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W I T H

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A S O F

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Together with

The KINGDOMS, PROVINCES, CITIES, TOWNS, and
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By a S O C I E T Y of G E N T L E M E N .

The S E C O N D E D I T I O N ,

With many A D D I T I O N S , and other I M P R O V E M E N T S .

————— *Huc undique Gaza*
Congeritur ————— VIRG.

V O L . I .

L O N D O N :

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M D C C L X I I I .

To surround, cover, and defend the parts that lie underneath it. 2. To be the organ of feeling. 3. To be an universal emunatory to the body, cleansing the blood of its redundancies, by the means of sweat and perspiration: while these, at the same time, serve to prevent the aridity or dryness of the cutis itself.

CUTTER of the tallies, an officer of the exchequer, whose business is to provide wood for the tallies, to cut or notch the sum paid upon them; and then to cast them into court, to be written upon. See the article **TALLY**.

CUTTING, in coinage, the taking the planchets out of the laminæ, when they are reduced to the thickness of the species to be coined. See **COINING**.

CUTTING, in heraldry, is used for the dividing a shield into two equal parts, from right to left, parallel to the horizon, or in the fesse way. It is also applied to the honourable ordinaries, and even to animals, when they are divided so as that one part is metal, the other colour: an ordinary is said to be cut, when it does not come to the full extremity of the shield.

CUTTING, or **INTERFERING**, in the manege, is when the feet of a horse interfere, or when, with the shoe of one hoof he beats off the skin from the pastern-joint of another foot. This is occasioned by bad shoeing, weariness, weakness, or not knowing how to go, whereby the feet entangle.

CUTTING, in painting, the laying one strong lively colour over another, without any shade or softening. The cutting of colours hath always a disagreeable effect.

CUTTING, in surgery, the operation of extracting the stone out of the human body by section. See the articles **STONE** and **LITHOTOMY**.

CUTTING in wood, a particular kind of sculpture, or engraving, denominated from the matter whereon it is employed. See the article **WOOD**.

CUTTINGS, or **SLIPS**, in gardening, the branches or sprigs of trees, or plants, cut or stripped off, to set again, which is done in any moist fine earth. The best time for this operation is from the middle of August to the middle of April; but when it is done, the sap ought not to be too much in the top, lest it die or decay before that part in the earth has root enough to support the top; neither must it be very dry or scanty, for the sap in the branches assists it to strike roots: if done in the spring, let them not fail of

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water in the summer. In providing them, such branches as have burs, knobs, or joints, are to be cut off, two or three inches beneath the burs, &c. and the leaves are to be stripped off so far as they are placed in the earth, leaving no side-branch: small top sprigs, of two or three years growth, are the best for this operation.

CUTTLE-FISH, the english name of the sepia of ichthyologists, called by some the ink fish. See the article **SERIA**.

CUVETTE, or **CUNETTE**. See the article **CUNETTE**.

CUYO, a division of Chili, in South America.

CYANELLA, in botany, a genus of the hexandria monogynia class of plants, without any calyx; the corolla consists of six oblong, concave patent petals, cohering at the unguis; the fruit is a roundish trifurcated capsule, consisting of three valves, and containing three cells: the seeds are numerous and oblong.

CYANUS, the **BLUE-BOTTLE**, in botany, makes a distinct genus of plant, according to Tournefort, but is comprehended by Linnæus among the centaurea. See the article **CENTAUREA**.

This plant is an alexipharmic and uterine. It is said to be of use also in the king's evil, in palpitations of the heart; and a water distilled from it is of service in inflammations of the eyes, &c.

CYATHUS, in roman antiquity, a liquid measure, containing four ligulas, or $\frac{1}{2}$ a pint english wine-measure, being 0.469 $\frac{7}{8}$ solid inches. See **MEASURE**.

CYCAS, in botany, the name of a plant the characters of which are intirely unknown.

CYCLAMEN, **SOW BREAD**, in botany, a genus of the pentandria-monogynia class of plants, the corolla of which consists of a single petal; the tube is subglobose, double the size of the cup; yet small and nutant; the limb is large, and turns upwards, and is divided into five ovato-lanceolate segments; the fruit is a roundish berry, opening in five or six places at the top, and containing only one cell; the seeds are numerous, roundish, and angular. See plate **LXV**. fig. 2.

