

CYCLOPÆDIA:
OR, AN
UNIVERSAL DICTIONARY
OF
ARTS and SCIENCES;

CONTAINING

The DEFINITIONS of the TERMS,

And ACCOUNTS of

The THINGS signify'd thereby,

In the several ARTS,

Both LIBERAL and MECHANICAL,

And the several SCIENCES,

HUMAN and DIVINE:

The Figures, Kinds, Properties, Productions, Preparations, and Uses,
of Things NATURAL and ARTIFICIAL;

The Rise, Progress, and State of Things ECCLESIASTICAL,
CIVIL, MILITARY, and COMMERCIAL:

With the several Systems, Sects, Opinions, &c. among Philosophers, Divines,
Mathematicians, Physicians, Antiquaries, Criticks, &c.

The Whole intended as a Course of Antient and Modern LEARNING.

Compiled from the best Authors, Dictionaries, Journals, Memoirs,
Transactions, Ephemerides, &c. in several Languages.

In TWO VOLUMES.

By E. CHAMBERS Gent.

*Floriferis ut apes in saltibus omnia libant,
Omnia nos*———LUCRET.

VOLUME the FIRST.

L O N D O N :

Printed for James and John Knapton, John Darby, Daniel Midwinter, Arthur Bettefworth,
John Senex, Robert Gosling, John Pemberton, William and John Innyes, John Osborn and Tho.
Longman, Charles Rivington, John Hooke, Ranew Robinson, Francis Clay, Aaron Ward,
Edward Symon, Daniel Browne, Andrew Johnston, and Thomas Osborn. M.DCC.XXVIII.

Schemes and other Figures ; to save the Expences of engraving on Copper : and for Prints, and Stamps, for Paper, Callicoes, Linens, &c. See PRINTING.

The Invention of *Cutting in Wood*, as well as that in Copper, is ascribed to a Goldsmith of *Florence* ; but 'tis to *Albert Durer*, and *Lucas*, they are both owing for their Perfection.

One *Hugo de Carpi* invented a manner of *Cutting in Wood*, by means whereof, the Prints appear'd as if painted in Clair-Obfcure : In order to this, he made three Kinds of Stamps for the same Design ; which were drawn, after one another, thro' the Prefs for the same Print : They were so conducted, as that one serv'd for the grand Lights, a second for the Demi-Teints, and a third for the Outlines, and the deep Shadows.

The Art of *Cutting in Wood*, was certainly carried to a very great Pitch about 150 Years ago ; and might even vie, for Beauty and Justness, with that of engraving in Copper : At present 'tis in a low Condition, as having been long neglected, and the Application of Artists wholly employ'd on Copper, as the more easy and promising Province : Not but that wooden *Cuts* have the Advantage of those in Copper on many Accounts ; chiefly for Figures and Devices in Books ; as being printed at the same Time, and in the same Prefs as the Letters ; whereas, for the other, there is requir'd a particular Impression.

The *Cutters in Wood* begin with preparing a Plank or Block, of the size and thickness requir'd, and ever even and smooth on the Side to be cut : for this, they usually take Pear-Tree, or Box ; tho the latter is the best, as being the closest, and least liable to be worm-eaten.

On this Block they make their Design with a Pen, or Pencil, just as they would have it printed. Those who can't make their own Design, as many there are cannot, make use of a Design furnish'd 'em by another ; fastening it upon the Block with Paste of Flower and Water, with a little Vinegar ; the Strokes or Lines turn'd towards the Wood.

When the Paper is dry, they wash it gently over with a Sponge dip'd in Water ; which done, they take off the Paper by little and little, still rubbing it a little first, with the Tip of the Finger ; till at length there be nothing left on the Block, but the Strokes of Ink that form the Design, which mark out so much of the Block as is to be spared, or left standing.

The rest they cut off, and take away very curiously with the Points of fine sharp Knives, or little Chissels, or Gravers, according to the Bigness or Delicacy of the Work ; for they need no other Instruments.

CUTTINGS, or *Slips*, in Gardening, the Branches or Sprigs of Trees, or Plants, cut or flipp'd off to set again ; which is done in any moist, fine Earth. See PLANTING.

The best Season is from *August* to *April* ; but Care is to be taken, when 'tis done, the Sap be not too much in the Top, lest it die ere that Part in the Earth have Root enough to support it : nor yet must it be too dry, or scanty ; the Sap in the Branches assisting it to take Root.

In providing the *Cuttings*, such Branches as have Joints, Knots, or Burrs, are to be cut off two or three Branches beneath them, and the Leaves to be strip'd off so far as they are set in the Earth. Small Top-Branche, of two or three Years growth, are fittest for the Operation. See MANURING, GARDENING.

CYCLE, in Chronology, *Circle* ; a certain Period, or Series of Numbers, proceeding orderly from first to last, and recurring again from last to first ; successively, and without interruption. See PERIOD.

The Origin of *Cycles* was thus : The apparent Revolution of the Sun round the Earth, has been divided, arbitrarily, into 24 Hours ; the Basis or Foundation of all our Mensuration of Time. Civil Use knows none but Hours ; or rather, Multiples of Hours, as Days, and Years. But neither the annual Motion of the Sun, nor that of the other Heavenly Bodies, can be measur'd exactly, and without any Remainder, by Hours, or their multiples. That of the Sun, v. g. is 365 Days, 5 Hours, 49 Minutes, nearly ; that of the Moon 29 Days, 12 Hours, 44 Minutes.

