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THE
BOOK OF KNOWLEDGE;

OR,
AN EXPLANATION OF WORDS AND THINGS
CONNECTED
WITH ALL THE ARTS AND SCIENCES.

ILLUSTRATED WITH NUMEROUS ENGRAVINGS.

By **GEORGE CRABB, A. M.**

AUTHOR OF "ENGLISH SYNONYMS," "TECHNOLOGICAL DICTIONARY," AND
"HISTORICAL DICTIONARY."

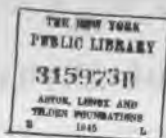


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NEW EDITION, WITH THE LATEST IMPROVEMENTS.

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DISTRICT OF MASSACHUSETTS, to wit: District Clerk's Office.

BE IT REMEMBERED, that on the twenty-fourth day of July, A. D. 1886, in the fifty-fifth year of the Independence of the United States of America, SAMUEL G. GOODRICH of the said District, has assumed to take Office the Title of a Book, the right whereof he claims as Proprietor in the words following, to-wit:

"A DICTIONARY OF GENERAL KNOWLEDGE; or an Exposition of words and things, Computed with all the approved References, Illustrated with numerous woodcuts, by GEORGE CHAPIN, A. M., Author of English Synonyms, Technological Dictionary, and Historical Dictionary. American Edition with several improvements."

It is hereby given notice of the Statute of the United States, entitled, "An Act for the encouragement of Learning, by securing the copies of Maps, Charts, and Books, to the Authors and Proprietors of such Copies during the times therein mentioned;" and also the said Statute, "An Act supplementary to an act, entitled 'An Act for the encouragement of Learning, by securing the copies of Maps, Charts, and Books, to the Authors and Proprietors of such Copies during the times therein mentioned,' and extending the benefit thereof to the copy of designs, engraving, and etching statistical and other plates."

JNO. W. DAVIS,
Clerk of the District of Massachusetts.

STEREOTYPED BY LYMAN THURSTON & Co.
BOSTON:

PREFACE

TO THE LONDON EDITION.

THIS volume contains definitions of all terms of art and science, with such additional explanations in some cases as serve to illustrate something more than the bare meaning of the word. It is drawn up with special regard to brevity, in order to comprehend within a convenient space all words on which the reader may wish for immediate information. To the juvenile and less informed class of readers, a work of this kind cannot fail to be acceptable, particularly as it has been so liberally supplied with illustrations by means of engravings. Although so small in bulk, yet this book will be found to contain a vast number of words which are not to be met with in any other works whatever, the explanation of which is nevertheless highly necessary for those who are not in the constant habit of hearing them used in ordinary discourse. Of this description are the Latin phrases now adopted into our language, as *Suæ qua non*, *Ne plus ultra*, and the like. The historical essays on

THE
BOOK OF KNOWLEDGE.

A B A

A, the first letter of the alphabet in most languages. It stands for the indefinite article, as, a man; for the sixth note in the gamut; for the first of the dominical letters in the calendar, &c. among the Romans, or with a stroke over it, \bar{a} , 5000; for an abbreviation, as A. M. Anno Mundi, A. B. Baccalarius Artium, Bachelor of Arts, A. C. Ante Christum, A. D. Anno Domini; in antiquity, A. Augustus, A. A. Augusti, A. A. A. Aurum, Argentum, &c.; among chymists, Amalgam.

AAM. A liquid measure, used by the Dutch, containing 260 pints English measure.

ABACUS. An instrument for calculation, consisting of a board of an oblong figure, divided by several lines or wires, and mounted with an equal number of balls arranged so as to express units, tens, hundreds, thousands, &c. The ball on the lowest line expresses 1; each of those on the second line, 10, &c.; those in the middle square, half as much as those on the lines above them.



ABAFF. The hinder part of a ship.
ABAIL. A silver coin in Persia, value about thirty-six sols, French money.

A B E

ABATIS, or **ABBATIS**. Trees felled, and laid so as to impede the progress of an enemy.

ABESS. The government of an abbey (or convent of nuns).

ABBEY. A house for religious persons, of which, in England, 499 were dissolved at the Reformation, having an annual revenue of 985,000*l*.

ABBOT. The governor of a religious house.

ABBREVIATION. The contracting of a word or sentence, by omitting some of the letters.

ABDOMEN. The lower part of the body; the belly.

ABDOMINATES. An order of fishes, having ventral fins placed behind the pectoral in the abdomen, as



ABDUCTION. The unlawful carrying away a person.

ABERRATION. A small apparent motion in the fixed stars, discovered by Mr. Halley and Dr. Bradley in the year 1725; also a deviation of the ray of light, when refracted by a lens or speculum, by

(¹), the grave accent thus (˘), the circumflex thus (ˆ).

ACCEPTANCE. The signing or subscribing a bill of exchange with the word 'accepted,' and one's name, by which the acceptor obliges himself to pay the contents of the bill.

ACCESSARY, or ACCESSORY (in Law). One guilty of an offence, not principally, but by participation.

ACCIDENCE. The rules of the inflexions of nouns and conjugations of verbs arranged in grammatical order.

ACCIDENT. That which belongs accidentally, not essentially, to a thing, as sweetness, softness, &c.; in Grammar, the derivation of words.

ACCIPITRES. The first order of birds, having an angular toothlike process on the upper mandible, as the vulture, falcon, owl, &c.



ACCLAMATION. A shouting in honour, which was practised among the Romans as a token of applause, particularly in the theatres. This consisted in the chanting or repetition of certain words in a modulated tone, so as to make a kind of harmony.

ACCOMPANIMENT. An instrumental part added to any piece of music.

ACCOMPLICE. The same as Accessory.

ACCOUNT, or ACCOMPE. The reckoning or bill of a tradesman; the statement of a merchant's dealings and affairs drawn out in regular order in his books, and called collectively Merchants' Accounts; also the books in which these accounts are kept.

ACCOUNTANT. One obliged to render an account to another.

ACCOUNTANT GENERAL. An officer in the Court of Chancery, England, who receives all moneys lodged in court.

ACQUANTIVE. The fourth case in Latin nouns.

ACETATES. A kind of salts formed

by the combination of acetic acid with a salifiable base, as the acetate of potash.

ACETIC ACID. Radical vinegar, or the strongest acid of vinegar.

ACHROMATIC. Coloured, & term applied to telescopes which were first contrived by Dr. Brewster, to remedy the aberrations of colour.

ACIDIFIABLE. An epithet signifying capable of being converted into an acid by an acidifying principle; an acidifiable base or radical is any substance that is capable of uniting with such a quantity of oxygen as to become possessed of acid properties.

ACIDS. Substances which are by taste sour, change blue vegetable colours to red, and combine with all the alkalis, and most of the metallic oxides and earths, so as to form the compounds called salts. Acids are distinguished according to the proportion of oxygen which they contain, by the terminations *ic* and *ous*, as nitric acid, and nitrous acid, sulphuric acid, and sulphurous acid, the former of which denotes the larger dose or portion of oxygen, and the latter the smaller; when the syllable *hypos* is added to either of these, it denotes a degree below it in point of oxidation, as hyposulphuric acid, an intermediate between the sulphuric and the sulphurous acid.

ACONITE, WOLFEYNE, or MONAKESMUS. A plant, the flower of which resembles the hood of a monk; it is a violent poison.

ACOUSTICS. That branch of science which treats of the nature and modifications of sound.

ACQUITTAL. A deliverance or setting free from the suspicion of guilt, as when a person, on the verdict of a jury, is found not guilty.

ACQUITTANCE. A written discharge for a sum of money that has been paid.

ACRE. A measure of land containing four square rods, or 160 square poles of 5 yards and a half, or 4840 square yards. The French acre is equal to one and a quarter of an English acre.

ACROSTICK. A sort of verser, the first letters of which compose some name, thing, or motto.

ACTION (in Physics). The pressure or percussion of one body against another. By a law of nature, action and reaction are equal; that is, the resistance of the body moved is always equal to the force communicated to it.

ACTION (in Rhetoric). The transport and motion of the body, and the modulation of the speaker's voice in delivering an address.

mar, added to a verb to complete its signification, as largely, heavily, &c.

ADVERSARIA. A term among literary men for a common-place book, wherein they enter whatever occurs to them in reading or conversation that is worthy of notice.

ADVERTISEMENT. Any printed publication of circumstances, either of public or private interest, particularly that inserted in the newspapers.

ADULT (in Civil Law). Any person between the ages of fourteen and twenty-five.

ADULTERATION. The debasing of the coin by the mixture of impure metals; also the debasing and corrupting any article of trade by putting improper ingredients in it, as is done very frequently by bakers, brewers and other traders.

ADVOCATE. A pleader in civil or ecclesiastical causes. The *Lord Advocate* is an officer of state in Scotland, who pleads in all causes of the crown, or where the king is concerned.

ADVOWSON (in Law). A right of presentation to a vacant church or benefice. He who possesses this right is called the patron of the living.

ADJURE. A Russian magistrate who had the charge of all public buildings, particularly temples and theatres, also of all streets, highways, &c.

AGRI. A shield, particularly Jupiter's shield.

ÆNEID. The title of Virgil's poem, in which he celebrates the adventures of Æneas.

Æolian HARP. A number of strings so disposed as to produce a set of musical notes by the action of the wind upon them.

ÆOLIC DIALECT. One of the five dialects of the Greek tongue.

ÆOLIPYLE. A hollow metal ball with a slender pipe, used to show the convertibility of water into steam.

ÆRA, or ERA. Any date, period, or event from which a calculation of years is made to commence. The principal æras are the vulgar, or Christian æra, dated from the birth of our Saviour; the æra of the creation, dated by Osher and most chronologists 4004 years before the vulgar æra; the æra of the Olympiads, dated about 776 years before the vulgar æra; the æra of the building of Rome, according to Varro, is 753 years before Christ; the æra of Nabonassar, so dated from Nabonassar the first king of Babylon, 747 years before Christ; the æra of the Hegire, or the Mohammedan æra, dated from the hejra of Right of Mahomet from Mecca, dated

about 622 years after Christ, or the vulgar æra.

AEROLITES. Air stones, or meteoric stones falling from the atmosphere. These are scientific substances, the descent of which, though mentioned several times in history, has not been authenticated until these few years. The fact is, however, by recent and frequent observations now put beyond all doubt. Two showers of stones are recorded by Livy and Julius Obsequens to have happened at Rome in the reigns of Tullius Hostilius, and during the consulate of C. Martius and M. Turpilius (a shower of iron, in Lucania, mentioned by Pliney, and a shower of mercury by Dioscorides the moderns, Cardan speaks of about 12,000 stones, one of 120 lbs, another of 60 lbs, that fell at Padua in Italy, in 1510; Gasendi, of a stone of 20 lbs. on Mount Vaiser in Provence; Maschenbuck of two large stones in Ireland; St. Amand de Baudin and others of a great shower of stones in the neighbourhood of Agen, in 1780; the cart of Bristol of twelve stones at Siena in Tuscany, in 1794; captain Topham of a stone of 50 lbs. at Wald Cottage in Yorkshire, in 1795; Dr. Houthley of a stone of 10 lbs. in Portugal, in 1796; Philosophical Magazine, of a mass of iron 70 cubic feet, in America, in 1800; and M. Fournoy of several stones from 10 lbs. to 17 lbs. that fell near L'Aigle in Normandy, besides other instances equally well attested. The larger sort of these stones have been seen as luminous bodies to move with great velocity, descending in an oblique direction, and frequently with a loud hissing noise, resembling that of a mortar shell when projected from a piece of ordnance. About the year 1807, a luminous body of this kind passed over Connecticut, and exploded with a loud noise like thunder, and large masses of stones fell in Weston in that state, specimens of which are in the Cabinet of Yale College. Though different from every other known terrestrial substance, yet these stones perfectly resemble each other, having the same appearance of amorphous matter, coated on the outside with a thin black incrustation, and being in their chymical composition very similar. The stone which fell at L'Aigle in France, in 1803, was found to contain silica 34 parts, oxide of iron 26, magnesia 8, oxide of nickel 3, sulphur 3, lime 1; their specific gravity is also nearly the same, being about 3 and a half that of common water.

AERONAUT. One who sails or floats in the air in a balloon.

AEROPTATION. The modern art of

then an equal bulk of common air. With this they ascended, and in three quarters of an hour traversed fifteen miles. Their sudden descent was occasioned by a rupture which happened to the machine when it was at its greatest height. On a subsequent day the same gentlemen made an ascent in a balloon filled with inflammable air. This machine was formed of gauze of silk, covered with a varnish of caoutchouc, of a spherical figure, and measuring 27 feet 6 inches in diameter. A net was spread over the upper hemisphere, and fastened to a hoop which passed round the middle of the balloon. To this a sort of car was suspended, a few feet below the lower part of the balloon; and in order to prevent the bursting of the machine, a valve was placed in it, by opening of which some of the inflammable air might be allowed to escape. In the car, which was of basket-work, and covered with linen, the two adventurers took their seats in the afternoon of the 1st of December, 1783. At the time the balloon rose the barometer was at 30°. 18", and it continued rising until the barometer fell to 27", from which they calculated that they had ascended 600 yards. By throwing out ballast occasionally they found it practicable to keep nearly the same distance from the earth during the rest of their voyage, the mercury fluctuating between 27" and 27" 66", and the thermometer between 32° and 57° the whole time. They continued in the air an hour and three quarters, and alighted at the distance of 27 miles from Paris, having suffered no inconvenience, nor experienced any of the contrary currents described by the marquis d'Arlandes. M. Roberts having alighted, and much of the inflammable gas still remaining, M. Charles discontinued on taking another voyage. No ascent therefore was the balloon then lightened of 130 pounds of its weight, then it arose with immense velocity, and in 20 minutes was 1000 feet above the earth, and out of sight of all terrestrial objects. The globe, which had become black, now began to swell, and when M. Charles drew the valve, to prevent the balloon from bursting, the inflammable gas, which was much warmer than the external air, for a time diffused a warmth around, but afterwards, a considerable change was observable in the temperature. His fingers were benumbed with cold, which also occasioned a pain in his right ear and jaw, but the beauty of the prospect compensated for these inconveniences. The net, which had been set on his ascent, became again visible for a short time, in consequence of the height which he had

reached. He saw for a few seconds vapours rising from the valley and rivers. The clouds seemed to rise from the earth, and reflect one upon the other; only their colour was gray and obscure from the dimness of the light. By the light of the moon he perceived first the machine was turning round with him, and that there were contrary currents which brought him back again; he also observed with surprise, that the wind ceased, his banners to point upwards, although he was neither rising nor descending, but moving horizontally. On alighting in a field about three miles distant from the place where he set out, he calculated that he had ascended, at this time not less than 10,500 feet. Hitherto all experiments of this kind had been unattended with any evil consequences, but an attempt which was made to put a small aerostatic machine with unrefined air under an inflammable air balloon, proved fatal to the adventurers, M. Pilatre de Rozier and M. Romaine. Their inflammable air balloon was about 27 feet in diameter, and the power of the refined air one was equivalent to about 60 pounds. They were not long in the air when the inflammable air balloon was seen to swell considerably, and the aeronauts were observed, by means of telescopes, to be very anxious to descend, and busied in pulling the valve and giving every possible facility of escape to the inflammable air, but, in spite of all their endeavours, the balloon took fire without any explosion, and the unfortunate gentlemen were precipitated to the earth at the height of about three quarters of a mile. M. Pilatre seemed to have been dead before he came to the ground; but M. Romaine was found to be alive, although he expired immediately after. The ill success of this experiment, which had been made for the purpose of diminishing the expense of inflating the machine with gas, did not intercept the progress of aerostation. Aerial voyages continued to be made on the old scheme. The first trial in England was made by Vincent Lunardi, an Italian, on the 15th of September, 1784. His balloon, the diameter of which was 23 feet, was made of silk, painted in alternate stripes of blue and red. From a net, which went over about two thirds of the balloon, descended 45 cords to a hoop hanging below it, and to which the gallery was attached. Instead of a valve, the aperture at the neck of the balloon, which was in the shape of a jaw, served for admitting or letting out the inflammable air. The gas for filling the balloon was produced from zinc, by means of diluted vitriolic acid. M. Lunardi

retrogresser in a dream, mentioned in Daniel, by which the first monarchy was denoted the golden one, the second silver, the third brass, and the fourth iron. The Greeks, who derived their mythology from the Egyptians, doubtless gathered this idea from the same source, and wrought it into a fable by the ingenuity of their poets.

AGE. A term in law for those special laws which enable men and women to do that which they could not do before; thus, in England, a man may take the oath of allegiance at twelve years of age, is at the age of discretion at fourteen to choose his guardian and contract a marriage, and is at full age at twenty-one. A woman at the age of nine is dowable, at twelve may confer her consent to marriage, at fourteen may receive her land into her own hands, and at twenty-one may alienate her lands and tenements. The laws in the United States, are similar.

AGENT (in Law). A person empowered to act for another.

AGENT (in Physics). Any thing having the power to act on another object, as cold or heat.

AGGREGATE. An order of plants in the Linnæan system, having compound flowers with separate anthers.

AGGREGATION (in Chymistry). The adhesion of parts of the same kind; as pieces of sulphur united by fusion form an aggregate.

AGIO. A term used chiefly in Holland and Venice, to denote the difference between the bank money and the current money, or cash, as when a merchant stipulates to receive for his goods 100 livres bank money or 100 cash, or current money, the agio is said to be 5 per cent.

AGRICULTURE. The art of tilling the land according to certain rules of experience and science.

AGRICULTURE, HISTORY OF. As the ground was, by divine appointment, to furnish subsistence for man, and after his fall he was doomed to procure it by labour, husbandry, or the practical part of agriculture, was of necessity the first and most important occupation of the descendants of Adam; wherefore we learn from Scripture, that his two sons, Abel and Cain, were both employed in this manner, the former being a keeper of sheep, and the latter a tiller of the ground. With what implements this work of tillage was carried on, and what degree of art was employed in producing the fruits of the earth, is left to conjecture; but writers on these early periods are generally agreed that the antediluvians were in possession of many arts and inven-

tions which were in process of time lost, or at least but imperfectly retained among the different nations that were scattered abroad after the confusion of tongues. Agriculture was one of the arts which Noah and his posterity retained; for we find that he cultivated the vine. Those of the line of Seth appear to have followed the breeding and feeding of cattle; but those of the line of Ham, who took possession of Egypt, applied themselves to the tilling of the ground, and with so much ingenuity, industry, and success, that, owing to the inundations of the Nile, and the consequent fertility of the soil, Egypt was enabled in the time of Abraham, and still more so in the time of Joseph, to supply its neighbours with corn during a period of famine. Nor were the inhabitants backward in assisting the liberality of nature; they hastened themselves in embanking, irrigation, and draining, in order to derive all the benefits which the bounteous river was capable of affording them. These works are said to have been carried on with particular spirit under the auspices of Semosiris, 1500 years before the Christian æra. So sensible were the Egyptians of the blessings which agriculture afforded, that, in the blindness of their zeal, they ascribed the invention of the art to their god Osiris, and the culture of barley and wheat to their goddess Isis.

The Pelagi, or aboriginal inhabitants of Greece, were among the number of those who lost all the liberal arts, and fed upon acorns and wild fruits, until they were led by the Egyptians, with whom they had an early communication, to the cultivation of the ground. Like them, too, they placed their benefactress Ceres, in whom they ascribed the introduction of corn, among the number of their deities; a goddess whose authors agree was no other than the Egyptian Isis. In the time of Homer, agriculture was in such esteem that King Laertes laid aside his royal dignity, that he might cultivate a few fields. Hesiod, the contemporary of this author, has devoted a whole poem to the labours of the field in the different seasons of the year. Of other writings, among the Greeks, on agriculture little remains, except a treatise by Xenophon on rural affairs, and scattered notices on the subject in the works of Aristotle and Theophrastus; but we learn from Varro, that there were in his time not less than fifty Greek authors to be consulted on agricultural matters.

The Jews, as Scripture informs us, applied themselves, when they came into the land of Canaan, to the cultivation of the soil, having such their territory allotted to

by the higher orders. The writers know no one this subject have within the last century been more successful than our former period; and every effort has been made by experiments, inventions, and improvements to render the land productive. Nor have these efforts been without effect, for, notwithstanding the immense increase in the population, there has been no such scarcity as we read of in former times.

AGUE. An intermittent fever, with hot and cold fits alternately.

AGOUTI. A South American animal, resembling a guinea pig, having the characters of the rat kind, and the hair and voice of the hog. When provoked, it raises all the hair of its back upright, and strikes the earth with its hinder feet.



AID-DE-CAMP. An officer that always attends on each of the generals in his camp, to receive and carry orders.

ALLANTHUS. A Chinese tree, called the tree of heaven, on account of its lofty growth; it rises with a straight trunk forty or fifty feet high.

AIR. A subtle, invisible, elastic fluid, surrounding the globe of the earth; it was formerly supposed to be an element, or a simple principle, but it is now known to be a compound of two gases, namely, oxygen and azote.

AIR (in Music). Any melody that comes within the reach of vocal expression.

AIR-BALLOON. Vide **BALLOON.**

AIR-GUN. A gun constructed so as to propel bullets solely by means of condensed air; which is effected without causing any explosion.



AIR-JACKET. A jacket made of leather, in which are several bags or bladders of the same material, communicating with each other, and fitted to receive air by means of a brass tube. This jacket is used

by persons who cannot swim, to support them in the water.

AIR-PLANT. A singular plant, which grows suspended from the ceiling of a room, and derives its nutriment from the air. The first plant of this kind which was blown in England is to be seen at Clarendon the seat of Prince Leopold. It is common in America.

AIR-PUMP. A machine for exhausting the air out of vessels, in the same manner as water is drawn up by a pump. This celebrated machine was invented by Otto de Guericke, consul of Magdeburgh, who exhibited his first public experiments with this instrument before the Emperor and States of Germany, at the breaking up of the Imperial Diet at Ratisbon, in the year 1654; but his description of the machine was first published in 1672, at Amsterdam, under the title of *Experimenta nova Magdeburgica de Vacuo Spatio*. Before this publication, it appears that Mr. Boyle, who had particularly directed his attention to the study of pneumatics, also conceived a similar idea, which led Mr. Hooke to ascribe the invention to him; but Mr. Boyle himself, in a letter to his nephew, Lord Brouncker, expresses his acknowledgments for the discovery of this useful machine from what he had heard reported of it, although, as he adds, he had not, at that time, pursued the account of it. On his becoming acquainted with the machine, he made many improvements upon it; as did afterwards Mr. Hooke and many others.



AIR-SHAFTS (in Mining). Holes or shafts let down from the open air to discharge the fuel vapours.

AIR-VESSELS. Spiral ducts or canals in the leaves and other parts of plants, which are supposed to supply them with air, after the manner of lungs in animals.

ALABASTER. A soft kind of marble, which is of a granular texture, and of a white colour, and has a certain degree of transparency. It is found in Germany.

equations, entitled *Quæsitæ Inventioni* diverse, which appeared in 1586. Cardan often used the literal notation of $a, b, c, d, &c.$, but Tartarus made no alteration in the forms of expression used by Lucas de Burgo, calling the first power of the unknown quantity in his language root, the second cube, the third cubo, &c. writing the names of all the operations in words at length, without using any contractions, except the initial R , for root, or radicality. About this time the science of algebra also attracted the attention of the Germans, among whom we find the writers Stifelius and Scheubolus. Stifelius, in his *Arithmetica Integri*, published at Nuremberg in 1544, introduced the characters $+$, $-$, and $\sqrt{\quad}$, for plus, minus, and radix, or root, as he called it; also the initials Σ , \int , ρ , for the power 1, 2, 3, &c., and the numerical exponents 0, 1, 2, 3, &c. which he called by the name of *exponents* exponent. He likewise uses the literal notation, $A, B, C, D, &c.$ for the unknown or general quantities. John Scheubolus, who wrote about the same time as Cardan and Stifelius, treats largely on surds, and gives a general rule for extracting the root of any binomial or residual, $\pm\sqrt[n]{a}$, where a or both parts are surds. These writers were succeeded by Robert Recorde, a mathematician and physician of Wales, who in his works, in 1559 and 1587, on *Arithmetic*, showed that the science of algebra had not been overlooked in England. He first gave rules for the extracting of the roots of compound algebraic quantities, and made use of the terms binomial and residual, and introduced the sign of equality, or $=$. Peletarius, a French algebraist, in his work, which appeared at Paris in 1528, made many improvements on those parts of algebra which had already been treated of. He was followed by Peter Ramus, who published his *Arithmetic and Algebra* in 1569; Raphael Bombelli, whose *Algebra* appeared at Bologna in 1579; and Simon Stevin, of Bruges, who published his *Arithmetic* in 1585, and his *Algebra* a little after. This latter invented a new character for the unknown quantity, namely, a small circle (\odot), within which he placed the numeral exponent of the power; and also denoted roots, as well as powers, by numeral exponents. The algebraical works of Vietæ, the next most distinguished algebraist, appeared about the year 1596, and contain many improvements in the methods of working algebraical questions. He uses the terms A, B, F, I, O, Y , for the unknown quantities, and the consonants, $B, C, D, &c.$ for the known quantities; and

introduced many terms which are in present use, as coefficient, affirmative and negative, pure and affected, &c.: also the line, or vinculum, over compound quantities (17). Albert Girard, an ingenious Flemish mathematician, was the first person who, in his *Invention Nouvelle en l'Algebre*, &c. printed in 1625, explained the general doctrine of the formation of the coefficients of the powers from the sums of their roots, and their products. He also first understood the use of negative roots, in the solution of geometrical problems, and first spoke of imaginary roots, &c. The celebrated Thomas Harriot, whose work on this subject appeared in 1631, introduced the vulgar use of the letters $x, y, z, &c.$; that is the vowels a, e, i, o, u for the unknown quantities, and the consonants, $b, c, d, &c.$ for the known quantities; these he joins together like the letters of a word, to represent the multiplication or product of any number of these literal quantities, and prefixing the numeral coefficient, as is usual at present, except being separated by a point, thus $5abc$. For a root he sets the index of the root after the mark $\sqrt{\quad}$, as $\sqrt[3]{\quad}$ for the cube root, and introduces the characters $>$, and $<$, for greater and less; and in the reduction of equations he arranged the operations in separate steps or lines, setting the explanations in the margin, on the left hand, for each line. In this manner he brought algebra nearly to the form which it now bears, and added also much information on the subject of equations. Oughtred, in his *Clavis*, which was first published in 1631, set down the doctrine without the denominator, separating them thus $2/3x$. In algebraic multiplications he either joins the letters which represent the factors, or connects them with the sign of multiplication \times , which is the first introduction of this character. He also seems to have first used points to denote proportion, as $7:9::27:36$; and for continued proportion has the mark \dots . In his work we likewise meet with the first instance of applying algebra to geometry, so as to investigate new geometrical properties: which latter subject is treated at large by Descartes, in his work on *Geometry*, published in 1637, and also by several other subsequent writers. Wallis, in his *Arithmetica Infinitorum*, first led the way to infinite series, particularly in the expression of the quotients of his series by an infinite series. He also estimated the fractional exponents in the place of radical signs, which in many instances facilitates the operations. Huygens, Barrow, and other mathematicians,

employed the algebraical calculus in resolving many problems which had hitherto baffled mathematicians. Sir Isaac Newton, in his *Arithmetica Universalis*, made many improvements in analytics, which subject, as well as the theory of infinite series, was further developed by Halley, Bernoulli, Taylor, Maclaurin, Nicole, Stirling, De Moivre, Clairaut, Lambert, Waring, Euler, &c.

ALGOL. A fixed star of the second magnitude in the constellation of Perseus, or Medusa's Head.

ALGORITHM. An Arabic word, frequently used to denote the practical rules of algebra.

ALIAS (in Law). A word signifying, literally, otherwise; and employed in describing the defendant, who has assumed other names besides his real one.

ALIBI (in Law). A term signifying, literally, elsewhere; and used by the defendant in a criminal prosecution, when he wishes to prove his innocence, by showing that he was in another place, or elsewhere, when the act was committed.

ALIGONDA. An Ethiopian tree, from the bark of which fax is spun.

ALIEN (in Law). One born in a foreign country. An alien is incapable of inheriting lands until he be naturalized by an act of the legislature. He has likewise no right to vote at elections, or to enjoy any office, until he be returned on any jury, unless where an alien is to be tried.

ALIMONY (in the Civil Law). The allowance made to a married woman upon her separation from her husband.

ALIQVANT PARTS. Such numbers in arithmetic as will not divide or measure a whole number exactly, as 7, which is the aliquant part of 10.

ALIQVOT PARTS. Such part of a number as will divide or measure a whole number exactly, as 2 the aliquot part of 4, 3 of 9, and 4 of 16.

ALKALI or **ALCALI.** A perfectly pure salt, which combines with acids so as to neutralize or impair their activity, and produce salts. Besides, alkalies change the purple colour of many vegetables to a green, the red to a purple, and the yellow to a brown. Some alkalies are called fixed, because they remain fixed in the fire, as potash and soda; others are volatile, as ammonia.

ALLAH. The Arabian name of God.

ALLEGIANCE (in Law). The formal obligation which every subject owes to his prince; the oath of allegiance is that which every person is required to take before he enters on any office.

ALLEGORY. A series of metaphors continued through course; thus the prophet Jews under the allegory of cultivated, and watered by

ALLEGRO. An Italian music, to denote that the piece is to be played in a brisk and sprightly manner.

ALLEGATION. A reasoning how to compose elements for any design proper to medical or alternate. All

the method of finding the composition from the qualities of the several ingredients. To find the value of brandy in a cask of 19 gallons, 10 at 25s. per gallon, alternate is the method of titles of ingredients now composed of a green mixture of various degrees of 10, 21, and 25 carats mixed together so that they be 20 carats fine. Guests are better advised by allegation.

ALLIGATOR. An amphibious animal, abounding in both North and South America in the torrid zone, grows to the length of 15 feet. Alligator is found in the Mississippi, but it is not in the large rivers of Florida. It is called Cayman in the West Indies. It resembles the Crocodile in Asia, but it never grows beside, different in form and habits.



ALLITERATION. A figure of speech consisting in the repetition of the same letter in several words.

ALLODIAL. An epithet without any acknowledged superior, in opposition to allodial lands are estates for services.

ALLOY, or **ALLAY.** Any base metal mixed with a purer one. Thus, the gold coin is alloyed with silver and copper, as silver

stone; the proportion in the former case for standard gold is 2 carats of alloy in a pound weight, or 32 carats fine; in the latter case, for the silver, there are 18 dwts. of alloy in 11 oz. 2 dwts. fine.

ALL SAINTS. A festival observed by some Christians on the first day of November, in commemoration of all the saints.

ALLSPICE, or the **PIPERITE TREE.** A beautiful tree of Mexico and the West Indies, the fruit of which is highly aromatic. The tree is about 30 feet in height, and 12 in circumference.



ALLUVION. A gradual increase of land washed to the shore by inundations. Alluvial formations are also to be found in valleys and plains, by the deposit of gravel, loam, clay, or other earths washed down from the mountains.

ALMAGEST. The name of a celebrated book on astronomy, composed by Ptolemy.

ALMA MATER. The name given to the universities of Oxford and Cambridge, England, by their several members who have passed their degrees in each of these universities. The same is done by the American Colleges.

ALMANAC. A calendar or table containing a list of the months and days, with an account of the rising and setting of the sun and moon, and other incidental matters. The English Nautical Almanac, or Astronomical Ephemeris, is a kind of national almanac, begun in 1767, under the direction and by the advice of the astronomer royal, the late Rev. Dr. Maskelyne. Besides most things essential to general use, which are found in other almanacs, it contains many new and important matters, particularly the distance of the moon from the sun and fixed stars, computed to the

meridian of Greenwich, for every three hours of time, to the purpose of computing the longitude at sea. This almanac is generally computed a few years forward, for the convenience of ships going out upon long voyages. A similar work is published in the United States. The American Almanac, first published at Boston in 1809, embraces a great mass of statistical knowledge, beside that usually given in an almanac.

ALMOND. The fruit of the almond tree, which is a nut, and is either sweet or bitter.

ALMOND TREE. A tall tree, resembling the peach tree, which flourishes in Asia and the southern parts of Europe. It is one of the first trees that bloom in spring.

ALMONEE. In England an ecclesiastical officer of the king, appointed to distribute the king's alms to the poor every day.

ALOE. A tree which originally came from India, is remarkable for a bitter juice, called aloes, which is extracted from its leaves, and is very useful in medicine. The aloes uociferina is a European species much cultivated in Spain.

ALPHA. The first letter in the Greek alphabet, which with the second letter, beta, forms the word alphabet.

ALPHABET. A series of the several letters in a language, which vary in number in different languages. The Hebrew contains 22 letters, as also the Chaldean, Samaritan, Syriac, Persian, Arabic, Sanscrit, &c. but the Irish, which is the same as the Pelagian, or Scythian, still retains only 17. The Greek alphabet, which was brought by Cadmus into Greece from Phoenicia, and was also Pelagian in its original, consisted of 16 or 17, to which was afterwards added 7 or 8 more, to make up 24.

The ancient Arabic alphabet consisted of 24, to which 4 more letters have since been added; the Coptic alphabet consists of 30, the Turkish of 28, the Georgian of 36, the Russian of 30, the Spanish of 27, the Italian of 29, the Latin of 26, the French of 30, and the English of 26. See more on this subject under the head of **WRITING**. The Chinese have no proper alphabet, unless we reckon as such their keys to classes of words, distinguished by the number of strokes combined in each, of which they have 214 in number. As to the written characters of those alphabets, see **WRITING**.

ALT. That part of the great scale of ascents lying between F above the table cliff note, and G in situations.

ALTAR. A table or raised place on which any offering was made to the Almighty. The first altar mentioned is that built by

Noah after the flood. The two principal sizes of the Jews were the altar of burnt



offerings and the altar of incense.



ALTERNATION. A rule in arithmetic showing the different ways in which any number of quantities may be changed or combined.

ALTIMETRY. The art of measuring altitudes or heights.

ALTITUDE. The height of an object, or its elevation above that plane to which the base is referred; thus in mathematics the altitude of a figure is the perpendicular or nearest distance of its vertex from the base. The altitude of an object is the elevation of an object above the plane of the horizon, or a perpendicular let fall in that plane, or a perpendicular let fall from a tower.

Altitudes are either accessible or inaccessible. An accessible altitude of an object is that whose base we can have access to, so as to measure the distance between it and the station from which the measure is to be taken.

Inaccessible altitude is when the base of an object cannot be approached. In such a case the altitude may be measured either by

geometry, trigonometry, optical or by the barometer. The altitudes of mountains may be determined by barometer, for as the weight of the sphere diminishes as we rise, the barometer determines the exact place. The altitudes of the pyramids in Egypt were measured in the same manner by means of their shadows and a weight beside them, making the of the pole and pyramid, to be equal to the length of their shadows. Instruments now commonly used to find altitudes are the geometric the quadrant, and theodolite.

ALTITUDE (in Optics). The an object above a line drawn to the horizon from the eye of the observer. **ALTITUDE OF THE EYE** (specie). The perpendicular line from the eye above the geometrical plane.

ALTITUDE OF A STAR (astronomy). The height of any star above the horizon, or an arc of a circle, intercepted between the star and the horizon.

This altitude is either true or apparent, according as it is reckoned from the true or sensible horizon, and the difference between these two is termed parallax of altitude. **ALTO** (in Music books). Half upper or counter tenor, and is a music of several parts.

ALUM. A mineral salt, non sulphuric acid, potash, alumina, &c. It is of a white colour, and of an acid taste; natural alum, which is known to the ancients, is a kind of friable stone, formerly found in the island of Melos, Maccedonia, Egypt, &c. Artificial alum is commonly made of iron pyrites, and of urine. It is the name of rock or English alum in calomel; and Roman alum, of a reddish colour.

ALUM EARTH. The earth from which alum is extracted.

ALUMINA, or ALUMINE. A substance, an argillaceous, soft, an sort of earth, which is the base of the principal part of clay.

ALUM WATER. A preparation by potting in water colour, producing them in water.

A. M. An abbreviation for ANNO DOMINI, the year of the world, and Magister of arts.

AMALGAM, or AMALGAM. A mixture of mercury with some other metal. It is used either to mend or to be applied to some works, as in

be also to reduce the metal to a subtle powder. An amalgam of tin and mercury is used for looking glasses.

AMALGAMATION. The operation of mixing qualities with some other metal, by fusing the metal, and in that state adding a portion of mercury to it. Gold of all metals unites best with mercury, next to that silver, then lead, tin, and every other metal, except iron and copper, the last of which admits scarcely any of such amalgamation.

AMANUENSIS. A slave among the Etoosians, who used to be employed in writing for his master; also any one among the moderns who is employed to transcribe for another.

AMARANTH. A plant which flourishes in the Indies and South America, remarkable for the lasting beauty of its flowers.

AMATEUR. One who follows a particular art or profession not for gain but for pleasure.

AMBASSADOR. One appointed by a sovereign power to represent him, and superintend his affairs at a foreign court.

AMBER. A hard, white, tasteless substance, mostly translucent, or opaque, and of a glossy surface. It is highly electric, and if a piece be kindled it burns in the end with pungent white vapours, without melting.

AMBERGRIS. A solid substance of fat substance, found floating in the sea, near the coasts of various tropical countries. It is supposed to be the excrement of the sperm whale, having frequently been met with in the intestines of that fish.

AMBER TREE. A shrub, the leaviness of which lies in its small evergreen leaves; these grow as close as health, and when rubbed emit a fragrant odour.

AMBIDEXTER. A person who can use both hands with equal facility.

AMBUCADE. A place where soldiers lie concealed, in order to surprise an enemy.

AMENDE. A penitentiary punishment imposed, according to the customs of France, by a judge, for any false prosecution or groundless appeal.

AMENDE HONORABLE. An infamous kind of punishment formerly inflicted in France on traitors, murderers, or sacrilegious persons, who were to go naked to the show, with a torch in their hand, and a rope round their neck, into a church or a court, to beg pardon of God, the court, and the injured party.

AMENYACLE. A natural order of plants, bearing cactuses, as the peapod, barrel, locust, &c.

AMPELEMENT. A penitentiary punish-

ment imposed on offenders at the mercy of the court; it is contracted from the Latin words *a misericordia*, which signify literally *from or at the mercy*. Ampelements differ from fines, in as much as the latter are defined, and the former are proportioned to the fault, or more properly of the discretion of the court.

AMERICAN ELK. A noble animal of the deer kind.

AMETHYST. A gem of great hardness and brilliancy, and of various colours, but mostly purple or violet. It comes from India, and is used in medicine as an astringent.

AMIANTHUS. An asbestoslike mineral fax, which may be drawn into threads and wove into cloth. It is mostly found among rocks.

AMMON. The title under which Jupiter was worshipped in Libya, where a temple was erected to him, from which oracles were delivered for many ages.

AMMONIA. A volatile alkali, which, when in its purest state, exists only in the form of a gas. It forms a liquid when cooled, and is known by the name of hartshorn, because it is obtained from distilling the horn of the hart. It may also be obtained from urine and camel's dung by distillation.

AMMONIAC, or GUM AMMONIAC. A resinous substance brought from the East Indies in drops or granules. The best kind is of a yellowish colour without and white within.

AMMONITE SNAKE STONE. A sort of fossil shells, made up of small circles, like those of a snake rolled up.



AMMUNITION. A general term for all warlike stores, but more especially powder, balls, guns, &c.

AMNESTY. An act of pardon granted by a prince to his subjects for former offences, as the amnesty granted by Charles II. at the Restoration.

AMPHIBIA. A class of animals which live equally well in air or water, such as the pike, or seal tribe, dogs, weasels, crocodiles, otters, water serpents, snakes. They are remarkable for their tenacity of

Measure shall appear regular and in proportion.



ANAPÆST. A metrical foot, having the two first short and the last long (" - -"), as *SHIRKS*.

ANARCHY. A society without a government, or where there is no supreme government.

ANATHEMA. In the general sense, a religious curse; in the particular sense, ecclesiastical excommunication.

ANATOMY. The art of dissecting for the purpose of examining their structure, and the nature, uses, and functions of their several parts; also the knowledge of the human body derived from such dissections and examinations; when applied to animals it is termed Comparative Anatomy. In the science of anatomy, the body is divided into the head, trunk, and extremities, and is composed of solids and fluids. The solids are the instruments, bones, cartilages, ligaments, membranes, vessels, muscles, nerves, and glands. The principal fluids are the blood, the chyle, the lymph, and the urine. Anatomy, from the name of the parts treated of, is divided into surgery, or the doctrine of the growth of

the bones; osteology, the doctrine of the bones in the adult subject; chondrology, the doctrine of the cartilages; aponeurology, the doctrine of the ligaments; myology, the doctrine of the muscles; burning, the doctrine of the horse manes; splenology, the doctrine of the viscera; angiology, the doctrine of the vessels; adenology, the doctrine of the glands; neurology, the doctrine of the nerves, &c. Anatomy, taken absolutely, applies only to the dissection of human subjects; the dissection and examination of brutes is called Comparative Anatomy.

ANATOMY, HISTORY OF. The science of anatomy was doubtless coeval with that of medicine, for the connection between the two studies would naturally suggest to the inquirer into the diseases of the human body the necessity of becoming acquainted with its component parts. In Egypt, the practice of embalming rendering it necessary to open the body, led them first to make observations on the structure of the human frame, which was afterwards encouraged by their kings, who ordered dead bodies to be regularly dissected for the perfection of the art; but, judging from some specimens which have been preserved of their anatomical observations, the science did not make any considerable progress among them. There is, however, no doubt, but they laid the foundation, and the Greeks, who derived their earliest information from them, enlarged the boundaries of the science by their researches. Hippocrates, who lived about 400 years before Christ, is the first who expressly wrote on this subject, and the first anatomical dissection recorded was made by his friend Democritus, of Abdera. In Aristotle's works there are many minute particulars on this subject, which show that he had made the animal body his particular study. From the Greeks this science, after an interval of several centuries, passed again into Egypt, where, by the fostering care of the Ptolemies, it was revived and made great advances. Erasistratus, the pupil and friend of Theophrastus and Herophilus, laid the foundation of the famous school of anatomy at Alexandria, which was for many centuries in such high repute that no one was supposed qualified for the medical art, who had not studied at Alexandria. Herophilus is said to have dissected not less than 700 bodies, and among the rest some living subjects, but probably, as such a course of cruelty must have defeated its own purpose, this latter part of the story is only an exaggeration. The Romans learned from the Greeks the science of anatomy, as they

Albinus, Cheselden, Trevis, &c.) those of the muscles are given in two large folios, by Casper and Albinus, the latter of which are particularly admired for their correctness. Haller has published a folio on the blood vessels, Dr. Monro, junior, on the nerves, Albinus, Rodericus, and Hunter on the gravid uterus, Weibrecht and others on the joints and fresh bones, Sommering on the brain, Zinn on the eye, Cotunnus Mucel, junior, and others on the ear, Waller on the nerves of the thorax and abdomen, Monro on the horse anatomy, besides the several systems of anatomy from the pens of Albinus, Keil, Cheselden, Hunter, Mead, Douglas, Fish, Winslow, &c.

ANCESTRY. The line of ancestors or forefathers from which any person is descended.

ANCHOR. An instrument for holding a ship in the place where she should ride.



ANCHORAGE. The ground that is fit for holding the anchor; also the duty taken of ships for the use of the haven where they cast anchor.

ANCHORET. A hermit, or one who retired from the world, and lived in perfect solitude.

ANCHOVY. A small sea-fish much used in sauce; it is so like the common sprat, that the latter is often pickled and sold under its name.



ANDANTE (in Music). Italian for easy and just time in playing, so as to keep the notes distinct from each other.

ANDROIDES (in Mechanics). A term used to denote an automaton in the figure of a man, which, by means of certain springs and other mechanical contrivances, is caused to walk, and perform other actions of a man. The most celebrated of these automatons which have been exhibited in modern times are the flute-player of

M. Vaucanson, exhibited at Paris, the chess-player of M. de Kempfen of Freiburg, and the chess-player who lately performed wonders in that game in London. The construction of these automatons is at present a secret.

ANDROMEDA. A small northern constellation consisting of sixty-three stars.

ANEMOMETER. An instrument used for measuring the force and velocity of the wind.

ANEMONE. A beautiful flower originally brought from the east, but now much cultivated in our gardens. The word signifies properly wind-flower, because it was supposed that it opened only when the wind blew.

ANEMOSCOPE. A machine showing from what point of the compass the wind blows.

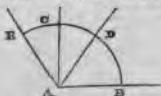
ANEURISM. A diseased swelling of an artery, attended with a continued pulsation.

ANGEL. Literally, a messenger; particularly, the heavenly messenger sent by God as ministers to execute his commands.

ANGEL. A gold coin, in value ten shillings, having the figure of an angel stamped upon it, in commemoration of the saying of Pope Gregory, that the English were so beautiful that they would be Angels, not Angels, if they were Christians.

ANGIOSPERMIA. A term in the Linnæan system for such plants of the class Didymia as have their seeds enclosed in a capsule or seed-vessel.

ANGLE. The inclination of two lines meeting one another in a point, which lines are called the legs; when the lines meet perpendicularly it is a right angle, as A, B, C; when they meet so as to make



the angle less than a right angle, it is called acute, as A, B, D; and when they make the angle greater, it is called an obtuse angle, as A, B, E.

ANGLER. A singular fish, also known at present by the name of the fishing frog, from the resemblance which it bears to that animal in the state of a tadpole.

ANGLICAN CHURCH. That form of doctrine and discipline which is established in England, and serves for the government

On south pole, which is also called the antarctic pole.

ANT-EATER. An animal of South America, that has a large slender tongue, which it always get covered with ants, and then quickly draws it in.

ANTE-HOLY. The word in grammar to which the relative refers; as God, whom we adore, the word God is the antecedent.

ANTEDATE. A date that precedes the real one; as the antedate of a bill, that which is earlier than the time when it is drawn.

ANTE-DILUVIANS. Persons living before the deluge.

ANTELOPE. A beautiful quadruped, of which there are many varieties. Antelopes are singularly swift in their motion, and in general natives of hot climates, particularly in Africa and Asia. Europe has but two species, and America but one; it is called the Prong-horned Antelope.



ANTENNÆ. The horns or feelers of insects which project from their heads, and serve them in the sense of feeling and seeing.

ANTHEM. A sacred composition used as a part of Christian worship.

ANTHEM. A part of the stem of a flower which is at the top of the filament. It contains the pollen or factors, which it emits or spreads when ripe.

ANTHOLOGY. A collection of choice poems, particularly a collection of Greek epigrams as usual.

ANTHROPOPHAGI. Another name for cannibals, or men eaters.

ANTIDOTE. A counterpoison, or any medicine generally that counteracts the effects of what has been swallowed.

ANTIMONY. A metallic, solid, heavy, brittle substance, which is very seldom found pure, but mostly mixed with other metals. In its pure state it is called the veins of antimony. Oxyde antimony, is common; it is a metallic ore, consisting of

the metal called antimony combined with sulphur.

ANTINOMIANS. An ancient sect, who maintained that faith, without good works, was sufficient for salvation. This sect has been revived since the Reformation.

ANTIPODES. Persons so named in geography, who live diametrically opposite to one another, so it were East to West. They have equal latitudes, the one north, and the other south; but opposite longitudes, consequently when it is day to the one it is night to the other, and when summer to the one winter to the other.

ANTIQUARY. One who searches after the remains of antiquity. The monks who were employed in making new copies of old books were formerly called antiquari.

ANTISCH (in Geography). People who live on different sides of the equator, and have their shadows at noon fall directly opposite ways.

ANTISEPTICS. Substances which resist putrefaction.

ANTITHESIS. A figure of speech, in which contraries are put in contrast with each other, as, He gained by losing, and by falling rose.

ANTIOECI (in Geography). People who live under the same meridian, east or west, but under opposite parallels of latitude; they have their noon or midnight at the same hour, but their seasons contrary.

ANVIL. An iron instrument, on which smiths hammer their work. It is usually mounted on a wooden block.



AORTA, otherwise called **MAGNA VESICA.** The great artery proceeding from the left ventricle of the heart, from which all the other arteries proceed mediately or immediately. It is distinguished by

inagourating a truth; as when a cause is proved from an effect.

APOSTLES. Properly messengers or ambassadors, a term applied now particularly to the twelve disciples commissioned by our Saviour to preach the gospel to all nations.

APOSTROPHE. A figure of speech, by which the orator turns from his subject to address a person either absent or dead, as if he were present.

APOSTROPHIC (in Grammar). A mark of contraction in a word; thus, for'd for loved.

APOTHECARY. Properly the keeper of a medicines shop; but more generally one who practices the art of pharmacy, or of compounding medicines. In London, apothecaries are one of the city companies, and are exempted, by stat. 5 Geo. 1. from serving upon juries or in parish offices. They are obliged to make up their medicines according to the formulas prescribed in the college dispensatory, and are liable to have their shops visited by the censors of the college, who are empowered to destroy such medicines as they do not think good.

APOTHEOSIS. Deification, or the ceremony of placing among the gods, which was frequent among the ancients. This honour was conferred on several of the Roman emperors at their decease.

APPANNAGE, or APPENNAGE. Land set apart as a portion for the king's younger children in France.

APPARATUS. A set of instruments or utensils necessary for practising any art, as a surgeon's apparatus, a clergyman's apparatus.

APPARENT (among Mathematicians). A term applied to things as they appear to us, in distinction from what they are in reality; as the apparent distance, magnitude, place, figure, &c. of any heavenly body, as distinguished from the real or true distance, &c.

APPARITION (in Astronomy). The seeming visible. The circle of apparition is an imaginary line, within which the stars are always visible in any given latitude.

APPAL (in Law). The removal of a cause from an inferior to a superior court.

APPEARANCE (in Law). The defendant appearing before the court to plead in any prosecution; there are four ways for defendants to appear in actions; in person, or by attorney, for persons of full age; by guardians, or next friends, for infants.

APPEARANCE (in Perspective). The projection of a figure or body on the per-

spective plane; in Astronomy, the same as phenomenon, or planet.

APPELLANT, or APPELLOE. One who makes or brings an appeal; it was formerly much used for one who brought an appeal in a criminal prosecution.

APPELLATIVE (in Grammar). A noun or name applicable to a whole species or kind, as, a man, a horse.

APPENDANT (in Law). Any thing inheritable that belongs to a more worthy inheritance, as an advowson, or common, which may be appendant to a manor; or land to an office; but land cannot be appendant to land, both being corporeal, and one thing corporeal may not be appendant to another.

APPLE. A well known fruit, from which cider is made.

APPLICATION. The bringing one thing nearer to another for the purpose of measuring it; thus a longer space is measured by the application of a foot, as a yard by a foot or an inch.

APPOSITION (in Grammar). The placing two or more substantives together, without any copulative between them, as, Cicero the orator.

APPRAISING. The valuing or setting a price on goods. An appraiser is one sworn to value goods fairly.

APPREHENSION. The first power of the mind, by which it simply contemplates things, without pronouncing any thing upon them.

APPRENTICE. A young person bound by indentures or articles of agreement to a tradesman, or artificer, to learn his trade or mystery. By the stat. 5 Eliz. no person can exercise any trade in any part of England, without having served a regular apprenticeship of at least seven years. No trades, however, are held to be within the statute but such as were in being at the making of the same in the reign of Elizabeth. No such law exists in the United States.

APPROACHES (in Fortification). The works thrown up by the besiegers, in order to get nearer a fortress without being exposed to the enemy's cannon.

APPROPRIATION. The annexing a benefice to the proper and perpetual use of a religious house, hospital, college, &c. so that the body or souls are both patron and person, and some one of the number was appointed to officiate. At the dissolution of the monasteries, the appropriators, being more than one third of all the parishes in England, were given to laymen, whence sprung most of the say impropriations existing at present; for what is called an ap-

ARCHBISHOP. The chief prelate, having authority over other bishops. There are two archbishops in England; namely, that of Canterbury, who has twenty-one bishops under him; and that of York, who has four.

ARCHDEACON. An officer in the church of England, who acts for the bishop, having a superintendent power over the clergy within his district.

ARCHDUKE. One having a preeminence over other dukes.

ARCHERY. The art of shooting with a bow; formerly a favourite diversion among the English, who were also much skilled in it as a military exercise. The practice of archery was much encouraged by our kings. It was followed both as a recreation and a service, and Edward III. prohibited all useless games that interfered with the practice of it on holidays and other intervals of leisure. By an act of Edward IV. every man was to have a bow of his own height, to be made of yew, hazel, or ash, &c.; and pounds of each were to be made in every township, for the use of the inhabitants. There were two kinds of bows in use among the English; namely, the long bow and the cross-bow; those who used the long bow were called archers, in distinction from the cross-bowmen. The English archers were the most skillful in Europe, and were employed in the army long after firearms were introduced. The artillery company of London is an ancient fraternity of archers and bowmen, besides which there are several companies of archers in England, as the woodmen of Arden.

ARCHITECT. One who is skilled in architecture. The architect forms plans and designs for edifices, conducts the work, and directs the artificers employed in it.

ARCHITECTURE. The art of building, or the science which teaches the method of constructing any edifice for use or ornament. It is divided into civil, military, and naval architecture, according as the erections are for civil, military, or naval purposes. The two last kinds are otherwise called Fortification, and Naval Architecture or Shipbuilding. (See FORTIFICATION and NAVAL ARCHITECTURE.)

ARCHITECTURE, HISTORY OF. The origin of civil architecture, or architecture properly so called, is commonly derived from the building of huts in a conical form, spreading wide at the bottom, and joining in a point at the top, the whole being covered with reeds, barks, &c. But what may have been the form of the first buildings, there is no doubt that the making of superior habitations was one of the first

things which necessity suggested to the reason of man; for we find that Cain, the son of Adam, built a city. Tents, or temporary residences, which were only suited to such as lead a wandering life, were not invented before the time of Jetho, the son of Tubal Cain; since that time the Tartars have followed the practice, and the original inhabitants of America did the same. Every nation, in proportion to the degree of civilization which it has attained, has shown a disposition to exercise their ingenuity in the construction of their residences. Among the Egyptians this art was carried to an extraordinary degree of perfection. Their pyramids, labyrinths, and some ruins of their palaces and other edifices are still to be seen and admired as stupendous monuments of their industry, perseverance, and skill. Near Anders, in Upper Egypt, are the ruins of a palace of gray granite, the ceilings of which are supported by columns of such thickness, that four men can scarcely span them. The great hall is 111 feet long, 60 high, and 12 broad. The roof of the whole edifice is a terrace, on which once stood an Arabian village. The Babylonians and Persians vied with the Egyptians, both in the grandeur and splendour of their buildings, as may be judged from the ruins still remaining. A staircase was to be seen some time ago, having 10 steps of white marble still standing, so broad and flat, that 12 horses might conveniently go abreast.

As these vast structures were not fitted for the general convenience of mankind, we must look to the Greeks for the art of architecture as it has since been exercised. From the simple construction of wooden huts, Vitruvius supposes the orders of architecture took their rise. When buildings of wood were superseded by solid and stately edifices of stone, they imitated the parts which necessity had introduced into the primitive huts; so that the upright trees, with the stones at each extremity of them, were the origin of columns, bases, and capitals; and the beams, joists, rafters, and the materials which formed the covering, gave birth to architraves, frizes, triglyphs, cornices, with the crests, modillions, modillions, and dentils. To bring all these several parts to the state of perfection at which they arrived was the work of long experience and much reasoning, aided by the invention of many tools. The Greeks improved upon the works of the Egyptians, so as to render them, if not so durable, at least more ornamental, and perhaps more gently agreeable. The construction of arches was unknown to the ancient Egyptians and Phœnicians. The roofs of their

circular, and supported by very plain and solid columns, of which examples are to be seen in the chancel at Orford, in Suffolk, and at Christ Church, Canterbury. Sometimes, however, the columns were decorated with carvings of foliage or animals, and sometimes with spirals, lozenges, or network.

These two styles continued to be the prevailing modes of building in England until the reign of Henry II., when a new mode was introduced, which was called modern Gothic. Whether this was purely a deviation from the other two modes, or whether it was derived from any foreign source, is not known. It is, however, supposed to be of Saracenic extraction, and to have been introduced by the crusaders. This supposition is strengthened by the fact, that the mosques and palaces of Fez, and also some of the cathedrals in Spain built by the Moors, are in this style; which ought therefore to be called Arabic, Saracenic, or Moorish. This style is distinguished by its numerous buttresses, lofty spires, and pinnacles, large and ramified windows, with a profusion of ornaments throughout. It came into general use in the reign of Henry III.; when the circular gave way to the pointed arch, and the massive column to the slender pillar, of which the present cathedral church of Salisbury, begun at that period, affords the best specimen. From that time to the reign of Henry VIII. the pillars in churches were of Purbeck marble, very slender and round, encompassed with marble shafts a little detached, having each a capital adorned with foliage, which joining formed an elegant capital for the whole pillar. The windows were long and narrow, with pointed arches and painted glass; and the lofty steeples were furnished with spires and pinnacles. In the reign of Henry VIII. a new kind of low pointed arch was introduced, which was described from four motives, was very round at the haunches, and the angle at the top was very obtuse, as may be seen in Cardinal Wolsey's building. In the fifteenth and sixteenth centuries the taste for Greek and Roman architecture revived, and brought the five orders again into use, although for sacred edifices the Bacon and Gothic styles still maintain the pre-eminence. The Italians were first long time reckoned the greatest architects, but England may also boast of an *Isidoro Jusep* and a Sir Christopher Wren, who hold a very high rank in the art. *Isidoro Jusep* has left the banqueting house at Wakehall, Queen Catherine's Chapel at St. James's, the Piazza at Covent Garden, and other buildings, as proofs of his skill

and taste. The works of Sir Christopher Wren even surpass those of his predecessors, both in number and magnitude. Among these stand foremost the Cathedral of St. Paul's, Greenwich Hospital, the Monument, Chelsea Hospital, the Theatre at Oxford, Trinity College Library, and Emmanuel College, Cambridge; besides upwards of fifty-two churches and innumerable other public buildings.

ARCHITECTURE (in Perspective). A sort of building, the members of which are of different measures and modules, and diminish in proportion to their distance, to make the building appear longer and larger in the view than it really is.

ARCHITRAVE. That part of a column or series of columns that is above or lies immediately upon the capital. It is the lowest member of the frieze, and is supposed to represent the principal beam in timber buildings. It is sometimes called the reason piece, as in porticoes, cloisters &c.; and the masterpiece in chimneys.

ARCHIVAUULT. The inner contour of an arch, or a frame set off with mouldings, running over the faces of the arch stones and bearing upon the impost.

ARCHIVES. The place where the records, &c. belonging to the crown and kingdom are kept.

ARCTIC. An epithet for what lies to the north, as the Arctic Circle, the Arctic Pole.

AREA. The site or space of ground on which any building is erected.

AREA (in Geometry). The superficial contents of any figure, as a triangle, quadrangle, &c.

ARENA. That part of an amphitheatre where the gladiators contended, so called from the sand with which it was strewn.

ARGENT (in Heraldry). The white colour in the coats of arms of baronets, knights, and gentlemen.

ARGONNAVIS. A constellation called after the ship of Jason and his companions.

ARGUMENT. Whatever is offered or offers itself to the mind, so as to create belief in regard to any subject or matter laid down.

ARGUMENT (in Astronomy). An arc, whereby another arc is to be sought bearing a certain proportion to the first arc.

ARGUMENTUM AD HOMINEM (in Logic). A mode of reasoning, in which an argument is drawn from the professed principles or practice of the adversary.

ARIES. The Ram, a constellation of fixed stars, and the first of the twelve signs of the zodiac, marked (♈).

ARISTOCRACY. A form of govern-

multiplication of algebra, at present. The Greeks had likewise another kind of notation by means of capitals, more properly initials of the names of numbers, and were used in inscriptions, as I for *un*, or *una*, I, II for *duo*, *duo*, Δ for *deka*, 10, &c. The Roman notation, which is still used in marking dates, and numbering chapters, &c. consists of five of their capital letters, namely, I one, V five, X ten, L fifty, C one hundred, which are increased in this manner: the repetition of the I's increases numbers by units, as II for two, III for three, &c.; that of X's increases numbers by tens, as XX for twenty, XXX for thirty, &c.; and that of C's increases numbers by hundreds, as CC for two hundred, CCC for three hundred, &c.; also a less character before a greater diminishes the value of the number, as I before V, thus, IV, makes it four, I before X, thus, IX, makes it nine: on the other hand, a less character after a greater increases the value of the number, as I after V, thus, VI, makes it six, and I after X, thus, XI, makes it eleven. In what manner the Romans performed their arithmetical operations is not known; but it is most probable that, as they were not a commercial nation, they followed the simplest forms of calculation; we must therefore look for further information on this subject in the period when the Arabs or Saracens introduced into Europe their mode of notation, which is not only distinguished from the others by the peculiarity of the characters, but also by their value and disposition. Although this notation consists of only nine digits, with the cipher 0, yet, by giving a local power to these figures, namely, that of units, tens, hundreds, thousands, &c. they may be made to express numbers to an indefinite extent. Besides, this mode also presents many advantages by the additional facility with which all arithmetical operations are thus performed. By what nation this improvement was first made is not known. The Greeks, as before observed, were making advances towards it by giving a local value to certain periods of four numbers each, but it does not appear that they proceeded any further. The Arabs introduced it into Europe about eight hundred years back, whence it soon circulated among the different European nations; but although the first use of this mode is commonly ascribed to them, yet they acknowledge themselves indebted to the Indians for it; and as this latter people were in many respects very ingenious, it is not at all impossible that they were the authors of the invention. The cultivation of arithmetic in Europe

may be dated from the thirteenth century, when Jordanus of Naxos, the first writer on the subject that we know of, flourished. His arithmetic was published with illustrations, by Joannes Faber Stapulensis, in the fifteenth century, but was less perfect than the treatise of Lucas de Burgo and Nicholas de Tartaglia in that and the subsequent centuries. In France, the subject of arithmetic was handled about the same time by Clavius and Ramus; in Germany, by Sturmus, Stifelius, and Henischius; and in England by Recorde, Digges, and Buckley. After that period the writers on arithmetic became too numerous to be particularly specified, but the names of Briggs, Emerson, Napier, Meisnerus, Halton, and Bonycastle, are entitled to notice for having systematized, enlarged, and in many particulars simplified the science.

ARK. The floating vessel in which Noah and his family were saved from the flood. It was 500 feet long, 90 broad, and 50 high.

ARK OF THE COVENANT, or MOSES' ARK. The chest in which the stone tables of the ten commandments, written by the hand of God, were laid up.

ARMADILLA. A quadruped, a native of Brazil and the West Indies, with the snout of a pig, the tail of a scard, and the feet of a hedgehog. He is armed with a coat of impenetrable scales, under which he retires like a tortoise.



ARMILLARY SPHERE (in Astronomy). An artificial sphere, composed of a number of circles, of metal, wood, or paper, representing the several circles of the sphere of the world put together in their natural order. The armillary sphere revolves upon an axis within a silvered horizon, which is divided into degrees, and moves in every way upon a brass-supporter. In Fenwick Hall, Cambridge, there is an armillary system constructed by Dr. Lowry, which is eighteen feet in diameter, and will contain more than thirty persons sitting within it, to view, as from a centre, the representation of the celestial sphere. That part of the sphere which is not visible in England is cut off; and the whole is so contrived, that, by being turned round, it

and according to prescribed rules, so as to make them serve the purposes for which they were designed. Liberal or fine arts are those which are noble and worthy to be cultivated without regard to gains, as painting, poetry, music, &c. Mechanic arts are those wherein the hand and body are more concerned than the mind. Terms of art are such words as are used in regard to any particular art, profession, or science.

ARTICHOKE. A plant very like the thistle, with scaly heads similar to the cone of the pine tree. At the bottom of each scale, as also at the bottom of each shoot, is the well known fleshy edible substance. The Jerusalem Artichoke is a plant, the root of which resembles a potato, having the taste of the artichoke.

ARTICLE (in Law). The clause or condition in a covenant.

ARTICLE (in Grammar). A particle, which in most languages serves to denote the gender and case of nouns; and in languages which have not different terminations it serves to particularize the object referred to.

ARTICULATION (in Anatomy). The junction of two bones intended for motion. There are two kinds; the diarthrosis, which has a manifest motion, and synarthrosis, which has only an obscure motion.

ARTICULATION. The articulate or distinct utterance of every letter, syllable, or word, so as to make oneself intelligible.

ARTIFICERS. Persons employed in the performance of mechanical arts.

ARTILLERY. A collective name denoting all engines of war, but particularly cannon, mortars, and other large pieces, for the discharge of shot and shells. It is also employed to denote the science which teaches all things relating to the artillery, as the construction of all engines of war, the arrangement, movement, and management of cannon and all sorts of ordnance, used either in the field, or the camp, or at sieges, &c.

ARTILLERY, CAMP. A place set apart in a camp for the artillery and large ordnance.

ARTILLERY, TRAINING. A set or number of pieces of ordnance mounted on carriages.

ARTILLERY, TRAINING. A sort of artillery, so called from the obesity with which it can be moved. Beasts are trained for the men who work it, and a sufficient force of horses is applied to enable them to proceed at a gallop; each horse being made by a separate drive. This kind of artillery was introduced by the French during the

late war, and has been adopted by other nations.

ARTIST. A proficient in the fine arts.

ARUNDELIAN MARBLES. Ancient marbles illustrative of the history and mythology of the ancients, so called from the Earl of Arundel, by whom they were transported from the island of Paros into England. They contain a chronicle of the city of Athens, supposed to have been inscribed thirteen 254 years before Christ.

ASA-FETIDA. A gum resin of a very fetid smell, obtained from the ferula asa fetida, a perennial plant, which is a native of Persia. It comes into this country in small grains of different colours, hard and brittle.

ARBESTOS. A mineral substance, of which Amianthus is one of its principal species. This consists of elastic fibres, somewhat unctuous to the touch, and slightly translucent. The ancients manufactured cloth from the fibres of the asbestos for the purpose, as is said, of wrapping up the bodies of the dead when exposed on the funeral pile; it being insensible to its nature. It is found in many places in Asia and Europe.

ASCARIDES. Worms that infest the intestine rectum, and cause a violent itching; also a kind of worms which infest the intestines of all animals.

ASCENSION (in Astronomy). That degree of the equator reckoned from the first of Aries eastward, which rises with the sun or a star. This is either right or oblique, according as it rises in a right or an oblique sphere.

ASCENSIONAL DIFFERENCE. The difference between the right and the oblique ascension in any point of the heavens.

ASCENT. The rising of fluids in a glass tube or any vessel above the surface of their own level.

ASH. A well known tree, the timber of which is used in the oak in vaine, being used in every sort of handicraft.

ASHES. The earthy substances remaining after combustion, which contain an alkaline salt; also the alkalinities of metal among the letter-founders.

ASH-WEDNESDAY. The first day in Lent, so called from the custom of fasting in sackcloth and ashes.

ASP. A very small kind of serpent, peculiar to Egypt and Libya, the bite of which is deadly. Its poison is so quick in its operations, that it kills without a possibility of applying any remedy. Those that are bitten by it are said to die within three hours, by means of sleep and lethargy.

ASSUMPTIO (in Law). A voluntary promise by which a man binds himself to pay any thing to another, or to do any work.

ASSURANCE, or INSURANCE. An engagement by which a person becomes bound for a specified sum, and for a limited period, to indemnify another for any losses which his property may sustain from fire or shipwreck, &c.

ASTERISK. A star (*) used in printing as a mark of reference.

ASTER. Behind a ship.

ASTEROIDS. The new planets, Ceres, Juno, Pallas, and Vesta, lately discovered.

ASTHMA. A painful, difficult, and laborious respiration, with a sense of stricture across the breast, that sometimes approaches to suffocation.

ASTRAGAL (in Anatomy). The ankle bone; in Architecture, a small round moulding serving as an ornament to the tops and bottoms of columns.

ASTRAGAL (in Gunnery). A small moulding encompassing a cannon.

ASTROLABE. An instrument for taking the altitude of the sun or stars at sea.

ASTROLOGY. An art formerly much cultivated, but now exploded, of judging as predicting human events from the situation and different aspects of the heavenly bodies.

ASTRONOMY. The science which treats of the sun, moon, earth, planets, and other heavenly bodies, showing their magnitudes, sizes, and distances from each other, measuring and marking their risings, settings, motions, appearances, the times and quantities of their eclipses, &c. It comprehends what was anciently called the doctrine of the spheres, and is a mixed mathematical science.

ASTRONOMY, HISTORY OF. Of all the sciences which have engaged the attention of mankind, none appears to have been cultivated so early as that of astronomy, which treats of the noblest and most interesting objects of contemplation. Josephus informs us that Seth, the son of Adam, is said to have laid the foundations of this science, and that his posterity, understanding they a pollution of Adam that there would be a general destruction of all things, save by the rage of fire and none by the rains and methods of waters, made two pillars, one of brick and the other of stone, and expressed their inventions on each, that if the pillar of brick happened to be overthrown by the flood, that of stone might

remain; which latter pillar, Josephus adds, was to be seen in his day. He also ascribes to the antediluvians a knowledge of the astronomical cycle of 600 years, but upon what authority we are not informed.

The account is, however, not improbable for historians generally agree in ascribing the origin of astronomy to the Chaldeans soon after the deluge, when, for the purpose of making their astrological predictions, in which they were much addicted, as also for that of advancing the science of astronomy, they devoted themselves to the study of the heavenly bodies. The Chaldeans were in fact a tribe of Babylonians, who constituted the priests, philosophers, astronomers, astrologers, and soothsayers of this people, whom a Chaldean and a soothsayer became synonymous terms. These Chaldeans discovered the motions of the heavenly bodies; and, from their supposed influence on human affairs, pretended to predict what was to come. The planets they called their interpreters, ascribing to Saturn the highest rank; the next in eminence was Sul, the sun; then Mars, Venus, Mercury, and Jupiter. By the motions and aspects of all these they foretold storms of wind and of rain, or excessive droughts, as also the appearance of comets, eclipses of the sun and moon, and other phenomena. They also marked out thirty-six constellations, twelve of which they placed in the zodiac, assigning to each a month in the year, and thus dividing the zodiac into twelve signs, through which they taught that the several planets performed their revolutions. They appear not to have had much idea of the immense distance of some of the planets from the sun, but were content for the time they took in performing their revolutions by the slowness of their motions. They, however, held that the moon completed her course the second of any, not because of her extraordinary velocity, but because her orbit, as it would now be called, was less than that of any of the heavenly bodies. They taught that she shone with a light not her own, and that when eclipsed she was immersed in the shadow of the earth. Of the eclipses of the sun they appear to have had not just idea, nor could they fix the time when they should happen. Their ideas of the earth as a celestial body were also crude and imperfect.

Astronomy was cultivated in Egypt nearly about the same time as among the Chaldeans; and, according to the opinions of some, the honour of the invention is due to them; but the most probable conclusion is, that as these two nations were chimerical, and both addicted to the arts and sciences,

effectually. He also determined the distance between the tropics to be $11^{\circ}43'$ of the whole meridian circle, which makes the obliquity of the ecliptic in his time to be $23^{\circ}48'$, $21'$ minutes and one-third. Archimedes is said to have constructed a planetarium to represent the phenomena and motions of the heavenly bodies; and many others added to the stock of astronomical knowledge, but none so much as Hipparchus, who flourished about 140 years B. C., and surpassed all that had gone before him in the extent of his researches. He showed that the orbits of the planets were eccentric, and that the moon moved slower in her apogee than in her perigee. He constructed tables of the motions of the sun and moon, collected accounts of eclipses that had been computed by the Chaldeans and Egyptians; and calculated such a great number for six hundred years, that he was correcting the error of astronomers in his measurement of the length of the year, and computing the moon's distance more accurately. He is, however, distinguished by his catalogue of the fixed stars to the number of a thousand and twenty-two, with their latitudes and longitudes, and apparent magnitudes. These and most other of his observations are preserved by his illustrious successor Ptolemy.

From the time of Hipparchus to that of Ptolemy, no interval of upwards of two centuries, few or no advances were made in astronomy. Claudius Ptolemy, who is known to have lived in Egypt, in the first century of the Christian era, is well known as the author of a great work on astronomy, entitled his *Almagest*, which contains a complete system of astronomy drawn from the observations of all preceding astronomers, with his own. He maintained the generally received opinion of the sun's motion, which continued to be universally held until the time of Copernicus. The work of Ptolemy being preserved from the general conflagration that consumed the Alexandrian library during the ravages of the Saracens, was translated out of the Greek into its Arabic, A. D. 827; and, by the help of this translation, the Arabians, who now applied themselves to the study of astronomy, cultivated it with great advantage under the patronage of the caliphs, especially Al Mamun, who was himself an astronomer, and made many accurate observations by the help of instruments, which he himself constructed. He determined the obliquity of the ecliptic in his time to be $23^{\circ}48'$, $25'$ minutes. Among the Arabic authors of this period was Al-

fragan, who wrote his *Elements of Astronomy*, and Alhazeni, who flourished about 900. This latter composed his own observations with those of Ptolemy, and computed the motion of the sun's apogee from Ptolemy's time to his own. He also composed tables for the meridians of Arabia, which were much esteemed by his countrymen. After this, Ibn Youne, astronomer to the caliph of Egypt, observed some eclipses, by means of which the quantity of the moon's acceleration since that time has been determined; also Arzachel, a Moor of Spain, observed the obliquity of the ecliptic; and Alhazen his contemporary, wrote on the twilight, the height of the clouds, and the phenomena of the horizontal moon. He likewise first employed the optical science in astronomical observations, and allowed the importance of the theory of refraction in astronomy.

In the thirteenth century, astronomy, as well as other arts and sciences, began to revive in Europe, particularly under the auspices of the emperor Frederick II.; who, besides restoring some decayed universities, founded a new one, and in 1230 caused the works of Aristotle, and the *Almagest* of Ptolemy to be translated into Latin. Two years after this, John de Sacro Bosco, or John of Halifax, published his work *De Sphaera*, a compendium of astronomy drawn from the works of Ptolemy, Alfragan, Alhazeni, and others. This was held in high estimation for some centuries, and was honoured with a commentary from the pen of Clavius and other learned men. In 1260, Alphonsus king of Castile, a great astronomer himself, and an encourager of astronomy, received with their assistance the tables of Ptolemy, which, from him, were called the *Alphonsine tables*. About the same time Roger Bacon published his treatise on astronomy, and shortly after Visalio, a Portuguese, in his treatise on optics, showed, in accordance with Alhazen, the use of refraction in astronomy. Nearly two centuries elapsed from this period before any further progress was made in the science, when Purtaich composed new tables of sines for every ten minutes, constructed spheres and globes, wrote commentaries on Ptolemy's *Almagest*, corrected the tables of the planets and the Alphonsine tables, determined the obliquity of the ecliptic at $23^{\circ}48'$, $23'$ minutes and a half, and began, at his death, a new series of tables for computing eclipses. He was succeeded by John Müller, commonly called Regiomontanus, Bernard Walther, John Werner, and others: John Werner showed that the

tables of the sun, moon, and planets, Dr. Halley added to the list of astronomical discoveries, being the first who discovered the acceleration of the moon's mean motion. He also contrived a method for finding her parallax by those observed phases of a solar eclipse, and showed the use that might be made of the approaching transit of Venus in 1761, in determining the distance of the sun from the earth, and recommended the method of determining the longitude by the moon's distance from the sun and certain fixed stars, which was afterwards successfully adopted by Dr. Maskelyne, Astronomer Royal.

It was about this period that the question respecting the figure of the earth appears to have been satisfactorily decided, and in favour of Newton's theory. M. Cassini concluded, from the measurement of M. Flaughaout, that it was an oblong spheroid, but Sir Isaac Newton, from a consideration of the laws of gravity, and the diurnal motion of the earth, had determined its figure to be that of an oblate spheroid flattened at the poles, and protuberant at the equator. To determine this point Louis XV. ordered two degrees of the meridian to be measured, one under or near the equator, the other as near as possible to the poles; the expedition to the north being intrusted to Messrs. Maupertuis and Clairaut, that to the south to Messrs. Cassini, Bouguer, and Jean Elie. Among the many observations made by those who went on this expedition, it was found by those who went to the south that the attraction of the mountain of Peru had a sensible effect on the plumb line of their large instruments, which is supposed to afford an experimental proof of the Newtonian doctrine of gravitation. A similar observation has since been made by Dr. Maskelyne on the mountain Schiehallion in Scotland.

The eighteenth century was marked by the discovery of Dr. Bradley, the successor to Dr. Halley as Astronomer Royal, and Dr. Herschel, who also filled the same post with honour to himself. Dr. Bradley discovered the aberration of light, and the motion of the earth's axis, besides having found new and accurate tables of the motion of Jupiter's satellites, and the most exact table of refractions that is extant; also used a large transit instrument, and a new mural quadrant of eight feet radius, he made observations for determining the places of all the stars in the British catalogue, and likewise nearly a hundred and fifty places of the moon. Dr. Herschel, by suggesting the powers of the telescope beyond any thing existing before, or even

thought of, succeeded in discovering a new planet, which he named the Georgian Sidus; he also discovered two additional satellites to Saturn, besides those of his own planet. Among those who cultivated the higher branches of the sciences, and distinguished themselves by their researches, Dr. Maskelyne, the predecessor of Dr. Herschel, ranks the foremost, having been the originator of the Nautical Almanac, and brought into use the lunar method of determining the longitude, &c. besides making the requisite tables. The theoretical part of the science was indebted to Clairaut, Euler, Simpson, de la Caille, Kiehl, Gregory, Leadbetter, for many correct observations and calculations. The practical part acquired a systematic form and many improvements from the pens of Lalande, Ferguson, Emerson, Bonnycastle, Vince, &c. The historians of the science are Weidler, in his History of Astronomy; Bailie, in his History of Ancient and Modern Astronomy; Montucla, in his Histoire des Mathématiques; and Lalande, in the first volume of his Astronomy.

The nineteenth century was commenced with the discovery of several new planets, namely one in 1801 by M. Piazzi of Palermo, named Ceres, between Mars and Jupiter, another, named Pallas, discovered March 28, 1802, by Dr. Olbers, of Bremen; a third, named Juno, by Mr. Harding, at the observatory at Lilienthal, near Bremen, Sept. 1, 1804; and a fourth, named Vesta, by Dr. Olbers, March 29, 1807. These three last have also been observed to revolve between Mars and Jupiter.

ASYMPTOTE (in Conic Sections). A line which approaches nearer to another continually, and never meets it. It is properly applied to straight lines approaching a curve.

ASYNDETON. A figure in grammar, when conjunctions are omitted in a sentence.

ATCHÈVEMENT (in Heraldry; vulgarly called *HARENMARK*). The arms of any family, with the ornaments appendant thereto, painted on canvass, and fixed to the dwelling house of a person deceased, to denote his death.

ATE. A termination of physical words. See *CHANGES*.

A-TEMPO (in Music). Italian for 'in time,' employed when the regular measure has been interrupted.