The root is a powerful aperient and abstergent, is of use in obstructions of the menses, and in expelling a dead fœtus: but it is to be used with great caution.

CYCLE, $\kappa\omega\lambda\lambda\omicron\varsigma$, in chronology, a certain period or series of years, which regularly proceed from the first to the last, and then return again to the first, and circulate perpetually. See the article **PERIOD**.

The most considerable cycles are those of the sun, of the moon, and of the roman indiction.

The *CYCLE of the sun* consists of twenty-eight years, which contain all the possible combinations of the dominical letters, in respect to their successive order, as pointing out the common years and leap-years; so that, after the expiration of the cycle, the days of the month return in the same order to the same days of the week, throughout the next cycle; except that upon every centesimal year, which is not a leap year, the letters must always be removed one place forward, to make them answer to the years of the cycle; for instance, if the year 1800 were a leap-year, as every centesimal year is in the julian account, the dominical letters would be E D, and C would be the dominical letter of the next year: but as it is a common year in the gregorian ac-

count, D is the dominical letter of 1801, which answers to the eighteenth of the cycle, C to the nineteenth, &c. until the next centesimal year. See *DOMINICAL LETTER*.

To find the year of this cycle for any year of the christian æra, add 9 to the current year of Christ, because the cycle commenced nine years before the christian æra, and divide the sum by 28, the quotient will shew the number of cycles which have revolved since the beginning of that in which the christian æra commenced: and the remainder, if any, shews the current year of the cycle: but if there be no remainder, it shews that it is the last, or twenty eighth year of the cycle.

The dominical letter of each year in this cycle, until the year 1800, appears by the following table.

1	D	C	5	F	E	9	A	G	13	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 of the moon, or Lunar CYCLE, called also the *golden number*, is a period of nineteen years, after which the new and full moons return on the same days of the months, only one hour twenty-eight minutes sooner: so that, on whatever days the new and full moon fall this year, they will happen nineteen years hence, on the same days of the months, except when a centesimal common year falls within the cycle, which will move the new and full moons a day later in the calendar than otherwise they would have fallen, inasmuch that a new moon which fell before the centesimal year, suppose on March 10, will fall nineteen years afterwards, on March 11. The number of years elapsed in this cycle is called the *prime*, from its use in pointing out the day of the new moon, *primam lunam*, and the golden number, as deterring to be writ in letters of gold. See the article *PRIME*.

The golden numbers are those placed in the first column of the calendar, betwixt March 21, and April 12, both inclusive, to denote the days upon which those full moons fall, which happen upon, or next after, March 21, in those years of which they are respectively the golden numbers. See the article *CALENDAR*.

For finding the golden number, add one to the current year of our Lord, because one year of this cycle was elapsed before the christian æra began, and divide by

19, the remainder is the current year of this cycle, or golden number; but if nothing remains, it shews that it is the last year of the cycle, and consequently the golden number is 19.

CYCLE of the roman indiction, is a period of fifteen years, in use among the Romans, commencing from the third year before Christ. This cycle has no connection with the celestial motions; but was instituted, according to Baronius, by Constantine; who having reduced the time which the Romans were obliged to serve to fifteen years, he was consequently obliged, every fifteen years, to impose, or *indicere*, according to the latin expression, an extraordinary tax for the payment of those who were discharged; and hence arose this cycle.

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 current year of the cycle of indiction; if there be no remainder, it is the fifteenth or last year of the indiction.

These three cycles multiplied into one another, that is $28 \times 19 \times 15$, amount to 7980, which is called the *julian period*, after which the three foregoing cycles will begin again together. This period had its imaginary beginning 770 years before the creation, according to the common opinion among chronologers concerning the age of the world, and is not yet complete. It is much used in chronological

logical tables. See the articles EPOCHA and PERIOD.

CYCLIDIA, in zoology, a genus of animalcules of a roundish figure, without any limbs. See ANIMALCULE.