Hence, to swallow up these Fractions in whole Numbers, and yet in Numbers which only express Days, and Years ; *Cycles* have been invented : which comprehending several Revolutions of the same Body, replace it, after a certain Number of Years, in the same Points of the Heaven, whence it first departed ; or, which is the same thing, in the same Place of the Civil Calendar. See CALENDAR.

Such is the famous *Cycle of 19 Years*, call'd also the *Cycle of the Moon*, or *Lunar Cycle*, a Period of 19 Lunar Years, and seven Intercalary Months ; equivalent to 19 Solar Years : in which Time, the New and Full Moons are supposed to return to the same Day of the *Julian Year*. See MOON.

This is also called the *Metonic Period*, from its Inventor *Meton*, the *Athenian* ; and the *Golden Number* : tho, properly, the *Golden Number* is the particular Number which

shews the Year of the *Lunar Cycle*, any given Year is in. This *Cycle* of the Moon only holds true for 312 Years : For, tho the New Moons do return to the same Day after 19 Years ; yet not to the same time of the Day, but near an Hour and a half sooner : which Error, in 312 Years, amounts to an entire Day.

Yet, those employ'd in reforming the Calendar, went on a Supposition of the Lunations returning precisely from 19 Years to 19 Years, for ever. See GREGORIAN.

The Use of this *Cycle* in the antient Calendar, is to shew the New Moon of each Year, and the Time of Easter. See EASTER.

In the new one, it only serves to find the Epacts ; which shew, in either Calendar, that the New Moons fall 11 Days too late. See EPACT.

As the Orientals began the Use of this *Cycle* at the Time of the Council of *Nice* ; they assumed, for the first Year of the *Cycle*, the Paschal New Moon to fall on the 13th of *March* : On which foot, the *Lunar Cycle* 3, fell on the 1st of *January*, in the third Year.

The Occidentals, on the contrary, put the Number 1 to the 1st of *January*, which occasion'd a considerable Difference in the Time of *Easter* : Hence, *Dionysius Exiguus*, upon framing a new Calendar, persuaded the Christians of the *West* to salve the Difference, and come into the Practice of the Church of *Alexandria*.

To find the Year of the *Lunar Cycle*, is to find the *Golden Number*. See GOLDEN NUMBER.

Cycle of Indictions, is a Series of 15 Years, returning constantly around, like the other *Cycles* ; and commencing from the third Year before Christ. See INDICATION.

When this *Cycle* of Indictions was first set on foot among the *Romans*, and for what End ; is much controverted among Chronologers. *Petavius* leaves it as a thing not to be ascertain'd. The most probable Opinion is, that it was receiv'd about the Year 312, after the Time of *Constantine*.

To find the *Cycle of Indiction* for any given Year ; add 3 to the given Year, and divide the Sum by 15, the Remainder is the *Cycle of Indiction*.

If there be no Remainder the *Cycle* is 15.

Cycle of the Sun, or *Solar Cycle*, a Revolution of 28 Years ; beginning with 1, and ending with 28 ; which elapsed, the Dominical or Sunday-Letters, and those that express the other Feasts, &c. return into their former Place, and proceed in the same Order as before. See DOMINICAL, &c.

'Tis called *Solar Cycle*, not with regard to the Sun's Course, which has nothing to do herein ; but from Sunday, antiently call'd *Dies Solis*, the *Day of the Sun* : in regard, 'tis the Dominical Letter is principally sought for from this Revolution ; the Dominical Letters, which are the first in the Alphabet, having been substituted in lieu of the Nundinal Letters of the *Romans*.

The Reformation of the Calendar under Pope *Gregory*, occasion'd a considerable Alteration of the *Cycle* : In the *Gregorian Calendar*, the *Solar Cycle* is not constant and perpetual ; in regard, every fourth Secular Year is Common ; whereas, in the *Julian* 'tis Bissextile. The *Epocha*, or Beginning of the *Solar Cycle*, both *Julian* and *Gregorian*, is the 9th Year before Christ.

To find the *Cycle of the Sun* for any given Year ; add 9 to the Number given, and divide the Sum by 28 ; the Number remaining will be the Number of the *Cycle*, and the Quotient the Number of Revolutions since Christ.

If there be no Remainder, it will be the 28th, or last Year of the *Cycle*.

CYCLE of the Sun in the Julian Year.																				
1	G	F	5	B	A	9	D	C	13	F	E	17	A	G	21	C	B	25	E	D
2	E	6	G	10	B	14	D	18	F	22	A	26	C							
3	D	7	F	11	A	15	C	19	E	23	G	27	B							
4	C	8	E	12	G	16	B	20	D	24	F	28	A							
CYCLE of the Sun from the Gregorian Year 1700, to the Year 1800.																				
1	D	C	5	F	E	9	A	G	12	C	B	17	E	D	21	G	F	25	B	A
2	B	6	D	10	F	14	A	18	C	22	E	26	G							
3	A	7	C	11	E	15	G	19	B	23	D	27	F							
4	G	8	B	12	D	16	F	20	A	24	C	28	E							

Cycle, it may be observ'd, is not only us'd in the general, for all the Numbers that compose the Series ; but for each Number in particular : Thus, we compute, that the ordinary *Epocha* from the Birth of Jesus Christ, had the *Solar Cycle* 10 ; the *Lunar Cycle*, or the *Golden Number* 2 ; the Dominical Letter B, and the *Cycle of Indiction* 4.

CYCLISCUS, from *κύκλος*, *Circulus* ; an Instrument in form of an Half-Moon ; used by the Surgeons to scrape away Rottenness.