance.

The same may be of advantage to abundance of other humane necessities, too long here to enumerate; and for securing any kind of Timber Work, it equals Painting with Colours in Oyl, and much more easy to attain; for Lin-
‡ feed

90 The Art of Painting.

seed Oyl and Rosen are much more easily melted together by boyling than Colours can any ways be ground; and being of the consistence of a Balsom, works delicately with a Brush, and of it self, without the addition of Colours, bears a body sufficient to secure all manner of Timber-work, equal to, most Oyl-Colours.

In the working of it there's no great skill required, if you can but use a Painters Brush; only let the matter you lay it on be thoroughly drenched, that the outside may be glazed with it: if you desire a Colour on the outside, you need only grind a Colour with the last Varnish you lay on.

CHAP.

C H A P. XVIII.

How to preserve all bright Iron-work from rust and other Injuries of a moist and corroding air, by an Oily Varnish.

TAke good Venetian, or for the want of that, the best and clearest common Turpentine, dissolve it in Oyl of Turpentine, and add to it some good drying Linseed Oyl, made clear by long standing in the hot Sun (*for some uses, the common drying Linseed Oyl may serve*) mix them well together, and with this mixture, Varnish over any sort of bright Iron-work whatever, that is used about the Houses of the Nobility and Gentry; as also all kind of bright Arms that is kept in Armories and other places of publick state: 'Tis a certain preserver of all such Iron-work from rust, let it be what it will, provided it be such as is not brought into common use, for much handling will wear it off, and heat will again dissolve it; but for all such bright

G

Iron

Iron work that is used about either Carpenters or Joiners Work, that require not much handling, as also Arms, &c. that stands up for state rather than present use; 'tis, as I said before, an infallible Preservative.

When you use this Oily Varnish, 'tis best to warm it, and then with a Brush lay it on as thin as possible; this is best for Arms; but for other Iron-work, it may be laid on cold; in four or five days after 'tis laid on, 'twill be thoroughly dry.

Note, That such Arms as is done over with it, may, when they come into use, be cleansed from it again, by being warmed hot before a fire; for heat will dissolve it, but Water will do it no hurt.

C H A P. XIX.

The Art of Back Painting, Mezotintto Prints, with Oyl-Colours.

THIS Mystery consists chiefly in pasting the Print upon a piece of glass of such a Size as fits the Print. Now to do this, take your Print and lay it in clean

clean Water for two Days and two Nights, *or longer, if your Print be on very strong Paper*; then take it out, and lay it upon two Sheets of Paper, and cover it with two more, and let it lie there a little to suck out the Moisture: In the mean time, take the Glass your Print is to be pasted on, and set it near the Fire to warm, then take *Strasburg Turpentine* and put it into a Gally-Pot, and warm it upon the Fire, then take a Hogs hair Brush, *the Hairs being well fastned by wedging, as before was shewed*, and therewith spread over the Turpentine very smoothly on the Glass; then take the Print from between the Paper, and lay it upon the Glass, beginning first at one part, and so rub it down gently, as you go on, till it lie close, and there be no Wind Bladders between, then with your Finger roll or rub off the Paper from the back side of the Print, till you see nothing but the Print left upon the Glass, and when this is done, set it by to dry, and when 'tis dry Varnish it over with some White Transparent Varnish, that the Print may be seen through it, and then it is fit for Painting.

You may, instead of soaking your Prints two Days and two Nights, roll them up and boil them for about two Hours in Water, and that will make them as fit for peeling as the other way, when rubbed with your Fingers, then having prepared your Oyl Colours, as in the preceding Work is directed, grinding them very fine, and tempering them up very stiff; let the backside of the transparent Print be Coloured over with such Colours as each particular part does require, letting the Master Lines of the Print still guide your Pencil, so will each particular Colour lye fair to the Eye, on the other side, and look almost as well as a Painted Piece, if it be done neatly.

Note, That the shadows of the Print are generally sufficient for the shadow of every Colour, but if you desire to give a shadow from your Pencil, then let the shadows be laid on first, and the other Colours after.