ATHANASIAN CREED. A formula of faith ascribed to St. Athanasius, which has been adopted into the liturgy of the church of England.

if any part of it wanted those constituents, it could not be subject.

ATROPA, or DEADLY NIGHTSHADE. A genus of plants, one species of which, namely the *Atropa Belladonna*, is remarkable for bearing berries of a fine black colour, which are highly poisonous. It grows wild in England, and has caused the death of many children who have eaten incautiously of its berries. The root is perennial.

ATROPHY. A disease, a kind of consumption, where the body is not nourished by food, but decays and wastes away insensibly.

ATROFOS. One of the three destinies, who, as the poets feign, cuts the thread of life.

ATTACHMENT (in Law). A lying on of hands, or taking by virtue of a precept; it differs from an arrest, inasmuch as it lays hold of the goods, as well as the person; and also from a distress, which seizes on lands, tenements, and goods; but an attachment on the goods and body.

ATTACK. A military term; a general assault or onset, made to gain a port or any particular point.

ATTAINDES (in Law). The corruption of blood, which follows from being convicted of treason or felony. A Bill of Attainder is a bill brought into parliament for attainting persons convicted of high treason. Such bills have been passed occasionally from the reign of Charles II.

ATTEC (in Architecture). A sort of building, in which there is no roof or covering to be seen, as was usual in the houses of the Athenians. The attic, or attic story, is the upper story of a house.

ATTITUDE (in Painting). The posture of a figure, serving to express the action and sentiments of the person represented.

ATTORNEY. One who is appointed by another to do a thing in his absence. A public attorney is one who acts in the courts of law, and is a lawyer by profession; a private attorney acts upon particular occasions, and is authorized by a letter of attorney, which gives one full power to act for another.

ATTORNEY-GENERAL. A great law officer, appointed to manage all affairs of the state, either in criminal prosecutions or otherwise.

ATTRACTION. In a general sense, the power or principle by which bodies usually tend towards each other, which varies according to the nature of the bodies attracted, and the circumstances under which the attraction takes place; whence attraction is distinguished into the Attraction of Cohesion, Attraction of Gravitation, Attraction of Electricity, Attraction of Magnetism, and Chymical Attraction.

tion of Electricity, Attraction of Magnetism, and Chymical Attraction.

The Attraction of Cohesion is that by which the minute particles of bodies are held together.

Attraction or Gravitation is the principle by which bodies at a distance tend to each other; on this principle it is that two leaden balls, having each a smooth surface, if compressed strongly together will cohere almost as strongly as if united by fusion; and even two pieces of glass if the surfaces are dry and even, will cohere so as to require a certain force to separate them; which is supposed to be a universal principle in nature. By gravitation a stone and all heavy bodies, if let fall from a height, are supposed to drop to the earth. All celestial bodies are supposed to have one only an attraction or gravitation towards their proper centres, but find they mutually attract each other within their sphere. The planets tend towards the sun and towards each other, as the sun does towards them. The satellites of Jupiter tend towards Jupiter, as Jupiter does towards his satellites; and the same with the satellites of Saturn and of Uranus. The earth and moon tend likewise reciprocally towards each. By this same principle of gravity heavenly bodies are kept in their orbits, and terrestrial bodies tend, as is supposed, towards the centre of the earth. From this attraction all the motions, and consequently all the changes in the universe, are supposed to arise, the rains fall, rivers glide, ocean swells, projectiles are directed, and the air presses upon different bodies.

Attraction of Magnetism is the particular tendency of certain bodies to each other, as that of the magnet, which attracts iron to itself. This is only a sort of attraction of gravitation, acting on particular substances.

Attraction of Electricity is the principle by which bodies, when excited by friction, tend towards each other. This species of attraction agrees with that of gravitation in the property of acting upon bodies at a distance; but it differs from it inasmuch as these bodies require to be in a particular state in order to be acted upon.

Chymical Attraction is that disposition which some bodies in solution indicate to unite with some substances in preference to others. This is otherwise called affinity, and is considered as a sort of attraction of cohesion, acting in an evaporating medium, as it applies peculiarly to such bodies as, in solution, indicate a disposition to unite with some substances in preference to others.

ATTRIBUTES. Those properties or per-

and in the anterior, the latter in the hinder part. These are muscular legs, which move regularly with the heart, but in an inverted order.

AURICULAR CONFESSION. A mode of confession among Roman Catholics, by whispering in the ears of their fathers, confessors, or priests.

AURORA BOREALIS, i. e. the NORWAY LIGHT. An extraordinary meteoric or luminous appearance visible in the night time in the northern parts of the heavens. The aurora borealis appears frequently in the form of an arch, chiefly in the spring and autumn, after a dry year. This kind of aurora is more rarely to be seen, the nearer we approach the equator, but in the polar regions it is very constant and brilliant. In the Swedish Isles these lights are called 'the merry dancers.'

AURUM MURICUM, or MURAUUM. A combination of tin and sulphur, used by alchemists and painters, for giving a gold colour in their figures.

AUSPICES. A kind of soothsaying among the Romans, by the flight or singing of birds.

AUTO DA FE, or AN ACT OF FAITH. The solemn act of punishing heretics, formerly in use among the Spaniards. Upon a Sunday or festival, the offender being brought from prison to church, dressed in a frightful manner, attended divine service, after which he was delivered over to the civil power to be burnt.

AUTOGRAPH. An epithet applied to whatever is written in a person's own hand writing, as an autograph letter, a letter of one's own writing.

AUTOMATON. A self-moving engine, more particularly the figure of any animal having the principle of motion within itself by means of wheels, springs, and weights; those in the figure of a man are called automata, as the mechanical chess-player, &c. (See ANATOMY); those of animals are properly called automata. It is said that Archytas of Tarentum, 400 years before Christ, made a wooden pigeon that could fly; and that Archimedes made similar automata. Regiomontanus made a wooden eagle, that flew forth from the city, met the emperor, saluted him, and returned; also a man flying, which flew out of his hand at a word, and returned again, after flying about the room. Dr. Hooke made the model of a flying chariot, capable of supporting itself in the air. M. Varrennot made a figure that played at the flute; also a duck capable of sailing, drinking, and imitating exactly the voice of a natural one; and, what is

will more surprising, the food it swallowed was evacuated in a digested state; also the wings, vivera, and bones were formed so as strongly to resemble those of a living duck. M. le Duc, of la Chaux de Fonds, presented a clock to the king of Spain, which had, among other curiosities, a sheep that made a bleating noise, and a dog watching a basket, that snarled and barked when any one offered to take it away.

One of the most celebrated automata ever invented, was that of the Chess Player, constructed in Germany by Baron Kempfle, and since exhibited in various parts of Europe and America, by Mr. Meisel. It represented the figure of a Turk, who made the moves on the chess-board with his hand, and played the game with no much skill that it was long thought never to have been beaten. It was however frequently beaten in America, and is now generally supposed to have concealed a person of small size within the engine, which directed the moves. The ingenuity of this contrivance, therefore, lay rather in the mode of concealing the real player, than in the mechanism.

AUTUMN. The third season in the year, which begins, in the northern hemisphere, on the day when the sun enters Libra, that is, on the 23d of September. It terminates about the same day in December when the winter commences.

AUTUMNAL SIGNS. The three signs Libra, Scorpio, and Sagittarius, through which the sun passes during the autumn season.

AUXILIARY VERBS (in Grammar). Such verbs as help to form or conjugate others, as, in English, the verbs 'to love,' and 'to be.'

AWL. A shoemaker's tool, with which holes are bored in the leather, for the admission of the thread in stitching and sewing. The blade of the awl is usually a little flattened and bent.



AWNING. A piece of tarpaulin or sail, &c. hung about the decks or any other part of a vessel, to screen persons from the sun and rain.

AXIOM. A self-evident proposition, or one requiring no proof, as that 'the whole is greater than the part.'

AXIS (in Geometry). A right line conceived to be drawn from the vertex of a figure to the middle of the base. It is so called because the figure, by revolving

B.

B, the second letter of the alphabet, is often used as an abbreviation for Bachelor, as B. A. Bachelor of Arts, B. D. Bachelor of Divinity, &c. B as a numeral among the Romans stood for 200, and with a dash over it thus, B̄, for 2000. B, in chronology, stands for one of the Dominical letters, and is music for the seventh note in the gamut.

BAAI. A god of the Phœnicians and Cœmans, which is supposed to represent the sun, and to be the same as the Baal or Belus of the Greeks.

BAROON. A large kind of ape with a short tail, which forms one division of the genus Simia in the Linnæan system.



BACCHANALIANE. Those who performed the rites at the Bacchanals in honour of Bacchus.

BACCHANALS. A festival at Rome in honour of Bacchus, which, for their licentiousness, were suppressed by a solemn decree of the senate.

BACCHUS. The god of wine in the heathen mythology, was the son of Jupiter and Semele. He was the Osiris of the Egyptians, from whom the falcons respecting him were taken by the Greeks.

BACCIFERE. Berry-bearing plants.

BACHELOR. One of the first degrees in the liberal arts conferred at the universities of Oxford and Cambridge.

BACKGAMMON. A particular game played by two persons with the help of dice, on a board or table divided into parts, wherein are twenty-four black and white pieces called pawns.

BACKPAINTING. The method of painting persons into prints pasted on glass, with oil colours.

BAIGETAPP. An instrument formerly used in taking the sun's altitude. It was so called because the back of the observer is turned towards the sun when he makes

the observation. This quadrant is now superseded by more accurate instruments.

BADGE. An exterior ornament of a coat of arms, originally worn by the retainers or attendants of the nobility. It fell into disuse in the reign of Queen Elizabeth.

BADGER. An animal ranked by Linnæus under the Bear tribe, which lives in holes by the sides of rivers, or in the chuffs of rocks. It feeds on insects or borries burrows during winter, hunts by night, and lies concealed by day.



BAG (in Commerce). A determinate quantity of goods contained in a bag, varying in size, according to the article or the place, from three to four hundred weight.

BAGNIO. Italian for a bathing house, with conveniences for lathing, wroasting, and otherwise cleansing the body.

BAGPIPE. A favourite wind instrument among the Highlanders. It consists of two parts; namely, a leathern bag, and pipes for admitting and ejecting the air. One of the pipes called the drone, with which the base part is played, never varies its tone. The third pipe is played on by compressing the bag under the arm.

BAILE (in Law). Sureties given for the appearance, when required, of a person in custody. Common Bail is in common countenance, where any sureties may be taken; but Special Bail is in matters of greater importance, where special surety of two or more persons must be taken according to the value of the cause.

BAILER (in Law). The person to whom the goods of the one that is bailed are delivered.

BAILIFF. A subordinate magistrate or officer appointed within a particular province or district, as bailiffs of hundreds, liberties, courts baron, &c. Sheriffs' bailiffs are officers appointed by the sheriff to execute writs. These, being bound in bond to the sheriff for the due execution of their

olive, are called boson ballifs, vulgarly *ballifs*.

BALLWICK. The hundred in any other district whereas a ballif has jurisdiction.

BALLMENT. The delivery of goods in land upon a contract expressed or implied.

BALLEN A. The whale; a genus of the class Monacalis, and of the order Cetii.

BALANCE. One of the simple powers in mechanics which serves to find out the equality or difference of weight in heavy bodies. It is a peculiar application of the lever to this particular purpose. The common balance consists of a lever with equal arms, at the extremity of each of which is attached a scale. Before loading it with any weights, the whole ought to preserve a perfect equilibrium; and this equilibrium must arise from an exact distribution of the weight of each arm and scale of the balance, as well as from the equal length of the forces; for on this depends the correctness of its action. The Assay-balance is a very delicate kind of balance, used for determining the exact weight of minute bodies. It is so called because it is particularly used in the different processes of assaying; it is also frequently used in chymical analysis. Balances also vary in their form, as the Bent-Lever Balance, the Compound Balance, consisting of a combination of balances used in weighing very heavy bodies; also the Danish balance, a kind of steel-yard.

BALANCE OF TRADE. A term in commerce, denoting the equality between the value of the commodities bought of foreigners, and the value of the native productions transported into other countries. Balance in a merchant's account is when the debit and credit account are made even.

BALE (in Commerce). A quantity of merchandise packed up in cloth. A bale of cotton yarn is from three to four hundred weight; of raw silk, from one to four hundred.

BALASTER, or FINE FLINT. A flint so called from the resemblance of its backbone to a fish. It is remarkable for the brilliancy of its colours.

BALL AND SOCKET. An instrument of brass with a perpetual screw, constructed to move in any direction. It is used in the management of surveying, and astronomical instruments.

BALLAST, Gravel, sand, or any weighty matter, put into a ship's hold, to settle her and keep her sufficiently low in the water.

BALLET. A theatrical representation, consisting of music and dancing.

BALLET-MACHIN. The same as ballet.

gives the position of the ballist.

BALLISTA. A the ancient is best large stones, darts,



BALLOON. A of tubing, and is various, to render it by the gas. When it from ten to thirteen atmospheric air, the convey heavy bodies weight which the rising will be in proportion of the sphere. From fact that a cubic will raise about one



BALLOT. A title of giving vote of an 18th ball, black or

BALL TRADE. Ballstones or small of quartz or flint to take

BALM, or BALSAM. a which is yellowed and a preservative from the human tree; the fennel in Turkey

BALM, or **BALM MINT**. A perennial, so called from the fragrance of its smell, which resembles that of balsam.

BALSAM TREE. A tree growing in Arabia and Egypt, the bark of which yields the balsam or balsam shrovetmentum.

BALSAMICS. Softening, healing, and cleansing medicines.

BAMBOO, or **BAMBU**. An Indian reed with larger knots than the common reed. The poorer inhabitants of India make their dwellings of this reed; paper is also made of the same material, by bruising it and steeping it in water until it be reduced to a pulp.

BANANA. See **PLANTAIN TREE**.
BAND (in Architecture). Any flat, low member or moulding, which is broad but not deep.

BANIANA BANUK ECHIEFS. A kind of silk handkerchiefs manufactured, in India, of silk and cotton.

BANDEROLE. A sea term for a little flag in form of a gridiron, that used to be hung on the masts of vessels.

BAND OF PENSIONERS. A particular company of gentlemen bearing halberds, and attending upon the person of the king upon solemn occasions.

BANDITTI. A band of outlawed robbers, most frequent in Italy.

BANDOLEER, or **BANDOLIER**. A large leathern bag, formerly worn over the right shoulder, and hanging under the left arm, to carry some warlike weapon.

BANDROL. A little flag or streamer.

BANDS. Two pieces of iron nailed upon the hooves of the saddle, to hold them tight.

BANERET. A knight made in the field, whose standard was converted into a banner which he could display in the king's army at the battle day.

BANIAN TREE See **FIGLEAF TREE**.
BANISHMENT. A quitting the realm, either voluntarily, as by abdication; or compulsively, as by transportation.

BANK (in Commerce). An establishment for the receiving of moneys and letting them out on interest. Banks are generally formed by a number of moneyed persons, who, for carrying on the business of negotiating bills of exchange, and dealing in bullion, &c. advance a considerable sum as a joint capital. The first bank was established at Venice about 1157, and the name of Banco was given to it in Italian, from the bench which the money-changers or bankers used to sit upon in their houses or exchanges. The bank of Genoa was established in 1543, that of Amsterdam, in 1602; that of Hamburg, in 1619; that of Rotterdam, in 1656. The Bank of Eng-

land, one of the last, but at present the greatest of its kind, was established by charter in the reign of William and Mary, into a corporate body, by the title of the Governor and Company of the Bank of England. Its notes form the currency of the kingdom to a certain extent, and amount to between twenty and thirty millions. The Bank of England is also the Government Bank, and pays the interest of the national debt.

BANKER. A person who trades in money, by receiving the current cash of individuals free of interest, and negotiating with it, either in the discount of bills or the advance of money on sufficient securities.

BANKING-HOUSE. Any mercantile house which carries on the business of a private banker, as distinguished from the Bank, by which is understood the Bank of England.

BANKRUPT. A trader who fails or breaks, so as to be unable to carry on his business or pay his debts. In Law, a bankrupt is one who has committed an act of bankruptcy, so as to bring him under the protection of the bankrupt laws, which is allowed in none but actual traders, or such as buy and sell, and gain a livelihood by so doing. It is derived from bankrupt, a bench, and rumpire, to break, because the bench of the Italian banker or money-changer is said to have been broken by very of infamy what he failed.

BANNER. A flag or standard at the end of a lance.

BANIANAS. A religious sect among the Hindoos, who believe in the transmigration of souls, and therefore abstain from eating the flesh of animals, which they carefully preserve. They are so cautious of having communication with any but their own caste, that if any of another action or tribe has drunk out of or touched their cup, they break it.

BANNOCK. A sort of oat cake in the north of England, baked in the cinders or on a hot stone.

BANS OF MATRIMONY. The publishing of marriage contracts in the church before the performance of the marriage ceremony. By the ordinances of the church, when persons are to be married, the house of matrimony shall be published in the church where they dwell three several Sundays or holidays in the time of Divine Service; and if, at the day appointed for their marriage, any man do allege any impediment or presentment of consanguinity or affinity, or any other consent, infirmity, &c. why they should

not be moved (and hence found with
scales to prove this allegation), then the
substitution must be deferred until the
truth is tried.

BANTAM. The name of a domestic
breed of the hen tribe, having short legs,
and the shanks well feathered.



BAPTISM. A sacrament of the Christian
church, administered either by immersion,
that is, dipping in water, or by sprinkling
with water.

BAPTISTS. A denomination of profes-
sioning Christians, who practice adult baptism
instead of that of children, and by immer-
sion rather than by sprinkling.

BAR (in Courts of Law). The place
parted off by a barre railing, within which
counselors stand to plead; also the profes-
sion of a barrister or pleader.

BAR. A sea term for a rock lying before
the harbour in such a manner that ships
cannot sail over except upon the flood.

BAR (in Music). A line which divides
the notes into equal portions in respect to
their duration.

BAR (in Heraldry). One of the honour-
able ordinaries, consisting of two horizon-
tal lines drawn across the scutcheon.



BARLIFTON. An arbitrary name
among logicians for an indirect mode of
the first figure of syllogisms.

BARATRY (in Commerce). A term
used when the master of a vessel or the
parties about the voyage by neglecting
their goods, or concealing the ship's
condition.

BARB. The points that stand back in

the head of an axe
prevent them from
also the name of a
breed, remarkable

BARBARA. A syl-
logism for the first
figure of syllogisms,
and several propositions
endued with names
ergo, all men are so
BARBARISM. A
used only by the sav-
ages.

BARREL. A dish o-
fies in holes near the
testaceous animals,
name from the barrel
nose.



BARBER. One w-
of shaving and dressing
also that of bloodlet-
ting, called Barber-Chirurg
as a sign to represent
sons used to hold w-
The barbers were reg-
noms by a statute in
the Second.

BARBERRY. A tree
the barberry tree

BARRICAN. An ob-
struction to a city or cas-
and also as a watch-
approach of an enemy

BARD. A sort of poet
who used to set forth
and great men.

BARGAIN AND SA-
instrument whereby it
and tenements be, for
tion, transferred from o-
er. It is called a real

inable consideration for
tenements, and being
indivisible and enrolled.

BARGE. A very large
either for pleasure and
barges; or for trade, as

BARILLA. A kind of
salt used in the glass

BARIFFONO. A low pitch of the voice between bass and tenor.

BARIUM. A metal so called by Sir H. Davy the discoverer, which is obtained by the chemical decomposition of barytes.

BARK. The skin or covering of a ligneous plant. Bark-biting is a disease in trees cured by slitting the bark.

BARK (in Commerce). A stuff manufactured in India of the bark of trees; also the Peruvian or Jesuit's bark, which is procured from the Cinchona tree growing in Quito.

BARK. A sea term for a small vessel, particularly one carrying three masts.

BARKING. The process of peeling the bark off the trees, which must be done in the month of May.

BARLEY. A sort of corn or grain which is sown in March, April, or May, and succeeds best in light dry soils. From barley, when converted into malt, beer is made.

BARLEY, or PEARL-BARLEY. Barley stripped of its first coat, and used in making a diet drink.

BARLEYCORN. The least of our long measures, being the third of an inch.

BARLEY-MOV. The piece where wheat barley is held up.

BARLEY-WATER. A decoction of pearl-barley.

BARN, or YEASER. The head or working out of beer, which is used as a ferment to lighten bread.

BARN. A storehouse for grain, in which it is deposited and thrashed.

BARNACLE. A species of shell-fish which sticks to the bottom of ships, rocks, &c.

BARNACLE-GOOSE. A large water-fowl, with a broad flat bill.



BAROLITE. A stone of the ponderosa order, called also the carbonate of barite.

BAROMETER. An instrument for measuring the weight of the atmosphere, invented by Torricelli. The common barometer is a glass tube hermetically sealed at one end, and filled with mercury, so as

to have no air over. Then the maker, putting his finger on the open end, immerses it in a basin of quicksilver or water; and on his removing his finger, the quicksilver in the tube descends, by its own weight, to descend into the basin, but by the pressure of the external air on the surface of the fluid in the basin, and an air being in the tube at the top, the quicksilver will rise from 28 to 31 inches in mercury, and from 30 to 33 inches in water. In dry weather, the air, being free from vapours, is consequently heavy, and presses up the quicksilver; but in moist rainy weather, the atmosphere being charged with clouds and fogs, the air is lighter, and presses with less force on the quicksilver. In high winds the atmosphere is light, and the quicksilver low; it also rises higher in cold weather than in warm.



BARON. In England, 4 degree of nobility next to a viscount. All barons are lords of parliament and peers of the realm. Barons were originally so by tenure, that is, by virtue of the barony annexed to their lands or office.

BARON AND FEME. A term in Law for husband and wife, who are deemed but one person.

BARON'S CORONET. On a gold circlet



six pearls, which were assigned to barons by King Charles II. After the Restoration **BARONET.** The lowest degree of hon-

ditary honour created by letters patent. It was founded by James I. in 1624.

BAGGINS OF THE EXCHEQUER. In England the four judges who officiate in the court of exchequer at Westminster.

BARONY. In England, the honour and territory which gave title to a baron, including the fees and lands of fiefs, both temporal and spiritual.

BARRACKS. Places erected for the accommodation of both men and horses in the army.

BARRAS. A substance consisting of resin and oil, which exudes from the wounds of fir trees in winter.

BARRATOR (in Law). A common mover of suits and quarrels, either in courts or elsewhere.

BARREL. A cask or vessel for holding liquor, that is, thirty-one and a half gallons of wine, &c. and thirty-two gallons of beer.

BARREL. The cylinder of a watch, above which the spring is wrapped.

BARRIER. A kind of fence, composed of great stakes, and serving to defend the entrance of a passage.

BARRISTER. In England a counsellor admitted to plead at the bar. An Inner Barrister is one who is a serjeant, or king's counsellor, and is admitted to plead within the bar; but an outer barrister is one who pleads without the bar.

BARROW (in Husbandry). An implement of conveyance with a single wheel, and driven with the two hands. It is made of different forms, according to the purpose for which it is intended; the common barrow, called the wheelbarrow, is represented underneath.



BARROW. A large billock or mound, of which many are to be met with in different parts of England, and are supposed to be the tumuli or tombs of the Romans.

BARTER. The exchanging one commodity for another; also the rule in Arithmetic by which the proportionate value of commodities is found.

BARTEN. A sort of porous earth, very brittle, and perfectly soluble in boiling sulphuric acid. It is compounded of strychnine and barium.

BAS. A sort of metallurgical earth, composed of siliceous earth, iron oxide, and oxides of iron, silica, and

ingenuous. It is always massive.

BASE (in Architecture). A pillar, by which it is attached to the ground, or the base of a figure, or that on which it stands.

BASE (in Chemistry). A substance which combines upon, by the more volatile strata, as the alkalies, oxides, which are the base in the formation of acids.

BASE LINE (in Mathematics). A common section of a geometrical plane.

BASEMENT. A part of a building below the ground level, or lower story of a building.

BASE TENURE, or LAW. A holding by custom or service.

BASHAW, or PASHA. A title of grand officers of the Ottoman Empire; as the chief admiral or commander-in-chief, the chief officer of the navy, &c. Their degrees of dignity are, viz. vizier, the ruler of Tripoli is called bashaw.

BASIL. The sloping part of a roof.

BASIL. A plant which smells.

BASILICON. An oil of resin, pitch, oil, wax, &c.

BASILISK. A serpentine, with remarkably a white spot on its head, and is said to be the offspring of a cock.

BASIN. Any hollow vessel for holding liquids. Basin is also a name for a place where the water is contained, and is also a name for a part which opens from a river into a spacious reservoir, or into a spacious reservoir, river, includes the whole of the water into branches.

BASKET. A vessel made of osiers, willows, or flexible material that can be rendered soft by fire, and soaked for some time, and then for the fine kind of basketry or market basket, must be soaked with water and then steeped. The common kind of work, or preparation; basket makers the arts that are carried

degree of perfection among the ancient Britons.

BASKING SHARK. A species of the shark, which lies much on the surface of the water, basking in the sun. It grows to a prodigious size, but is not very fierce.

BAS-RELIEF. See **BASSO RELIEVO**.

BASS. A sort of cushion made of rush or straw.

BASS (in Music). The lowest or deepest part of any composition. This note is played on the largest pipes or strings of instruments of the common size, as the organ, lute, &c., or on the largest kind of instruments. The bass is the principal part of a musical composition, and the foundation of harmony, whence it is called the fundamental bass. Thorough bass is that which includes the fundamental rules of composition. Ground bass is that which commences with some subject of its own, that is continually repeated throughout the movement, whilst the upper parts pursue a separate air.

BASS CLIFF, or **F CLIFF.** The character marked thus,



and placed at the beginning of a stave in which the bass or lower notes are placed.

BASSO RELIEVO. In English, bass-relief, a sort of sculpture in which the figures are represented, as projecting not far above the plane on which they are formed. Figures cut, are said to be done in relief, and when the work is low or flat it is called bass-relief, or basso relievo, in distinction from alto relievo, and mezzo relievo.

BASSOON. A musical wind instrument blown with a reed, and has eleven holes. It serves to play the bass part in concerts.

BASS VIOL. A stringed musical instrument of the same shape as a violin, but much larger.

BASS VOICE. The gravest and deepest of the male voices.

BASTARD (in Law). One born out of wedlock, who cannot inherit.

BASTILE. A fortress in Paris, which was used as a prison, and destroyed during the French revolution.

BASTINADO. A mode of punishment usual among the Turks, of beating the offender on the soles of the feet.

BASTION. A large mass of earth, standing out from a rampart, of which it forms the principal part.

BAT. An animal resembling both a bird

and a mouse. It has wings not of feathers, but of a skin distended, and flies only at night. It lays no eggs, but brings forth its young alive, and suckles them.



BATABLE GROUND. Land formerly so called, which lay between England and Scotland, and was the subject of debate to whom it belonged.

BATEMENT (in Carpentry). The wasting of stuff, in cutting it for the purpose designed.

BAT-POWLING. A mode of catching birds at night, when they are at roost.

BATH. Any receptacle for water which is convenient for bathing; also any artificial contrivance which is to supply the place of a bath, as a shower bath, or an apparatus for applying water to the body in the form of a shower; a vapour bath, or a mode of conveying moisture to the body by means of steam; a medicinal bath is that in which certain chymical preparations are mingled.

BATH (in Chymistry). A contrivance by which heat is conveyed to any substance; also in the refining of metals, the fusion of the metallic matter is called a bath.

BATH, KNIGHTS OF THE. In England, a military order of knighthood, restored, if not instituted, by Henry IV. These knights wear a red ribbon, and their motto is, *Triajuncta in uno*, alluding to the three cardinal virtues, faith, hope, and charity, which every knight ought to possess.

BATON. The staff or truncheon, given as a symbol of authority, to generals in the French army.

BATTA. Allowances made to troops in India. Dry batta is money given in lieu of rations; wet batta, what is given in kind.

BATTALION. A body of foot soldiers of from 600 to 800 men.

BATTEL. An ancient mode of trial by single combat, which has lately been abolished in England.

BATTEN. A scantling or piece of wooden stuff, from two to four inches broad, and one inch thick.

BATTERING. A cannonade of heavy ordnance against any fortress or works.

BATTERING-RAM. A military machine, with which the ancients effected

brushes in fortifications. These engines were variously constructed, and of different sizes. Spotsch informs us that Marc Antony, in the Puthian war, used a ram of 20 feet long; and, according to Virgilus, they were sometimes 165, and even 180 feet long, and weighed 100,000 lbs. This engine was frequently used in the fourteenth century, and occasionally for other purposes besides that of war in later periods. Sir Christopher Wren is said to have employed it in demolishing the walls of the old church of St. Paul, previously to his rebuilding it.



BATTERY (in Law). The striking, beating, or offering any violence to the person of another, or by spitting in his face, or any way touching him in anger, or violently jostling against him. It is distinguished from an assault, inasmuch as the latter does not necessarily imply a hitting, or blow. There may be an assault without battery, but there cannot be a battery without an assault.

BATTERY (in Military Affairs). Any raised place on which cannon are placed. Batteries are of different kinds, as open batteries, which are exposed to view; masked batteries, which are hidden by a breastwork; cross batteries, two batteries being situated each other on the same object, &c. A floating battery is a battery erected on simple rafts, or the hulls of ships.

BATTERY (in Electricity). A combination of coated surfaces of glass jars, so connected, that they may be charged at once, and discharged by a common conductor. A battery or pile, is also an apparatus employed for accumulating the electricity of galvanism.

BATTLEDOSE. An instrument used either with a slanting neck, or a tumbler.

BATTLEMENTS. Niches or recesses in the top of a wall or bastion, like embrasures, to look through.

BATTLE AXE. A weapon, having an ass end, for cutting or thrusting.



BATTON. A staff or stick, used by the English in contests of legitimacy.



BAWLING. The noise made by a bawling, who are too busy to be silent.

BAY. Any inlet of the sea, or promontories, or peninsulas, or straits; it is defined in the sea stretching into the land.

BAY, or BAY TREE. A tree, an evergreen, which grows in Italy and France.

BAY. A colour in heraldry, dried bay leaf.

BAYONET. A short sword, made to fix on the muzzle of a musket.

BAY-SALT. A salt water, known in France, by the name of *salin*, which is evaporated, and converted into crystals.

BAZAAR. A place fitted up with shops in England, also a similar collection of goods, introduced into England.

BEDELJUM. The gum tree about the size of an argemone, which resembles wax, and is used in the manufacture of gunpowder, and saltpetre.

BEACH. The shore or bank of a river, which is washed by the sea.

BEACON. A signal to give notice, to prevent some mischief, or to give notice of a storm.

BEAD (in Architecture). A small round object, used in the construction of a necklace.

BEADLE, or BEDEL. An officer of a court, or of a

any corporate body, who acts as a messenger and attends to keep order.

BEAD PROOF. A method of determining the strength of spirituous liquors, from the continuance of the bubbles or beads on the surface.

BEAD TREE. A shrub, the fruit of which is a nut, that is bored through, and strung as beads by the Roman Catholics in Spain and Portugal.

BEAGLE. A sort of hunting dog.

BEAK, or BEAK-HEAD OF A SHIP. That part of it, which is without before the fore-castle, and serves by way of ornament. Among the ancients it was a piece of brass, like a bird's beak.

BEAM. The largest piece of wood in a building, which is its main support; in Naval Architecture, beams are the large main timbers that stretch across a ship to support a deck.

BEAM-COMPASS. An instrument consisting of a square wooden or brass beam, having sliding sockets, used for describing large circles.

BEAM-TREE. A tree which grows to the height of thirty or forty feet, so called, because it is particularly fitted for making axes and the like.

BEAN. An edible pulse, of which there are several sorts, as the kidney or French bean, the broad Windsor bean, the horse bean, &c.

BEAR. A wild beast, covered with shaggy hair, and having hooked claws for climbing trees. It feeds on honey, insects, and carcases, and lies torpid during the winter. The black bear is a native of the north of Europe, Asia and America; but the polar bear, which is white, lives within the arctic circle. The brown bear is found in Europe, but not in America. Asia has several varieties of the bear. The grisly bear figured below, is found only near the Rocky mountains in the United States.



BEAR'S-BREECH. An herb, from the smooth leaved sort of which, is extracted a meslage.

BEARD (with Botanists). The under lip of a labiate flower, and in corn and grass,

that hair or bristle which serves to defend the ear, as in barley, rye, wheat, and oats

BEARD OF A COMET (in Astronomy). The rays which a comet emits towards that part of the heavens, to which its course seems to direct it.

BEARD OF A HORSE (in Farriery). The chuck, or that part under the lower jaw, on the outside, and above the chin, which bears the curb of the bridle.

BEAR-GARDEN. A place formerly set apart in England for the baiting of bears

BEARER OF A BILL (in Commerce). The person in whose hands the bill is, and in favour of whom the last indorsement was made.

BEARERS. Posts or brick walls, which are trimmed up between two ends of a piece of timber, to shorten its bearing, or to prevent its bearing with the whole weight at the ends only.

BEARING (in Architecture). The distance between the bearer, or support, and each end of the timber.

BEARING. A sea term, to denote the situation of any distant object with regard to the ship's position, whether ahead, astern, or abreast, &c.

BEARING (in Heraldry). Whatever is borne in, or fills the escutcheon.

BEAT. The walk or round, which a watchman has to take at stated intervals.

BEATING TIME (in Music). That motion of the hand or foot, by which some person marks and regulates the movements of the performers.

BEATS (in a Clock or Watch). The strokes made by the pallets or fangs of the spindle.

BEAVER. An amphibious four footed animal, that lives on the banks of rivers and unfrequented lakes, and is remarkable



for its ingenuity in building its habitation. It walks slowly, swims dexterously, eats sitting on its haunches, and conveys its food to its mouth with its fore paws. This animal is valued both for its fur and for the oil which it yields, called castor oil.

BELLOWS OF AN ORGAN. The pneumatic part of the machine, by which it is supplied with wind. The bellows of a large organ are worked by a man called the blower; those of smaller organs by the foot of the player.

BELLUË. The sixth order of animals in the Linnæan system, having their feet hooved, as the equus, the horse; sus, the swine; the hippopotamus, and the tapir.

BELT. A girdle for hanging a sword or any other weapon on.

BELT (in Heraldry). A badge of the knighthood, given to a person when he was raised to the knighthood.

BELT (in Surgery). A bandage applied round the body.

BELT (in Masonry). A range or course of bricks projecting from the rest.

BELTEIN. An ancient festival in Ireland, celebrated on the 21st of June, the summer solstice, when fires were kindled on the tops of the hills.

BELTS, or FACETS. Two zones or girdles round the planet Jupiter, more broad than the other parts of his body, and terminated by parallel straight lines, sometimes broader and sometimes narrower, varying both in magnitude and position. These belts were first observed at Naples, by Zappi and Bartoli, two Jesuits.

BENCH. A seat of justices, or judges, as the King's Bench, at Westminster, Eng.

BENEFICE. In England, a lawyer of the oldest standing in the line of court.

BEND (in Heraldry). One of the ten honorable ordinaries, drawn from the dexter, or right corner, at the top of the shield, to the sinister base, or left corner, at the bottom. It is supposed to represent a shoulder belt, or scarf, and to show the wearer to be valiant in war. It is sometimes called a bend dexter, to distinguish it from the bend sinister, which is drawn from the left side of the shield to the right.



BEND. A sea term for the knot, by which one rope is fastened to another or to an anchor.

BENDING. A sea term, for the tying two cables or ropes together, or to anything else.

BENDING (in Physiology). The reducing a body to a curved or crooked form. The bending of boards, planks, &c. is effected by means of heat, whether by boiling or otherwise, by which the fibres become relaxed and flexible.

BENDS IN A SHIP. The outermost timbers of the side, to set the foot on in climbing by the side. They are reckoned from the water, first, second, and third bend, and are of great service in strengthening the ship, as like them the beams, knees, and struts are bolted.

BENEFICE. In England, any ecclesiastical living, but particularly rectories and vicarages.

BENEFIT OF CLERGY. In England, a privilege in law, at first peculiar to the clergy, but in after times made common to the laity. When any one was convicted of certain crimes, he had a book given him to read, and if the ordinary or his deputy pronounced these words, 'Legit ut clericus, he reads like a clergyman, or scholar,' he was only burnt in the hand, and set free for the first offence, otherwise he was to suffer death.

BENZOLIN. A dry solid resin, of a fragrant smell, produced by incision from the styrax, an Indian tree. It is brought to us from the East Indies, particularly Siam and the islands of Java and Sumatra, in masses of various sizes, composed of small granules of a whitish or yellowish colour, with a purple cast on the surface. It is very inflammable, and diffuses a fragrant smell while burning, and so in like manner when rubbed in the hand. When the benzoin tree is six years old, the natives cut it in several places, in an oblique direction, and the benzoin flows from the wounds. Benzoin is used by perfumers in making sweet bags, &c. and was formerly very much esteemed as an expectorant. The tree was introduced from Virginia into England.

BEQUEST. A legacy; what is bequeathed or left by will.

BERENICE'S HAIR. A constellation in the northern hemisphere.

BERGAMOT. A fine sort of pear, which is of two sorts, namely, the summer bergamot and the autumn bergamot.

BERGAMOT (in Chymistry). A fragrant essence, extracted from a fruit, which is produced by separating a branch of a lemon tree, upon the stock of a bergamot pear. This essence is got by cutting the external rind of the fruit into small pieces, and squeezing them into a glass vessel, in the same manner as the juice of a lemon is

BILL OF EXCHANGE (in Commerce). A note containing an order for the payment of a sum of money, to a person called the drawer, who when he has signed it with his name, and written the word accepted, he is called the acceptor. The person in whose favour it is drawn, or to whom it is ordered to be paid, is called the drawee, or payee, who, when he has indorsed it, is called the indorser. He, who is in possession of the bill, is the holder.

BILL OF FARE. An account of such provisions as are in season, or are to be supplied for the table.

BILL OF LADING, or INVOICE. A deed signed by the master of a ship, by which he acknowledges the receipt of the merchant's goods, and obliges himself to deliver them at the place to which they are consigned.

BILL OF PARCELS. A tradesman's account of goods sold and delivered.

BILLET. A ticket for quartering soldiers: also a small paper, or note, folded up as a billet doux, or love-letter.

BILLET. A small log of wood; also in Heraldry, a bearing in the form of a square, supposed to represent cloth of gold and silver.

BILLETING (in Military Affairs). Ordering soldiers to be quartered in particular houses by a billet or small ticket.

BILLIARDE. A game played on an oblong table, exactly level, and covered with cloth, by the means of ivory balls, which are struck or driven with sticks, made bending, so as to drive the antagonist's ball into holes, called hazards or pockets, at the corners or by the sides of the table. The art of the game lies in pocketing your antagonist's ball without putting in your own.

BILLION. The sum of a million millions.

BILLS OF MORTALITY. Annual registers of the deaths and burials, which take place in the different parishes in and near London. The term is also applied to a register of deaths, in any town.

BINDING OF BOOKS. The art of doing up books in leather or vellum, as distinguished from those done up in boards or only sewed.

BINNACLE. A wooden case, containing the compasses, log glasses, watch glasses, &c.

BINOMIAL. A term in algebra for any quantity consisting of two names, or terms, connected together by the sign +, or -, as a + b.

BIPED. An animal with only two legs, as men and birds.

BISQUADRATIC. The square squared, or the fourth power of any quantity.

BIRCH TREE. A tree with leaves like the poplar, the fruit of which is a squamous cone. The timber is used for hop-poles.

BIRD-BOLT. A small arrow with three heads, which was discharged at birds from a cross-bow. The bird-bolt is still used in England as a bearing in coat armour.

BIRDCALL. A whistle or pipe to decoy birds.

BIRDCATCHING. The art of taking birds or wild fowl, by birdlime, nets, and decoys, which, as respects the more artful modes of catching birds, is called fowling. In the western islands of Scotland, where the birds live in rocks, a dangerous mode of bird catching is in use.

BIRDLIME. A glutinous substance, made of the bark of holly, which is spread on the twigs of trees to catch birds.

BIRD OF PARADISE. See PARADISE, Bird of.

BIRTH. A sea term for the station in which a ship rides at anchoring ground, as a good birth, for a good anchoring ground.

BIRTHRIGHT (in Law). Honour or estate belonging to a person by right of his birth.

BIRTHWORT. A herb having a perennial root.

BISCUIT (from biscoctus, twice baked). A sort of bread much dried in baking; sea biscuit is dried harder than any other, that it may be better preserved.

BISECTION. The cutting any quantity, as a line or angle, into two equal parts.

BISON. A variety of the ox, which has its horns bent forwards, back gibbous, and mane long. It is very common in the western prairies. Herds of ten thousand are sometimes seen together. It is improperly called Buffalo, in the United States.



BISHOP. A dignitary in the Greek, Romish and English churches. In the latter he presides over the clergy within a certain district, called his diocese.

BLACKBERRY. The fruit of the bramble, or blackberry bush.

BLACK BOOK (in England). A book kept in the Exchequer, which contains the orders of that court.

BLACKCAP. A little bird with a fine black crown on its head.

BLACK HOLE. A place of confinement for soldiers.

BLACK LEAD. A mineral, the plumbeo or graphite of Linnaeus. It is found in lead mines, and is fusible only by a violent heat. Lead pencils and crucibles are made of it.

BLACK LETTER. A sort of old English alphabet.

BLADDER. A thin membranous substance, which serves as the receptacle of some fluid, as the urinary bladder, and the gall bladder.

BLADDER-NUT. A tree, the fruit of which is contained in a membrane inflated like a bladder.

BLADDER SENNA. A shrub which yields a papilionaceous flower, that is succeeded by pods resembling the inflated bladder of fishes.

BLADE. The flat part of a sword or knife, resembling the blade or leaf of grass in shape.

BLADEBONE. The shoulder bone.

BLAIN (in Farriery). A distemper incident to animals, being a bladder at the root of the tongue, which stops the breath.

BLANCH FARM (in English Law). A term for a farm where the rent is paid in silver, not in black cattle.

BLANCHING. The art of making any thing white, as (in horticulture) the method of whitening salads. Blanching money is the annealing, boiling, and cleansing it when it is coined. Blanching copper is done in various ways, so as to make it resemble silver. Blanching is also the operation of covering iron plates with a thin coat or crust of tin. Blanching almonds is the skinning them by means of hot water.

BLANK. A void space in any writing or printing.

BLANK VERSE. That which has no rhyme.

BLANKETS (in Printing). Woolen cloths to lay between the tympan of a printing press, in order to produce a fair impression.

BLANKETS. A sea term, for combustibles made of coarse brown paper steeped in oil, dried, and then steeped again in tallow, resin, and sulphur; they are used in fireships.

BLAST. A disease in grain and trees, called also a blight.

BLASTING (among Miners). The tearing up rocks by the force of gunpowder.

BLASTING - BELLOWS. Bellows which are used to produce a more than ordinary degree of heat in furnaces.

BLAZONRY, or BLAZONING. That branch of the art of heraldry which consists in expressing in proper terms all that belongs to coats of arms. The word comes from the German *blasen*, to blow; because a trumpet used to be blown at just, &c. previously to the herald's recording the achievements of the knights.

BLEACHING. The process of whitening linen by exposure to the sun and air; or, as is now more commonly in use, by the application of chymical preparations.

BLEMISH (in Farriery). Any imperfection in a horse which impedes a sound warrant, as broken knees, cracked heels, &c.

BLLENDE. The ore of zinc.

BLIGHT. A disease incident to plants, which consists in a sort of fungus, that converts the affected part into a scabby mass.

BLINDE. A contrivance to prevent any one seeing through a window; in Military Affairs, bundles of oiled used at the heads of trenches, to protect the men.

BLINDWORM, or SLEWORM. A worm so called from the smallness of its eyes and the slowness of its motion.

BLISTER. A pustule in the skin, filled with serum; in general, any swelling caused by the separation of the outer integument of any substance from that which is underneath.

BLISTER (in Medicine). The plaster or application that raises a blister, mostly made of the cantharides, or Spanish flies.

BLOCK. A sea term for a pulley, or series of pulleys, mounted in a frame, or shell, which serves to facilitate the passage of the ropes. Blocks are single, double, treble, &c. according to the number of shivers in them through which the running ropes run.

SINGLE BLOCK.



ROD

rip runs over between tack and tack, as to make about boards, that is, to tack frequently; also the ship itself, as to go across, that is, into the ship; so board and board is said of two ships coming so near to each other as to touch by the board over the ship's side.

BOARD (in Carpentry). Any piece of timber sawed to a less thickness than about an inch; all above this thickness are planks.

BOARD, or PARQUETBOARD. Layers of paper or papered together as to make a substance so hard as a board.

BOARDING. The fixing of boards for any purpose, as a floor; (in Naval Tactics) the entering a ship in a forcible manner.

BOARDS, or by way of contraction, **BOV.** The manner of doing looks up in parquetry, without leather.

BOARD WAGES. Money given to servants in lieu of diet.

BOAT. A small open vessel worked on various small waters by rowing or sailing.



BOATBILL. A bird of South America, having a bill that resembles a boat in shape. It lives upon fish, and darts down upon them as they are swimming.

BOATY. An insect with an inflated snout, that flies in stagnant waters.

BOATSWAIN. A sea term, for the officer who has the boats, anchors, &c. in his charge.

BOB. The metallic weight attached to a pendulum.

BOVINE. A sort of tape.

BOVINE. Little pins of wood with a notch, or which thread, &c. is wound.

BOVINE. A long sort of pin, on which women used to roll their hair.

BOVY (in Geometry). Any solid having three dimensions, length, breadth, and thickness. Regular bodies, which have all their angles and sides similar and equal, are of five kinds, namely, tetrahedron, a body contained under four equilateral triangles; hexahedron, a body containing six squares; octahedron, a body having eight triangles; dodecahedron, a body containing twelve pentagons; icosahedron, a body containing twenty triangles. Irregular bodies are solids which are not bounded by equal, and like surfaces.

BOM

BODY (in Physics). An extended solid substance, consisting of hard, impenetrable, moveable particles. It is a hard body when its parts do not easily yield to any stroke or percussion; a soft body when it yields to every stroke, and thereby undergoes a change; an elastic body, that changes its form with every stroke, but recovers it again when the impelling force is removed.

BODY. In the phrase 'to bear a body,' a term applied by painters to any colour which is of a nature to be ground so freely, and to mix with oil as entirely, so to seem one thick oil of the same colour.

BODY. Of a physical vessel, that which holds the matter in distillation, body of a pump, the thickest part of the barrel or pipe. Body, in an army, any number of forces united under one commander.

BOHEA TEA. One of the superior kinds of tea that comes from China.

BOILING POINT. The fixed point at degree of heat required to produce the ebullition or boiling of a fluid. Every liquid has a fixed point at which boiling commences, and this is called the boiling point. Thus water begins to boil at the temperature of 212°. After a liquid has begun to boil it will not become hotter, for although a stronger heat makes all liquids boil more rapidly, yet it does not increase their temperature.

BOLE. A friable sort of the argillaceous kind, which unites with water so as to form a paste. The stimulant bole, or bole armeniac, is a bright red coloured earth, so called from Armenia, the country from which it is prepared.

BOLL. A measure of two bushels.

BOLOGNA STONE. A phosphoric stone, first found at Bologna in Italy. It is a grey soft sulphureous stone, about the size of a large walnut, which shines in the dark after calcination. This stone is the native sulphate of stryctes.

BOLSTER. A soft pillow for a broken limb; in Partery, it is the part of those parts of a saddle which are raised upon the loaves to receive the rider's thighs.

BOLSTER. A sea term, for a piece of flannel cut and placed for the support of the cable.

BOLT. An iron pin used for strengthening timber.

BOLUS. An internal medicine, of a consistency thicker than honey.

BOMB. A hollow ball of cast iron filled with gunpowder, and discharged from a mortar into the air; when, by bursting, it causes much mischief.

show. Sometimes the roll consisted of several sheets of bark fastened together and rolled upon a stick, called an umbilicus. Before the introduction of printing, books were become so scarce in the middle ages, that, in Spain, one and the same copy of the Bible, St. Jerome's Epistles, and some few volumes of ecclesiastical offices served several different monasteries. Since that period the increase of books has been prodigious; and in consequence of the different editions, modes of printing, size, type, and other particulars connected either with the external form or internal contents, the knowledge of books has become a particular study and pursuit, under the name of bibliography.

BOOK-BINDING. The process of binding books, or putting the sheets together into the form of books. The bookbinder receives the sheets which compose a book immediately from the printer, and after having folded them in the order of the signatures, or letters at the bottom of the page, they are first beaten with a hammer on a stone, to make them lie close and smooth; after which they are put into a press, and sewed with bands, or strips of leather fastened at certain distances, which, being all glued together very firmly, form the back of the book, to which the pasteboards are attached by means of the bands, so as to form the sides. In all this process of fixing on the sides, much art and nicety is required in rounding the back, and keeping the whole firmly fixed in the press. After this the book is put into the cutting-press between two boards, one lying even with the press for the knife to run upon, the other above, for the knife to run against. In this manner the leaves and boards are cut in form an even edge. The next operation is the sprinkling of the leaves, which is done by means of a brush dipped in vermilion and sap green. The covers of leather, &c. being first moistened, are cut to the size of the book, smeared with paste, and then stretched successively over the back and the two sides, after having taken off the four angles, and indented and plated the cover at the head band. When done far finished, the book is covered and bound between two boards and set to dry. It is afterwards washed with paste and water, and then sprinkled with a brush, unless it is to be marbled, which is done by making spots with spirit. The book is then glazed with the whites of an egg, and, lastly, polished with a hot iron. The letters and ornaments are made with gilding tools, or brass cylinders, rolled along by a handle; to apply the gold, the

leather is glazed with a liquor made of the white of eggs, diluted with water, and when nearly dry the gold is laid on; such is the process when a book is fully bound; but books may sometimes be only sewed and have a paper cover, when they are said to be sewed; sometimes the boards are covered with paper only, when they are said to be in boards; and sometimes they have a leather covering on the back, extending a small way over each side, when they are said to be half bound.

BOOK-KEEPING. The art of keeping accounts, or recording the mercantile transactions of a man, so that he may thoroughly know the whole state of his affairs, or any part of them, with ease and dispatch. Accounts may be kept either by single or double entry; the former of which may answer the purpose where the dealings are on a small scale, but merchants, whose concerns are extensive, keep their books according to the double entry, or Italian method. In single entry two books only are wanted, namely, a journal, or day book, in which the transactions of the day, as they occur in the course of business, are entered; and the ledger, or post book, in which all the accounts drawn out of the journal are placed under the proper names, either on the debtor or creditor side. Those who keep their accounts by double entry, have occasion for several books, the three principal of which are, the waste book, the journal, and the ledger. The waste book is a book containing an inventory of a merchant's effects and debts, with a distinct record of all his dealings. The act of placing any transacting under a given account is called the entry; if placed on the Dr. or debtor's side, it is debiting the account; if placed on the Cr. or creditor's side, it is crediting. The waste book opens with the inventory, which consists of two parts; namely, in the first place, of a man's effects, and what is due to him; and in the next place, what is due by him. After the inventory follow the daily transactions as they occur in business. The accounts of persons are debited under their respective names when they become indebted to the merchant, and credited when the merchant becomes indebted to them. Accounts of property are debited when they come into his possession, and credited when they go out of it. In the same manner the accounts of profit and loss are kept, which are debited on account of a loss, and credited on account of a gain. These marked Dr. are placed on the left side, and those marked Cr. on the opposite side, marked Contra Cr. This book should contain the names of per-

BOROUGH-ENGLISH. A customary descent of land in some places to the youngest sons.

BONE. The generic name in the Linnæan system for all animals of the os tribe, as the bison, buffalo, common ox, milk ox, &c.

BOTANY. The science which teaches the knowledge of plants, as to their distinguishing characters, structure, growth, nature, diseases, and the like. Plants are distinguished into natural orders, as trees, the stems of which send forth branches from the middle and top; shrubs, the stems of which send forth branches from the bottom; umbelliferæ, when the stems of the whole perish; herbs, which bear flowers and seeds, and then die; if they die at the end of one year they are called annuals, if at the end of two years biennials, if they last three or more years they are perennials: fungi are fleshy, cartilaginous, or woody; algae, or seaweeds, have neither stems nor leaves; mosses, which have truly leaves and fruit; ferns, that never send forth more than one leaf on a footstalk; grasses, which are distinguished by their stem, which is a culm or straw; lilies, which have a tubercle or bulbous root; palms, which have an fibrous stem, from which the leaves grow, and not the branches.

The parts of plants are distinguished generally into the root, the stem, the bud, the leaf, the inflorescence, and the fructification. The root is the part through which the plant derives nourishment from the earth; a plant is either annual, biennial, or perennial, according to the time that the root lasts. Roots are sometimes called fleshy, when they consist of a fleshy protuberance; fibrous, when they consist of many fibres; underground; tuberoses, when they consist of a thick fleshy sub-stance, as the potatoe; bulbous, when they consist of a bulb or fleshy body, provided with several roots, as the onion or the lily; perennial, when they have a cluster of little bulbs, as in the scirpago; or creeping, when they have a horizontal protuberance of the root growing under the earth, and sending forth new plants of the kind, as *Andropogon*.

The stem is the protuberance of the plant above the soil, proceeding from the root. The woody stem of trees is the trunk; that which is herbaceous is the stalk, and belongs only to herbaceous plants; but the stalk of grasses, rushes, and stony plants, is called the culm; and where the stalk bears flowers and fruits immediately from the root, and not leaves, it is a scape, as in the pansy and nasturtium; the stalk

which springs from the stem or branches, bearing the flowers and fruit, is the peduncle or flower stalk; that which bears the leaf only is the petiole, or footstalk.

The bud is that part of the plant which contains the embryo of the leaves, flowers, &c., and serves as their hybernaculum, or winter receptacle. The bud is guarded by scales, and furnished with gum, or wax, as an additional defence. The young bud is a roundish longish body, proceeding from the mother plant, and becoming itself a new one; the gougias is a knob belonging to the seaweed, which falls off on the death of the mother plant, and becomes a new one.

The leaf is the herbaceous production from the ascending stem; when the stalk and leaf are so intimately connected that they cannot be distinguished, this is called a frond, as in the palm and the alga. To the leaf belong several appendages, which serve either for ornament or some specific use, as the bractee, or floral leaf, that stands near or between the flowers, forming a tuft, as in the pineapple; the stipula, a small leaf that appears on the stem, in the place of a footstalk; the sheath, a prolongation of the leaf that rolls itself round the stem, as in grasses; the ascidium, or bottle, a filiform cylindrical hollow body, which is generally furnished with a cross, and contains water; the ampulla, or bladder, a round hollow body at the roots of water plants; the gland, a round body situated on the leaves, which serves as an organ of respiration; the spine, or thorn, that rises in the interior of the plant, as in the hinc; the aculeus, or prickle, that issues from the bark; the cirrus, sharper, or tendril, a bifurcated body which serves to support weak plants, as in the vine, &c.; the arista, or awn, a pointed leaflet in grasses; the bill, hair, fine slender bodies, which include all kinds of pubescence, as bristles, wool, &c. some of which discharge a poison, as in the nettle.

The inflorescence is the mode of flowering, which differs very much in different plants, and is distinguished into racematus, the whorl, which consists of several flowers, standing at intervals, surrounding the stem, as in the mistle; the racemose, the racemose, a peduncle with short lateral branches, as in the currant and the vine, &c.; the corymbus, or corymb, an open racemose; the lower peduncles of which are so lengthened as to be of equal height with the upper; when the peduncles take their rise from the same centre, but the subdivisions are irregular, it is a cyme; when the peduncles rise from the same centre, but the whole is

serve the purpose of transpiration; the lymphatics, which are reticularly united; the cellular texture, a delicate membrane surrounding all the vessels, and containing a resinous juice, as in the fir tribe, and a gummy juice in fruit trees; the glands, which serve as secretory vessels.

The principal chymical constituents of plants are carbon, hydrogen, and oxygen, but chiefly the former, besides which azote, sulphur, and other simple substances, may be found in small quantities. The principal compound substances which form the essential ingredients of plants are, the acids, mucilage, sugar, starch, albumen, gluten, fixed and volatile oil, wax, resin, camphor, &c.

The principal diseases to which plants are incident are, fissures, or a separation of the solids into long clefts, arising from an extreme fulness of juice; premature defoliation, when the leaves fall off before the usual period; albugo mildew, a whitish mucilaginous coating of the leaves of plants, which causes their decay; rubigo, rust which appears on the leaves and stems of many plants; lepra, leprosy, which affects the trunk; galle, galls, occasioned by flying insects; verruca, warts; besides hemorrhage, canker, exulceration, &c.

BOTANY, HISTORY OF. As the practice of cultivating plants both for pleasure and utility was coeval with the first formation of man, it is natural to suppose that the science of botany was one of the earliest studies which engaged the attention of inquirers. Aristotle, in his history of animals, has many remarks on plants, drawing a comparison between their mode of growth and that of animals, and pointing out in what animal and vegetable life agree and in what they differ. His disciple, Theophrastus, has devoted a whole work to his favourite subject, and has not only marked the distinctions between trees, shrubs, herbs, and flowers, but treated of the different parts of plants, as the root, stem, leaf, and fruit; showing their diversity in form, habit, colour, mode of growth, and other interesting particulars, which he has illustrated by giving the names of not less than five hundred different plants, by way of example. Except the descriptions or allusions of the poets to favourite plants, there is nothing further to be found on the subject of botany until the time of the Romans. Virgil, in his *Georgics*, speaks of the uses and culture of several plants connected with husbandry. Pliny, in his *Natural History*, describes not less than one thousand species of plants, but without any other order than in connexion with the

places where they were indigenous. Antonius Musa describes the virtues of the plant betony. Columella treats of plants in an agricultural point of view. Dioscorides, Galen, Ombasiris, Paulus Aegineta, and Arius have described the medicinal virtues of plants much at large. After these writers the subject of botany appears to have been almost forgotten, otherwise than it was pursued by the Arabians in conjunction with the science of medicine in Europe, at least, we find that it was altogether neglected until the sixteenth century, when a number of botanists sprung up in Germany, England, Holland, Italy, and France, who, as their works testify prosecuted the subject with great zeal. Propper Alpinus wrote several books on the plants of Egypt and other exotics. Clusius, a French botanist, wrote on the rarer kind of plants. Many other botanists in this and the following centuries wrote general histories of the plants which came within their observation, particularly Cæsalius in his work *De Plantis, libri xvi.*; Delechamp, in his *Historia Generalis Plantarum*; J. Bauhin, in his *Historia Plantarum*; C. Bauhin, in his *Phytotopix*; Gerarde, in his *Herbal*; Parkinson, in his *Theatrum Botanicum*; Ray, in his *Historia Plantarum*; Commelinus, in his *Hortus Malabaricus*; Tournefort, in his *Institutiones Rei Herbarie*; Boerhaave, in his *Index alter Plantarum Horti Academici Lugduni*; Vaillant, in his *Botanicon Parisiense*; besides Fuchsius, Matthioli, Dodonæus, Camerarius, Bregnius, Rheodius, Brunfels, Plukenet, Plumier, &c.

Cæsalius, in the sixteenth century, was the first who properly systematized botany. He formed fifteen classes from the fruit and the situation of the corollum. Since his time many systems have been formed from different parts of the plants. Ray chose the flower, fruit, and external appearance of the plants for the foundation of his system. Camellus framed a system from the valves of the capsule, calling his classes pericarpia fora, unifora, bifora, &c. Rivinus selected the corolla, dividing the plants into flores regulares, composite, and irregulares, and these again into monopetalii, dipetalii, &c. Haller formed a natural system from the cotyledons, the calyx, the corolla, the stamens, and the sexes of the plants; but the system most generally adopted before the time of Linnæus was that of Tournefort. He divided plants into herbe et suffrutices, arbores et frutices, and these again into herbe scrobis monopetalis, campaniformibus, infundibuliformibus, &c.

Linnæus, the most eminent naturalist of all who went before him or followed after him, was born the beginning of the eighteenth century, and having devoted his attention to the vegetable as well as the animal and mineral kingdoms, framed a system for the whole, called after him the Linnæan system, which has been universally adopted by scientific men in all parts of the world. His system is composed of classes, orders, genera, species, and varieties. The class is the largest of all the divisions, having under it the orders as subdivisions; the genera are contained in the order, the species in the genera, and the variety in the species. This system, as respects plants, is also called the sexual system, because it embraces the sexes of plants in the scheme. The classes, twenty-five in number, are distinguished either according to the number or situation of the stamens, filaments, anthers, or male and female flowers, in each plant, as monandria, for those having one stamen; diandria, for those having two stamens; triandria, for those having three stamens; tetrandria, for those having four stamens; pentandria, for those having five stamens; hexandria, for those having six stamens; heptandria, for those having seven stamens; octandria, for those having eight stamens; decandria, for those having ten stamens. Those having from eleven to seventeen stamens were included under the class didecandria; those having many stamens inserted in the calyx under the class icteandria; those having twenty stamens and upwards under polyandria; those having four stamens in one flower, two longer than the others, didynamia; those having six stamens, two shorter than the rest, tetradynamia; those having their filaments connected into the form of a cylinder or tube, monodelphia; those having two such cylinders, diadelphia; those having the anthers formed into a tube, syngenesia; those having the stamens standing in the style, gynandria; those having stamens and pistils in separate flowers, but in one plant, monœcia; those having the stamens and pistils in separate plants, dioœcia; those having stamens and pistils separate in some flowers and united in others, polyœcia; those having these parts of fructification either not well separated, or not to be numbered with certainty, cryptogœmia.

The orders, or subdivisions of the classes, from the first to the thirteenth class inclusive, are marked by the number of pistils in each plant, as monocœcia for those having one pistil, polyœcia for those having two, triœcia, tetraœcia, pentœcia, hexœcia, and polyœcia; for those having two, three, four, five, six, seven, or more pistils.

The two orders having the seed for those whose precursors, belong to two orders since those whose seeds are of different dynamics. In most orders are marked with the names which the orders; polyœcia necessary regions mark the Under the last contained four on usual, the names and fungi, the full

BOTTOM. The of any thing; as if the bottom of the sea the persons, 'to a speaking of ships' tone,' speaking of

BOTTOMBY (li ing money on the is, when the mone if the money so be the time appointed, forfeited; also the merchant on any a to be paid on the re be lost if she is lost

BOUTS. Wagon testines of horses.

BOULDER WA round dints or pebb

BOUND. A sea fined to a particular wind bound, ice bou

BOUNTY. A sea government to men

BOUTS-RIMES. posed in order, and ther with a subject, verses ending in th the same order.

BOW. A sea ter fixed on a staff, will sun's shadow at en parts of the ship's a the starboard and lea and lee bow.

BOW. The mast called from their cur of a key, the arches finger; the base of a wood on each side, in the upper part of a

(of a vessel) the fund bow, with which the

BOW. An inst

arrows. The long bow, the favourite of the English army in former times, is simply a bow with a string fixed at each end, to which the arrow was applied. It is used with great dexterity by the Tartars of Asia, and the savages of America.




BOWSPRIT. A mast projecting over the stem or head to carry the sails forward.

BOWYER. A bowmaker; the bowyers are one of the city companies in London.

BOX. Any case of wood, iron, or leather, which serves for conveying or keeping things.

BOX. A plant, which is of two kinds; namely, the dwarf box that is used for hedges in gardens, and the box tree, which is a shrub or tree. The wood of this is yellow and hard.

B. R. In England, an abbreviation for *Bancus Regis*, the Court of King's Bench.

BRACE. What holds a thing tight, as the braces of a drum; in Carpentry, a piece of timber which serves to keep the frame work tight; in Printing, a crooked line marked thus  which serves to enclose words that are to be together.

BRACKET. An ornament for the arm or wrist; also a piece of defensive armour for the arm.

BRACHMANS, or BRAMINS. The priests or philosophers among the Hindoos; so called from their god Brhma, to whose worship they devote themselves.

BRACKET. A kind of stay in the form of a knee, or shoulder on which staves are made to rest; also in Shipbuilding, a kind of knee for the support of the masts.

BRICK (among Artificers). A kind of material used in building, which have no heads like other acids, or joiners' heads, showing heads, when heads.

BRAIN. The soft contents of the cra-

nium or skull, consisting of the cerebrum, cerebellum, and medulla oblongata, which are surrounded by three membranes, called meninges, or men, as the dura mater, pia mater, and arachnoidea. The substance of the brain is distinguished into outer and inner; the former is called corticalis, cerebra, or glandulosa; the latter, medullaris, alba, or serena. It is generally supposed to be the seat of the soul, or that part where all the senses terminate.

BRAN. The husk of ground wheat.

BRANCH. A shoot from the main bough of a tree; also several things similar in figure, as the antlers or horns of a stag's horns; the branches of veins, branches of a river, branches of a bridge, that is, the two pieces of hinged iron that bear the mill-mouth, the chains, and the curb.

BRANCHLE. Gills in the anatomy of fishes, organs of respiration answering to the lungs in other animals, with which all fishes are provided, except the torpidous fish and the lamprey. They are eight in number, and serve the fish to take in, and throw out water with the air.

BRANCHIOSTEGIOUS. A sort of fishes in the Linnæan system, including such as have gills without bony rays, as the pipe fish, sucker, frog fish, &c.

BRANDY. A spirituous and inflammable liquor, made from the lees of wine by distillation. Its constituent parts are water, alcohol, and a little oil or resin. Brandy is said to have been first manufactured in Languedoc.

BRANT-FOX. A sort of black and red fox.

BRASIL WOOD. A sort of wood so denominated because, as is supposed, it was first brought from Brazil. It is red and luscious, so as to sink in water, takes a good polish, and yields beautiful orange and red colours, which are used by dyers. When chewed it has a sweetish taste.

BRASS. A fattitious compound metal, of a yellow colour, consisting of copper and about one third of its weight of zinc.

BRAWN. The muscular or fleshy part of the body, particularly that of the lion.

BREACH. A gap made in the works of a town by the besiegers.

BREACH (in Law). The violation of a contract; breach of pound, is the breaking any place where cattle are detained; breach of prison, an escape by breaking out of prison.

BREAD. A light, porous, spongy substance, prepared by fermentation and baking, from the flour of wheat, rye, or barley. Whipten bread is distinguished into white bread, which is made of the

The principal parts of a bridge are the piers, or walls, built for the support of the arches; the parapet, or breastwall, made to protect the passengers, the banquet, pavement, or raised footpath, and the abutments or extremities of the bridge, which rest on the banks. The principal arches employed in bridge building are those of the semicircular or elliptical form, the catenarian arch, and the arch of equilibrium, which last is esteemed to be the best, because it is equally strong in every part.



BRIDGE. A military term, for any contrivance by which soldiers can cross a river, as a bridge of boats, formed by boats joined sideways, and covered with planks; or a bridge of rushes, formed of bundles of rushes bound fast together and covered with planks. Such temporary bridges are called flying bridges.

BRIDGE. The name of several things similar in figure to a bridge, as the bridge of the nose, the gristle which parts the nostrils; the bridge in a violin, &c. the perpendicular arch which supports the strings; the bridge, among Gunners, is the same for the two pieces of timber which go between the transverse of a gun carriage on which the bed rests.

BRIDLE. A part of the furniture of a horse's head, which serves to guide the animal. The principal parts are the bit, or snaffle, which goes into the horse's mouth; the curb, or chain of iron, that runs over the beard of the horse; the head-stall, or leather that goes round the head; the fillet, that lies over the forehead; the throatband, that goes under the throat; and the reins, which serve for the rider.

BRIEF (in Law). An abridgment of a client's case, made out for the instruction of counsel on a trial at law; also a license in England to make collections for repairing churches, losses by fire, &c. This last sort of brief is now abolished by statute.

BRIEF (in Music). A measure of quantity, which contains two strokes down in beating time, and as many up.

BRIG. A small merchant's vessel with two masts.

BRIGADE. A military term, for a party or division of soldiers, whether horse

or foot, under the command of a brigadier.

BRIGANTINE. A small light vessel, which can both row and sail well, being adapted either for fighting or for chase



BRIMSTONE. The vulgar name for sulphur.

BRINE. Water impregnated with salt.

BRISKET. That part of the breast of an animal that lies nearest the ribs.

BRISTLE. The hair of swine, which is much used by brushmakers, particularly that imported from Russia.

BRISTOL HOT WATER. Mineral waters of the lowest temperature of any in England, the constituent parts of which are carbonic acid, gas, lime, and magnesia, besides the muriatic and vitriolic acids.

BRITANNIA. The name given by the Romans to the island of Britain, which is represented on their medals under the figure of a female resting her left arm on a shield. Also a species of ware made of black tin.

BROADSIDE. A sea term, for a discharge of all the guns on one side of a ship.

BROADSWORD. A sword with a broad blade, chiefly designed for cutting.

BROCADE. A kind of stuff or cloth of gold.

BROCCOLI. An Italian plant of the cauliflower kind.

BROGUE. A defective pronunciation of a language, particularly applied to the Irish manner of speaking English.

BROKEN LETTER. A term in Printing for the breaking the orderly succession in which the letters stood in a line or page, and mingling them together.

BROKER. One who concludes bargains or contracts for merchants, as exchange brokers, ship brokers, &c.

BROKERAGE. What is paid to a broker for his trouble.

of which is called cow; when the male is cut he is called an ox.



BULL. A brief or mandate issued by the Pope, and sealed with the bulls, a golden or gold seal.

BULL-DOG. A dog of true English breed, so called from his property of attacking the bull, whence he was formerly used in the cruel sport of bullbaiting.

BULLET. A name for the leaden balls with which small fire arms are loaded.

BULLETIN. In Europe an official account of public transactions, or matters of general interest, as the state of the king's health, &c.

BULLFINCH. A small European bird of a cinereous colour, having its head and wings black, and coverts of the tail white. It is easily tamed, and may be taught to speak.



BULL-FROG. A remarkable species of the frog in North America, so called because its voice resembles the distant lowing of an ox.



BULLFIGHT. A cruel sport in Spain

and Portugal, where wild bulls are encountered by men on horseback.

BULL-HEAD. A sort of fish, having its head much broader than its body.

BULLION. Gold or silver in the mass, before it is wrought into coin.

BULL'S EYE. A mark in the shape of a bull's eye, at which archers shoot by way of exercise.

BULL-TROUT. A sort of salmon about two feet in length.

BUM-BOAT. A sort of wherry used about harbours, to carry provisions, &c. for sale, to ships lying at a distance.

BUNT (a Sea Term). The middle part of a sail formed into a sort of bag, or hollow, that the sail may gather more wind.

BUNTLINES. Small lines which serve to force up the bunt of the sail, for the better furling it up.

BUOY. A short piece of wood or close hooped barrel fastened by a rope to the anchor, to point out its situation. It is also a piece of wood or cork fastened by a chain, serving to point out dangerous places in or near a harbour.



BUPHAGA, or BEEFATER. A sort of bird of the order picæ, found in Africa. It is so called because it alights on the backs of cattle, and picks holes in them to get at the larvae of the gad-fly, on which it lives.

BUPRESTIS. An insect of the coleopterous order, remarkable for the brilliancy of its colours, which emulate the polish of the finest metals.

BURDEN (a Sea Term). Whatever can be stowed in a hold, or the number of tons which it can carry. Beasts of burden, in Husbandry, are those which are fitted for bearing burdens, or drawing weights.

BURGAGE (in Law). In England a kind of tenure by which the inhabitants of cities or boroughs held their lands or tenements of the king.

BURGESS. In England an inhabitant of a borough, or one who possesses a tenement therein; it is now more commonly taken for the representative of a borough town.

BURGLARY (in Law). The breaking and entering the dwelling of another in the night, with the intent to commit some felony, whether the felonious intent be put in execution or not.

BURGUNDY PITCH. The juice of the

in trees boiled in water, and strained through a linen cloth.

BURNING-GLASS. A concave or convex glass, commonly spherical, which collects the rays of the sun towards a common point, called the focus. The burning glass of M. de Vilette was three feet eleven inches in diameter, and it burnt at the distance of three feet two inches; by it were melted a silver alpenze in seven minutes and a half; a King George's half-penny in sixteen minutes, which ran in thirty-four minutes; a diamond weighing four grains lost seven-eighths of its weight. That of Buffon was a polyhedron, six feet broad, and as many high, consisting of one hundred and sixty eight small mirrors, or flat pieces of looking-glass, each six inches square, by means of which, with the faint rays of the sun in the month of March, he set on fire boards of beech wood at one hundred and fifty feet distance.

BURNING OF WOMEN. A superstitious practice in Hindostan, for the widows to burn themselves on the funeral pile of their husbands.

BURNISHER. A round polished piece of steel, serving to smooth and give a lustre to metals.

BUSHEL. Dry measure, containing four pecks, or eight gallons.

BUSH-HARROW. An implement of husbandry for harrowing grass lands, and covering grass or clover seeds. It consists of a frame with three or more larks, in which bushes are interwoven.

BUSKIN. A kind of high shoe, anciently worn by tragedians; also a sort of leather stocking serving the purpose of a boot.

BUSTARD. A species of European bird of which there are several varieties. The Great Bustard is the largest land bird known in England. It seems to bear a remote affinity to the Ostrich.

BUTCHER BIRD. A sort of shrike remarkable for its ferocity towards the



It kills, and tearing them up, sticks them on thorns.

BUST. The figure or portrait of a person in relieve, showing only the upper parts of the body.

BUTT. A measure of wine, containing 120 gallons.

BUTTEND. The largest end of a piece of timber nearest to the root.

BUTTER. A fat nutritious substance, procured from the cream of milk by churning; a term in Chymistry for substances of similar consistency, as butter of arsenic, butter of limoth, butter of wax, &c.

BUTTERBUD. A plant with a floccular flower, consisting of many florets.

BUTTERFLOWER. A yellow flower, which abounds in the meadows in May.

BUTTERFLY. A beautiful insect, so called because it first appears at the beginning of the season for butter. That which seems to be powder upon the wings of the insect is an innumerable quantity of feathers, which are only to be discovered through a microscope. The butterfly first appears in the state of the caterpillar, which is called the larva, and afterwards in that of the pupa, or chrysalis, from which it comes forth in its perfect state.



The larva.

The chrysalis.

BUTTOCK. The breech or binnacle of an animal, next to the tail; also a sea term, for that part of a ship which forms the breadth, right astern from the truck upwards.

BUTTON. Any thing in a round form, which serves to fasten, particularly what is used in garments; also a part of the rascal in a gun or howitzer, which is in the form of a button.

BUTTRISS. A kind of buttress, built archwise, serving to support a building or wall.

BUZZARD. A very stingy bird of the hawk kind. The Turkey Buzzard known in the southern parts of the United States is a species of *Bubo*.

BY-LAW. A private law made within some particular place or jurisdiction.

C.

C, the third letter and second consonant of the alphabet; as a numeral, C stands for 100, and CC for 200, &c.; in Music, it is the highest part in the thorough bass; as an Abbreviation it stands for Christ, as A. C. Anno Christi, or ante Christum; also for Companion, as C. B. Companion of the Bath.

CAABA. An Arabic term for the house of God, a part of the temple of Mahomet in Mecca.

CABALA. A traditional or mysterious doctrine among the ancient Jews, which they say was delivered by word of mouth to Moses, and by him to the fathers. Among Christians, the cabala is an abuse of certain passages of Scripture for magical purposes.

CABBAGE TREE. A tree of the Cape of Good Hope, so called from the resemblance which its leaves bear, to those of the cabbage plant.

CABIN. The apartment in a vessel for the officers and superior passengers.

CABINET. In England, the closet or private room in the king's palace, where councils are held; also the ministers of the king, who are summoned to attend such councils. In the United States, the term is applied to the four secretaries and the attorney general at Washington, considered as counsellors of the President.

CABLE. A sea term for a strong rope, which serves to keep a ship at anchor.

CABLE'S LENGTH. The measure of 120 fathoms.

CACOETHES. An ill habit or propensity; as the cacoethes scribendi, an itch for authorship.

CACOPHONY. A bad tone of the voice, proceeding from the ill disposition of the organs.

CADENCE (in Grammar). The fall of the voice; also the flow of versos or periods; in Music, it is a pause or suspension at the end of an air, resembling points or virgules in prose; in Dancing, cadence is used when the steps follow the notes and measures of the music; in the Manège the cadence is the measure or proportion observed by a horse in all his motions, when he is thoroughly managed.

CADET. One who is trained up for the army by a course of military discipline; such as the cadets at the military college at West Point.

CADETSHIP. The commission given

to a cadet, to enter the East India Company's service in England.

CADI. A magistrate, or sort of justice of the peace, among the Arabs and Turks.

CADMIA. A sort of mineral among the ancients, now called cobalt.

CADUCEUS. A name for Mercury's rod or sceptre, which on medals is an emblem of peace. It was carried by the Roman heralds when they went to proclaim peace.



CÆSAR. A title or name given to the twelve emperors of Rome, who succeeded Julius Cæsar.

CAGMAG. Old goose are so called, which are sent up to the London market for sale.

CAIRNS. Heaps of stones in a conical form, which are frequently to be met with in Scotland and Wales.

CAISSON. A wooden chest filled with bombs or powder, and buried under some work to blow it up; also the frame used in laying the foundations of a bridge.

CALAMANCO. A kind of woollen stuff manufactured in England and Brabant. It has a fine gloss, and is chequered in the warp.

CALAMARIÆ. The third natural order of plants in the Linnaean system, containing the reeds resembling grasses.

CALAMINARIS, or **LAPIS CALAMINARIS**. The calamine stone, or oxide of zinc among the chymists; a kind of bituminous fossil earth, which, when mixed with copper, produces brass.

CALCAREOUS. The third order of the class earths in the system of Gmelin, consisting of chalk, limestone, spar, gypsum, marble, marl.

CALCINATION. The solution of a mixed body by the means of heat or any corroding substance, as mercury, aquafortis, &c., whereby it is reduced to powder. The body so reduced was named a calx, in common language ainder, and in chymistry an oxide.

CALCULATION. The act of computing

found in the more northern parts of central Asia. The Asiatic species is generally used in the warm parts of Asia and Africa. This animal is borne in coats of arms.



CAMELOPAID or **GIRAFFE**. A remarkable animal found only in the middle and southern regions of Africa. It is the tallest of all animals, being about 17 feet high. It feeds on the tops of trees. It is very timid but defends itself, when attacked, by kicking. It is capable of putting out its tongue to the length of 12 inches, and has so flexible a neck it may be reduced at the point he is to pass through a lady's ring. There are two living animals of this kind now in Europe.



CAMEO. A sort of onyx stone, having various figures upon it; in Natural History, known of petrified wood.

CAMERA LUCIDA. An optical instrument invented by the Hook, for the purpose of making the image of any object

appear on the wall in a light room, either by day or night. This name has since been applied to an instrument invented by Dr. Wallaston, for drawing objects in true perspective.

CAMERA OBSCURA. An optical machine or apparatus, representing an artificial eye, by which the images of external objects, received through a double convex glass, are shown distinctly, and in their native colours.



CAMLET. A sort of stuff originally made of camel's hair and silk mixed, but now of wool and silk.

