DE *deserendâ pro Rata Portionis*, is a Writ that lieth where one is distrained for a Rent that ought to be paid by others *proportionably* with him.

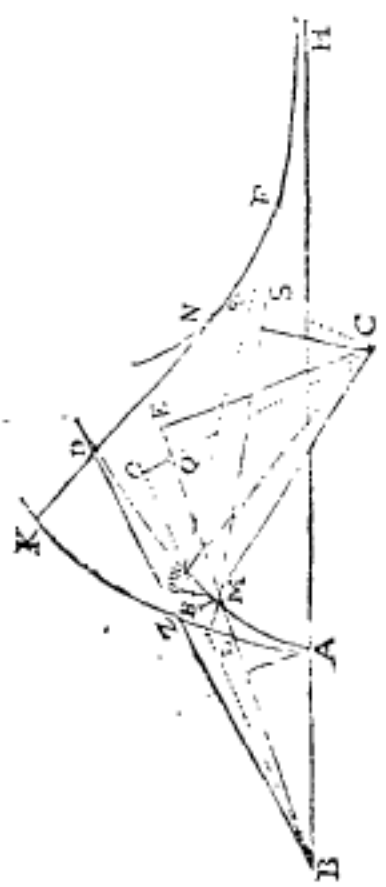
DEPARTURE, in Navigation, is the Easting or Westing of a Ship with respect to the Meridian it *departed* or sail'd from. Or 'tis the difference of Longitude (either East or West) between the present Meridian the Ship is under, and that where the last Reckoning or Observation was made: This *Departure*, any where but under the Equator, must be accounted according to the Number of Miles in a Degree proper to the Parallel the Ship is under. *See Mercator's Sailing.*

DEPOSITUM, in the Civil Law, is a Contract of the Law of Nations, by which a Thing is committed to the Custody of one to be kept, without any Reward, on Condition to be returned truly again on Demand.

DERELICKS, in the Civil Law, are such as are *wilfully* thrown away and abandoned by the Owners.

DESIGN, in Painting or Sculpture, is the Expression of the Images or Ideas that the Painter hath conceiv'd in his Mind on the Picture. *Ex* and it is Good, when the Author has a good Gusto and correct Judgment: This is the Basis and Foundation of all other Parts, and may be compared to the *Stile* of a correct Writer. But the Painters call *Designs* chiefly such Draughts as they usually express on Paper, in order to the Performance of some considerable Piece of Work: A fainter imperfect Design is usually call'd a *Sketch*.

DIACAUSTICK Curve, or the *Caustick by Refraction*. If you imagine an infinite Number of Rayes, *B A*, *B M*, *B D*, &c. issuing from the



same Luminary Point *B*, to be refracted from or to the Perpendicular *M C*, at the Curve *A M D*; and to that *C E*, the Sines of the Angles of Incidence *C M E*, be always to *C G*, the Sines of the refracted Angles *C M G*, in a given *Ratio*; then the Curve Line *H F N*, which touches all the refracted Rays, is called the *Diacaustick*, or Caustick by Refraction. How to find these *Caustick by Refraction* to all Sorts of Curves, see *Hayes's Fluxions*, *p.* 243, &c. where also the Doctrine of the *Foci* of Spherical Glasses of all Sorts, exposed either to diverging, converging, or Parallel Rayes, is deduced from the Principles of the Caustick Curves. *Vid. p.* 249. Of the Relation of this Diacaustick Curve to the *Evolute*, see a Discourse of Mr. *James Bernoulli* in the *Leipsick* Acts of *May*, 1693.

DIACENTROS, is a Word used by *Kepler*, to signify the shortest Diameter of the Elliptical Orbit of any Planet.

DIAGLYPHICE, is the Art of Cutting, or otherwise making hollow or concave Figures in Metals; such as Seals and *Intaglias's*.