Note also, That in laying on of Colours in this kind of backside Painting, you need not be curious in laying them on smooth, 'tis not at all requisite here where the chief aim is only to have the
Colours

Colours appear well on the forefide of the Print; and therefore the only care to be used in this work, is to lay Colour thick enough, that its body may strike the Colour of it plainly through the Glafs.

Some Directions for mixing of Oyl-Colour for divers purposes, in this Art of Colouring Prints with Oyl-Colours.

Colours for several Faces.

FOR Faces that are accounted fair, take White-lead, a little Vermillion, and a very small touch of Lake.

For the Lips take more of the Vermillion and Lake than you did for the Face.

For a Brown Face take burnt Oaker and White.

For a Tawny Moor, take Cullens Earth, a little burnt Oaker, and a little White.

Colours for Hair.

For a brown Hair, mix Umber and a little Black and White.

For a yellow Hair, take Stone-Oaker, White-lead, a little Vermillion.

For a flaxen Hair, take White lead, Stone-Oaker, and a little Cullens-Earth.

Linnen.

Is done with White Lead or Cerus.

Silver.

Is done with White, a little Smalt, and some White Masticote.

Gold.

Is done with Red Orpiment and White Masticote, of each equal quantity.

Colours for Garments.

For Blue Garments the best Smalt and White-Lead.

For a Grass Green, mix Verdigrease and a little Pink Yellow.

For a Willow-Green, mix Verdigrease and a very little White.

A Sea Green is made by mixing green Verditer, Pink and White-Lead.

A French Green is made by mixing Pink and Indico.

A Carnation by mixing Lake and White-Lead.

A Crimson is made by mixing Vermillion, Lake and White.

A Scarlet is only Vermillion laid on alone.

A Cherry Colour is made by mixing Vermillion and White-Lead.

For Yellow, lay on either Yellow Orpiment, or Yellow Masticoate; if your Yellows are more pale, then mix White with the former.

For an Orange Colour, mix Orpiment and a little Vermillion.

For a Purple, mix Smalt, Lake and White.

For a Violet, mix Bise and Lake.

A Straw-Colour is made with White, Yellow-Oaker, and a very little Umber.

An Ash-Colour is made by mixing Black and White.

A Chesnut Colour is made by mixing Umber, Lake and White.

A Dove-Colour, or the Wings of an Angel, take White, a little Lake, and a little Smalt.

Colours for Trees.

For the Bodies of Trees, take Pink, Yellow, White-Lead, Yellow-Oaker, and a little Black.

For the Leaves of them that are near the Eye, take Verdigrease and Pink, or if darker Coloured, then take Indico and Pink.

For Leaves of Trees farther off, take Green Verditer, Pink, and White-Lead.

For them that are farthest of all, take Terrevert and White.

Colours for Grounds behind a Picture.

Note, That a light Hair requires a dark ground, and a dark Hair a light ground.

Ground Colours for a Picture with a light Hair, is made with Umber, White and Black.

A Ground Colour for a dark Hair is made with Umber and White.

For

For Ground in a Lanskip.

Take Pink, Oaker, and White, with a little Green Verditer.

For Country Houses, at a distance, take White-Lead, Yellow-Oaker, and Smalt; the same Colour serves also for Houses of Stone.

For Brick-Houses or Walls, take Yellow-Oaker burnt, and White-Lead, if the Work be far off, but if near, then *India Red*, and a little White.

For Pails of Wood or other Timber-Work, of what kind soever, in Country-Cottages, take Umber, White, and a little Oaker.

Sky Colours.

Are made of Smalt and White for the highest Skies, more White for the lower, and Yellow mixt with a little Vermillion for the lowest of all.

C H A P. XX.

The manner of Painting Cloth, or Sarsnet Shash Windows.

LET the Cloth or Sarsnet be first strained tite to the Frames, and there made fast, and when they be through dry, Varnish them over with the following transparent Varnish thus made.