CAMP. The spot of ground where an army rests and intrenches itself.

CAMPAIGN. The space of time during which an army is kept in the field.

CAMPANACEÆ. One of Linnaeus's natural order of flowers, including those that are bell-shaped, as the campanula, convolvulus, &c.

CAMPANULA, or **BELL FLOWER**. A sort of plants, mostly perennials, and bearing a bell-shaped flower.

CAMPHOR. A white concrete crystalline substance, of an acrid bitter taste, and a penetrating smell. It was formerly supposed to be a resin which was procured from a tree, much like a walnut tree, growing in Borneo, and therefore called the camphor tree; but modern chymists consider it to be a peculiar substance not to be classed either with the oils or the resins. It is procured from the volatile oil of several plants, as rosemary, sage, lavender, &c.

CAN. A drinking vessel; particularly that used by sailors.

CANAL. An artificial river, provided with locks and sluices, and sustained by banks and mounds.

CANARY BIRD. A singing bird of a greenish colour, formerly bred in the Canaries, and now here also. These birds are now bred in all parts of Europe and America.

charge; the principal parts of a
 the muzzle, or mouth, the en-
 the bore or the hollow part which
 the charge; the chase, or the whole
 on the muzzle to the trunnions;
 trunnions, or two solid cylindrical
 of metal, which project from the
 by which it is supported on the
 the vent, which is small fissure
 the touchhole, a small hole pierc-
 ed of the bore or chamber, for the
 of priming the piece with powder,
 to induce the tube in order, when
 it is set fire to the charge; the cham-
 ber part of the bore or hollow of the
 where the powder is lodged which
 the charge; the breech, the solid
 which, the hindermost part of which
 of the caucel. That part next to
 which is called the reinforce, which
 is stronger to resist the force of the
 er. The ornaments of a cannon are
 the muzzle, astragal, and fillets, the close
 and fillets, the reinforce ring, and
 breech mouldings. The first cannon
 was invented in 1294, on the coast of Den-



CANOE. A little vessel or boat used
 by the Indians, which is made all of one
 piece of the trunk of a tree hollowed.

CANON. A law, or ordinance of the
 church. The Canon Law consists of rules
 drawn from Scripture, from the writings
 of the ancient fathers, from the ordinances
 of councils, and the decrees of the pope.

CANON. A dignity in a cathedral
 church.

CANON OF SCRIPTURE. That body
 of the Holy Scripture which serves
 as a rule of faith and practice.

CANONIZATION. The act of writing
 the names of the number of the saints,
 which is the practice of the Romish church,
 and performed by the pope.

CANOPUS (in Astronomy). A bright
 star of the first magnitude, in the rudder
 of the ship Argo.

CANTATA. A piece of music for six
 voices, or more voices, chiefly intended for a
 single voice with a thorough bass.

CANTHAR. A settling stone for both
 officers and men; also a small vessel of tin

plate or wood, in which soldiers on their
 march carry their liquor.

CANTERBURY-BELL. A fine flower
 much cultivated in gardens. The plant is
 biennial, and the flower is white or blue,
 and of an oblong figure.

CANTHARIDES, or **SPARTAN FLIES.**
 A species of shining beetle, powdered and
 used for raising blisters.

CANTON. A division or small part
 of a country, such as the cantons of Swit-
 zerland.

CANTON (in Heraldry). An ordinary,
 so called because it occupies but a cantel
 or corner of the escutcheon.

CANVAS, or **CANYASS.** The cloth
 on which painters usually draw their pic-
 tures; and also that of which the sails of
 vessels are made.

CAP. In general, any covering for the
 head; sometimes of a particular make, as
 a cartilin's cap.

CAP. The name of several things simi-
 lar in figure or use, as the cap of a great
 gun, a piece of lead laid over the touchhole;
 the cap in a ship, the square piece of tim-
 ber placed over the head of a mast.

CAP (in Architecture). The uppermost
 part of any member, as the capital of a
 column, the cornice of a door, &c.

CAP OF MAINTENANCE (in Herald-
 ry). One of the regalia or ornaments of
 state, carried before the king of Great
 Britain at the coronation and other great
 solemnities.

CAPE (in Geography). A promontory
 or headland projecting into the sea farther
 than the rest of the coast, as the Cape of
 Good Hope, Cape St. Vincent, &c.

CAPELLA. A star of the first mag-
 nitude in Auriga.

CAPER-BUSH. A shrub or tree, the
 seed or flower of which is converted into
 a pickle called caper.

CAPILLARY. An epithet for what is
 as fine as a hair. Capillary tubes are pipes
 of the fineness of a hair, by which various
 phenomena in physics and hydraulics are
 displayed.

Capillary vessels, in Anatomy,
 the smallest and extreme parts of the in-
 numerable ramifications of the veins and ar-
 teries.

CAPITAL. The chief or head of a thing.

CAPITAL (in Geography). The chief
 town.

CAPITAL (in Architecture). The upper
 most part of a column, serving as the
 head.

CAPITAL (in Printing). The large let-
 ters, which serve as initials, or in titles.

CAPITAL (in Commerce). The stock
 of fund of a trading company.

CARDIAC. Medicines that tend to strengthen the heart.

CARDINAL. A dignitary in the Roman Church, and one of its chief governors, of whom there are seventy in number. They constitute a college, by and from whom the pope is chosen.

CARDINAL POINTS. The four points or divisions of the horizon, namely, the north, south, east, and west.

CARDINAL'S CAP, or CARDINAL FLOWER. A plant so called because its flower, by the intense redness of its colour, seems to simulate the sкарlet cap of a cardinal.

CARDINAL'S CAP, or HAT. A cap or hat of a peculiar form, which is worn by cardinals.



CARDINAL VIRTUES. The four virtues of prudence, temperance, justice, and fortitude.

CARDS. Pieces of pasteboard of an oblong figure, and different sizes, made into packs of 22 in number, and used by way of amusement in different games. They are painted with various figures, namely, hearts, spades, diamonds, clubs, and kings and queens. They are said to have been introduced in the fourteenth century, by Henry Charles VI. king of France, who had fallen into a state of melancholy. By the hearts, clubs, were meant the Jews, Christians, and Mohammedans, instead of which the Spaniards use castles. The spades, in Spanish espada, swords, were intended to represent the nobility, who wear swords or pikes. The diamonds, or carreaux, designated the order of citizens in merchandise. The treble, tall oak or clover grass, was an emblem of the bourgeoisie; this is called clubs with us because the Spaniards have hearts, clubs, and their cards. The knaves represent the servants of the knights. The four kings were intended for David, Alexander, Caesar, and Charlemagne, who established the four great monarchies of the Jews, Greeks, Romans, and Franks. The four queens were supposed to represent Argine, i. e. virgin, the queen by descent, Esther, Judith, and Pallas. The months or blocks used

for making cards were exactly like those which were shortly afterwards used in the making of books.

CAREENING. The heaving a ship on one side, for the purpose of clearing or sidling the other side.

CARGO (in Commerce). The merchandise and effects that are laden on board a ship.

CARCATURE (From the Italian Carcatura). A distorted way of representing objects, so as to make them appear ridiculous.

CARRIES. A disease of the bones; a kind of rottenness.

CARINA. A keel; the name given by Linnaeus to the lower staminate petal of a papilionaceous or butterfly-shaped flower, as the keel, which resembles the keel of a ship in its shape.

CARLENE THISTLE. A plant of the thistle kind, which is sometimes used medicinally.

CARLINGS. Short pieces of timber which serve to support and strengthen the larger beams in a ship.

CARMAN. One who is employed in carrying goods from the wharfs to the merchant's warehouses.

CARMELETES. An order of monks who were first founded on Mount Carmel.

CARMINATIVES. Medicines which expel wind.

CARMINE. A stain or powder of a deep red colour, procured from cochineal, and used for painting in miniature.

CARNATION. A beautiful sort of clove pink, having its bright colours equally marked all over the flowers.

CARNATION (in Painting). The flesh colour.

CARNIVAL, or CARNAVAL. A season of mirth and festivity, particularly observed by the Italians and generally by Catholics from Twelfth Day until Lent.

CARNIVOROUS. An epithet applied to animals that feed on flesh.

CAROTIDE. Two arteries in the neck, which convey the blood from the aorta to the brain.

CARP. A fresh-water fish fitted for stocking ponds, as it spawns three times a year.

CARPENTER'S RULE. A tool generally used in taking dimensions, and cutting up the contents of timber and the artificer's work.

CARPENTRY. The art of cutting framing, and joining large pieces of wood for the uses of building; it is subdivided into architecture, and is divided into House Carpentry and Ship Carpentry. Carpen-

try differs from joining only inasmuch as the work is coarser, larger, and not so artistic.

CARPET. A sort of stuff wrought either with the needle or the loom, and used as a covering for the floor. Persian and Turkish carpets are most in esteem.

CARRIAGE. In general, a vehicle for carrying goods and persons; in Gunnery, the machine upon which the gun is mounted; in Carpentry, the frame of timber-work which supports the steps of wooden stairs.

CARRIERS. All persons carrying goods for hire; also a sort of pigeons that are used in conveying letters to a distance.

CABBOT. A fleshy root, cultivated as a garden vegetable.

CART. A small carriage with two wheels, used in husbandry.

CART-HORSE. An inferior kind of horse, used in husbandry.

CARTE BLANCHE. A blank paper, delivered to a person to be filled up as he pleases; applied generally in the sense of unlimited terms granted to a person.

CARTEL. An agreement between two states at war for the exchange of prisoners.

CARTILAGE. A part of the animal body, harder and drier than a ligament, and softer than a bone; its use is to render the articulation of the bones more easy.

CARTILAGINOUS FISHES. Those having cartilaginous instead of bony skeletons.

CARTOON. A design made on strong paper, to be afterwards calked through, and transferred to the fresh plaster of a wall to be painted in fresco, such as the famous cartoons of Raphael now in the palace of Hampton Court, England.

CARTOUCH. A case of wood holding about four hundred musket balls, besides iron balls, from six to ten, to be fired out of a bow-*see*.

CARTOUCHES. Blocks of medallions used in the uniforms of regimented squadrons; also ornaments representing a scroll of paper.

CARTRIDGE. A case of paper or parchment filled with gunpowder, and used in the charging of guns.

CARVEL. A small ship or fly-boat.

CARVING. The art of cutting wood into various forms and figures.

CARYATIDES (See Architecture). A sort of columns or pillars shaped like the bodies of women, and in the dress of the Carians people. They were intended to represent the Carian women who were taken captives by the Athenians.

CARTOPHYLLÆA. A natural order

of plants, consisting of such as have pluck-like flowers.

CASE. Any outside covering which serves to enclose a thing entirely, as packing cases or knife cases; in Carpentry, the case of a door is the wooden frame, in which it is hung; in Printing, it is a frame of wood, with numerous small partitions for the letters.

CASE (in Grammar). An accident of nouns which have different inflections or terminations.

CASE-HARDENING. A method of preparing iron, so as to render its outer surface hard, and capable of resisting any edged tool.

CASE-KNIFE. A large kitchen-knife.

CASEMENT. A window that opens on hinges.

CAPE-SHOT. Musket balls, stones, old iron, &c. put into cases and shot out of great guns.

CASH. Ready money, distinguished from bills.

CAPHEW CURASSÓW. A bird about the size of a hen turkey found in Jamaica and the northern parts of South America. (See CURASSÓW.)

CAPHEW-NUT. The fruit of the caphew, that abounds in Jamaica and Barbadoes. From this nut is expressed a juice that is made into a pleasant wine.



CARRIER. The keeper of the cash or money, which it is his business to receive and pay.

CARRIERS OF THE BANK. Officers of the Bank who sign the notes that are issued out.

CASHIERING. A dishonourable dismissal of an officer or soldier from the service.

CASHMERE. A Downy or fine

which gives name to a valuable kind of cloth, and finely shawls manufactured there from the wool of a species of goat peculiar to Tibet.

CASSAVA. An American tree, bearing a bell-shaped flower. Its root, when dried and ground to flour, was converted into bread by the original inhabitants.

CASSIA FISTULA, or **PURGING TREE.** A very large tree, a native of Alexandria and the West Indies, which bears a long cylindrical taper or flat pod, divided into many cells, in each of which is a hard seed lodged in a clammy black substance, which is purgative, and is known in medicine by the name of the Purging Cassia, or, simply, Cassia.

CASSIOPEIA. A northern constellation.

CASSIQUE, or CACIQUE. A sovereign lord among the ancient Americans.

CASSOCK. A vestment worn by clergymen under their gowns.

CASSOWARY. A large bird of the ostrich kind, found only in Java, and the Asiatic Islands. It is second in size only to the Ostrich.

CAST. The name of figures or small statues in bronze.

CASTE. The name of different tribes in Hindostan, of which the Brahmins is the most noble. The second is that of the soldiers, the third, that of merchants and husbandmen, the fourth that of labourers in various employments.

CASTING (among Sculptors). The taking of casts or impressions of figures, busts, &c.; is a fine art, the running of molten into any mould prepared for this purpose.

CASTLE. A fortress or place rendered defensible by nature and art. Castles, being an emblem of grandeur, are frequently borne in coats of arms.



CAST IRON. The iron as it is extracted from the ores by means of casting.

CASTOR. A soft, grayish yellow substance found in the bags of the beaver,

near its groin. In a warm air, the castor grows by degrees hard, brittle, and of a dark colour.

CAT. A well known animal nearly allied to the tiger, is either domestic or wild. The wild or mountain cat, is borne in some of arms as an emblem of liberty, vigilance, and forecast.

The animals of the cat family known in North America, are the Cougar, vulgarly called Panther; the wild cat, or catamount, an animal three times the size of the domestic cat, and having a short tail; and the Lynx. The domestic cat is a tame variety of the European cat. It is not a native of this country.



CAT. A sea term for a ship usually employed in the coal trade; also a sort of strong tackle for drawing up the anchor; also a military term for a kind of shed under which soldiers conceal themselves while filling up a ditch or mining a wall.

CATACOMBS. Grottoes or subterraneous places for the burial of the dead, frequently found in Egypt and in Italy.

CATALOGUE. A list of books or any other matters, arranged in order, for purposes of sale or reference.

CATAMARAN. A sort of floating raft originally used in China as a fishing boat.

CATABACT. A high, steep place or precipice in the channel of a river, caused by rocks or other obstacles stopping the course of the stream. Niagara is the most stupendous cataract in the world. Also a disease in the eye, arising from a little film or speck, which swimming in the aqueous humour, and getting before the pupil, causes a dimness of sight or blindness.

CATARRH. A defluxion from the head occasioned by cold.

CAT BIRD. A bird common in the United States of a bluish gray colour which makes a noise very similar to the mewing of a cat. It is a pretty good singer; its song consists of imitations of the notes of other birds.

CAT CALB. A harsh sort of pipe, imitating the howl of a cat.

CAUL. A membrane in the abdomen which serves to cover the intestines.

CAULIFLOWER. The finest sort of cabbage, with a seeded head.

CAUSEWAY, or CAUSEY. A path raised above the level of the ground, and paved with stones or gravel.

CAUSTIC CURVE. A curve formed by the concourse or coincidence of the rays of light, reflected or refracted from any other curve.

CAUSTICS. Medicines which, when applied to any part of the body, burn it to a hard crust.

CAUTERY. Any burning application.

CAYENNE PEPPER. A powder prepared from the pods of several species of the papawain, which originally came from Cayenne, but is now brought from both the Indies.

CAYMAN. The American alligator.
C.B. in England, Companion of the Bath.
E. C. Calves College; C. C. C. Corpus Christi College.

CEDAR. A well known evergreen, very like the juniper in appearance, which delights in cold mountainous places. The leaves are much narrower than those of the pine tree, and the seeds are produced in large cones. The most celebrated species is that of Lebanon, which is also found in Russia and which is introduced by transplanting into various parts of Europe and America.

CEILING. The inside of the roof or top of an apartment, in distinction from the surface of a floor.

CELERY. A sort of parsley much used in winter salads.

CELESTIAL GLOBE. An artificial representation of the heavens.

CELL. The apartment or chamber of a monk or nun; also a small close apartment in a prison.

CELLAR. A place, commonly under ground, which serves as a store-room.

CELLS (in Anatomy). Bags or bladders whose fluids are lodged; in Botany, the partitions in the husks or pods of plants where the seeds are lodged.

CELLULAR MEMBRANE. One of the largest membranes in the human body, of a vascular texture, fitted for holding the fat.

CEMENT. A compound of pitch, tobacco, plaster of Paris, &c. used by masons and other artificers for making their work firm.

CEMETERY. A repository for the dead.

CENITH. A magistrates among the Romans, who sat and taxed men's houses, and also punished any acts of immorality.

CENSORS. In modern times, persons of learning appointed to examine all books before they go to press, and to see that they contain nothing contrary to good morals. This is confined to despotic countries.

CENT. An abbreviation, in Commerce, for centum, a hundred, as five per cent; that is, five pounds interest, discount, or profit, upon every hundred.

CENTAURUS. One of the forty-eight old constellations in the southern hemisphere.

CENTRE. The middle point of anything, especially of a circle or sphere.

CENTRE-BIT. A carpenter's tool, which makes a cylindrical excavation by turning on an axis or centre.



CENTRE OF GRAVITY. That point about which all the parts of a body in any situation balance each other.

CENTRIFUGAL. An epithet for that force which causes a body revolving about a centre, or about another body, to recede from it.

CENTRIFETAL. An epithet for that force which causes all bodies to tend towards some point as a centre.

CENTURION. A military officer among the Romans, who had the command of a hundred men.

CEKES (in the Hebraic Mythology). The daughter of Saturn and Vesta, and



goddess of corn and fruits. She first taught man the art of cultivating the ground.

CEN. A membrane in the abdomen
serves to cover the intestines.

CHLIFLOWER. The finest sort of
figs, with a seeded head.

CHURCHWAY, or CAUSEY. A path
laid above the level of the ground, and
laid with stones or gravel.

CHROMATIC CURVE. A curve formed
by the concurrence or coincidence of the
of light, reflected or refracted from
other curve.

CHURCH. Medicines which, when
used in any part of the body, burn it
and harden it.

CHURCH. Any burning application.

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pared from the pods of several species of
capsicum, which originally came from
America, but is now brought from both
Indies.

CHURCHMAN. The American alligator.

CHURCH. In England, Companion of the Bath.

CHURCH. Calais College: C. U. C. Corpus
Christi College.

CHURCH. A well known evergreen, very
diffuse in appearance, which grows
in cold mountainous places. The
leaves are much narrower than those of
the pine tree, and the seeds are produced
in cone-like cones. The most celebrated
specimen of Lebanon, which is also found
in Asia and which is introduced by trans-
porting into various parts of Europe and
Africa.

CHURCHING. The inside of the roof or
of an apartment, in distinction from
the surface of a floor.

CHURCHERY. A sort of parley much used
in the solids.

CHURCH GLOVE. An artificial
representation of the heavens.

CHURCH. The apartment or chamber of a
house (or man); also a small close apartment
in a prison.

CHURCH. A place, commonly under
ground, which serves as a store-room.

CHURCH (in Anatomy). Bags or bladders
which are lodged in the leaves or pods of plants
and are the seeds set lodged.

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and is used for holding the

CHURCH. A compound of pitch, brick-
work, plaster of Paris, &c. used by chemists
and other artificers for making their work

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situation balance each other.

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force which causes a body revolving about
a centre, or about another body, to recede
from it.

CENTRIFUGAL. An epithet for that
force which causes all bodies to tend to-
wards some point as a centre.

CENTURION. A military officer among
the Romans, who had the command of a
hundred men.

CERES (in the Italian Mythology).
The daughter of Saturn and Vesta, and



goddess of corn and fruits. She first taught
men the art of cultivating the ground.

CHAMBER OF A MINE. The place where the powder is confined, that is to be used for blowing up the works.

CHAMBERLAIN (in England). An officer who has the care of any particular chamber or place, as the Lord Great Chamberlain of England, a great officer of state, to whom belongs the government of the palace at Westminster; the Chamberlain of London, who receives the rents of the city, and deposits them in the chamber or treasury of London.

CHAMBERS (in England). Rooms or apartments belonging to the Inns of court; in Anatomy, two spaces between the crystalline lens and the cornea of the eye, divided off by the iris.

CHAMELEON. See CHAMÆLEON.

CHAMOIS, or, The Wild Goat, which inhabits the Alpine mountains, having horns erect, round, and smooth.



CHAMOMILE. An odoriferous plant, which has a very bitter taste, but many medicinal virtues.

CHAMPAGNE. A fine French wine, so called from Cismagne, a former province of France.

CHAMPION (in Law). The combatant who undertook to fight in the trial by battle, formerly in use in England.

CHANCE-MEDLEY (in Law). The accidental killing of a man, not without the fault of the killer, but without any evil intent.

CHANCEL. That part of a church between the altar and communion table, and the rails or balustrade by which it is enclosed. This applies particularly to Catholic, and Episcopal Churches.

CHANCELLOR (in England). An officer of state, known by the title of the Lord High Chancellor of England, and the chief person next to the sovereign in the administration of justice; the Chancellor of the Exchequer is an officer who has the principal management of the King's revenue. The term is applied to the first Judge of the Chancery Court in the State of New York.

CHANCERY, The Court of (in England). The highest court of judicature in the realm next to the Parliament. The Lord Chancellor presides in this court and is assisted by the Vice-chancellor, the Master of the Rolls, the Masters in Chancery, &c.

CHANCES, DOCTRINE OF. A branch of modern mathematics, which treats of the probabilities of certain events taking place.

CHANNEL. The middle or deepest part of any sea; also a strait or narrow sea between two lands, as St. George's Channel, between Great Britain and Ireland, and the British or English Channel, properly called the Channel, between England and France.

CHANTREY. A chapel anciently joined to some cathedral or parish, where mass used to be said daily for the souls of the founders.

CHAOS. A dark and rude mass of matter, out of which the heathen philosophers supposed the world was formed.

CHAPEL. In England, a smaller kind of church, which, being built for the convenience of the parish church, is denominated a chapel of ease.

CHAPERON. A hood or cap, particularly that worn by the knights of the garter.

CHAPLAIN. In England, originally signified one who performed divine service in a chapel, but now more commonly one who attends upon the king, or other person of quality, for the performance of his clerical duties in the family. The term is also applied to the clergyman attached to the navy or army.

CHAPLET. A wreath or garland worn about the head. Chaplets are borne in coats of arms, as trophies or ensigns of military prowess.

CHAPTER. A body of the clergy belonging to a cathedral, collegiate, or conventual church; also the place of their meeting, in England.

CHARACTER. Any mark which serves as a sign to denote some particular object, as the astronomical characters, mathematical characters, &c.

CHARADE. A sort of riddle, the subject of which is a word of one or two syllables.

CHARCOAL. The substance from wood half burnt, which is much used in the manufacture of gunpowder.

CHARDS OF ARTHUROKES. The leaves of artichoke plants bound in straw till they lose part of their bitterness, and become white.

is seldom employed except as timber.

CHALICE. Literally a knight or champion, answering to the English cavalier.

CHAUX DE PISE (in Fortification.)

A sort of turpikes or tournepikes, consisting of spurs of wood set into a plaster, and armed with a short spike, to point all ways. They serve to support the trenches.



CHIRON (in Heraldry). One of the noble ordinaries, representing two of a house joined together in chief, as carpenters set on the highest part of a house to support the roof.



CHIRO OSCURO. See *Osario Oscuro*.

CHUCKWEED. An annual weed (*in Heraldry*). One of the humble ordinaries, which occupies the upper part of the scutcheon. As the chief part of a man, so is this the principal part of the scutcheon, and contains a third part of the field.



CHIEF. The head rank of a tribe of people.

CHIEF'S OVERTURE. A holy day of the Church of England, observed, which is supposed to have been given by the Holy Spirit to many of the apostles.

general, having the office of Steward of the Chiltern Hundreds attached to it. By the acceptance of this office, any member of parliament is enabled to vacate his seat; for as no member can retain his seat after accepting an office, so taken into every member wishing to vacate his seat is obliged to do it in this manner; that is, in the usual phrase, 'accept the Chiltern Hundreds.'

CHIMERA (in the Grecian Mythology). A monster supposed to be like a lion in the forepart, a dragon behind, and a goat in the middle.

CHIMES OF A CLOCK. A particular apparatus, by which the clock at certain times is enabled to play certain tunes.

CHIMNEY. That part of a house which, by the means of a funnel, serves to carry off the smoke. Various devices have been tried to prevent the smoking of chimneys, as the carrying them up zigzag, or narrower at the top than at the bottom, and the like, which have all been found ineffectual. It is now supposed that chimneys should be built as nearly perpendicular as possible, should be free from all raggedness in the inside, and be a little wider at the top than at the base.

CHINTZ. A fine Indian painted calico. Also cotton goods made elsewhere in imitation of it.

CHIP SQUIRREL. A beautiful little striped animal common in the woods of North America.

CHINCHILLA. A beautiful little animal of Peru, probably of the rat kind, which produces a fur much in use.



CHROMASCY. The pretended art of fomenting a person's fortune by the lines in his hands.

CHIVALRY. The name anciently given to knightship, a military dignity; also the martial exploits and dignifications of a knight. Chivalry, as a military dignity, is supposed by some to have taken its rise from the promotion, because those exploits they gave rise to many chivalrous exploits.

and feats of arms, but it is evident that its origin may be traced much higher, to the northern nations who settled in Europe on the decline of the Roman empire, whose martial habits and temper led them to make valour and prowess, the only sources of honour and distinction.

CHIVES. A sort of small onion.

CHLORENE. A gaseous body of a green yellow colour.

CHLORITES, A kind of green jasper, almost as petricid as the coarse emerald.

CHOCOLATE (in Concoction). A kind of paste, prepared chiefly from the cocoa nut, with a mixture of other ingredients.

CHOCOLATE TREE. A species of the cocoa tree, from the fruit of which the chocolate is prepared.

CHOIL. That part of a cathedral where the service is performed.

CHOKEDAMP (in Mining). The noxious air occasionally found at the bottom of mines.

CHOLEPPEAR. A very rough tasted pea.

CHOLERA MORBUS. A disease consisting of a violent perturbation in the belly, accompanied with a discharge of bile upwards and downwards.

CHORD (in Geometry). A right line, drawn from one part of an arc of a circle to another.

CHORDS (in Music). Strings, by the vibration of which the sensation of sound is excited.

CHOROGRAPHY. A part of geography, which treats of the description of particular countries.

CHORUS. A company of persons all singing in concert.

CHRISM. An unction or anointing of children, which was formerly practised as soon as they were born.

CHRIST. Which properly signifies anointed, is the name of the ever blessed Redeemer of the world.

CHRISTENDOM. The whole Christian world.

CHRISTENING. The ceremony of admitting a person into the communion of the Christian church, by means of baptism, or sprinkling with water. It is a term particularly applied to infant baptism.

CHRISTIAN. One who professes the Christian religion.

CHRISTMAS. A festival observed in the Christian church, on the twenty-fifth of December, in commemoration of our Saviour's nativity.

CHROMA. A sort kind of colour.

CHROMATICS. That part of optics, which explains the several properties of light and colour.

CHRONICAL. An epithet for *Discourses*, of long duration.

CHRONOLOGY. The science which teaches the measures and divisions of time. The divisions of time are either natural or artificial; the natural divisions of time are the year, month, week, day, and hour, deduced from the motions of the heavenly bodies, and suited to the purposes of civil life; the artificial divisions of time are the cycle or period, the epoch, and the æra or æra, which have been framed for the purposes of history.

CHRONOLOGY, HISTORY OF. Chronology, as regards the natural divisions of time, was doubtless coeval with the creation, for we learn from the sacred historian that the work of creation was performed within the period of a week, or seven days, whence this division was observed by the Hebrews, and from them transmitted to the Egyptians and other nations. But the Persians are said to have been ignorant of such a division. The Greeks had weeks of ten days, and the Romans weeks of eight days. It is evident from the names of the days of the week among most European nations, that we derive this division from the ancient Celts or Scythians, who, in all probability, at the dispersion of mankind after the deluge, borrowed this patriarchal mode of measuring time. The year is that division of time which was regulated by the motions of the sun, being that period of time in which the sun passes through the signs of the zodiac. This division was doubtless formed at the time that astronomical observations were first made; but the Egyptians are the first people on record who formed this division, which they made to consist of 360 days, and subdivided into 12 months of 30 days each; to these Tychemegistes is said to have added five more days. The ancient Jewish year was the same as the Egyptian; but on their departure from Egypt they adopted the lunar year, consisting of 30 days and 29 days alternately, and in order to make it agree with the solar year, they sometimes added 11 or 12 days at the end of the year, and sometimes a whole month after a certain number of years. The Greeks also regulated by the same kind of year. The ancient Roman year was also lunar, and at first consisted of 10 months of 30 and 31 days; two months were afterwards added by Numa Pompilius, which consisted of 29 and 30 days each, in the whole 355 days. Julius Cæsar first re-

formed the calendar, and adopted the solar year of 365 days in the common year, with the addition of a day in every fourth year, called *bissextile*, or *Leap Year*; in order to adjust the computation to the true solar year, it was then reckoned 365 days 6 hours, but as the true solar year was found to be 365 days, 5 hours, 48 minutes, 46 seconds, a further reformation of this calendar has been made on the assumption that the solar year consists of 365 days, 5 hours, and 49 minutes. According to this computation, which was made by Pope Gregory XIII. in 1582, and thence called the *Gregorian style*, an intercalation of one day in February should be made every fourth year, and that the sixteen hundredth year of the Christian *era*, and every fourth century hereafter, should be a *bissextile* or *leap year*. One day consequently is to be intercalated in the years 2000, 2400, 2800, &c.; but in the intervening centuries 1700, 1800, 1900, 2100, &c. it is to be suppressed, and they are to be reckoned common. Moreover as the equinoxes had fallen back ten days and the full moons four days, since the Nicene council, a. d. 325, he ordained that ten days should be cut off after the fourth of October, so that the fifth should be the fifteenth. This mode of reckoning, which is now introduced in most countries of Europe, is called the *New Style*, to distinguish it from the *Old style*, or the former reckoning. This is however still not perfectly correct, for as the excess of the Julian year, within the space four centuries, is three days, one hour, and twenty minutes, that of the Gregorian is one hour and twenty minutes within the same period, or about a day in 7000 years.

Besides these alterations in the form and length of the year, attempts had been made by the Greeks at an early period to adjust in their reckonings the lunar year to the solar year, for which purpose they hit on the device of framing cycles or series of years, which being numbered in an arbitrary manner from first to last, should return to the same point of reckoning from which they commenced. The first of these cycles was framed by Clisthenes, about 322 years before Christ. It consisted of eight years, or 9922 days, during the course of which all lunations would elapse of 29 and 30 days alternately, together with three intercalary months. By this cycle he proposed to adjust the lunar to the solar year, so that at the conclusion of each cycle the moon should be recovered, but he failed in his object, for at the end of 16 years there was found to be an error of three days, which in the space of 160 years would

amount to more than a whole month. The *Metonic Cycle*, framed by Meton at the commencement of the Peloponnesian war, for the purpose of curvetting the *annus*, consisted of 19 years, at the end of which the sun and moon would be in the same quarter. This cycle, which was so much esteemed by the Greeks as to be called the *Golden Number*, nevertheless failed in the amount of eight or ten hours at the end of one period, and of three days in 133 years. The cycle of Eudoxus was an improvement on that of Clisthenes, by subtracting a month of 30 days from a period of 109 years, which was supposed to be equal to the difference that would subsist at the expiration of that period between the solar and the lunar motions. The *Callippic Period*, contrived by Callippus at the new moon of the summer s. e. 321, was intended as an improvement upon that of Meton, which it multiplied by four, so as to make a period of 76 years, or 27,750 days. As 240 lunations are equal to 27,750 days, 9 hours, 5 minutes, and 9 seconds, which is only $46^{\circ} 29' 27''$ less than 76 solar tropical years, it follows that the lunar motion, according to this calculation, did not vary more than 14 hours, 13 minutes, and 22 seconds, wherefore this period has been chosen to form the basis to the modern cycle of the moon, which is said to have commenced one year before the Christian *era*. There is also a solar cycle, consisting of a series of 96 years, at the completion of which the same order of *bissextile* and *dominical* letters return, a cycle which came into use in the early ages of Christianity; besides the cycle of indiction, or a series of 15 years, introduced in the reign of Constantine; the *Epacta*, or excesses of any solar revolutions above the lunar, which were introduced for the purpose of ascertaining the time when Easter ought to be celebrated; the *Dionysian Period*, or series of 532 years, formed by Dionysius Exiguus, a Roman abbot, by multiplying the solar cycle 96 into the lunar 19, for the purpose of restoring the new and full moons to the same day; and lastly, the *Julian Period*, invented by Scaliger, and so called because it is adapted to the Julian year; this is a series of years formed by the multiplication of the solar and lunar cycles and the cycle of indiction into one another, making the sum of 7980 Julian years.

The application of chronology to history is of comparatively modern date. In Homer and other ancient writers there appears to have been no idea of recording events in any *exact* order of time. The

... for the most part combine with
... earths, and metallic oxides, and
... another important class of compounds
... salts; these are distinguished by the
... of oxygen, and that of
... the acid contains the smaller
...; thus the combination of sulphuric
... and potash is a sulphate of potash,
... of sulphurous acid with potash is
... of potash. Salts are denomi-
... which the separate qualities
... component principles are not appa-
... when the acid predominates the
... is added, and when the base
... it is denoted by the prefix
... the sulphate of potash denotes
... in its perfect state, without any
... of the sulphuric acid or the potash;
... sulphate of potash is the same salt
... in excess of acid; the subsulphate of
... the same salt with an excess of
... When an acid combines with two
... this class of compounds is distin-
... by the name of triple salts, as the
... of potash and soda, that is the
... of tartaric acid with potash
... salts.

... combinations of metals with each
... are called alloys, except those which
... form with any other metal, which
... are called amalgams.

... list of compound substances most
... of several compound combustibles,
... resins, bitumens, oils, and
... which are formed by the combination of
... with alkalies, earth, and metallic
... Besides, water and atmospheric
... which had hitherto been looked upon
... simple substances, are now ranked
... the compounds.

... action consists of two parts,
... decomposition and combination.
... the constituent parts of bodies are
... from each other, the bodies are
... be decomposed, and the act of
... them is called decomposition:
... when bodies are so in-
... as to form new and distinct
... this chymical union is distin-
... by the name of combination. The
... investigation of bodies therefore
... in two ways, namely, by analysis,
... the separation of bodies by a series
... operations and combinations, to
... the knowledge of the constituent
... and synthesis, by a series of pro-
... from new compounds, and these
... of investigation was accompany-
... on each other; thus, Epsom salts
... analyzed and shown to consist of
... acid and magnesia, or it may be

... ethetically compounded by combining
... magnesia with sulphuric acid, when Epsom
... salts, in the form of crystals, &c. in the
... result.

... chymical investigations proceed on the
... principle of attraction, in its different forms
... of affinity, cohesion, &c., and also on that
... of repulsion. The different processes re-
... quired in this investigation are solution,
... neutralization, precipitation, redissolution,
... evaporation, crystallization, fusion, diges-
... tion, calcination, distillation, sublimation,
... lexivation, reduction, sublimation, dete-
... cation, filtration, &c., each of which
... terms may be found explained in its proper
... place.

... CHEMISTRY, HISTORY OF. Chymistry
... as a practical art connected with metallur-
... gy, or the extraction of metals from their
... ores, was of high antiquity, for we learn
... from Scripture that Tubal Cain, the eighth
... from Adam, was an expert artificer in
... brass and iron. Various branches of the
... chymical art, such as the preservation of
... viatic liquors, dyeing, tanning, making
... glass, and various preparations in pharma-
... cy and cooking were in use at a very early
... period: besides the famous Egyptian philo-
... sopher, called by the Greeks Hermes, and
... the Romans Mercury, is reported to have
... been versed in many chymical arts, and
... to have been the founder of the chymical
... science, at least in that nation. From the
... Egyptians, Democritus, a Greek, learned
... the art of softening ivory, of vitrifying
... plants, and imitating precious stones, which
... he communicated to his countrymen. After
... his time we read of many metallic prepa-
... rations, as ceruse, verdigris, letharge, &c. Di-
... scorides describes the distillation of mer-
... cury from cinnabar; but their process of
... distillation consisted in the separation of
... the air, or the more subtle parts of water,
... from the rest of the matter, which was done
... by putting the matter to be distilled into a
... vessel, the mouth of which was covered
... with a wet cloth, and by this means the
... steam of the ascending vapour were con-
... densed, which were afterwards procured
... by wringing out the cloth. Such is the
... distillation spoken of by Galen, Orisostus,
... and Paulus Aegineta. After the conquests
... of the Saracens in the seventh and eighth
... centuries, chymical researches began to be
... more enlarged. Geber, Avicenna, and
... other Arabian physicians introduced into
... the materia medica many preparations
... both vegetable and mineral; but the know-
... ledge of these chymical agents, the acids
... and the alkalis, was at that time exceed-
... ingly imperfect, for, except the acetic
... acid and soda, there is no mention of these

CIRCLE. A plain figure bounded by one only, called the circumference, *C*, *D*, in which all the lines drawn to a point in the middle, called the center, as *A* *B*, *A* *C*, and *A* *D* are equal to other. The line which divides it into two equal parts is called the diameter, *D*. Every circle is supposed to be divided into 360 parts or degrees, where angles are measured by the arc of a circle thus *B* *A* *C*, which is a right angle, or to the arc *B* *C*, or 90 degrees.



CIRCUITS. In England, certain circuits in the kingdom, through which the king once a year, or oftener, to hold and administer justice. A similar system exists in the United States in reference to the national courts.

CIRCULATION (in Anatomy). The motion of the blood in a living animal; it proceeds from the heart to the parts of the body by the arteries, and returns to the heart by the veins.

CIRCUMFERENCE. The curve line bounds a circle.

CIRCUMFERENTOR. An instrument used by surveyors for taking angles.



CIRCUMFLEX. An accent in Greek thus (-), in Latin to regulate the pronunciation.

CIRCUMLOCUTION. The describing of many words, which might be said by a few.

CIRCUMSTANTIAL. An epithet in evidence drawn indirectly from circumstances, as distinguished from positive.

CIRCUMVALLEATION, OR A LINE OF CIRCUMVALLEATION. A trench or quite round a besieger's camp.

CIRCUS. A circular building at Rome, where games were exhibited; it is now used to designate a place where feats of horsemanship are exhibited. In Architecture, an assemblage of houses built so as to form a circle.

CITRIC ACID. The acid of limes.

CITRON. A species of the lemon, which is much cultivated in Persia and the warm climates of Europe.



CITY. In England, a corporate town having a bishop's see, and a cathedral town. This distinction is not always observed in common discourse, for they say the town of Ely, which is a bishop's see, and the city of Westminster, which at present has no see. In the United States the term is applied to any incorporated town, which has a mayor and aldermen. By geographical writers it is loosely applied to any large town.

CIVET CAT. An animal of the weasel kind, about two feet in length exclusive of the tail. It is a native of warm climates; but many of them are kept in Europe, particularly in Holland, for the civet. This is taken from a bag under its tail, and is a fat substance, having the smell of musk, and used as a perfume.



CIVILIAN. A doctor or professor of the civil law.

CIVIL LAW, otherwise called *HERETIC LAW.* The law of the Roman empire, derived from the laws of the republic and

COUD. A mass of vapour, such as smoke, drawn or sent out of the earth into the atmosphere. When condensed water, they fall in rain.

COVE GILLIFLOWER, or CLOVE L. A finer kind of pink cultivated in gardens.

COVER. A kind of three leaved grass (see *fol.*); it is much used as a food for calves.

CRYSYTER. An instrument for the infusion of any fluid into the body.

C. An abbreviation of company.

CACH. A carriage of pleasure, state, or war, having seats to front each other.

CACH DOG. A dog beautifully coloured with round black spots on a white ground. It is supposed to be of Dalmatian breed, and is kept as a handsome attention to a coach.

CAJUTOL. One who assists another in any office.

COAGULATION. The rendering of a body of a thicker consistence, by driving out some part of it in vapours by heat, or by the addition of some body by which it is decomposed.

CAK. See COCA.

CAKING. A sea term, for the operation of cutting two or more pieces of timber together in the centre, by means of a projecting spar.

COAL. A solid inflammable substance, of a bituminous nature, dug out of the earth and used as fuel. Coal is distinguished into several kinds.

COAL. A solid inflammable substance, of a bituminous nature, dug out of the earth and used as fuel. Coal is distinguished into several kinds, in regard to its properties it is divided into three kinds, *viz.* black coal, which is composed of a nucleus, and an earthy matter; *viz.* coal, having likewise a resinous nucleus; slate coal, which contains a quantity of argillaceous earth; and *viz.* coal, which contains only siliceous and earth.

COALMASTER. An officer in London, whose duty it is to inspect the measuring of coals that go from the wharf.

COAL MINE. An excavation regularly made under the earth, from which coals are dug. There are many coal mines in the Kingdom of England. The most important ones in the United States are those at Lehigh and Pottsville in Pennsylvania.

COAST. The edge of the land, next to the sea.

COASTER. A vessel employed in going to sea to coast along the coast.

COAT. A garment worn commonly by men; it has covering laid or done by being, as a coat of plate, &c.; in

Anatomy, the membranous cover of any part of the body, as the coats of the eye, the stomach, &c.

COAT ARMOUR, or COATS OF ARMS. Armeral ensigns or bearings, which were originally painted on the coats of arms.

COATIMOUDE. An animal shaped somewhat like a raccoon with a long snout flexible like the trunk of an Elephant. When asleep it rolls itself into a lump.

COAT OF MAIL. A piece of armour made in the form of a shirt, and wrought over with many iron rings.

COBALT. A mineral of a grey colour, consisting of silver and arsenic, which latter is obtained from it in great quantities. It has never been found pure in nature, but mostly in the state of an oxide, or alloyed with other metals.

COCAO. See COCA.

COCCULUS INDICUS. An Indian tree producing a poisonous berry, which is one of the deleterious ingredients unlawfully used in the making of beer.

COCHINEAL. An insect which infests different plants, but particularly the opuntia. This insect, when dried, is used in dyeing a rich scarlet. There is a red berry which grows on an American tree, called the *Coccus Americanus* or *Picus Indiana*, which also yields a beautiful scarlet dye.

COCHLEA (in Anatomy). The internal cavity of the ear, so called from its resemblance to the spiral shape of the cochlea, or snail's shell.

COCHLEA (in Mechanics). One of the five mechanical powers, otherwise called a screw.

COCK. The male of most birds, particularly of the well known domestic fowl in a farmyard.

COCK. The name of a part of several instruments, as that part of the lock of a musket which sustains the jaws, or piece of iron that receive the flint; also the wrought piece that covers the balance in a clock or watch; and the spout which is put into beer or water barrels, &c.

COCKCHAFER, or TEXAS BEETLE. A mischievous insect, which devours the



leaves of trees, &c. The grub, which is soft and gray, with tortoise head and

COFFERDAM. A case of piling fixed to the bed of a river, for the purpose of building a pier dry.

COFFIN. A case or box for the reception of a dead body, that is to be buried; in the veterinary art, the whole hoof of a horse's foot above the coronet.

COG. The tooth of a wheel.

COGNIZANCE (in Law). The hearing of a thing judicially; also the acknowledgment of a fine.

COGNIZANCE OF PLEAS. In England, a privilege granted by the king to a city or town to hold pleas of all contracts, &c. (See the Liberty of the franchise; in Herdery, the same as the coat).

COHESION, or ATTRACTING OF CORPUSCLES. That power by which the particles of bodies are held together; the absolute cohesion of bodies, is measured by the force necessary to pull them asunder.

COHORT. A military body among the Romans, consisting of the tenth of a legion, about 600 men.

COIF. A sort of hood or cap for the head, formerly worn in England, by women in law.

COIL. The ring or circle formed by a cable in coiling or winding it.

COIN. A piece of metal stamped with certain marks, and made current at a certain value.

COINING. The process of stamping or striking coins, which has undergone an enormous change in England, within the last few years, in consequence of the invention of machinery first made by Messrs. Bolton and Watt. The coining press is now worked by means of complicated machinery, placed in an apartment over the coining room, and connected with the steam engine. To this is attached a contrivance which it feeds itself with the blanks



is impressed, and returns them the instant they have received the impression.

There are eight of these presses fixed in the coining room in the Mint at London, which, by the aid of the machinery, may be worked by four boys, so as to strike off 20,000 pieces of money in an hour. The method of coining in the United States Mint, at Philadelphia, is for the most part peculiar to that establishment.

COINS (in Architecture). The angles formed by the two sides of any building.

COINS (in Gunnery). Large wedges of wood for altering the position of a gun.

COKE, or COAK. A hard zincous kind of charcoal, formed by the burning of black pit coal.

COLD. Not only the sensation of cold, but the state of the body which causes the sensation. If soon, cold is supposed to be a distinct substance, and that which we call a body cold, we may be understood to signify, that it absorbs caloric or heat from other bodies.

COLEOPTERA. The first order of insects in the Linnean system, comprehending those with four wings, as the beetle, glowworm, ladybird, leather eater, &c.

COLEWORT, or KALE. A variety of the cabbage, which thrives in the winter, and improves from the action of the frost upon it.

COLIC. A violent pain in the abdomen, so called from the colon, the intestine formerly supposed to be affected.

COLLAR (in Heridry). An ornament for the neck, worn by knights, such as the collar of the order of the Garter is the subjoined figure



COLLATERAL (in Law). A term for what is side ways, or not direct, as collateral kinsmen, those who are not descended from one common stock, as the issue of two sons, who are collateral kinsmen to one another.

COLLATING (among Book-binders). The counting the whole number of sheets belonging to a book, in order to see if they are all printed properly.

COLLATION OF A BENEFICE. In England, the bestowing of a benefice by the bishop, when he has the right of pre-

the light, numerous, and pleasant kind, ordinarily intended to ridicule the follies of man.

COMET. An opaque, spherical, and solid body, like a planet, performing revolutions round the sun in elliptical orbits, which are the axis in one of the foci. It is divided into the nucleus or dense part; the tail; the coma, a faint light surrounding the head; and the fan, which is the long train of light by which these bodies are distinguished. The comet is sometimes true in coats of arms, when it is said to be streaming.

COMMA (in Grammar). A point marked with (,) and put between words and sentences.

COMMANDER. A military term, for a man who has the command of a body of men. The Commander in Chief of the British army is he who has the supreme command over all his majesty's land forces in Great Britain. In the naval service the Commander in Chief is the chief admiral in any port or station.

COMMANDER OF A SHIP, otherwise called the **MAJOR;** he is an officer of the British navy next in rank to a post captain.

COMMENTARY. An explanation of obscure passages in an author.

COMMERCE. A trafficking or dealing in foreign countries, by means of export and importing different commodities.

COMMERCE, HISTORY OF. The intercourse between different nations for purposes of commerce, doubtless took place even after the dispersion of mankind, for we find it recorded in holy writ that the ancients, who were settled in higher parts of Arabia, carried on a trade with Egypt in spices, linen, and myrrh, and that in one of their journeys Joseph was sold to them by his brethren. As the commodities in which they dealt, as gums and sweet scented woods, which were to be procured only from the East Indies, it is no doubt that those people and the Egyptians were among the first who made ships and voyages in the way of trade. They were succeeded by the Phoenicians, an adventurous people who were first that raised any naval power that has any figure in history. By their enterprise and industry they became a rich and luxurious people, and their cities, Tyre and Sidon, became the nurseries of the maritime. In the time of David and Solomon we find the Jewish king enriched themselves of the sustenance of the people in stripping their fleets, as the destruction of old Tyre, a new

city arose out of the ruins, which rivalled the other in wealth, industry, and commerce; and while in her glory she planted the colonies of Carthage, on the coast of Africa, which from the convenience of her situation and the industry of her inhabitants, rose to an extraordinary pitch of prosperity. The Carthaginians made themselves masters of Spain, and of the islands of Sicily and Sardinia, discovered the greatest part of the coast of Africa and the Canary Islands, traded with Britain by the route of the Shilly Islands, and are supposed to have made their way even to America. In the mean time Egypt, under the Ptolemies, also attained a high degree of grandeur and affluence. Ptolemy Philadelphus in particular, by encouraging trade, made his people rich and himself powerful. Such was the greatness of Alexandria alone, that the produce of the customs fell little short of two millions annually. Under the Romans commerce was encouraged in every part of the world where they had any influence, as may be learned not only from historians but also from various medals and inscriptions, showing that every considerable city had several colleges or trading companies.

On the decline of the empire, commerce was, owing to the unsettled state of all Europe, and the constant eruption of the barbarous tribes, almost at a stand. About this period it happened that some straggling people, either forced by necessity or led by inclination, took their abode in a few scattered islands that lay near the coast of Italy, and as these islands were separated from each other by narrow channels, full of shallows, that prevented strangers from navigating, the inhabitants found themselves protected from all hostile incursions, and in the midst of this security they followed their pursuits with so much industry and success, that those more inhospitable islands rose in the space of two centuries, that in the sixth to the eighth century, into a great city and a powerful republic. Such was the humble origin of the most potent state of Venice, which by degrees acquired an extent of commerce and a naval power that had not for a length of time its rival. She drew in herself the profits of the Indian trade, and by availing herself of every favourable conjuncture, she not only monopolized the trade of all Italy, but of all the countries in subjection to the Mahometans; but as other countries in Europe began to enlarge their commerce, Venice lost her monopoly, and this combined with her own imprudent ambition, caused the decay of her trade and the decline of her

ified the Great, who sent people as far as the East for commercial purposes, as well as for the sake of procuring information. After the Conquest, the English princes were for a long time too much engaged in political and military concerns to turn their attention to this subject, and little was done beyond that of giving encouragement to foreigners to settle in England, or to have dealings with the people. One provision of Magna Charta held forth indemnity and protection to foreign merchants in the passage to and fro, as also during their stay in the country.

Safe conducts were afterwards given to the English going abroad, which afforded them the opportunity of carrying on a traffic for their commodities with foreign nations. In consequence we find that staple markets were established both in England and on the continent, where English wool, lead, and other productions were bought and sold; and an encouragement was given in the Hanseatic League, a trading company was in consequence formed in the reign of Edward I. first called the company of Merchants trading to Calais, afterwards the Company of Merchant Adventurers trading to Hamburg. This company, which is the first of the kind in England, was incorporated by Edward I. in 1295. In the reign of Edward III. commerce and manufactures both met with considerable encouragement, but the intercourse of foreigners with England was now more encouraged than that of Englishmen with foreign nations. In consequence the staple or mart was confined to certain towns, where, by the statute of the staple it was ordained that foreigners might resort for the purchase of English commodities, but Englishmen were prohibited under great penalties from exporting any themselves. A number of new laws were made for the establishment and government of the staple, which formed that branch of the English law since known by the name of the Law-Merchant, or the encouragement of manufactures, protection was given to clothmakers to come from foreign parts and reside here. In the reign of Edward VI. the principle of confining commerce within the limit of one country was, in consequence of the recent discoveries, somewhat altered. An intercourse with Russia was commenced by means of some English adventurers, who, going on a voyage of discovery in order to find out a north west passage to China, came to the port of Archangel, where they were well received by the Muscovites,

whence they afterwards formed a company and received a charter to secure to themselves the trade to Russia. This company was incorporated in the reign of Philip and Mary, under the name of the Russia Company. The reign of Elizabeth was still more favourable to commercial adventures of every kind. Drake, Sir Walter Raleigh, and Henry de Clifford, Earl of Cumberland, distinguished themselves by their voyages and discoveries; besides which several fresh companies were formed under the auspices of this queen.

The Eastland Company was incorporated under the title of the Company of Merchants to the East; the Turkey or Levant Company was also incorporated in 1581; but the most important of all the companies which had hitherto been formed was the East India Company, which was first established by charter in 1600. In the reign of William III. a new East India Company was formed, which was for a time a rival to the old one, but in 1708 the two companies were consolidated into one; since which they have experienced considerable vicissitudes, and in consequence of the numerous wars in which they have been engaged their affairs were at one time so reduced that they were obliged to apply to the government for assistance, in consequence of which they have lost much of their independence, and are necessarily subject to more control than they were formerly. English commerce continued to increase from the reign of Elizabeth until the last war, when England had at one time almost the whole trade of the universe in its hands, with the exception of what fell to the share of the Americans. The imports of England have sometimes exceeded thirty millions, and the exports fifty millions.

COMMISSARY (in Military Affairs). An officer appointed to inspect musters, &c.; in Ecclesiastical Affairs, a deputy, or one who supplies the place of the bishop.

COMMISSION (in Law). The warrant, or letters patent by which one is authorized to exercise jurisdiction; in Military Affairs, the warrant or authority by which one holds any post in the army; in Commerce, the order by which any one trafficks or negotiates for another; also the per centage given to factors and agents for transacting the business of others.

COMMITTEE (in a Legislature). A certain number of members appointed by the house, for the examination of any matter; in general, he or they in whom any matter is referred by some body for further examination.

COMPLEMENT OF AN ARC (in Geometry). What an arc wants of 90° or a quadrant of a circle; thus the complement of 50° is 40°, and the complement of 2° is 58°.

COMPOSING. That branch of the art printing which consists in arranging the lines of letters in such an order, as to fit on for the press. This the compositor performs, by gathering a letter at a time in his composing stick, which when full composes into a frame called a galley. The several lines arranged in order in the galley he makes a page, and of several pages he makes a form.



COMPOSING-STICK. A compositor's made of iron plate, and consisting of head, the bottom, the back, the two feet, and the two screws. While the compositor is in the act of composing he holds the composing-stick in his left hand, resting the second joint of his thumb over the head of the stick, so as to keep the feet tight and square together, as he places the lines in the stick. When the composing-stick is full, he proceeds to empty it into the galley.



COMPOSITE. One of Linnaeus' orders, comprehending the plants with several flowers, as the dandelion, sunflower, &c.

COMPOSITION (in Music). A piece musically composed according to the rules of the art.

COMPOSITION (in Painting). The joining together the several parts of a picture, so as to set off the whole to the advantage.

COMPOSITION (in Commerce). An ancient manner laid between an invest-

ment define and his creditor, by which the latter accepts a part of the debt, in compensation for the whole.

COMPOSITE NUMBERS. Such numbers as some other numbers besides units will measure, as 12, which is measured by 2, 3, 4, and 6.

COMPOSITE ORDER (in Architecture). One of the five orders of architecture, so called because it is composed of the Ionic and Corinthian orders.



COMPOSITOR (among Printers). He who composes the matter for the press.

COMPOST, pronounced *COMFO* (in Husbandry). Several sorts of soils or earths and other matters mixed together, in order to make a particularly fine kind of mould.

COMPOUND. A term in botany applied to a flower consisting of several distinct lesser flowers.

COMPOUND INTEREST. Is that interest which arises from principal and interest put together.

COMPOUNDING FELONY, or *THREAT BOX* (in Law). Where the party robbed takes his goods again of the thief, upon an agreement not to prosecute.

COMPOUNDING WITH ONE'S CREDITOR. Where the debtor, not being able to pay all his debts, agrees with his creditors to pay a part.

CONCAVE LENS. An optical for glasses ground hollow on the inside, so as to reflect on the hollow side.

one species being valued as high as five hundred dollars.



CONFESSION (in Theology). A public declaration of one's faith, or the faith of a public body; also a part of the Liturgy, in which an acknowledgment of guilt is made by the whole congregation. Antienter confession, a private confession or acknowledgment of one's sins, made by each individual in the Romish church to his priest or father confessor. It is so called because it is made by whispering in his ear.

CONFESSIONAL. The place in a Catholic church or chapel, where confession is made to the priest, usually through a small latticed aperture.

CONFIRMATION. A ceremony in the English church, by which baptized persons are confirmed in their baptismal vows by the laying on of hands. What is prepared for is extirpating, is performed by confirmation. This ceremony is performed by the bishop.

CONFLUENCE. The meeting of two rivers, or the place where they meet.

CONGELATION. A condensation of any fluid by means of cold.

CONGEL, or CONGER EEL. An eel of an extraordinary size, and extremely voracious, which preys on crustaceans, and other fish.

CONGREGATION (in Ecclesiastical Affairs). An assembly of persons who meet together for purposes of divine worship; (in Physics) a term for the least degree of mixture, in which the parts of the mixed body do not touch each other in more than one point.

CONGRESS. An assembly of envoys, commissioners, deputies, &c. from different countries, who meet to agree on matters of general interest; also an assembly of the deputies from the different states in the republic of America. The Congress of the United States consists of a Senate and House of Representatives. Each state sends two senators, and one representative for every 30,000 inhabitants. In the slave

states five slaves are reckoned as three freemen. Senators are chosen for six years, representatives for two.

CONGREVE ROCKET. An invention so called from the inventor, Sir William Congreve, by which balls and other combustibles are discharged to an immense distance.



CONIC SECTIONS. Curve lines and plane figures produced by the intersection of a plane with a cone. These sections are derived from the different directions in which the solid cone is cut by a plane passing through it; they are the triangle, circle, ellipse, parabola, and hyperbola.

The doctrine of Conic Sections, which is one of the abstract branches of geometry, was particularly cultivated by the ancients. Aristotle is said to have composed five books relating to this subject, but they have not been handed down to us. The most ancient treatise extant is that of Apollonius, in eight books, the first four of which is said to have been written by Euclid, and afterwards perfected by Apollonius, with the addition of four other books. Among the moderns the principal treatises are those of Myrdogius, De la Hire, De l'Hospital, Emerson, Banton, Vines, and Robertson.

CONFERE. One of Linnaeus's natural orders, containing the cone bearing trees.

CONJUGAL RIGHTS, RESTITUTION OF. In England, a species of matrimonial suit, which may be brought either by the husband or the wife, against the party who is guilty of the injury of sub-

stitution or living in a state of separation.

CONJUGATE. An epithet to denote the junction of two lines, as a conjugate axis, that which crosses another axis.

CONJUGATING (in Grammar). The act of going through the inflections of a

verb according to its several moods, tenses, and persons.

CONJUGATION (in Grammar). The moods, tenses, and persons of a verb computed together in regular order.

CONJUNCTION. A term in Astronomy for the meeting of two planets in the same degree of the zodiac, which is marked thus (δ).

CONJUNCTION (in Grammar). A part of speech which joins words and sentences.

CONNOISSEUR. A person well versed in any art or science.

CONOID (in Geometry). A figure resembling a cone.

CONQUEROR. In a general sense, one who has gained a battle or any thing by means of fighting; particularly applied to William I. who succeeded to the throne of England after having gained the battle of Hastings.

CONSANGUINITY. Kindred by blood and birth between persons descended from the same common stock.

CONSCRIPT FATHERS. An appellation for the Roman senators, so called because they were elected from the equestrian order into the list of senators.

CONSCRIPTS. Recruits in the French army.

CONSEQUENCE. That which follows from any principle by way of inference; among logicians, the last part or proposition of an argument, in distinction from the antecedents, being something gathered from a preceding argument.

CONSEQUENT (in Geometry). The latter of two terms of proportion, in distinction from the former, or antecedent.

CONSIGNMENT. The sending or delivering over of goods to another person.

CONSISTORY, or **CONSISTORY COURT**. In England, the session or assembly of ecclesiastical persons held by the bishop or his chancellor.

CONSONANCE (in Music). An agreement of two sounds.

CONSONANT (in Grammar). A letter which cannot be sounded by itself without the help of a vowel; in Music, an epithet for that interval which produces consonant sounds.

CONSTABLE. A civil officer, anciently of great dignity, as the lord high constable of England, and also the constable or keeper of castles, &c.; now an inferior officer of justice.

CONSTELLATION. An assemblage of fixed stars, imagined to represent the form of some creature or other object, as a bear,

a ship, and the like; whence they have derived those appellations which are convenient in describing the stars. The division of the heavens into constellations is very ancient, probably coeval with astronomy itself. Frequent mention is made of them by name in the sacred writings, as in the book of Job, and in the prophecy of Amos. Some of the constellations are also mentioned by Homer and Hesiod, who flourished above 800 years before Christ; and Aratus, who lived about 277 years before Christ, professedly treated of all such as were marked out by the ancients, and were afterwards admitted into the Almanac of Ptolemy. These were forty eight in number, called the Old Constellations, to which have since been added others, called New Constellations.

CONSTITUENT (in Law). In England, one who by his vote, constitutes or elects a member of parliament. The term is also applied to voters in the United States.

CONSTITUENTS (in Physics). The elementary parts of any substance.

CONSTITUTION (in Law). Property, any form of government regularly constituted; in a particular sense, the mixed and popular form of government in England, consisting of king, lords, and commons, or the free constitution of the United States.

CONSTITUTION (in Civil Law). A law made by some king or emperor; and in the canon law, the same as an ecclesiastical law or canon.

CONSTITUTION (in Medicine). The temperment of the whole body, arising from the quality and properties of the parts.

CONSUL. A chief magistrat among the Romans, of which there were two that were elected every year.

CONSUL. An officer commissioned by government, to reside in foreign countries of any considerable trade, to facilitate and dispatch business and protect the merchants of the nation.

CONSUMPTION. The wasting and decay of the body by disease.

CONTEMPT (in Law). A disobedience to the rules, orders, or process of a court.

CONTINENT. The main land, as distinguished from the sea.

CONTORT.E. One of Linnaeus' natural orders, including plants with a single twisted petal.

CONTOUR. The outline of a figure.

CONTRABAND GOODS. Goods prohibited by law to be exported or imported.

CONTRACT. A covenant or agreement between two or more persons, with a lawful consideration or cause.

CONTRACTION. In general, the diminishing the extent or dimensions of a

CONTRACTION (in Surgery). The closing up of the muscles or arteries.

CONTRACTION (in Grammar). The joining two syllables into one.

CONTRACTION (in Arithmetic). The closing of operations.

CONTRAST (in Printing). The due to the different parts and objects of a that they may be mutually opposed to each other.

CONTRAVALLATION, LEVEE, &c. A trench, cut round a place by the soldiers, to defend themselves against the attack of the garrison.

CONTRAVENTION (in Law). The in breach of a contract.

CONVEYANCE (in Law). An overseer appointed to control or oversee the accounts of other officers.

CONTEMPT (in Law). A refusal to appear in court when legally summoned.

CONVALESCENCE. That period between the departure of a disease, and the recovery of one's health.

CONVENTICLE. A term applied first to the private meetings of the followers of John Wickliffe, and afterwards to the religious meetings of the Nonconformists.

CONVENTION (in Law). Any agreement or treaty between the states or their deputies in military affairs, an agreement entered into between two bodies of troops, and so forth.

CONVERGING LINES. Lines which gradually approximate.

CONVERGING RAYS (in Optics). Rays that issue from diverse points of an object, and incline towards one another as they meet.

CONVEX. Curved, or protuberant outwards, as a convex lens, mirror, &c.

CONVOYANCE (in Law). A deed or instrument by which lands, &c. are conveyed over to another.

CONVOYER. One who follows the train of conveyancing, or drawing conveyances.

CONVOYAGE. In England, an office of the clergy, consisting of an episcopally consecrated house, which meet when the king is absent, to consult on the affairs of the church.

CONVOLVULUS, or HENBANE. A plant called, because it creeps up and itself round whatever it meets it. Its roots are cultivated in gardens, as a beautiful blue flower.

CONVOY. A sea term, for signs of war.

which accompany merchantmen in time of war, to protect them from the attacks of the enemy; in military affairs, a detachment of troops employed to guard any supply of money, ammunition, &c.

COOK. One who practices the art of cookery. The company of cooks in England was incorporated in the fifteenth century.

COOLER. A vessel used by brewers, for cooling the beer after it is drawn off.

COOMB. A measure of corn, containing four bushels.

COOP. A place where fowls are kept confined; also a vessel made of twigs, in which fish are caught, and a barrel or vessel for keeping liquors.

COOPER. A maker of tubs, coops, or barrels. The company of coopers in England was incorporated in the reign of Henry VII.

COOPERY. The art of making tubs or barrels with boards bound by hoops.

COOT. A water fowl, mostly of a black colour, called also a Mute Hax. These birds frequent lakes and still rivers, where they make their nests among the rushes, &c. floating on the water, so as to rise and fall with it.



COPAL. An American name for all coloriferous gums, but particularly applied to a resinous substance imported from Guiana. It is hard, shining, transparent, and citron coloured.

COPERNICAN SYSTEM. A particular system of the spheres first proposed by Copernicus, a Polish astronomer. According to this system the sun is supposed to be placed in the centre, and all the other bodies to revolve round it in a particular order; which plan it is now universally adopted, under the name of the Heliocentric system.

COPING. A stone covering on the top of a wall.

COPPER. A metal next to iron in

aves, between which arise little stalks or pedicels, forming stiticon vesicles.

CORDELIERS. In Catholic countries, a order of monks, so called because they wear a cord full of knots about their middle.

CORDOVAN. A sort of leather made of goat skin at Cordova in Spain.

CORK TREE. A glandiferous tree of a oak kind, having a thick, spongy, and soft bark, known by the name of cork. It is abundant in Italy, Spain and other parts in the South of Europe.

CORMORANT, or CORVOBANT. An exceedingly voracious bird of the pelican race. It builds on the highest cliffs hanging over the sea.



CORN. A general term in England for wheat. Sometimes, for all grain of which bread is made. In the United States, it is a common term for Indian corn. See WHEAT.

CORNEA. One of the coats of the eye, which is transparent in the fore part, to admit the rays of light.

CORNELIAN. A precious stone, of a reddish colour, of which rings are made.

CORNET (in Military Affairs). An instrument very similar to a trumpet, which is used in the army; also a commissioned officer in a troop of horse or dragons.

CORNFLAG. A plant having a double row of leaves, which leaves like the fleur-de-lis, and a flower consisting of one petal, and like the lily.

CORNFLOWER. A plant that grows among the corn.

CORNICE. Any moulded projection, cornice or balustrade the part to which is affixed, as the cornice of a room, a pediment, &c.

CORNISH CROUCH. In England, a kind of crouch, of a fine blue or purple black dye, with red back and legs. It was

reckoned the finest bird of its kind, and therefore borne in coats of arms.

CORNUCOPIA, or THE HORN OF PLENTY. Fabled to be the horn which Hercules took off from Achelous' head. It was filled by the nymphs with all manner of flowers and fruits, and made the emblem of abundance.

COROLLA. The leafy parts of a flower which is marked with diverse colours. Each leaf or division of the corolla is called a petal.

COROLLARY. A consequence drawn from some proposition already proved or demonstrated.

CORONABLE. One of Linnaeus' natural orders of plants, containing those of the fibaceous tribe, which are most fitted for making garlands.

CORONATION. The act or solemnity of crowning a king; also the ceremony of investing the pope with his sacerdotal ensigns and dignity.

CORONER. An officer whose particular duty it is to make inquisition into the untimely death of any person.

CORONET (in Heraldry). A small crown worn by the nobility.

CORONET, or CORNET (in Farriery). The upper part of a horse's hoof.

CORPORAL (in Law). An epithet for any thing that belongs to the body, as corporal punishment, in distinction from a fine; a corporal oath, so called because the party taking it, is obliged to lay his hand on the Bible.

CORPORAL (in Military Affairs). A rank and file man, with superior pay to a common soldier, and with nominal rank under a sergeant.

CORPORATION. A body politic or incorporated, so called because the persons composing it, are made into one body.

CORPOSANTO, or CORPOSANT. Small luminous balls supposed to be electrical which play about the rigging of ships in stormy weather and are regarded with superstitious awe, by sailors.

CORPUS. A French term for any body of forces forming the division of a grand army.

CORRECTION (in Printing). The correcting of proof sheets as they come from the compositor's hands, in order to free them from all faults.

CORRECTIVES. Medicines which serve to correct the qualities of other medicines.

CORRECTOR. The person appointed in a printing office to correct the proofs as they come rough from the compositor's hands.

COUGAR. The largest animal of America of the cat kind, and sometimes called the American Lion. In South America it is called Puma, in North America, Panther. It is of an ash colour, and so powerful, that it will bear the body of a man up a tree.

COVING (in Architecture). The projection in houses beyond the ground plot.

COUNCIL (in Law). An assembly of the different members of any government who meet to consult about affairs. In England that is called the Privy Council where the king himself and his privy counsellors meet, in the king's court or palace, to deliberate on affairs of state. When the council is composed only of cabinet ministers, or the king's most confidential servants, it is called a Cabinet Council.

COUNCIL (in Ecclesiastical Affairs). The same as the synod.

COUNCIL OF WAR (in Military Affairs). An assembly of the chief officers in the army or navy, called by the general or admiral in particular emergencies, to concert measures for their conduct.

COUNTERFEIT. A fraudulent imitation of any thing, made so as to pass for genuine, as counterfeit coin.

COUNTERMINE. A mine made by the besieged, in order to blow up the mine of the besiegers.

COUNTERSCARP (in Fortification). That side of the ditch which is next the camp, and forms the body of the place.

COUNTER-TENOR (in Music). One of the middle parts, so called because it is, as it were opposed to the tenor.

COUNTINGHOUSE. An office in which a merchant transacts his business.

COUNTRY DANCE (in Music). A lively pointed air calculated for dancing.

COUNTY. One of the ancient divisions of England, which by the Saxons were called shires; England is divided into forty counties or shires, Wales into twelve, Scotland into thirty. Each of the United States is also divided into counties.

COUP DE MAIN. A sudden unopposed attack.

COUP D'ŒIL. The first glance of the eye, with which it surveys any object at large.

COUP DE SOLEIL. Any disaster suddenly produced by the violent searching of the sun.

COUPLE. A band with which days are tied together.

COUPLE-CLOCK (in History). An ancient watch, so termed from its striking the

cheyron by couples, being always borne in pairs, one on each side a cheyron.

COUPLES (in Building). Bars or timbers joined together in pairs with a double nut.

COUPLET. The division of a hymn, ode, or song, wherein an equal number, or an equal measure of verse is found in each part.

COURANT. An epithet for any vessel, represented in an escutcheon in a running attitude.

COURSE. A sea term, for that point of the horizon or compass for which a ship steers.

COURSE (in Masonry). A continued range of bricks or stones of the same height.

COURSE OF EXCHANGE (in Commerce). The current price or rate at which the coin of one country is exchanged for that of another; which, as it depends upon the balance of trade and the political relations which subsist between the two countries, is always fluctuating.

COURSE. A race horse.

COURSING. The pursuing of grey hounds of chase, or the hare, &c. with greyhounds.

COURT (in Law). In monarchial countries, the king's palace or mansion; in common use, the place where justice is judicially administered.

COURTS OF CONSCIENCE. Courts for the recovery of small debts.

COVY. An assemblage of wild fowl, particularly partridges.

COW. The female of the ox kind, which is kept for her milk and her calves.

COWKEEPER. One who keeps cows for the purpose of milking.

COWPOX. A substitute for the small-pox. It is taken from the udder of the cow, and used in that sort of inoculation now known by the name of vaccination.

COWBIE. A testaceous animal, which is said to have the power of leaving its shell and forming a new one. These animals live in sand at the bottom of the sea. The shell is used as a coin in India.

COWSLIP. A plant which grows wild in the meadows, and bears a pretty yellow flower.

C. P. R. (in England). Custos privati sigilli; i. e. keeper of the privy seal.

CR. An abbreviation for creditor.

CRAB (in Astronomy). Cancer, one of the signs of the zodiac.

CRAB (in Botany). A wild agate tree, and also the fruit of that tree.

CRAB (among Shipwrights). An engine with three flaws by which it is raised or whirled.

CRABBY EYE. A spot found in the eye of fish, resembling an eye.

CRACKLING. The crackling noise
by some salts during the process of
distillation.

CROCOD. A garden salad.

CROCODON. The company of salices be-
comes a crocodon.

CROCKET. A little insect that haunts
moor and arena.

CROCODON. An officer who cries or makes
proclamation.

CROCODON. Offences against morals, as
they are prohibited by law.

CROCODON. Persons who used formerly
to carry others into the land or sea.

CROCODON. First stage of a disorder from
which judgment may be formed of
the disease.

CROCODON. An amphibious animal,
the largest of the lizard tribe, which
inhabits the rivers of Africa and Asia. It
is covered with hard scales, that cannot
be pierced, except under its belly.

CROCODON. A bulbous plant, that flowers
early in spring.

CROCODON. The crow of a bird; also the
seed of what is sown in a field.

CROCODON. A gibbet, on which the Romans
executed malefactors by the hands and
feet.

CROCODON. (in Heraldry). The most ancient
emblem of all the honours and
nobility, by the meeting of two pen-
nons with two horizontal lines, as
in the four right angles in the figure
above, such as the cross between in
heraldic figure.



CROCODON. The name given to the right
arm, to distinguish from the left
arm.

CROCODON. (in Architecture). Any building
in the figure of a cross.

CROCODON. A kind of bow formerly
used.



CROCODON. A kind of wood, which was strong and set in
a wooden frame, with a trigger, &c.

CROSSBILL. A sort of Grebe, a
bird so called because the mandibles of
its beak cross each other.



CROSS-EXAMINATION. (in Law). A
close and rigid examination on the part of
the adversary, consisting of cross questions,
in order to elicit the truth.

CROTCHET. (in Music). Half a minims,
marked thus.



CROTCHET. (in Printing). Marked thus
[], to separate what is not the necessary
part of a sentence.

CROUP. The hindmost part of a horse.

CROUPER. A leathern strap fixed to go
under the tail of a horse, to keep the saddle
in its place.

CROW. A sociable noisy bird, that feeds
partly on carrion.



CROW. (among Mechanics). An iron
instrument that is used as a lever for raising
weights.

CROWN. In England, a coin, in value
five shillings, so called from the figure
of the crown which was originally given
upon it.

CROWN. (in Anatomy). The vertex or
highest part of the head.

CROWN. (in Architecture). The upper-
most member of a cornice.

CRACKING. The crackling noise by some salts during the process of solution.

CRESS. A garden salad.

CREW. The company of sailors belonging to a vessel.

CRICKET. A little insect that haunts meadows and ovens.

CRIMINAL. An officer who cries or makes proclamation.

CRIMES. Offences against morals, as they are prohibited by law.

CRIMINALS. Persons who used formerly to be sent into the land or sea service.

CRISIS. That stage of a disorder from some judgment may be formed of termination.

CRISPID. An amphibious animal, the largest of the lizard tribe, which inhabits the rivers of Africa and Asia. It is covered with hard scales, that cannot be plucked, except under its belly.

CROCUS. A bulbous plant, that flowers early in spring.

CROW. The cry of a bird; also the name of what is sown in a field.

CROWBAR. A gibbet, on which the Romans punished malefactors by the hands and feet.

CROSS (in Heraldry). The most ancient and noblest of all the honourable ornaments by the meeting of two perpendicular lines, which make four right angles in the figure, such as the cross batonne in the joined figure.



CROSS. The name given to the right arm of a scale, in distinction from the pile.

CROSS (in Architecture). Any building or figure in the shape of a cross.

CROSSBOW. A kind of bow formerly used in war.



CROSSBOW. A kind of bow formerly used, which was strong and set in a frame of wood, with a trigger, &c.

CROSSBILL. A sort of Grackle, a bird so called because the mandibles of its beak cross each other.



CROSS-EXAMINATION (in Law). A close and rigid examination on the part of the adversary, consisting of cross questions, in order to elicit the truth.

CROTCHET (in Music). Half a minims, marked thus.



CROTCHET (in Printing). Marked thus [] , to separate what is not the necessary part of a sentence.

CROUP. The hindmost part of a horse.

CROUPER. A leather strap fitted to go under the bill of a horse, to keep the saddle in its place.

CROW. A sociable noisy bird, that feeds partly on carrion.



CROW (among Mechanics). An iron instrument that is used as a lever for raising weights.

CROWN. In England, a coin, in value five shillings, so called from the figure of the crown which was originally given upon it.

CROWN (in Anatomy). The vertex or highest part of the head.

CROWN (in Architecture). The uppermost member of a cornice.

CUBE (in Geometry). A regular solid body, supposed to be generated by the motion of a square plane along a line equal and perpendicular to one of its sides. It is enclosed by six equal sides or faces, which are squares, as in the annexed figure. A die is a small cube.



CUBE (in Arithmetic). The third power of any number, produced by multiplying the number into itself, and then again into the product, as $3 \times 3 = 9$, $9 \times 3 = 27$, the cube.

CUBE ROOT. The side of a cube number; thus 3 is the cube root of 27.

CUBIT. A measure equal to about 1 foot 9 inches.

CUCKOO. A bird which is heard about the middle of April, and ceases to sing at the end of July. It deposits its eggs in the nests of other birds, generally in that of the hedge-sparrow. The American Cuckoo differs in its note from the European bird of that name. It is also smaller in size.



CUCKOO-SPITZLE. A white froth or spume, very common on the lavender and other plants in the spring, which forms the albed of a sort of clouds.

CUCURBITACEÆ. One of Linnæus's natural orders of plants, comprehending those which resemble the gourd, as the cucumber, the melon, &c.

CULM (in Botany). The stalk or stem of corn or grasses.

CULM (among Miners). A sort of coal in Wales.

CULMINEÆ. One of the Linnæan natural orders of plants, consisting of the grasses.

CULPRIT (in Law). A word of form, applied in court to one who is indicted

for a criminal offence. It is as much as to say, in French, 'culpable prit, found or considered guilty.'

CUMMIN SEED. A long, slender seed of a rough texture, sticky when bruised, of a strong smell and an acrid taste.

CUPBEARER (in England). An officer of the king's household, who was formerly an attendant at a feast.

CUPEL. A chymical vessel made of earth, ashes, or burnt bone, in which assay-masters try metals.

CUPOLA. A roof or vault rising in a circular form, otherwise called the *Tholus* or *Dome*, as the cupola of St. Paul's Cathedral, here represented.



CUPPING (in Surgery). The operation of applying the cupping-glass to the fleshy parts of the body, for the purpose of drawing away blood, or humours.

CURASSOW. A species of bird of which there are several varieties in South America, and the West Indies, of which the Cashew Curassow is the largest. This bird was formerly domesticated in some parts of Europe.

CURATE. Properly, one who has the care of souls; now applied in England to one who officiates for hire in the place of the incumbent.

CURB OF A BRIDLE. A chain of iron that runs over the horse's head.

CURFEW. Literally, cover fire or fire; a law introduced from Normandy into England by William the Conqueror, that all people should put out their fire and lights, at the ringing of the eight o'clock bell.

CURLEW. An European water fowl of a gray colour, with a large beak.

CURRANT. The fruit of a shrub having no prickles, the leaves of this plant are large, and the fruit, which is either black, red, or white, is highly succulent; also a dried fruit that comes from the layers.

s, comprehending such plants as are used in the form of a cynos.

FAESS. A tree very celebrated among the ancients, by whom it was used as the emblem of death, and used in building their sepulchres. The leaves of

D.