DIALLING. Some Authors on this Subject are,

F. Bapt. Benedicti, de Re Gnomonica.
Kercheri, Ars magna Lucis & Umbræ. Rom. 1646.
Marignani Perspectiva Horaria.
Leybourn's Dialling.
Colling's Geometrical Dialling.
Clr. Clavii Gnomonices, Libri 8. Fol.
Vossius de Sciotericis Horologiis.
Castilii Horologiographia Plana.
Holwell's Dialling. 4to.
Fr. Commandini de Horologio Descriptione. 4to.
Sargue's Universal Way of Dialling.
Fyfer's Elliptical Horologiography.
Fale's Art of Dialling.
Wells's Art of Shadows. 8vo.

DIALLING in a *Mine*, which they call also *plumming*, is using a *Compass* (which they call a *Dial*) and a long Line, to know which Way the *Lead* or Vein of Oar inclines, or where to sink an *Airshafe*, or to bring an Adit to a desired Place. See the Manner of it under the Word Tin.

DIALLING *Lines or Scales*, are such graduated Lines as being placed on Rulers or the Edges of Quadrants, and other such like Instruments, are designed to expedite the Constitution of all Kind of Dials.

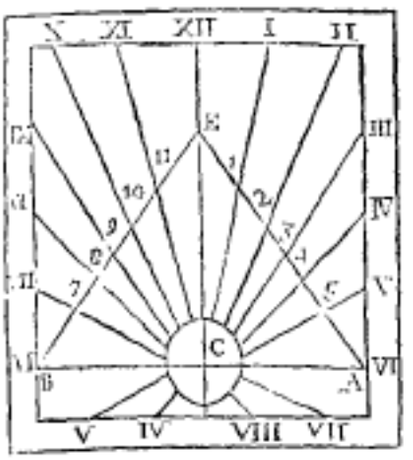
These Lines are,

1. *A Scale of six Hours*; which is only a double Tangent, or 2 Lines of Tangents, each of 45 Deg. set together in the Middle, and equal to the whole Line of Sines, with the Declinations set against the Meridian Altitudes, in the Latitude of *London*, suppose, or whatever Place else it is made for. The Radius of which Line of Sines, is equal to the Dialling Scale of six Hours.

2. *A Line of Latitudes*; which is fitted to the *Hour Scale*, and is made by this Canon: *As Rad.: to the Chord of* 90 *Deg.* :: *So are the Tangents of each respective Degree of the Line of Latitudes: to the Tangents of other Arks.* And then the natural Sines of those Arks are the Numbers, which taken from a Diagonal Scale of equal Parts, shall graduate the Divisions of the Line of Latitudes to any Radius.

The Line of Hours and Latitudes is general for pricking down all Dials with Centres: As suppose. 1. an Horizontal Dial for the Latitude of *London*, 51 *Deg.* 30 *Min.* Draw *C E* for the Hour Line of 12, and cross it at Right Angles with *A B*. Then out of the Scales of Latitudes set off *C B* and *C A* each equal to 51 *Deg.* 30 *Min.* or the Stile's Height. Then take the whole Scale of six Hours, and set it from *A* to *E*, and from *B* to *E*, dividing those two Lines *A E* and *B E* with the Compass

Compasses accordingly; as you see in the Figure:



Then Lines drawn from *C*, the Center of the Dial, through those Points 1, 2, 3, 4, 5, and 11, 10, 9, 8, 7, &c. shall be the true Hour Lines. And this is a very ready and easy way to describe the Hour Lines on any Plane.

See *Collin's Sector on a Quadrant.*

The other Scales are particular, and give the several Requisites for all upright declining Dials by Inspection.

They are these:

3. A Line of Chords.
4. A Line for the Substile's Distance from the Meridian.
5. A Line for the Stile's Height.
6. A Line of the Angle of 12 and 6.
7. A Line of Inclination of Meridians.