Take a pound of good clear Nut-Oyl, put it into an Earthen Pipkin, and add to it half a pound of good Silver Litharage in fine Powder, set it on a small Fire, but not to boyl, and let it stand hot at least twelve hours, stirring it often in that time (*this adds a drying quality to the Oyl*) when it has stood thus long, pour it off from the Litharage by Inclination, then take a pound and a half of the clearest white Rosen, beat it to Powder, and mix it with the Oyl on a slow Fire, always stirring it till the Rosen be dissolved; then take it off and put into it a Pound of good clear *Venus Tur-*
pentine,

pentine, and stir them all well together ; then with a good Brush let your Shashes be thoroughly Varnished over with this mixture, so that they may appear all over clear and transparent.

When this Varnish is dry, then you may Paint upon them what fancy you please with Oyl Colours, but Landskip is most common and natural, for which purpose, the Colours you mix ought to be such as are of a fine Body, and apt to become transparent.

For these purposes, Lake makes an excellent transparent Ruby Colour, and distilled Verdigrease makes an incomparable transparent Green, Orpiment makes an excellent transparent Gold Colour ; Umber and Yellow Oaker will become indifferent transparent, if thinly mixt, but for the rest, there are none that will lye clear in this work, but only according to the very thinness of their mixture with the Oyl.

The aforesaid Varnish, as it is clear of it self, is an excellent Varnish for Paper Windows, being much more transparent than any other Composition, and more lasting ; for the Rosen and Turpentine being made tough, when dry,
by

by means of the Oyl mixt with it, does more powerfully resist the Injuries of all weather than Oyl alone.

If any are troubled with weak Eyes, and cannot indure a bright Light, this Varnish mixt with distilled Verdigrease, and Paper Windows, or Sarfnet ones done over with it, will make an incomparable green light, very comfortable to the sight, and of great benefit to such as love not too much brightness: a Note of good use, especially to all great Students, whose sight is often much impaired and weakened by poring too much upon their Books; the whiteness of the Paper being observed to be often a great Enemy to the sight of some Men, the inconveniencies of which, such a green Light as this now mentioned, will infallibly prevent, beyond green reading Glass, Spectacles, or any other contrivance, yet found out; the like benefit may some Tradefmen also receive from it.

C H A P. XXI.

The whole Art and Mystery of Colouring Maps, and other Prints, in Water Colour.

HAVING, as yet, seen nothing published upon this Subject that is Authentick, I have thought fit for the sake of those that are inclined to Ingenuity, to set forth the way and manner of doing this Work, it being an excellent Recreation for those Gentry, and others, who delight in the Knowledge of Maps; who by being Coloured, and the several Divisions distinguished one from the other by Colours of different kinds, do give a better Idea of the Countries they describe, than they can possibly attain to uncoloured.

Now to perform this Work after the best manner, there must be provided in the first place a Lye made with Tartar, and a Gum-Water.

To make the Tartar Lye do thus, take two Ounces of the best White Tar-

tar, which is a stony Substance that sticks to the side of the Wine Vessels, and is sold by the Drugists. Wrap it up hard and tite in half a Sheet of Brown Cap Paper, wet it throughly in Water, and put it into a clear Fire, either of Wood or Sea-cole ; let it remain therein till it be red quite through, then take it out with a pair of Tongs, and put it immediately into half a Pint of Water, and with your Fingers rub it well to pieces ; put it into a long narrow Glafs, and in a Day or two the Black will all fettle, and the Lye will become pure clear : Pour off the clear Lye into a clean Glafs, and keep it close stopt for use.

To make Gum-Water, take Three Ounces of the whitest and clearest *Gum-Araback*, which is also sold at the Drugists, and beat it as small as you can bruise it ; then put it into a Pint of fair Spring Water, and let it dissolve therein, which will be much hastened by shaking the Glafs three or four times a Day very well, that the Gum that is dissolved may mix the better with the Water that is above it : And when it is all dissolved, if there appear any Foul-
ness

ness in it, strain it through a Rag into a clean Earthen Dish, and put it into a Glass, and stop it up for Use. *Note*, That too much of this ought not to be made at a time: For if the Gum be kept dissolved too long in the Water, it will rot, and so be of no use; therefore observe to make it fresh once a Month at the farthest.