D. A numeral, denotes 500; as an abbreviation, stands for Doctor, Domini, &c.; **D.** is one of the Dominical or Son-days; and in Music, the nominal of the second note in the natural diatonic

D. A flat fish, thinner and less than under.

D. A river fish of the carp kind.

D. A foot or division in a poem, consisting of one long and two syllables.

D. The die, or that part in the pedestal of a column between the cornice.

D. A spirit either good or bad, the heathens; the devil, or an evil among Christians.

D. One possessed with a

D. An idol of the Philistines, of a conical shape, and resembling a horn, with a long tail.

D. (in Common Law). The hindrance which a man receives in a suit, particularly those which are required of by the jurors, when an answer is required for the plaintiff.

D. (pronounced DAMASCENE). A tree, yielding a small black plum, oval shape, so called from Damascus, where it is a native.

D. A silk stuff with a raised pattern, consisting of figures and flowers.

D. A fine sort of rose, called

D. Noxious exhalations in mines sometimes suffocate those that work

D. See DAMASCENE.

D. Light gray with spots; the color of a horse.

D. (in Geometry). Things given or granted, as known or true.

D. That part of a writing or letter, which expresses the day of the month and

D. A species of palm, native to the East Indies, and other parts of Africa and Asia, which grows to a great height, and its fruit formerly much used in

the cypress are squamous and flat; the fruit is composed of woody tubercles, and the wood of the tree is always green.

D. The title assumed by the emperors of Russia.

medicine. The fruit is frequently imported into this country.

D. (in Grammar). The third case of Greek and Latin nouns.

D. The title of the next bell to the crown of France.

D. The commencement of the day, when the twilight appears.

D. A space of time reckoned from the apparent motion of the sun. The day is distinguished into civil and astronomical. The civil day is a space of twenty-four hours, reckoned from sunset to sunset, or from sunrise to sunrise, which is different in different parts of the globe. The astronomical day is the space of twenty-four hours, reckoned from twelve o'clock at noon to the noon of the next day.

D. (in Law) Is the civil day, including day and night; also the day of appearance of the parties in court.

D. A kind of insect, so called because it lives only a day.



D. (in Law). An order of court. In England, permitting a prisoner in custody in the King's Bench prison, &c. to go for one day without the bounds of the prison.

D. (in Commerce). A customary number of days allowed for the payment of a bill of exchange, &c. after the same becomes due.

D. Doctor of Divinity.

D. A situation in account in the church, where officers are to receive the priest

inclination is 33 degrees and a half.

DECANTION. A medicinal liquor.

DECOMPOSITION. (in Chymistry). The resolution of a body to the parts of which it is composed.

DECORATIONS. Any ornaments or embellishments, such as prints in a book, or mouldings, and other carved works in buildings.

DECOY. A sea term for a stratagem employed by ships of war, to draw any sort of inferior force into an incalculable snare, until she comes within gun-shot.

DECOY. (among Sportsmen). A place for catching wild fowl.

DECOY-DUCK. A wild duck trained to fly to any other lake, the decoy, or place where they may be caught.

DEED. (in Law). A written contract, signed, sealed, and delivered. It is particularly applied to instruments for conveying land.

DEEP-SEA-LINE. A sea term for a line to extend with.

DEER. An animal which in England is found in parks, either for ornament or for use; the flesh of which is called venison.

In North America, we have five sorts of the deer kind, the Moose or Elk of Europe; the American Elk, a stately animal, whose branching horns are sometimes five feet in length; the common fallow or Virginia deer; the moose, or black deer of the Rocky mountains; and rein-deer. The male of the fallow is called Buck, the female, Hind, Stag, Hart, or Red Deer of Europe, the male of which is called Hind, is not found in this country. It is a characteristic of all these animals, that they shed their horns once a year.

D. F. Defender Fidei, Defender of the Faith.

DE FACTO. In deed or fact.

DECLARATION. A signing off or a statement in any public accounts.

DECLAMATION. (in Law). Slandorous words spoken or written against any one.

DECEIT. (in Law). A non-appearance in court without sufficient cause.

DEFICIENT. One who is deficient in accounts.

DEFLECTION. The falling off from a constant or state.

DEFERENCE. (in Law). The reply which a defendant makes after the declaration closed; in Military Affairs, any work carried on behind the opposite posts, trenches, parapets.

DEFENDANT. (in Law). One who is in an action.

DEFENDER OF THE FAITH. A title given by Pope Leo X. to Henry VIII. for writing against Luther.

DEFILE. A narrow lane or passage, through which a company of soldiers can pass only in file.

DEFINITION. The determining the nature of things by words, or explaining the signification of a word.

DEFLAGRATION. The burning in a crucible of any mineral body.

DEFLEXION. The turning of any thing out of its true course.

DEFLUXION. (in Surgery). The falling of a humour in the body, from a superior upon an inferior part.

DEGRADATION. (in Ecclesiastical Affairs in England). The depriving a person of his dignity and degree, as the degradation of a clergyman, by depriving him of holy orders.

DEGRADATION. (in Military Affairs). The depriving an officer of his commission.

DEGREE. (in Mathematics). The 360th part of the circumference of a circle, marked thus ($^{\circ}$).

DEGREE. (in Law). An interval of relationship between persons, more or less nearly allied.

DEGREES. (in a University). Titles of honour, conferred on persons for their merit in the arts and sciences.

DEGREES OF COMPARISON. (in Grammar). The inflexions of adjectives, to express different degrees of the same quality.

D. G. An abbreviation for Dei Gratia, By the Grace of God.

DEIST. One who believes in a God, but rejects revelation.

DE JURE. By right.

DELEGATES. In England, commissioners of appeal, appointed by the king to hear appeal causes, from the ecclesiastical court.

DELETERIOUS. An epithet for drugs, or any substances, of a destructive and poisonous quality.

DELFT WARE. A kind of pottery ware, originally made at Delft in Holland; it is covered with an enamel, or white glazing, in imitation of porcelain.

DELIQUITUM, or DELIQUESCENCE. A spontaneous solution of some salts by exposure to the air.

DELIVERY, or CAOL DELIVERY. (in Law). A term applied to the sessions at the Old Baily, &c. in London, by which the goods are delivered or cleared of prisoners.

DELIVERY. (in the Mint). The quantity of moneys coined within a given period.

DELIVERY. (in History). The journey

DIAPYCNESIS. Medicines which resolve viscid humours.

DIAPYCNESIS. That which has one, or a limited number of years.

DIAPYCNESIS. The noise and explosion, which some substances make upon application of fire to them, as gunpowder, &c.

DIAPYCNESIS. A preparation of sulphur, &c.

DIAPYCNESIS. That which is washed from the mountains, and forms a soil.

DIAPYCNESIS. The son of Prometheus, with his wife Pyrrha, were saved from a deluge, in a ship on Mount Parnassus.

DIAPYCNESIS. A gift of lands by last will and testament.

DIAPYCNESIS. The fourth book of the Bible.

DIAPYCNESIS. The moisture, which is first dried from the earth by the sun, and then falls again upon the earth in gentle drops during the night.

DIAPYCNESIS. The loose skin that hangs down under the throat of an ox, cow, &c.

DIAPYCNESIS. The right, or so the right hand or side, as the dexter point; in Herodotus, the right-hand side of the saccheum.

DIAPYCNESIS. The supreme governor of Algiers.

DIAPYCNESIS. (in Medicine). An excessive discharge of crude urine.

DIAPYCNESIS. The science of rectified sounds.

DIAPYCNESIS. (in Botany). One of the Linnaean classes, comprehending such plants as bear hermaphrodite flowers with two sets of united stamens.



DIAPYCNESIS. A headband or fillet, anciently worn by kings as an emblem of dignity.

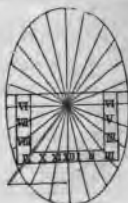
DIAPYCNESIS. (in Grammar). The division of one syllable into two, marked thus (=)

DIAGNOSTIC SIGNS. Signs by which diseases are distinguished from each other.

DIAGONAL. A straight line drawn from one angle of a figure to another.

DIAGRAM. A scheme drawn by way of illustrating any thing.

DIAL. A plate marked with lines, for showing the hour of the day by the shadow of a gnomon, style, or pin when the sun shines. The diversity of the planes, and from the different figures of the surfaces upon which they are described. The subjoined figure represents an horizontal dial.



DIALECT. A manner of speech peculiar to any parts of a country. The dialects of Greece were admitted to form a part of their language, as the Attic dialect, spoken by the Athenians; so the Ionic, Poetic, Æolic, and Doric dialects.

DIALECTIC. The art of logic.

DIALING. The art of drawing lines on any surface.

DIALLIST. One who constructs sundials.

DIALOGUE. A written discourse between two or more persons.

DIALYSIS. A mark or character, consisting of two points placed over two vowels, as *poëta*, to show that they must be sounded distinctly.

DIAMETER. A right line passing through the centre of a circle, or any curved figure.

DIAMOND. The hardest and most precious of all stones. The goodness of a diamond consists in three things: its lustre or water, its weight or bigness, and its hardness. Its weight is estimated by carats of four grains each. Some diamonds are of an extraordinary size, and are valued at immense prices; the largest ever known

belonging to the king of Portugal weighs 1080 carats, and is valued, although unused, at \$24,000,000, setting; that, in the sceptre of the emperor of Russia, weighs 770 carats, and is valued at upwards of 4,000,000; but was bought by the empress Catherine for about 120,000. The Fiat Diamond, which at that time was one of the largest, weighed 136 carats, and cost Louis XIV. 130,000. Diamonds are found in the East Indies and in Brazil, where they are gathered out of the sand.

DIAMOND (among Glaziers). An instrument for cutting glass; in Printing, the smallest types or letters.

DIAMOND BEETLE. An exceedingly beautiful insect, so called from the marks on its wing-sheaths, that resemble gems in brilliancy.

DIANA. The goddess of hunting, the daughter of Jupiter and Latona, and twin sister of Apollo; she is commonly represented with a bow and arrow.



DIANDRIA (in Botany). One of the classes in the Linnæan system, consisting of such plants as have hermaphrodite flowers with two stamens, as the olive, the pines, the nightshade, &c.



DIAPASON (in Ancient Music). The interval of an octave; among Musical Instrument Makers, the diapason is a scale or measure.

DIAPER. A kind of linen for the table, wrought with flowers.

DIAPHANOUS. Transparent like glass.

DIAPHONIA. The precepts formerly taught for the use of the organ.

DIAPHORETIC. Medicines which promote perspiration.

DIAPHRAGM. A muscular membrane which divides the thorax from the abdomen.

DIARRHOEA. A disorder which consists in the frequent discharge, by stool, of a bilious humour from the intestines.

DIARY. An account of what passes in the course of a day.

DIATHESEBON (in Music). An interval composed of a greater and less tone.

DIATHESEBON (in Theology). The four Gospels.

DIATRIBE. A disputation or controversial discourse.

DIBBLE. A pointed tool for making holes to plant in.

DICE. Pieces of bone or ivory, of a cubical form, and marked with dots on each of their faces from one to six.

DICTATOR. An extraordinary magistrate among the Romans, chosen upon particular occasions; and invested with absolute power. He laid down his office, as soon as the occasion ceased, for which he had been appointed.

DICTIONARY. A collection of the words of a language, explained in alphabetical order.

DICTION. The positive opinion pronounced by an individual.

DIDACTIVE. An epithet for what serves to teach or explain the nature of things, as didactic pieces.

DIDYNAMIA (in Botany). One of the Linnæan classes, including such plants as have flowers with four stamens in two pairs of different lengths.

DIE. The stamp used in coinage.

DIE (in Architecture). The middle of the pedestal.

DIER. One who follows the trade of dyeing.

DIER'S BROOM. A shrub so called from its flowers, which yield a colour used by diers in dyeing wool green.

DIES NON; that is, Dies non Juridici. Days on which no pleas are held, in any court of justice.

DIET. Food regulated by the rules of medicine.

DIETETICS. That branch of the medical science, which treats of the diet to be used suited to particular cases.

DIEU ET MON DROIT, that is, God and my right. The motto of the arms of the King of England.

DIFFERENCE (in Arithmetic). The

derlet, when one number has been subtracted from another.

DIFFERENCE (in Heraldry). Was used in coats of arms, as a mark to distinguish younger families from the elder.

DIFFERENCE OF LONGITUDE (in Astronomy). An arc of the equator, contained between the meridians of two places on the earth.

DIFFERENTIAL CALCULUS. A method of finding a differential, or that very small quantity, which taken an infinite number of times, is equal to a given quantity.

DIGESTER. An apparatus for reducing substances to a pulp or jelly.

DIGESTION. The dissolving or cooking food in the stomach, so that its various parts may be applied to their proper uses.

DIGESTION (in Chemistry). The continual soaking of a solid substance in a liquid, so that by the application of heat, it may be reduced to a soft substance.

DIGESTION (in Surgery). The dressing a wound to separate or discharge its pus.

DIGESTIVES. Medicines which help digestion.

DIGESTS. The first volume of the civil

DIGIT. A measure equal to three quarters of an inch; also a character denoting five, as 7, for one; 2, for two, &c.

DIGIT (in Astronomy). The twelfth part of a diameter of the sun or moon.

DIGITALIS, or **FOXGLOVE**. A kind of plant which is for the most part herbaceous, with a root that is either biennial or perennial. The stalk of this plant rises to a height of three feet high, and bears spikes of a coloured, or purple flowers. The purple foxglove is a native of England, and much used in medicine.

DIGNITY (in Law). Honour and authority.

DIGYNIA (in Botany). An order in the Linnæan system, consisting of plants that have two pistils.

DILAPIDATION (in Law). The ruin or damage which accrues to a house, in consequence of neglect.

DILEMMA. An argument which cannot be denied in any way, without involving the party denying in contradictions.

DILICTASTE. A lover of the fine arts.

DIMENSION. The measure or compass of a thing; a line has two dimensions, namely, length; a surface three, namely, length and breadth; a solid three, namely, length, breadth, and thickness.

DIMINUTIVE (in Grammar). A word

or ending, which denotes the meaning of the original word; as, rivulet, a small river.

DIOCESAN. A bishop who has charge of a particular diocese.

DIocese. The district or circuit of a bishop's jurisdiction.

DIœCJA (in Botany). A class in the Linnæan system, comprehending such plants as have no hermaphrodite flowers, but the males and females on distinct individuals, as the poplar, aspen, amber tree, willow, ozier, &c.



DIOPTRICS. That branch of optics, which considers the different refractions of light in its passing through different mediums, as air, water, glass, &c.

DIP OF THE MAGNETIC NEEDLE. The property of the needle, when rubbed with the lodestone, of inclining the north end below the level of the horizon.

DIP OF THE HORIZON. See Depression.

DIPHTHONG. Two vowels sounded as one; as, *ea*, *o*.

DIPLOMA. A license or certificate given by colleges, &c. to a clergyman, to exercise the ministerial functions, or to a physician, to practice physic.

DIPLOMACY. The functions of an ambassador residing at a foreign court.

DIPPING NEEDLE. The magnetical needle so duly poised about an horizontal axis, that, besides its direction towards the pole, it will always point to a determined degree below the horizon. The dipping needle was invented by Robert Norman, a compass maker at Ratcliffe, about the year 1576, and arose, according to his own account of the matter, from the following circumstance. It was his custom to finish and hang the needles of his compasses before he touched them, and he always found, after the touch, the north point would dip or decline downward, pointing in a direction under the horizon; so that to balance the needle again he was always forced to put a piece of wax on the south end, as a counterpoise. After having observed the effect frequently, he was at length led to mark the quantity which the dip, or to measure the greatest angle which the dip would make with the horizon; he found at London it was 71° 50', and by

DISSOLUTION. The reducing of a solid body into a fluid state, by the action of some menstruum or solvent.

DISSONANCE (in Music). A disagreeable interval between two sounds, which being continued together, offends the ear.

DISTAFF. An instrument anciently used in spelling.

DISTEMPER (in Painting). Colours mixed with oil or water, but with staves of eggs, &c.

DISTEMPER (in Furry). A disease prevalent in dogs, horses, and other domestic animals.

DISTICH. A couplet or couple of lines in poetry, making complete sense.

DISTILLATION. A chymical process drawing out the humid, spirituous, viscid, or saline parts of mixed bodies, means of heat, these parts being first reduced into a gas or vapour, and then condensed into a fluid, by means of a stiller.

DISTILLER. One who follows the trade of distilling. The distillers are one of the companies in London, incorporated in the reign of Queen Elizabeth.

DISTRESS (in Law). The distraining or taking upon a person's goods, for the rent of land or taxes, &c.

DISTRIBUTION (in Printing). The setting a form together, so as to separate the lines.

DISTRIBUTION (in Medicine). The action of the chyle with the blood.

DISTRIBUTION (in Logic). The dividing a whole, into its several constituent parts.

DISTRIBUTIVE JUSTICE. Justice administered by a judge, so as to give each man his due.

DISTRIBUTIVE NOUNS. Words which serve to distribute things into their several orders, as each, either, every, &c.

DIVERT (in Law). That circuit or way, within which a man may be obliged to make his appearance.

DITCH. A trench cut in the ground for a field.

DIVER. A labourer who makes a field.

DYRMBIC. A sort of hymn sung in honour of Bacchus; any written with wildness.

DO, abbreviated Do. The same as does, a term used in accounts.

DIET. A council of state among the nobles and a court of justice.

DIET. A waterfall that frequents and goes with difficulty on land.

DIET. or **DIVERGING** An

epitaph for several things which have the property of divergency.

DIVERGING RAYS (in Optics). Those which, issuing from a radiant point, continually recede from each other.

DIVERGING SERIES (in Mathematics). A series, the terms of which always become larger, the farther they are continued.

DIVIDEND (in Arithmetic). The number to be divided.

DIVIDEND (in Commerce). The share of profit in a joint stock, which is to be divided among the shareholders; also that part of a debtor's effects, which he is to be divided among the creditors.

DIVINATION. A practice among the heathens of foretelling future events, by the flight of birds or other signs.

DIVINE. A minister of the gospel; a clergyman.

DIVINER. One who professes the art of divination; a conjurer.

DIVING. The art of descending under water to a considerable depth, and remaining there for a length of time, no occasion may require. The practice of diving is resorted to, for the recovery of things that are sunk, &c.

DIVING-BELL. A contrivance, by which persons may descend below the water, and remain for some time without inconvenience. It is used for the recovery of property, that is sunk in wrecks.



DIVISION. One of the four first rules or operations in arithmetic, by which we find how often one quantity is contained in another. There are three numbers considered in this operation, namely, the dividend, or number to be divided; the divisor, or that by which one divides; and the quotient, or that number which shews, how often the second is contained in the first.

made in the reign of William the Conqueror or a book of the survey of England, giving an account of all the demesnes or tithes.

DOMINICAL LETTER. One of the seven letters in the alphabet, which fall on the Sundays throughout the whole year, and are marked in the Almanac. After the term of twenty-eight years, the same letters return in the same order again.

DOMINO. A game played by two persons, with twenty-eight pieces of wood, called cards.

DOMINO (in Ecclesiastical Affairs). A hood worn by canons of a cathedral.

DOMINION. A title of honour in Spain, answering to Don, or Dominus, Lord.

DOMINATIVE (in Law). A benefice given to a clerk by the patron, without presentation to the bishop.

DOMINION (in Fortification). A tower or bastion, where the fortress may retreat in case of necessity.

DOMINIC ORDER (in Architecture). The most ancient of the Gothic orders, made, as is said, in imitation of the hovels erected by the original inhabitants of Greece.



DOMINIC, or DOMINIC (in Architecture). A window made in the post of a building.

DOMINIC. An epithet for what belongs to the back, as the dorsal fin of a fish.

DOERMUSE. An animal of the mouse kind, which remains torpid during winter.



DOSE. The quantity of any medicine prescribed by the physician to be taken by the patient at one time.

DOSE (in Chymistry). The quantity of any substance which is added to any solution, in order to produce any chymical effect.

DOTTEREL. A foolish bird, which is found in many parts of England.

DOUBLE ENTENDRE. An ambiguous expression, mostly intended to convey some improper insinuation.

DOUBLING A CAPE. A sea term, for sailing round or passing beyond it.

DOUBLINGS. The turnings of a hare when she is pursued.

DOUBLOON. A Spanish coin, equal to 2*l.* 6*s.* sterling.

DOUCEUR. A gift made to gain the favour or interest of a person.

DOVE. A wild pigeon, of which there are three sorts, namely, the ring dove, the largest of the pigeon tribe, so wild that it cannot be domesticated; the stock dove, that is migratory; and the turtle dove, a shy and retired kind living in the woods.

These descriptions apply to the European varieties. In America we have several kinds of pigeon, of which the passenger pigeon is the most remarkable. In the western states these birds assemble in such countless numbers, as to darken the air by their flocks, and desolate the whole country for miles around their breeding places.

The turtle dove of America differs in some measure, from the turtle dove of Europe.

DOVE-TAILING. A method of joining one board into another, by pins in the one fixed in holes in the other.

DOWAGER (in Law). Properly, a widow who enjoys a dowry, commonly applied as a title to the widows of princes and nobility.

DOWER (in Law). The portion which a widow has of her husband's lands at his decease.

DOWEL. A sort of linen cloth.

DOWN. The linen and softest part of the feathers of a goose or other water fowl.

DOWNS. A bank of sand formed by the sea along its shores; also a large open plain.

ment, by the removing or dragging the
with dredges, &c.

DRESS. Clothing for the body.

DRESS (in Husbandry). Any stuff, such
as wool, sand, &c. which is put on land to
improve the soil.

DRESSER. One employed in putting
on the clothes of another, particularly for
purposes of ornament.

DRESSER (in Military Affairs). One
who dresses a line of soldiers, or makes
a stand with an even front.

DRESSER (in Housewifery). A lanch
in which meat is dressed or prepared for
cooking.

DRESSING (in Husbandry). The clean-
ing of hemp, flax, &c. so as to prepare it
for spinning.

DRESSING (among Letterfounders).
Scrapping, heading, &c. of letters, be-
cause they are used by the printer.

DRESSING (in the Manège). The clean-
ing and trimming a horse.

DRIFT. A sea term for any thing that
is upon the water; also the course
which a ship makes when she is driven by
sea.

DRILLING (in Military Affairs). The
drilling young recruits the first principles
of military movements.

DRILLING (in Husbandry). A modern
mode of putting seed into the ground by a
machine called a drilling machine, which
makes channels in the ground, and lets the
seed fall into them, so that it comes up in rows
at regular distances from each other.

DRINK. A liquid medicine given to a
disease.

DRIP. The projecting part of a cornice.

DRUMMERY. The Arabian camel
carrying one bunch, which is said to be very
fit, and able to travel more than one
hundred miles in a day, though its com-
mon rate does not exceed 40 miles. See
CAMEL.



DRUM. An ornament in pillars of the
Doric order.

DRUMS. A collection of watery hor-
mors, either throughout the whole body, or

in some part of it, as the cavity of the
abdomen.

DRONE. A large kind of bee or wasp,
which is without a sting. It is the male
of this tribe of insects.



DRIVERS. Men employed to drive
cattle to, or from market.

DRUGGET. A kind of woollen stuff.

DRUGGIST. A dealer in drugs.

DRUGS. All kinds of simples, which are
for the most part dry, and fit for medicinal
uses.

DRUIDS. A sort of priests among the
ancient Gauls and Britons.

DRUM. A musical instrument much
used in the army, consisting of vellum,
strained over a wooden cylinder on each
end, and beaten with sticks.



DRUM (in Anatomy). A membrane of
the cavity of the ear.

DRUMMER (in Military Affairs). A
soldier who beats the drum.

DRUM MAJOR. He who has the com-
mand over the other drummers.

DRUPE (in Botany). A pulpy fruit,
containing a nut or stone, with a kernel
like the plum.

DRYADES. Nymphs inhabiting woods.

DRY-ROT. A disease incident to timber
in doorings, &c.

DUCAT. A foreign coin of different
values. Dutch ducats are equal to 3s. 6d.
sterling.

DUCAL COBNET. A circle of gold with eight strawberry or parsley leaves of equal height, about the rim.



DUCATOON. A silver coin in Holland, worth about 5s. 6d.

DUCK. A water fowl, both wild and tame.



DUCK, or RUSSIA DUCK (in Commerce). The best sort of canvas.

DUCKWEED. A plant growing in ditches and stagnant waters; it is an annual much liked by ducks.

DUCT. A channel or passage for any fluid in the body.

DUCTILITY. A property possessed by certain bodies, particularly metals, of yielding to any pressure, by which their parts may be expanded by hammering.

DUEL (in Law). Originally a combat between two persons for the trial of the truth; but now an unlawful battle between two persons on some private quarrel, in the which, in England, if death ensue, both the principals, and the seconds are guilty of murder. In most of the United States, the laws are similar.

DUES (in Law). Moneys due to the clergy, as Easter offerings, &c.

DUET. A little song in two parts.

DUKE. A sovereign prince in Germany; the highest title of honour in England next to the Prince of Wales.

DUMOS.E. One of Linnæus's natural orders of plants, consisting of shrubs and bushes, as hurnia, fern, &c.

DUNGEON. The darkest, and lowest part of a prison.

DUODECIMALS, or CROSS MEASUREMENTS. A rule used by workmen and artificers, in computing the contents of their work. Dimensions are usually taken in feet, inches, and parts.

DUODENARY ARITHMETIC. That in which the local value of the figures increases in a twelvefold proportion.

DUPLICATE. Any manuscript copied after another.

DUPLICATE RATIO (in Geometry) The product of a ratio multiplied into itself.

DURA MATER. One of the membranes which enclose the brain.

DUFRANTE (in Law). During, as Dufrante bene placito, during pleasure; Dufrante minore etate, during minority.

DURESS. An unlawful imprisonment.

DUTCHY. In England, a seignory or lordship, formerly established by the kings with several privileges, honours, &c.

DUTY. What is paid or due, by way of custom on merchandises in general.

DWARE. A hand much below the ordinary size.

DWARF (in Botany). A term for plants that grow low, as distinguished from those of the same kind which rise to a considerable height.

DYKE. A bank, mole, or causeway raised to stop the floods.

DYNAMICS. The science of moving powers, particularly of the motion of bodies mutually acting on one another. It is a branch of the science of mechanics, and is distinguished from statics in this, that the former considers bodies only as respects their motion, but the latter considers those bodies when in a state of rest, as to their equilibrium. When fluids, instead of solids, are the subjects of investigation, that which treats of their equilibrium, weight, pressure, &c. is called hydrostatics, and that which treats of their motion, hydrodynamics.

DYNASTY. A series of persons who have reigned successively in any kingdom, particularly applied to the Hereditary Kings.

DYSENTERY. A difficulty, or disturbance in the intestines, which impedes their functions.

E.

the fifth letter of the alphabet, stood as a numeral for 250; stands as an abbreviation for east, as i. e. id est; also for east; sign of particular notes in music.

EAGLE. A bird of prey, said to be the best, strongest, and boldest of all birds; has a long hooked beak, yellow scaly thick crinkled talons, a short tail, and keen sight. The common eagle is represented.



The eagle, as a bearing in coat armor, is deemed as honorable among the birds, and the lion among the beasts. The bald eagle is the national emblem of the United States.

EAR. The organ of hearing in an animal which consists of the external ear, the middle ear without the external orifice, the ossicles, and the internal ear which lies within the cavity of the temporal bone.

EARL. In England, a title of nobility, next a marquis and a Viscount, next a duke.

EAR OF CORONET. Has no flowers above the arches, like that of a Duke.



male, but only points there, and one on each of them.

EARL MARSHALL (in Eng.). Who has the care and direction of funeral ceremonies. This office belongs by hereditary right to the Duke of Norfolk.

EARNEST (in Commerce). Money advanced to bind the parties to the performance of a verbal bargain.

EAR-RING. An ornament hung on the ears, particularly of women.

EARTH (in Mineralogy). A substance formerly considered as one of the four elements of which the material world is composed. The term is now applied to such substances as have neither taste nor smell, that are incombustible, and nearly insoluble in water, the specific gravity being under five, as lime, barytes, silica, clay, &c.

EARTH (in Astronomy). One of the primary planets, marked by the character ☷. According to the Ptolemaic system it was supposed to be immovable in the centre of the universe, but according to that of Copernicus, it moves from west to east, so as to occasion the succession of day and night, and also annually round the sun, so as to cause the different seasons.

EARTH NUTS. A kind of plant, the pods or nuts of which ripen under ground. The nuts yield a quantity of oil.

EARTHQUAKE. A violent shock or concussion of the earth, or some parts of it, caused by an accumulation of electrical matter within the bowels of the earth, which force a passage, and cause much destruction of houses, cities, trees, and whole tracts of country. In hot countries, earthquakes are most frequent.

EARTHWORM. A worm bred under ground, being the common species of the worm.

EARWIG. An insect with six long wings, which was formerly imagined to creep into the ear, but this idea does not appear to be borne out by the fact, no case of the kind having yet been witnessed or recorded.

EASSEL. A frame on which a painter sets the cloth, &c. to be painted.

EAST. One of the four cardinal points, where the sun rises.

EASTER. A solemn festival observed among Christians, in commemoration of the resurrection of our blessed Lord and Saviour Jesus Christ. This feast was fixed by the council of Nice, in the year 325, to

EDULCORATION (in Chemistry). The washing of things that have been calcined, in order to purify them from their salts.

EDULCORATION (in Pharmacy). The sweetening any medicinal preparation.

EEL. A voracious slimy fish, very similar to a lizard, that licks and feeds in mud.

EEL POUT. A young eel.

EEL SPEAR. A forked instrument with which eels are caught.



EFFECTIVE (in Military Affairs). A term for any body of men that are fit for service.

EFFECTS. The moveables or goods of any merchant, tradesman, &c.

EFFERVESCENCE (in Chemistry). A violent ebullition in the parts of any liquor, accompanied with some degree of heat.

EFFICIENT CAUSE. Any cause that actually produces an effect.

EFFIGY. Any representation whatever which gives, or is intended to give, the figure of a person; thus, the figure of a man dressed up and carried about in derision of any one, is called his effigy; when this is burnt, the person is said to be burnt in effigy.

EFFLORESCENCE (in Botany). The lowering of plants.

EFFLORESCENCE (in Chemistry). The conversion of any body into a dry powder.

EFFLUVIA. Small particles, perpetually flowing out of mixed bodies in the form of vapours, which are sometimes visible, as in the case of smoke or steam; and sometimes not perceptible, as insensible perspiration.

EFFUSION. The pouring out a liquor, so that the sediment may remain.

EFFUSION (in Surgery). The natural secretion of fluids from the vessels.

EFT. A sort of lizard, which has a body covered with scales.

E. G. An abbreviation for *Exempli gratia*, that is, for example, or by way of example.

Egg. The fetus or production of feathered birds, that which they lay, and from which they hatch their young; also the eggs or spers of other creatures. The legs of birds are composed of the shell, or external coating, a thin, white, and strong

membrane, the albumen or white, and the yolk.

EGLANTINE. The wild rose.

EGRET. A bird of the heron tribe.

EIDER-DUCK. A kind of duck remarkable for the softness of its down.

EIDOURANION. An exhibition of the heavens and the heavenly bodies.

EJECTMENT. A writ or action which lies for the house for a term of years, who is cast out before his term is expired; also the putting any one out of an estate by a legal process.

ELASTICITY. That property of bodies, of restoring themselves to their former figure after any external pressure. Elasticity is increased by augmenting the density of bodies; thus metals are rendered more elastic by being beaten by a hammer; it is also sometimes increased by cold; thus the strings of a viola reserve their situation with less force in hot, than in cold weather.

ELECTION (in Law). The choice of two remedies, either of which, when chosen, the party is compelled to abide.

ELECTION. The choosing of persons to a particular office or situation by a majority of voices, as in England the election of parish officers, or the election of members of parliament, which takes place every seven years. The state elections here, are generally annual. The President, and Vice President are elected once in four years.

ELECTIVE ATTRACTION. Another name for chymical affinities.

ELECTOR (in Political Affairs). The title of such German princes as formerly had a voice in the election of the emperor of Germany.

ELECTOR (in English Law). Any one who has the right of giving his voice at an election, particularly at an election of a member of parliament. The term is applied in America to voters generally. In most of the states, those citizens who pay taxes are electors.

ELECTRIC. A term for any substance capable of being excited either by friction or otherwise so as to exhibit the phenomena of electricity. Bodies thus capable of accumulating and retaining the electric fluid are impervious to its power, and it should seem that in proportion as they are capable of being excited, so are they less pervious; and, on the other hand, those which are more pervious are less capable of excitation. They are called electric, or nonconductors, in distinction from those which are capable of receiving and transmitting electricity, and on that account

called conductors. To the class of electrics belong resins, bitumens, glass, dry animal substances, sealers, paper, white sugar, oils, chocolate, &c. Substances of this description may be excited, so as to exhibit the electric appearance of attracting and repelling light bodies, emitting a spark of light, attended with a snapping noise, and yielding a current of air, the sensation of which resembles that of a spider's web drawn over the face, and a smell like that of phosphorus. This excitation may be effected either by friction, or by heating and cooling, or by melting and pouring one melted substance into another.

ELECTRIC FLUID. A fine rare fluid, supposed to issue from and surround electrical bodies.

ELECTRICAL APPARATUS. The various instruments and machines necessary for the most usual experiments in electricity are two or three glass tubes, from three to five feet in length, and an inch and a half in diameter, one of which should be closed at one end, and furnished at the other end with a brass cap and stopcock, to rarely or condense the enclosed air; insulated stools or supports of various forms, wires, fine brass chains, sticks of sealing wax, or cylinders of baked wood, for producing the negative electricity; paper rubbers, or black oiled silk, with assalgun upon it, and soft new flannel or hare or cat skins tanned with the hair on; coated jars, or plates of glass, either single or combined in a battery for accumulating electricity; metal rods, or dischargers; an electrical machine, electrometers, &c.

ELECTRICAL BATTERY. A number of coated jars contacted with each other, which being charged or electrified are then applied or discharged with prodigious effect.



ELECTRICAL BATTERY. A primary sort of battery, as called from its power of pro-

ducing an electrical shock whenever it is touched.

ELECTRICAL JAR. See LARSEN'S PATENT.

ELECTRICAL KITE. A contrivance devised by Dr. Franklin, for verifying his hypothesis respecting the identity of electricity and lightning. It consists of a large thin silk handkerchief, extended and fastened at the four corners to two slight strips of cedar, and accommodated with a tail, loop, and string, so as to rise in the air like a paper kite. To the top of the upright stick of the cross was fixed a sharp pointed wire, rising a foot or more above the wood, and to the end of the twine, near the hand, was attached a silk riband. From a key suspended at the union of the twine and silk, when the kite is raised during a thunder storm, a phial may be charged, and electric fire collected, as is usually done by means of a rubbed glass tube or globe: kites made of paper, covered with varnish, or with well larded linned oil, in order to preserve them from the rain, with a stick and eagle bow, like those of school-boys, will answer the purpose extremely well, particularly in determining the electricity of the atmosphere.

ELECTRICAL MACHINE. The principal part of the electrical apparatus so constructed as to be capable of exciting a great quantity of the electric fluid, and exhibiting its effects in a very sensible manner. It is constructed in various forms but the cylindrical machine is in most common use. This consists of a glass cylinder, fixed in such manner that it may be turned with a winch; a cushion, supported



by a glass tube, and the top by a piece of silk which comes between it and the cylinder.

to take, supported by a glass pillar, is called the prime conductor, or by the conductor. A more modern name, called the Plate Machine, is represented.

ELECTRICAL RUBBER. A part of electrical apparatus, consisting of black silk, which serves to all the friction electrical machine.

ELECTRICAL SHOCK. The sudden idea between the opposite sides of a rod electric; also the effect produced there in the act of being electrified.

ELECTRICITY, or Electric Power. Property first discovered in amber of attracting light bodies when excited by friction. This property, which has its name from the Greek *Elektron*, in which it was first observed, has been found in other bodies, as seals, amber, and most kinds of precious stones, and has also, by subsequent discoveries, been found capable of being manifested under different circumstances.

ELECTRICITY, THE SCIENCE OF. The science which treats of the electric power, and its various operations, effects, experiments,

ELECTRICITY, HISTORY OF. It does appear that the ancients had something more than an imperfect and partial knowledge of the electric fluid. Thales, the first philosopher, who lived about six hundred years before Christ, was aware of the attractive property of amber, that when rubbed it would attract light bodies to itself, and Theophrastus observed that iron or magnets possessed the same property, but beyond this there is no mention of the subject, either by this or any other philosopher, until the seventeenth century, Dr. William Gilbert, a native of Colchester, published his treatise 'De Magnete,' in which we find many interesting particulars. These remarks are illustrated from the experiments of Boyle, Otto Guericke, Dr. Wall, and others, but more especially from the labors of Van Kleef, who, in his work on electricity, assumed the electrical power to be the light proceeding from it. He first heard the snapping noise that attends excitation, and noticed the phenomena relating to electrical attraction and repulsion; besides, by introducing the glass globe into the electrical apparatus, he much facilitated his own experiments and those of others. After the year of about twenty years, Mr. Grey added very materially to the

science of electricity by numerous important experiments. He first showed how the power of active electricity might be communicated to other bodies in which it cannot be excited, by supporting them on silken lines, hair lines, rakes of reeds or glass. He also more accurately distinguished between electric and non-electrics, and displayed the effect of electricity on water more clearly than Gilbert had done.

The experiments of Mr. Grey were elucidated and enlarged by M. de Fay, member of the Academy of Sciences at Paris. He observed that electrical operations were obstructed by great heat, as well as by a moist air; that all bodies, both solid and fluid, would receive electricity, when placed on warm or dry glass or sealing wax; that those bodies which are naturally the least electric have the greatest degree of electricity communicated to them by the approach of the excited tube. He first observed the electric spark from a living body suspended on silken lines, and established a principle first suggested by Otto Guericke, that all electric bodies attract others that are not wet, and repel them as soon as they are become electric by the vicinity or contact of the electric body. He likewise distinguished electricity into two kinds, which he called vitreous, as belonging to glass, rock, crystal, &c., and resinous, as applied to that of amber, gum, lac, &c.; the former of them has since been called positive electricity, and the latter negative.

Mr. Grey resumed his experiments in 1751, the result of which was the discovery of conductors. He also concluded from several experiments that the electrical power was of the same nature as that of thunder and lightning. Desaguliers and other experimentalists in France, England, and Germany, followed up the experiments of Mr. Grey with further researches, which displayed the power of electricity in new forms, particularly by the discovery that if electricity be accumulated in a point, it may be discharged again so as to occasion the electric shock. Mr. Van Kleef, of Leyden, first observed the property of the fluid, and Cuvier followed it by exhibiting the experiment. Mr. Muschenbroek, who also tried the experiment with a very thin bowl, named M. Kennow, in a letter, that he felt himself struck in his arms, shoulder, and breast, so that he lost his breath, and was two days before he recovered from the effects of the blow, and the terror which this unexpected result produced. He added that he would not receive a second shock for the whole king.

ELEVATION (in Gunnery). The angle which the chase of a cannon or mortar makes with the plane of the horizon.

ELEVATION OF THE HOST (in the Jewish Church). That part of the ceremony of the mass which consists in the priest's raising the host above his head, for the adoration of the people.

ELT. A wandering spirit supposed to be in unfrequented places.

ELGIN MARBLES. Curious marbles brought by the Earl of Elgin out of Greece, and deposited in the British Museum.

ELISION (in Grammar). The striking a vowel at the end of a word, as 'th' in 'the,' for 'the arch.'

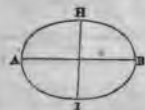
ELIXIR. A very powerful tincture. The Grand Elixir is another word for an powerful medicine.

ELK. The largest of the deer kind, and inhabits the northern parts of both continents. It is called Moose in America.



ELL. A measure of length, different in several countries. The English and Flemish are the most used; the former of which is three feet nine inches, or one yard and a quarter; the latter only three quarters of a yard.

ELLIPSE, or **ELLIPTIC**. A curve which cuts the cone obliquely through both sides. It is vulgarly called an oval, as in



an oblonged figure, A B H I, where H I is the transverse diameter, H I the conjugate diameter.

ELM. A sort of tree which grows to a very great height, and thrives best in a rich black earth. The timber of elm in England is next to that of oak for value, being particularly useful for masts.

ELOCUTION (in Rhetoric). The adapting words and sentences, to the things or sentiments to be expressed. It consists in apt expressions, the happy order in disposing the words, and a certain musical cadence which arises from the whole.

ELONGATION (in Astronomy). The removal of a planet to the farthest distance it can be from the sun, so it appears to an observer on the earth.

ELOPEMENT (in Law). The voluntary departure of a wife from her husband to go and live with an adulterer; in common acceptance, the secret departure of any female with her lover.

ELYSIAN FIELDS. The paradise of the heathens.

EMANCIPATION. A deliverance from slavery or servitude; also the release of the Roman Catholics from the disabilities, which prevented them from filling offices of state.

EMBALMING. The filling a dead body with spices, gums, and other antiseptics, to prevent it from putrifying. The Egyptians practised this art most successfully, so that bodies which they embalmed two thousand years ago, remain whole to this day.

EMBARCO (in Commerce). A prohibition issued by authority on all shipping, not to leave any port.

EMBER DAYS. Particular days of fasting and humiliation in the Ember weeks.

EMBER WEEKS. Four seasons in the year, more particularly set apart for prayer and fasting, namely, the first week in Lent, the next after Whitsonide, the fourteenth of September, and the thirteenth of December.

EMBEZZLEMENT. The appropriating a thing to one's own use, which has been intrusted to one.

EMBLEM. A kind of painted enigmas, or certain figures painted or cut metaphorically, expressing some action.

EMBOSSING. A sort of sculpture or carving, where the figure is protuberant, and projects from the plane in which it is cut.

EMBRASURE (in Architecture). An enlargement made in a wall.

EMBRASURE (in Fortification). A hole in a parapet for the reception of a gun.

EMBOCCATION. A kind of conversation.

EMBRROIDERY. Figured work wrought on silk, cloth, or stuffs.

ing, as far as regards the representation of figures or characters on metal, stone, or wood, was one of the first arts on which human ingenuity was exercised. Moses speaks of the art of engraving as an ancient invention. The tables which God delivered to Moses are said to be the work of God, and the writing was the writing of God engraved upon the tables. The first engravings of human workmanship mentioned in the Scriptures, were executed by Ahobai and Bezaleel, for the decoration of the tabernacle and the ornaments for the dress of Aaron. It is also said that the tables of stone contained the astronomical discoveries of that patriarch and his sons. In various times we find that the clasps, buckles, rings, and other ornamental parts of dress, as also the cups and other household furniture, together with the arms of military chieftains, were probably enriched with the first specimens of engraving. The artists of the Carthage, as described by Strabo, were ornamented with rude contrivances, as were also those of the ancient Celtic nations, but the hieroglyphic signs of the Egyptians afford the best and the most specimens of engraving properly called. The Phœnicians probably learned this art from the Egyptians; and their coins, which are looked upon to be among the most ancient extant, prove, as Mr. Strabo observes, that they were by no means inferior artists. It is, however, generally supposed, that there are no remains in antiquity, either in sculpture, painting, or engraving, prior to those of Etruscan origin. Some of those which are preserved in the British Museum are exceedingly fine, and evidently executed with the burr only upon a flat surface, and if finished with ink and run through a printing press, provided the plate would endure the operation, might produce a fair and perfect specimen.

The art of engraving on their shields was practised by the Saxons, in common with the other northern tribes. Alfred the Great discouraged this among the other nations, and the works of the Saxon artists, when strikers and makers, rose by his management and that of his successors, in celebrity in estimation, not only in England but on the continent. Strutt mentions a curious remnant of antiquity in the room at Oxford, namely, a very valuable jewel, made of gold, and richly adorned with a kind of work resembling engraving, in the midst of which is seen the figure of a man, supposed to be Paulinus the Apostle. The back of this jewel, which was engraved by command of Alfred, is

ornamented with foliage very skilfully executed. Saint Dunstan, the celebrated Archbishop of Canterbury, who died A. D. 1008, is also noted for his skill in the arts. Osborn, his biographer, enumerates among his other endowments that he could 'sculpello insipiens ex auro, argento, ære, et ferre.'

After the Conquest, it appears that engraving, which had hitherto been mostly followed in conjunction with the sister arts of carving and chasing, was now followed as a distinct art, and carried to a higher state of perfection, as may be learned from the brass plates so frequently to be met with in the English churches or on the tombstones in the fourteenth and following centuries. These are usually ornamented with the effigies of the persons in whose memory they are dedicated, and are evidently executed by the graver only; the outlines being first made, then the shadows are expressed by stroke strengthened in proportion as they required more force, and occasionally crossed with other strokes a second or third time, precisely in the same manner as copperplate is at present engraved for printing. Thus we see that the art of engraving was for a long time practised, before it was made to answer the noble purpose, of perpetuating the labours of the painter.

That branch of the art of engraving which consists in taking impressions on paper was, according to Giorgio Vasari, first practised by the Italians, and took its rise from an accident. One Maso Finiguerra, an ingenious goldsmith and sculptor of Florence in the fifteenth century, used to design and emboss figures on gold and other metals, and before he finished them, he used to fill the engraving with earth, and cast melted sulphur on it, which gave it a sort of olive colour, after which, pressing a piece of damp paper on it with a smooth wooden roller, the engraving on the metal remained imprinted on the paper, just as if it had been designed with a pen, in consequence of which Andrew Mantegna set about making regular prints from his engravings. The correctness of this story, however, as far as regards the priority of the discoverer, is disputed by Strutt and others.

It should seem that impressions from engravings on wood, had been taken in Germany prior to this, and that the brief masters, or the makers of playing cards, practised the art of card making about the fifteenth century, and from the making of cards were led to the execution of other figures of a dress or nature, so as to form a

of other insects; the *fishers*, small movable
suction organs, placed mostly on each side
of the jaw, and resembling the antennae, but
much smaller; these vary in number from
two to six in different insects.

The trunk, which is the second general
division of which an insect consists, com-
prehends that portion situated between
the head and the abdomen. This consists
of the thorax, or upper part of the body,
in which the first pair of legs is attached;
the mesothorax, or middle part of the thorax,
in which the four posterior feet are attached;
and the breast bone, a ridge running under the
mesothorax, which is conspicuous in some in-
sects; and the scutellum, or scutiform, a
plate-like process, situated at the posterior
end of the thorax.

The abdomen, or third principal portion
of an insect's body, is composed of anota-
cites, or segments, which vary in firm-
ness and number in different insects; this is
divided into the back, or upper part,
and the belly, or under part. The motion
of the abdomen is most visible in the fly
and bee tribes. In this division belong
the tail and the sting. The tail some-
times spreads like a leaf, as in the rock-
tick; and in other insects is trisected.
The sting, which is peculiar to
many of the bee tribe and some few
others, is sometimes simple, having but
one dart, and sometimes compound, having
two or three darts. In bees and wasps the sting is
a single dart, that is, capable of being drawn
out, but in other insects it is almost always
fixed in the body, or seldom thrust out. In
the tribe of insects it exists in the males,
but in the females only, but seldom
both sexes.

The members or extremities of insects
are the legs and the wings. Insects have
sometimes six legs, but never more, except
as is observable in the larva, which
terminates spiny feet. The feet vary in
form and use, being furnished either
for running, swimming, or leaping, with
the claws of the spider, &c. The wings
are usually two, but sometimes four in
number, mostly placed on each side of
the thorax, so as that each pair should corre-
spond in situation, form, &c.; but where
there is more than one pair, the first are
usually larger than those behind. The
wings are greatly diversified as to form,
as in the butterfly, cicada, &c. To the
wings belong also the elytra, or wing
covers, and the halteres, or potasses. The
wings are two various kinds, which
are expanded in flight, but when at rest
they cover the abdomen and sometimes
the membranaceous wings, as in insects

of the beetle tribe; the potasses are two
globular bodies placed on slender stalks
behind the wings in the tribe of winged
insects, so called because they are sup-
posed to keep the insect steady in its
flight.

The internal parts of insects are less
perfect and distinct than those of larger
animals, and of course less known. The
brain of insects is altogether different from
the substance which bears that name in
other animals, being little more than gan-
glions of nerves, two in number, that are
observed in the crabs, lobster, &c. The
muscles consist of fasciculi of fibres, that
serve apparently the office of producing
two motions, namely, that of extending
and that of bending. Some insects appear
to be furnished with some fluid vessels,
which secrete a fluid varying in colour in
different tribes, but very similar to saliva.
The oesophagus, or organ of deglutition, is
a straight short tube, consisting of annular
muscular fibres, like the proboscis of the
common fly.

The organs of digestion vary very much
in different tribes of insects. Most have a
single stomach, but some have it double,
and others have a cessant stomach. In
bees the stomach is membranaceous, fitted
to receive the nectar of flowers; the legs,
the host fly, and such as feed on animal
substances, have a muscular stomach. The
beetle, ladybird, curlew, and some others
that feed on other insects, have a double
stomach, the first of which is muscular,
after the manner of a gizzard, and the
second is a membranaceous canal. Insects
such as the cricket and grasshopper, which
have many stomachs, seem to employ them
much after the manner of the ruminating
animals.

Instead of organs of respiration, it has
been found that they have spiracles run-
ning on each side the body that serve for
the reception of the air, and other vessels
proceeding from these that serve for the
expiration of air. Insects, among the
ancients, were reckoned to be bloodless
animals; but it has since been ascertained
that the process both of circulation and
secretion goes forward in the bodies of
insects, although in a different manner.
The process of secretion is supposed to be
performed by means of a number of long
 slender vessels, which float in the internal
cavity of the body, serving to secrete
different fluids, according to the nature of
the animal, thus the bee, wasp, sphinx,
&c. have two vessels situated at the bottom
of the stinging apparatus, through which they discharge
an acrid fluid. From the rest is extracted

century by Dr. Wotton's work, *De Insectis Animatum*, and various remarks on insects in *Rondeletina Libri de Medicis Maribus*, and in Conrad Gesner's work *De Serpente Naturo*.

A far more important production on the subject of insects appeared in 1682, from the pen of that industrious naturalist Alexander, entitled *De Antiquissimis Insectis*, in which he divided them into two orders, *terrestria* and *aquatica*, and subdivided them into orders, according to their colour, nature, position, &c. of their wings. This work was followed by the *Scripta Anatomica Sacra* of Wolfgang Fabricius, and other works from the pen of Julius Celsus, Hofmeier, and Archibald Simpson. This latter work is entitled to this because it was the first work on entomology that had appeared in Britain.

The graphic art was also called into aid in this period, to illustrate the subject of entomology, as appears from the works

of the celebrated engraver Hofmeier, above Anstet, De Bry, Vallet, Roten, &c. The invention of the microscope also afforded great facilities in the study of entomology, and enlarged the field of observation very considerably.

These facilities many naturalists availed themselves, as Hooke, Leuwenhoek, Hartsoeker, &c. of them. The latter

mer discovered the circulation of the fluids in insects. Christopher Marret published, in 1687, a work containing an account of British insects; and a particular description of the tarantula was published about

the same time by Wolfgang Bauhinnus, at the most important work on this subject was Swammerdam's *General History of Insects*, which displayed an anatomical

knowledge of these animals that raised a reputation of this writer very high.

His account in 1688, and in 1678 Linnaeus's valuable *History of English Insects*; a year following the first part of Madame Letaur's extensive work on the metamorphose of lepidopterous insects, which was

followed by other parts in 1695, 1720, and 1721, which last in a splendid performance on the insects of Surinam. Leuwenhoek

also, about the same time, added considerably to the stock of entomological knowledge, by giving an account of the anatomy of insects, drawn from microscopical observations.

His published, in 1710, his *Historia Insectorum*, which was the joint labour of himself and his friend Willoughby. In this history insects are divided into the *transmutabilia* and *intransmutabilia*. The *transmutabilia* are divided into

the *arbores* namely, *vespigena*, those

which have wings covered with a sheath; *papilionae*, the lepidopterous insects; *quadripennae*, four winged insects; and *bi-pennae*, two winged insects: which are

again subdivided into families. In 1735, the system of Linnaeus was published, which has since been universally adopted.

It consisted at first of four orders, which he afterwards increased to the number of seven. Some writers, as Deger, Reitzius, and Fabricius, have attempted to improve upon the Linnaean system, but their alterations have not been admitted.

As to the history of insects, many naturalists since his time have contributed their share to the stock of information, either by the description of the insects in particular parts, or by the description of insects generally. In 1752, appeared the *Entomologia Curiosa* of Scopoli; in 1763, Burckhardt published *Outlines of Natural History of Britain*; in Seward's *Natural History* is given an account of many exotic insects. In 1776 were published *Illustrations of Natural History*; in 1775 Fabricius published his *Systema Entomologiae*; and within the last few years we have had Donovan's *Natural History of British Insects*, in 15 vols.; Lamurck's *Systeme des Animaux sans vertebres*; Martini's *Entomologia Britannica*, and Kirby's *Monographia Apium Anglica*.

ENTRY (in Commerce). The act of setting down in merchant's account books the particulars of trade.

ENTRY (at the Custom House). The passing the bills through the hands of the proper officers.

ENTRY (in Law). The taking possession of lands.

ENVELOPE. The cover that encloses a letter or note.

ENVIRONS. The country lying round a large town or city.

ENVOY. A person in degree lower than an ambassador, sent on some particular occasion from one government to another.

EPACT (in Chronology). A number arising from the excess of the lunation solar year above the lunar, by which the age of the moon may be found every year.

EPAULETTE. The shoulder knot worn by a soldier or lieutenant.

EPAULEMENT. A work raised to cover soldiers, made of earth, gabions, &c.

EPHEMERAL. Beginning and ending in a day; an ephemeral insect lives but for a day, or the day of.

EPHEMERIS. An astronomical almanac.

EQUESTRIAN ORDER. The second rank in Rome, next to the senators.

EQUESTRIAN STATUE. The representation of a person mounted on a horse.

EQUILANGULAR. Having equal angles.

EQUIDISTANT. At an equal distance.

EQUILATERAL. Having equal sides.

EQUILIBRIUM. An equal balance or equality of weight and poles, as when two ends of a lever hang as even, as in poise another way.

EQUIMULTIPLES (in Arithmetic or Geometry). Numbers and quantities multiplied by one and the same number and quantity, as 12 and 6, which are equimultiples of 4 and 3, called their sub-multiples.

EQUINOCTIAL, or EQUINOCTIAL-LINE. A great circle of the celestial globe, answering to the equator on the terrestrial globe. Whenever the sun comes to this circle the days and nights are equal all over the globe.

EQUINOXES. The times when the sun enters the first points of Aries and Libra, that is, about the twenty-first of March and the twenty-first of September, when the days and nights are equal all over the world.

EQUIPAGE (among Travellers). Whatever is necessary for a voyage or journey, as horses, attendants, attire, &c.

EQUIPAGE (in Military Affairs). Whatever is necessary for an army on its march, as tents, baggage, kitchen furniture, &c.

EQUIPOLLENCE. Equality of force and power; as equipollent propositions, such as have the same meaning, though differently expressed.

EQUITY (in Law). A correction of the common law wherein it is deficient.

EQUITY, COURT or. A title given by way of distinction to the Court of Chancery, in which the rigour of other courts is moderate, and controversies are supposed to be determined, according to the exact rules of equity and conscience.

EQUIVOCAL. An epithet for words which have a double meaning, and may be applied equally well to both.

EQUIVOCATION. The use of equivocal terms, which may be understood by the hearer in a different sense from that in which they are taken by the speaker.

ESCALOPES. An old constitution, having from first to six stars.

ERA. See *Ms.*

ERIDANUS. A constellation in the southern hemisphere, containing, according to different authors, from six to ten or eighty-five stars.

ERMINE. A little animal about the size of a squirrel, the fur of which, bearing the same name, is very valuable. This animal is white all over, except the tip of the tail, which is black. The common weasel of the United States, which in winter is white, is an ermine. In some parts of the country it is sometimes called *Stout*.



ERMINE (in Heraldry). A fur used in coat armour, and supposed to represent the linings and doublings of mantles and robes. It is represented by a white field powdered or semé with black spots.



ERRATUM. An error of the press; in the plural, *Errata*, errors of the press.

ERRATIC. Wandering, not fixed.

ERUPTION (in Medicine). A breaking forth in a morbid manner, as spots on the skin.

ERUPTION (in Mineralogy). The breaking forth of fire, ashes, stones, &c. from a volcano.

ERYSIPELAS, vulgarly called *SARS ANTHONY'S FIRE*. A disorder in the skin, which consists in a swelling, with redness, heat, and pain.

ESCALADE. An attack of a fortified place by scaling the walls with ladders, without breaking ground or carrying on a regular siege.

ESCALOP SHELLS. The shells of scallops, a sort of fish, which are regularly indented.

ESCAPE (in Law). A violent or private evasion out of some lawful restraint.

ESCAPEMENT. See *SCARFMENT*.

ESCARBUNCLE. See *CANCERULE*.

ESCHEAT. In England, lands or profits that fall to a lord within his manor, either by forfeiture or the death of the tenant.

ESCHEATOR. In England, an officer formerly appointed to make inquests of titles by escheats.

ESCOET. A company of armed men, attending by way of distinction or protection.

ESCUAGE. A kind of knight's service.

ESCULENT. A plant that may be eaten.

ESCUTCHEON, or SHIELD. The representation of the ancient shields used in war, on which armorial bearings are painted.

ESPALIER. A low branching fruit tree, having the branches trained to a frame.

ESPIONAGE. A system of employing spies either in military or political affairs.

ESPLANADE (in Fortification). The sloping of the parapet of the covered way towards the campaign.

ESQUIRE. In England, anciently, the person that attended a knight in time of war, and carried his shield; now, a title of honour given to the sons of knights, or those who serve the king in any vobishiplful calling, as officers of the king's courts, counsellors at law, &c. In the United States this title is given to lawyers, and by courtesy to many other persons.

ESSAY. A short discourse or treatise on some subject.

ESSAYIST. A writer of essays, of which there have been many in England, as Addison, Steele, Swift, Pope, Johnson, Hawkesworth, Goldsmith, Mackenzie, &c. whose works have been collected under the name of the British Essayists.

ESSENCE (in Chemistry). The purest and subtlest parts of a body, drawn by means of fire, &c.

ESSENTIAL OILS. Acid, volatile oils, having a strong aromatic smell, which are drawn from plants by distillation, in distinction from native oils procured by exaction.

ESSOIN (in Law). An excuse by reason of sickness or any other just cause, for one that is summoned to appear and answer an action, &c.

ESTABLISHMENT (in Military Affairs). The quota of officers and men in an army.

ESTABLISHMENT (in Trade). The stock, capital, &c. which are essential for carrying on a business.

ESTRIPE. A military course, sent part of an army to another.

ESTATE (in Law). The title or interest a man has in lands or tenements.

ESTATES OF THE REALM. In Europe, the distinct parts of any state or government, as the King, Lords, and Commons in England.

ESTIMATE. A calculation of the expenses of any undertaking, made according to the regular charges of trade, as the estimate of builders, engineers, printers, publishers, &c.

ESTOPPEL. An impediment or bar to an action.

ESTRAY. A term best found without any owner known.

ESTREAT (in Law). The copy of an original writing, particularly of the penalties or fines, to be levied by the bailiff or other officer, of every man for his offences.

ESTUARY. The mouth of a lake or river, or any place where the tide comes.

ETC. or &c. L. V. Et Cetera. Literally, And other things not mentioned.

ETCHING. A method of engraving, in which the lines and strokes are eaten in, with aquafortis.

ETHER. A very volatile fluid, produced by the distillation of alcohol with zinc acid.

ETHICS. The science of moral duties, showing the rules and measures of human conduct which lead to happiness.

ETIQUETTE. Rules and ceremonies of good manners, observed either at court or in general life.

ETYMOLOGY. A branch of grammar, which teaches the original and derivation of words.

ETYMOLOGIST. One who traces words from their original sources.

EVACUATION (in Medicine). The discharge of superfluous humours or excrements out of the body.

EVACUATION (in Military Affairs). The leaving a town, fortress, or any place which has been besieged as a military post or position.

EVANGELIST. Literally, the bringer of good tidings; particularly, the writers of our Saviour's history, as Matthew, Mark, Luke, and John.

EVAPORATION (in Chemistry). A process in which the superfluous moisture of any liquid substance is dispersed by means of fire.

EUCARIST. The sacrament of the Lord's Supper, so called, because the death of our Redeemer is thereby commemorated with thankful remembrance.

EUDIOMETER. An instrument for ascertaining the weight of air, or the quan-

ity of oxygen and nitrogen in atmospheric air.

EVERGREEN (in Gardening). A species of perennials which preserve their verdure all the year round, such as hollies, laurestinus, hays, pines, firs, &c.

EVERLASTING PEA. A perennial of the vetch kind, which grows naturally in some places, and may be cultivated with advantage as food for cattle.

EVIDENCE (in Law). The testimony adduced in a court, which may either be written, as by deeds, bonds, and other documents, or verbal, by witnesses examined *videlicet*.

EULOGY. Praise or commendation of a person.

EVOLUTION (in Arithmetic). The extraction of the roots of any power.

EVOLUTION (in Military Tactics). The complicated movement of a body of men when they change their position.

EVOLUTION (in Geometry). The unfolding of a curve.

EVOLUTION (in Botany). The expansion or opening of the bud.

EUPHONY (in Grammar). Good sound in pronouncing a word. It is properly a figure, whereby a letter that is too harsh is converted into a smoother, contrary to the ordinary rules, for the purpose of producing smoothness and elegance in pronunciation.

EURHYTHM (in Painting, Architecture, and Sculpture). A certain majesty and elegance of appearance in the composition of diverse parts of a body, painting, or piece of sculpture. Vitruvius, who ranks eurhythmy among the essentials in architecture, makes it to consist in the beauty of the construction or assemblage of the several parts of the work.

EWE. The female of the sheep.

EX (in Composition). Now signifies late, as the ex-minister, the late minister.

EXACTION (in Law). Injury done by an officer, or one who, under colour of his office, takes more than what the law allows.

EXAGGERATION. The making things appear more than they really are.

EXALTATION (in Chemistry). The raising a thing to a higher degree of virtue, or increasing the principal property in a body.

EXAMINATION (in Law). The examining of witnesses by questions.

EXAMINERS (in Law). Two officers in the Court of Chancery, in England, appointed to examine witnesses.

EXCELLENCY. In England, the title given to ambassadors, commanders, and

others not entitled to that of highness. In America the title is given to the President, to ambassadors, and governors of states.

EXCENTRICITY. See **ECCENTRICITY**.

EXCEPTION (in Law). A stop or stay to any action, which consists either of a denial of the matter alleged in bar to the action, or, in the Court of Chancery, it is what is alleged against the sufficiency of an answer.

EXCHANGE (in Commerce). The trucking or bartering one thing for another; also the place where merchants meet for the purpose of transacting business; and likewise the giving a sum of money in one place for a bill, ordering the payment of it in another place.

EXCHANGE (in Arithmetic). The reducing of moneys of different denominations from one to another, or the method of finding what quantity of the money of one place is equal to a given sum of another, according to a certain course of exchange.

EXCHANGE (in Law). A mutual grant of equal interests, the one in consideration of the other.

EXCHANGE BROKERS. Men who give the merchants information how the exchange goes.

EXCHEQUER (in Law). In England the office or place, where the king's cash is kept and paid.

EXCHEQUER COURT. In England, a court in which all causes relating to the revenues are tried; also the Protogalile Court of the Archbishop of York.

EXCHEQUERED. Summoned before the Exchequer, in England, to answer any charge of defrauding the revenue, &c.

EXCISE DUTIES. Inland taxes on commodities of general consumption.

EXCOMMUNICATION. An ecclesiastical censure, whereby a person is excluded from communion with the church, and in England deprived of some civil rights.

EXCORIATION. The rubbing or peeling away the cuticle or external skin.

EXCORTICATION. The stripping a tree of its bark.

EXCRESCENCE (in Surgery). Any preternatural formation of flesh on any part of the body, as warts, veins, &c.

EXECUTION (in Law). A judicial writ granted on the judgment of the court whenever it issues.

EXECUTION (in Military Affairs). The plundering and wasting a country in time of war.

EXECUTIVE (in Law). That branch

of the government, which executes the functions of governing the state.

EXECUTOR (in Law). One appointed by a testator to see that his will is executed.

EXECUTRIX. A female executor.

EXEMPLIFICATION. A duplicate of letters patent.

EXERCISE (in Military Tactics). The practice of all military movements.

EXHALATION. A fume or vapour rising from the earth.

EXHIBITION. A public display of whatever is interesting, either as a matter of art, or a natural curiosity; in England, particularly the exhibition of paintings at Somerset House, which is by distinction called The Exhibition.

EXHUMATION. The act of digging up a body that has been interred.

EXIGENT (in Law). A writ or part of the process of outlawry.

EXILE (in Law). A person sent into some place distant from his native country, under a penalty not to return within a certain period.

EXIT (in Theatricals). Going off the stage.

EX OFFICIO. By virtue of one's office, as, in England, et officio informations, prosecutions commenced by the king's attorney general by virtue of his office, without applying in the court for permission.

EXORCIST. One, who by prayers and incantations, professes to cast out evil spirits.

EXORDIUM. The commencement of a speech, serving to prepare the audience.

EXOTIC PLANTS. Plants of foreign growth, which in this climate require a hothouse and every kind of nurture.

EXPANSION. An increase of the bulk of any body by a power acting within, particularly by the action of heat.

EX PARTE (in Law). On one side, as ex parte statements, a partial statement, or that which is made on one side only.

EXPECTATION. In the doctrine of chances, is applied to any contingent event, upon the happening of which, some benefit is expected.

EXPECTORANTS. Medicines which promote expectoration, or a discharge of mucus from the breast.

EXPERIMENT. A trial of the results of certain applications and motions of natural bodies, in order to discover something of their laws, nature, &c.

EXPERIMENTAL PHILOSOPHY. That philosophy, which deduces the laws of nature, from sensible experiments and observations.

EXPERIMENTUM CRUCIS. A trial or decisive experiment.

EXPIRATION. A breathing from the lungs.

EXPLOSION. A sudden and expansion of an aerial or elastic fluid, accompanied with a noise.

EXPONENT (in Algebra). The or quantity expressing the degree of a power, as, in x^2 , 2 is the of the square number.

EXPORTS (in Commerce). Goods exported or sent out of one's own country to a foreign land.

EXPOSITOR. One who explains the writings of others, particularly of profanes to expound the scriptures.

EX POST FACTO. Literally something done afterwards, as an *in facta* law, a law which operates subject not liable to it at the time was made.

EXPRESS. A messenger sent with secret and specific instructions.

EXPRESSED OILS. Oils obtained from bodies by pressing.

EXPRESSION (in Chymistry or anatomy). The pressing of the oils out of vegetables.

EXPRESSION (in Painting). The distinct exhibition of character or sentiment, in the characters represented.

EXTEMPORE, or EXTEMPORE. Without preparation or rehearsal.

EXTENSION. One of the essential properties of a body, to occupy some space.

EXTENT (in Law). A writ of extent for valuing lands and tenements.

EXTENT (in Music). The compass of voice or instrument.

EXTENT IN AID. In England, a writ made by the crown, when an accountant becomes a defaulter.

EXTINGUISHMENT (in Law). Annihilation of an estate, &c. by its being merged or consolidated in another.

EXTIRPATION (in Surgery). The complete removal or destruction of an abscess by exclusion or by means of a caustic.

EXTORTION. The unlawful acquisition of money or any other thing when it is all is due.

EXTRACT (in Chymistry). The parts of any substance extracted by grosser parts by means of *decoction* formerly also by distillation, until were of the consistence of paste or jelly.

EXTRACT (in Literature). Some parts or sentences taken from a book.

EXTRACT (in Law). A draught or copy of a writing.

EXTRACTION (in Surgery). The drawing any foreign matter out of the body.

EXTRACTION (in Arithmetic). The finding out the true root of any number or quantity.

EXTRACTION (in Genealogy). The line, stem, or branch of a family from which a person is descended.

EXTRACTOR (in Surgery). An instrument for drawing the stone from the body.

EXTRAORDINARY. Out of the common course; as an Extraordinary Courier, one sent on an urgent occasion; Extraordinary Gazette, one published to announce some particular event.

EXTRAVASATION. The state of the fluids when they are out of their proper vessels, as when by the breaking of a blood vessel in the dura mater, the blood is effused in the ventricles of the brain.

EXTREME UNCTION. A solemn anointing of any person in the Romish church, who is at the point of death.

EXUDATION. The emitting of moisture

through the pores, as the exudation of gums through the bark of trees.

EXUVIÆ. The slough or cast off coverings of animals, particularly those of the snake kind.

EYE (in Anatomy). The organ of sight, whereby visible objects are represented to the mind. The external parts of the eye are the eyebrows, eyelashes, eyelids, the lachrymal ducts, &c.; the internal parts of the eye, which compose the ball or globe of the eye, consist of membranes, chambers, and humours.

EYE. A term applied to different objects from some supposed resemblance to the natural eye.

EYE (in Architecture). The aperture at the top of a dome, and to the centre of a vault.

EYE (in Botany). That part of a potatoe and other things where the bad puts forth.

EYE (in Printing). The graving in relief, on the top or face of the letter.

EYEGLASS. A glass put close to the eye, for the purpose of bringing objects nearer.

F.

F, the sixth letter in the alphabet, stood as a numeral for 40, and with a dash over it, for 40,000; it now stands for one of the Dominical or Sunday letters, and also, in Music, for the fourth note in the diatonic scale.

FA (in Music). The fourth note of the modern scale, which is either flat or sharp; the flat is marked thus *D*, and the sharp thus *F*.

FABLE. A tale or fictitious narration intended to instruct or convey a moral, as the Fables of Æsop; also the principal part of an epic or dramatic piece.

FABRIC (in Commerce). The same as manufacture; face of the fabric of Brussels, &c.

FACADE. The front or the principal side of a building.

FACE (in Anatomy). The lower and anterior part of the skull, in general, the fore part of any thing, as the face of a stone, seal, &c.

FACE (in Fortification). The face of a bastion, the most advanced part towards the enemy.

FACE (in Gunnery). The axial of the extremity of the muzzle of a gun.

FACE (in Military Tactics). The side of a battalion formed into a square.

FACET. The smooth side of a diamond.

FAC SIMILE. The copy of a person's writing, as of a letter in imitation of his own handwriting.

FACITIOUS. Made by art, as fictitious diamond; in distinction from that produced naturally.

FACTOR (in Commerce). An agent commissioned by merchants to buy or sell goods on their account.

FACTORS (in Arithmetic). The two numbers that are multiplied together.

FACTORY. A place in a distant country, where factors reside for purposes of trade; also the trades themselves collectively.

FACULÆ (in Astronomy). Bright spots on the surface of the sun.

FACULTIES, *COUAT. OF.* In England, a court under the archbishop of Canterbury for granting faculties or privileges.

FACULTIES (in the Universities). The divisions under which the arts and sciences are classed, and degrees granted. These are for the most part four, as 1. Arts, including Humanity and Philosophy; 2. Theology; 3. Physics; and 4. Civil Law.

FACULTY (in Law). A dispensation or privilege.

FACULTY (in Physics). That power by which a living creature moves and acts. This may be either an animal, or corporeal

FARMER. Properly, one who occupies and cultivates a farm or hired ground; a cultivator of ground generally. In England the farmers are not proprietors of the lands which usually belong to rich persons, who let them to tenants.

FARMING. The cultivating of land for the purposes of profit.

FARRAGO. A mixture of several sorts of seed sown in the same plot of ground.

FARRIER. One who shoes horses, and also cures their diseases. In London, the farriers are one of the oldest of the city companies. As farriers worked most in iron, they were originally called *ferrarii* or *forriers*, from *ferrum*, iron.

FARRIERY. The art of shoeing and managing horses altogether, including also the cure of his diseases. On the application of science to this art, it rose in importance and estimation; a college was formed some years ago in England for practitioners in animal medicine and surgery, which, in imitation of the French, was called the Veterinary College, and the art itself the veterinary art.

FARTHING. The fourth part of a penny.
F. A. S. L. a. *Fraternitas Antiquarianorum Socius*, or Fellow of the Antiquarian Society in England.

FASCES. Bundles of rods bound round the helms of henchmen, which were carried before the Roman consuls as insignia of their office.

FASCETS. Truss used in a glass manufactory.

FASCINE (in Fortification). Small branches of trees bound up in bundles for filling ditches, &c.

FAST. An abstinence from food on a religious occasion.

FASTI. The Roman calendar, in which were set down the feasts, games, occasions, &c.

FAT. A concrete oily matter contained in the cellular membrane of animals.

FATES. The destinies; according to a poet, the three fatal sisters, Clotho, Lachesis, and Atropos, who determined a duration of life.

FATHER LASHER. A voracious fish, habiting the shores of Greenland and Newfoundland.

FATHER LONG-LEGS. A horned insect, with a small body and exceedingly long legs.

FATHOM. A long measure of six feet.

FAUNS. Rural deities having horns on their heads, with pointed ears and tails.

FAWN. A young deer; a buck or doe of the first year.

F. E. An abbreviation for Flemish Elm.

FEASTS. Anniversary times of feasting and thanksgiving, such as Christmas and Easter, &c. Some feasts are moveable, that is, not confined to any particular day, as Easter and all that are governed by it; others, as Christmas, &c. are immovable, that is, fixed to a day.

FEATHER. That which forms the covering of birds. The constituent parts of feathers are, for the most part, albumen, with a little gelatin.

FEATHER (in the Massage). A row of hair turned back and raised in the neck of a horse.

FEATHER-EDGED BOARDS. Boards having one edge thinner than the other.

FEATHERS. The finest kind of feathers, as Ostrich Feathers, which are used for ornament. The Prince's feathers are those which adorn the regimance of the Prince of Wales.

FEB. An abbreviation for February.

FERRIFUGE. A sort of medicines which abate the violence of fever.

FEDERAL. United by a compact, as Federal States.

FEDERAL CONSTITUTION. The constitution of the United States in which the several states are united, or federated under one general government.

FEE. An estate of inheritance, or the interest which a man has in land or some other immovable: this is called a fee simple when it is unconditional, and a fee tail, when limited to certain heirs according to the will of the first donor.

FEED. What is given to a horse at one time, either of hay or corn.

FEEDER. A sort of drain which carries the water into other drains.

FEELERS. Organs fixed to the mouth of insects, which are vulgarly called horns: the feelers are, however, smaller than the antennae, or horns, in some insects.

FEELING. One of the five senses, which men by means of the nerves, that are distributed in all parts of the body.

FEES. Perquisites allowed to officers in the administration of justice.

FEIGNED ACTION. An action which is brought simply in try the merits of a question.

FEINT (in Military Tactics). A mock attack, made to conceal the true one.

FELLS. The pieces of wood which form the circumference or circular part of the wheel.

EXTRACT (in Law). A draught or copy of a writing.

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EXTRACTION (in Arithmetic). The finding out the true root of any number or quantity.

EXTRACTION (in Genealogy). The line, stem, or branch of a family from which a person is descended.

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through the pores, as the exudation of gums through the bark of trees.

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EYE (in Architecture). The aperture at the top of a dome, and to the centre of a volute.

EYE (in Botany). That part of a potatoe and other things where the bud puts forth.

EYE (in Printing). The graving in relief, on the top or face of the letter.

EYEGLASS. A glass put close to the eye, for the purpose of bringing objects nearer.

F.

F, the sixth letter in the alphabet, stood as a numeral for 40, and with a dash over it, for 40,000; it now stands for one of the Duple and Sunday letters, and also, in Music, for the fourth note in the diatonic scale.

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FACE (in Fortification). The face of a bastion, the most advanced part towards the field.

FACE (in Gunnery). The metal at the extremity of the muzzle of a gun.

FACE (in Military Tactics). The side of a battalion formed into a square.

FACET. The east side of a diamond.

FAC SMILE. The copy of a person's writing, as of a letter in imitation of his own handwriting.

FACTITIOUS. Made by art, as factitious cinnamon; in distinction from that procured naturally.

FACTOR (in Commerce). An agent commissioned by merchants to buy or sell goods on their account.

FACTORS (in Arithmetic). The two numbers that are multiplied together.

FACTORY. A place in a distant country, where factors reside for purposes of trade; also the trades themselves collectively.

FACULTE (in Astronomy). Bright spots on the surface of the sun.

FACULTIES, *Conveyer*. In England, a court under the archbishop of Canterbury for granting faculties or privileges.

FACULTIES (in the Universities). The divisions under which the arts and sciences are classed, and degrees granted. These are for the most part four, as 1. Arts, including Humanity and Philosophy; 2. Theology; 3. Physic; and 4. Civil Law.

FAULTY (in Law). A disposition or omission.

FACULTY (in Physics). That power by which a living creature moves and acts. This may be either an animal, or corporeal

with the pinnæ joint in the feet of many horses.

FESSE (in Heraldry). One of the honorific ordinaries, which occupies the third part and the middle of the field.



FETTERS (in Law). A sort of iron put on the legs of malefactor.

FEUD. In England, the right which the vassal or tenant had in lands and other immovable things of his lord's, to use the same and take the profits thereof, rendering unto his lord such duties and services as belonged to military tenures, the property of the soil, &c. always remaining to the lord. The laws respecting these feuds, which are comprehended under the name of the Feudal System, regulated all the principles of landed property in this kingdom until the reign of Charles II.; and vestiges of this system are still to be seen in the modern tenures, particularly in copyholds.

FEVER. A disease characterized by an increase of heat, an accelerated pulse, a red tongue, and an impaired state of several functions.

FIAT, *l. v. LET IT BE DONE*. In Eng. A short order or warrant of some judge, for making out and allowing certain processes.

FIBRE (in Anatomy). Astropilement, serving to form other parts, as the muscles, nerves, &c.

FIBRE (in Botany). Threads or hair-like strings in plants, roots, &c.; the first constituent parts of bodies.

FIBRIL. A small fibre.

FIBRINA (in Chymistry). That substance which constitutes the firmest part of muscles. It is of a white colour, without taste or smell, and not soluble in alcohol or water.

FIBROLITE. A mineral consisting of alumina, silica, and iron.

FIBULA (in Anatomy). The lesser and outer bone of the leg.

FICTION (in Law). A supposition that a thing is true, so that it may have the effect of truth so far as it is consistent with equity.

FIELD. Arable land, or any plot of ground parcelled off for cultivation.

FIELD (in Heraldry). The whole surface of the shield or escutcheon.

FIELD (in Military Tactics). The ground chosen for any battle.

FIELD (in Painting). The ground or blank space on which any thing may be drawn.

FIELD-BED (in Military Affairs). A folding bed used by officers in their tents.

FIELDFARE. A migratory bird of the thrush tribe, that visits England about Michaelmas and leaves it in March.

FIELD-OFFICERS. Those who command a whole regiment.

FIELD-PIECE. A sort of cannon, consisting of eighteen-pounds and less.

FIELD-WORKS (in Fortification). Works thrown up by an army to besieging a fortress.

FIERI FACIAS. A writ commanding a sheriff to levy the debt or damages on the goods of one, against whom judgment has been had in an action of debt.

FIFE. A shrill wind instrument of the martial kind, consisting of a short narrow tube, with holes disposed along the side for the regulation of its tones.

FIFER. One who plays on the fife in the army.