When these are placed all together on a Ruler in order as they should be;

Count the Plane's Declination in the Line of Chords, and then a Square laid over it will intersect all the other Lines in their proper Points: Or you may open the Compasses to the Planes Declination in the Chords, and then that Distance will find all the rest in the other Scales. Thus, Suppose a Plane decline 35 *Deg.* from the Meridian, then all the Requisites by these Scales will be found thus:

	Deg.	*Min.*
The Substile's Distance from the Meridian	24	30
The Stile's Height	30	38
The Inclination of Meridians	41	49
The Angle of 12 and 6	84	10

All which previous Requisites being found, the Dial may be drawn easily and readily by applying in the Hour Scale by the Help of the Line of Latitudes and the *Substilar Line*, as *Collins* shews how to do in his Sector on a Quadrant, p. 269. or by any other Method of describing Hour Lines on a given Plane.

DIAMETER *of Gravity*, in any Surface, Body, or Solid, is that Right Line in which the Center of Gravity is placed.

DIHELIOS, in the Elliptical Astronomy, is the Ordinate of the Ellipsis which passes through the Focus in which the Sun is supposed to be placed. *Kepler.*

DILAPIDATION, is a wasteful destroying, or letting of Buildings run to Ruin and Decay for want of Reparation, 13 *Eliz. c.* 13. And the Money recover'd for Dilapidations, by 14 *Eliz.* 11. shall be employ'd in the Repair of the same Houses.

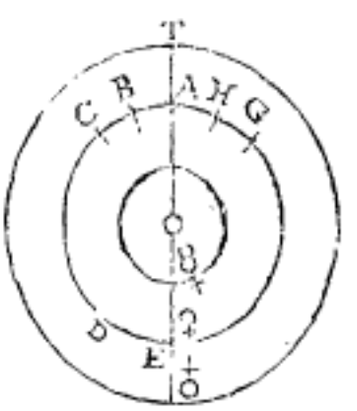
DILVING, is a Word used in the dressing of *Tin Oar*; and means, taking the Forehead of what is in the 2d Buddle after the 2d *Trambling*, and putting it into a Canvals Sieve, to shake it lustily about in a large Tub of Water, so that the Filth goes over the Rim of the Sieve, leaving the *Black Tin* behind. See *Tin*, *Buddle*, and *Trambling*.

DIAZEUTICK *Tone*, in the Antient Greek Musick, was that which disjoin'd two *Fourths*, one on each Side of it, and which being join'd to either, made a *Fifth*. This was in their Musick that from *Mese* to *Paramese*; that is, in our Musick, from *A* to *B*, supposing *Mi* to stand in *B sharp*, which is accounted its natural Position. They allowed to this *Diazeutick Tone*, which is our *La*, *Mi*, the Proportion of 9, to 8, as being the unalterable Difference of *Diapente* and *Diatessaron*, or of the *Fifth* and *Fourth*.

DICASTRICK *Muscles*, sometimes called *Biventres*, are such as have a double Belly.

DIMISSORY *Letters*. When a Candidate for Holy Orders hath a Title in one Diocese, and is to be ordain'd in another, the proper *Diocesan* gives his *Letters Dimissory* directed to some other Bishop, giving Leave that the Bearer may be ordain'd to such a Cure within his District.

DIRECT Motion of a Planet. To any Eye placed at the Earth's Surface, *Venus* and *Mercury*, which move round the Sun in lesser Orbits than it doth, will sometimes appear direct, and sometimes *Stationary* and *Retrograde*.



For let the Earth be at *T*, moving round the Sun in the Orbit *T* ♁ from West to East. Let *A C D F* be the Orbit of ♀ revolving the same Way, but performing its Revolution in a shorter Time. It will then be plain, that when *Venus* is in that Part of her Orbit expressed in the Figure by *D E F*, and which is most remote from the Earth, supposed to be in *T*, I say, *Venus* will then appear to move forward directly, according to the Order of Signs, or *in Consequentia*, as the Astronomers speak, and so is said to be *Direct*. And when she comes to such a Position, in respect of the Sun and Earth, as to be in *G*; then while she moves from *G* to *H*, she will seem to move with equal Celerity with the Sun, for then she tends directly towards the Earth: Nor can she appear to have any other Motion, than as if her Orbit were carry'd by the Sun moving towards the East. Therefore now she will appear to move slower than before, but still she will