In the next Place, you must prepare or make your Colours ready for Use, and the best for this Work are those that follow; Namely,

Copper.Green, and that is made thus; take a Pound of Right *French Verdigrase*, made at *Monpeliar*, this being the best; for the *Verdigrase* made at any other place will fade. To this add Three Ounces of Cream of Tartar, beat them both into a fine Pouders, and take care, while the *Verdigrase* is in the pounding, to stop your Nose, and hold a Bunch of fine Linnen in your Mouth to breath through, else the subtil Pouders of the *Verdigrase* will be apt to offend; and when this is done, mix both the Pouders in two Quarts of Water, and boil it in an Earthen Pipkin till it boil away a Quart, then strain it out when cold,

cold, and put the Liquor into a Glass, stop it up, and let it stand to settle till the Liquor be very clear, so you will have a delicate Green: But sometimes the *Verdigrease* not being always of a Goodness, the Colour may not be deep enough for some Uses. In this Case, put some of it into a broad Earthen Dish, and set it over a Chafing-Dish of Coals, and by a gentle Heat, diminish so much of the Liquor, till by trying on a Paper *and letting of it dry*, the Colour please you: *and here you are to note*, That if it shine too much when dry, it is not right; for it is not rightly made except it but just shine, and if you cannot make the Colour deep enough by evaporating by Heat, the abounding Liquid, without making it shine too much, it were better to add some more *Verdigrease*, and boil it up a new, till it become a Transparent deep *Willow Green*. If you would make but a Pint of this, you must take but half the Quantities of each: And you are also to take notice, that this is a Colour that will keep a Year or more without decaying, if the Glass that contains it be close stopp'd up.

The next Colour needful to be made, is a Stone Colour, or a Liquor of *Myrrh*, which is thus done; take a Pint of your Tartar Lye, and add to it an Ounce of *Myrrh* in Pouders, the best for this use is the blackest or coursest, and boil it till the *Myrrh* is dissolved; which will be done in a small time; let it settle and pour off the clear for Use, which you must keep close stopp'd up: This is also a Tincture which will keep long, and may be made fainter or deeper by boiling more of the Liquor away to make it deeper, or by adding Water to it to make it fainter. Some make also a Colour of Pitch like Soot, made by Wood; this Soot they boyl in Water, and when clear, is good for many Uses, and serves in some Cases instead of this Liquor of *Myrrh*.

And in the last Place, there is required a *Crimson Colour* which is speedily made thus. Buy at the Drugists some good *Cochinele*, about half an Ounce will go a great way. Take Thirty or Forty Grains, bruise them in a Gally-Pot to fine Pouders, then put to them as many Drops of the Tartar Lye as will just wet it, and make it give forth

its Colour; and immediately add to it half a spoonful of Water, or more if the Colour be yet too deep, and you will have a delicate purple Liquor, or Tincture. Then take a bit of *Allum*, and with a Knife scrape very finely a very little of it into the Tincture, and this will take away the Purple Colour, and make it a delicate *Crimson*. Strain this through a fine Cloath into a clean Gally-Pot, and use it as soon as you can, for this is a Colour that always looks most Noble when soon made use of, but it will decay if it stand long.

Indico is another Colour used in colouring of Maps. This is bought at the Colour Shops that sell Paint, and it must be ground very fine on a Stone, as you do Oyl Colours, with a little Tartar Lye to make it give its Colour, and look the brighter, when 'tis ground perfect fine like a thick Syrrup, add Gum Water to it till it be thin enough for your purpose, and keep it in a Glass close stopt up, but it will settle so, that when you use it you must stir it up from the Bottom.