FIG. A tree, with an upright stem branching fifteen or twenty feet high, with large palmated or hand-shaped leaves. It flourishes in warm climates, and bears a fruit so represented underneath, which, when dried, is remarkable for its harshness and sweetness.



FIG (in Farriery). A kind of wart on the flesh of a horse, that is often filled with foul humours.

FIGHTS. Waste clothes hung round a ship in battle, to prevent the men from being seen.

FIGURE (in Painting). The lines and colours which form the representation of an object.

FIGURE (in Geometry). A space terminated on all parts by lines curved or straight.

FIGURE (in Arithmetic). One of the nine digits, as 1, 2, 3, &c.

FIGURE (in Grammar and Rhetoric). A word or form of expression which de-

FIRE-MAN. One who is employed in extinguishing fires.

FIRE-SHIP. A ship filled with combustibles, to set fire to the vessels of the enemy.

FIRE-WORKS. Compositions of sulphur, saltpetre, and charcoal, which exhibit a handsome appearance when fired off.

FIRKIN. An English measure of capacity, containing nine gallons of beer.

FIRMAN. A passport granted in Turkey and India for the liberty of trade.

FIRST-FRUITS (in England.) The profits of every spiritual living for one year, given to the king.

FIRSTLING. The young of cattle which are first brought forth.

FISH, or FISHES (in Natural History.) Water animals in general; one class of the animal kingdom in the Linnæan system.

FISH, or BIVALVE FISH (in Law.) The whale and sturgeon, so denominated in England, because the king is entitled to them whenever they are thrown on shore, or caught near the coasts.

FISH (among Mariners.) A machine employed to hoist and draw up the flukes of ships' anchors towards the top of the bow.

FISHERY. The place where fish are caught for the purposes of trade.

FISH-GIG. An instrument for striking fish at sea.

FISHING-FLY. A bait used for catching fish.

FISHING-HOOK. An instrument of steel wire, fitted for catching and retaining fish.

FISHING-LINE. A line of twisted hair fixed to a rod called the fishing-rod, and having at one end the fishing-hook.

FISHMONGER. A dealer in fish. There were formerly two companies of fishmongers in London, namely, the stock-fishmongers and salt-fishmongers, which were united in 1599.

FITCH. A long and slender ulcer.

FITCHET. An animal of the species of forest kind.

FISHING. The making any volatile spirituous body endure the fire.

FIXED AIR. A name formerly given by Chymists, to the air which was extracted from lime, magnesia, and alkalies, now commonly called, orherwise held gas.

FIXED BODIES. Such as neither fire nor any corrosive menstruum, have the power of reducing to their component elements, or atoms.

FIXED STARS. Sixty four fixed stars properly denominated in respect to their motion.

FLAG (in Naval or Military Affairs) The colours or ensign of a ship, or of a regiment of land forces. The first flag in Great Britain is the standard, only to be hoisted when the king or queen is on board.



FLAG (in Botany.) A sort of rush with a large leaf. It is of different kinds, as the common flag, or water iris, that grows in rivers and bears a yellow flower; the corn flag, or gladiolus, a bulbous plant; and the sweet flag, a perennial; which two last are cultivated in gardens.

FLAGOLET. A little flag.

FLAG-OFFICER. An officer commanding a squadron.

FLAGON. A large drinking vessel.

FLAG-SHIP. A ship commanded by a flag-officer.

FLAG-STAFF. The staff set on the head of the topgallant mast, on which the flag is placed.

FLAGSTONE. A sort of stone used for smooth pavement.

FLAIL. An instrument used for threshing corn.

FLAME. The most subtle part of fire, which is properly the flame or vapour of fire, heated red-hot so as to shine.

FLAMINGO. A sort of bird in Africa and America.

FLANK. The side of an army, or a battalion encompassed on the right and left.

FLANK (in Fortification.) Any part of a work that defends another work along the outside of its proper.

FLANNEL. A light, warm, woollen stuff, woven on a loom with two threads after the manner of linen. It serves to keep the body warm, because, from its light and spongy texture, it does not admit of a passage for the heat.

FLASK. A measure for holding gunpowder.

FLAT (in Music.) A character marked thus ♭, which lowers a note one semitone.

FLAX. A plant, from the fibres of which linen thread is made. Common flax, &c.

represented underneath, is an animal; but the other kinds are perennials.



FLAX BARTH, or MOUNTAIN FLAX.
See *ANASTAS*.

FLEA. A little insect of a deep purple colour, remarkable for its agility in leaping, for which it has three pair of legs. It sucks the blood of larger animals.

FLEAM. An instrument for lancing the gums or bleeding cattle.

FLEECE. A flock of wool, or what comes from a sheep at one shearing.

FLEET. A number of ships together in company or under one command.

FLEET. A prison in London, where debates are confined.

FLESH (in Anatomy). The soft and fibrous part of an animal body; also the red part of a muscle.

FLESH (in Botany). The pulpy substance of any fruit or root.

FLEUR DE LIS, or FLOWER OF LEAVES (in Heraldry). A bearing in the arms of France, and in other coats of arms.

FLINT. A semitransparent and hard stone, which possesses the property of emitting fire when struck.

FLINT (among Gunsmiths). A piece of flint, cut so as to go between the jaws of the cock of a gun.

FLOAT. A raft or number of pieces of timber, lashed together with cables or staves, to be driven down a river with the tide.

FLOATING BATTERY. Vessels used as batteries in river troops in landing on an enemy's coast.

FLOCK. A number of sheep in company or a number of birds.

FLOES or strata of earth, composed of animal or vegetable matter.

FLOES. A species of soft water in nature, and consists of a calcareous earth in combination with

water continuous rising.

FLOOD-GATE. A sluice or gate may be opened or shut, for the admission or exclusion of the water.

FLOOR. The area or surface of a room.

FLOOR (in Ship Building). The bottom of the ship which rests on the ground.

FLORES (in the Heathen Mythology). The goddess of flowers; in Botany.

FLORES. A coin of different value the silver florin of Holland is worth 1s. 8d.

FLOUR. The fine parts of wheat ground and sifted.

FLOWER. The beautiful part of a plant, the blossom; the parts or divisions which are called petals. It contains the parts of fructification, or the germ of fruit.

FLOWER DE LUCE. A species of the iris; a bulbous root having a flower of one leaf, shaped like that of a common iris.

FLOWERS (in Chymistry). The mealy matter which, in subtilization, is carried up to the head of the vessel in the flowers of benjamin, zinc, &c.

FLUATES. A kind of salts formed by the combination of fluoric acid with most bases, as the fluoate of ammonia.

FLUE. The small winding chimneys or funnels for conveying smoke, &c. It has a larger chimney; also the soft hair of rabbits and feathers.

FLUELLER. An animal that gives gardeners.

FLUID (in Physiology). A fluid is one whose parts yield to the surface impressed, and are easily mixed among each other. Fluids are either simple, as the air, or non-elastic, as mercury, &c.

FLUID (in Anatomy). The fluids of an animal body are the humours and juices, as the blood, chyle, saliva, &c.

FLUIDITY. The state of bodies whose parts are very readily movable in all directions with respect to each other. It stands directly opposed to solidity, firmness, and is distinguished from liquidity and humidity, inasmuch as the latter imply also wetting and adhesion. Metals, air, ether, smoke, and fluids (fluid but not liquid bodies, their parts are dry and leaving no traces of moisture) fluids are converted into fluids by means of heat.

FLUID SPAR. A species of soft water in nature, and consists of a calcareous earth in combination with

acid. It is called *fluor* because it melts readily; it is called *aque* because it has a sparry form and fracture; and it is also called *vitreous spar* because it has the appearance of glass.

FLUORIC ACID. A gaseous substance procured from *fluor spar*, which is of a corroding nature, and will dissolve glass, for which reason it has been used for etching on glass. This acid gas readily combines with water; and when dropped in, a hissing noise is produced with much heat.

FLUTE. A wind instrument, and the simplest of its kind, with stops for the fingers.

FLETES. The hollow channels found along the surface of a salina.

FLUX (in Physiology). That motion of the water by which it rises.

FLUX (in Chemistry). Any substance or mixture added to assist the fusion of minerals and metals. In assaying, alkalies are used as fluxes, which render the earthy mixtures fusible by connecting them with glass.

FLUXION. That branch of algebra which treats of the velocities with which the fluents or flowing quantities increase or decrease. The variable or flowing quantities are represented by the letters *x, y, z, &c.*; the invariable quantities, by the letters *a, b, c, d, &c.* The fluxion is represented by a dot thus \dot{y} .

FLY (in Natural History). A small winged insect, that is always flying about in houses.

FLY (among Mechanics). That part of a jack which puts the rest of the machine in motion.

FLY (among Mariners). That part of a compass on which the thirty-two points are described.

FLY (among Carpenters). Flies or flyers are the series of steps which go straight forward without winding.

FLY-BOAT. A large vessel with a broad bow, used in the coating trade.

FLY-BLOW. The deposit of the eggs, maggots, or nymphs of flies in meat.

FLY-CATCHER. A sort of bird inhabiting Asia, Africa, and America, so called because it lives upon flies. The king bird is a well known variety in this country.

FLYING BRIDGE. See BRIDGE.

FLYING-FISH. A fish inhabiting the European and American seas, which, by the help of its long pectoral fins, is enabled to raise itself out of the water and to fly a short distance when pursued by other fish.

FLYING SQUIRREL. A beautiful

American Squirel), which by the aid of membranes attached to its legs enables him to fly from the tops of trees to a great distance.

FLYING DRAGON. A four-footed reptile of the lizard tribe, inhabiting India and Java, which has a lateral membrane serving as a wing.



FLY-ORCHIS. A plant, so called from the resemblance it bears in its figure to a fly.

FLY-TRAP, or VERVA'S FLY-TRAP. A sensitive plant, the leaves of which consist of two lobes, that close when they are irritated within, and consequently entrap any insect that lights upon them.

FOAL. The young of a horse, or ass.

FOCUS (in Optics). The point of convergence or concurrence, where all the rays meet after passing through a convex lens.

FOCUS (in Geometry and Conic Sections). A certain point in the parabola and ellipse, &c. where the rays reflected from all parts of these curves converge.

FODDER. Dry food for cattle.

FODDER (in England). The prerogative of the king's farmery, to be provided with fodder for his horses in any straits or expedition.

FOG, or MIST. A meteor consisting of condensed vapours floating near the surface of the earth.

FOIL (in Fencing). An instrument without a point, to fence with by way of exercise.

FOIL (among Glass-grinders). A sheet of tin laid on the back of a looking glass, to make it reflect.

FOIL (among Jewellers). A thin leaf of metal placed under a precious stone, to increase its brilliancy.

FOLD. An enclosed place in which sheep are confined.

FOLIAGE. A cluster or assemblage of the leaves of trees.

FOLIAGE (in Architecture). Ornament representing leaves, used in curls, &c.

FOLIATING. Spreading the plates of glass over with the oil, in order to make them reflect.

FOLIO. The full size of paper as it comes from the manufacturer; also books printed on paper of that size.

FOLIO (in Merchants' Accounts). The page, including the right and left hand page, in a merchant's ledger, which are numbered by the same figure, so that they may correspond.

FOMENTATION. The bathing any part of the body with a decoction of herbs, &c. A similar application with bugs of herbs and other ingredients, is called a dry fomentation.

FOOT. A measure of length amounting to twelve inches.

FOOT (in Poetry). A certain number of syllables which serve for measuring the verse.

FOOT (in Military Tactics). Soldiers who serve on foot.

FORAGE. Proviander for horses in an army.

FORCE (in Physiology). Whatever is, or may be made, the primary cause of motion in bodies.

FORCE (in Law). Unlawful violence.

FORCE (in Military Affairs). Any body of men that may be employed in action.

FORCEPS. A surgeon's tongs, pliers, &c.

FORCER, or **FORCING-PUMP**. A pump with a *forcer* or piston without a valve.

FORCING (among Gardeners). A method of obtaining fruits and flowers before their season, by the application of heat.

FORCING (in Commerce). The forcing down wares so as to render them fit for immediate sale.

FORE. A sea term for near the stem; as 'fore and aft,' that is, from stem to stern.

FORECASTLE. A short deck in the fore part of the ship.

FORECLOSED (in Law). Excluded or barred the equity of redemption on mortgages, &c.

FOREIGN ATTACHMENT (in Law). An attachment of foreigners' goods.

FORENSIC. Belonging to the law or courts of law.

FORESHORTENING (in Painting). The making a head or face in a drawing appear shorter before.

FOREST. In England, a large wood privileged to hold the King's game of all kinds.

FORESTALLING. The buying or bargaining the term or other merchandise, before it comes into the market.

FORSTER. In England, the keeper of a forest.

FORFEITURE (in Law). The loss of a right, as employments, &c. for any offence.

FORGE. A furnace, in which heat their metals red-hot, or in which are taken out of the mine in melted.

FORGERY (in Law). The falsifying, making or altering any record, writing, &c. to the prejudice of man's right, particularly the counterfeiting the signature of another with intent of fraud, which, by the law of England, is made a capital felony. In the States, it is punished by imprisonment.

FORGING (in Smithery). The hammering iron on an anvil.

FORK. An instrument divided into two or more prongs, for uses.

FORM (in Physiology). The exact and distinguishing modification of matter of which any body is composed.

FORM (among Mechanics). A mould in which any thing is wrought.

FORM (among Printers). The frame filled with type or letters and form of a page, made ready for press. This form will be quite sheet consist of 5 pages, octavo consist of 16 pages, and duodecimo consist of 24 pages.

FORMA PAUPERIS, *L. e.* A Form or a Petition. In England, in which any one may sue who that he is not worth five pounds, and a certificate from some lawyer that he is not worth five pounds, and is released costs of suit, &c.

FORMIC ACID. The acid of ants is obtained chiefly from the red ant.

FORMULA (in Mathematics). An abstract or theoretical expression, for any part of a problem.

FORMULA (in Theology). A prayer or formula.

FORMULARY. A book of the precedents for law matters.

FOET. A small castle or strong place of small extent, fortified with earth or stone, being unincorporated, usual, common, and proper, is represented underneath, to secure some high or the passage of a river.

FOETIFICATION. The raising of any architectonic, which teaches the mode of putting a city, town, or a



FOETIFICATION. The raising of any architectonic, which teaches the mode of putting a city, town, or a

place, into a state of defence by making works around it. A fortification is either regular or irregular; a regular fortification is built in a regular polygon, as in the adjoining figure; an irregular fortification is where the sides and angles are not uniform. A temporary fortification is that which is raised for any particular emergency, as fieldworks, &c. This is distinguished from a durable fortification, which serves as a permanent defence of a place. A defensive fortification is that by which a town is defended in case of a siege, in distinction from an offensive fortification, which is raised by besiegers for the attack of a place. The works of a place are those about the place, in distinction from the outworks, which are constructed before the body of the place. The principal works belonging to a fortification are, the ditch or trench made round each work; the rampart, or elevation of earth, raised along the face of any work, to cover the inner part; the parapet, or that part of a rampart which serves to cover the troops planted there; the bastion, that part of the inner enclosure of a fortification making an angle towards the field; the counterscarp, the slope of the ditch facing the body of the place; the covert way, the space extending round the counterscarp; the glacis, the part beyond the covert way, in which it serves as a parapet; the curtain, the front of a wall between two bastions; the flank, any part of a work which defends another; the gorge, that part next to the body of the place where there is no rampart; the esplanade, the shoulder of the bastion; besides the bastions, palisades, portcullis, piece of arms, &c.



FORTIORI, or A FORTIORI. A term used in reasoning, for any conclusion or

inference that is much stronger than an other.

FORUM. A public place in Rome, where causes were tried and business transacted.

FOSSES (in Fortification). A is flow ditch, commonly full of water, lying between the scarp and the counterscarp.

FORSAN. An animal of the weasel kind, found in the Asiatic islands, about the size of the ferret.

FOSSILE. All manner of things dug out of the earth, whether they be native fossils growing in and of the earth, as metals, stones, salts, earths, and other minerals; or whether they be foreign substances, as the exuvia of sea and land animals, namely, shells, bones, teeth, &c.; or whether they be vegetables, as leaves, wood, &c. which have lain long buried in the earth.

FOUL. A sea term for the running of one ship against another.

FOUNDATION (in Architecture). That part of a building which is under ground.

FOUNDATION (in Law). A donation in money or lands for the maintenance and support of some community, as an hospital, a school, &c.

FOUNDER (in Law). One who founds and endows a church, school, college, &c.

FOUNDER (in Trade). One who casts metals in various forms, as gun-founders, bell-founders, &c. The company of founders was incorporated in London, in 1614.

FOUNDRY. The art of casting metals in various forms; also the place where this business is done. Small works are cast in sand, which, being duly prepared, is put into a wooden frame; then wooden or metal models of what is intended to be cast are put into the sand so as to leave their impression, and along the middle of the mould is laid a small brass cylinder to form a chief canal for the metal to run through, from which canal run others extending to each mould or pattern placed in the frame. When the mould is fully prepared, the fused metal is poured out of the crucible into the chief canal, and thence conveyed to each pattern. After the white has been set to red, the cast work is taken out of the sand. The mould for very large articles is made of wet tempered loam, built up by degrees in a pit, into which the melted metal is made to run along a channel on the ground in the mould. The composition used in casting bells is termed bell metal.

FOUNT, or FOUNT. A set or certain quantity of letters cast at one time by a letter-founder for the use of a printer. Founts are large or small, according to

the wants of a printer, who orders them by the hundred weight or by the sheet. A font of five hundred, including letters, points, spaces, quadrats, &c. is to weigh 500 lb. A font of ten sheets is expected to contain a sufficiency for composing ten sheets without being obliged to distribute; in the making of which the founder takes care that those sorts of letters should be best supplied for which there are the greatest calls in composition, so that scarcely any two boxes will contain the same number of letters. The proportion which the different sorts of characters in a font should bear to each other has been now reduced to a rule, which by the French is called the *poire*.

FOUNTAIN. A natural spring of water rising out of the ground, also a stream of water ejected through a pipe by means of a machine contrived for this purpose. Artificial fountains are various in their forms, but they all act on the principle of a pressure, either from a head of water, or arising from the spring and elasticity of the air. When fountains are formed by the pressure of a head of water, or any other fluid of the same kind, with the fountain or jet, then will this spout up nearly to the same height as that head, allowing a little for the resistance of the air, with that of the adjuvant, &c. In the fluid rushing through, but when the fountain is produced by any other force than the pressure of a column of the same fluid as itself, it will rise nearly to the altitude of the fluid, whose pressure is equal to the given force that produces the fountain. The subjoined figure represents the circulating fountain, or the fountain of Hero of Alexandria, so called because it was invented by him, in which



the jet, being compressed by a condensed
of water forms a jet that appears if

it had a perpetual motion, and that some water which fell from the jet came again; but, in reality, that water does not come up again, but, running down through a pipe into the bottom box, it drives out the air through an ascending pipe into the box at the top containing water which, being pressed upon, is forced through the spout as long as there is any in it.

FOWL. The largest sort of birds, whether domestic or wild, as geese, pheasants, partridges, &c.; also a full grown chicken, or young hen.

FOWLING. The art of taking or killing birds, either by means of snares or nets, or by various devices, as imitating their voices or using decoy birds and the like.

FOWLINGPIECE. A light gun for shooting birds.

FOX. A crafty, lively animal, nearly allied to the dog, which seeks its food by sight among the poultry, rabbits, and hares. The fox is borne in coats of arms, and as a charge, is supposed to denote a subtle wit by which a man has served his country.



FOXGLOVE. See **DIGITALIS.**

FOX-TAIL-GRASS. An herbaceous plant.

F. R. S. Fellow of the Royal Society in London.

FRACTURE (in Mineralogy). The breaking of minerals, or the manner in which they break, which is one of their specific characters.

FRACTURE (in Surgery). The breaking of any bone by an external act of violence.

FRENUM LINGUÆ (in Anatomy). The ligament under the tongue.

FRAME (with Painters). A kind of square, composed of four long pieces of edge of wood joined together, the intermediate space of which is divided by little strings or threads into a great number of little squares, like the meshes of a net, used in reducing figures from great to small or from small to great.

FRANCHISE (in Law). A privilege or exemption from ordinary jurisdiction.

FRIT, or **FRITT** (in the Glass Manufacture). The matter or ingredients of which glass is to be made, after they have been selected or laked in a furnace. It is of different kinds, according to the quality of the glass. Crystal frit, for the best kind, is made with salt of pulverine and sand. The ordinary or common glass is made of the bare ashes of pulverine, or barilla, without extracting the salt from them; this is the second kind of frit. The third kind of frit, for green glass, is made of common ashes, without any preparation.

FRITH (in Geography). An arm of the sea, as the Frith of Forth, or of Edinburgh, the Frith of Clyde, &c.

FRIZING CLOTH. A process in the woollen manufacture, of forming the nap of cloth or stuff into a number of little hard burrs or prominences, so as to cover almost the whole ground. This process is now performed by machinery.

FROG. An amphibious animal, having a smooth body, and longer legs than the toad.



FROG (in Veterinary). The hard projecting substance in the hollow of a horse's foot.

FROG-FISH, or **FROG-FISH**. A kind of fish resembling a frog in the tadpole state, that puts forth its slender horns and entices the little fish to itself, in order to seize them.

FRONT. The principal face or side of a building.

FRONTIER. The boundary of a kingdom, which separates it from another kingdom on the land side.

FRONTISPIECE. The ornament or picture which faces the title page in a book.

FRONTLET. A band worn on the forehead.

FRUCTIFICATION (in Botany). The temporary part of vegetables, appropriated to their propagation, consisting of the flower and the fruit.

FRUITS (in Botany). That which grows on the stem of a plant, and which bears the seeds.

only, or it may be an excellent nutriment, as the apple or the pear; or it may be hard, like the nut, pea, &c.

FRUITERER. One who deals in fruit. The company of fruiterers in London incorporated in 1664.

FRUSE. The tender part of a shell, next the hoof.

FRUSTUM (in Mathematics). A part of some solid body separated from.

FRUSTUM OF A CONE. The part of a cone that remains when the top is cut off by a plane parallel to the base, otherwise called a truncated cone.

FRUSTUM OF A GLOBE or **SPHERE**. Any part of it cut off by a plane.

F. S. A. An abbreviation for the Society of Arts.

FUCI. A genus of plants in the class of anemones, comprehending most of those which are commonly called sea-pinks, from which, when burnt, an ink is procured called kelp.



FUCUS. The name given by the ancients to a sea plant, from which was procured, for dyeing woollenen cloths of that colour.

FUGITIVE PIECE. Little pieces of composition of temporary interest.

FUGITIVE'S GOODS (in Law). Goods of one who flies upon felony.

FUGUE (in Music). A species of composition, in which the different parts repeat each other, each repeating in order the first had performed.

FULCRUM (in Mechanics). The support by which a lever is supported.

FULLER. One who cleans cloth.

FULLER'S EARTH. A species of earth remarkable for the property of

all, whenever it is used by fallers to take grass out of cloth.

FULLING. The art of cleansing, scouring, and pressing cloths, to make them straight, closer, and firmer, which is done by means of a water mill, called a fulling or scouring mill. These mills are nearly the same as corn mills, except in the millstones and the hopper. In France, corn is ground and cloth is fullied by the motion of the same wheel: cloths and woollen stuffs are sometimes fullied by means of soap, in the following manner; the cloth is laid in the trough of the fulling mill, and then the soap dissolved in pale of river or spring water is to be poured upon it by little and little. The cloth, after lying two hours in the soap, is taken out, stretched, and then returned to the trough. Upon being taken out a second time, the grease and filth is then wrung out. This process is afterwards repeated, and when the cloth has thus been brought to the quality and thickness required, it is scouried in hot water until it is quite clean.

FULMINATION. The noise which some minerals or metals make when heated in a crucible; as fulminating powder, which is made of nitre, potash, and the flowers of sulphur, triturated in a warm mortar. If this powder be fused in a ladle, and then set on fire, it will explode with a noise like thunder. If a solution of gold be precipitated by ammonia, the product will be fulminating gold, a grain of which, if held over a flame, will explode with a sharp loud noise.

FUMIGATION. A process by means of which the nitrous and other mineral acids, in a state of vapour, are dispersed through any place.

FUNCTION. The performance of any duty.

FUNCTION (in Physiology). The exertions of any faculty or power, as the vital functions, or those which are necessary to life.

FUNCTION (in Algebra). An algebraical expression of a certain letter or quantity.

FUND (in Commerce). The capital or stock of a public company.

FUNDAMENTAL NOTE (in Music). The lowest note of the chord, to which all the rest are in some measure adapted, and by which they are regulated; it is otherwise called the key to the song.

FUNDS, PUBLIC FUNDS, or STOCKS. The national debt formed into different capitals, upon which interest is payable.

FUNGI. The fourth order of the class

Cryptogamia in the Linnæan system, consisting of funguses, mushrooms, truffles, &c. A fungus of this order is represented underneath.



FURLONG. A measure of length, consisting of forty poles.

FURLOUGH. Leave of absence given to a soldier, or noncommissioned officer.

FURNACE. A fire place for melting, distilling, and other chymical processes, so built up to cause the fire to burn vehemently.



FUR. The coat or covering of some animals, as shales, beavers, martens, squirrels, &c. which is used in various articles of dress, either for ornament or warmth.

FURS. Tinctures in coats of arms, which are supposed to represent the furs of animals.

FURRIER. One who deals in furs, and prepares them for the manufacturer.

FURRING (in Carpentry). The fixing the scantlings or bats on the edge of timbers, to bring them to the even surface they were intended to form.

FURRINGS (in Carpentry). The pieces of timber employed in making an even surface.

FURROW. A small trench cut up by the plough between the lands.

FURRY (in Clockwork). A mechanical contrivance by squinting the power of

by a common tube into a condensing vessel, which is kept cool by being immersed in water. In the condenser are retained the water, tar, and other condensable vapours, while the gaseous products, namely, the carbonated hydrogen, the sulphuretted hydrogen, and the carbonic acids and acid are passed through strata of slaked lime, by which the sulphuretted hydrogen and carbonic gases are absorbed, and the carbonated hydrogen and hydrogen gases in their purified state are transmitted into the gasmeters, from which the several pipes are supplied that convey the gas to the lamps. The best kind of coal for distillation is that which contains most bitumen and least sulphur.

After the discovery of obtaining gas from coal, attempts were made to extract it from other substances. The method of procuring it from oil is said to have originated in an attempt made in 1814 to convert coal tar into gas. Since that period, numerous works have been constructed for the manufacture of oil gas, which, in the opinion of many, is preferable to the coal gas.

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GASTRIC JUICE. A fluid separated by the capillary vessels of the stomach, and serving as the principal solvent of the food. This juice in a healthy subject is viscidous, of a saltish taste, and limpid like water.

GATE. A movable part of a fence, made of wood or iron. Gates with five or six bars, large enough to admit of carts



passing through, are most commonly employed in fences for putting off fields.

GAVELKIND. A tenon or custom in Kent in England, whereby the lands of the father were divided equally at his death among his sons.

GAUGING. The art of measuring the capacities of all kinds of vessels.

GAUNTLET. An iron glove for the hand, which was formerly used in single combat. It is borne in coat armour, as in the annexed figure.



GAUZE. A very thin sort of silk.

GAZELLE. A beautiful species of the Antelope frequently alluded to, in Persian poetry.

GAZETTE. A newspaper, particularly that published by authority. The first Gazette in England was published in 1665 at Oxford, where the court then was.

GAZETTEER. A writer or publisher of a Gazette; also the title of a geographical dictionary.

GELATINE, or JELLY. An animal substance, soluble in water, and capable of assuming an elastic or translucent consistence when cooled, and solidifying again by the application of heat.

GEM. A precious stone; or a sort of siliceous earth, consisting of silica and alumina, with a small portion of lime and oxide of iron. The gem is remarkable for its hardness and internal lustre. Under this name is comprehended the diamond, ruby, sapphire, hyacinth, beryl, garnet, chrysolite, &c. To these have been added rock crystals, the finer kinds of pebbles, the cat's eye, the acute mound, the vishnucolour, the moon stones, the onyx, the horn-stone, the sardonyx, agate, &c.

The imitation of antique gems, by taking the impressions and figures upon them, in glass of the colour of the original gem, or on sealing wax or brimstone, has been practised at different times by persons who, in respect to the first method of taking them on glass, have kept the art to themselves, and suffered it to die with them. But the process adopted by Mr. Houtburg, which has also been recommended by him to the world, is highly esteemed for the perfection to which he has brought the art. From the engraved gems of the king's cabinet, he took such exact impressions of the originals as were fitted to be

the nicest judges, who mistook them for the true antique stones. His method consists in taking the impression of the gem in a very fine earth, and then conveying the impression from the earth to a piece of half melted glass.

GEMINI, the Twins. A constellation, and sign in the zodiac, marked thus ♊.

GEN. An abbreviation for General and Gens.

GENDARMES, or GENS D'ARMES. A select body of soldiers in the French army, who are now much employed by the police.

GENDER (in Grammar). A distinction in nouns to mark the sexes; genders are either masculine, for the male sex; feminine, for the female sex; or neuter, for those which are of neither sex.

GENEALOGY. A series or succession of ancestors; also an account of the relations and alliances of any person or family.

GENERAL (in Military Affairs). An officer in chief, in whom the command of troops is intrusted; also a particular beat of drum in the morning, to give notice to the men to march.

GENERALISSIMO. The supreme general or commander in chief of an army.

GENERAL ISSUE (in Law). That plea which releases or excuses at once the whole defendant or indictment.

GENERAL OFFICERS. All officers above the rank of lieutenant-colonel in the line.

GENERATING (in Geometry). A term for a line or figure, which by its motion produces any other figure.

GENERIC CHARACTER (in Natural History). The character which distinguishes the genera or general kinds of plants, animals, &c. from each other. This character belongs to all the species of the same genus or kind.

GENERIC NAME (in Natural History). The name of any genus or kind of animal, plant, or mineral. This name can be described only by describing the generic character.

GENET. An animal of the weasel kind, resembling the civet cat in its mark and smell.

GENEVA. See GENE.

GENITIVE CASE. The second case in Latin and Greek nouns, which denotes possession. It is marked in English by a with an apostrophe, thus (s).

GENIE. Good or evil spirits, much thought of in the eastern nations. The Tables of the Cassin profess to give an account of their proceedings and dealings with mankind.

GENTILES. A name given by the Jews

to all who were not of the twelve tribes of Israel; among Christians, it is the name of all heathens who did not embrace the Christian faith.

GENTLEMAN. Anciently, one above the state of a yeoman.

GENTRY (in Law). The order and rank of gentlemen, descended from ancient families, that had always borne coat armour.

GENTOO. A native of Hindostan.

GENUS (in Natural History). A subdivision of a class or order of natural objects, animal, vegetable, or mineral, and living under different species or variety.

GENUS (among Logicians). That which is common to a number of individuals; the summum genus, or highest genus, is that which appertains to the greatest number of individuals, or substance, which belongs to all material.

GEOCENTRIC. Being concentric with the earth, or having the earth for its centre; a term applied to a planet in its orbit.

GEOGRAPHICAL MILE. The 60th part of a degree.

GEOGRAPHY. The science which treats of the earth as an habitable world, comprehending a description of the whole globe, together with an account of all its parts, limits, inhabitants, &c. Geography is either general or particular. General geography comprehends the knowledge of the earth in general, and the affections common to the whole globe, as its figure, magnitude, motions, circles, winds, tides, meteors, divisions into land and water, &c. Particular geography has respect to particular countries, showing their boundaries, figure, climate, seasons, inhabitants, arts, customs, language, history, &c. When it respects regions, districts, or parts of countries, it is called chorography, and when particular cities, towns, or villages, &c. it is called topography. Particular geography is also distinguished into ancient geography, when it treats of the countries and places existing among the ancients; modern geography, when it treats of modern places; the geography of the middle ages, which treats of places that flourished in the middle ages; and lastly, sacred geography, which treats of places mentioned in the Bible.

The earth, considered as a planet, is supposed to be marked by circles corresponding to those which the sun apparently describes in the heavens, as the horizon, which divides the sphere into two parts or hemispheres, the one upper and visible to the eye, the other lower and invisible; the equator which is equidistant from both the poles, and divides the globe into northern and

southern hemisphere, the zenith, or vertical circles, which intersect each other at the zenith and nadir; the meridian, which crosses the equator at right angles, and from which the distance of parts east and west is reckoned; the parallels of latitude, small circles supposed to be parallel to the equator, which show the latitude of places, or their distance north and south from the equator; the arctic and antarctic circles, two circles at the distance of twenty-three degrees and a half from the north and south poles; the two tropics, namely, the tropic of Cancer and the tropic of Capricorn, the first north and the second south, twenty-three degrees and a half distant from the equator; to these might be added the four circles, or the twenty-four circles passing through the equator, and corresponding to the twenty-four hours of the day.

From the diversity in the length of the days and nights, geographers divide the globe into certain districts, called climates, measured either by hours or half hours; and from the effects of light and heat upon the earth in different parts, it is distinguished into five zones, namely, one torrid or burning zone, between the tropics; two temperate, between the polar circles and the tropics; two frigid or frozen zones, between the polar circles and the poles. The inhabitants of the earth, as to their relative situations in regard to each other, are distinguished into the antipodes, who live directly opposite to each other; the antimer, who live under the same meridian, but opposite parallels of latitude; the peripol, who live under the same parallels of latitude, but opposite meridians.

The earth is naturally divided into land and water, and according to some computations about three-fourths of it is occupied by water, and the remaining fourth by land. The land is distinguished into continents, or large portions not separated by any sea, as the four great continents, Europe, Asia, Africa, and America, which are the four quarters of the world; islands, smaller portions, entirely surrounded by water, as Great Britain, Ireland, &c.; peninsulas, or tracts of land almost surrounded by water, as the Morea, in Greece; isthmuses, or necks of land joining two continents, as the isthmus of Suez, joining Africa to Asia; promontories, or capes, high portions of land stretching out into the sea, as the Cape of Good Hope; mountains, or elevations of the earth's surface, such as the Alps and Pyrenees in Europe, the Caucasus and Uralian Mountains in

Asia, and the Andes in America. The water is distinguished into oceans, which are vast collections which separate the continents from each other, as the Pacific and Atlantic Oceans; seas, or smaller collections of water, as the Indian Sea, Black Sea, &c.; gulfs, parts of sea surrounded nearly with land, as the Gulf of Venice; if they have a wide entrance they are bays, as the Bay of Biscay; straits, narrow passages joining two seas, as the Strait of Gibraltar; lakes, large collections entirely surrounded by land, as the Lake of Geneva; rivers, streams of water which have their source in some spring, and empty themselves into some other river or piece of water. The principal rivers, as to their magnitudes, are the Amazon, Senegal, Nile, St. Lawrence, La Plata, Mississippi, Volga, Oronoko, Ganges, Euphrates, Danube, Dnieper, and Dwina, but if estimated according to the length of course which they run, their order will be rather different, but the Amazon is the largest in every respect.

The earth is politically divided into countries, which, according to their government, are distinguished into empires, if they are of great extent, as the Russian and Austrian empires; or kingdoms, as the Kingdom of Great Britain, France, Spain, &c.; or states, as the states of Holland and America; or republics, as the republics of Venice, Genoa, &c. Under this head geography treats of the subdivisions of each country into provinces, cities, towns, &c.; also of the number of inhabitants, the nature and produce of the soil, the animals peculiar to each place, the state of the arts, manufactures, commerce, &c. which constitute the wealth of each country, and is comprehended under the name of statistics. To all this may be added an account of curiosities, natural and artificial, as volcanoes, caverns, canals, springs, fountains, and the like. Beside geography treats not only of the earth's surface, but also of the operations which it is exposed to from the waters of the ocean which produce the flux and reflux of the tide, and the currents belonging to particular seas, as in the Mediterranean and East India seas; likewise of the winds which blow in particular seasons and directions, such as the monsoons or trade winds, which blow for some months in the year one way and the rest another; and, lastly, the meteorological peculiarities of each country, such as regards the degree of heat and cold, the quantity of rain which falls in particular places, or within a given period

possess the power of giving a very exact shock, similar to that of a small electric jar, and this effect took place at once as a communication was made between each end of the pile, and so long as the pieces of metal remained moist: an improvement was made in this apparatus by Mr. Crookshank, of Wrexham, which was described a galvanic trough, and consists of a box of beaked wood, in which plates of copper, or of silver and zinc, soldered together at their edges, are connected in such a manner as to leave a number of water-tight cells, corresponding to the number of the series; this serves to remedy the defect of the Voltaic pile, which, on account of the loss of moisture, loses its electrical action in a few days; but by Mr. Crookshank's contrivance its activity may be renewed by filling the cells with the proper saline fluid.

GAMBOGE. A yellow resinous substance used by palaters. It is the produce of a tree native of Coahuila or Coahuila, in the East Indies.

GAME. All sorts of birds and beasts that are objects of the chase. The laws which in England particularly protect this sort of property, are known by the name of the Game Laws. By these laws certain qualifications of property are required, to give a person the privilege of being allowed to kill game; and penalties are imposed on all persons who kill game, either without such qualification or at improper seasons; likewise the sale of game is prohibited under every circumstance. Attempts have been repeatedly made in parliament to procure a repeal, either wholly or in part, of these laws, which are thought to be oppressive in their operation.

GAME. Any sport or amusement which affords a subject of contest, and a display of skill or superiority.

GAMECOCK. A cock bred to fight.

GAMESTER. One who is viciously addicted to playing at games.

GAMING. The wanton and extravagant playing at games for purposes of gain.

GAMUT (in Music). The table or scale of notes laid down by Guido, and marked by the unchangeable ut, re, mi, fa, sol, la; also the first note in the scale.

GANG (among Mechanics). A select number of a ship's crew, appointed on any particular service.

GANG. A number of persons who go or bind together for a wicked purpose.

GANGLOPHER. French, Italian, nearly synonymous, formed on the nervous and headless parts.

GANGRENE. A mortification in the first beginning.

GANGWAY (among Mechanics). Means of several ways or passages from part of a ship to another.

GANNET. A large water bird, seen on the coasts of Scotland.

GANTLOPE, or GANTLET (in Law). An old punishment by which the criminal, running between the pincers, received a blow from every man.

GANT (in Law). A prison for the punishment of criminals in debtors.

GAOL DELIVERER. In England, clearing of a prison by a judicial sentence or removal of the prisoners; translation from the king to deliver their goods.

GARR. A wreath of, signifying and given, in words of arms.

GARRISON. In England, office the city, authorized to examine applicants offered to sleep in the city.

GARDEN. A plot of ground well cultivated with extraordinary and furnished with the best kind plants and flowers, for pleasure and

GARDENING. The process of a garden, and keeping it in order.

GARDENING, HORTICULTURE. Gardening is one of those domestic arts so long connected with the refined enjoyment of mankind, that with a garden has ever associated every idea of cultivating pure pleasure.

From Italy West we that our first parents, before they passed their lives in a garden, and poetry, although according to the fiction of their Maker, doomed to be ground with the sweat of their brow, a thicket have at all times endeavored

sweeten their labor by engaging themselves the enjoyment of culture within the narrow circle of their habitation.

The accounts of gardens in the ancients are confined to those of poets or great men, as the garden of Solomon and the garden of Achimor the Pharaoh, which is minutely described in Homer in his Odysey.

The hanging gardens of Babylon, particularly spoken by Diodorus and Strabo, may be traced among the wonders of art. Each extended four hundred feet, so that the top of the base was nearly an acre.

They were constructed one above the other, and supported with pillars of height of four hundred feet. These

steps were formed of stone, covered with earth, and terminated with balustrades, and was a double row of

flowers 1844 a double row of flowers

by a common tube into a condensing vessel, which is kept cool by being immersed in water. In the condenser are retained the water, tar, and other condensable vapours, while the gaseous products, namely, the carbonated hydrogen, the sulphuretted hydrogen, and the carbonic oxide and acid are passed through strata of slaked lime, by which the sulphuretted hydrogen and carbonic gases are absorbed, and the carbonated hydrogen and hydrogen gases in their purified state are transmitted into the gasometers, from which the several pipes are supplied that convey the gas to the lamps. The best kind of coal for distillation is that which contains most hydrogen and least sulphur.

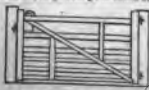
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southern hemisphere; the azimuth, or vertical circles, which intersect each other at the zenith and nadir; the meridian, which crosses the equator at right angles, and from which the distances of places east and west is reckoned; the parallels of latitude, small circles supposed to be parallel to the equator, which show the latitude of places, or their distance north and south from the equator; the arctic and antarctic circles, two circles at the distance of twenty-three degrees and a half from the north and south poles; the two tropics, namely, the tropic of Cancer and the tropic of Capricorn, the first north and the second south, twenty-three degrees and a half distant from the equator; to these might be added the hour circles, or the twenty-four circles passing through the equator, and corresponding to the twenty-four hours of the day.

From the diversity in the length of the days and nights, geographers divide the globe into certain districts, called climates, measured either by hours or half hours; and from the effects of light and heat upon the earth in different parts, it is distinguished into five zones, namely, one torrid or burning zone, between the tropics; two temperate, between the polar circles and the tropics; two frigid or frozen zones, between the polar circles and the poles. The inhabitants of the earth, as to their relative situation in regard to each other, are distinguished into the antipodes, who live directly opposite to each other; the antiochi, who live under the same meridian, but opposite parallels of latitude; the perioeci, who live under the same parallels of latitude, but opposite meridians.

The earth is naturally divided into land and water, and according to some computations about three fourths of it is occupied by water, and the remaining fourth by land. The land is distinguished into continents, or large portions not separated by any sea, as the four great continents, Europe, Asia, Africa, and America, which are the four quarters of the world; islands, smaller portions, entirely surrounded by water, as Great Britain, Ireland, &c.; peninsulas, or tracts of land almost surrounded by water, as the Morea, in Greece; isthmuses, or necks of land joining two continents, as the Isthmus of Suez, joining Africa to Asia; promontories, or capes, high portions of land stretching out into the sea, as the Cape of Good Hope; mountains, or elevations of the earth's surface, such as the Alps and Pyrenees in Europe,

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sales of India, noting all the places it passed through. He drew this parallel not by the success of the latitude, but by observing where the longest day was fourteen hours and a half, which Hipparchus afterwards found to be thirty-six. Eratosthenes also drew maps of the countries then known, with as much accuracy as his scanty information would enable him, but they contained little more than an imperfect representation of the states of Greece and the dominions of Alexander's successors. He was ignorant, as Strabo infers us, of Gaul, Spain, Germany, Britain, Italy, and the coast of the Adriatic, and had only a faint idea of the western parts of Europe. Hipparchus improved upon the labours of Eratosthenes, and determined both the latitudes and longitudes from celestial observations.

Under the Roman emperors geography acquired an increasing interest, from the perpetual excursions which were made by conquest to the empire. Accordingly, we find the number of geographical writers to be greatly increased, and their writings to be more correct and particular. Besides Pomponius Mela, who, in his *Cosmographia*, has given a neat and comprehensive account of the known world, and Dionysius Periegetes, who has written a system of geography in verse, Strabo has left a work on this subject which, in point of methodical arrangement and extent of information, exceeded any thing that had been hitherto published. This was followed, after the interval of more than a century, by the great work of Ptolemy on this subject, in the execution of which he took astronomy to his aid for determining the situation of places. He fixed the latitudes and longitudes of all the principal places in the known world, and expressed them in degrees, after the manner of Hipparchus, making his calculations from the proportions of the gnomon in its shadow, as observed by different astronomer at the time of the equinoxes and solstices, and deduced from them the length of the longest days. He also measured and computed the distances of the principal roads mentioned in the different surveys and itineraries which had been made at different times by order of the emperors, and compared them with such reports as he could gather from travellers. In this manner did Ptolemy execute his system of geography, which, as a work of science, has deservedly held the first rank among the works of the ancients, and, considered as the labour of one man, was never surpassed, and scarcely ever equalled.

With the exception of the *Geographica*, Dictionary of Stephanus Byzantinus, in the fifth and sixth centuries, and the scattered geographical notices interspersed in the works of the Byzantine historians, the subject of geography was neglected until the thirteenth century, when John Sacro de Bosc published his treatise on the sphere, which contained an account of the earth as far as it was connected with the doctrine of the sphere. Nothing further was done towards the advancement of this science until the discovery of the New World, when geographical knowledge received continual accessions by new discoveries, and the spirit of investigation and research which they awakened. Since that time the writers on geography have been exceedingly numerous. Among those who have treated it in immediate connexion with astronomy and the other sciences may be reckoned Ficcoli, in his *Geographia et Hydrographia Reformata*; Deschales, in his *Mundus Mathematicus*; and Wolfius, in his *Elementa Mathematica*. Among those who have written on ancient and modern geography, Cellarius, Cluverius, and Haudrand are the most distinguished: the most esteemed modern works on this subject are the systems of Busching, Salmon, Guthrie, Pilkington, Playfair, and Myer, &c. The most recent, that of Malte Brun, is undoubtedly the best system of geography that has ever been compiled.

GEOLOGY. The science which treats of the structure of the earth, or of the different minerals, stones, earths, &c. which enter into its composition, and the manner in which they are disposed in regard to each other. This science has of late attracted particular notice, and from the important facts which have thus been brought to light, the subject has justly awakened a considerable interest. Geology may be considered under two heads; namely, first, as regards those bodies which naturally form constituent parts of this globe; and, secondly, as regards those foreign bodies which have been buried in the earth and partly amalgamated with it. These are now distinguished by the name of fossil or organic remains. In the consideration of these two branches of the science of geology, it will appear that the earth has undergone such changes, since its original formation, as nothing but a universal deluge could have produced, and in this point of view it furnishes to the believer a wonderful and gratifying confirmation of the Scripture account of that great and mysterious convulsion.

The study of geology having been most

ry of Pliny many fossils remains are spoken of, as the *locardis*, resembling an ox's horn; the *prospecta*, having the form of a tongue; the horns of ammon, resembling a man's horn; the *lepidosa*, like the scales of fish, &c.

GEOMETRY. That branch of mathematics which treats of the properties of extension and figure. Geometry is distinguished into the theoretical and the practical. Theoretical or speculative geometry treats of the various properties and relations in magnitudes, &c. Practical geometry comprehends the construction of figures, the drawing of lines in certain positions, as parallel or perpendicular to each other, &c. Speculative geometry is again distinguished into elementary geometry, that treats of the properties and proportions of right lines and right lined figures, as also of the circle and its several parts; and the sublime or transcendental geometry, that treats of the higher order of curves, &c.

The simple principles of geometry are explained in definitions and axioms. The following are the most important definitions. A point is that which has neither length, breadth, nor thickness; a line has length without breadth or thickness; a superficies, or surface, has length and breadth only, the boundaries of which are lines; a solid has length, breadth, and thickness, the boundaries of a solid are surfaces. A straight line lies evenly between the parts, parallel lines keep at the same distance from each other when extended indefinitely. A perpendicular line is perpendicular to another line. An angle is formed by the meeting of two lines in a point; it is a right angle when formed by one line falling on another perpendicularly on another line; an obtuse angle, when it is greater than a right angle; and an acute angle when it is less. A figure is a space enclosed within one or more boundaries, called sides; it is rectilinear when contained by right lines, and curvilinear when contained by curved lines; a rectilinear figure contained by three right lines is a triangle; if by four, quadrilateral; if by five, a pentagon; if by six, a hexagon, &c.; if by more than twelve, a polygon.

Triangles are distinguished according to the length of their sides, into equilateral, having all the sides equal; isosceles, having two sides equal; and scalene, having all the sides unequal; or according to their angles, into right angled, if they have one right angle; obtuse angled, if they have one obtuse angle; and acute angled, if they have all acute angles. Every quadrilateral-sided figure is called a quadrilateral

when it has its sides parallel, and when all its angles are right angled figures are moreover distinguished according to their sides and angles, which has all its sides and angles right ones; an oblong square has its opposite sides equal and all its angles right ones; a rhombus, having equal, but the angles not right ones; a rhomboid, having the opposite sides equal, but the angles not right ones; a quadrilateral has none of its sides parallel a trapezoid. The figure is the right line which divides a figure into two equal parts. The vertex is the extreme point of a line which is perpendicular to the base; the altitude is the perpendicular distance from the vertex to the base. The area of a figure is the quantity of space contained within its boundaries.

Of curvilinear figures in geometry the circle, which is a figure bounded by a curve line called circumference, which is equally distant from a point called the centre. The diameter of a circle is a straight line drawn from one side of the circumference to the other through the centre, so as to divide the circumference into two equal parts. The radius of a circle is a straight line drawn from the centre to the circumference; the segment is a part cut off by a line called a chord. The circumference of every circle is supposed to be divided into 360 equal parts called degrees, every degree into 60 equal parts called minutes, and every minute into 60 equal parts called seconds.

Solids are distinguished into those the sides of which are parallel, and those the two ends of which are similar, parallel to each other; the cylinder, consisting of six equal square sides or faces; the pyramid, having any plane figure for its base and triangles for its sides, meeting in one common point at the top; the cylinder, which is generated by the rotation of a rectangle about one of its sides; the cone, which is generated by the rotation of a triangle about one of its sides; the sphere, which is generated by the rotation of a circle about one of its diameters; the spheroid, which is generated by the rotation of an ellipse about one of its axes; the paraboloid, which is generated by the rotation of a parabola about one of its axes; the hyperboloid, which is generated by the rotation of a hyperbola about one of its axes.

These curves which are formed by the intersection of a plane with a solid of the same kind to one another, are called conic sections. The circle is a branch of conic geometry.

Ratio is the mutual relation of quantities of the same kind to one another, as 2 to 1, 3 to 2, &c. The former of these is called antecedent and the latter the con-

proportion is the similitude of ratios, as 6 be to 2 as 3 is to 1; that is a triple ratio in both cases.

An axiom is a plain truth that wants no demonstration, as that the whole is greater than a part. A postulate is that which requires to be granted as true before another thing can be demonstrated. A proposition is that which proposes something to be done or demonstrated; it is a problem when it proposes any thing to be done, as to divide a given line into two equal parts, or to raise a perpendicular, &c.; and a theorem when it proposes something to be shown, as that triangles of the same base and altitude are equal to each other, or that all the angles in the same segment of an arch are equal, &c.

GEOMETRY, HISTORY OF. The origin of geometry is ascribed by Herodotus to the Egyptians, who, in consequence of the inundations of the Nile, which carried away all their landmarks, were under the necessity of distinguishing and laying out their lands by the consideration of their figure and quantity, whence the word geometry in the Greek signifies literally land-measuring. The Greeks, who cultivated this science more than any other people, doubtless learned the rudiments from the Egyptians; for Thales, who travelled into Egypt and acquired a sufficient knowledge of astronomy to calculate, must also have first become acquainted with the principles of geometry to assist him in his astronomical inquiries. Pythagoras, the pupil and friend of Thales, distinguished himself by his discoveries in arithmetic, as well as geometry. He invented the multiplication table, called after him the Abacus Pythagoricus, and in geometry he discovered the thirty-second and forty-seventh propositions in the first book of Euclid's Elements. Soon after this flourished Anaximander, Anaximenes, Anaxagoras, Cleostratus, Anaxides, and Zenodorus, all celebrated geometers, of whose works nothing remains except the last. They were succeeded by Hipparchus, who rendered himself celebrated by the quadrature of the lines rather after him, as also by his attempt at the quadrature of the circle, which was a matter of great interest among the ancient mathematicians, and is said to have taken in reach an answer of the oracle at Delphi, which, when consulted on the necessity of some public calamity, answered 'Doubles the altar,' which was an exact cube. Notwithstanding the failure of Hipparchus, others renewed the attempt, which although it proved unsuccessful as to that particular object, nevertheless it said to

have led to the discoveries of other geometrical properties, as the conoid of Nicomedes, the conoid of Divaldes, and the quadratrix of Dinostratus. This latter geometer was the follower and friend of Plato, whose devotion to the science of geometry was such that he caused it to be inscribed over the door of his school.

'Let no one enter here who is ignorant of geometry.' To Plato we are indebted for that branch of geometry known by the name of conic sections, of which his scholar Ariston is said to have composed five books that are highly spoken of by the ancients, but are not now extant. Eudoxus and Menechmus were also disciples of Plato, and distinguished themselves, the former in geometry as well as astronomy, the latter by his application of conic sections to many problems. After an interval of ninety years from their time, that is, about three hundred years before Christ, flourished Euclid, who, by collecting and methodizing all the principles of geometry then known into a regular system, called his Elements of Geometry, secured to himself a celebrity which, in point of extent, has never been surpassed, and perhaps scarcely ever equaled, his work having ever since been considered as the standard of all geometrical knowledge. Euclid was quickly followed by Archimedes, a mathematical genius, who added many discoveries to the sciences of geometry, mechanics, optics, and hydrostatics. In geometry he discovered the ratio between the sphere and the circumscribing cylinder, found the quadrature of the parabola, and the solidity of the conoid; he invented the spiral which bears his name, and discovered its rectification, besides a variety of other important geometrical propositions, many of which are extant, and attest the skill and ingenuity of the author.

Apollonius of Perga, who, from his writings, acquired the name of the Great Geometrician, flourished about thirty years after Archimedes. His work on the Conic Sections, which is the principal piece of his extant, was in all probability the best of its kind in that day, and has since been the groundwork of all works published on that subject. Of those who after Apollonius distinguished themselves in this time in the cultivation of the geometrical sciences, there are but few who added any thing worthy of particular notice. Eratosthenes attempted to measure the circumference of the earth; Ctesibius invented water pumps; Hero of Alexandria, spheroids; Theonetus, who lived in the first century

GLUTTON. A cunning voracious animal, larger than a badger, which inhabits Europe, Asia, and America, and preys on the carcases of hares, mice, &c.

GNAT. An active little insect, which lives by sucking the blood of other animals.

GNEISE. A sort of rock that lies immediately over granite.

GNOMON (in Dialling). The stile or pin of a dial, the shadow of which points out the hours.

GNOMON (in Astronomy). An instrumental apparatus for measuring altitudes.

GNOMON (in Geometry). A figure formed by the two complements with either of the parallelograms about the diameter.

GNU. A particular kind of antelope, having horns bent forward at the base and backward in the middle.

GOAD. A staff pointed with a sharp iron for driving cattle.

GOAT. A quadruped kind of dry, rocky mountains, and feeding on aromatic vegetables. The varieties of the goat are distinguished principally by their horns.

GOAT-SUCKER. An American bird, so called because it was supposed to suck the teats of the goats.

GODFATHER. One who stands sponsor for a child in baptism.

GODWIT. A bird resembling the Plover, that feeds on worms on the sea shore.

GOLD. The richest and heaviest metal except platinum, being the most solid and the least porous. The ductility and malleability of gold is such, that one grain of it will cover upwards of fifty square inches, and an ounce is capable of being extended in the form of wire many hundred miles. Gold is found in beds of quartz, sand stone, &c. and also in many rivers, particularly in Peru, in minute and irregular grains, which are known by the name of gold dust.

GOLDBEATERS SKIN. The skin or membrane of any animal, which is used by the goldbeaters in preparing gold leaf.

GOLDEN NUMBER. A number beginning with one and increasing one every year till it comes in nineteen, when it begins with one again, and is used to show what year is the lunar cycle again given year is.

GOLDEN ROD. A plant which is for the most part a native of North America. Two species only are found in Europe.

GOLDEN RULE. A name given to the Rule of Three.

GOLDFINCH. A beautiful European bird with a fine yellow mark in its black

quill feathers. It sings very charmingly, and is very docile. See **YELLOW BIRD.**

GOLD FISH. An elegant fish of a rich colour, originally brought from China, and now kept by way of ornament.

GOLD LEAF, or LEAF GOLD. Gold that is hammered by the beaters, until it becomes so thin and extended as a leaf.

GOLDSMITH. A worker or seller of gold or silver vessels. The company of goldsmiths in London, were incorporated in the reign of Richard II.

GONDOLA. A sort of Venetian pleasure barge.

GONG (in Music). A Chinese instrument, the form of which is a shallow circular concave.

GOODS (in Law). The remainder of which a man is possessed.

GOOSEANDER. A water bird, the size of a goose.



GOOSE. A well known domestic fowl, which exists in a wild as well as a tame state. The gray ley goose, or common wild goose, is easily tamed: from this sort has sprung the domestic breed.

GOOSEBERRY (in Botany). A plant that is set with prickles, and yields a fruit of an oval and globular figure, containing many small seeds in a pulpy substance. It is a bush much cultivated in gardens.

GORGE (in Fortification). The entrance of a bastion, ravelin, or other outwork.

GORGON. A piece of armour round the neck; something stouter is now worn by officers on duty by way of ornament.

GOSAWK. That species of hawk which was formerly much used in falconry.

GOSPEL. The four books in the New Testament written by the Evangelists, St. Matthew, St. Mark, St. Luke, and St. John.

GOSSEMER. A fine flimy substance like a cobweb, which is seen in clear days in autumn in stubble fields, and is probably worked by spiders for catching flies.

GOTHIC STYLE. A style of architecture in which pointed arches of greater height than breadth, and a profusion of ornaments, in imitation of leaves and

HARRIER. A hunting dog who pursues hares.

HART. A stag or male deer of the forest, which if hunted by the king or queen, and he escape alive, is styled a Hart Royal.

HARTSHORN. A volatile alkali, originally drawn from the horn of the stag; it is now known by chymists under the name of the sesquicarbonate of ammonia.

HARVEST MOON. The moon which, in the season of harvest, rises several nights successively soon after sunset.

HATCHING. The act of hatching from-fertilized eggs, so that they should produce young birds. This is commonly done by the incubation of the mother; but sometimes by means of artificial heat in ovens, as is practiced in Egypt.

HATCHMENT. See *ACCOMMODATION*.
HATCHWAY (among Mariners). An opening in the deck, to serve as a passage from one deck to another.

HATTER. A manufacturer and seller of hats. The company of hatters, or hat-makers in London, is very ancient.

HAYERSACK. A kind of bag of strong coarse linen, to carry bread and provisions on a march.

HAUL, or **VAUL** (among Rope-makers). A yarn of four hundred threads.

HAUNCH. The hind part of a stag, or of a horse, &c.

HAUNT. The walk of a deer.

HAUTOY. A musical wind instrument, shaped much like the flute, only that it spreads and widens at the bottom, and is sounded through a reed at one end.

HAWFINCH. A sort of finch, so called because it feeds on haws and cherries.

HAWK. A bird of prey of the eagle and falcon tribe, the two principal species of which are the sparrowhawk and the goshawk, both used formerly in falconry.

HAWKER. In England, itinerant petty chapmen, who go with their goods from town to town and from house to house. They are obliged by law to have a license.

HAWKING. The aerial sport of fowling with hawks.

HAWKING (in Tennis). The ping about with commodious to suit, after the manner of a hawker.

HAWK'S BELL. The bell put about the feet of a hawk.

HAWKWEEK. A plant which bears a flower in the form of a nutmeg. The whole plant has a milky juice.

WHE. A sea weed, for the situation of which before the sails' stern, when

she is moored with two of the bows, as 'a clear of foul hawses,' &c.

HAWSER. A small cut.

HAZARD. A game so much by gamblers and g

HAZLE NUT. A shrub flowers growing at various the fruit on the same grow in clusters, and is the common hazel nut, the filbert, which latter is named.

HEAD (in Anatomy). The top of the body, placed on the sloping externally of the forehead; internally, of the medulla oblongata.

HEAD (among Mocha and since solid part of it as the head of a nail, the head of a hammer.

HEAD (in Painting). The of the head of a person.

HEAD (in Architecture of sculpture or carved work

HEAD (in Gunnery). The cheeks of a gun.

HEAD (in Printing). The top of a page.

HEADBOROUGH. One of a borough, or frankpledge petty constable.

HEADER (in Masonry) the bricks which are used in the thickness of a wall.

HEADLAND. A point farther out at sea than the

HEADSTALL. That part that goes about the head, latter.

HEALING (in Surgery) wound.

HEALING (among Men) covering a roof with any slate, &c.

HEARING. One of the which the ear is the organ of the auditory nerves and

HEARSE. A close carrying dead bodies.

HEART. The seat of the body, is situated in the thorax externally into the base, which part; the superior and to and the anterior and posterior.

Internally, it is divided into two, right and left.

HEARTBURN. A burning stomach.

HEARTBEAK. A plant

HED, that yields a variegated, sweet-sour flavor.

HEARTH The pavement of a fireplace.

HEAT (in Physiology). See CALORIC.

HEAT (among Geographers). The heat of different climates, which arises from the different angles under which the sun's rays strike upon the surface of the earth; added to which, the heat of different places is either increased or diminished by the accidents of situation, with regard to mountains and valleys, proximity to the sea, and the like.

HEAT (among Smiths). The degree of heat requisite for iron work, namely, the blood-red heat, the smallest degree; the flame, or white heat, the second degree; and the sparkling, or welding heat, which is the strongest degree.

HEAT (among Surveyors). A certain prescribed distance which a horse runs at the course.

HEATH. A wide open place, generally overgrown with heath.

HEATH (in Botany). A shrub, which either grows wild, or is cultivated with great care in hothouses. The cultivated sorts are remarkable for their variety and beauty.

HEAVEN (in Astronomy). That immense region wherein the planets, stars, and comets are disposed, and perform their motions; among the ancients, a heaven denoted an orb or circular region of the ethereal heaven. Astronomers therefore assumed as many different heavens as they observed different celestial motions; thus they had seven heavens for the seven planets, the Moon, Mercury, Venus, the Sun, Mars, Jupiter, and Saturn. The eighth was the fixed stars, which was particularly denominated the firmament. Ptolemy added a ninth heaven, which he calls the Primum Mobile; Alphonbus afterwards added two crystalline heavens, to account for some irregularities in the motions of the other heavens. Other ancient astronomers admitted more heavens, according to their different hypotheses.

HEB. An abbreviation for Hebrews.

HECATORH. The successor of a hundred men.

HECTIC FEVER. An habitual fever, or one which is slow and continued, and long in a consumption.

HEMEL. A fence of thorns or shrubs to part off land.

HEMISHERIC. A quadruped denuded all over with sharp prickles, which is a native of Europe, and found also in Madagascar: It lives in thickets, and swims

easily. When frightened, it rolls itself up in its spiny skin, and presents nothing but a ball of prickles.



HEDGESPARROW. A kind of sparrow that lives in the fields and about the hedges.

HEEL. The back of the foot protruding behind.

HEEL (among Mariners). The heel of a mast, that part at the feet of a ship's mast that is pared away slanting.

HEELPIECE. A piece of leather put upon the heel of a shoe.

HEIRA (in Chronology). An era which takes its date from Mahomet's flight from Mecca, A. S. 622.

HEIR (in Law). One who succeeds by descent to lands and tenements.

HELLOOM. Household goods and furniture which have for several descents belonged to a house, and necessarily come to the heir with the house.

HELIACAL (in Astronomy). A term applied to the stars or planets when they rise and set with or at the same time as the sun.

HELIOCENTRAL. An epithet for what relates to the centre of the sun.

HELIOMETER. An instrument for measuring the diameter of the heavenly bodies. This instrument is a kind of telescope, consisting of two object glasses of equal focal distance, placed one by the side of the other, so that the same eyeglass serves for both.

HELIOCOPE, or TURN-ILL. A plant which is said always to follow the course of the sun.

HELLEBORE. A plant, the flower of which expands in the form of a rose. The seed is oblong, like a grain of wheat. It is very doubtful whether the plant now so named be the true hellebore so famous for its poisonous quality among the ancients.

HELM (in Naval Architecture). A long flat piece of timber suspended at the head part of a ship's sternpost, which serves to direct the course of the ship. It is composed of three parts, namely, the *udder*, which turns upon its hinges; the *tiler*,

which serves to direct the rudder; and the wheel, round which the tiller-ropes are wound in large vessels.

HELMET. A headpiece, or armour for the head, which was formerly the noblest piece of coat armour.

HELMINTHOLOGY. The science of worms.

HELVE. The handle of an axe.

HEM. The edge part of cloth.

HEMIFTERA. The second order of insects in the Linnæan system, including those which have their upper wings semi-crustaceous, as the cock roach, mantis or walking leaf, locust, cricket, grasshopper, lantern-fly, boat-fly, water scorpion, aphid or plant louse, and the tucanus or tickle.

HEMISPHERE. One half of the mundane sphere.

HEMLOCK. A narcotic plant, the leaves of which are cut into many minute segments, like parsley. It is doubtful whether it be the true hemlock of the ancients.

HEMP. A fibrous plant, of which linen and ropes are made.

HEN. A fowling bird of any species, particularly the domestic fowl.

HENBANE. A poisonous plant that grows in hedges.

HENDRAGON. A figure of eleven sides.

HEPTAGON. A figure of seven sides and seven angles.



HEPTANDRIA. One of the Linnæan classes, including those plants which have seven stamens to the flower, as the hellebore, chickweed, lizard's tail, &c.



HEPTARCHY. The seven kingdoms by the Saxons on their first settling in England. They were all united in a kingdom by Egbert.

HELD. (In England). An office.

whose business it is to purchase war and peace, to marshal processions, and regulate armorial ensigns, &c. The heralds receive in reward, and are distinguished by the names of Richmond, Lancaster, Clarence, Windsor, Somerset, and York. They are all equal in degree, and have precedence only according to the seniority of their creation.

HERALDRY. An ancient art which professes to teach the true use of arms; to how to blazon or describe them to proper terms, and how to marshal or dispose the different arms in an escutcheon or shield.

HERALDRY, HISTORY OF. Although the science of heraldry, as far as regards the distinctions of families by means of coat armour, is comparatively of modern date, yet the Romans were not without their marks of honour, which, being hereditary, served as a proof of nobility, and a title to a certain rank. This was known among them by the name of *fas imaginum*, which was the right of having the statues or images of their ancestors; that belonged to those only who were either of patrician rank or had risen to distinction in the state.

He who had the privilege of having the statues or images of his ancestors was termed 'nobilitas'; he who could only see his own was a 'novus homo,' or an upstart, like one who had neither his own statues nor those of his ancestors was termed 'ignobilis.' These images or statues were made of wood, brass, marble, and sometimes in waxwork, and were painted, according to the life, with the several emblems of military honour which belonged to the individual. Thus the eagle or chain on the statue of Torquatus, and the tuft of hair on that of Cincinnatus, were the trophies of which these brave warriors had despoiled their enemies.

These statues commonly stood in their courts in a cabinet of wood, whence probably originated our cabinets of arms, where the helmet, crest, gauntlet, spurs, banner, &c. were kept; and as, upon particular occasions, these cabinets were set open, and the statues were exposed to public view before the porch or gate of their houses, so our nobility and gentry have their coats of arms cut in stone, and painted in escutcheons over their gates. At their funerals these statues were borne before such as had the *fas imaginum*, whence it after those it became the practice, at the funerals of great men, to carry their ensigns of nobility, and the arms of those from whom they were descended, which, being all placed, are placed neither

HEROIC POEM. A poem setting forth the exploits of some hero.

HEROIC VERSE. Hexameter verse, so called because it is used by poets in their heroic poems.

HERRING. A small codfish of a green colour, which inhabits the North sea, and migrates southerly in immense shoals, particularly in the month of June. Their progress is marked by the number of birds which follow them to prey upon them. Those which flock to the British coasts are to be found in the greatest number off Yarmouth, the mart for herrings.

HERSE (in Fortification). An engine like a harrow, stuck full of spikes.

HESPERIDÆ (in Botany). A natural order of plants, including the myrtle tribe.

HETEROSCU (in Geography). Those inhabitants of the earth which have their shadows falling but one way, or those living between the tropic and polar circles.

HEXAEDRON (in Geometry). A solid figure of six equal sides.

HEXAGON (in Geometry). A figure of six sides and six angles.



HEXAGYNIA (in Botany). An order of plants, which have six styles in the flowers.

HEXAMETER (in Poetry). A verse consisting of six feet.

HEXANDRIA (in Botany). One of the Linnaean classes, comprehending those plants which have six stamens in each flower, as the pineapple, lamb-ear, spider-weed, fly of the valley, arrow grass, &c.



HHD. An abbreviation for hoghead.

HIATUS. A gap or chasm in various, also any deficiency in a manuscript which destroys the connexion.

HICCOUGH, or **HICCUP.** A convulsive motion of the stomach.

HIDE (in Law). A portion of land, from 109 to 120 acres.

HIDE (among Tanners). The skin of beasts after they are taken off.

HIDEBOUND (in Veterinary). A disease in horses and cattle when the skin cleaves to the sides.

HIDEBOUND (in Botany). A disease in trees when the bark cleaves in the wood.

HIERARCHY. Church government, or the subordination of rank among the different orders of clergy.

HIEROGLYPHICS. Certain characters, figures, or signs, made use of by the Egyptians instead of letters, to express the conceptions of men, particularly the mysteries of their religion. In a general sense an hieroglyphic is any symbol or figure which may serve to represent an object; thus the astronomical characters are instances of them of this nature, as the chirote for Mercury, ♀, which is the figure of his caduceus; that of Mars, ♂, which is supposed to represent his shield and spear; that of Saturn, ♄, which represents his sickle, &c.

HIGHNESS. In Europe, a title of honour given to a prince.

HIGHWATER. When the tide is at its highest point.

HIGHWAY (in Law). A public or common passage for the people.

HIGHWAYMEN. Robbers on the highway.

HIGLER. In England one who busies himself in the country, and carries the sheep to town.

HIND. The female of the ox.

HINGE. The iron work on which a door is made to turn.

HIP. The upper part of the thigh.

HIPPOTAMUS, or **TWO HOVED HORSE.** An amphibious creature found on the rivers of Africa.



HIP-ROOF (in Architecture). A particular kind of roof, which has neither a beam, shed, or battens, nor joists inside.

HIPS (in Botany). The ripe fruit of the fig tree, which is principally used in the East.

in England, the motto of the order of the Garter, signifying, Evil be to him that evil thinks.

HONOUE. In England, the most noble part of seignories.

HONOUE. (in Military Affairs). External marks of honour paid to superior officers.

HONOUE COURTS. In England, courts held within the bounds of an honour.

HONOUE, MAIDS OF (in Court Etiquette). In England, ladies in the queen's household, who attend the queen when she goes out.

HONOURS OF WAR. Honourable terms granted to a vanquished enemy, when he is permitted to march out of a town with all the insignia of military etiquette.

HOOD. An upper covering for the head of a woman.

HOOD (at the University). In England, an ornamental fidd that hangs down the back of a graduate, to mark his degree.

HOOF. The horny part of the feet of a horse or other cattle.

HOOK. A hooked iron to hang things upon; also a bent piece of iron or wire attached to a fishing-rod for catching fish.

HOOP, or HOOPOE. A bird inhabiting Europe, Asia, and Africa, which is solitary and migratory.



HOP. A plant with a creeping root, the stalks of which climb and twist about whatever is near them; wherefore, in hop grounds, poles are fixed near to the plant for them to rise upon. Hops are said to have been introduced into England from the Netherlands in the sixteenth century; they are principally used to put up with beer, to enter to prevent it from turning sour, and to give it a strengthening quality. Hops require to be planted in open situations, and in a rich strong ground. The soil should be ploughed in autumn, and sown in June or July. Hops begin to blow,

and are ready to gather about the latter end of August, when, by their strong scent, their hardness, and the brown colour of the seed, they may be known to be so. The best method of drying hops is on a kiln over a charcoal fire; when the stalks are brittle, and the top leaves easily fall off, they are properly dried. When taken from the kiln, they should be laid to cool for three weeks or a month before they are bagged.

HORIZON (in Astronomy). A great circle of the sphere, which divides it into upper and lower hemispheres. The apparent or sensible horizon is that circle of the heavens which bounds the view of the observer, in distinction from the rational or real horizon, which is a circle encompassing the earth exactly in the middle. It is represented in the globes by the wooden frame which contains the globe.

HOEN (in Natural History). The hard, pointed bodies which grow on the heads of some granivorous animals, and serve either for defence or ornament; also the slender handles on the heads of insects, &c.

HOEN (in Chymistry). Is mostly composed of albumen, gelatin, and phosphate of lime, but the horns of the buck and stag are of an intermediate nature between horn and bone.

HORN (in Music). A wind instrument, chiefly used in hunting and in the chase.

HORNBEAM. A tree that has leaves like the elm or beech tree; it was formerly used in hedgerows. The timber is very tough and inflexible.

HORNBLÉNDE (in Mineralogy). A sort of stony stone, of a green and blackish green colour. It is a very abundant mineral.

HORN-BOOK. The first book for children, containing the alphabet, which was formerly covered with transparent horn.

HORNET. A large, strong, and stinging insect, of the wasp kind.

HORN-ORE (in Mineralogy). One of the species of silver ore.

HORSPIPE. An animated sort of dance.

HOBES-STONE. A species of flint.

HOENWORK (in Fortification). An entrenchment which advances towards the field.

HOROLOLOGY. The science which treats on the measuring of portions of time. The principal instruments used in the measuring of time are dialls, gnomons, or water clocks, clock's, watches, and in some cases also hour-glasses.

HOROLOGICAL (in Astronomy). A double instrument contrived for the measuring of time by means of the sun. The first of

fact to one of the shreds, having a dead man's eye at the end.

HORSE-BEAN. A small bean usually given to horses.

HORSE-BREAKER. One who breaks in young horses, and fits them for use.

HORSE-CHESTNUT. A tree, which yields a prickly nut.

HORSE-DEALER. One who buys horses to sell them again.

HORSE-DOCTOR. One who undertakes to cure the diseases of horses.

HORSE-LEECH. A large sort of leech that fastens on horses.

HORSEMAN. One skilled in riding.

HORSEMANSHIP. The art of riding and managing horses.

HORSE-RACE. A match of horses in running.

HORSESHOE (in Smithery). A circular piece of iron fitted to the foot of a horse. This shoe is sometimes turned up in the winter season, to prevent the horse from slipping; this is called rough-shoeing. As an improvement upon this sort of shoeing, the rims have been made removable at pleasure by means of a screw



HORSESHOE (in Fortification). A work, sometimes of an oval figure, raised in marshy ground.

HORSESHOEING. The fitting and nailing a shoe to a horse's foot.

HORTICULTURE. The art of cultivating a garden, and rearing the finest kinds of plants.

HORTUS SICCUS. Literally, a dry garden; an appellation given to a collection of specimens of plants carefully dried and preserved. Various methods have been adopted by botanists for obtaining a *hortus siccus*; but that of pressing the plants, that are to be dried, in a box of sand or with a hot smoothing iron, has been recommended. If pressure be employed, that is best effected by means of a botanical press made for the purpose, in which the plants are put, with sheets of dry paper between. At first they ought to be pressed gently, and occasionally taken out in order to see

some of the leaves are crumpled or As they continue to dry, the pressure may be increased. When they are fully dried, they may be taken out

and laid on dry paper. Plants that are succulent require a longer and harder pressure, but for the most part three days' pressure is sufficient.

HOSANNA. A solemn acclamation used by the Jews in the Feast of Tabernacles.

HOSE (among Mariners). A leathern tube for conveying water from the main decks into the casks.

HOSIERY. Stockings, and other goods in a shop that are spun or wove.

HOSPITAL. A house, erected out of charity, for the support and relief of the sick and poor.

HOSPITALIERS. An order of knights who built an hospital at Jerusalem for the entertainment of pilgrims.

HOST. The consecrated wafers in the Roman Catholic communion.

HOSTAGE. A person left as a security for the performance of the articles of a treaty.

HOTBED. A bed made in a wooden frame with horse-dung, and covered with glasses, for raising early plants.

HOTCH-POT. Properly, flesh cut into small pieces, and stewed with herbs and roots; in Law, in England, the putting lands together, that belong to coparceners, for the purpose of distributing them equally.

HOTHOUSE. A building, constructed in a garden, for the rearing of exotics and tender plants that require heat.

HOUD. A kind of sporting dog, having pendulous ears, and very strong scent.



HOUD'S TONGUE. A plant cultivated in gardens, bearing a pink flower.

HOUE. The twenty-fourth part of a natural day; the space of sixty minutes.

HOUR-GLASS. A glass for measuring the hours by the running of the sand from one part of the vessel to another.

HOUSE. A building, constructed with all conveniences for habitation.

HOUSE (among Genealogists). A noble family, or an illustrious race descended from the same stock.

HOUSE (in Astrology). The twelfth part of the Zodiac. The whole of a family.

HOUSHOLD. The whole of a family.

HYDRODYNAMICS, HISTORY OF. Although the doctrine of fluids and their motion is but partially treated by the ancients, yet, as respects the action of water in rivers, fountains, and aqueducts, it is certain that they must have had a considerable portion of practical knowledge. Aristotle treats on the nature of subterraneous waters, as also of those which are above. Ptolemy of Alexandria made an artificial fountain, which bears his name. The Romans displayed their acquaintance with the art of carrying waters, in their famous aqueducts, and Frontinus, an engineer, who wrote on this subject, has given some few rules and hints on the motion of fluids. It is, however, only within the three last

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HYDROGEN GAS. A constituent of water and the lightest species of ponderable matter hitherto known, which was discovered by Mr. Cavendish in 1781. It is an inflammable air, or an invisible aeriform fluid, which burns rapidly when kindled, in contact with atmospheric air, and forms what are now termed gas-lights. When combined with oxygen, it produces water. It is unfit for respiration, so that animals, when obliged to breathe it, die almost immediately.

HYDROGRAPHY. A description of rivers, bays, lakes, and other pieces of water.

HYDROLOGY. That part of natural history which treats of and explains the nature and properties of waters in general.

HYDROMETER. An instrument for measuring the density and gravity, &c. of water and other liquids. That which is designed simply for ascertaining the specific gravity of different waters is more commonly called an areometer or water-gauge. The term hydrometer being more commonly understood to denote an instrument for measuring the gravity of spirits, though sometimes used indifferently for either. It is likewise contrived an hydrometer for

determining the specific gravities of different waters to such a nicety, that it would show when one kind of water was but the 10,000th part heavier than another.

HYDROMETRY. The measurement of fluids, as to their density, gravity, &c.

HYDROPHOBIA, i. e. A DISEASE OF WATER. A distemper arising from the bite of a mad dog, which is always accompanied with a horror of water and other liquids.

HYDROSCOPE. An instrument anciently used for the measuring of time.

HYDROSTATICAL BALANCE. A kind of balance contrived for the finding the specific gravities of bodies solid as well as fluid.



HYDROSTATICAL BELLOWS. A machine for showing the upward pressure of fluids, and the hydrostatical paradox.



HYDROSTATICAL PARADOX. A principle in hydrostatics, so called because it has a paradoxical appearance at first view; it is this, that any quantity of water or other fluid, how small soever, may be made to balance and support any quantity or any weight, however great it may be.

HYDROSTATICS. The science which treats of the laws regulating the motions, pressure, cohesion, and equilibrium of fluid bodies, particularly water, and also

IB. IBID. or **IBIDEM.** The same.
IREX. An European variety of the goat with very long horns.



ICHNEUMON. An Egyptian animal of the vessel kind that feeds upon the eggs of the crocodile.