CYCLISCUS, in surgery, an instrument of the form of a half moon, used in scraping the skull, in case of fractures of that part. See FRACTURE.

CYCLOID, in geometry, a curve of the transcendental kind, called also the trochoid. It is generated in the following manner: if the circle CDH (plate LXV. fig. 1.) roll on the given straight line AB , so that all the parts of the circumference be applied to it one after another, the point C that touched the line AB in A , by a motion thus compounded of a circular and rectilinear motion, will describe the curve $ACEB$, called the cycloid, the properties of which are these: 1. If on the axis EF be described the generating circle EGF meeting the ordinate CK in G , the ordinate will be equal to the sum of the arc EG and its right line GK ; that is, CK will be equal to $EG + GK$. 2. The line CH parallel to the chord EG is a tangent to the cycloid in C . 3. The arch of the cycloid EL is double of the chord EM , of the corresponding arc of the generating circle EMF : hence the semicycloid ELB is equal to twice the diameter of the generating circle EF ; and the whole cycloid $ACEB$ is quadruple of the diameter EF . 4. If ER be parallel to the base AB , and CR parallel to the axis of the cycloid EF ; the space ECR , bounded by the arc of the cycloid EC , and the lines ER and RC , shall be equal to the circle area EGK : hence it follows, if AT , perpendicular to the base AB , meet ER in T , the space $ETACE$ will be equal to the semicircle EGF : and since AF is equal to the semicircumference EGF , the rectangle $EFA T$, being the rectangle of the diameter and semicircumference, will be equal to four times the semicircle EGF ; and therefore the area $ECATF$ will be equal to three times the area of the generating semicircle EGF . Again, if you draw the line EA , the area intercepted betwixt the cycloid ECA , and the straight line EA will be equal to the semicircle EGF ; for the area $ECATF$ is equal to three times EGF , and the triangle $EAF = AF \times \frac{1}{2} EF$, the rectangle of the semicircle and radius, and consequently equal to $2EGF$; therefore their difference the area $ECAE$ is equal

to EGF . 5. Take $Eb = OK$, draw bZ parallel to the base, meeting the generating circle in X , and the cycloid in Z , and join CZ , $F X$; then shall the area $CZEC$ be equal to the sum of the triangles GFK and bFX . Hence an infinite number of segments of the cycloid may be assigned, that are perfectly quadrable.

For example, if the ordinate CK be supposed to cut the axis in the middle of the radius OE , then K and b coincide; and the area ECK becomes in that case equal to the triangle GKF , and $E b Z$ becomes equal to $F b X$, and these triangles themselves become equal.

This is the curve on which the doctrine of pendulums and time-measuring instruments in a great measure depend: Mr. Huygens having demonstrated that from whatever point or height a heavy body oscillating on a fixed center begins to descend, while it continues to move in a cycloid, the time of its falls or oscillations will be equal to each other. It is likewise demonstrable, that it is the curve of quickest descent, *i. e.* a body falling in it, from any given point above, to another not exactly under it, will come to this point in a less time than in any other curve passing through those two points. See the articles PENDULUM and OSCILLATION.

CYCLOIDAL, something belonging to a cycloid. See the preceding article. Hence the cycloidal space is the area bounded by the cycloid and its subtense.

CYCLOMETRY, a term sometimes used for the mensuration of circles. See the article CIRCLE.

CYCLOPÆDIA, or **ENCYCLOPÆDIA**, denotes the circle or compass of arts and sciences. A cyclopædia, say the authors of the french Encyclopedie, ought to explain, as much as possible, the order and connection of human knowledge.

Cyclopædias are generally in the form of dictionaries, where every branch of knowledge is resolved into its constituent parts, the description whereof is to be found under their respective articles. See the article DICTIONARY, and the Introduction to this work.

CYCLOPTERUS, the LUMP-FISH, in ichthyology, a genus of fishes of the order of the branchiostegi: it is also called the sea-owl, and by the Scots the cock-paddle.

It is distinguished from other fishes of this order, by its belly-fins growing together in the form of a funnel. It is a