For a Yellow, *Gumboge* is the best, it is sold at Drugist in Lumps, and the
way

way to make it fit for Use, is to make a little hole with a Knife in the Lump, and put into the Hole some Water, stir it well with a Pencil till the Water be either a faint or a deeper Yellow, as your occasion requires, then pour it into a Gally-Pot, and temper up more, till you have enough for your purpose. Some instead of this Use French Berries, by some called Yellow Berries, which they put into Water with a little Powder of *Alum*, which in a days time will draw out a delicate Yellow Tincture; the more Berries, the Yellower will the Liquor be.

Red Lead is also a Colour much used in this Work, and so is *Orpiment*; both which you may buy at the Colour Shops very finely ground, so that they need only to be tempered with Gum-Water to be fit for Use.

Blue Bice is also used often, which needs only to be tempered with Gum-Water, and when Men design to be curious, they may use instead thereof *Ultramarine*, which is the best and most glorious of all Blues, but very dear; yet small Papers of it of about Two Shillings Price may be bought at some

Colour Shops, which if carefully used, will go a great way: It needs only to be tempered in a very small Gally-Pot with a little Gum Water, till it lie on the Paper with a good Colour.

There is also an exceeding glorious Red or Crimson Colour, called *Carmine*, which is also very dear, yet about Half a Crowns-worth will go a great way in the Uses to which it is put; it needs only to be tempered with Gum-Water, and gives several degrees of Colour according as it is thicker or thinner tempered; for if it be very thin, it resembles in Colour the Crimson made from *Cochenele*, and may be used instead thereof, by the Gentry, to whom the Price will not be considerable.

Vermillion is also used in some Cases. This is a glorious *Scarlet*, and needs only to be tempered with Gum-Water, for it may be bought very finely ground to Pouders at the Colour Shops; only the lightest coloured *Vermillion* is the best for this use; and 'tis to be noted, that this Colour shews much brighter when dry, if glazed over with thick Gum-Water, made by putting Two Ounces of Gum Araback to half a Pint of
Water

Water, or less; which should always be ready for this purpose.

And for some Uses, burnt *Umber* ground very fine with *Water* as thick as possible, and then tempered up with *Gum-Water* to a due thickness, make a good *Transparent Colour*.

There is another *Colour* needful in this *Work*, which is a most pleasant *Grass Green*, and that is made thus, take a Lump of *Gum Boge*, and make a little *Hole* in it, then put therein some *Copper Green*, stir it about with a *Pencil*, and from a *Willow* you will see it turn to a *Grass Green*, which you may make deeper or lighter, as you stir it about a longer or a lesser time.

Of the Practice of Colouring Maps.

The *Colours* being prepared as before is directed, you may proceed to *Colour* a *Map* in this manner, first take notice of the several *Divisions* in a *Map* which distinguish one *Kingdom* from another, or one *County* from another, which are known by certain *Lines*, or *Rows* of *Pricks*, or *Points* of several *Sizes* and *Shapes* agreeable to the *Divisions* they

are to denote. As for instance, *Portugal* is distinguished from *Spain* by a row of large Points, or Pricks, and the Provinces of that Kingdom, or Shires, as we call them in *England*, are distinguished one from another by Lines of lesser Points or Pricks. Now if you were to colour the Kingdom of *Portugal* do thus, first with a small Camel Hair Pencil in a Ducks Quill, colour over all the Hills within the Large prick Line that divides it from *Spain* with the *Tincture of Myrrh* very thin; then if there be any Woods, dab every Tree with the point of a very fine Pencil dipt in *Grass Green*, made of *Copper Green* tempered up with *Gum Boge*, but in dipping your Pencils into any Colour, stroke it against the sides of the Pot or Glass in which you put it, that the Colour may not drop from it and spoil your Work; then with another Pencil dipt in *Red Lead*, tempered thinly with *Gum Water*, let the *Principal Cities and Towns* be done over that the Eye may more readily perceive them. Lastly, with a Ducks Quill Pencil dip in some Colour, as *Copper Green*, and trace out the Bounds of one of the Provinces,