ICHNEUMON (in Entomology). A sort of fly, which deposits its eggs in the bodies of other insects.

ICHNOGRAPHY (in Architecture). The ground plan of a building.

ICHNOGRAPHY (in Fortification). A draught of the length and breadth of the works raised about a place.

ICHTHYOLOGY. That branch of general zoology which treats of fishes. These animals are divided into five orders, namely, into apodal, or those which have no ventral fins; jugular, which have the ventral fins placed more forward than the pectoral; abdominal, or those which have the ventral fins situated behind, thoracic, or those which have their ventral fins situated immediately under the pectoral; and the cartilaginous fishes, which have a cartilaginous instead of a bony skeleton.

ICHTHYOLOGY. HISTORY OF. The subject of fishes has engaged the attention of naturalists from the time of Aristotle to the present period. Aristotle, probably the first writer on the subject, divided fishes into voracious, apteous, and cartilaginous, or wax, after a long interval, followed by others, who treated of the fishes of particular places, as Ovid, who treats of

the fishes of the Euxine, Appian of those of the Adriatic, and Atkinson of those of the Mæotic, &c.; among the moderns there are also some who have treated this subject partially, as Paul Jovius, who described the fishes of the Mediterranean, Sebwenkfeld those of Sicily, Schonfeld those of Hamburgh, Macgraves the fishes of Brazil, Russell and Francis Valentine those of Amboyna, Piny was a general writer on the subject, and pursued no method; Elliot and Alderson have only scattered notices of some few fishes. Among the moderns, Bellonius, Rondeletius, Gesner, Willoughby, Ray, Artedi, and Linnæus have done most towards reducing this science to a systematic order.

ICORANDELIA (in Botany). The twelfth class in the Linnæan system, including plants with twenty stamens or more to their flowers, as the melon, Indian fig, pomegranate, plum, &c.



IDIOM. A manner of expressing peculiar to any language.

IDIOSYNCRACY. A peculiarity of constitution.

IDOL. Property an image; but particularly the image of any false god.

IDOLATRY. The worshipping of idols.

IDYLL. A little pastoral poem, treating of shepherds and shepherdesses, such as the Idylls of Theocritus, Gesner, &c.

I. E. ID EST. That is.

IGNIS FATUUS. See JACK WITH THE LANTERN.

IGNITION (in Chymistry.) The application of fire to metals, till they become red hot without melting.

IGNORAMUS. An ignorant fellow, a pretender to knowledge.

IGNORAMUS (in Law.) The term used by the Grand Jury when they ignore or throw out a bill of indictment. It signifies 'We know nothing about it, or have not sufficient evidence respecting it.'

IGNORING A BILL (in Law). The throwing out a bill of indictment by a grand jury, who induce it with the word 'ignoramus.'

I. H. S. An abbreviation for Jesus Christus, or Jesus the Son of God.

INCOGNITO, or **INCOG** (in Europe). Literally, unknown, not to be recognized; a mode of travelling without any mark of distinction, which is sometimes adapted by princes and great people who do not wish to be recognized.

INCLINED PLANE (in Mechanics). A plane inclined to the horizon, or making an angle with it, which is one of the mechanical powers.



INCOMBUSTIBLE. A body that is incapable of undergoing combustion.

INCOMBUSTIBLE CLOTH. A sort of cloth made from a stone in the form of a tale; which stone is called lapis amianthus, and asbestos.

INCOMMENSURABLE (in Geometry). A term applied to two lines or quantities which have no common measure by which they can be divided.

INCORPORATION (in Law). The formation of a body politic.

INCORPORATION (in Chemistry). The mingling the particles of different bodies together into one mass, in such manner that the different ingredients cannot be distinguished.

INCREMENT (in Fluxions). The small increase of a variable body. Dr. Brook Taylor, to whom we are indebted for the doctrine of increments or finite differences, denoted his increments by a dot under the variable quantity, thus the increment of x was denoted by \dot{x} ; others have employed a small accent, thus x' , or thus x . M. Nicole uses another letter to denote the increment of x , or any variable, as by α ; but Euler employs the character Δ , thus Δx the increment of x , and Δy the increment of y . Dr. Brook Taylor first published his *Methodus Incrementorum* in 1715, which was afterwards illustrated by M. Nicole in the *Memoirs of the Royal Academy of Sciences* for the years 1715, 1723, and 1731. In 1732, Emerson published his method of increments; but the writer who contributed most to the elucidation of this subject was Euler, who, in his *Institutiones Calculi Differentialis*, gave a new and extended form to this branch of analysis. Various other writers have since treated the subject, among whom Lagrange, in his *Leçons de Mécanique*, &c. is thought to be the most happy.

INCUBATION. The process of a bird sitting on her eggs and hatching in them

the time required for this varies in different birds, domestic fowls sit three weeks ducks, geese, and turkeys a month, pigeons eighteen days, &c.

INCUBUS, or **NIGHT MARE**. A disease which consists in an obstructed respiration, that produces the sensation in sleep, of a weight pressing on the breast.

INCUMBENT. One in present possession of a benefice.

INDECLINABLE. Not varied by terminations, as an infinitive noun.

INDEFINITE PRONOUNS. Words that are loose and undetermined in their meaning, as whatsoever, any, every, &c.

INDEMNITY (in Law). The saving harmless; or a writing to secure one from all damage and danger that may ensue from any act.

INDEMNITY ACT (in England). An act passed every session of parliament, for the relief of those who have neglected to take the necessary oath, &c.

INDENTURE (in Law). An agreement or contract made between two or more persons, so called, because it was indented or cut scallopedwise, as to correspond with another writing containing the same words.

INDEPENDENTS. A sect of Protestants in England and Holland, who govern themselves in their own congregations, without acknowledging any dependence upon, or connexion with any other church.

INDEX (in Arithmetic and Algebra). The number that shows to what power the figure x is to be raised, as in 10^3 , the figure 3 is the exponent or index.

INDEX (in Watchmaking). The little stile or hand fixed either to a clock or watch, &c.

INDEX (in Literature). An alphabetical table of the contents of a book.

INDIAN AEROW ROOT. The root of a plant growing in the West Indies, where it was formerly used as an antidote against poisons.

INDIAN FIG. These India in the Linnæan system; another name for the Baobab tree.

INDIAN RUBBER, or **CAOUTCHOUC**. An elastic gum, a substance procured from a tree in South America, called the *pybbonia elastica*. It is mostly brought into Europe in the shape of bottles, which are formed by spreading the gum over a mould of clay.

INDIAN WHEAT. See **MARSH**.

INDICATIVE MOOD (in Grammar). That mood of a verb which simply affirms or denies.

INDICATED (in Law). That is, accused.

of some offences by bill preferred to juries.

INDICTION, or *Cyclus* or *Indictionis* (in Chronology). A mode of computing time by the space of fifteen years, instituted by Constantine the Great. The popes, since the time of Charlemagne, have dated their acts by the year of the indiction, which was fixed on the first of January. At the time of the reformation of the calendar the year 1582 was reckoned the sixth year of the indiction. Now this date when divided by fifteen leaves a remainder seven, that is three less than the indiction, and the same must necessarily be the case in all subsequent cases, so that in order to find the indiction for any year divide the date by fifteen and add three to the remainder.

INDICTMENT. A bill or accusation drawn up in form of law, and exhibiting some offence, which is preferred to a grand jury preparatory to the trial in open court.

INDIGENOUS. Native, as applied to animals and plants.

INDIGO. A beautiful blue colour or dye procured from a plant called by the Americans, anil, in the Linnæan system, *Indigofera*. The indigo used by the dyers is a Gœcula procured from the leaves of the plant, which are laid in vats full of water, and left to ferment. The liquor is then drawn off into another vat, and after having been well stirred up, it is drawn off, and what remains at the bottom is exposed to the air until it is thoroughly dry, when it is fit for use. The principal constituent parts of indigo are sinilaginosa, resinous, and earthy matter, with some oxide of iron.

INDORSING. See *EXORSING*.

INDUCTION (in English). Putting a clerk in possession of his living.

INDUCTION (in Logic). A mode of argumentation, or reasoning, when the species is gathered out of the individuals, and the genus out of the species, &c. as if it be true that all planets borrow their light from the sun, then, by induction, it is true that Jupiter, Mars, and each individual planet does the same.

INDULGENCES (in the Romish Church). Pardons for sin, granted by the pope to such as profess to be penitents.

INERTIA, or *Via Inertia* (in Physiology). A passive principle, supposed by Sir Isaac Newton to reside in bodies, by which they persist in their motion or rest, and receive motion according to the force impressed upon them, and resist so much as they are resisted.

INFANT (in Law). Any person under the age of twenty-one.

INFANTA. The title given to the eldest daughter of the king of Spain or Portugal.

INFANTY. The title given to the eldest son of the king of Spain and Portugal.

INFANTRY. The body of foot soldiers.

INFECTIÖN. The communication of a disease by certain effluvia which fly off from distempered bodies, or from goods that are infected.

INFIMPTESIMALS. Indefinitely small parts.

INFIMITIVE MOOD. The mood of a verb, so named because it is not limited by number or person.

INFIRMARY. A place where the sick poor are received, or can get advice and medicines gratis.

INFLECTION (in Optics). A multiplex refraction of the rays of light, caused by the unequal thickness of any medium.

INFLECTION (in Grammar). The change which a word undergoes in its ending, to express case, number, gender, mood, tense, &c.

INFLECTION, POINT or (in Geometry). A point where a curve begins to bend a contrary way.

INFLORESCENCE. The manner in which plants flower, or in which flowers are fastened to the stem by means of the pedicels.

INFLUENZA. A sort of catarrh or disease from cold, so called, because it was supposed to be produced by the peculiar influence of the stars.

IN FORMA PAUPERIS. See *FOKMA*.

INFORMATION (in Law). An accusation or complaint exhibited against a person, for some criminal offence. An information differs from an indictment, inasmuch as the latter is exhibited on the oath of twelve men, but the information is only the allegation of the officer or individual who exhibits it.

INFORMER (in Law.) One who gives information, particularly private information, to a magistrate.

INFUSIBLE. Not to be fused, or made fluid.

INFUSION. A method of obtaining the virtues of plants, roots, &c. by steeping them in a hot or cold liquor.

INFUSORIA. One of the Linnæan orders of animals, of the class vermes, including such as are simple, microscopic animals found in stagnant water.

INGOT. A wedge or bar of gold.

INGREDIENT. Any simple that enters into the composition of a compound medicine.

INGRESS (in Astronomy). The sun's entering into the first scruple of Aries.

INGROSS. See *ESROSS*.

INHERITANCE (in Law). An estate in a man and his heirs.

INJECTION (in Anatomy). The filling the veins of a dead subject with any coloured matter to show their ramifications.

INJECTION (in Surgery). The forcing any liquid into the body by means of a syringe.

INITIALS. Letters placed at the beginnings of words or sentences.

INJUNCTION. A kind of prohibition granted by courts of equity, principally with a view of preserving property pending a suit.

INK. A black liquor for writing; it is sometimes red, when it is called red ink. Black ink is of three kinds: namely, Indian ink, made in China of lamp-black and size; printer's ink, composed of oil and lamp-black for the black ink, or of vermilion for the red ink; writing ink, composed of an infusion of galls, sulphate of iron or copper dissolved in water, logwood, and gum arabic. The red ink is composed of Brazil wood, gum, and alum.

INK, SYMPATHETIC. See *SYMPATHETIC INK*.

INLAND. That place which is situated in the interior of a country, far from the seacoast.

INLAND BILLS (in Commerce). Bills payable in the country where they are drawn.

INLAND TRADE. Trade carried on within the country; home trade, as opposed to foreign commerce.

INLAYING (among Mechanicks). Working in wood or metal with several pieces of different colours, curiously put together.

IN LIMINE. In the outset; before any thing is said or done.

INN. A house of entertainment for travellers.

INNS OF COURT (in London). Houses or residences for the entertainment of students in the law; the principal of these societies at present are Lincoln's Inn, the Inner Temple, and the Middle Temple.

INTUENDO (in Law). A hint, a doubtful or obscure expression.

INOCULATION (in Surgery). The operation of giving the small pox to persons by injection. When a person is inoculated with the cow-pox, it is called vaccination.

INOCULATION (in Gardening). A kind of grafting in the bud; as when the bud of the fruit tree is set in the stock or branch of another, so as to make several sorts of fruit grow on the same tree.

INOCULATION (in Anatomy). The joining the mouth of the capillary veins and arteries.

IN PROPRIA PERSONA. In one's own person or character.

INQUEST (in Law). An inquisition by Jurors, the most usual mode of trial in cases both civil and criminal in this country.

INQUISITION (in Ecclesiastical Affairs). A tribunal in some Roman Catholic countries for the suppression of heresies.

INQUISITOR (in England). Any officer, as the sheriff and the coroner, having power to inquire into certain matters; in Ecclesiastical Affairs, Grand Inquisitor is the name of the judge of the Inquisition.

INROLLMENT (in England). The registering or entering in the rolls of the Chancery and King's Bench, &c. any lawful act, as recognizances, &c.

INSCRIBED (in Geometry). An epithet for a figure inscribed in another, so that all its angles touch the sides or planes of the other figure.

INSECTA. The fifth class of animals in the Linnaean system, comprehending all insects except worms, which Linnaeus has formed into a distinct class called vermes. The insects are divided into seven orders, namely, the coleoptera, lepidoptera, hemiptera, neuroptera, diptera, and aptera. See *ENTOMOLOGUS*.

INSECTS. Small animals that either creep or fly, having many feet, and bodies composed of joints and segments, in some cases they have the head distinct from the body, as flies, bees, &c. Those that are capable of being parted without destroying life were also included under this head, but Linnæus has classed them under the head of vermes, worms.

INSIGNIA. Badges.

INSOLUBLE (in Chymistry). An epithet for any body which is not to be dissolved or separated.

INSOLVENCY (in Law). The state of not being able to pay one's debts.

INSOLVENT. In a state of insolvency.

INSOLVENT ACTS. Acts passed for the purpose of releasing from prison, and sometimes from their debts, persons who cannot take the benefit of the bankrupt laws.

INSPECTION (in Law). A mode of trial, when the judges decide a point of dispute, upon the testimony of their own senses.

INSPECTOR. A military officer whose duty it is to inspect regiments, &c.

INSPIRATION (in Anatomy). The

fast to one of the shrouds, having a dead man's eye at the end.

HORSE-BEAN. A small bean usually given to horses.

HORSE-BREAKER. One who breaks in young horses, and fits them for use.

HORSE-CHESTNUT. A tree, which yields a prickly nut.

HORSEDEALER. One who buys horses to sell them again.

HORSE-DOCTOR. One who undertakes to cure the diseases of horses.

HORSE-LEECH. A large sort of leech that fastens on horses.

HORSEMAN. One skilled in riding.

HORSEMANSHIP. The art of riding and managing horses.

HORSE-RACE. A match of horses in running.

HORSESHOE (in Smithery). A circular piece of iron fitted to the foot of a horse.

This shoe is sometimes turned up in the winter season, to prevent the horse from slipping; this is called rough-shoeing. As an improvement upon this sort of shoeing, the clips have been made removable at pleasure by means of a screw



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HOSPITALLERS. An order of knights who built an hospital at Jerusalem for the entertainment of pilgrims.

HOST. The consecrated wafer in the Roman Catholic communion.

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HOUE-GLASS. A glass for measuring the hours by the running of the sand from one part of the vessel to another.

HOUSE. A building, constructed with all conveniences for habitation.

HOUSE (among Germanists). A noble family, or an illustrious race descended from the same stock.

HOUSE (in Astrology). The twelfth part of the heavens.

HOUSEHOLD. The whole of a family.

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HYDROLOGY. That part of natural history which treats of and explains the source and properties of waters in general.

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determining the specific gravities of various waters in such a manner, that they show when one kind of water is 40,000th part heavier than another.

HYDROMETRY. The measurement of fluids, as to their density, gravity, &c.

HYDROPHOBIA, l. e. A. WARRA. A distemper arising from a mad dog, which is always attended with a horror of water and other fluids.

HYDROSCOPE. An instrument used for the measuring of the specific gravities of both solids and fluids.

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HYDROSTATICAL PARADOX. The principle is hydrostatics, so called because it has a paradoxical appearance. In this, it is this, that any quantity of water, or other fluid, how small soever, made to balance and support any weight, however great it is. The ancient Greeks treated of the laws regulating the pressure, gravitation, and equilibrium of fluids, particularly water, &c.

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INCUMBENT. One in present possession of a benefice.

INDECLINABLE. Not varied by terminations, as an indeclinable noun.

INDEFINITE PRONOUNS. Words that are loose and undetermined in their meaning, as whatsoever, any, every, &c.

INDEMNITY (in Law). The saving harmless; or a writing to secure one from all damage and danger that may ensue from any act.

INDEMNITY ACT or (in England). An act passed every session of parliament, for the relief of those who have neglected to take the necessary oaths, &c.

INDENTURE (in Law). An agreement or contract made between two or more persons, so called, because it was indented or cut scissorwise, so as to correspond with another writing containing the same words.

INDEPENDENTS. A sect of Protestants in England and Holland, who govern themselves in their own congregations, without acknowledging any dependence upon, or connexion with any other church.

INDEX (in Arithmetic and Algebra). The number that shows to what power the quantity is to be raised, as in 10^5 , the figure 5 is the exponent or index.

INDEX (in Watchmaking). The little stile or hand fitted either to a clock or watch, &c.

INDEX (in Literature). An alphabetical table of the contents of a book.

INDIAN ARROW ROOT. The root of a plant growing in the West Indies, whose it was formerly used as an antidote against poison.

INDIAN FIG, *Ficus Indica* (in the Linnæan system); another name for the Banyan tree.

INDIAN RUBBER, or **CAOUTCHOUC**. An elastic gum, a substance procured from a tree in South America, called the *xylopia elastica*. It is mostly brought into Europe in the shape of bottles, which are formed by spreading the gum over a mould of wax.

INDIAN WHEAT. See **MALFE**.

INDICATIVE MOOD (in Grammar). The mood of a verb which simply affirms or denies.

INDICTED (in Law). That is, accused

paid for the use or loan of money. The sum paid by the borrower, the interest, and when the two are interposed, the interest paid upon that is called compound interest, or interest upon interest.

INTEREST (in Arithmetic). A rule by which the interest of money is computed, which is either simple or compound.

INTERJECTION. An indelible part of speech, serving to express the emotions of the mind.

INTERLOCUTORY ORDER (in Law). An order which does not decide the cause itself, only some intervening matter relating to it.

INTERLOPERS (in Law). Those who, without legal authority, intercept or hinder the trade of a company, lawfully established to trade in a particular way or part.

INTERLUDE. An entertainment between the acts of a play, for the purpose of allowing the performers time to rest, &c.

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INTERREGNUM. In Europe, the vacancy of a throne, by the death or deposition of a king.

INTERREX. He who governs while there is no king.

INTERROGATION. A question put.

INTERROGATION, or **NOTA** or **INTERROGATORIA** (in Grammar). A mark thus (?) put at the end of a question.

INTERROGATIVES. Words used in asking a question, as why, wherefore, &c.

INTERROGATIVE SYSTEM. A mode of teaching by means of question and answer.

INTERROGATORIES (in Law). Questions in writing demanded of witnesses in a cause, particularly in the Court of Chancery.

INTERRORUM. By way of frightening or deterring.

INTERSECTION (in Mathematics). The cutting of one line or plane by another.

INTERVAL (in Music). The difference between two sounds, as respects acute and grave.

INTESTATE. One dying without a will.

INTESTINA (in Zoology). An order in the Linnaean system, of the class vermes, including earthworms and leeches.

INTESTINE MOTION (in Physiology). That motion which takes place in the corpuscles or smallest particles of a body.

INTESTINES. The convoluted membranous tube in the body of animals. In the human subject, the intestines are divid-

ded into large and small, each of which consists of three distinct portions.

INTOLERANCE. The not tolerating or allowing of every man's private judgment, in matters of doctrine or discipline.

INTONATION (in Music). The act of ascending the notes in the scale with the voice, or any other given order of musical tones.

INTRANSITIVE VERBS. Verbs that express actions, that do not pass over to an object, as go, come, &c.

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INVOLUTION. The raising any quantity to a given power by multiplying it into itself the required number of times; thus, the cube of 3 is got by multiplying 3, the root, into itself twice, as $3 \times 3 \times 3 = 27$.

IODINE. A deadly poison, of a black colour and metallic lustre, procured from kelp, which resembles chlorine in its odour, and power of destroying vegetable colours. Iodine is incombustible, but with caustic it forms a curious detonating powder.

IONIC ORDER (in Architecture). An order so called from Ionia in Lycaea Asia.

INCOGNITO, or INCOG (in Europe). Literally, unknown, not to be recognized; a mode of travelling without any mark of distinction, which is sometimes adopted by princes and great people who do not wish to be recognized.

INCLINED PLANE (in Mechanics). A plane inclined to the horizon, or making an angle with it, which is one of the mechanical powers.



INCOMBUSTIBLE. A body that is incapable of undergoing combustion.

INCOMBUSTIBLE CLOTH. A sort of cloth made from a stone in the form of a tairy which stone is called lapis amianthus, and asbestos.

INCOMMENSURABLE (in Geometry). A term applied to two lines or quantities which have no common measure by which they can be divided.

INCORPORATION (in Law). The formation of a body politic.

INCORPORATION (in Chymistry). The mingling the particles of different bodies together into one mass, in such manner that the different ingredients cannot be distinguished.

INCREMENT (in Fluxions). The small increase of a variable body. Dr. Brook Taylor, to whom we are indebted for the doctrine of increments or finite differences, denoted his increments by a dot under the variable quantity, thus the increment of x was denoted by \dot{x} ; others have employed a small accent, thus x' , or thus x . M. Nicole uses another letter to denote the increment of x , or any variable, as by w ; but Euler employs the character Δ , thus Δx the increment of x , and Δy the increment of y . Dr. Brook Taylor first published his *Methodus Incrementorum* in 1715, which was afterwards illustrated by M. Nicole in the *Memoirs of the Royal Academy of Sciences* for the years 1717, 1723, and 1724. In 1725, Emerson published his *method of Increments*; but the writer who contributed most to the elucidation of this subject was L'Hôpital, who, in his *Institutiones Calculi Differentialis*, gave a new and extended form to this branch of analysis. Various other writers have since treated on this subject, among whom Lagrange, in his *Théorie des Différences*, &c. is thought to be the most happy.

INATION. The process of a bird egg and hatching its young.

the time required for this varies in different birds, domestic fowls sit three weeks, ducks, geese, and turkeys a month, pigeons sixteen days, &c.

INCUBUS, or NIGHT MARE. A disease which consists in an obstructed respiration, that produces the sensation in sleep of a weight pressing on the breast.

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IONIC ORDER (in Architecture). An order so called from Ionia in Lesser Asia.

aperture, giving vent to noxious humours in the body.

ISSUES (in Military Affairs). Certain sums of money given into the hands of agents, for the payment of the army.

ISSUES (in Fortification). Outlets in a town.

ISTHMIAN GAMES. Games formerly celebrated by the Greeks at the Isthmus of Corinth every three, four, or five years.

ISTHMUS. A little neck of land joining a peninsula to a continent, as the Isthmus of Corinth, &c.

ITALIC. A kind of letter used in printing, by way of distinction from the Roman, as in this word, *Italy*.

ITCH. A cutaneous disease, supposed to be caused by an insect of the acarus tribe called the itch-mite. This small insect, which is white, with reddish legs, is found

in the small pointed vesicles of the hands and joints infected with the itch.

ITEM. Also; a word used to denote an article added to an account.

ITINERANT. Going from place to place.

ITINERANT JUSTICES, or *JUSTICES IN ERK*. In England, justices sent into divers counties, to hear and determine causes.

ITINERARY. A book pointing out the roads and distances of places, for the use of travellers.

IVORY. A finer sort of bone, or an intermediate substance between bone and horn, prepared from the tusk of the male elephant.

IVY. A parasitic or twining plant, that runs about trees, walls, &c. by means of roots and fibres from its branches.

J.

J, the tenth letter of the alphabet.

JACK (in Mechanics). An instrument in common use for raising very great weights of any kind.

JACK (among Mariners). The flag which is hung out in the bowsprit end.

JACK (in Natural History). A kind of pike that is very destructive in fishponds.

JACK, HUCK. An engine placed in chimneys, and turned by means of the



ascending smoke, which answers the purpose of the kitchen jack.

JACKAL. A beast of prey nearly allied



to the dog. It follows the lion and feeds on the remains of animals he has killed.

JACKDAW. A bird of the crow kind, having a white collar about its neck.

JACKS. Small bits of wood fixed in the keys of virginals, harpsichords, and spinets.

JACK-WITH-THE-LANTERN, or *Will-o'-the-Wisp*. Vulgar names for the ignis fatuus or *meteor*, which hovers in the night about marshy places, and seems to be mostly occasioned, by the extrication of phosphorus from rotten leaves, and other vegetable matters. It appears like a candle in a lantern, and has sometimes caused travellers to lose their way.

JACOBIN. A partisan of the French revolution.

JACOBITES. A name given to the adherents of James II. at and after the revolution in England.

JACOB'S STAFF. A mathematical instrument for taking heights and distances.

JACOBUS. A gold coin in the reign of James I. current at 2s. 2s. and 2s.

JACULATION OF MARRIAGE. In England, a suit in the ecclesiastical courts, when one of the parties boasts or gives out that he or she is married, which the other party denying, and no adequate proof of the marriage being brought, the offending party is enjoined silence on that head.

JADE. See *Nephrite*.

JAG (in Botany). A division of staff in a leaf.

JALAP. The root of a West Indian plant, of the *Scrophularius* tribe, of a black colour on the outside, and reddish within,

with *restio* resin. It was not known in England until after the discovery of America, and received its name from Xalapa, a town in New Spain. The principal medicinal parts of jinsap are the root and stem.

JAGUAR. An animal of the cat kind, resembling the panther; it is found in the northern part of South America, and in Mexico.



JAMB (among Carpenters). Any supporter on either side, as the posts of a door.

JAMB (among Miners). A thick bed of stone that obstructs the miners in their passing the veins of ores.

JANIZARIES. The grand sultan's guard, or the soldiers of the Turkish infantry, which have lately been abolished, and their places supplied by troops trained after the European manner.

JANUARY. The first month in the year, supposed to take its name from Janus, an ancient king of Italy.

JAPANING. The art of varnishing and painting figures on wood, metal, &c. as is practised by the inhabitants of Japan, &c.

JAPONICA. The Japan rose.

JAR. A measure of capacity, as a jar of oil, containing from 12 to 26 gallons.

JASMIN. See *JASMINE*.

JASPER. A precious stone of a green transparent colour, without veins. It is a sort of silicious earth, consisting mostly of silica, with a small portion of alumina, oxide of iron, magnesia, and potash.

JAVELIN. A sort of half pike or spear.

JAUNDICE. A disease proceeding from obstructions in the glands of the liver, which causes the bile to overflow, and turns the complexion yellow.

JAW. A bone of the mouth, in which the teeth are fixed.

JAWS. The two pieces in the socket of a gun between which the ball is fixed.

JERUSALEM. The proper name of the Mount High in the Hebrew.

JELLY. Any liquid, as the juice of

fruits, congealed into a translucent, soft substance; when long boiled it loses the property of gelatinizing, and becomes analogous to meringue.

JERBOA. A lively little animal shaped like the Opossum of the size of a rat, and found in Egypt, and the adjacent countries.

JAY. A bird with particoloured plumage, some varieties of which may be taught to speak. The blue jay of America is remarkable for its brilliant plumage.



JERUSALEM ARTICHOKE. A sort of sunflower, which resembles the artichoke in taste.

JESSAMINE, or JASMINE. A plant bearing fragrant flowers, which is commonly trained to the walls of houses.

JESUITS, or the Order of Jesus. A religious order founded by Ignatius Loyola in 1534, and abolished in 1773, on account of their intrigues, but partially restored since.

JESUITS BARK. The Cinchona or Peruvian Bark, so called because it was first used by the Jesuit missionaries in Peru.

JET (in Mineralogy). A deep black sort of bitumen.

JET D'EAU. The pipe of a fountain which throws up the water in the air.

JETSAM (in Law). Any thing thrown out of a ship which is in danger of a wreck.

JEU D'ESPRIT. A lively, peppy thought.

JEWEL. The name of the precious stones which are worn as ornaments.

JEWELLER. One who works or deals in jewels and all kinds of precious stones.

JEWEL OFFICE. In England, an office where the king's plate is fashioned, weighed, and delivered out by the warrant of the laid chamberlain.

JEWES. The descendants of the twelve tribes of Israel, who were so called after their return from the captivity of Babylon, from Judah, one of the sons of Jacob, whose office formed the most considerable part of those that remained at the captivity. Although the Jews have lost the distinction of their office, and are dispersed throughout

all nations, yet they remain a perfectly distinct people, and adhere to the religion of their forefathers. Their condition has been considerably ameliorated in all Christian countries where they now reside.

JEW'S-EAR. A kind of oushroom.

JEW'S-HARP. A musical instrument which is played between the teeth.

JEW'S-MALLOW. A plant whose leaves are produced alternately at the stalks. The flower expands in the form of a rose.

JIB. The foremost sail of a ship.

JOBBER. One who buys and sells cattle for another.

JOCKEY. A man who rides horses at races.

JOHN DOREE. A species of fish.

JOINER. A worker in wood, who fits together the several pieces which have been prepared for each other. He differs from the carpenter, inasmuch as he does the finer work, that requires more skill. The company of joiners in London, was incorporated in 1576.

JOINT (in Anatomy). The place where any bone is articulated, or joined with another.

JOINT (in Masonry). The separation between the stones, which is filled with mortar.

JOINT (in Joinery). The parts where two pieces of wood join.

JOINT (in Botany). The knot in the stalk of a plant.

JOINT (among Butchers). The flesh that is cut from the carcass of an animal.

JOINT STOCK (in Commerce). A stock or fund, formed by the union of several shares from different persons.

JOINT STOCK COMPANIES. Commercial associations, having a stock consisting of many shares: in such associations the shareholders gain or lose, according to the number of shares which they hold.

JOINTURE (in Law). A settlement of lands and tenements made over by the husband to the wife, to be enjoyed after his decease.

JOISTS. Timbers framed into the girders, or summers of a building.

JONQUIL. A plant of the Narcissus kind, the flowers of which are either single or double, and are much cultivated for their sweet scent.

JOURNAL. Any book in which is kept an account of what passes in the day.

JOURNAL (in Merchants' Accounts). A whereby every thing is posted out and in.

JOURNAL (among Publishers and

Booksellers). A periodical work, either daily, weekly, or monthly, &c.

JOURNAL (among Mariners). A book wherein is kept an account of the sailing way at sea.

JOURNEY (in Husbandry). A day's ploughing.

JOURNEY (in Coining). Money coined within a certain period.

JOURNEYMAN. One who works the day, the week, or the year, &c. another.

JUBILEE. Every fiftieth year, celebrated as a festival among the Jews, in commemoration of their deliverance

from Egypt. At this festival, which was solemnized by the Romans, were set free

JUBILEE (in the Romish Church). Solemnly instituted A. D. 1250, by Pope Boniface, to be observed every hundred year, or every twenty-fifth year, as enjoined by Pope Sixtus IV. For the forgiveness of several crimes in order to obtain pardons, remissions from sins, indulgences, &c. The jubilee lasts a year, and as it brings in great store of wealth to the popes, it has been called Golden Year.

JUDAISM. The rites, customs, doctrines of the Jews.

JUDGE (in Law). A chief magistrate appointed to administer justice in civil and criminal causes. In England he are commonly said to be twelve; namely, the Lord Chief Justice of the King's Bench; the Lord Chief Justice of the Common Pleas; the Lord Chief Justice of the Exchequer; the three Judges in inferior Judges of the two first courts; the twelve Barons of the latter court. The Chief Justices are installed or placed on the bench by the Lord Chancellor, and the other Judges by the Lord Chancellor and the Chief Justice.

JUDGE MARTIAL, or JUDGE AT GAVE, or ARBITRATOR GENERAL. The prime judge in courts martial.

JUDGMENT (in Law). The sentence of the court, pronounced by the judge on the matter in the cause, either in default, where the defendant pleads guilty; or of confession, when the defendant acknowledges the action; or upon a verdict, where the defendant pleads a hard case; or upon a consent or retractum, where the plaintiff withdraws or abandons prosecution. Judgments are either final, that is, given in the middle course on some intermediate point, or such as put an end to the action.

JUDICIAL (in Law). An

what appertains to a court, as judicial decisions, &c.

JUGLARES (in Ichthyology). An order of fishes in the Linnaean system, including those that have the ventral fin placed before the pectoral, as the roach, the whiting, the bass, &c.

JUGULAR VEINS. Veins, running from the head down the sides of the neck.

JULIAN PERIOD (in Chronology). A period of 7860 consecutive years, produced by the multiplication of the three cycles of the sun, moon, and indiction into one another. It was so called because it consists of Julian years.

JULIAN YEAR. A space of time consisting of 365 days and 6 hours, so called from Julius Cæsar, by whom it was established. The calendar, which contained an account of Julian time, was called the Julian Calendar; and the time when it was first instituted, usually, 46 a. c., the Julian Epoch.

JULY. The seventh month in the year, so called in honour of Julius Cæsar.

JUNIPER TREE. A sort of tree or shrub, having long, narrow, and prickly leaves, and bearing a soft poly berry. This shrub is common on heath and barren hills, but the berries which are used medicinally are brought from Germany. From the berries is made, in Holland, the gin called Holland gin.

JUNO (in the Heathen Mythology). The wife of Jupiter, whose emblem was the peacock.



JUNO (in Astronomy). One of the newly discovered planets.

JUNTA. A Spanish term for a meeting of men sitting in council.

JUPITER (in Astronomy). One of the largest of all the planets, being, according to some, upwards of two thousand times bigger than our earth. It is the most brilliant star after Venus, revolves on its own axis in 9 hours and 56 minutes, and performs its revolution round the sun in 4333 days 14 hours 39 minutes and 41 seconds.

JUPITER (in the Heathen Mythology). The son of Saturn and Ops, and chief of the gods, was the most honoured among men. His most usual attributes are the eagle, and thunder, and sometimes a figure of victory, and a spear, &c.



JURISDICTION. The power or authority exercised in any individual or court, of doing justice in the causes brought before them.

JURISPRUDENCE. Properly, a knowledge of the laws, or skill in interpreting and applying them; also the laws themselves, together with all that relates to their administration. English jurisprudence comprehends the common and statute law, together with such parts of the civil and canon law as have been admitted into their courts.

JURY (in Law). A certain number of persons sworn to inquire of, and to declare the truth upon the evidence offered to them relating to the matter of fact. Juries are of different kinds, as the grand jury, petty jury, special jury, common jury, coroner's jury, &c. The grand jury, consisting of twenty-four persons, is chosen to consider all bills of indictment preferred to the court, which they return as true, by writing upon them, 'hinc verum, true bill, or throw out by indicating the word 'ignoramus.' The petty jury, consisting of twelve men, is chosen to try all causes civil and criminal; in the latter cases they give a verdict of guilty, or Not Guilty; in civil causes, they bring a verdict either for the plaintiff or the defendant; and in real actions, either for the demandant or tenant. A jury is called special, when it is returned for a particular cause, and common when it is returned by the sheriff in the same panel, to try every cause at the same court.

JURYMAN. One who is sworn on a jury.

JURY-MAST. A great yard used in the place of the foremast or mainmast, when it is broken down by a storm.

JURTYCE (in Law). In England, a

person deputed by the king to administer justice to his subjects. Justices are distinguished into Justices of the King's Bench, and Common Pleas, Justices of Assize, Justices of the Forest, Justices of Gaud Delivery, &c.

JUSTICES OF THE PEACE. Persons of interest and credit appointed by commission, to maintain the peace within certain limits.

JUSTIFICATION (in Law). The showing good reason in a court, why one has

done the thing for which he is called to answer.

JUSTICIARY, or COURT OF JUVENICE, in Scotland. A court of supreme jurisdiction in all criminal cases.

JUSTS. Exercises in former times, the display of martial prowess at great solemnities, as the marriages of princes, &c.

JUXTAPosition (with Philosophers) The state of being placed in contiguity near to each other.

K.

K, the eleventh letter in the alphabet, stand as a numeral for 250, with a stroke over it thus, \bar{K} , for 250,000; as an abbreviation, it stands for Knight, as K. G. Knight of the Garter, K. B. Knight of the Bath.

KALE. A hardy kind of winter cabbage, with a curled leaf.

KALEIDOSCOPE. An optical instrument for exhibiting a diversity of beautiful figures, invented by Dr. Brewster. It is chiefly used by calico-printers, posters, and carpet manufacturers, who are thus supplied with an immense variety of patterns.

KALI (called in Botany *Salsola Kali*). A sort of marine plant, from which the alkali of commerce is prepared by burning

ing, and when at its highest pitch, cause suffocation and sudden death. To prevent this, it is necessary to stop nose and mouth with handkerchiefs.

KAN. A magistrate in Persia, answering to a governor in Europe.

KANGUROO. An animal in New Zealand, which, when full grown, is as large as a sheep. It leaps and eats like a squirrel. It is furnished, like the opossum, with a pouch in the abdomen, which is a receptacle for its young during the time of breeding, and is resorted to after the birth for the sake of warmth and protection. It is said to leap thirty yards at a single bound.



KALMUCS. A nation of Tartars inhabiting parts of Russia in Asia.

KAMSIN. A hot and dry southerly wind, common in Egypt and the deserts of Africa, which prevails more or less for fifty days. On the approach of this wind the sky becomes dark and heavy, the air gray and thick, and filled with a dust so visible that it penetrates everywhere. It is not remarkably hot at first, but increases in heat the longer it continues, so that which time it causes a difficulty of breath-



KAOLIN. A sort of earth which is used as one of the two ingredients in porcelain.

KECKLING (among Mariners). Wrapping or twining small ropes about a cable-rope, to preserve them from getting chafed.

KEDGER. A small anchor.

KEDGING (among Mariners). To pull up the main, and letting a ship drive to the tide, when the wind is contrary to the side.

KEEL. The lowest piece of timber in a ship, running her whole length. It is thicker at the bow, and tapers to a second keel, or false keel, at the stern.

to be derived. In fact, he maintains that competent knowledge of the Hebrew, or any other of the oriental languages, will enable a person to understand very much of the Ethiopic, there being several Hebrew roots and significations of Hebrew words in this language which are not to be found in any other.

As the Phœnicians, the descendants of the Cassanites, inhabited the maritime parts of the land of Canaan it is not surprising that their language should be supposed to have been nearly the same as the Hebrew. Some vestiges of this affinity are to be found in the proper names of the Carthaginians, their descendants, who spoke a dialect of the Phœnician called the Punic language: this latter language is also said to have had a tincture of the Chaldee and Syriac, which may be easily accounted for by the intercourse which these two trading nations held with all other people. A writer in modern times has also shown that the Maltese contains

a number of Punic words, from which it is justly inferred that Malta was once in the possession of the Carthaginians.

The Fœnians, as it is now handed down to us, is considerably posterior to the Arabic, to which it is nearly allied both in its primitive letters and whole construction, but it has been shown by writers that the Parthians or Persians were Scythians who mingled with the Eleans or original inhabitants of Persia, and gave to the Persian language that Celtic tincture which brings it nearer in accordance with the northern language of Europe. In the language of India and Armenia there are strong marks of resemblance to the Persian; but as to the Chinese it was probably one of the earliest tongues formed after the flood, as it bears few or no marks of affinity to any but the Hebrew.

In proof of what has been advanced on the oriental languages the following alphabets are given:—

HEBREW AND CHALDEE.	SYRIAC.	COPTIC.	ETHIOPIC.	ARABIC.	ARMENIAN.	
Alph	Alph	Alpha Phi	Alf	Alif	All	Ue
Beth	Beth	Beta or Chd	Bet	Be	Bien	Tache
Gimel	Gemal	Beta Y	Gimel	Gejn	Gim	Pa
Dialath	Dolath	Gamma	Daat	Dal	Da	Deche
He	He	Delta	Hast	He	He	Rea
Vav	Vav	E	Waw	Waw	Wa	Se
Zain	Zain	Eta	Zal	Zay	Z	Wiew
Cheth	Cheth	Zeta	Hikarn	Hikarn	Hik	Tolm
Teth	Teth	Heta	Teth	Teth	Teth	He
Jed	Yod	Theta	Jamou	Je	Je	Tone
Chaph	Caf	Iota	Caf	Caf	Caf	Hion
Lamed	Lamad	Kappa	Lowl	Lowl	Lowl	Pitar
Mem	Min	Lambda	Mai	Mai	Mai	Khe
Nun	Nun	Mi	Nahas	Nas	Nas	Pe
Samech	Samereth	Ni	Sast	Saf	Saf	Q
Gemin	Gi	O	Ala	Ala	Ala	
Ph	Pe	Xi	Tafal	Tafal	Tafal	
Thell	Thel	I	Kof	Kaf	Kaf	
Eph	Ef	K	Rem	Re	Re	
Resh	Rish	Re	Sent	Sin	Sin	
Schib	Shin	Sin	Tawi	Taw	Taw	
Thau	Taw	Coptic				

As the abovementioned languages were spoken by the most ancient people, it is not surprising to find that they retained in many marks of their origin, but it is worthy of observation that those languages which sprung out of them underwent greater changes in their external form, so as to give them an air of originality which does not in reality belong to them. Thus it is that the Greek, from the inventive genius of the people, acquired a peculiar structure and a richness of expression which made it pass for a primitive tongue, when in truth it is as much a derivative language as those which have since been formed. That it was indebted to the Egyptian for the names of its letters will be obvious to any one who should compare the Greek alphabet with the Coptic,

given above; and antiquarians have made it clear that the roots of the Greek are to be traced either to the Egyptian, the Phœnician, or the Pelasgian, which was spoken by the Pelasgi, a Celtic people, who first took possession of Greece, or the Isles of Eubœa as it is called in Scripture. It has also been clearly shown that this Pelasgian had a common original with the Irish and Welsh, the primitive languages of Ireland and Britain, which were peopled by two kindred tribes, the descendants of Magog and Gomer, the sons of Japhet, who at a very early period proceeded from Scythia to Europe, and laid the foundation of all the modern European languages. Those people which inhabited the countries of Europe, (Alps, Greece, were afterwards called by the Greeks

German	Dutch	Swedish	Danish	French	English	Polish	Spanish	Portuguese
4. Sechs	Zes	Ses	Sex	Six	Six	Six	Sesex	Seis
7. Sieben	Zeven	Sju	Syv	Seven	Seven	Siedem	Siete	Seis
8. Acht	Acht	Akta	Ott	Eight	Eight	Osm	Ocho	Ocho
9. Neun	Negen	Nio	Nio	Nine	Nine	Dziwios	Nove	Nove
10. Zehn	Tien	Tio	Tio	Ten	Ten	Dziesiac	Dez	Dez

LANNER. A sort of hawk, formerly much esteemed in falconry. It is next to the bozzard in size.

LANTERN FLY. A remarkable insect of South America, that emits an extraordinary light from the hollow of its head.

LANYARDS (among Mariners). Short pieces of rope fastened to several parts of a ship.

LAPIDARY (in Commerce). One who polishes and engraves stones.

LAPIS INFERNALIS. A sort of caustic composition.

LAPIS LAZULI (in Painting). A stone of an azure or blue colour, of which the paint called ultramarine is made. It is a super ore, very compact and hard, and is found in lumps of a beautiful blue colour, richly variegated with clouds of white and veins of shining gold colour.

LAPSE (in Law). An omission on the part of the patron to present to a benefice within six months after it is vacant, upon which default the ordinary has a right to collate to the said benefice.

LAPSED LEGACY. Fallen or lost by a lapse, as where the legatee dies before the testator, &c.

LAPWING. See **PERWIT**.

LARBOARD. A sea term for the left hand side of a ship, when looking towards the stem or head.

LARCENY. The felonious and fraudulent taking away the personal goods of another, which in England, is petty larceny if the thing be of the value of twelve pence or under, and grand larceny if above that value.

LARCH. A lofty tree of the pine kind, bearing leaves like those of the pine, and a sort of mushroom for the fruit. The gum of this tree is called Venice turpentine. The leaves fall off in winter. The timber, which is remarkably durable, is used in building ships.

LARDER. The room where meat is kept and salted.

LARES. The domestic or household gods among the Romans, placed in some private part of the house, which the family honoured as their protectors.

LARGE (in Music). The greatest measure of musical quantities; our large containing two longs.

LARGE. A sea phrase for the wind, when it crosses the line of a ship's course in a favourable direction.

LARGEES (in Husbandry). A girl to the labourers in the harvest season.

LARGO (in Music). A slow movement.

LARK. A well known singing bird, the most remarkable species of which is the skylark, that sings so beautifully as it is soaring in the air. This bird is not found in America. Our meadow lark bears some resemblance to it, but is nearly twice as large.

LARKSPUR. A plant cultivated in gardens, the flower of which consists of many dissimilar petals or leaves, some of which end in a tail or spur.

LARVA. The grub or caterpillar state of some insects so called by Linnaeus, but by others the cruce or caterpillar.

LARUM. A sort of clock that makes a noise or alarm at a certain hour.

LARYNX (in Anatomy). The top of the windpipe, below the root of the tongue.

LASSO. A rope with a noose, used in South America for catching wild cattle.



LAST. A measure of weight, as a last of iron, &c. equal to ten quarters, and a last of cod fish, &c. equal to four twelve to twenty-four barrels.

LATH (in Carpentry). A long, thin, piece of wood, nailed to the rafters of a wall or roof to receive the plaster or covering. Laths are distinguished according to the wood of which they are made, into hearts of oak, sap laths, and dent laths.

LATHE (in Turnery). The engine used in turning wood, &c.

LATIN. The language spoken by the ancient Romans, or the inhabitants of Latium, from which it derives its name.

LATITAT (in England). A verb used

in personal actions, where the party is to be arrested in any other county than Middlesex.

LATITUDE (in Geography). The distance of a place from the equator, which is either northern or southern, according as the place is north or south. The latitude cannot exceed 90 degrees, the distance of the equator from the north or south pole.

LATTEN. Iron plates tinned over, of which tea canisters are made.

LAVA. The mineral substance which flows from Mount Etna, Vesuvius, and other volcanoes, is of a grayish colour, light, moderately hard, and brittle, and easily frangible: it generally attracts the magnetic needle, and is easily fusible into compact glass.

LAUDANUM. A specific tincture, containing the finer and purer parts of opium, drawn in water and spirits of wine, and then reduced to its due consistence.

LAVENDER. A plant with a shrubby stem, much branched with numerous hoary leaves. The flowers are produced in terminating spikes from the young shoots on long peduncles. The leaves, stalk, and flower yield a fragrant perfume, and from the latter are prepared an essential oil, a simple spirit, and a compound tincture.

LAUNCE-FISH, or **KISS LAUNCE**. A sea fish which buries itself on the recess of the tide a foot deep in the sand. It is generally used for baits.

LAUNCH. A particular kind of boat, used in undermining the cables of different ships, that are fastened across each other.

LAUNCHING. Putting a ship out of dock, and conveying her into the water.

LAUNDRESS. One whose business it is to wash and get up linen.

LAUREATE, or **POET LAUREATE** (in England). A title given to the king's poet.

LAUREL. An evergreen tree, having broad, thick, shining leaves. The flower consists of five petals or leaves, which expand in the form of a rose.

LAURISTINUS. The wild bay tree.

LAW. In its most extensive sense, the rule of conduct prescribed by the supreme power of a state. The laws of England comprehend the Common Law and the Statute Law, together with certain portions of the Civil Law and the Canon Law.

LAWN. A plain or level space covered with grass, in a pleasure ground.

LAY (in Ecclesiastical Law). An officer for whatever belongs to the people at large, in distinction from those who are in holy orders.

LAY (with Festa). A kind of ancient poetry, consisting of stanzas or verses.

LAY (in Husbandry). Ground that lies fallow or untilled.

LAY BROTHERS. In the Romish church, such as performed the secular and servile offices in a convent.

LAY CORPORATION (in England). A lay investiture of bishops, &c.

LAYER (in Horticulture). A young sprout bent down and covered with mould for raising fresh plants.

LAYER (among Fishermen). A sharpnet or bed in a creek, where small oysters are thrown for breeding.

LAY FEE (in England). Lands held in fee of a lay lord, as distinguished from those lands which belong to the church.

LAY IMPROPRIATION (in England). The impropriating or employing the revenues of the church to the use of a layman.

LAYMAN (in Ecclesiastical Law). One who has not taken holy orders.

LAYMAN (in Painting). A statue of wood, whose joints are so made that it may be put into any posture.

LAZARETTO. An hospital for leprosy or leprosy persons.

LAZULI. See **LAPIS**.

LAZULITE. A mineral of the silicious order, of which lapis lazuli is the principal species. Its principal constituents are silica, alumina, carbonate of lime, sulphate of lime, oxide of iron, &c.

LEACH (among Miners). A term signifying lead work.

LEAD (in Mineralogy). A bluish white metal, very soft and flexible, and easily beaten into thin plates by the hammer. In a strong heat it boils and emits fumes, and if during that time it is exposed to the air, its oxidation proceeds very rapidly. It is very brittle at the time of congelation. Most of the acids attack lead, but it unites with most of the metals, particularly tin, which in union with lead forms the solder used by plumbers. The carbonate of lead, which is a powder, is better known by the name of white lead; the red oxide of lead is otherwise called red lead.

LEAD, or **SOURWOOD LEAD**. A sediment for an instrument which is used to discover the depth of water at sea.

LEAF (in Botany). A membranaceous and sometimes succulent part of a plant, which arises from the stem. Leaves appear to assist the process of vegetation by communicating the air to the whole of the plant, which on that account is found to be exceedingly tender of its leaves, and to suffer much from any rough treatment which they may receive.

LEAF. A term applied to other objects resembling a leaf in shape or make, as the leaf of a book; also leaf gold or silver, gold or silver beaten into plates of exceeding thinness.

LEAGUE (in Geography). A measure of length, containing a certain number of geographical paces, according to the usage or computation of different countries. A league at sea, where it is mostly used by us, is equal to three miles, or three thousand geometrical paces: the league in France contains three thousand five hundred paces. The Dutch or German league four geographical miles. Seventeen Spanish leagues are equal to a degree, or sixty-two and a half statute miles.

LEAGUE (in Politics). A treaty of alliance between different states or parties.

LEAK. Any hole or chink in a vessel which admits the water, particularly applied to a ship at sea.

LEAKAGE (in Commerce). An allowance made to merchants for the leaking or running of vessels.

LEAF (in Commerce). A measure equal to half a bushel.

LEAF YEAR (in Chronology). Any year in which a day is added more than ordinary.

LEASE (in Law). A conveyance of lands, generally in consideration of rent or other annual recompense, for term of years, for life, or at will, provided it be for a shorter term than the lessor has in the premises.

LEASH (among Sportsmen). The number of three applied to partridges or other game which are killed.

LEASING. The same as gleaning, or picking up the ears of corn after the field is cleared.

LEATHER. The skin or hide of a beast tanned and dressed.

LEATHER-DRESSER. One who dresses leather.

LEATHER-SELLER. One who deals in leather. The company of leather-sellers in London, was incorporated in 1389.

LEAVEN. A piece of sour dough put to ferment a mass of bread.

LECTURER (in Ecclesiastical Law). In England, a minister who preaches in the afternoon, and is usually paid by the people.

LEDGE (in Geography). A long ridge of rocks near the surface of the sea.

LEDGER. The chief book used in merchants accounts, wherein every man's particular account is kept; and also all the goods bought and sold are distinctly placed on by themselves, as debtor on the left

hand page, and creditor on the right hand.

LEE. A sea term for that part which the wind blows upon, or that is opposite to the wind, as the lee shore.

LEECH. A well known insect that lives in the water, and is commonly used in bleeding. The two principal species are the medicinal leech, which is employed to draw blood where the lancet is less safe; and the horse leech, which is larger, and applied to horses for the same purpose.

LEECHES. A sea term for the edges of a sail.

LEEK. A potherb having long cylindrical and coated roots. It has something of the flavour of the onion.

LEES. The dregs of wine.

LEET. In England, a little court within a manor, having a criminal jurisdiction.

LEG (in Anatomy). A limb, and that part of the animal body which serves for walking.

LEG (among Artificers). Whatever serves for the support of a thing, as the leg of a stool, &c.

LEG (in Mathematics). The two sides of a triangle are called the legs.

LEG. A sea term for ropes put through the bolt ropes of the main and foresail.

LEGACY (in Law). A bequest or gift by testament of any personal effects; the person bequeathing is called the testator, and he to whom it is bequeathed the legatee.

LEGATE. A cardinal or bishop sent by the pope as his ambassador to sovereign princes.

LEGEND. A book used in the ancient Roman churches, containing the lessons that were to be read; also a chronicle or register of the lives of saints.

LEGEND (among Antiquarians). The inscription on the edge of a medal or coin.

LEGERDEMAIN, or SLIGHT OF HAND. Tricks which, from the dexterity of the performer, are made to deceive the observer.

LEGION (in the Roman army). A body of 6000 foot and 300 horse, or less.

LEGUMEN. All manner of pulses.

LEGUMEN (in Botany). That species of seed vessel vulgarly termed a pod, as the seed vessel of the pea, vetch, lupine, &c.

LEMMA. A proposition in Mathematics, which serves to prepare the way for the demonstration of some theorem.

LEMMING. A species of animals of the rat kind; the Lapland lemming migrates

alphabet. Letters are composed of vowels and consonants, and form words.

LETTER (in Printing). The type or character which is used in composing.

LETTER (in Commerce). Any writing sent from one person to another.

LETTER OF ADVICE. A letter written by a merchant to his correspondent, advising or giving him notice of what bills he has drawn upon him.

LETTER OF ATTORNEY (in Law). A writing whereby a person constitutes another to do a lawful act in his stead, as to receive debts, &c.

LETTER OF CREDIT (among Merchants). A writing by one merchant to another, desiring him to credit the bearer with a certain sum of money.

LETTER OF MARQUE. An extraordinary commission, granted under the king's seal, to merchants or others in the time of war, to make reprisals on the enemy.

LETTUCE. A garden herb much used as a salad.

LEUCITE. A stone of the garnet kind.

LEVEL. An instrument used to make a line parallel to the horizon. The plumb level is that which shows the horizontal line by means of another line perpendicular to that described by a plummet or plumbline, which instrument consists of two legs or branches, joined together at right angles, whereof that which carries the thread and plummet is about a foot and a half long, the thread is hung towards the top of the branch. A telescope is placed on the horizontal branch of the instrument, having a hair placed horizontally across the focus of the object glass, which determines the point of the level. The telescope is fastened by a ball and socket.



LEVELER is England, a company of the nobility, gentry, &c. who assemble in parliaments to receive the king. It consists of seven peers, by which it is directed.

guided from a drawing room, where ladies as well as gentlemen attend. The term is also applied to the evening assemblage at the president's house in Washington.

LEVELLING. The act of finding a line parallel to the horizon at sun or moon stations, in order to determine the height of one place in respect to another. The subjoined figure shows the manner of finding the difference of the level of a place, where there is a level line and two signs level with each other, whereby the perpendicular distance between the surface of the ground and any point in the level line may be discovered. The art of leveling is particularly applied to the laying out grounds even, regulating descents, draining morasses, conducting water, &c.



LEVELLING (in Fortification). The reducing an uneven surface to that of a plane, so that the works may be of a corresponding height and figure.

LEVER. One of the six powers, which may consist of any instrument, as a straight bar of iron or wood, as A B, supported upon a fulcrum or prop, C, having a weight, W, at one end, a power, P, at the other. Thus A C and B C are the arms of the lever. Of this kind are balances, scales, pincers, &c.



LEVERET. A young hare.

LEVIGATION. The mechanical process of grinding the parts of bodies to a fine paste, by rubbing the flat face of a stone called a muller, upon another stone called the table or slab.

LEVITE. One of the tribe of Levi, or belonging to the priestly office.

LEXICOGRAPHY. The art of writing dictionaries.

LEYDEN PHIAL, or **LEYDEN JAR**

LIGATURE (in Surgery). The disposing of bandages for closing wounds.

LIGATURE (among Printers). Type consisting of two letters in one piece, as ff, &c.

LIGHT (in Optics). The sensation which arises from beholding any object, or the cause of that sensation. The nature and properties of light, and the changes which it undergoes in passing through bodies, form a principal part of the science of optics.

LIGHT (in Painting). That part of a piece which is illuminated.

LIGHT (in Architecture). Lights are the apertures in a house.

LIGHT (in Military Affairs). An epithet for soldiers lightly armed, as lighthorse, or lightinfantry.

LIGHTER. A large vessel for carrying goods.

LIGHTERAGE. Money paid for the carrying goods in a lighter.

LIGHTERMAN. One who conducts a lighter.

LIGHTHOUSE. A tower or lofty building on the sea-coast, having a light in it, for the guidance of mariners at night. It is mostly erected upon a cape or promontory, or upon some rock in the sea, and is furnished with several lamps, for the purpose of giving a great light that may be seen at a distance, and prevent the mariners from running ashore or steering a wrong course.

LIGHTNING. A flash of light issuing from the clouds, that accompanies thunder. It is properly an electrical explosion, which sometimes bursts upon houses, trees, or other objects, and does much mischief.

LIGNUM VITÆ. A hard wood, the produce of a West India tree.

LILAC. A tree of the syriac tribe, which bears a pretty flower early in the spring.

LILY. A plant with a bulbous and perennial root, the flower of which is six petalled and campanulate.

LIMB. A jointed or articulated part of an animal body.

LIMB (in Astronomy). The utmost edge or border of the body of the sun or moon.

LIMB (in Mathematics). The utmost edge or border of an instrument.

LIME. A fruit like a lemon, the juice of which is a strong acid.

LIME (in Mineralogy). An earthy substance, which is found purest in limestone, white, and chalk, and is prepared by burning it in a white heat. It is of a white

colour, and easily reduced to a powder. If water be poured on newly burnt it swells and falls in a powder, in a state it is called slacked lime.

LIME (in Botany). A tree of the oak kind, that grows in warm climates.



LIME KILNS. Furnaces in which limestone is converted into lime by burning.

LIMESTONE. The native carbonaceous lime, which is generally rather brittle from the presence of iron.

LIMIT (in Mathematics). A constant quantity, to which a variable continually approaches.

LIMITATION (in Law). A certain action prescribed by statute, within which action must be brought.

LIMING. The art of painting in water colours.

LINCHPIN, or LINSPIN. An iron that keeps the wheel on the axle-tree.

LINE (in Geometry). A quantity extended in length only. Lines are also called curves or right lines.

LINE (in Fortification). Whatever is drawn on the ground of the field, as trench, or a row of gabions, &c.

LINE (in Military Affairs). Regal troops, in distinction from the militia volunteers, &c.

LINE, or a SHIP OF THE LINE (in Navy Affairs). Is any vessel of war large enough to be drawn up to the gun of another.

LINE (in Geography). Another name for the equator, or equinoctial line.

LINE OF BATTLE. The disposition of an army for battle.

LINEN. A kind of cloth made of flax.

LING. A sort of sea fish.

LINNEAN SYSTEM. A system of natural history, so called from LINNÆUS, the Swedish naturalist. It comprehends a sensible arrangement of all natural objects, as animals, plants, and minerals, into three kingdoms, subdivided into classes, orders, genera, and varieties, &c.

LIVRE. A money of account formerly used in France, equal to twenty sous, or ten pence sterling.

LIXIVIUM. A lye made of ashes.

LOZARD. An attentive tribe of animals, classed by Linnæus under the genus lacerta, comprehending the crocodile, lizard, chameleon, and salamander. The lizard, properly so called, is a little reptile of a green colour, and is frequently to be met with in gardens or under dung-hills, &c.



LLAMA (in Natural History). An animal of the camel kind in Peru and Chili, which has a bunch on the breast, long, soft hair, and defends itself by ejecting its saliva.



LL. D. L. s. Legum Doctor, or Doctor of the Civil and Canon Laws.

LOAD (in Commerce). A certain quantity of hay or timber, about 2000 lbs. of hay, and of timber fifty feet.

LOAD (among Miners). A vein of ore, the leading vein of a mine.

LOAD (in Husbandry). A trench to drain fens.

LOADING A GUN. Charging a gun.

LOADSMAN. The pilot.

LOADSTONE. A sort of ore dug out of iron mines, on which the needle of the mariner's compass is touched, to give it a direction north or south. It is a peculiarly rich ore of iron, found in large masses in England, and most other places where there are mines of that metal. It is of a grey, and when fresh broken, it glistens with a brownish or reddish

A lump of bread of a certain weight by the baker into a per-

fectur form, of quarters or half quarters; about eighty quarters are made from a sack of flour.

LOAF (among Sugar-bakers). A lump of sugar of a conical form.

LOAM, or LOMM. A prolific kind of fat,unctuous, and senseless earth, that is used much by gardeners in making compost.

LOAN. In general, any thing entrusted to another to be returned again; particularly money.

LOAN (in Political Economy). Sums of money borrowed from individuals or public bodies for the service of the state. This practice of borrowing money to defray the extraordinary expenses in time of war which has been adopted by Great Britain during several of her late wars, has given rise to the national debt. All loans on the part of government in England, are contracted for by the Chancellor of the Exchequer, and afterwards confirmed by parliament. Loans used formerly to be granted by public bodies to the king in consideration of certain privileges that were secured to them, but now money is commonly advanced by individuals, in consideration of receiving interest.

LOBBY (in Architecture). A kind of passage, room, or gallery, as the lobby in a theatre.

LOBBY (in Naval Architecture). A small room near the bread-room in a vessel of war, appropriated to the use of the surgeon.

LOBE (in Anatomy). A division in any body, as the lungs or liver.

LOBE (in Botany). A division in seeds, such as beans, peas, &c.

LOBSTER. A small crustaceous fish, having a cylindrical body, with a long tail and long anten. Lobsters are found on most of the rocky coasts of England, and are abundant in this country.



LOCAL (in Law). Tied or joined to a place; thus real actions are local, because they must be brought in the country where the lands, &c. lie.

LOCAL COLOURS (in Painting). Such as are natural and proper for each particular subject in a picture.

geometrical progression with which those indices correspond, then, 2 and 3 added together are equal to 5, and the numbers 4 and 2 corresponding with those indices being multiplied together are equal to 20, which is the number answering to the index 5. So if any index be subtracted from another, the difference will be the index of that number, which is equal to the quotient of the two terms to which those indices belong. Thus the index 6-4=2, then 16 divided by 16, the terms corresponding to those two indices leaves the quotient 4, which answers to the index 2. Logarithms being the exponents of ratios are so that account called indices, thus the logarithm 2 is the exponent or index of the several numbers in the geometrical series over which it stands, as 2^1 , or the square of 2 equal to 4 is the first series, 2^2 or square of 2, that is 8, in the second series, and 10^3 or the square of 10, that is 100, in the third series; so likewise 3 is the index or exponent for the cube numbers 8, 27, 1000, &c. over which it stands.

LOG-BOARD. A table on which an account of the ship's way is marked.

LOG-BOOK. The book in which the account of the log is transcribed.

LOGIC. The art which teaches the right use of reason, and treats of the several operations of the mind which are employed in argumentation or reasoning.

LOG LINE. The line fastened to the log, which is divided into certain spaces fifty feet in length, by knots or pieces of knotted twine, unreeled between the strands of the line, which show, by means of a half-minute glass, how many of these spaces or knots are run out in half a minute, and as the distance of the knots bears the same proportion to a mile that half a minute does to an hour, whatever number of knots the ship runs in half a minute, the same number of miles she runs in an hour.

LOGOGRAPHY. A method of printing in which the types form whole words instead of letters. By this method the memory of the compositor is less hurried, and the lines more proceeds with more expedition and less liability to err. It is also said that the logographic method is not more expensive than the common method.

LOGWOOD. A sort of wood used by dyers, called also Campeche wood, because it was originally brought from Campeche, in New Spain. Logwood is very hard and firm in its texture, exceedingly so as to sink into water, of a deep red, and admits of a fine polish.

LOGS

It yields its colour both to spirits and watery menstrua, but alcohol extracts it more readily than water. Acids turn its dye to a yellow, alkalies destroy its colour, and give it a purple or violet hue.

LOMENTACEÆ (in Botany). The name of the thirty-third natural order in Linnaeus's Frugiformis, consisting of plants many of which furnish beautiful dyes, and the pericarpium of which is always a pod containing seeds that are farinaceous, or mealy, like those of the lupine, or the cassia, the wild senna, logwood, mimosa, or the sensitive plant, &c.

LONDON PRIDE. A plant bearing a small flower.

LONG (in Music). A note equal to two breves.

LONG BOAT (among Mariners). The strongest and longest boat belonging to a vessel of war.

LONG BOW. An ancient bow that was once much used.

LONGIMETRY. The measuring of lengths or distances, both accessible and inaccessible.

LONGITUDE (in Astronomy). An arc of the ecliptic intercepted betwixt the beginning of Aries and the point of the ecliptic cut by the circle of longitude belonging to any star.

LONGITUDE (in Geography). The extent of the earth from east to west.

LONGITUDE OF A PLACE. An arc of the equator intercepted betwixt some given point called the first meridian and the meridian passing through the proposed place. This may be either east or west, according as it is reckoned on the east or west side of the first meridian.

LOOP. A sea term for the after part of a ship's bow.

LOOKING-GLASS. A plain glass mirror, which being impervious to the light, reflects the images of things placed before it.

LOOM (among Weavers). A frame in which the process of weaving is performed.

LOOM. A sea term for a ship which when seen at distance, appears big.

LOOP (in Gunnery). A small iron ring in the barrel of a gun.

LOOP (in the Iron Works). A part of melted off from the joint.

LOOP. A sea term for the mizen in a ship.

LOPHOLEN (among Machinery Makers for fixing sockets through a ship).

LOPHOLEN (in Paper-makers). A hole in the wall of a machine for cutting.

every five years) whence that year was called a *lustrum*.

LUSTRE (in Mineralogy). One character of mineral bodies, which in that respect are distinguished into splendid, shining, glistening, glimmering, and dull.

LUTE. A stringed instrument, containing at first only five rows of strings, to which were afterwards added six more. It was formerly much used.

LUTE (in Chemistry). A compound paste made of potter's clay, sand, and other materials, for the purpose of closing up the necks of retorts, receivers, &c. in different chymical experiments.

LUTHERANISM. The doctrines of Martin Luther, the German reformer, which form the creed of all the protestants in Germany who are not Calvinists.

LYCOPEDIUM, or *Clea Moss*. A sort of moss, the seeds of which when ignited burn off like a flash of lightning. It is used in the London theatres.

LYDIAN STONE. A stone of a grayish black colour, which is found in Bohemia and other parts of Germany, and also in Scotland. When polished, it is used as a test stone for determining the purity of gold and silver. It was used for that purpose among the ancients, by whom it received this name, because it was found only in the Tmolus, a river of Lydia.

LYE. A composition of ashes suited for washing or scouring.

LYMPH (in Anatomy). A clear humour, secreted from the blood, is carried by the lymphatic vessels to the thoracic duct, where it mixes with chyle.

LYMPHATICS. The lymphatic vessels.

LYNX. A wild beast, of a tawny colour, with black spots, and very sighted, which in its habits resembles wild cat.



LYRA. The lyre, a constellation in the northern hemisphere.

LYRE. A musical stringed instrument much used by the ancients.

LYRIC. Pertaining to the lyre, or verse, poetry made for or set to the lyre.

M.

M, the thirteenth letter of the alphabet, which as a numeral stands for mille, a thousand, and with a stroke over it, thus M̄, it stood for 1,000,000. As an abbreviation M. A. stands for Master of Arts, M. D. Doctor of Medicine, D. Mus. Doctor of Music, MS. Manuscript, MSc. Manuscript.

MADAMIZING. A method of making roads, introduced by Mr. Mac Adam, which consists in breaking the stones so small that they may bind with the earth into a solid smooth mass.

MACARONIC POEM. A sort of burlesque poetry.

MACAROON. A sweetmeat made of almonds.

MACCAW. A kind of parrot.

MACE (in Botany). A sort of spice, the second coat of the kernel of the nutmeg, a thin membranaceous substance, of an aromatic nature, a yellow colour, and a very fragrant aromatic perfume, and is not used and obnoxious taste. (in Hulse's Dispensary). In England,

an ornamented staff, borne as an ensign of honour before a magistrate.

MACERATION (in Pharmacy). Infusion of ingredients in any liquid in order to soften them.

MACHINE. An engine composed of several parts, put together by mechanical art and contrivance, for the purpose of raising bodies, assisting, regulating, stopping their motions, &c. Simple machines comprehend the six mechanical powers. Compound machines are composed of the simple. Machines are also distinguished according to the use for which they are used into architectural machine, electrical machine, hydraulic machine, &c.

MACHINE INFERNAL. A machine used in modern warfare, for the purpose of blowing up bridges, &c.

MACKEREL. A well known fish, which the shores of the ocean in the next season in vast shoals.

MACKEREL-GALE. A strong fish, which is very voracious for mackerel.

native of Florida, and bears a beautiful milkwhite flower.

MAGPIE. A cunning, variegated bird common in Europe and found in the western regions of the United States.

MAHOGANY (in Botany). A beautiful wood, belonging to a tree that grows in America and the West Indies, known by the botanical name of the *swietenia mahogani*, or the mahogany tree.

MAHOMETANS. Believers in the doctrines and divine mission of the impostor Mahomet.

MAIDEN-HAIR. A plant, native of the south of France.

MAJESTY. A title given commonly to kings. It was first used in England in the reign of Henry VIII. instead of highness.

MAIHEM, or MAYHEM. A corporal wound or hurt, by which a man loses the use of any member. It originally applied to such corporal injuries as rendered a man less fit for war.

MAIL, or Mail Bag. A leathern bag for the conveyance of letters.

MAIL-COACH. A coach of a particular construction for expeditious travelling, several of which are employed by government for the conveyance of letters to all parts of England. Mail coaches were first brought into use in 1784. In the United States the coaches belong to proprietors with whom the government contracts to carry the mail.

MAINPRIZE (in Law). Receiving a person into friendly custody who might otherwise be committed to prison, on security given for his forthcoming on a day appointed; a sort of bail.

MAINTENANCE (in Law). The wrongful upholding another in a cause.

MAJOR (in Military Affairs). An officer above a captain.

MAJOR-GENERAL. He who receives the general's order.

MAJOR OF A BRIGADE. The officer who receives the orders from the major-general.

MAJOR OF A REGIMENT. The officer next the lieutenant-colonel.

MAJOR, Town. The third officer of a garrison.

MALACHITE. A mineral, the green carbonate of copper, found frequently crystallized in long slender needles. It consists of copper, carbonic acid, oxygen, and water.

MALACOLITE. A mineral found in the silver mines in Sweden, and also in Norway, consisting of silica, lime, magnesia, lunaria, oxide of iron, &c.

MAIZE, or INDIAN CORN. A well known plant, once peculiar to America, but now extensively cultivated, in France, Germany, Italy, and parts of Africa and Asia. It is one of the most important of all bread stuffs, in the United States.



MALADMINISTRATION. Bad management of public affairs, or a misdeemeanour in public employments.

MALAPROPOS. Unseasonably, or at an improper time.

MALATES. Salts formed by the union of the malic acid with different bases. The malates of potash, soda, and ammonia are deliquescent.

MALE. One of the sexes of animals.

MALE FLOWER. A flower that bears stamens only, without pistils.

MALE SCREW. A screw that has the spiral thread on the outside of the cylinder.

MALIC ACID. An acid discovered by Scheele, about the year 1785. It is procured from the juices of many fruits, but particularly from that of apples. It is composed of oxygen, hydrogen, and carbon, and combines with alkalies, earths, and metallic oxides, so as to form malates.

MALLEABILITY. The property of metals of being capable of extension by beating with the hammer, and of being worked into different forms.

MALLET. A wooden hammer.



MALLOW. An herbaceous plant, most species of which grow wild in the field. The common mallow is an annual; but there are several species which are perennials and biennials.

MALT. Barley prepared by a particular process, so as to fit it for making into beer.

atmosphere, but the former the density of the air in which it is found.

MANOR (in Law). In England, a noble sort of fee anciently granted by the king to some baron to dwell upon, and to exercise a jurisdiction greater or less within that circuit; this was in part let out to the lord's tenants, and part was reserved for the use of his family, which latter was called *terra dominicalis*, or *demesne*. Some part was left uncultivated, which was called the lord's waste.

MANSION (in Law). The lord of the manor's chief dwelling house within his fee.

MANSLAUGHTER (in Law). The killing a man by misadventure without malice prepense.

MANTELETS (in Fortification). A kind of moveable parapets used in a siege.

MANTIS. A sort of insects, of which there are numerous species, distinguished by the difference and singularity of their shape. The chief species in Europe is the camel cricket, or praying mantis, so called because when sitting it holds up its two fore legs as if in the attitude of prayer. This is a rapacious insect, that attacks other insects with great ferocity.

MANUAL. Pertaining to the hand, as manual operation, an operation performed by the hand.

MANUAL SIGN (in Law). The signing of a deed or writing, under hand and seal.

MANUAL (in Literature). Any book small enough to be carried in the hand, which contains a compendium of science.

MANUFACTURE. Any commodity made by the hand, or any thing formed from the raw materials or natural productions of a country, as cloths from wool, and cotton or silk goods from the cotton and silk, &c.

MANUFACTURER. One who employs his capital in manufacturing goods.

MANUMISSION (in Law). The act of enfranchising, or setting a slave or bondman free.

MANURE. Whatever serves to enrich the ground and fit it for husbandry purposes, as dung, loam, soap ashes, &c.

MANUSCRIPT, abbreviated **MS.** or in the plural **MSS.** A book or copy written with the hand, in opposition to a printed copy.

MAP. A plane figure representing the surface of the earth, or any part thereof, together with the several divisions of land and water, and the several countries, seas, and the like. It is called a *university* when it represents the whole surface of the earth, or the two hemispheres,

and a particular map when it only represents a particular region or countries. A map is properly a representation of land, as distinguished from a chart, which only represents the sea or seacoast.

MAPLE (in Botany). A tree of which there are numerous species, classed by Linnaeus under the scientific name *acer*. The *acer saccharinum*, or sugar maple, in North America, is one of the most remarkable species, from which, by tapping the trees early in the spring is procured a vast quantity of sugar, a tree of an ordinary size yielding in a good season from twenty to thirty gallons of sap.

MARBLE. A sort of fossils composed chiefly of lime, moderately hard, fermenting with acid and soluble in acid menstruum, and calcining in a slight fire: its marbles admit of a fine polish; they are used much as ornaments in building. Marble is found in most of the mountainous parts of Europe. Derbyshire abounds in this article, as also the Isle of Angleson, where there is a beautiful marble called *Verde de Corsica*, because it is found likewise in Corsica, and in some parts of Italy.

MARBLING. The painting any thing with veins and clouds, so as to represent marble.

MARCH (in Chronology). The third month in the year, which was formerly the first month.

MARCH (in Military Affairs). The movement of a body of troops from one place to another; or the stopping of a soldier according to a certain form.

MARCH (in Music). Any piece adapted to a soldier's march.

MARCHES. Borders or confines, particularly the boundaries between England and Wales.

MARIGOLD. A plant cultivated in gardens, which bears a radiated, discous flower.

MARINE. A general name for the navy of a kingdom or state, comprehending also all that relates to naval affairs, as the building, rigging, arming, equipping, navigating, and employing ships, either for merchandise or war.

MARINE. Belonging to the sea, as marine stores, &c.; also the name of a body of soldiers raised for the sea service.

MARINE REMAINS. The shells of sea fishes and parts of crustaceans and other sea animals found in digging down great depths into the earth, particularly on the tops of mountains, which, as they with water, are considered as vestiges and striking evidences of the general deluge

MARSHAL, or **FIELD MARSMAI** (in Military Affairs). In England, the highest officer in the army.

MARSHALLING (in Heraldry). The disposing of the several coats of arms belonging to distinct families in one and the same escutcheon, together with their ornaments; one branch of the science of heraldry.

MARSHALSEA (in England). A court originally instituted to hear and determine causes between the servants of the king's household and others within the verge of the court, that is within twelve miles round Whitehall, in London.

MARTIAL LAW (in England). The law that has to do only with soldiers and seamen when the king's army is on foot. This law differs from the common law, in as much as it depends upon the pleasure of the king. In cases of riots and rebellions, Martial Law is sometimes proclaimed when the civil power is not strong enough to preserve the peace.

MARTINGALE (in the Manege). A thong of leather fastened at one end of the girth under the belly of the horse.

MARTINGALE. A sea term for a rope, extending from the jib boom to the end of the bumkin.

MASCULINE GENDER. The gender of nouns that denote the male sex.

MASH. Bran scalded in hot water and given to a horse or cow, &c.

MASHES OF A NET. Holes formed by the strings of a net.

MASHING. The mixing the malt and hot water together in brewing.

MASK. A covering for the face.

MASONRY. The art of hewing, cutting, or squaring stones, and fitting them for the use of buildings; also of joining them together with mortar.

MASONS, or **WORKERS IN STONE**. Were incorporated in London about the year 1418.

MASONS, FREE, OR ACCEPTED MASONS. A fraternity of great antiquity, so called because the first founders of that society were persons of that profession. They are bound by an oath of secrecy not to reveal any thing that passes within the society, and the members throughout the whole world are known to each other, by certain secret signs.

MASORITES. The rabbies who, under the name of scribe, are supposed to have written the Hebrew Bible of the errors rept into it during the Babylonish captivity. They divided the canonical into twenty-two, and those twenty-

two took into chapters, and the chapters into verses.

MASQUE (in Architecture). Certain pieces of sculpture representing hideous forms, which serve to fill up vacant spaces.

MASQUERADE. An exhibition in which persons, having masks or vizards, meet together and represent different characters.

MASS (in Ecclesiastical Affairs). The ritual or service of the Romish church; when the prayers are simply rehearsed, without singing, it is called *Low Mass*; but when the prayers are sung by choristers, and the service is performed by a deacon and subdeacon, it is called *High* or *Grand Mass*.

MASSES (in Painting). The parts of a picture containing great lights and shadows.

MASSICOT. A yellow oxide of lead.

MASS-PRIEST. The name for priests who are kept in chantries or at particular altars, to say so many masses for the souls of the deceased.

MAST. The upright beam or post on the deck of a vessel, to which the yards, sails, &c. are fixed. The mainmast is the largest mast in the ship; the foremast is the next in size, standing near the stem of the ship; the mizenmast, the smallest of the three, stands between the mainmast and the stern.

MASTER (in England). The name of several officers who preside in their several departments, as Master of the Assay, King's Household, &c.

MASTER OF THE FACULTIES (in England). An officer under the Archbishop of Canterbury, who grants licenses and dispensations.

MASTER OF THE HORSE (in England). A great officer of the crown, who orders all matters relating to the king's stables.

MASTER OF THE ORDNANCE (in England). A great officer who has charge of all the king's ordnance and stores.