vinces, keeping the outmost Edge of the Pencil close to the Pricks, and be careful to lay your Colours all alike, and not thicker in one place than in another, and when 'tis almost dry, take another clean Pencil of the same Size, and dip it in Water, stroaking the Water out well, and therewith rub upon the inside of the coloured Line, till it take away most of the Colour on the edge, and make it grow faint and lose it self by degrees, and continue so to do till you have gone quite round; then take Yellow made of *Gum Boge*, and go round the inside of the Pricks that divide the next Province, sweetning over the innermost Side of it, when almost dry, with a Pencil dipt in Water, as you did before, do over the next to that with the *Crimson Tincture* made with *Cochinele*, or thin *Carmine*, and the next to that do round with *Red-Lead*, and the next to that with *Grass Green*, and the next to that with any of the former Colours that will so agree with the Work, that two joining Provinces may not be coloured with the same Colour, for then you could not distinguish them so well by sight.

And in this Work of dividing, observe, That when your Boundary Lines pass through Woods already coloured, or Hills; observe then, I say, to miss the Colour of those Woods and Hills in your drawing a Colour round the Province, and be careful also not to draw any Colour over the Cities or Towns that are painted Red, for that spoils the Beauty of it.

And when you have coloured over or divided all the Counties, then colour *the Sea-shoar*, and all *Lakes of Water*, if there be any, with thin *Indico*, working of that side of the Colour which is from the Land faint, with a wet Pencil as before was taught, and if there be any Ships, colour the Water shaded at the bottom with the same *Indico*, painting the Hull of the Ship with *Umber*, the Sails with Tincture of *Myrrh*, and the Flags with *Vermillion* or *Blue Bice*; and if they are represented as firing their Guns, let the fire be done with *Red Lead*, and the Smoak with very thin *Bice*, and as for the *Margent or square stick of Degrees*, as the *Gravers* term it, which goes round the Map, let that be coloured either with Yellow or
Red.

Red Lead, or Crimson, none but those three Colours serving well for this purpose.

As for the Compartment or Title, which consists generally of some neat Device to set the Map off, and make it appear more beautiful, it may be coloured according to the Nature of it. As for instance, *Crowns* or any thing representing Gold with Yellow, shadowed in the darkeſt parts of the Graving with Orpment, the Hair of Men or Women with Tincture of *Myrrh*, or if Black, with half Water half common Ink, or with burnt *Umber*; the Flesh of Women or Boys with a very little of the Tincture of *Cochinele*, in a large Quantity of Water, and Garments either with thin Green shadowed with thicker, and with the Tincture of *Cochinele* made thin with Water, and shaded with the ſame Colour thicker, and thin *Bice*, and shadowed with a thicker mixture of the ſame, or with *Vermillion* shaded with *Carmine*. In general obſerve, That the Colour muſt be laid in the lighteſt part of all Garments, very thin and deeper in the Shades, for then the more beautiful it wil

will appear; the thick of the same Colour being the most natural Shade for most Colours, except *Yellow* and *Blue*, for *Blue* sometimes requires to be shaded in the darkest Places with a *Black*, or at least with thick *Indico*; and *Yellow* requires *Red-Lead* or *Crimson*, and sometimes it appears very pleasing when shaded with *Green*.

If you are to paint Clouds, do them sometimes with Tincture of *Myrrh*; and in some Cases, with a very thin *Crimson*, and for Variety, you may do some with thin *Ivory Black*, ground very fine, and tempered up with much *Gum-Water*. *Smok* is best represented with very thin *Blue Bice*, and if you are to colour any Representation of *Sea Waves*, do it with *Indico*.