MASTER OF THE ROLLS (in England). The chief assistant of the lord chancellor and lord keeper. He has the keeping of all the rolls and grants, &c.

MASTER OF A SHIP. An officer in a public ship who inspects the provisions, stores, &c.

MASTER AT ARMS. In a ship of war, he who has charge of the small arms, and exercises the petty officers, &c.

MASTER OF ARTS. The second degree taken up at Cambridge and Oxford in

MARSHLOCK, a kind of harpichord, which was used with a psalm.

MATE, an ancient office on board a vessel.

MATEE, see *BARA NATEE*.

MATERIALIST, One who maintains that the world is material.

MATEIRA MEDICA, All that is used in the art of medicine for the prevention or cure of diseases, whether prepared from vegetables, minerals, or animals.

MATHEMATICS, The science which teaches or treats of whatever is capable of being treated of in number, and is divided into arithmetic, or that branch which has number for its object, and geometry, which treats of magnitude. It is also distinguished into Pure Mathematics, which treats quantities abstractedly, and without any relation to matter, and Mixed Mathematics, which treat of the properties of quantity, as applied in material or sensible objects, and interweaves with physical considerations, as astronomy, geography, navigation, mechanics, surveying, architecture, &c.

The following list of the writers who have distinguished themselves in the different branches of the mathematical science will furnish the most historical view of mathematics in general.

A. C.

301 Confucius, the Chinese philosopher.

302 Thales, a Greek astronomer. Anaximander, an inventor of globes.

303 Chironius, an astronomer. Anaxagoras, a philosopher. Anaximenes, a Greek. Pythagoras, an astronomer and geometer.

304 Plato, a geometer. Eudoxus, an astronomer. Meneo, the inventor of the Nicomach cycle. Hippocrates, a geometer. Cephalus, a geometer. Zenodorus, a geometer.

305 Aristotle, a philosopher. Calippus, an astronomer, and inventor of the Calippic period. Democritus, an architect. Theophrastus, a philosopher. Anaximedes, a philosopher. Eudoxus, an astronomer and geometer. Erythra, an astronomer. Archytas, a philosopher. Aristarchus, a geometer. Democritus, a geometer. Menelaus, a geometer.

306 Apollonius, a geometer, author of the Conic Sections. Archimedes, a geometer, and inventor of machines. Aristarchus, an astronomer. Eratosthenes, a mathematician. Euclid, a geometer, author of the Elements. Aratus, an astronomer and poet. Aristillus, an astronomer. Nicomachus, a geometer, the inventor of the cycle of the ages.

Hipparchus, an astronomer, considered stars. Claudius Ptolemy, was a geometer. Heo invented the cycloids and a sundial.

A. C.

307 Apollonius, a Roman astronomer. Claudius, an astronomer of Rhodes. Ptolemy, an astronomer and poet. Hipparchus, an astronomer. Theon, an astronomer. Julius Cordus, the astronomer of the calendar. Sacrobosco, an Egyptian geometer. Minimus, a writer in mathematics. Theophrastus, a geometer. Ptolemy, a geometer. Theon, a geometer and astronomer. Jam. Hillius, a Syrian philosopher.

308 Nicomachus, a Greek mathematician. Euclid, a geometer. Ptolemy, an Egyptian astronomer and geographer, author of the Almagest. Hipparchus, a Greek mathematician.

309 Diophantus, a Greek astronomer. Simon Stevinus, a Syrian philosopher. Pappus, a Greek mathematician on Apollonius. Theon, a Greek mathematician on Ptolemy, &c.

310 Hypatia, daughter of Theon, a commentator on Diophantus. Proclus, a Greek mathematician on Euclid. Diophantus, a Greek geometer, discoverer of the method of fluxions, a Greek mathematician.

311 Martinus, a geometer of Naples. Orontius, an astronomer. Hypatia, a Greek mathematician. Theon, an astronomer.

312 The Younger Ptolemy, an English name and philosopher.

313 Almagest the Younger, an astronomer. Hero the Younger, a Greek geometer.

314 Al Miskin the Caliph, an astronomer. Al Rasid, a Persian astronomer. Al Buzjani, an Arabian astronomer. Almagest, an Arabic astronomer.

315 Pope Sylvester, II, a mathematician.

1000 Ibn Isac, an Arabian astronomer. Ulugh Beg Khan, an Arabian astronomer. Ulugh Beg Khan, an Arabian astronomer. Ulugh Beg Khan, an Arabian astronomer.

1100 Albertus, an Arabian astronomer and astronomer.

1200 Leonard de Pisa, an Italian, said the first European astronomer. Nicolaus Copernicus, a Polish astronomer. Alphonsus, a king of Castile, an astronomer, and author of the Alphonsine tables. John Wallis, an English mathematician. Johannes Kepler, an astronomer. Roger Bacon, an English philosopher. Campanus, an astronomer. Vitellius, an astronomer.

1250 Albertus, an Italian mathematician. Archimedes, an Italian mathematician. John of Saxony, an astronomer.

1400 Bionius, an Italian astronomer. Moschopulus, a modern Greek astronomer. Perhaps, an astronomer. Regiomontanus, or Meilior, an astronomer of Vienna. Cardinal Cosmo, an astronomer. Henry, son of John king of Portugal, the inventor of charts. Wang Heng, a Chinese astronomer. Leone de Clugny, or Paulus, a German astronomer. Guisardus, an Italian astronomer. Thalesius Nicetus, an Italian astronomer.

1600 Copernicus, a German astronomer, and the inventor of the solar system. Henry Adrian, an Arabian, a Chinese astronomer. Cardan, an Italian astronomer.

&c. in which any mineral substance is found.

MATRON. An elderly respectable female who is employed as a nurse in hospital.

MATRON (in Law). A married woman of experience, who is in certain cases empanelled upon juries.

MATT. Rope yarn, junk, &c. beaten flat and interwoven to save the yards, &c. from galling.

MATTE Peruvian tea, much used in South America.

MATTER. That which is the object of our senses, and appears under the diverse forms of solids, fluids, and gases.

MAUNDY THURSDAY (in England). The Thursday before Good Friday, in which the king is accustomed to give alms to the poor.

MAUSOLEUM. A stately sepulchre built by Artemisia, queen of Caria, for her husband Mausolus; also any pompous sepulchral monument.

MAXIMUM (in Mathematics). The greatest quantity attainable in any case.

MAY. The fifth month in the year.

MEAD. An agreeable drink, made of honey and water boiled and fermented.

MEADOW. Ground covered with grass, which is commonly left for hay.

MEADOW SWEET. A herb with crumpled leaves, something like those of the elm, growing in meadows. Its flower expands in the form of a rose.

MEAL. The edible part of corn, particularly of barley.

MEAN (in Mathematics). The middle between two extremes, as a mean motion, mean distance, arithmetical mean, geometrical mean, &c.

MEAN ARITHMETICAL. Half the sum of the extremes.

MEAN GEOMETRICAL, or A MEAN PROPORTIONAL. The square root of the product of the two extremes.

MEAN HARMONICAL. Double a fourth proportional to the sum of the extremes.

MEAN TIME, or EQUAL TIME. That which is measured by an equable motion, as a clock.

MEASLES. A disorder incident to children, consisting of a fever, attended with inflammation, cough, and difficulty of breathing.

MEASURE. Any given quantity by which the quantity, length, breadth, thickness, and capacity of other things may be estimated.

MEASURE (in Geometry) Any cer-

tain quantity assumed as one, or unity, to which the ratio of other similar quantities is expressed, thus the measure of a line is the extension of a right line as pleasure, which is to be considered as unity, as an inch, a foot, or a yard.

MEASURE (in Arithmetic). A certain number or quantity, which being repeated a certain number of times is equal to another that is bigger, to which it has relation, as 6 is the measure of 36.

MEASURE (in Music). That note, as the semibreve, by which all the other notes are measured or adjusted to its value.

MEASURE (in Poetry). A certain number of syllables metrically measured.

MEASURE (in Commerce). Determinate quantities, by which all things that are bought and sold are measured as to their quantity, and estimated as to the rate: these are various in different countries.

MECHANICAL. Pertaining to mechanics.

MECHANICAL AFFECTIONS (among Philosophers). Such properties of matter or body as arise from its figure, bulk or motion.

MECHANICAL PHILOSOPHY. That which explains the phenomena or appearances of nature from mechanical principles, viz. from the motion, rest, size, figure, &c. of the small particles of matter. This is the same as the corpuscular philosophy.

MECHANICAL POWERS. The six simple machines to which all others, how complex soever, may be reduced, and of the assemblage whereof they are all composed; these are the simple lever, the wheel and axis, the pulley, the inclined plane, the wedge, and the screw. These six might be reduced to two, for the pulley and wheel are only assemblages of levers, and the wedge and screw are inclined planes.

MECHANICAL SOLUTION OF A PROBLEM (with Mathematicians). Is a construction or proof not done in a strictly geometrical manner, but by the help of instruments.

MECHANICS. The science of motion, or that branch of mixed mathematics which treats of the effects of powers or chases and engines, and applies them to mechanics into practical and rational; the former of which relates to the mechanical powers, namely, the lever, balance, wheel and axle pulley, wedge, screw, inclined

MEERSHAUM. A fine sort of Turkish clay, of which pipes are made in Germany of various forms. It assumes a beautiful brown colour after it has been used for smoking for some time.

MELLITE, or Honey-Brown. A mineral found first in Thuringia, which is of a honey-yellow colour, and is usually crystallized in small octahedrons.

MELLITIC ACID A substance procured from mellite.

MELODY (In Music). The agreeable sensation produced by a regular succession of different sounds.

MELOE. A sort of insects, of which the two principal species are the oil beetle, so called because, on being handled, it exudes from its legs, drops of a clear, deep yellow oil or fluid, of a very peculiar and penetrating smell; and the meloe vesicatorius, or Spanish fly, which is used in raising blisters.

MELON. A plant of the cucumber tribe, the flower of which consists of one bell-shaped leaf cut into several segments. The fruit is mostly of an oval shape, and filled with seeds.

MEMBRANE (In Anatomy). A broad, nervous, and fibrous substance, which serves as a covering for different parts of the body, particularly the brain and the viscera.

MEMENTO A hint to awaken the memory.

MEMOIRS. Histories written by those who have been witnesses of the transactions, and acquainted with the persons, which they describe.

MEMORANDUM. A short note, for the better remembrance of a thing.

MEMORIAL. A monument, or whatever else serves to call a thing or person to remembrance.

MEMORY, ARTIFICIAL. A method of assisting the memory by some artificial contrivance, as that of forming certain words, the letters of which shall signify the date or era to be remembered. Various devices of this kind have been hit upon at different times.

MENDICANTS. Monks so called, who go about begging alms.

MENSTRUUM. A liquid which serves to extract the virtues of any substance, by infusion, decoction, &c. Water is the menstruum of all salts, oils of resins, acids of alkalies and the like.

MENSURATION. The art of measuring lines, superficies, and solids, which, in consequence of its extensive application to the purposes of life, is considered as of the highest importance.

Euclid treats of mensuration, as far as regards surfaces, only of the measuring of triangles; and in regard to curvilinear figures, he attempted the measurement of the circle and the sphere. Archimedes carried this subject to a much greater extent: he found the area of a parabola to be two thirds of its circumscribing triangle; which, with the exception of the lunules of Hippocrates, was the first instance of the quadrature of a curvilinear space. He likewise determined the ratio of spheroids and conoids to their circumscribing cylinders, and has left us his attempt at the quadrature of the circle. He demonstrated that the area of a circle is equal to the area of a right-angled triangle, of which one of its sides about the right angle is equal to the radius, and the other to the circumference; and thus reduced the quadrature of the circle to the determining the ratio of the circumference to the diameter, a problem, in the solution of which he could only arrive at an approximation to the truth, showing that the ratio between the circumference and the diameter was less than that of 7 to 22. What Archimedes failed to effect in this respect has continued the efforts which have been made by subsequent mathematicians, particularly within the last three centuries, to arrive at a greater approximation. As all hopes of accurately squaring the circle and some other curves were at length given up, mathematicians applied themselves to the finding the most convenient series for approximating towards their true lengths and quadratures; and the science of mensuration has in consequence assumed a more consistent form, as may be clearly seen in the treatises of Hawney, Robertson, Hutton, and Bonycastle.

MEPHITIC. Poisonous, like the Mephitis, or Damp, as it is called by the miners; as Mephitic Air, another name for nitrogen gas, on account of its noxious quality; and Mephitic Acid, carbonic acid, so called because it cannot be respired without causing death.

MERCATOR'S CHART. A sea chart, in which the parallels of latitude and the meridians are represented by straight lines.

MERCER. One who deals in wrought silks. The mercers' company in London was incorporated in 1393.

MERCHANT. In England, one that exports and imports merchandise. In the U. S., the term is applied to large dealers generally.

MERCHANTMAN A vessel that is

larly for such sudden and luminous appearances as are occasionally visible, such as fireballs or luminous bodies of considerable magnitude, that are frequently to be seen in the tropical climates; shooting or falling stars, that are of common occurrence; and the ignis fatuus, seen in marshes.

METEORIC STONES. Heavy, stony bodies, that are supposed to fall from the fireballs after they have exploded. These stones, which are looked upon by some as concretions formed in the atmosphere, are by a chymical analysis found to contain silica, oxide of iron, magnesia, sulphur, lime and oxide of nickel.

METEOROLOGY. The doctrine of meteors in general, or the study of the variable phenomena of the atmosphere. The changes to which the atmosphere is most subject are such as respect its temperature, weight, moisture, and electricity, which are marked and measured by the barometer, thermometer, hygrometer, and electrometer. The results of these changes are winds, rains, snow, hails, dews, &c. The intensity of the winds is measured by the anemometer, and the quantity of rain is measured by the pluviometer or rain-gauge.

METER, or COAL-METER. A measurer of coals before they are delivered out to sale.

METHODISTS. A sect of physicians who flourished at Rome, and professed to follow the rules of Galen; also a sect of religionists, who, in the seventeenth century, professed to defend the tenets of the Church of Rome against the Protestants; and in modern times, another sect, who profess to act by a rule of their own, as distinguished from the doctrine and discipline of the Church of England. The leaders of this latter sect were Wesley and Whitfield, the followers of whom are divided into two parties.

METONYMY (in Rhetoric). A figure of speech, whereby one thing is put for another, as the cause for the effect, the part for the whole, and the like.

METRE (in Poetry). A system of feet composing a verse; as pentameter, a verse of five feet, hexameter, a verse of six feet, &c.

METRE (in Commerce). A French measure, equal to rather more than thirty-nine inches.

METROPOLIS. The chief city of a kingdom or province.

METROPOLITAN. A bishop of the mother church; an archbishop, who is bishop of the metropolis.

MEZZOTINTO. A particular kind of engraving, so called from its resemblance

to drawings in India ink. This is performed by punching the copper plates with the graining tool, scraping them with the scraper, and then rubbing them with the burnisher or smooth piece of steel, to produce the effect desired.

MIASMA. The contagious effluvia or pestilential diseases.

MICA, or MUSCOVY GLASS. A stone which forms the essential part of many mountains. It consists of a number of thin laminae adhering to each other. It has long been used as a substitute for glass, particularly in Russia.

MICROMETER. An astronomical machine which serves to measure extremely small distances in the heavens, &c.

MICROSCOPE. An optical instrument which magnifies objects, so that the smallest may be distinctly seen and described. The invention of microscopes, like many other ingenious discoveries, has been claimed for different authors. Huygens informs us that Drebell, a Dutchman, constructed the first microscope in 1621; but Borelli states, in a letter to his brother, that when he was ambassador in England in 1619, Cornelius Drebell showed him a microscope, which he said was given him by the archduke Albert, and had been made by Jansen, whom he considers to have been the real inventor, although F. Fontana, a Neapolitan, claimed, in 1646, the honour of the invention to himself, and dated it from the year 1618.

MIDRIFF, or DIAPHRAGM (in Anatomy). A membrane which divides the trunk of the body into the thorax and abdomen, the upper and lower cavity.

MIDSHIPMAN. An officer in the navy, who assists on all occasions, both in stowing and unshipping the hold, sailing the ship, &c.

MIDSUMMER. The summer solstice. The 24th of June is the Midsummer Day, which is also quarter day.

MIDWIFERY. The art of assisting women in childbirth.

MILE. A long measure, which, in England, contains 6 furlongs, or 1760 yards, or 5280 feet.

MILIARY GLANDS. The small and infinitely numerous glands, which secrete the perspiration.

MILITARY. A name for the whole body of soldiery, with their equipments, &c.

MILITARY. An epithet for what belongs to soldiers, as Military Architecture, Military Exercises, &c.

MILITARY ARCHITECTURE. See FORTIFICATION.

She is commonly represented with all the symbols of war, as the helmet, spear, and shield.

MINERVIA. Presents among the ancients, made by the boys in their masters before the feast of Minerva.

MINIATURE. A delicate kind of printing, consisting of little points or dots instead of lines, commonly done in ivory, and used in taking portraits; also the portrait itself.

MINIM (in Music). A measure of time marked thus, \sphericalangle , equal to two crotchets.

MINIMUM (in Mathematics). The least quantity attainable in a given case.

MINISTER OF STATE. In England, one who conducts the affairs of state by an authority from the king.

MINISTER, FOREIGN. A person sent into a foreign country, to manage the affairs of the state by which he is sent.

MINUM, or **Red Lead.** An oxide of lead, prepared by exposing this metal to a great heat and a free access of air.

MINK. An animal of the weasel kind, common in North America, that frequents the banks of streams.

MINOR (in Law). An heir, male or female, within the age of twenty-one.

MINORITY (in Law). A state of non-age; also the smaller number of persons who give their votes on any questions.

MINSTREL. A player on any musical instrument; an itinerant performer.

MINT (in Botany). A pot-herb, which has a creeping root and a strong aromatic scent.

MINT. The place where coin is made.

MINUTE (in Geometry, marked thus \prime). The sixtieth part of the degree of a circle; also the sixtieth part of an hour.

MIRACLES. Works effected in a manner different from the ordinary course of nature, by the immediate power of the Almighty, for some particular purpose.

MIRROR. The surface of any specular body polished, and adapted to reflect the rays of light which fall upon it, and to represent objects. Mirrors are either flat, as looking-glasses; concave, for the purpose of converging the rays of light; or convex, for the purpose of diverging the rays of light.

MISADVENTURE (in Law). A sort of homicide against the mind of the killer, partly by negligence and partly by chance.

MISCELLANEOUS. One of Linnaeus's natural orders of plants, comprehending such as were not included in the other orders.

MISCHIEF (in Law) Damage or Injury.

ry done to the property of another, but with a malicious intent.

MODERATION. An ethical term.

MISLETOE. A plant which grows on trees, and was thought to be an excrement of the tree-wood or berry which is propagated misletoe through from one tree to another, this bird being fond of them, and sometimes happens that the wood of the berry sticks to his back, and attempts to disengage himself, by striking his back against the bark of the tree, the berry sticks to the latter, it happens to light on a smooth part, take root, and spread out the next year. This plant adheres most readily to apple, and other smooth-barked trees.

MISNAIL. The code or collection of the civil law of the Jews.

MISNOMER (in Law). The giving a person a wrong name.

MISPRISON. In general, a misprision of treason, a neglect to treason; which was formerly high treason in England.

MISSAL. The book of the Roman ceremonies.

MISSILE. Any weapon thrown or charged from a machine, as stones & sling.

MISSIONARIES. Ministers sent into a country to preach Christianity.

MISTS. Vapours hovering over earth, which are either drawn upward by the rays of the sun, or fall down by their own weight in the shape of dew; cold weather, in that of hoar-frost.

MITE. One of the smallest insects is scarcely visible to the naked eye, by its motion. As seen through a microscope, it is found to have eight legs, eyes, one on each side of the head, two jointed tentacula. It mostly lives on chestnut.



MITE (in Commerce). A small silver current, equal to about one-sixth part of a farthing; also a weight, as the miteyen, equal to the twentieth part of a grain.

MITRE (among Carpenters). An angle of one right or half a right angle.

MONASTERY. A college of monks or nuns; a house of religious retirement.

MONDAY. The second day of the week.

MONEY. Whatever is made the medium of trade for determining the value of commodities in buying or selling. It consists either of coins, or pieces of stamped metal, or of paper money or monies of account. Paper money is called paper currency, to distinguish it from specie, metallic currency, or cash; it comprehends notes of hand, bills of exchange, bonds, mortgages &c. Monies of account are imaginary monies, used only in keeping accounts; such was the English pound until sovereigns were coined.

MONYERS. In England, officers in the king's mint, who make and coin the money.

MONGREL. Any creature of a mixed breed.

MONK. One of a religious community; one who dwells in a monastery, under a vow of observing the rules of the order he belongs to.

MONKEY. A well known animal, with a long tail, cheeks puffed, and haunches naked. The cut below represents a small species, called the striped monkey.



MONKEY (in Military Affairs). A machine used for driving large piles of wood.

MONKHOOD, or ACONITE. A poisonous plant bearing a fine blue flower.

MONOCEROS. One of the new constellations in the northern hemisphere.

MONOCORB. A musical instrument with one string.

MONODY. A funeral duty.

MONOXYNIA (in Botany). An order in the Linnæan system, comprehending plants that have only one pistil or stigma in a flower.

MONOECIA (in Botany). One of the Linnæan classes, including plants that have male and female flowers on the same plant.

as the plants *trifolium, hirsutum, cicutaria*, &c.



MONOLOGUE. A soliloquy, or a discourse where one only speaks.

MONOPETALOUS. One-petaled flowers the corolla of which consists of one petal only.

MONOPOLY. In England, a grant by the king to any person or persons sole trading in any commodity; a unlawful engrossing to one's self any trade or the sale of any commodity, to enhance the price.

MONOSYLLABLE. A word consisting of one syllable.

MONOTONY. Sameness in the voice; a fault in elocution or in poetry.

MONSOONS, or TRADE WINDS. Periodical winds in the Indian sea, that blow one half the year one way, and the other half the year the opposite way. These winds and times of shifting are different in different parts of the ocean.

MONTH (in Chronology). The part of a year, otherwise called a calendar month, to distinguish it from the astronomical month, which is either solar or lunar. A solar month, or the time in which the sun passes through a whole sign or zodiac, is 30 days 16 hours 23 minutes 5 seconds; a lunar month, or the time of one lunation, is 29 days 12 hours 44 minutes.

MOOD (in Grammar). The various inflections of a verb, or the various different forms and manners of the verb, to express the different intentions of the speaker: the indicative mood, which denotes the thing; the imperative mood, by which one commands; the subjunctive mood, which implies a conditional action; the potential mood, which denotes the possibility of doing the thing; and the infinitive mood, which expresses the action itself.

MOON. One of the secondary planets and a satellite in the earth, much smaller in diameter than the earth, and moves less than the earth. The surface of the moon is diversified with mountains and valleys. Her sidereal or periodical motion for each year she performs in 354 days 8 hours and 48 minutes and 35 seconds.

MOVABLES. Personal goods.

MOVEMENT (in Military Affairs). The regular, orderly motion of an army, for some particular purpose.

MOVEMENT (in Music). The progress of sounds from grave to acute, or from acute to grave.

MOVEMENT (among Watchmakers). A name for the finer works of a watch, &c., that move.

MOULD (in Horticulture). Earth mixed with dung, &c., fit for the reception of seeds.

MOULD (among Mechanics). A form or frame in which any thing is cast, as glassers' moulds, tailors' chandlers' moulds, and the like.

MOULDINESS. A term applied to bodies, as bread, &c., which are in a state of corruption, from the action of the damp or air. This shows itself by a white down, which, when seen through a microscope, appears, like the moss, to be a kind of plant, although some have imagined it to look like animalcules.

MOULDINGS (in Architecture). Projections beyond the naked wall, such as cornices, door-cases, &c., which are cut so as to be ornamental.

MOUND (among Antiquarians). A ball or globe with a cross upon it, which kings are represented as holding in their hands, to designate their sovereign majesty.



MOUND (in Fortification). Any thing raised, as a bank of earth, &c., to fortify or defend a place.

MOUNT. An official elevation of earth.

MOUNTAIN ASH. An ornamental tree, which in its leaf resembles the common ash; but it bears a clustered flower, that is succeeded by a beautiful red berry.

MOUNTAINS. Extraordinary elevations of the earth, such as the Alps and Pyrenees in Europe, the Caucasus and Uralian mountains in Asia, and the Andes in America. Mountains mostly consist of stone.

MOUNTING (in Military Affairs). Going upon some accident or specific duty, as mounting a beach, that is, running up

to it; mounting the trenches, giving duty in the trenches, &c.; but more a cannon is setting it on its carriage.

MOUSE. A little animal that inhabits houses and fields. It is usually called the rat, and is classed with it under the name of Mus in the Linnaean system. Field mice are frequently white.



MOUSE-EAR. A plant very similar to chickweed; but the flower is larger, the fruit shaped like an ox's horn, &c. at the top.

MOUTH. The aperture in the head of any animal at which the food is received by which the inspiration and expiration of the air is performed; also the aperture of many other things, so called from the similarity of situation or use, as the mouth of a cannon, where the powder ball goes in and out; the mouth of a river, where the water passes in and out of the mouth of a vessel, &c.

M. P. An abbreviation for Member of Parliament.

MS. An abbreviation for Manuscript.

MSS. An abbreviation for Manuscripts.

MUCILAGE. A slimy substance sufficient consistence to hold together, a solution of gum or any tenacious liquid or a viscous extraction from roots or other parts of vegetables.

MUCUS. A viscous fluid secreted from certain glands in the body.

MUFFLE. A small earthen oven used for cupellation.

MUFTI. The chief priest among Mussulmen, appointed by the grand sultan for himself. He is the oracle in all doubtful questions of their law.

MUL-ATTO. Any one born of a black man and white woman, and vice versa.

MULBERRY TREE. A large, spreading tree, the fruit of which resembles raspberries in its woody make, but is considerably larger. The white mulberry is cultivated in France, Italy, and the United States for its leaves, to feed silkworms, but the Persians make use of the common black mulberry for this purpose.

MULE. A mixed kind of quadruped generated between an ass and a mare.

arts and sciences. They were also indebted to the invention of history; Hippocrates, the inventor of surgery; Thales, of geometry; Democritus, of the use of the steam; Pythagoras, of the laws of music; the five and ten; Cato, of domestic economy; of agriculture; Polybius, of rhetoric. Aristotle divided his history into nine books, to each of which he gave the name of one of the senses.

MUSEUM. A collection of rare and interesting objects, particularly in the departments of Natural History; also the place where the collection is deposited. The term was originally applied to a study, or a place set apart for learned men, in the great palace of Alexandria, by Ptolemy Philadelphus, who founded a college, and gave substance to the several institutes, adding also an extensive library, which was one of the most celebrated in the world.

MUSEUM. A plant, the generic name of which, in the Linnaean system, is *Agaricus*. It is a spongy substance which grows up to the bulk of a mushroom. The seeds of mushrooms have not long been discovered.



MUSIC. The science which treats of the number, time, division, succession, and combination of sounds, so as to produce harmony. It is divided into Theoretical Music, which inquires into the properties of sounds and discords, and explains their combinations and proportions for the production of melody and harmony; and Practical Music, which is the art of applying the theory of music in the composition of all sorts of tunes and airs.

MUSIC, HISTORY OF. The first traces of music are to be found in Egypt, where musical instruments, capable of such variety and expression, existed at a time when other nations were in an unenlightened state. The invention of the lyre is by Democritus and Hermetus Trismegistus, the Mentor of the Egyptians, which is a proof of antiquity; but a still greater proof of the existence of musical instruments

among them at a very early period, drawn from the signs of an instrument, as is supposed, in the Egyptian hieroglyphics. This instrument, by some called a *musaphis*, is the only Egyptian stringed instrument, of which there are several mentioned by the historians as being used in the temple of Isis. An flute was called by all the kings of the Egyptians, it is probable that the same religious ceremonies, borrowed from that people. The two Greek, their first ideas of music. Some have thought the invention of the lyre to be the work of Apollo, and give him the credit of playing upon it. It is not exactly true, as much cultivated as in Greece. The same as well as Apollo, Bacchus, and other gods and demigods, practiced it, in various ways or others. Their poems are said to have been like the Greek, German, Irish, and the words of love and sentiment, who were almost all their poems in the strains, and the sort of poems. In this manner did Orpheus, Homer, Hesiod, Virgil, and others, in their verses; and in after times, a justification of the genus, *musaphis*, harp, and other gods, celebrated in the theophany of the verses. The instrument known in the time of Homer twenty-five, five, seven, and trumpet. The invention of music and musical science is ascribed to Pythagoras, a poet and musician, who flourished 500 years before Christ. We afterwards find philosophers, in the same parts, among the number of those who admired and cultivated music, *musaphis*, as well as particularly, by Pythagoras, Aristotle, Aristoxenus, Euclid, and others. Pythagoras is celebrated for his discoveries in this science; especially, that of musical notes, and the addition of an eighth string to the lyre. The key of these he is supposed to have derived from the Egyptians. He also explained the theory of sounds, and introduced the science. Aristoxenus is the first ancient writer on music of whose works any remains. Euclid followed up the line to mathematical demonstration. The list of Greek writers may be added Theophrastus, Geronimus, Hippocrates, Boethius, and Aristotle. The latter two were not all explicit. There were besides Euclid, Boethius, many of whose works

when he will not put himself upon the inquest.

MUTE (in Mineralogy). An epithet for minerals which do not ring when they are struck.

MUTES (in Grammar). Letters which cannot form a sound without a vowel after them, as b, c, d, g, k, p, q, t.

MUTES (in the Grand Seigneur's Seraglio). Dumb officers, who are sent to strange, with the bow-string, bashaws or other persons who fall under the sultan's displeasure.

MUTES (among Undertakers). Those men who are employed to stand at the foot of the deceased, until the body is carried out.

MUTINY. A revolting from lawful authority, particularly among soldiers and sailors.

MYRMELEON. A genus of insects in the Linnæan system, one species of which is remarkable on account of its larva,

which has the property of preparing a sort of pitfall for the ensnaring of other insects.

MYRRH. A resinous concrete juice procured from a tree growing in Arabia and Abyssinia. The sort of tree which yields this substance is not exactly known, but, according to Bruce, it is a sort of mimosa. Myrrh is in the form of tears, brittle, of an aromatic taste, not melting when heated, and burning with difficulty; yields oil by distillation, and forms a yellow solution with water.

MYRTLE. A fragrant shrub, which, among the ancients, was sacred to Venus. The common myrtle is a native of Asia, Africa, and Europe.

MYRTUS. The generic name of the myrtle in the Linnæan system; includes also among its species the pimento or allspice tree.

MYTHOLOGY. The fabulous history of the heathen deities and heroes, and divine honours paid to them.

N.

N, the thirteenth letter of the alphabet, stood as a numeral for 900, and, with a dash over it, thus, N̄, 9000. N. or No. stands as an abbreviation for numero, number; also for north, note, noun, &c.

NABOB, or **NAVOUR**. An Indian word for a deputy; a title of dignity and power applied to those who act under the sobabs or viceroys.

NABONASSAR. First king of Babylon, in whose reign, according to Ptolemy, astronomical observations were made; whence an era was formed from this king's reign, called the era of Nabonassar, dated 747 years before Christ.

NADIR (in Astronomy). That point in the heavens opposite to the zenith, and directly under our feet, or a point in a right line, supposed to be drawn from our feet through the centre of the earth, and terminating in the lower hemisphere.

NAIL (in Anatomy). The horny lamina on the extremity of the fingers and toes.

NAIL (with Ironmongers). Spikes of iron and brass, having heads, and fitted for binding several pieces of wood together.

NAIL (in Commerce). A measure of length, containing the sixteenth part of a yard.

NAIL. A term in Architecture, applied to a column or a wall, to be face or plain surface from so projections take their rise.

NANKIN. A well known stuff, so called from Nanking, a city in China.

NAPE. The hinder part of the neck.

NAPHTHA. A native combustible liquid, and one of the thinnest of the liquid bitumens issuing from the earth, and found on the borders of springs on the shores of the Caspian Sea, and many other places. It feels greasy, has a bituminous smell, takes fire on the approach of flame, and is so light as to float on the water.

NARCISUS. A genus of plants, which is cultivated in gardens on account of its sweet-smelling flowers, which are either yellow or white.

NARCOTICS (in Medicine). Soporiferous and stupefying medicines, as opium and its preparations.

NARROW. A small passage between two lands.

NARVAL. An animal of the whale tribe, remarkable for its single tooth standing out like the horn of the unicorn.



NASTURTIIUM. A plant, which is cultivated in gardens, and bears a flower of a deep crimson colour. The seeds, when

decreased in the Phœnicia, who were celebrated for their skill in the construction and management of vessels. In consequence of their contests with the Romans, the latter, after having suffered one or two defeats in naval engagements, acquired the art of building ships from their rivals, and successfully employed it to their overthrow.

The modern art of ship-building appears to have been derived from the northern tribes, among whom we find that trees hollowed out like canoes were first used. The cruades first gave the impulse to improvements in ship-building, which, notwithstanding, continued for some time at a low ebb. Even in the reign of Edward the First, ships were very insignificant in point of size, for it appears that forty men were deemed sufficient to man the largest vessels in England. The states of Venice and Genoa probably first increased the size of their ships, but they were soon surpassed by the Spaniards, who first employed cannon. The Hanse Towns made such advances in naval architecture, that in the fourteenth century it was usual for them to let their ships out to foreign princes. In the reign of Henry IV. ships of considerable size began to be built in England, and they continued to increase in magnitude until the reign of Henry VIII. when two very large ships were built, namely, the Regent, of 1000 tons burthen, and the Henry Grace Dieu, which was larger. From the reign of Charles II. the navy of Great Britain acquired great importance, and in consequence of the wars which have been since carried on in several subsequent reigns, it has risen to its present state.

In 1678 the British navy consisted of 23 ships, of which 5th were of the line; in 1689 there were 117 ships, and in 1701, above 430.

NAVAL CROWN. A crown among the Romans, given to him who first boarded an enemy's ship; it was a circle of gold representing the beaks of ships.



The body or main part of a

NAVIGATION. The art of conducting a vessel at sea from one port to another. This is navigation, properly so called, it distinguishes it from common navigation or coasting, that is, conducting vessels from one port to another lying on the same coast; and inland navigation, which is performed by small craft on canals. There is also a submarine navigation, that is, the art of sailing under water by means of the diving bell, &c. Navigation is divided into theoretical navigation, which treats of the difference of latitude, the difference of longitude, the reckoning or distance run, the course or usual run on, besides the different modes of sailing—plain sailing, in which the plane chart is made use of; Mercator's or globular sailing, in which Mercator's chart is used, &c. Practical navigation has respect to the places sailed to, or the waters sailed over, and is either proper, common, inland, &c. as before explained.

NAVIGATION, HISTORY OF. Navigation and commerce without doubt took their rise together; for the desire of gain, being one of the most powerful incentives to action, would naturally lead men to explore distant countries. Hence we find that the Phœnicians, particularly those of Tyre, who were the first trading people on record, were also the first to make fleets, and by the aid of astronomical observations to extend their voyages to some distance from their own shores. The Carthaginians followed the course of their ancestors the Tyrians, and addicted themselves so thoroughly to trade and navigation that they surpassed every other nation of antiquity in the cultivation of these two arts. They first made the quadremes, or four-oared galleys, and probably were the first who made cables for their large vessels of the shrub spatium. They likewise pushed their discoveries to a vast extent. They were perfectly acquainted with the Mediterranean and all the ports in it, and proceeded to the westward farther than any other nation. Britain and the Canaries were known to them, and in the opinion of some they even went as far as America. The formidable fleets they always kept in their employ, and the masters of the sea, sufficiently attest the advances which they made in navigation. As the Greeks and Romans were more addicted to war than commerce, they employed their shipping principally in transporting their men to the countries they were going to attack, or in engaging their enemies at sea. That the Athenians on

called all the other Greeks in their maritime warfare is evident from the victories which they gained over the Persians by sea. As in the Romans, they are said by Polybius to have been utter strangers in naval affairs, and quite ignorant of ship-building, before the first Punic war, when a Carthaginian galley, having accidentally stranded on the coast of Italy, was taken by them, and served as a model for the construction of vessels. Of that they made so good a use as to raise a fleet of one hundred and twenty galleys, with which they were enabled to beat the Carthaginians on their own element. It does not appear, however, that either of these people went to any distance in their vessels, either for purposes of trade or curiosity. The only voyage of discovery we read of in antiquity was that made by Nearchus, under the auspices of Alexander. In all other countries, navigation was encouraged solely for the purposes of commerce, as by the Egyptians and the Byzantines, and subsequently by the Venetians and Genoese until the time of the crusades, when a spirit of adventure was excited throughout all Europe, and preparations were made for voyages to the Holy Land, which led to the improvement of navigation. The laws of Ulpian, framed and established by our king Richard I., show that a system of maritime policy was now thought necessary. Of the progress of the English navy, it suffices here to observe, that the first statutes respecting it were passed in the reign of Richard II. and that from that period to the present it has been the object of government to raise it to the highest pitch of perfection. As to the art of navigation generally, nothing contributed so much to its advancement as the invention of the mariner's compass, in the fourteenth century, which gave so great a facility to the exploring of unknown regions. From this time many considerable voyages were made, particularly by the Portuguese, under the auspices of Henry Duke of Viseu, who was particularly skilled in cosmography, and employed a seaman from the island of Majorca to teach navigation and to make instruments and charts. In the subsequent reign of John II. one Martin de Behaim, a Portuguese, native of the island of Fayal, a pupil of Regiomontanus, calculated, about 1480, the use of magnetic tables of the sun's declination, and recommended the instrument for taking observations at sea. About the same time, Columbus conceived the idea of exploring a passage to India by sailing directly towards the west across

the Atlantic ocean, and being furnished with a small armament of three ships by Ferdinand and Isabella of Spain, he set sail in August, 1492, and steered directly for the Canary Islands; thence holding his course due west, he stretched away into unexplored and unknown seas. After encountering incredible difficulties and hardships from the elements, and a scarcity of provisions, but above all from the inhuman spirit of his crew, he arrived at Guamaui, one of the large cluster of islands called the Laysan, or Sandwich Isles. He also discovered Cuba, Hispaniola, and several other small islands, and, having left a colony in Hispaniola, returned to Spain in March, 1493. In September following, he set out on his second voyage, and sailed by the Leeward Islands to Hispaniola; and in a third voyage, undertaken in 1498, he discovered the continent of America. In the same year, Vasco de Gama returned to Lisbon from a voyage to the East Indies by the Cape of Good Hope. As from practice the art of navigation was thus materially improved, so likewise additional efforts were now made to advance it theoretically, and to extend its cultivation. The emperor Charles V. founded a lecture at Seville for the improvement of navigation, which derived much advantage from the discovery of the variation of the compass, and the use of the cross staff. The subject also now began to engage the pens of the learned. Two treatises, the first of the kind, containing a system of the art, were published in Spanish, the first by Pedro de Medina, at Valladolid, in 1545, called 'Arte de Navegar,' the second at Seville, in 1556, by Martin Cortes, under the title of 'Breve Compendio de la Esphera, y de la Arte de Navegar, &c.' which was translated into English and passed through several impressions.

The finding of the longitude, which is still a desideratum in the art, had even early engaged the attention of writers; for we find that Pedro Nunes, or Nuncio, published a treatise on this subject in 1537 in the Portuguese language, which was afterwards printed at Basel in Latin, under the title of 'De Arte et Mysterio Navigandi.' In this work the problem of determining the latitude from two observations of the sun's altitude and the intersection almost is resolved. In 1637, Brouncker published his 'Regimen for the Sea,' intended as a supplement to Cortes's and Inlet's; Michael Coignet, a native of Antwerp, published his 'Instruction Necessaire des Points plus excellents et necessaires des

suspended on a pivot, on which, playing at liberty, it directs itself in the north and south of the horizon. Magnetical needles are ruled horizontal when balanced equally on both sides, and inclinatory or dipping when they are constructed so as to show the dip of the needle, or how far it points below the horizon.

NEGATIVE. An epithet for what implies negation.

NEGATIVE ELECTRICITY. That state of bodies, in which they are deprived of some portion of the electricity which they naturally contain.

NEGATIVE PREGNANT (in Law). A negative which implies an affirmation, as when a person denies having done a thing in a certain manner or at a certain time, as stated in the declaration, which implies that he did it in some manner.

NEGATIVE QUANTITIES (in Algebra). Quantities having the negative sign set before them.

NEGATIVE SIGN (in Algebra). A sign marked thus —, to denote less than nothing.

NEGOTIATION. The conducting of a treaty, either in political or commercial matters.

NEGROES. The black inhabitants of Africa, having woolly hair and a peculiar complexion. They have hitherto been the objects of the inhuman traffic called the slave-trade. They are very numerous in the central parts of Africa, and it appears by the late Travels of Denham and Clapperton and others, that powerful kingdoms exist there, in a state further advanced toward civilization, than was supposed. It has been imagined that the negroes are inferior in capacity to the other races of mankind, but a better knowledge of Africa may throw doubt upon this opinion.

NEM. CON. An abbreviation for penitentiary convicts, that is, no one supposing, applied to the decisions of the English parliament and other public assemblies.

NEM. DISSE. An abbreviation for humane disseminators, or one disseminating, that is, with gratuitous consent.

NEPHRITE. A sort of stone of the same kind, of a dark lock-green colour, verging to blue. It is found in China, America, and Egypt, and is highly prized by the Hindoos and Chinese, by whom it is made into talismans.

NEPHRITIC. Relating to the kidneys.
NE PLUS ULTRA, i. e. no farther. The extremity, or utmost extent to which any thing can go.

NEPTUNE. The god of the sea, in story of Jupiter, in the heathen mythology, who is known by his trident.



NERITA. A sort of testaceous worms, whose shells are adorned with a beautiful painting in miniature.

NERVES (in Anatomy). Long white cords, the medullary prolongations of the brain which serve for sensation.

NERVES (in Botany). Long tough strings, which run lengthways in the leaf of a plant.

NERVOUS. An epithet for what relates to the nerves, as the nervous system, nervous disorders, &c.

NEST. The lodging prepared by birds for incubation and receiving their young.

NET. A device for catching either fish or fowl, formed by threads interlaced.

NETTINGS. Small ropes suited to other gratings with rope-yarn, to stretch in different parts of a ship.

NETTLE. A stinging herb.

NET WEIGHT. See NEAT WEIGHT.

NEUROPTERA. An order of insects in the Linnaean system, including those which have the wings reticulate, as the dragon fly, the day fly, the lion ant, &c.

NEUTRALIZATION (in Chemistry). The process by which an acid and an alkali are so combined as to destroy each other's properties.

NEUTRAL SALTS. Salts which partake of the nature of both an acid and an alkali.

NEWFOUNDLAND DOG. A very sagacious kind of spaniel that is web-footed, and an excellent swimmer.

NEWSPAPER. A periodical publication, which appears once or oftener in the week, containing an account of the political and domestic occurrences of the time.

NEW STYLE, abbreviated N. S. The Gregorian method of reckoning the days of the year, so as to adjust the odd hours and minutes in the period of the sun's revolution.

NEWT. A small animal of the lizard tribe.

NEWTONIAN PHILOSOPHY. The doctrine of the universe as explained by Sir Isaac Newton, respecting the properties, laws, affinities, forces, motions, &c. of bodies, both celestial and terrestrial. The chief parts of the Newtonian philosophy are explained by the author in his *Principia, or Principles of Natural Philosophy*.

NICENE CREED. A particular creed formed at the first general council assembled at the city of Nice by Constantine the Great, A. D. 325. This creed has since been adopted by the church of England.

NICKEL. A metallic substance, mostly found in a metallic state, but sometimes in that of an oxide. Its ores have a silvery red color.

NICKEL KUPFER, or the SOLERURARY or NICKEL, is a compound of nickel, arsenic, and a sulphuret of iron.

NICTITANT MEMBRANE (in Comparative Anatomy). A thin membrane chiefly found in birds and fishes, which covers the eyes of those animals, so as to shelter them from the dust and excess of light.

NIGHT (in Law). The period of darkness, when a man's face cannot be discerned.

NIGHTHAWK. An American bird, that makes its appearance at evening, and is seen high in the air, flying about in pursuit of insects. It has been erroneously supposed that it was the whip-poorwill.



NIGHTHAWK. A heavy, pressing sun in the forest during the night, to various persons are subject.

NIGHTINGALE. A small brown, European bird, that sings beautifully during the night.



NIGHTSHADE, or DEADLY NIGHTSHADE. A poisonous plant, bearing a bell-shaped corolla, from the leaves of which painters extract a fine green.

NISI DICIT (in Law). A failure on the part of the defendant to put in an answer to the plaintiff's declaration, &c., by which omission, judgment is of course had against him.

NISGHAU, or NYLGHAU. The Fennian name for a species of antelope, the antelope picta of Linnaeus, having short horns bent forward, and the upper and under parts of the neck matted.



NIMS'S (among Antiquarians). A circle observed on some medals, or round the head of some emperors, answering to the circles of light drawn around the images of saints.

NISI PRIBUS. In England, a commission directed to the Judges of assize, empowering them to try all questions of fact issuing out of the courts of Westminster, that are then ready for trial; and as, by the course of the court, all causes are heard at Westminster, the clause is added in such writs, *Nisi prius (procurator) ad magnam curiam venierit*; that is, *if since the day fixed the parties shall have into the county in question, whether the*

as well as the commission, have received the name.

NITRATES. Salts formed of nitric acid with suitable bases, as the nitrate of potash, soda, &c.

NITRE, vulgarly called **SALTPETRE.** A neutral salt, being a crystallized, pellicular, and whitish substance, of an acrid and bitterish taste, impressing a strong sense of coldness on the tongue. It is found ready formed in the East Indies and in the southern parts of Europe, but by far the greater part of the nitre in common use is produced by the combination of substances in suitable situations, which tend to produce nitric acid, particularly whose nitrous matter becomes decomposed by the air, such as slaughter-houses, drains, and the like.

NITRIC ACID. A heavy, yellow liquid, produced by the chemical combination of oxygen and nitrogen gas. Diluted with the sulphuric and auratic acids, it forms the well known liquid aquafortis.

NITROGEN, or AZOTE. The principle of nitre in its gaseous state, which constitutes four fifths of the volume of atmospheric air. It has neither smell nor taste, and is not to be procured in a separate state; but is remarkable for the properties of extinguishing flame and animal life.

NITRO MURIATIC ACID. A compound of nitric and muriatic acids, formerly called aqua regia.

NITROUS ACID. An acid which has one of oxygen than the nitric acid.

NITROUS OXIDE OF AZOTE. A gaseous substance, best prepared from nitrate of ammoniac, which if inhaled produces an exhilarating and intoxicating effect.

NOBILITY. In England, those who hold a rank above the degree of a knight, and are distinguished from the commonalty by titles and privileges.

NOBLE. A coin, value 5s. 6d., which was struck in the reign of Edward III.



NOCTANTER. By night.

NOCTURNAL. An epithet for what belongs to the night, as a nocturnal hawk, the scab described by the owl or a star in the night.

NOCTURNAL, or NOCTURNATION. An instrument used at sea for finding the latitude and hour of the night.

NODDY. A sea fowl of the tern kind.

NODE (in Surgery). A hard tumour rising out of a bone.

NODE (in Dialling). The axis or cock of a dial.

NODES (in Astronomy). Two points where the orbit of a planet intersects the ecliptic: the Northern or Ascending Node, called the dragon's head, is marked thus ☊, the Southern or Descending Node, the dragon's tail, marked thus ☋.

NOLLE PROSEQUI. An agreement on the part of the plaintiff not to prosecute his suit.

NO MAN'S LAND. A sea term for the space in midships, between the after part of the battery, and the fore part of a ship's beam, when she is stowed upon the beam.

NOMENCLATURE. A catalogue of the most useful and significant words in any language or in any particular science.

NOMINATIVE (in Grammar). The first case of a noun, or the name itself.

NONAGESIMAL. The ninetieth degree of the ecliptic.

NONCHALANCE. An affected indifference.

NON COMPOS MENTIS (in Law). Not of sound mind.

NON CONDUCTORS (in Electricity). Bodies which do not become electric by being placed in the neighbourhood of an excited body.

NONCONFORMIST. In England, a person not conforming to the church of England.

NON EST INVENTUS, l. e. literally, He has not been found. This was once made by the sheriff in the return of the writ, when the defendant is not to be found in his bailiwick.

NONPLUS. A difficulty or embarrassment, when one cannot proceed any way.

NON PROSEQUI, l. e. Non prosecute, He does not prosecute. A assuit, or the form of renouncing or letting fall a suit by the plaintiff.

NONRESIDENCE (in Law). In England, the not residing on their benefices, as applied to spiritual persons.

NONSUIT. The letting fall or renouncing a suit.

NORMAL. A perpendicular.

NORRBY KING AT ARMS. In England, the third king at arms.

NORTH POLE. A point in the northern hemisphere, sixty degrees distant from the equator.

NOBILITY. A systematic arrangement and description of diseases.

NOSTRUM, s. e. Ours. The name given to the medicines offered by quacks as universal remedies.

NOTARY (in Law). A scrivener who takes notes and draughts of contracts.

NOTARY PUBLIC (in Commerce). A scrivener who witnesses deeds, in order to make them authentic in foreign courts.

NOTATION (in Arithmetic and Algebra). The method of expressing numbers or quantities by signs or characters appropriated for that purpose. The Jews, Greeks, and Romans expressed their numbers by the letters of their alphabet; the Arabians had particular characters called figures, which have been universally adopted in Europe in all arithmetical operations. The Roman mode of notation is also still in use in marking dates, or numbering chapters, &c.

NOTATION (in Music). The manner of expressing sounds by characters.

NOTE. Any short writing or memorandum.

NOTE (in Music). A character to distinguish the pitch and time of a sound.

NOTE OF HAND. A writing under a man's hand, by which one person engages to pay another a sum of money on a certain day, or on demand; this may either be in the form of a bill or of a promissory note.

NOT GUILTY (in Law). The general issue or plea of the defendant in a criminal action.

NOTICE (in Law). The making something known that a man was or might be ignorant of, and which it was proper he should be made acquainted with.

NOV. An abbreviation for November.

NOVEL. A narrative of fictitious events and characters. When the incidents and persons are not probable, it is called a romance; and if only a short story, a novelette.

NOVEMBER. The eleventh month of the Julian year. It was called November because it was the ninth of Romulus's year.

NOVICE (in the Romish Church). One who has entered his novitiate or year of probation, before he takes his vow; in a general sense, a learner in any profession, an unskilful person.

N. s. An abbreviation for new style, or the new mode of farming the calendar.

NOTIX (in Grammar). A part of speech, or name of the thing itself, as house, dog,

NUCLEUS (in Astronomy). The body of the comet, otherwise called the head.

NUDE CONTRACT. A loan, naked contract, without a consideration, which is void in law.

NUISANCE (in Law). Any nuisance which tends to the hurt or inconvenience of another.

NUMBER (in Arithmetic). An assemblage of several units or of several things of the same kind. Whole numbers are otherwise called integers, as 1, 2, 3. Broken numbers are fractions, as $\frac{1}{2}$. Cardinal numbers express the number of things, as 1, 2, 3. Ordinal numbers denote the order of things, as 1st, 2d, 3d, &c. Even numbers are those which may be divided into two equal parts, without a fraction, as 2, 4, 6, &c. Uneven numbers are such as leave a remainder after being divided, as 3, 5, 7, &c. A square number is the product of any number multiplied by itself, as 4, the product of 2 multiplied by 2.

NUMBER (in Grammar). An inflection or change of ending in nouns and verbs, to denote number. Numbers are singular to denote one, dual to denote two, or plural to denote more than one.

NUMBERS (in Poetry). Measures or cadences which render a verse agreeable to the ear.

NUMERAL. Any character which expresses a number, as, 1, 2, 3.

NUMERAL LETTERS. The Roman letters I. II. III. IV. &c. which denote numbers.

NUMERATION. The art of expressing in figures any number proposed in words, or expressing in words any number proposed in figures.

NUMERATOR. The number in the upper line of a fraction, denoting the number of the given parts taken, as 2 in $\frac{2}{3}$, that is, three out of the four parts of an integer.

NUMERICAL. Relating to numbers, or numerical algebra, that which is performed by the help of numbers.

NUMISMATICS. The science of medals and coins.

NUNCIO. The pope's ambassador.

NUNCUPATIVE WILL. A will made by word of mouth.

NUNNERY (in the Romish Church). A religious house for nuns, or females who have bound themselves by vow to a single life.

NURSERY. A chamber for young children.

NURSERY. A place set apart for young trees and shrubs.

NUPTIALS (in Astronomy). A conjunction of the sun and moon.

NUCLEUS. The kernel of a nut, &c.

OFFENCE (in Law). The violation of *any law*; this is capital, if punished with death, and not capital, if visited with any other punishment.

OFFERINGS (in Law). In England, church dues, payable by custom, as the Easter offerings, or the offerings at marriages, &c.

OFFICE. That function by virtue whereof a man hath some employment, either in the public affairs or those of a private individual.

OFFICER (in Law). One filling an office or post under government.

OFFICER (in Military and Naval Affairs). One acting under government in a military or naval capacity.

OFFICERS, COMMISSIONERS (in the Army). Appointed by commission.

OFFICERS, COMMISSIONERS (in the Emperor's Navy), hold their commissions from the Lord High Admiral or Lords of the Admiralty.

OFFICERS OF THE CROWN. The great officers of the crown in England are the Lord High Chancellor, the Lord High Steward, the Lord High Treasurer, the Lord President of the Council, the Lord Privy Seal, the Lord Chamberlain, the Lord High Constable, and the Earl Marshal.

OFFICIAL (in Law). A deputy appointed by the archdeacon for the execution of his office.

OFFICIAL. An epithet for what is sold in shops, as official plants, herbs, medicines, &c.

OFFING. The open sea, or that part of the sea at a distance from the shore, where there is deep water.

OFFSETS (in Botany). Young shoots that spring and grow from shoots.

OFFSETS (in Surveying). Perpendicular let fall, and measuring from the stationary lines to the hedge, fence, or extremity of an enclosure.

OGEE (in Architecture). A moulding formed like the letter S.



OIL. A fat, mucous substance, which derives its name from *olea*, the olive, because it was at first principally known as the produce of the olive. Oils are distinguished by chemistry into volatile or essential oils, which have a strong, acrid taste, and a strong, fragrant smell, being obtained from essential plants; and fixed

oils, which are thick and viscid, insoluble in water, and do not boil under 600 degrees: these latter oils are obtained from both animal and vegetable substances, as train oil, olive oil, roseed oil, &c.

OIL GAS. A gas extracted from flint oil, which is more expensive and not reckoned so good as that procured from coals.

OLEACEÆ. One of the Linnaean natural orders of plants, containing persea, anacardium, thyme, mist, &c.

OLERON, Laws or. A code of maritime law, so called because it was framed by king Richard I. on an island off the coast of France.

OLFACTORY NERVES. The nerves which give the sense of smelling.

OLIGARCHY. A form of government wherein the administration of affairs is lodged in the hands of a few persons.

OLIVE TREE. A tree, native of the southern parts of Europe, which rises with solid upright stems, and branches numerous on every side. The olive, which is the fruit of this tree, yields an oil that is of an emollient and solvent nature.



OLYMPIAD. The space of four years, whereby the Greeks reckoned their time from the circumstance of the Olympic games having been established here in 604 years. The first Olympiad is dated, according to some, 774 years before Christ.

OLYMPIC GAMES. solemn games among the Greeks, in honour of Jupiter Olympus, at which five kinds of exercises were exhibited, namely, leaping, running, wrestling, quating, and whitens.

OMEGA. The last letter of the Greek alphabet.

OMENTUM. A double bottle membrane spread over the entrails.

OMER. A Hebrew measure, about three pints and a half English.

OMNIUM. A term among stock brokers for all the kinds of stock, as 3 per cents, 4 per cents, &c., which are sold

the equator, being now estimated at something less than 22 degrees 28 minutes, as the ecliptic approaches nearer to a parallel with the equator at the rate of about 41 seconds in 100 years.

OBOLUS. A small Grecian coin, equal to one penny farthing.

OBSERVATION. The observing the phenomena of the heavenly bodies by means of any instrument.

OBSERVATORY. A place erected in some lofty situation, and fitted up with telescopes, quadrants, &c. for the purpose of making astronomical observations, such as the observatories at Greenwich, Paris, Munich and Palermo, which are the most celebrated among the modern observatories. The ancient Chaldeans had also similar places.

OBSERVATORY, EQUATORIAL, or FORETABLE. An instrument for solving many problems in astronomy, as finding the meridian, pointing the telescope on a star, though not in the meridian, in full daylight, &c.

OBUSIONAL CROWN. A crown made of the grass that grew in a besieged place, which the Romans gave to the general by whom the town was taken.



OBT. An abbreviation for obedient.

OBTUSE ANGLE. Any angle greater than a right angle. See ANGLE.

OCCIDENT. Westward, as the occident equinoctial, &c.

OCCIPUT. The back part of the head.

OCCULTATION. The obscuration of any star or planet by the interposition of any other body, as the moon, &c.

OCCULTATION, CIRCLE OF. An imaginary circle round the poles, which contains those stars that are not visible in our hemisphere.

OCCULT DISEASES. Diseases, the causes and treatment of which are not understood.

OCCULT QUALITIES. Qualities in

bodies which do not admit of any rational explanation.

OCCUPATION (in Law). The possession and use of lands or tenements.

OCEAN. A vast collection of salt and navigable waters, enclosing the continents or quarters of the globe, Europe, Asia, Africa, and America, and comprehended under the several divisions of the Atlantic, the Pacific, Indian, Northern, and Southern Oceans.

OCELOT. A very fierce, but beautiful animal of the cat kind, found in South America.

OCHRE. A sort of earth consisting of alumina and red oxide of iron.

OCTAGON. A figure of eight sides and angles.



OCTAHEDRON. One of the five regular bodies, consisting of eight equal and equilateral triangles.

OCTANDRIA (in Botany). One of the Linnæan classes, consisting of plants having eight stamens to each flower.



OCTANT. An aspect of two planets when they are distant from each other 45 degrees, or the eighth part of a circle.

OCTAVE (in Music). The eighth interval in a scale of sounds.

OCTAVO, l. e. in eight, expressed by printers thus, *lvs.* The form of a page by folding a sheet into eight leaves, so as to make it consist of sixteen pages.

OCTOBEE. The eighth month in the year, containing thirty-one days.

OCCULIST. One who cures the disorders of the eyes.

ODD. An epithet for any number in the series of 1, 3, 5, &c.

ODE. A poem written to be sung to music.

ODOUR. The scent or smell.

OEDEMA. Any tumour or swelling.

ŒSOPHAGUS. The gullet, or *gullet* (from the transverse canal, reaching from the throat to the stomach).

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OLIVACEÆ. One of the Linnæan natural orders of plants, containing peaches, as spinach, thyme, mint, &c.

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OMENTUM. A double setlike membrane spread over the intestines.

OMER. A Hebrew measure, about three pints and a half English.

OMNIBUS. A term among stock brokers for all the kinds of stock, as 5 per cents, 4 per cents, &c., which are sold

together as they were bought by the contractors from government.

ONION. A bulbous edible root, growing in gardens, and used for various culinary purposes.

ONYX. A precious stone, accounted a species of opacite agate. It is a semiprecious gem of different colours, but the bluish white kind is looked upon as the true onyx of the ancients.

OPACITY. That property in bodies by which they are rendered impervious to the rays of the sun, owing probably to the density of the parts.

OPAL. A precious stone of various tints, which comes under the class of pedicid gems. It is found in many parts of Europe, especially in Hungary. When first dug out of the earth, it is soft, but it hardens and diminishes in bulk by exposure to the air. The substance in which it is found is a ferruginous sand stone.

OPERA. A dramatic composition set to music. It is sung on the stage, accompanied and interspersed with dialogue.

OPERA-GLASS. A kind of glass constructed in a small wooden tube, so as to view a person in a theatre, and, as the glass is made to point at a different object from that which is viewed, it may be used without any one knowing exactly who is observed.

OPERATION (in Surgery). Any exercise of the surgical art which is performed by the use of instruments.

OPERATION (in Chymistry). Any process that leads to a given result.

OPERATION (in Military Affairs). Any movement of an army for the attainment of a particular object.

OPHTHALMIA. An inflammation of the membranes of the eye, a disease which particularly affected the English soldiers during their stay in Egypt.

OPIATE. A medicine made of opium.

OPIUM. An impounded gummy juice obtained from the head of the poppy. It is imported in cakes from Persia, Arabia, and other warm climates; is of a reddish brown colour, and of a nauseous bitter taste; and has a powerfully narcotic property.

OPORISAMUM, BALM OF GILGAI. A gummy juice of the balsam tree.

OPONAX. A gummy, viscid juice obtained from the root of an umbelliferous plant growing in warm climates.

OPUSUM. An American animal lives in holes and woody places. Its female is remarkable for having three pouches, wherein she conceals herself in time of dan-

ger. It is found only in Virginia, and the vicinity.



OPPOSITION (in Astronomy). One of the aspects of the planets, when they are 180 degrees distant from each other, that is, in a diametrically opposite relation to each other.

OPORTIVE (in Grammar). A mood or form of a verb by which is expressed the wish or desire to do a thing.

OPTIC. Pertaining to the sight; as Optic Glasses, glasses contrived for viewing objects which cannot otherwise be seen, as spectacles, telescopes, microscopes, &c.

OPTICIAN. A dealer in or maker of optical instruments.

OPTIC NERVES. The second pair of nerves of the brain, which perforate the bulb of the eye, and serve for the sense of sight.

OPTIC PLACE OF A STAR. That point of its orbit in which it appears to be in our eye.

OPTIC PYRAMID. A pyramid formed by rays drawn from the several points of the perforator to the eye.

OPTICS. That branch of natural philosophy which treats of the nature of light and colours, or of the general doctrine of vision. It is distinguished into three kinds: namely, optics, properly so called, which treats of direct vision; catoptrics, which treats of reflected vision; or that which is performed by means of rays reflected from speculums or mirrors; and dioptrics, which treats of refracted vision; or that which is performed by means of rays refracted or turned out of their course by passing through mediums of different densities, chiefly through glasses or lenses.

OPTICS, HISTORY OF. The properties of light naturally attracted, at an early period, the attention of philosophers who made nature their study. Empedocles, who flourished upwards of four hundred years before Christ, is said to have written a treatise on light; and the Greeks of Aristotle's period, as well as the school of Arip-

numerous pipes of various kinds and dimensions, which, for its solemnity, grandeur, and rich volume of tone, is peculiarly fitted for the purpose for which it is commonly employed. Organs are sometimes of an immense size: the organ in the cathedral church at Ulm, in Germany, is said to be 33 feet high and 22 broad, its largest pipe being 13 inches in diameter, and it having sixteen pair of bellows.

ORGANIC REMAINS. A name applied to all those animal and vegetable substances which have been dug out of the earth in a mineralized state, and serve as strong evidences of the universal deluge, and the changes which ensued. They also afford reason to believe that the matter composing the solid parts of the globe has undergone violent and extensive revolutions, and that whole classes of vegetables and animals now extinct have existed on the globe, anterior to the present constitution of things. See **Geology**.

ORIENT. The east or rising point.

ORIFICE. The mouth or entrance to any cavity in the animal body.

ORIGINAL. The first copy, or that from which any thing is first transcribed or translated.

ORIOLE. A species of birds, of which the Baltimore oriole, or hang-bird, is a beautiful variety, well known in the U. States.



ORION. A constellation in the southern hemisphere, containing from thirty-eight to seventy-eight stars, according to different writers.

ORNAMENTS (in Architecture). Leaves, roses, clunnetings, and the like, which ornament the different parts of a column.

ORNITHOLOGY. That branch of Natural History which treats of Birds, and their natures, habits, form, economy, and uses.

Birds, in the Linnaean system, are divided, under the class Aves, into six orders according to the form of their bills: Accipitres, including the eagle, vulture,

hawk, &c.; Fines, including the crow, jackdaw, juncos, &c.; Anseres, including the duck, goose, swan, gull, &c.; Grallae, as the heron, woodcock, snipe, &c.; Gallinae, including the partridge, pheasant, turkey, domestic fowl, &c.; Passeres, including the sparrow, lark, swallow, &c.

ORNITHOLOGY, HISTORY OF. The only scientific writers on the subject of birds among the ancients were Aristotle and Pliny. The former of these writers speaks of the different kinds of food adapted to the different species, of which he gives an imperfect nomenclature, and adds some remarks on their various periods of hatching their eggs. Pliny's remarks on birds are very desultory, and not very extended. The first writer among the moderns, who has treated of birds methodically, is Pons Befon, who has classed them principally according to their food and habitation. He has likewise added many observations on their external form and character. Conrad Gesner, his contemporary, has displayed much learning in his work, having given alphabetical tables of the names of birds in Hebrew, Chaldee, Arabic, Greek, and Latin, and numerous references to the writers from whom he collected his materials. Aldrovandus, the celebrated naturalist, followed in the steps of Befon and Gesner, and added much to their store of learning and research; at the same time illustrating the subject with numerous wood cuts. The next ornithologists of any distinction, after these three, were Willoughby and Ray, the latter of whom published the works of the former, his friend, with many additions of his own, in 1678. In this work, the external and internal structure of birds is described. Jacob Theodori K. J. in his History of Birds, divides them into families, orders, and tribes; the families being arranged according to their feet, the orders by the form of the bill, and the tribes by the form of the foot, &c. In the systematic arrangement of Moehring, the classes, orders, and genera of birds are distinguished by the form of the feet and bill. The system of Linnaeus, which follows him in order of time, is dated from the year 1766. It is formed from the numbers and habits of the birds, as well as their external form (see **ZOOLOGY**). Brisson, in his system of Ornithology, has distributed birds into twenty-six orders, from the form of the bill and feet, &c., including under Quinquies hundred and fifteen genera, and thousands of hundred species. (The work, which is in six volumes 8vo., is illustrated with more

The elevation or representation of the front of a building.

ORTOLAN. A delicate kind of the laughing lark, which visits England before the setting in of frost and snow.

OSYCTOLOGY. The science of organic remains.

OSCILLATION. The vibration of a clock.

OSCULATION. The contact between any curve and its osculatory circle.

OSIEL. The red wains-willow, of which wicker baskets are made.

OSIRIS. An Egyptian deity.

OSPREY. The fish hawk, common in Europe and America.



OSSIFICATION. The formation of bones, or the hardening into a bony state.

OSTEOLOGY. The description of the bones.

OSTRACISM. A mode of punishing the sentence of banishment among the Athenians by means of tiles, on which the name of the person to be banished was written.

OSTRACITE. A kind of crust sticking to furnaces where the brass ore is melted.

OSTRICH. The largest of all birds, having usually seven feet high from the top of the head to the ground, but from the



only four. It is a native of Africa, Arabia, and lays forty or fifty eggs

which are as large as the head of a calf. There are three birds allied to the ostrich which are sometimes confounded with it; the cassowary of the Asiatic Islands, the emu of New Zealand, and the rheu of Patagonia.

OTTER. A voracious animal, that inhabits the banks of rivers, and feeds principally on fish. Its fur is much esteemed. It is fierce and crafty when attacked, but may easily be tamed when young, and taught to catch fish. The sea otter, which inhabits the northern seas, is the largest of the species.



OVAL. An oblong curvilinear figure, in the shape of an egg. The mathematical oval, which is a regular figure, equally broad at each end, is called an ellipse.

OVERSEERS (in Law). Parish officers who take charge of the poor that receive parish relief.

OVERT ACT (in Law). A plain and open matter of fact, serving to prove a design.

OUNCE. In Avoirdupois weight, the sixteenth part of a pound; in Troy weight, the twelfth part; in Apothecaries' weight, equal to eight drams.

OUNCE (in Zoology). An animal of the leopard kind, but smaller and milder than the other species. It is trained to hunting in the East Indies.



OVOLO (in Architecture). A convex moulding, the section of which is usually the quarter of a circle.



OUTLAWRY. In England, put out of the law, or out of the

as an honourable attendant on a prince, to bear up train, robes, &c.

PAGODA. A Chinese or Hindoo temple; also an Indian coin worth about eight shillings.

PAINE AND PENALTIES. In England, an act of parliament to inflict pains and penalties, beyond or contrary to the common law, in the particular cases of great public offenders.

PAINTED LADY. A beautifully variegated pea.

PAINTER. An artist who represents objects by colours, as a portrait painter; also an artisan who lays colours on wood or stone, &c., as a house painter. The company of painters in London is of great antiquity, but was not incorporated before the reign of Elizabeth.

PAINTER (a Sea Term). A rope for hauling a boat on shore.

PAINTER-STAINER. A painter of coats of arms. They were incorporated with the painters.

PAINTING. The art of representing all objects of nature by lines and colours on a plain surface. In the exercise of this art, the powers of imagination, imitation, and invention, are required for making a choice of the subject, and of the several figures and subordinate parts of a picture, which are comprehended under the name of design. In the execution of the work, there is likewise required a due regard to the effects of light and shade, and colours, which is termed composition; and also a nice choice of the colours to be employed, which is known by the name of coloring. Painting, as regards the subjects, is distinguished into historical painting, portrait painting, landscape painting, &c.; as regards the form and the materials, into painting in oil, water colours, fresco, miniature, distemper, mosaic, &c.

PAINTING, HISTORY OF. It is to be supposed that painting was among the earliest efforts of human ingenuity, for the love of imitation would naturally suggest the idea of representing the surrounding objects which engaged the attention and interested the affections. Thus it is that the savages painted their own bodies, by means of smearing the skin, and infusing different colours into the punctures, and that they painted on their shields different figures according to the fancy of the hunter. So, likewise, we find that the Mexicans were in the habit of representing their warlike exploits by means of re-writing, which was something new to the hieroglyphics of the Egyptians, that served to represent sacred ob-

jects for religious purposes. The first step beyond the rude machine was an attempt to complete the imitation by applying tints, which at first was effected by covering the different parts of the figure with different colours, after the manner of our coloured maps, as was done by the Egyptians, and is still practised by the Indians and Chinese.

Painting was peculiarly cultivated by the Egyptians, but was not carried to any perfection, because they principally employed themselves in the representation of the monstrous objects of their worship, rather than in depicting natural or real objects; in consequence, their natural figures were very stiff and unbecomingly, the legs being drawn together, and the arms pasted to the sides, like the mummies which they copied. Their painters were likewise very much employed on earthen vessels or drinking cups, or in ornamenting barges, and covering with figures the chests of mummies. Pliny also informs us that the Egyptians painted the precious metals, which doubtless consisted in surmounting gold or silver with a single colour. The Persians, as well as the Arabians, had some idea of mosaic; but the art was cultivated by those people principally for domestic purposes. Among the Indians, painting is confined principally to the representation of their idols and monstrous objects of worship, but the painters of Thibet are remarkable for the delicacy of their strokes, in which they might vie with the Greeks, although deficient in every other particular. The Chinese are remarkable for the brightness of their colours; but this is the only perfection they can boast of. Their figures are, as usual, nature as possible, devoid of vapour and of proportion. The Egyptians were the first people who appear to have excelled in this art. Many specimens of Egyptian painting have been preserved, which consist of long painted friezes, and pilasters adorned with huge figures. The paintings are executed on a ground of thick mortar, and many of them are said to be in a high state of preservation. There are likewise many Coptician vases extant, which are wonderful proofs of the perfection of the art at a very early period among these people. As to the origin of painting among the Greeks, it is not easy to define the period of its commencement. The Greeks themselves, according to Pliny, speak of Polygnotus as their first painter of eminence, who flourished in the 48th Olympiad, or 480 years before Christ. That painting in dry colours existed in the time of Homer, is cer-

PALISADE. A finer kind of palting in gardens.

PALISADOES, or PALISADES (in Fertilisation). An enclosure of stakes, used to fortify the avenues of open farms, &c. They were sometimes so ordered, that they would turn up and down as occasion required, and might be hidden from the view of the enemy until he came to the attack.

PALLADIUM. A sort of metal drawn from crude platina.

PALLAS. A small, newly discovered planet, situated between the orbits of Mars and Jupiter.

PALLET. A painter's colour board.

PALLET (among Golders). A tool for taking up the gold leaf.

PALLET (among Mariners). A partition in a hold.

PALLET (in Heraldry). The diminutive of the pale, being one half of its breadth.

PALLET-BED. A small, low bed.

PALLETS. Levers in clocks and watches, connected with the pendulum or balance, which receive the immediate impulse of the wheel.

PALL-MALL. An ancient game, in which an iron ball was struck with a mallet through a ring or arch of iron, as was once practised in St. James's Park, and gave its name to the street called Pall-Mall, pronounced Peil-Mell.

PALM. A tree of different kinds, the branches of which were carried in token of victory. The cocco-nut tree, date tree, bread-fruit tree, and many others, are varieties of the Palm. Some of these varieties are found in nearly all tropical climates.

PALM (in Commerce). A measure of three inches.

PALM. A sea term for the broad part of an anchor.

PALM (in Anatomy). The inner part of the hand.

PALME. Palms; one of the seven families into which Linnæus divided the vegetable Kingdom, including such trees and shrubs with simple stems as bear leaves resembling those of the ferns.

PALMER. A pilgrim bearing a staff.

PALMISTRY. A mode of telling fortunes by the lines of the hand.

PALM SUNDAY. The sixth Sunday in Lent, the next before Easter, commemorative of our Saviour's triumphal entry into Jerusalem, when palm branches were strewn in the way.

PALM WORM. A poisonous insect of

America. This insect is extremely swift in its motions.

PALSY, or PARALYSIS. A privation of motion or sense of feeling; a nervous disorder arising from an affection of the cerebellum.

PAN. The god of mountains, woods and shepherds, who was said to be the son of Mercury, and the inventor of the Pan-fest pipes. He is represented as a monster, with horns on his head, and the legs and feet of a goat.



PANACEA. A universal remedy in the cure of all disorders.

PANADA. Bread pup.

PANATHENÆA. A festival celebrated at Athens in honour of Minerva.

PANCRATIUM. An exercise among the ancients, which consisted in wrestling, boxing, and kicking at the same time.

PANCREAS (in Anatomy). A flat glandular viscus of the abdomen; its animal called the sweetbread.

PANCREATIC. Belonging to the pancreas, as the pancreatic duct and juice.

PANDICTS. The name of a volume of the civil law, digested by order of the emperor Justinian.

PANDORA. The first woman, according to the poets, made by Jupiter, who presented her husband Epimetheus with a box, the gift of Jupiter, and on his opening it, there flew out all kinds of evils on the earth.

PANE. A square of stone.

PANEGYRIC. A set speech among the ancients in praise of any one; in the Greek Church, a book of praises of Jesus Christ and the saints.

PANEL, or PANSEL. A schedule or roll of parchment on which are written the names of the jurors returned by the sheriff.

PANICLE (in Botany). A sort of inflorescence or flowering, in which the flowers and fruits are scattered on pedun-

subtle, and carries a top or plume of small hairs.



PAR. An equality between the exchanges of different countries.

PARABLE. An allegorical instruction, founded on something real or apparent in nature or history, from which a moral is drawn.

PARABOLA (in Conic Sections). A curve made by cutting a cone by a plane, parallel to one of its sides, or parallel to a plane that touches one side of the cone.



PARACHUTE. An instrument in the shape of an umbrella, which serves to break the fall in descending from an air balloon.

PARADE. The place where troops draw up, to do duty and mount guard.

PARADIGM (in Grammar). An example of a Greek or Hebrew verb, conjugated through all its moods and tenses.

PARADISE. The garden of Eden, where Adam and Eve dwelt in their state of innocence.

PARADISE, BIRD OF. A bird of a beautiful plumage, that chiefly inhabits the Asiatic islands. Its feathers are much used as ornaments for the head among the Japanese, Chinese, and Persians, from whom they are obtained, and imported Europe.

Its name was given it by Ixora, who, seeing it on the wing, to see, fancifully imagined it to be

an inhabitant of the air, and nest of the land.



PARADISE, GRAINS OF. The hot berries or seeds of the cardamum.

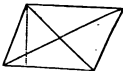
PARADOX. An opinion apparently absurd or contradictory, although sometimes true in fact.

PARAGRAPH. A collection of sentences comprehended between one break and another.

PARALLAX. A change in the apparent place of any heavenly body when seen from different points of view.

PARALLEL (in Mathematics). The name for lines, surfaces, or bodies every where at an equal distance from each other.

PARALLELOGRAM. A plane figure, bounded by four right lines, whereof the opposite are parallel and equal to one another.



PARALLEL SPHERE (in Astronomy). The situation of the sphere when the equator coincides with the horizon, and the poles with the zenith and nadir.

PARALYSIS. The palsy.

PARAPET. A wall breast high, that serves to hide the roof of a house.

PARAPHRASE. An explanation of any text in plainer and more ample terms.

PARASANG. A Persian measure equal to from 30 to 50 stadia or furlongs.

PARASELENE. A mock moon, or a meteor in the form of a luminous ring round the moon.

PARASITE (among the Ancients). A guest invited by the priest to eat of the sacrifice; a trencher friend, or hanger on at the tables of the great, who lives by flattery.

PARASITICAL PLANTS. Such as

PARTLEY. A potato, and a pomegranate, which grows in gardens.

PARTNEP. An edible root.

PARTSON. In England, the person holding the office of rector or vicar in a parish.

PART (in Arithmetic). A quantity contained in a Whole.

PART (in Music). A piece of the score or partition, written by itself, for the convenience of the musician.

PART (in the Drama). The character or portion of a piece assigned to a performer.

PARTERRE. An open part of a garden in the front of a house, commonly ornamented with flowers.

PARTHENON. A temple at Athens, sacred to Minerva.

PARTICIPLE (in Grammar). One of the parts of speech, so called because it partakes both of the noun and the verb.

PARTICLE (in Physiology). A minute part of any body which enters into its composition.

PARTICLE (in Grammar). Small indeclinable words, that serve to unite or connect others together.

PARTIES (in Law). The persons named in a deed.

PARTING. Separating gold and silver by aqua regia.

PARTITION (in Law). Dividing lands or tenements among heirs or partners.

PARTNER. One who joins with another in some concern or affair.

PART OWNERS. Partners possessed of a certain share in a ship.

PARTRIDGE. A bird of game which abounds in all parts of Europe, and is highly esteemed for its flesh. It resembles the quail of the United States, but is larger.



The bird called partridge in New England, and pheasant at the South, is a species of grouse.

PARTS OF SPEECH. The grammar, but division of words according to their grammatical use or dependence upon each other; they are commonly reckoned nine

in number, namely, the article, noun, pronoun, verb, participle, adverb, conjunction, preposition, and interjection.

PARTY (in Military Affairs). A small detachment or number of men sent upon any particular duty, as a pursuing party, &c.

PARTY (in Public Affairs). Any number of men combining together to follow their own particular views, either in politics or religion.

PARTY-WALLS. Partitions of brick made between buildings separately occupied, to prevent the spreading of fire.

PASQUINADE. A short satirical libel that is generally stuck up to be read by the passage by.