If you are to colour any Representations of *Land*, do the lightest parts over with very thin *Yellow* that represents a *Straw Colour*, shading it in some places with *Orpment*; and in others let a light *Green* be laid, and shade it with a deeper *Green*: *Rocks* must be done with Tincture of *Myrrh*, or of *Soot*, and the *Trees* some with *Copper Green*, some with dark *Grass Green*, and some with

with thin burnt *Umber* and *Gum-Boge* mixt ; Houses may be done with *Red-Lead*, and the Tiles with *Vermillion*, or with *Bice* to represent Blue Slat, Castles may be done with Tincture of *Myrrh* in some parts, in others, with thin *Red-Lead*, and the Spires and Pinacles with *Blue*.

But when all is said that can be said, the only way to colour Maps well, is by a Pattern done by some good Workman, of which the *Dutch* are esteemed the best ; three or four such Maps coloured by a good Artist, is sufficient to guide a Man in the right doing of his Work : But if he cannot obtain this, he may by a few Tryals grow a good Artist in a short time ; for this is only attained to by Practice, and if a Man does spoil half a score Maps in order to get the knack of colouring well at last, there's no Man that is ingenious will grumble at it, or grudge at the Charge.

The hardest thing in this Art is, to know rightly how to make and prepare the Colours which here is taught faithfully : And if your Paper be good and bear the Colours well, without suffering them to sink into it, all that are here
men-

mentioned will lie fair and pleasant to the Eye, and 'tis the Fairness of the Colours that is most esteemed in this Art of Map-Painting: But if the Paper be not good and strong, no Art can make the Colours lie well; therefore in buying *Maps*, chuse those that are Printed on the strongest or thickest Paper: For they colour best, provided the Paper be well sized, and indeed it will be found, *when we have taken the greatest Care we can*, that Colours will lie fairer, and look more bright and pleasant on some Paper, than on other sorts, tho' they seem to be as strong.

F I N I S.

*Some Books Printed for, and sold by
Sam. Crouch at the Corner of Popes-
Head-Ally in Cornhill.*

F O L I O S.

R *Ushmoreth's Collections.*
*Lord Falkland's Life of Edward
the II^d.*
Cambridge Concordance.
Dryden's Works in Four Volumes.

Q U A R T O E S.

*The Royal Dictionary. French and
English, and English and French. By
Mr. Boyer.*

*The New A-la-Mode Secretary: Or
Practical Pen-Man. A New Copy-Book.
Wherein the Bastard Italians, common-
ly called the New A-la-Mode, Round
Hands, Mixt Running Hands, and Mixt
Secretary's, are so Model'd and Com-
posed, as to dispatch Business with Fa-
cility and Neatness. Written with much
Variety, and performed according to the
Nature, Freedom, and Tendency of the
Pen.*

Youths

Youth's Introduction to Trade: An Exercise-Book, chiefly designed for the Use of the Writing-School, to Employ Youth at *Night*, and other *vacant* Times, while they learn to Write; by which the Young Apprentice may be able to apply his Writing and Arithmetick to Business; as, a Merchant, Shop-keeper, or other inferior Trades: First Methodized for the benefit of the Author's Scholars: And Published for the Use of such as Teach Writing and Arithmetick. The third Edition, Corrected, and very much enlarged. Both by *John Ayres*.

OCTAVO and TWELVES.

The Physical Dictionary: Wherein the Terms of Anatomy, the Names and Causes of Diseases, Chyrurgical Instruments, and their Use are accurately Describ'd. Also the Names and Virtues of Medicinal Plants, Minerals, Stones, Gums, Salts, Earths, &c. And the Method of choosing the best Drugs. The Terms of Chymistry, and the various Forms of Medicines, and the ways of compound-
ing them. By *Stephen Blacard*, M. D. Physick Professor at *Middleburg* in *Zea-land*. The Fourth Edition. With the
Ad.

Books Printed for S. Crouch.

Addition of many Thousand Terms of Art, and their Explanation. Also a Catalogue of Characters used in Physick, both in *Latin* and *English*. Engraved in Copper.

A Rational Practice of Chyrurgery ; or, Chyrurgical Observations resolved according to the Solid Fundamentals of true Philosophy. By *John Muys*, Doctor of Physick in *Arnheim*. In five Decades.

The *Spanish* Rule of Trade to the *West-Indies* : Containing an account of the *Casa de Contratacion*, or *India-House*, its Government, Laws, Ordinances, Officers, and Jurisdiction : Of its Inferiour Courts : Of the receiving and sending out *Armada's* and *lota's* : What these are : Of the Duties paid to the King : Who may go over to the *Indies*, and who not : Of the Corporation of Sailers : Of Building of Ships : Of the Ports in the *Indies* : and many more Curious Observations of this Nature. Written in *Spanish* by *D. Joseph de Veitia Linage*, Knight, Treasurer and Commissioner of the *India-House*. Made *English*. To which are added, Two Compleat Lists : One of the Goods Transported out of *Europe* to the *Spanish West-Indies* ;

dies; the other of Commodities brought from those Parts into *Europe*.

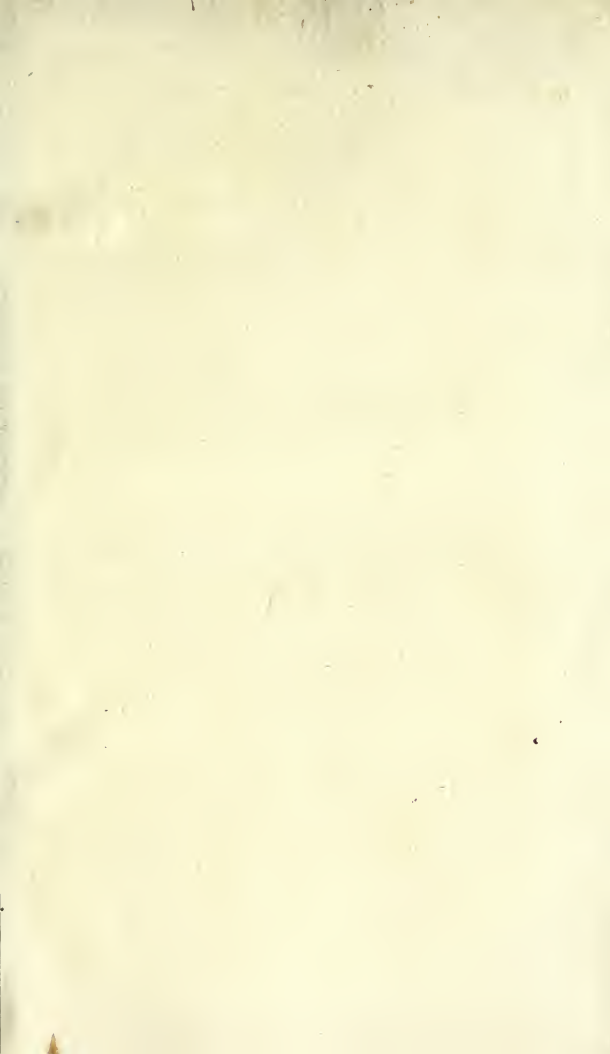
Grammatica Anglio-Lusitanica: Or a short and Compendious System of an *English* and *Portugueze* Grammar. Containing all the most Useful and Necessary Rules of the *Syntax*, and Construction of the *Portugueze* Tongue. Together with some useful Dialogues and Colloquies, agreeable to common Conversation. With a Vocabulary of Useful Words in *English* and *Portugueze*. Designed for, and fitted to all Capacities, and more especially such whose Chance or Business may lead them into any part of the World, where that Language is used or esteemed. By A. J.

Boyer's Dictionary, *French* and *English*, and *English* and *French*, Abridg'd.

Advice to the Readers of the Common Prayer-Book, and the People attending the same. With a Preface of Divine Worship in General. By T. Seymour, Layman. The Third Edition, Corrected.

Dyres's Arithmetick made easy for the use of Tradesmen, with the Art of measuring. The seventh Edition.

The *English* Tutor, or a plain way to the *English* Tongue. The fifth Edition.







SPECIAL

85-B

5722-2

THE GETTY CENTER

LIBRARY