PASS (in Military Affairs). A strait or narrow passage, which renders the entrance into a country difficult for an army.

PASS (among Miners). A frame of thin boards, set sloping for the use to slide down.

PASS (in Fencing). A push or thrust at the adversary.

PASSAGE (in Music). A succession of sounds forming a measure or phrase in a composition.

PASSAGE (in Military Affairs). The passing over bridges, mountains, &c.

PASSAGE (in Navigation). The course pursued at sea, particularly that which has been attempted to be taken by the north pole in going to India. This attempt has been made in two ways, namely, by coasting along the northern parts of Europe and Asia, called the north-east passage; and another by sailing round the northern part of the American continent, called the north-west passage; besides which, an attempt has also been made to sail over the pole itself.

PASSENGER. Any one travelling by a coach, vessel, or other mode of conveyance; also any one passing by.

PASSERES. An order of birds in the Linnaean system, comprehending such as have the bill acute and pointed, as the pigeon, the hawk, the thrush, &c.

PASSION WEEK. The week immediately before Easter.

PASSIVE. Suffering, an epithet for verbs which express the suffering or being acted upon, as 'to be loved.'

PASSIVE PRINCIPLES (in Chemistry). Earth and water, so called because their parts are not so readily moved as those of spirit, oil, and salt.

PASSOVER. A festival of the Jews, commemorative of the angels striking the doors of the Egyptians when they slew all the first born of the Egyptians.

PEACE ESTABLISHMENT. The number of effective men required in the army and navy during peace.

PEACE OF GOD AND THE CHURCH. In England, the time of vacation between terms, when there is a cessation from lawsuits.

PEACE OF THE KING. In England, that peace and security, both for life and goods, which the king affords to all his subjects.

PEACE OF THE KING'S HIGHWAY. In England, the immunity that the king's highway has to be free from all molestation.

PEACH. A delicious, juicy fruit, that, in England, grows against garden walls, and in America, is produced abundantly in orchards.

PEACOCK. A well known domestic bird, remarkable for the beauty of its tail and the barbsness of its cry.

PEAK (in Geography). A mountain or elevation with a sharp summit, as the Peak of Teneriffe.

PEAK (among Mariners). The upper corner of sails which are extended by a gaff or by a yard, which crosses the mast obliquely.

PEAR. A well known class of trees which yields a great variety of fruit, as the musk, muscadelle, rose, bergamot, bury pear, sickle, St. Michael's, &c.

PEARL. A concretion found in several shells, as in some species of the oyster and mussel. Pearls are of a silvery or bluish white colour, and very brilliant. They are supposed to be produced by a distemper in the animal, similar to the stone in man; they are formed, however, of the same matter as the inner shell, and consist of layers one over another, after the manner of an onion.

PEARL, MOTHER OF. The shell of another species of oyster, not the pearl oyster. It is extremely smooth, and as white as the pearl.

PEARLASH. Potash calcined or cleared of its impurities by fire.

PEARL BARLEY. The seed of common barley rubbed into small round grains like pearl, of which a cooling drink is made.

PEAT. A sort of fuel dug out of the earth. It is the remains of decayed vegetables, as leaves, stringy fibres, the wood of decayed trunks of trees, &c. It is found in low valleys and bogs in Great Britain and other parts of Europe, and in America.

PEAT MOSS. The bed in which peat is found, either on the surface of the soil, or covered over with sand or earth to a certain depth.

PEBBLES. A sort of fossils distinguished from flints by having a variety of colours.

PECCARY. An animal of the hog kind, found in Mexico.

PECK. A dry measure, the fourth part of a bushel.

PECORA. An order of animals in the Linnæan system, under the class mammalia, comprehending such as have the feet hooved and cloven, and live on grass, and chew the cud, and have four stomachs, as the antelope, the camel, camelopard, stag, musk, sheep, ox, cow, &c.

PECTORAL. Relating to the breast, as pectoral medicines, medicines good for curing diseases in the breast.

PECULIAR (in Law). In England, a church or parish having a jurisdiction within itself.

PECULIARS, COURT OF. In England, a court belonging to the archbishop of Canterbury, which takes cognizance of matters relating to parishes that have a peculiar jurisdiction.

PEDANTRY. A needless or ill-timed display of learning.

PEDESTAL. The lowest part of a column.

PEDIMENT. A low pinnacle, serving to crown a frontispiece, &c.

PEDOMETER. See PERAMBULATOR.

PEER (in Law). An equal, or one of the same rank and condition; formerly used in England, to the vassals or tenants of the same lord; and now applied to upon a man accused of any offence, who, by the criminal law, ought to be peers or equals of the person accused.

PEERESS. The lady of a peer.

PEERS OF THE REALM. In England, the nobility of the kingdom, who, though distinguished by the different titles of duke, marquis, earl, viscount, and baron, are nevertheless all peers or equals in their political character as lords of parliament.

PEEWIT, or LAYWING. An European bird that frequents marshes, and the banks of streams, about the size of a pigeon, and resembling the plover. A similar bird, but much smaller in size, bears the same name in the United States.

PEGASUS (in the Heathen Mythology). A winged horse, on which Bellerophon is fabled to have ridden.

PEGASUS (in Astronomy). A constellation in the northern hemisphere, containing from 30 to 80 stars, according to different writers.

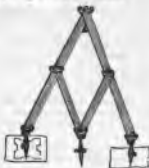
PELIGAN. A large bird found in all

foot by King Henry VII., whose office it is to guard the king's person in his palace.

PENTAGON. A geometrical figure, having five sides and five angles.



PENTAGRAPH. A copying machine, by which designs may be copied in any proportion by persons who are not skilled in drawing. It consists of four jointed levers, as in the subjoined figure.



PENTAGYNIA (in Botany). An order of plants in the Linnæan system, comprehending such as have five pistils in an hermaphrodite flower.

PENTAMETER. A sort of verse in Latin and Greek, consisting of five feet or metres.

PENTANDRIA (in Botany). One of the Linnæan classes, comprehending plants which have flowers with five stamens.



PENTATEUCH. The five books of Moses.

PENTHOUSE. A shed hanging forward.

PENUMBRA (in Astronomy). A partial shade observed between the perfect shadow and the full light in an eclipse.

PEPPER. An aromatic fruit or berry brought from India. It is of three kinds, namely, black, white, and long.—The black is the fruit of a tree that grows in the Spice Islands.

PER. A Latin preposition, signifying by, used in many phrases, as, per mare, &c. or per annum, per cent. or per centum, &c.

PERAMBULATOR. An instrument for measuring distances, otherwise called a pedometer, or surveying wheel.



PER CENTUM, or Per. Cent. Ende of interest, so much for each hundred; as, five per cent, that is, five pounds for every hundred pounds.

PERCH. A kind of fish with sharp, incurvate teeth, that prey upon other fish; the flesh of this fish is very delicate.

PERCH (in Commerce). A measure of five yards and a half, or sixteen feet and a half.

PER CHANCE. Ascendantly.

PERCUSSION. The impression a body makes in falling or striking upon another. It is either direct or oblique; direct when the impulse is made in the direction of a line perpendicular at the point of impact, and oblique when it is given in a line oblique to the plane of impact, or that does not pass through the common centre of gravity of the two striking bodies.

PEREMPTORY (in Law). Absolute or determinate, as peremptory writ, &c.

PERENNIAL. A plant the root of which continues for more than two years.

PERFORATION. Boring or making a hole through.

PER FORCE. Against one's inclination.

PERIANTH. The calyx or cup of a flower when it is contiguous to the flower, in distinction from the calyx or cup consisting of the flower.

PERICARDIUM. A double membrane, which surrounds the whole compass of the heart.

PERICARP. A viscid bag with seeds, or a vessel producing seeds.

PERICRANIUM. A membrane which encloses the bones of the skull.

PERIGEE (in Ancient Astronomy). That point in the heaven in which the sun or any planet is least distant from the centre of the earth.

into natural persons, when God has formed, and artificial persons, or those formed by society, as corporations or bodies politic.

PERSPECTIVE. A branch of mixed mathematics, which shows how to represent objects on a plain surface as naturally as they would appear to our sight if seen through that plane, supposing it were as transparent as glass. Perspective is divided into Aerial Perspective, which has principally a reference to the colouring and shading of distant objects; and Linear Perspective, which relates to the position, form, magnitude, &c., of the several lines or surfaces of objects, &c.

PERSPECTIVE, Horary or. Perspective, as a branch of optics, was known and practised at an early period. It was taught by Democritus and Anaxagoras, and treated of by Euclid in his *Optics*. Alhazen likewise, in his optical treatise, speaks of this art, and of its importance for the painter; but the first writers who professedly treated on perspective, were Bartolomeo Bramantino, in his *Regole di Perspective*, &c., dated 1449, and Pietro del Borgo, who supposed objects to be placed beyond a transparent tablet, and so to trace the images which rays of light emitted from them would make upon it. Albert Durer constructed a machine upon the principles of Borgo, by which he could trace the perspective appearance of objects. Leon Battista Alberti, in his treatise *De Pictura*, speaks chiefly of perspective; and Battista Poma, of Sessa, who died in 1501, wrote a *systeme de perspective*, which appeared in 1503. He is said to have first enumerated points of distance, to which are drawn all lines that make an angle of 45 degrees with the ground line. Guido Ubaldo, in his *Perspective*, published in 1615, showed that all lines are parallel to one another, if they be inclined to the ground line, and converge to some point in the horizontal line; and that through this point also will pass a line drawn from the eye parallel to them. His work contained the first principles, which afterwards formed the groundwork of Dr. Taylor's. He was immediately followed by Giacomo Barozzi, of Vicenza, whose *Two Rules of Perspective* were published, with a commentary, by Ignazio Danti. Marco Polo's work was published at the Hague in 1615, and that of Sirigatti, which was an abstract of Vicenza's, in 1623. But the most celebrated writer on this subject was Dr. Brooke Taylor, who, in his *Linear Perspective*, has laid down principles far more general than those of any of his pre-

decessors. He does not confine his rules to the horizontal plane only, but he has made them applicable to every species of lines and planes. Likewise, by his method, which is exceedingly simple, the fewest lines imaginable are required to produce any perspective representation. As a proof of the excellence of his method, it suffices to add that it has been followed by all who have treated on this subject, and is universally adopted in practice. Mr. Hamilton published his *Stereography* in 2 vols. folio, after the manner of Dr. Taylor; besides which there are some good treatises on the subject from Ware, Cowley, Ferguson, Emerson, &c.; but Mr. Kirby's system of perspective has been generally esteemed for its practical utility.

PERSPECTIVE. In gardens, or at the end of galleries, designed to deceive the eye by representing the continuation of an alley or a building, &c.

PERSPECTIVE-GLASS. The glass or other transparent surface, supposed to be placed between the eye and the object, perpendicularly to the horizon.

PERSPIRATION. The evacuation of the juices of the body through the pores of the skin. This is either sensible, which is called sweating; or insensible, which is not perceptible to the senses.

PERUVIAN BARK. A drug, the bark of a tree growing in Peru.

PESTLE. An instrument for pounding in a mortar.

PETAL. The leaf of the corolla or flower.

PETARD (in Fortification). A hollow engine shaped like a sugar-loaf, made for breaking open gates, drawbridges, &c.

PETIOLE (in Botany). The leaf-stalk, or the stem which supports the leaf.

PETITION (in Law). A supplication in lieu of a writ, which, in England, is always made by a subject to the king when the latter is a party in the suit; also any supplication drawn up in form, and addressed either to the executive or the legislature.

PETITIO FRANCHI (among Legislators). Begging the question, or taking for granted, that which is the matter in dispute.

PETREL. A sea-bird, which has the faculty of spouting pure oil from its bill. It is a sure prognostic of a storm at sea, when it hovers about a ship. The point is about the size of the swallow; its legs are long and slender, and its colour is black. It is seen in all parts of the ocean, mostly engaged in spouting. It is killed by the violent fury of the storm, which

various phenomena in the natural and moral world; as the Pythagorean philosophy, which taught, among other things, the transmigration of souls; the Aristotelian philosophy, or the doctrine of Aristotle, which are to be found in his works; the Socratic philosophy, which is to be found in the writings of Xenophon and Plato; Epicurean philosophy, a sceptical, inconstant scheme of morals ascribed to Epicurus; Stoic philosophy, the doctrine of Zeno the Stoic, who maintained, among other things, that a man might be happy in the midst of the severest toils; the Cynic philosophy, the followers of which affected a great contempt of riches, and of all sciences except morality; and the Sceptical philosophy, broached by one Pyrrho, who affected to doubt every thing.

PHLEBOTOMY. The opening a vein, for the purpose of discharging some of the blood.

PHLEGM (in Anatomy) A thick, tenacious matter secreted in the lungs.

PHLEGM (in Chymistry). A watery, distilled liquor, in distinction from a spirituous liquor.

PHOSPHATES. Salts formed by phosphoric acid, with the alkalies, earths, and metallic oxides.

PHOSPHITES. Salts formed with phosphorus united in the earths, alkalies, and metallic oxides.

PHOSPHORIC ACID. An acid formed by the combination of muriatic acid with oxygen.

PHOSPHOROUS ACID. An acid formed by the combination of phosphorus with oxygen. It contains less of the latter than phosphoric acid.

PHOSPHORUS. A yellow, semi-transparent substance, of the consistence of wax, but brittle during the frost. It is luminous in the common temperature of the air, of a rough, disagreeable taste, and a smell like garlic.

PHOSPHURET. A substance formed by the union of alkalies, earths, and metallic oxides with phosphorus.

PHRENOLOGY. A newly invented science, which professes to teach, from the construction of the human skull, its particular characters and propensities of men, asserting that the faculties and operations of the human mind have their particular seat in the brain, and are to be traced by particular external marks. See **CRANIOLOGY.**

PHYLACTERY. A charm or amulet among the ancients, which, being worn, was supposed to preserve people from certain evils, diseases, or dangers.

PHYSICIAN. One who professes medical science, or the art of healing.

PHYSICS, or NATURAL PHILOSOPHY. The science which explains the doctrine of natural bodies, their phenomena, causes, and effects, with their various affections, motions, and operations.

PHYSIOGNOMY. The study of man's particular characters and ruling passions from the features of the face and the cast of the countenance.

PHYSIOLOGY. The same as **PHYSICS**; also that branch of medicine, which treats of the structure and constitution of the human body, and the functions of the various parts, with regard to the cure of diseases.

PHYTOLOGY. A treatise on the forms, properties, and kinds of plants.

PIA MATER (in Anatomy). The interior membrane, enclosing the brain.

PIANO FORTE. A well known keyed instrument of German invention, which sends forth sounds both piano and forte that is, soft and strong.

PIAZZA. A spacious place enclosed with columns.

PICÆ. An order of birds in the Linnæan system, under the class **AVES**, comprehending such as have their bill compressed and convex, including the parrot, crow, raven, magpie, cuckoo, jay, bird of paradise, &c.

PICKLE. A brine or liquor, usually composed of salt for seasoning meat, and also of spices and vinegar for preserving fruits; also the fruits preserved in pickle.

PICQUET (in Military Affairs). A certain number of men, horse or foot, who do duty as an outguard, to prevent surprises.

PIC (in Printing). The composed matter broken or thrown out of order.

PIC-POWDER, or COCK or PIA-POCK. In England, a cock held in falconry.

PICK. A mole or rampart mined in a harbor to break the force of the sea.

PIGEON. A domestic bird, of which there are many varieties, as the rock pigeon, the carrier pigeon, the pouter, slider, tumbler, &c. See **Dove.**

PIGMENTS. Artificial preparations in imitation of certain colours.

PIG OF LEAD. About two hundred and fifty pounds weight.

PIKE (in Ichthyology). A fish which abounds in most of the lakes of Europe and America. It is remarkable for its voracity, and also for its longevity.

PIKE (in Military Affairs). A long, slender staff, with a pikaxe spike at the end.

PILASTER. A square pillar.

FIQUET. A game of cards played by two persons with only thirty-two cards, rejecting all the deuces, threes, fours, fives, and sixes.

PIRATE. A sea robber; one who lives by plunder at sea.

PISCES (in Ichthyology). The third class into which Linnaeus divided the animal kingdom, consisting of five orders, namely, the abdominalis, apoda, cartilaginei, jagularis, and thoracici. See *ANIMALIA*, &c.

PISCES (in Astronomy). The twelfth and last sign in the zodiac, marked thus (♓).

PISCIS VOLANS. A constellation in the southern hemisphere.

PISTACHIO. A nut of an aromatic smell, growing on a tree in Syria, from which an oil is extracted.

PISTIL, or **POINCEL** (in Botany). An organ adhering to the fruit for the reception of the pollen.

PISTOL. A sort of small firearm, the barrel of which is shorter and thicker than that of a common gun.

PISTOLE. A German coin, in value from 17s. to 19s. sterling.

PISTON. A sucker, or that part which acts as such in all pumps, &c.

PITCH. A tenacious, oily substance, drawn chiefly from pines and firs.

PITCH (in Architecture). The angle in which a pable end, and consequently a whole building, is set.

PITCH (in Husbandry). An iron bar, with a pointed end.

PITCH (in Music). The acuteness or gravity of any particular sound.

PITFALL. A gin or snare to catch beasts.

PITYL. The soft, spongy substance in the stalk or stem of plants.

PIVOT. The pin on which any thing turns.

PIX (in Law). The box in the mist in which the pieces of coin are kept that are selected for trial.

PIX, TRIAL OF. In England, the trial of the coin, previous to their being issued, before a jury of twenty-four persons, twelve of whom are gildsmen.

PLACARD. A proclamation in Holland, and in France a table wherein laws and edicts were hung up; with us, vulgarly, any bill posted up against a wall or post.

PLAID. A sort of stuff worn by Scotch Highlanders.

PLAGIARY. A literary thief, who purloins the works of another, and publishes them in his own name.

PLAQUE. A contagious and malignant temper.

PLAICE. A sort of flat fish, which has a delicate flesh.

PLAN. The representation of something drawn on a plane, as maps, land charts, &c.; or, more particularly, the draught of a building, such as it is intended to appear on the ground.

PLANE (in Geometry). A plane or level surface, whose parts lie even between its extremities.

PLANE (among Joiners). An edged tool for paring and shaving wood smooth.



PLANE TABLE. A simple instrument whereby the draught of a field is taken on the spot.

PLANETARIUM, or **ORRERY.** An astronomical machine, made to represent the motions of the heavens. See *ORRERY*.

PLANE-TREE. A tall tree resembling a maple, which is a native of America.

PLANETS. Wandering bodies, or such stars as change their position, in distinction from the fixed stars. They are distinguished into primary and secondary.

The primary are those which are supposed to revolve round the sun, as Jupiter, Mercury, Venus, &c.; and the secondary

are those which revolve round a primary planet, as the moon, the satellites of Jupiter, Saturn, and Uranus. The original

number of planets was six, constituting, as was imagined, the whole planetary system. These were Mercury, Venus, the Earth, Mars, Jupiter, and Saturn,

which were distinguished by some mark or attribute of the deities of those names. Thus the mark of Mercury, ☿, represents

his caduceus; that of Venus, a mirror, ♀, with a handle to it; that of Tellus, the earth, ♁, to denote her form; that of Mars,

the god of war, a spear, ♁; that of Jupiter, the first letter of his Greek name, ♃; and that of Saturn, a scythe, ♄.

To the above six planets have been added five others, namely, the Georgium Sidus, or Uranus, ♅, Ceres, ♁, Juno, and Vesta.

PLANISPHERIC. A projection of the sphere, and its various circles on a plane, such as maps, &c.; but more particularly, a projection of the celestial sphere upon a plane, representing the stars, constellations, &c.

PLANK. A piece of timber sawed the carpenter's way.

PLANTAIN. A tree in the West I.

PLOT (in Surveying). The plan or draught of a field or any piece of ground, surveyed with an instrument, and laid down in the proper figure and dimensions.

FLOTTING. The describing or laying down on paper the several lines, angles, &c. of a piece of land.

PIOVER. A sort of bird which frequents the shores of England in spring, and migrates in autumn. The golden plover, black-bellied plover, and Wilson's plover, are the varieties of this bird most common in the Middle and Eastern States. They frequent coasts and open grounds.

PLOUGH (in Agriculture). A machine for turning up the soil in preparation for receiving the seed. It consists of a wooden frame, with a handle; a share, or sharpened piece of iron, fixed on the bottom of the plough; and a coulter, another cutting iron, that stands upright in the plough.



PLOUGH (among Bookbinders). A machine for cutting the edges of books.

PLOUGHSHARE. The cutting iron fixed at the bottom of the wood-work of the plough, which forms the furrows.



PLUM. A well known fruit of different kinds; also the dried raisin, that is imported.

PLUMBAGO, or **BLACK LEAD**. An ore of a shining black colour.

PLUMBER. A maker of leaden vessels, or worker in lead. The company of plumbers in London was incorporated in 1611.

PLUMB-LINE (among Artificers). A perpendicular to the horizon, formed by means of the plummet.

PLUMB. A set of feathers for ornament, particularly ostrich feathers.

PLUMMET. A leaden weight attached to a string, by which depths are sounded perpendicularly, and perpendiculars are taken by surveyors, masons, &c.

PLUFF (in Law). In England, tied to any number of benefices, one held by a clergyman.

PLUS, *i. e.* More. A term in algebra, to denote addition, marked by the sign (+), as 4+6=10, that is, 4 plus 6 equal to 10.

PLUSH. Cloth made either of silk, as velvet; or of hair, as sheep.

PNEUMATICS. The science which treats of the mechanical properties of air and other compressible fluids. The principal mechanical properties of air which are treated of under this science, are its fluidity, weight, and elasticity.

PNEUMATICS, *Harrier* or *er*. Although the ancients did not investigate the properties of air with the same minuteness as the moderns have done, yet the subject evidently engaged the attention of Aristotle and other Grecian Philosophers. Aristotle was aware of the gravity of the air, and observed that a bladder filled with air would weigh more than the same bladder when empty; and Empedocles ascribed the cause of respiration to the weight of the air, which, by its pressure, insonates itself into the lungs. Its elasticity also, as well as its gravity, must have been known and made the subject of experiments, if it be true, as is related by historians, that Hero of Alexandria, and Chelios, his contemporary, invented air-guns. The subject was, however, for a long time neglected, or treated superficially; for the effects which are now known to arise from the gravity and elasticity of the air were for a long time attributed to the imaginary principle of a *Fuga Vacui*, or Nature's abhorrence of a vacuum, a principle which Galileo did not altogether discard, although he was fully aware of the gravity of the air, and pointed out two methods of demonstrating it by weighing the air in bottles; but the pressure of the atmosphere was first discovered by Torricelli, and clearly demonstrated by an experiment, which terminated in the invention of the barometer in 1643. It occurred to him, on observing that a column of water, 34 feet high, is sustained above its level in the tube of a common pump, that the same force, whatever fluid was, would sustain a column of any other fluid which weighed as much as that column of water on the same base; and hence he concluded that quicksilver, being about 14 times as heavy as water, would not be sustained at a greater height than 90 or 30 inches. Accordingly he took a glass tube of several feet in length, and, having sealed it hermetically at one end, he filled it with quicksilver; then, inverting it, he held it upright, and, keeping his finger applied to the open or lower orifice, he immersed the

to the poles, which is the characteristic of the magnet.

POLE. A long bar of wood, cut and fitted for various purposes, as the pole of a carriage, &c.

POLE (in Surveying). A measure containing 16 foot and a half.

POLE (in Mathematics). A point ninety degrees distant from the plane of any circle.

POLE (in Astronomy). The extremity of the axis of the earth, an imaginary point on the earth's surface, of which there are two, namely, the Arctic or North Pole, and the Antarctic or South Pole. These are so encompassed with ice, that every attempt to approach them within a considerable distance, has hitherto proved ineffectual.

POLECAT. An animal of the weasel tribe, which emits a most fluid vapour when pursued. It inhabits Europe and Asiatic Russia.

POLEMICS. Treatises concerning disputed points in theology.

POLES (in Magnetism). The two points of a magnet, corresponding to the poles of the world, the one pointing to the north, and the other to the south.

POLE STAR, or POLAR STAR. A star of the second magnitude, the last in the tail of Ursa Minor, which, owing to its proximity, never sets, and is therefore of great use to navigators in determining the latitudes, &c.

POLICE. The internal government of any town or country, as far as regards the preservation of peace.

POLICY. The art of government, principally as regards foreign affairs.

POLICY OF INSURANCE. An instrument or deed by which a contract of insurance is effected.

POLITICAL ARITHMETIC. The application of arithmetical calculations to political uses, as in estimating the revenues, resources, and population of a country.

POLITICAL ECONOMY. The art or theory of managing the affairs of any state.

POLL, or DASS POLL (in Law). A deed that is polled or shaved even.

POLL (in Elections). The register of those who give their vote, containing their names, place of residence, &c.

POLLEN. A prolific powder contained in the anther of flowers.

POLLUX. A star of the second magnitude in the constellation Gemini.

POLY. A prefix in many words, denoting a multitude or indefinite number, *poly*syllable, a word of many syllables;

polygon, a figure of many angles; *polyadelphs*, *polyandria*, &c.

POLYADELPHIA (in Botany). One of the Linnæan classes, including plants that have many stamens to each flower united by their filaments into three or more distinct bundles.



POLYANDRIA (in Botany). One of the Linnæan classes, including plants, the flowers of which have many stamens.



POLYANTHUS. A plant with a perennial root, that yields many flowers. It is much cultivated in gardens, and greatly esteemed for the richness and diversity of its colours.

POLYGAMIA (in Botany). One of the Linnæan classes, including plants that have both male and female flowers, as the fig-tree, date-tree, plantain-tree, &c.



POLYGAMY. The having more than one husband or one wife, either at the same time or in succession.

POLYGAMY (in Law). The having more than one husband or wife at the same time, which is felony.

POLYGLOTT, i. e. Many languages; as the Polyglott Bible, a Bible printed in many languages.

POLYGON. A square of many sides and many angles.

POLYGYNIA (in Botany). One of the Linnæan orders containing plants the flowers of which have many pistils.

POLYPE. An animal of the worm tribe, inhabiting the stagnant waters of

gates of a city, to be let down to keep out the enemy.

PORTER. One who carries goods for hire, and also one who attends at a gate.

PORTER. A kind of malt liquor made of high-dried malt.

PORTHOLES. Holes in the sides of the vesicæ, through which guns are put.

PORTMANTEAU. A cloak-bag, to carry the necessary clothing on a journey.

POSITION (in Arithmetic). A rule in which any supposed number is taken at pleasure, to work the question by.

POSITIVE DEGREE. The first degree of any quality expressed by the word itself.

POSITIVE ELECTRICITY. A term applied to bodies supposed to contain more than their natural quantity of electricity.

POSSE COMITATUS (in Law). The armed power of the county, or the attendance of all persons charged by the sheriff to assist him in the suppression of riots, &c.

POSSESSIVE CASE (in Grammar). Any ending of nouns which denotes possession.

POST (in Military Affairs). Any spot of ground that is marked out to be occupied by soldiers.

POST (in Commerce). A conveyance for letters and despatches.

POST (in Grammar). A prefix to many words, implying after, as postdiluvian, after the deluge.

POSTHUMOUS CHILD (in Law). One born after his father's death.

POSTMAN. One who delivers the letters from the post-office to the persons to whom they are addressed.

POSTMASTER. He who has the charge of the letters received in, and delivered from the post-office.

POSTMASTER-GENERAL. He who presides over the whole business of conveying letters by the post-office.

POST OBIT. After death.

POST-OFFICE. The office where the business of receiving and forwarding letters is conducted. In London, there is the General Post-Office, which takes charge of all letters to be conveyed to the different parts of the world; and the Twopenny Post-Office, which takes charge of letters to be conveyed to different parts of the metropolis and its environs. In the United States, the General Post-Office is at Washington, and is under the direction of the postmaster-general.

POSTMASTER-GENERAL.

POSTMASTER-GENERAL.

POSTMASTER-GENERAL.

POSTMASTER-GENERAL.

POSTMASTER-GENERAL.

POSTULATE. Any fundamental principle in a science that is taken for granted.

POTASH. An impure fixed alkaline salt, procured by burning vegetables. It is a brittle, corrosive substance, of a white colour and acrid taste.

POTASSIUM. A metallic substance, which is supposed to be the basis of potash.

POTATO. An edible root, once peculiar to America, but now common in most countries.

POTSTONE. A mineral of a greenish-gray colour, found abundantly near the lake Como, in Lombardy.

POTTERY. The manufacture of earthen pots, or earthenware in general, but particularly of the charger sort.

POUNCE. The powder of gun sand-rack, sifted very fine.

POUND. A weight containing 12 ounces Troy, and 16 avoirdupois weight.

POUND (in Law). Any enclosed place for the keeping of beasts in, particularly such as are distrained.

POUNDER. The name of a great gun, from the weight of the ball it carries, as a six, twelve, and twenty-four pounder, &c.

POWDER. Any thing as fine as dust, as gunpowder, hairpowder, &c.

POWDER CHESTS. Triangular chests on board a vessel for holding the gunpowder, &c.

POWDER-HORN. A horn in which gunpowder is kept.

POWDER-MILL. A mill in which the ingredients for gunpowder are ground and mingled.

POWER (in Mechanics). Any force which, applied to a machine, sets it in motion. There are six simple machines, which are particularly denominated the six mechanical powers, namely, the lever, the balance, the screw, the wheel and axle, the wedge, and the pulley.

POWER (in Arithmetic). The produce of any quantity multiplied by itself any number of times, as the square, cube, bi-quadrato, &c.

POWER (in Law). The authority which one man gives another, to act for him.

POWER-LOOM. A loom worked by steam or water.

POWER OF ATTORNEY (in Law) An instrument or deed whereby a person is empowered to act for another.

POWER OF A GLASS (in Optics). The distance between the convexity and the focus.

POWER. A sort of pigeon, which swells up its neck when it is displeased.

PRACTICE (in Arithmetic). An easy and expeditious method of resolving ques-

PRIMA FACIE. On the first view of any question.

PRIMARY PLANETS. Those which revolve round the sun as a centre, as Mercury, Venus, the Earth, Mars, Jupiter, Saturn, and Herschel.

PRIMATE. In England, the first or chief archbishop.

PRIMATE (in Zoology). The first order in the Linnæan class of mammals, including man, the ape, baboon, monkey &c.

PRIME FIGURE. That which cannot be divided by any figure but itself.

PRIME OF A GUN. The powder put into the touchhole.

PRIMITIVE (in Grammar). The root or original word in a language, from which others are derived.

PRINCE'S METAL. A mixture of copper and zinc.

PRINT. The impression taken from a copper-plate.

PRINTING. The art of taking impressions from characters or figures, movable or immovable, on paper, linen, silk, &c. Printing is of four kinds, namely, one for books, from movable letters composed and set in a form; and another for books, from solid pages; a third for pictures, from copper-plates; a fourth for printing calicoes, linens, &c., from blocks, on which are represented different figures. The first of these is printing, properly so called; the second is stereotype printing; the third, rolling-press printing, or copper-plate printing; and the fourth, calico-printing. Printing was first introduced in the fifteenth century, at Mentz and Haerlem, when, instead of the present movable types or letters, blocks of wood were carved, and the impressions were taken only on one side.

PRINTING-PRESS. The principal machine employed in the art of printing, by which impressions are taken from the type after it has been composed, and put into the form of a sheet.



ING MACHINES, carried by
e, or other power, have lately

been invented, and are now extensively in use. They perform that part of printing which is called press-work.

PRISM (in Geometry). An oblong not contained under more than four planes, whose bases are equal, parallel, and alike situated.

PRISM (in Dioptrics). A solid glass in the form of a prism, much used in experiments on the nature of light and colours.

PRIVATEERS. Vessels fitted out by private persons, with the licence of the prince or state, for the purpose of making prizes of the enemy's ships or goods.

PRIVET. A shrub much used in hedges.

PRIVY (in Law). One who is particularly, or has an interest in, any action, or privies in blood, that is, heirs to the ancestor; privies in representation, as executors or administrators to the deceased.

PRIVY COUNCIL. In England, the principal council belonging to the king.

PRIVY SEAL. The king's seal, which is first set to such grants as pass the Great Seal of England.

PRIZE (in Naval Affairs). A vessel taken from the enemy.

PROBATE (in Law). Is English the proving of wills in the spiritual court.

PROBATE, COURT OF. In the United States, a court that is charged with the settling of estates.

PROBATION. In England, the trial of a student what is to take his degree.

PROBATIONER. In England, a scholar who undergoes a probation at the university.

PROBE. A surgeon's instrument for searching the depth, &c., of a wound.

PROBLEM (in Geometry). A proposition in which something is proposed to be done.

PRO BONO PUBLICO. For the public good.

PROBOSCIS. An Elephant's trunk.

PROCEEDS. What proceeds or arises from any profitable transaction, as the net proceeds of a sale.

PROCTOR. In England, an advocate in the civil law.

PRODUCE. What any country yields from labour and growth, which may serve either for the use of the inhabitants, or be exported to foreign countries. The crops of grain, &c., are the produce of the fields.

PROSECUTION (in Law). The sum-moning a suit against any one in a court of law.

PROSODY. That branch of grammar which teaches the pronunciation of words according to a certain rule or measure.

PRO TEMPORE. For the time being.

PROTEST. In England, the declaration of any peer in parliament stating his dissent from the vote of the house, and his reasons for such dissent, which he has a right of entering on the journals of the house; also a declaration against the proceedings of a court.

PROTEST (in Commerce). The act of the master, on his arrival with his ship from parts beyond the seas, to save him and his crews harmless and indemnified from damage sustained during a storm; also the declaration made by the holder of a bill of exchange, that the same is dishonoured.

PROTESTANT. The name first given to the followers of Luther, who protested, at the diet of Spire, against a decree of Charles V., a name since given to all members of the reformed churches.

PROTEUS. A sea deity, who was said to assume various shapes.

PROTHONOTARY. In England, a chief clerk of the king's bench and common pleas.

PROTOCOL. The first draught of a deed, contract, or instrument.

PROTOMARTYR. The first martyr or witness that suffered death in testimony of the truth; a title given to St. Stephen.

PROTYPICAL. The first pattern or model of a thing; the original of a copy.

PROTRACTOR (in Surgery). An instrument for drawing out extraneous bodies from a wound.

PROTRACTOR (in Surveying). An instrument for laying down on paper the angles in a field. The protractor is a small semicircle of brass or other material, the limber circumference of which is nicely divided into one hundred and eighty degrees.

PROV. An abbreviation for Proverbs.

PROVISO (in Law). A condition inserted in a deed.

PROVOST. The mayor or chief magistrate in Scotch cities and towns.

PROVOST-MARSHAL. An officer in the army, whose concern it is to apprehend deserters; and in the navy, to take charge of the prisoners, &c.

PROW. The head or fore part of a ship.

PROXY. One who acts or stands for another in his absence.

PROXY (in the House of Lords in Eng-land). The peer who is deputed by another for him in his absence.

PRUNELLA. A preparation of purified sulphur.

PRUNING. Lopping off superfluous branches of trees, in order to make them bear fruit the better; an important part of gardening, which can be learned only by practice and experience.

PRUSSIAN BLUE. A pigment of a dark blue colour, now procured from bluish's blood, carbonate of potash, vitriol of iron, alum, and muriatic acid.

PRUSSIC ACID. An acid procured from Prussian blue, which is one of the most violent poisons.

PSEUDO, i. e. FALSE. A prefix used to many words, as pseudo martyr, a counterfeit martyr.

PTOLEMAIC SYSTEM. The system of astronomy laid down by Ptolemy, the celebrated astronomer and mathematician of Ptolemaea in Egypt. This system is founded on the hypothesis that the earth is immovably fixed in the centre, not of the world only, but also of the universe, round which the sun, moon, planets, and stars all move from east to west once in 24 hours.

PUBLICAN. A taxgatherer, or farmer of the public revenues among the Romans; now the keeper of a public house or common place of entertainment.

PUBLICATION. In England, the giving out copies of depositions in the Court of Chancery.

PUBLICATION (in Literature). The editing and printing a book; also any book or pamphlet offered to the public.

PUBLISHER. One who puts forth any printed book to the world, particularly he who prints and publishes the manuscript copies of authors.

PULVING STONE. A mineral aggregate, consisting of flint pebbles imbedded in a silicious cement.

PUFFIN. A sort of auk or sea-pull.

PULLET. A young hen.

PULLEY. One of the six mechanic powers, consisting of a small wheel, having a groove around it, and turning on an axis, as in the subjoined cut.



PULLEYS, SYSTEM OF, OR FORCE OF
FIG. 1. A. B. C. D. E. F. G. H. I. J. K. L. M. N. O. P. Q. R. S. T. U. V. W. X. Y. Z.

PURGATORY. A place where, according to the Roman Catholics, the souls of the faithful are purified by fire, from the sins which they carry with them out of this life, before they are admitted to a state of perfect bliss.

PURITAN. In England, a name given originally in derision to dissenters, who pretended to have a purer doctrine and discipline than others.

PURPLE. A mixed colour of red and blue.

PURSE. An officer on board a man of war, who takes charge of the provisions.

PUS. The corrupt matter issuing from a sore, which usually precedes the healing, and in such cases is termed healthy or good constitutional pus.

PUTREFACTION. The spontaneous decomposition of animal and vegetable matter, accompanied mostly with a fetid smell. Water and atmospheric air are active agents in this process of nature.

PUTTY. Whiting and linseed oil pounded together into a paste, which is used by glassers in fastening the panes of glass, and also by painters in stopping chinks.

QUADRANA. A gray kind of earth used in Italy for building under water.

PYRAMID (in Architecture). A solid massy edifice, constructed in the figure of a pyramid, as described in the next article.



Of these edifices the Egyptians have left some specimens, as wonderful monuments of human skill. The largest pyramid, or the great pyramid, as it is called, is situated with others, near Memphis, and is about 500 feet high.

PYRAMID (in Geometry). A solid standing on a triangular, square, or polygonal basis, and terminating in a vertex as point at the top.

PYRITES. A mineral composed of iron and sulphur.

PYROLIGNEOUS ACID. An acid obtained from beech and other woods, which is a liquid of the colour of white wine, of a strong acid, and slightly acrid taste. It is an antiseptic, and serves instead of wood smoke, of which it is the principle, for preserving animal substances.

PYROMETER. An instrument for measuring high temperatures, particularly the one invented by Mr. Wedgwood for determining the expansion of solid bodies by heat. This instrument is founded on the principle that clay progressively contracts in its dimensions in proportion as it is exposed to higher degrees of heat.

PYROPHORUS. A preparation from alum by calcination, which takes fire on exposure to the air.

PYROTECHNY. The science which teaches the management and application of fire in several operations, particularly in the construction of artificial fireworks.

PYTHAGOREAN SYSTEM. The system of astronomy taught by Pythagoras, which was founded on the hypothesis that the sun was a movable sphere situated in the centre, round which the other planets revolved. This is now called the Copernican system, because it was revived by Copernicus.

PYTHIAN GAMES. Games celebrated in Greece every five years, in honour of the Pythian Apollo at Delphi.

Q, the nineteenth letter of the alphabet, as a numeral, stood for 500; with a dash over it, five Q's, for 2000, as an abbreviation among the Romans for Quiritus, &c., among the Greeks for Quintus, &c., and used also denominated, &c., which was to be demonstrated, &c., among Physicians, Q. S. Eleonora suffix, as much as was necessary.

QUACK. A medical impostor.

QUADRANGLE (in Geometry). A figure consisting of four sides and four angles.

QUADRANGLE (in Architecture). Any range of houses or buildings with four sides in the form of a square.

QUADRANT (in Geometry). An arc of a circle, containing the fourth part, or ninety degrees.

QUADRANTAL COMPASS (in Navigation). An instrument for taking the

spoing of men's lives, and giving great assistance to a transported enemy.

QUARTER DAYS. The days which begin the four quarters of the year, namely, the 23d of March, or Lady Day; the 23d of June, or Midsummer Day; the 23d of September, or Michaelmas Day; and the 23d of December, or Christmas Day.

QUARTERING (in Law). The dividing the body of a traitor into four parts after it is beheaded.

QUARTERINGS. The partitions in an apartment, according to the number of beds or rooms that are to be open in.

QUARTER MASTER. An officer whose duty it is to provide quarters or lodgings for the soldiers.

QUARTER & LASTONS. In England, a court being every quarter by the magistrates of the county, to hear and determine matters both civil and criminal, to appeal from these sessions to a superior court.

QUARTETTO. A piece of music for four voices.

QUARTS (in Printing). The form of a book, the sheets of which are divided into four parts of leaves, making a square; it is usually abbreviated in this manner, 4to.

QUARTZ. A sort of silicious earth, consisting of silica, with a small portion of alumina and carbonate of lime. It is not fusible per se, but with soda it runs into a hard pellucid glass, when broken it becomes sand.

QUASSIA. A sort of plant which is sometimes used by brewers, in the stead of hops. It is also a valuable medicine.

QUEEN CONSORT. In England, the wife of the king, who, though a subject, has nevertheless several prerogatives above other women.

QUINA. The young plants of the hawthorn, which hedges are first made.

QUICKSILVER. Unpacked lime.

QUICKSANDS. Sands that move and shake, into which those who pass over them are apt to sink.

QUICKSET HEDGE. Any live hedge, in distinction from that made of dead

wood, but particularly that which is set with quick.

QUICKSILVER. The vulgar name for mercury.

QUIDSUNC. A curious person always making after news.

QUID PRO QUO. An equivalent or return for any thing given.

QUILL. The feather of a goose or a crow, &c., particularly that of which, when cured, pens are made.

QUINCE. A sort of apple with a rough, scrid taste.

QUINTESSENCE. A preparation of the essential oil of some vegetable substance incorporated with the spirit of wine.

QUIRE. An odd piece in a ground plot which remains after the square has been formed.

QUI TAM. A sort of popular action, on a penal statute, brought at the suit of the commonswealth, as well as the party or informant.

QUITRENT. In England, a small rent, payable by the tenants of most manors, whereby they go quit and free from all other services.

QUOITS. A game which consisted in throwing a quail or round iron to a certain distance.

QUIVER. A case for arrows.



QUORUM. Justices of the peace, so named because in the commission they are said to be those before whom all matters of importance are transacted.

QUOTIENT. What results from the division of one number by another, as 6 ÷ 2 = 3, the quotient.

QUO WARRANTO. A writ to inquire by what authority, right, or title, any person or corporation holds a franchise, exercises an office, and the like.

R.

R, the eighteenth letter of the alphabet, as a numeral stood for 5; with a dash over it, R, for 50,000; as an abbreviation, R. for Roma, Rex, and Royal; B. C., for Romana Civitas, &c.

RABBETING. The cutting of channels or grooves in a board.

RABBI. A doctor in the Jewish law.

RABBIT. An animal of the kind, but much smaller. There are two sorts.

wild rabbit. It is not a.



An animal of the beehive is in hollow trees. It is by letting its tail into pulling them out when it.



in which consists in running horses, as a trial of certain premiums or rewards, absolutely taken, are also carried on at New and many other parts certain seasons of the

of the Hacks. A particular, which are trained for lining races.



engine of torture, formerly, occasionally, and on the commonly, for the purpose of execution.

The full value of the

POINT. Any point from

and. The distinguishing part of which consists with oxygen, in all acids.

RADIUS (in Geometry). The semi-diameter of a circle, or a right line drawn from the centre to the circumference.

RADIUS (in Anatomy). The bone of the fore arm.

RAFT. A sort of float, consisting of boards fastened together side by side; a mode of conveying timber by water.

RAFTERS. The pieces of timber, which, standing by pairs on the raising piece, meet in an angle at the top, and form the roof of a building.

RAG-BOWLEY, or **HANGDOWN**. A sort of stone of the silicious or flint class.

RAIL. A migratory bird, which inhabits sodgy places. In the Middle and Southern States, this bird is abundant on the rocky shores of the rivers, and affords a favourite amusement to sportsmen.

RAILS. A wooden fence for enclosing a place.

RAILWAY. A species of road or carriage way, in which, the track of the carriage wheels being laid with bars or rails of wood, stone, or metal, the carriage runs with so much greater facility, that one horse will perform the work of many. In some railways in England, the wagons are driven along by steam instead of horses.

RAIN. A vapour drawn up by the sun, that, after being condensed by the cold, falls in the earth in drops from the clouds. It is supposed that rain is, in almost every instance, immediately occasioned by the electrical action of the clouds upon one another.

RAINDOW. A meteor in form of a jary-coloured arc, exhibited in a rainy sky, opposite the sun, by the refraction and reflection of his rays in the drops of falling rain.

RAINDOW, MARINE. A phenomenon sometimes observed in an agitated sea, when the wind carrying the tops of the waves west, and the sun's rays falling upon them, they are refracted.

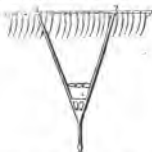
RAIN GAGE. An instrument for measuring the quantity of rain that falls.

RAISIN. The grape perfectly ripe, and dried either in an oven or by the heat of the sun; in this latter case, they are richer and sweeter than when dried in an oven. The finest sort are imported in jars, and thence called jar raisins.

RAISING A SIEGE. Giving over the attack of the place.

RAKE. An implement of husbandry provided with teeth, for making the earth light and smooth. It is also used for gathering hay and grain. The corn rake, a large kind of iron rake, used in Suffolk

and Norfolk, England, for raking barley stubbles, is represented underneath.



RAKE (among Mariners). So much of the hull as hangs over both ends of her keel.

RAM. The male of the sheep.

RAMADAN. The Mohammedan fast, kept during the sixth month of the Arabic year.

RAMIFICATION. Any small branch issuing from a large one, particularly the very minute branches issuing from the larger arteries.

RAMMEL. An instrument for driving stones or piles into the ground.

RAMPANT (in Heraldry). An epithet for a beast standing directly upright on his hinder legs.

RAMPART (in Fortification). A massy bank of earth raised round a fortress, to cover it from the fire of the enemy.

RAM'S HEAD. An iron lever to heave up great stones with.

RAM'S HEAD (among Mariners). A great block or pulley, into which the ropes called halibuts are put.

RANA. The generic name for that class of animals in the Linnæan system, of which the frog and the toad are the principal species.

RANDOMTY. The change which cold undergoes, both in smell and taste, by exposure to the air.

RANDOM. The shot made from a piece not designed to shoot directly forward.

RANGE (in Gunnery). The line which a shot describes from the mouth of a piece to the point where it lodges.

RANGE (among Mariners). A sufficient length of the cable drawn up upon the deck before the anchor is cast loose from the bow.

RANGER. In England, an officer whose duty it was to walk through the forest and present all trespasses at the next court; as the forest laws are now

but little in use, the duty of the ranger is not of the same importance as formerly.

RANK (in Domestic Policy). The situation which one man holds in respect to another: this is particularly defined in regard to the nobility in England, as also in all offices of state, as also in the officers of the army and navy.

RANK (in Military Tactics). The straight line which the soldiers of a battalion or squadron make, as they stand side by side.

RANSOM. Money paid for the redeeming a captive or the liberty of a prisoner of war.

RANUNCULUS. A perennial, much cultivated in gardens, bearing a flower of a globular shape; also the botanical name of a genus of plants, of which the globe ranunculus, the crowfoot, and the spearwort, are the principal species.

RAREFACTION (in Physics). The act whereby a body is brought to possess more room, or appear under a larger bulk, without the accession of any new matter.

RASH. An eruption on the skin.

RASP. A steel instrument with sharp teeth, used in rubbing things smooth.

RAT. A fierce and voracious animal that infests houses, barns, corn stacks, &c. The common rat is a native of almost all countries, as is also the water rat, which has the faculty of swimming, and lives on the banks of rivers or ditches.



RATAPIA. A delicious liquor, made of the kernels of apricots, cherries, &c., steeped in brandy.

RATE (in Law). A valuation of every man's estate, for determining the proportion that each is to pay of any tax.

RATE (in Naval Architecture). The class or degree by which vessels are distinguished, as regards their force, burden, &c.

RATIER. A thick wooden staff. **RATIFICATION**. In England, the confirmation of a clerk formerly given him by the bishop; also the confirmation of a treaty.

RATIO. (The *ars magna*.) The relation of two magnitudes of the same kind

entity; thus the ratio of 2 to 1 triple, &c.

RAY, *in* the share or proportion of age, &c., given to soldiers

2. The account or summation of hypotheses, examples on which it depends, or other circumstance.

(among Mariners, called *ray* which make the ladder up the shrouds, and put

RAY. An animal of the living tail furnished with 7 shakers when angry. It is not mountainous places in, and although its bite is does not attack any one



Works raised on the one the variety of a plate, kind of the row kind, that is, is long feet, and has an of snail. It is common in found in America north



rays of light, propagated from - said to be direct when it on the point, reflected if it n any body, and is hence the eye. Rays are also dis- parallel, converging, diverg

mus of fishes of the class's Linnæus system, the prin-

cipal species of which are the skate, the thornback, the sturgeon, the ray, and the torpedo

RAZOR. An instrument for shaving.

REACTION (in Physics). The resistance made by all bodies to the action or impulse of others that endeavour to change their state, whether of motion or rest

READINGS. The different manner of reading the text of authors, particularly that of classical writers.

READINGS (in Law). Commentaries or glosses on the law text.

REAGENT. The name given by rhy-meters to such bodies as serve to detect the component parts of others; thus the infusion of galls is a reagent which detects iron by a dark purple precipitate.

REALGAR, or **Red Oxide**. A metallic substance, the sulphuret of arsenic, which is either native, and dug out of the earth in China, or it is factitious, produced by boiling arsenic in subliming vessels.

REAM. Twenty quires of paper.

REAPING MACHINE. An implement of husbandry for cutting down grain, instead of reaping with a sickle.



REAR. A military term for behind, as rear-guard, a body of men that follows an army on its march, to pick up stragglers and the like.

REAR. A naval term applied to the squadron which is hindermost.

REBATE AND DISCOUNT. A rule in arithmetic, by which discounts upon ready money payments are calculated.

REC. or **RECEIPT**. An acknowledgment in writing of money received.

RECEIVER (in Law). One who receives stolen goods; also the name of some officers appointed to receive money as the receiver of rents, or receiver of fines, &c.

RECEIVER (in Pneumatics). The receiver of the air pump, a glass vessel placed on the top of the apparatus out of which the air is to be exhausted.

RECEIVER (in Chemistry). A vessel for receiving any distilled liquor.

RECIPE. Directions for preparing any mixture or compound, as a physician's recipe, a cook's recipe, and the like.

and Norfolk, England, for raking barley stubbles, is represented underneath.



RAKE (among Mariners): So much of the hull as hangs over both ends of her keel.

RAM. The male of the sheep.

RAMADAN. The Mahomedan fast, kept during the ninth month of the Arabic year.

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RAMMER. An instrument for driving stones or piles into the ground.

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RATE (in Law). A valuation of every man's estate, for determining the proportion that each is to pay of any tax.

RATE (in Naval Architecture). The class or degree by which vessels are distinguished, as regards their form, burden, &c.

RATION. A thick woaden staff.

RATIFICATION. In England, the confirmation of a clerk formerly given him by the bishop; also the confirmation of a treaty.

RATIO. The mutual habitude or relation of two magnitudes of the same kind

RECIPROCAL. An epithet for what acts by alternation.

RECIPROCAL TERMS (in Logic). Terms which, having the same signification, are convertible, as man and rational animal; for man is a rational animal, and a rational animal is man.

RECIPROCAL PROPORTION (in Arithmetic) is when, in four numbers, the fourth is less than the second by so much as the third is less than the first, and the contrary.

RECIPROCAL VERBS (in Grammar). Such as reflect the action on the agent himself, as I love myself, thou lovest thyself, &c.

RECITATIVE. The recital of any thing on a stage in musical cadence.

RECKONING, or Ship's RECKONING. The account kept of a ship's way, by which it may be known at any time where she is; the account taken from the logbook is called the dead reckoning.

RECOGNIZANCE. A bond or obligation acknowledged in some court, or before some judge.

RECORD. A public act enrolled and preserved in courts of record.

RECORDER. An officer associated with the mayor of a town for the administration of justice according to the forms of law.

RECOVERY (in Law). The obtaining of any thing by judgment or trial at law.

RECTANGLE. A figure having right angles, as a square, &c.

RECTIFICATION (in Astronomy). The setting the globes in such position, as to fit them for the performance of problems.

RECTIFICATION (in Geometry). The finding a right line equal in length to a curve.

RECTIFICATION (in Chymistry). The repeating a distillation or sublimation several times, in order to render the substance purer and finer.

RECTORY. In England, the parson of the parish church, who has the cure or charge of the parish, and receives all the tithes, glebes, and other profits.

RECTUM. The last portion of the large intestines.

RECUISANTS (in Law). A name formerly given to the Roman Catholics who refused to conform to the church of England.

RED. One of the simple or primary colours of bodies, which is distinguished into different shades, as scarlet, vermilion, crimson, &c.

RED BOOK OF THE EXCHEQUER

In England, an ancient manuscript or record, in the keeping of the king's exchequer, which contains many things relating to the times before and after the Conquest.

REDEBAST. See *Essex*.

REDEMPTION (in Law). The right of reentering upon lands, &c. that have been assigned or sold, upon reimbursing the purchase money. This right is sometimes termed the equity of redemption.

REDOUT (in Fortification). A small square fort, without defense but in front.

REDPOLE. A finch with a red spot on the crown.

REDSHANK. A bird of the curlew tribe.

REDFEET. A European bird that is migratory, and sings very sweetly. Though very timid, it often builds its nest in cities.

REDFLECK. A sort of apple.

REDUCTION (in Arithmetic). A rule by which money, weights or measures are reduced to their least or greatest parts.

REDUCTION OF EQUATIONS (in Algebra). The reducing them to the simplest state, or clearing them of all superfluous quantities.

REDUCTION (in Surgery). An operation whereby a dislocated bone is restored to its proper place.

REDUCTION OF A DESIGN OR DRAUGHT, &c. The making a copy thereof either larger or smaller than the original.

REDWING. A European bird, about the size of the Thrush.

REDWING BLACKBIRD. A well known American bird, that builds its nest on low bushes, near ponds, and in marshy places.

REED. A kind of long, hollow, knotted grass, that grows in dense and watery places.

REEFING. A sea term for the mending or taking up a sail in a gale of wind.

REEL. A machine turning round on an axle, on which lines of different kinds are wound.

REENTRY (in Law). The resuming or retaking possession of lands lately lost.

REEVE. See *Essex*.

REFERENCE (in Law). Referring a matter in dispute to the decision of an arbitrator; also in the Court of Chancery, in England, referring a matter to a master.

REFERENCE (in Printing). A mark in the text of a work, referring to a similar one in the side or at the bottom of the page; also the author's name referred to in the margin.

RELIEVO, or RELIAR (in Sculpture). The projection or standing out of a figure above the ground or plane whereon it is formed. There are three kinds of relieve, namely, the alto, which projects as much as life; the basso relieve, when the work is raised but a little; and demi relieve, when one half of the figure rises.

RELIGIOUS HOUSES. Convents, monasteries, nunneries, and the like, in the Romish Church, where persons live under certain rules, and are bound by their vows to lead a religious life; at the Reformation, these religious houses were dissolved in England, and their wealth was seized by Henry VIII.

REMAINDER (in Law). An estate in lands, tenements, &c., limited to be enjoyed after the expiration of another estate.

REMAINDER (in Arithmetic). The difference, or that which is left after subtracting one quantity from another.

REMEMBRANCE. In England, an officer in the exchequer.

REMITTANCE. A sum of money sent from a business.

REMORA. The generic name for the sucking fish.

RENDEZVOUS. An appointed place of meeting, particularly for soldiers.

RENNET. The gastric juice and contents of the stomach of a calf, used in turning milk to curd.

RENT. A profit, issuing jointly out of lands or tenements.

RENTAL, or RENTROLL. In England, a roll in which the rents of a manor are set down; the collective amount of rents thus set down is called the amount of rents due by the tenants.

RENT CHARGE. In England, a charge of rent upon land, with a clause of distress in case of non payment.

REPEATING. A kind of watch, which, by means of a spring, repeats or strikes the hour.

REPELLANTS. Medicines which drive the humours from the part where they have settled.

REPERTORY. A place where things are deposited; also a book in which things are methodically entered.

RESERVIN (in Law). A release of (quite or goods that are distrained.

REPLEGATION (in Law). The plaintiff's oath to the defendant's answer.

REPORT (in Law). A relation of cases judicially debated and decided upon.

REPRESENTATION (in Law). The personating another, as in the case of an heir by representation.

REPRESENTATIVE (in Law). One who represents a district or corporation

as a member of parliament, a member of congress.

REPRESENTATIVE MONARCHY. A government having national councils, consisting of persons chosen by the people, to represent their persons, and consult their interests; such are the governments of England and France, &c.

REPRESENTATIVE OR FREE GOVERNMENT. A government in which the laws are made by representatives freely chosen by the people; such is the government of the United States.

REPRIEVE (in Law). A warrant for suspending the execution of a malefactor.

REPRINT. A book printed again.

REPRISALS. The seizing the vessels or goods of merchant strangers, as an equivalent for some loss sustained from the nation of which they are subjects.

REPRODUCTION. The power in some bodies of being restored by a process of nature, after having been destroyed, as the reproduction of a tree from a slip, but more particularly the reproduction of animals which have been cut into pieces, as the polype, and some other worms; also the limbs of crystal, glass, &c., are reproduced when broken off.

REPTILES. The first order of animals under the class amphibia, in the Linnaean system, comprehending the toad, the frog, the dragon, the lizard, crocodile, &c.

REPUGNANCE (in Law). A contradiction of what has been said before, as in deeds, grants, &c., which makes them void.

REPULSION (in Physics). A power in bodies of opposing the approach of other bodies, as oil and water, which for a time refuse to be incorporated; it is opposed to attraction.

REQUESTS, COURT OF. In England, a court for the recovery of small debts.

RESCUE (in Law). The violent taking away, or causing to escape, one that is taken by lawful authority.

RESERVE. A body of men kept apart in the day of battle for some particular service, as a reserve may require.

RESAXT (in Law). One residing in a certain place.

RESIDENCE (in Law). In England, the continuance of a person in vicar so has benefited.

RESIDENT. A minister of state sent to reside in any court.

RESIDUARY LEGATTE. He to whom the residue of a personal estate is given by will.

RESIDUUM. The residue, or what is left over of an estate or process.

RET. A solid inflammating from trees, as the *r. turpentine*; from the *r. putrescent*; sandal-*ret*; lacquer from the *resins* are soluble in all-impure resins are not

REVERSIVE FORCE. acts in an opposite di-

(in Mathematics). A the truth or falsehood discovered.

(in Chemistry). The (in composition) parts. (in Surgery). The dis-

OP FORUMS (in Me- viding any force or mo- lars in other direction, together, shall have the single one.

An important fun- l body, which consists bation and exhibition ce lungs and that are had contracted.

RE. A fee given to a or, to keep him from her side.

R. The act of return-

R (in Physics). The the velocity of a moving

R. A nervous mem- ic epidermis and the part of the integument

contraction among as- suring the quantity of

oid or inverted, y, which is the most to organ of vision

chymical vessel of a a hollow peak of tube

R. A retrograde movement of men.

RT. Any work raised

RETRO. Backward; a prefix to many

words, as *retrocession*, *retrogradation*, &c. **RETROCESSION OF THE EQUINOXES.** The going backwards of the equinoctial points of the signs Aries and Taurus.

RETROGRADATION. A moving backwards.

RETURN. A certificate from sheriffs and bailiffs of what is done in the execution of a writ.

RETURN DAYS (in Law). Certain days in term time for the return of writs.

RETURNS (in Commerce). That which is returned, whether in goods or specie, for merchandise sent abroad; also the return of money laid out in the way of trade.

RETURNS OF A MINE (in Fortifi- cation). The windings and turnings of a gallery leading to a mine.

REVELATION. The miraculous communication made by God of his will to man, which are contained in the Bible.

REVENUE (in Law). The yearly profit that accrues to a man from his lands or possessions. In England, the revenue of the crown is that which peculiarly accrues by way of profit to the king; in an extended sense, the public revenue, or the yearly income derived from the taxes and other sources, for the support of the government.

REVERBERATORY. A very strong furnace, used for calcining minerals, &c.

REVERSAL OF JUDGMENT. The making it void.

REVERSE OF A MEDAL. The back side, or that which does not contain the principal figure.

REVERSION (in Law) is when the possession of an estate, which was parted with for a time, returns to the donor or his heirs.

REVIEW (in Military Affairs). The display of a body of men before the general, that he may judge of their condition.

REVIEW, BILL OF (in Law). A bill in chancery for the re-examination of a cause.

REVIEW (in Literature). A periodical publication, which professes to give a criticism of publications as they appear.

REVISE. A second proof sheet of a work, for the revival or re-examination of the errors corrected.

REVOCAION. The recalling or making void any grant.

REVOLUTION (in Astronomy). The motion of any heavenly body in a circular line, until it returns to the same point again.

R. retrograde movement of men.

RT. Any work raised

REVOLUTIONIST. A favourer of political revolutions.

RHEA. A large bird of the ostrich species, found in the plains of Patagonia, and incorrectly called the South American ostrich.

RHETORIC. The art of speaking on any subject with propriety, and the force of persuasion.

RHEUM. A thin, serous humour, that comes occasionally from the glands about the throat and mouth.

RHEUMATISM. Wandering pains in the body, accompanied with heaviness, difficulty of motion, and sometimes a fever.

RHINOCEROS. A large beast in India, and the largest of all quadrupeds, except the elephant, having a horn in his front, and a skin full of wrinkles, which is so hard that it can scarcely be pierced by a sword.

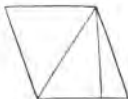


RHODODENDRON. A shrub bearing a very fine flower.

RHOMBROID. A quadrilateral figure, whose opposite sides and angles are equal, but it is neither equilateral nor rectangular.



RHOMBUS. A quadrilateral figure which is equilateral, but not rectangular.



RHUBARB. A perennial, the root of which is much used in medicine, particu-

larly what comes from Turkey; the stalk of the European rhubarb is also much esteemed in tart.

RIUMB. A vertical circle of any plane, or the intersection of part of such circle with the horizon.

RHYME. A sort of verse which terminates with words of the same sound.

RIB (in Anatomy). A side bone of the body.

RIB (in Carpentry). Any piece of timber that strengthens the side.

RIB (in Ship-building). The timber of the futlocks, when the planks are off, which resemble the ribs of the body.

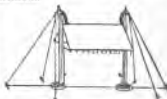
RIBBON. A narrow sort of silk, chiefly used for head ornaments.

RICKETS. A disease in the back bone, incident to children.

RICE. A sort of excellent grain, cultivated in warm countries, which grows in banks of an oval figure.



RICK CLOTH. In England, a tarpawling, which is set up by stacks or ricks of hay or corn, while it is stacking. It is worked with poles, as represented underneath.



RIDER. A leaf inserted by, or attached to other leaves.

RIDER (in Commerce). One who travels for a trading or mercantile house to collect orders.

RIDER (in Gunnery). A piece of wood equal in the length of the body of the catheter of the gun carriage.

RIDER-GOLE (in Law). A shoddy

ishment added to some work.
 slip-building). Timbers to strengthen them.
 top of a house that rises; also the top of the ver-

sewindy). The highest between two furrows.
 lityness of a county, as at riding of Yorkshire,

UK. In England, one of chancery, who, in his appointment book of all his great seal.

ROOL. A public place; taught to sit gracefully; use the brittle with propriety having spiral channels

Soldiers armed with rifle as marksmen in fire

If the cordage or ropes different parts of a ship.
 ROY. Any title or condition, mortgage, &c., society). Strongest, as a

RO. The angle formed of perpendicularity upon

ROE (in Astronomy). That to by which its poles are
 architecture). A flat, thin as what is designed for all pictures, before they

ROE (in Architecture). A thin slip of
 taking up a form, for use, &c.
 ROE (in any fruit).

A European variety of
 in instrument for stretch-
 with.

The head of a party
 A European bird, crest of white upon the neck.

A cutaneous disorder
 a skin is rings, and is

The forcible doing an
 three or more persons, or for that purpose.
 A legislative act, prohibitive
 simultaneous assemblies.

which, being read by a magistrate or peace officer to the mob, obliges all persons to disperse within an hour, on pain of being apprehended as rioters.

ROISING. The appearance of any star or planet above the horizon, which, before, was hid beneath it.

ROITUAL. A book directing the order and manner to be observed, in celebrating religious ceremonies, and performing divine service in the church.

ROIVER. A stream or current of fresh water, flowing in a bed or channel, as the river Amazon in South America, the Mississippi and Saint Lawrence in North America, the Nile in Egypt, the Euphrates and Ganges in India, the Rhine and Danube in Germany, the Rhone and Seine in France, the Tiber in Italy, the Tagus in Portugal, the Thames in Great Britain, &c.

RIVET. A metal pin clinched at both ends.

RIX DOLLAR. A coin in Germany, worth from three to four shillings sterling.

ROAD. A fish of the carp kind.

ROAD. A highway, or a way prepared for travellers; it is either a carriage road, where carriages may pass, or a foot road, or path for foot passengers. Military roads were formerly constructed by the Romans for the passage of their armies, of which there are still vestiges in England. Roads in the latter country are now principally made by small stones bound together with the earth, which is called Macadamizing.

ROAD. A sea term for any place fit for anchorage, at some distance from the shore.

ROADSTER. A horse accustomed to traveling on the road.

ROBIN, or ROBIN REDBREAST. A pretty little European bird with a red breast, which is very tame, and in winter time comes into the house. The American robin is larger, but is a great favourite, and sings very sweetly.

ROCHE ALUM, or ROCK ALUM. A mineral salt of a very binding quality.

ROCK. A stony mass, of which mountains are for the most part formed. Rocks are, however, to be met with in immensely large separate masses.

ROCKET. A sort of fireworks, which, when let off, go to a very great height in the air before they burst.

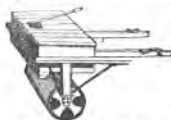
ROCKY. A silicious substance found in rocks.

ROE. An animal of the deer kind; also the spawn of fish; that of the cod is called soft roe or milt, that of the females hard roe or spawn.

ROGATION WEEK. The week preceding Whit Sunday.

ROLL (in Law). A schedule or parchment which may be rolled up.

ROLLER (in Flaxdressing and Gardening). A wooden or iron instrument of a circular shape, and fitted for rolling along the ground to level grass land, break the clods of arable land, and to bind the gravel in gravel walks.



ROLLER (in Surgery). A long, broad figure, for keeping the parts of the body in their places.

ROLLER (in Ornithology). A sort of bird the size of a jay.

ROLLING MILL. A machine for working metals into plates or bars. This sort of mill is chiefly used for drawing out the iron bars, after they have been manufactured into bar iron by the forge hammer.

ROMAN CATHOLICS. Those who hold the doctrines, and submit to the discipline of the Romish church.

ROOD. The fourth part of an acre.

ROOF. The covering of a building.

ROUL. A sizeable European kind of the cover kind.

ROOT (in Arithmetic). A number or quantity, which multiplied by itself produces a higher power, as 2, the square root of 4 or the cube root of 8.

ROOT (in Botany). That part of a plant which is under ground, and by which the plant derives its nourishment from the earth.

ROOT (in Grammar). The original words from which others are formed.

ROPE. The larger kind of cordage, formed by the twisting of several strings of yarn together; the smallest sort of rope is called cord, and the larger kinds cable, which is used for the rigging of ships.

ROPEMAKING. The process of twisting yarn into ropes by means of a wheel.

ROPEYARN. The rope of any yarn untwisted.

ROSE. A shrub especially celebrated and admired, by both ancients and moderns, for its sweetness and its beauty. The best esteemed species of this favourite shrub, are the hundred leaved rose, its

mask rose, Provence rose, white rose, musk rose, &c.

ROSE ACACIA. A prickly shrub, the flower of which resembles the rose in form.

ROSEMARY. A medicinal and fragrant plant.

ROSEWATER. Water distilled from roses.

ROSKIN. See *ESSIN*.

ROSTRUM. A place in Rome where orations were made and pleadings carried on; it was so called from *rostrum*, the beak of a ship, because it was made of the beaks of the ships taken at Antium.

ROT. A disease among sheep, in which their lungs are wasted and their throats swollen.

ROTACEÆ. One of Linnæus's natural order of plants, consisting of such as have one wheel-shaped petal without a tube.

ROTATION (in Geometry). The circumvolution of a surface round an immovable line, by which solids are conceived to be generated.

ROTTEN STONE. A mineral, found in Derbyshire, which is used for all sorts of finer grinding and polishing, and sometimes for cutting of stones.

ROTUNDA, or ROTUNDA. A circular building at Rome, which was anciently called the Pantheon; also any circular building.

ROTUNDITY OF THE EARTH. Roundness of form ascribed to the earth from various appearances which serve to prove it, as, for instance, that the masts of a vessel come in sight before the hull is visible.

ROUGE. A red paint extracted from the plant called by botanists the *carthagenian tinctoria*.

ROUGH CASTING. A kind of mortar used as a covering for external walls, which is thrown on roughly, instead of being plastered on.

ROUGH RIDER. A non-commissioned officer in the cavalry, who assists the riding master.

ROUNDHOUSE. In England, a temporary prison in a parish, where those who are apprehended by the constable are confined.

ROUNDHOUSE (among Mariners). The uppermost room or cabin in the stern of a ship, where the master lies.

ROUNDS. A watch commanded by an officer, who goes in the night time round a fortress.

ROUND ROBIN. A paper containing a statement of grievances, on the part of any number of dissatisfied persons to the army or navy, with the names in a

It inhabits the northern regions, and is much esteemed for its fur.



SABLE (in Heraldry). The tincture of black represented in engraving by perpendicular and horizontal lines.



SABRE. A sword with a broad, heavy blade, worn by the heavy cavalry.

SACCHARINE. Of the nature of sugar.

SACCHARINE ACID. An acid extracted from sugar by distillation.

SACK OF WOOL. A quantity of wool containing twenty-two stones, each stone fourteen pounds.

SACKBUT. A sort of trumpet fit for playing bass.

SACLAUTIC ACID. A powder prepared from the sugar of milk.

SACRAMENT. A sign of a holy thing containing a divine mystery.

SADDLE. A seat for a horseman fitted to a horse's back. It is supposed that saddles did not come into use till about the time of Constantine the Great, in the fourth century.

SADDLER. One who makes and sells saddles. The company of saddlers in London is of great antiquity, having been incorporated as early as the reign of Edward I.

SADDUCEES. A sect among the Jews, which were esteemed as deists and free-thinkers.

SAFE CONDUCT. A security given by the king under his great seal to any person, for his quiet coming into, or passage out of his realm.

SAFEGUARD. A protection given by a prince or his general to an enemy's country, to protect it from being ravaged by an army.

SAFETY-LAMP. A lamp invented by the Humphrey Davy, for the use of miners in the coal mines, to prevent the fatal ex-

plusions which have arisen from the use of common lamps. The safety-lamp transmits its light through a cylinder of iron or copper wire gauze, the apertures in which are not above one twentieth of an inch square. As the fire-damp is not ignited by heated wire, the thickness of the wire is of no importance. The principal parts of this lamp are a brass cistern containing the oil, the rim on which the wire gauze cover is fixed, an aperture for supplying oil, a central aperture for the wick, and the wire gauze cylinder.



SAFFRON. A bulbous root; also the flower of the crocus; also a substance formed from the stigmas of the crocus *officinale* dried on a kiln and pressed into cakes.

SAGITTA. A constellation in the northern hemisphere.

SAGITTARIUS. The ninth sign of the zodiac, marked thus (♐).

SAGO. A staple produced from the pith of a kind of palm growing in the East Indies, called by botanists the *cycas circinalis*.

SAGUIN. A South American animal about the size of a rabbit.

SAIL. A large piece of canvas composed of several threads sewed together, which, when extended by means of lines or booms, catches the wind, and drives the vessel along.

SAILING. The conducting a vessel from one port to another, which is the practical part of navigation.

SALAMANDER. A sort of lizard, which exudes from its pores a milky liquor, by which it is enabled for a time to resist the action of fire. From this virtue, it was formerly supposed capable of living in fire.

SAL AMMONIAC. A fossil salt which was said to be dug out of the sands of Ammonia in Libya, from which it took its name. There is no native salt of this

he moderns, but a factoid of a volatile alkaline salt, whence it is called ammonia.

is striped or remembrance for his services, in diages, which is for day which is for military

Transferring the promise to another, upon a ship.

One who sells clothes dies. It is also applied with establishment, who

FILE (in Fortification) ag onwards.

excretion from certain outh, which serve to before it is swallowed.

A drawing humours by mercurial preparation increase of

sort of willow.

leaning of the besieged ad tower, and falling on of them off.

Downways on each ship, out of which the escape into the boats in to sink.

fish that lives in neither ay, but shows that which ch esteemed for its flesh.



CUT. A species of the a body spotted with

aqueous room much used a room for the reception

substance brought from red, as is supposed, from plant botanically called

me given by modern city-ns of substances, namely, nd the compounds formation with alkalies, caries, xides. These latter are called, and are some-

times distinguished from the two others by the name of neutral salts, as Epsom salts, nitre, &c. Salts are likewise distinguished according to the process by which they are prepared. Common salt, or bay salt, a muriate of soda, being a compound of muriatic acid and soda, is procured by evaporation from sea water. Essential salts are drawn from the juices of plants by crystallization. Fixed salts are made by calcining or reducing the matter to ashes, then boiling it in water, straining off the liquor, and evaporating all the moisture, when the salt will remain in the form of a powder. Volatile salts are procured principally from animal substances or the fermented parts of plants.

SALTER. A dealer in salt or salt fish. The company of salters in London were incorporated in the reign of Henry VIII.

SALTPETRE, or NITRE. A nitrate of potash.

SALTS, or SALTYCELLERS. A name for the vessel that holds the salt when it is brought to the table.

SALVAGE. A recompense allowed to such persons as have assisted in saving merchandises, ships, &c., from shipwrecks.

SALUTE (in Military Etiquette). A discharge of artillery, or presenting of arms, as a mark of honour or respect to some person of distinction.

SALUTE (in the Navy). The discharge of ordnance, striking of colours, and the like, as testimonies of respect to the ships of an admiral or superior.

SAMARITANS. A sect among the Jews, who rejected all the scriptures except the five books of Moses.

SANCTUARY (in Law). A privileged place, whither, anciently, offenders were allowed to fly, and to remain for some time under protection.

SANDAL. A sort of slipper worn by the Greek and Roman ladies.

SANDAL WOOD. The wood of an Indian tree, remarkable for its fragrance.

BANDARACH. A resinous substance exuding from a tree that grows in Barbary.

HANDBAGS. Bags filled for holding sand or earth, and used in repairing breaches in fortifications, &c.

HANDYER, or GLASS GALL. A saline matter which rises as a scum in the crucibles in which glass is made.

SANDPAPER. A sort of beath bird.

SANDSTONE. A soft, compound stone, consisting of grains of sand, &c., cemented together. The principal pie-

uses are the grindstone and the filtering stone.

SANGIAC. The governor of a Turkish province.

SANHEDRIM. The supreme council or court of judicature among the Jews.

SAP. The juice or fluid part of a tree, which is a mucilaginous liquid, sometimes strongly astringent, so as to yield a large quantity of sugar, and also to furnish a strong fermented liquor.

SAPPERS. Soldiers attached to the engineers, and employed to assist in the labour of sapping.

SAPPHIRE. A hard and precious stone of a beautiful azure or sky-blue colour, nearly as transparent and glittering as the diamond.

SAPPING. A working underground to gain the descent of a ditch, counter-scarp, &c.

SARCOCOL. A gum resin brought from Persia and Arabia in small grains, and supposed to be the product of a tree called by botanists the *penax sarcocolla*.

SARCOPHAGUS. A sort of stone coffins, which consumed the bodies placed in them in the space of forty days. It was used by the ancients sometimes instead of burning the bodies by fire.

SARDONYX. A precious stone, consisting of a mixture of chalcedony and carnelian stone.

SARMENTOSE (in Botany). One of Linnæus's natural orders, consisting of plants which have climbing stems and branches, like the vine.

SARSAPARILLA. The root of the rough snail, a plant growing in Peru. It has a bitterish taste, and is much used in medicine.

SASH (among Carpenters). A frame of wood with panes of glass for a window.

SASH. A girdle round the waist, which in the army is worn by the officers.

SASSAPARA. A yellow, odoriferous wood of an aromatic scent, common in America.

SATELLITE. A secondary planet moving round another, as the moon does round the earth, so called because it attends the primary planet from rising to setting, after the manner of the satellites who attended on the eastern princes as a guard. Jupiter has four such satellites, Saturn seven, and Herschel six.

SATIN. A glossy kind of silk stuff.

SATIRE. A biting sort of poetry, written to expose the follies of men.

SATURATION. An impregnation of a fluid with as much of any solid substance as it can dissolve. Thus water

will dissolve about one third of its weight of common salt, and when it holds that much in solution, it is said to be saturated with it, because, if more be added, it will remain solid.

SATURDAY. The last day in the week, so called from Saturn.

SATURN (in Heathen Mythology). A son of Cœlus and Terra, and the god of time, commonly represented with a scythe, to denote the destroying power of time; sometimes with wings, to denote the swiftness of time, and with shackles, to denote the slow revolution and motion of the planet Saturn.



SATURN. One of the primary planets; the tenth in order of distance from the sun, which is thirty years in performing his sidereal revolution. He is marked by this character ♄.

SATURNALIA. A festival at Rome, in commemoration of the golden age, or the age of Saturn, when all men enjoyed their liberty, as the poets tell us.

SATURN'S RING. A broad, opaque, circular arc, which encompasses the planet like the wooden bottom of an artificial globe.



SAVGY. A sort of winter cabbage with a crumpled leaf, which is greatly improved in flavour by being exposed to frost.

SAWNILL. A mill for sawing logs into boards, planks, &c.

SAWYER. A mechanic employed in sawing timber. There are two sawyers to one piece, one of whom is in the pit, as before, and the other stands on the timber

trade by those whose speculations require despatch.



SCIAGRAPHY. The art of finding out the hour of the day or the night by the shadow of the sun or the moon.

SCION. A graft or young shoot of a tree.

SCIOPTIC. A sphere or globe of wood with a hole, in which is placed a lens, so constructed that it may be turned round every way, and used in making experiments in a darkened room.

SCIEE FACTAS. A sort of sensation which lies a year and a day after judgment given.

SCIRRHUS. A kind tumour of some gland.

SCITAMINEÆ. One of Linnaeus's main orders, comprehending ginger, turbanum, spices, and other aromatic plants.

SCISSOR. (in Music.) Cutting and separating the several detached parts of a piece into a continuous one.

SCORPIO. One of the twelve signs of the zodiac, denoted thus ♏.

SCORPION. An insect, 100 to 120 legs which penetrates the brain, but much smaller. It is armed with a serpent sting, the point of which is but glancing in very dangerous.

SCREEN. An implement to substitute which contains a frame and a net work, with which is fast or placed of the dist and the dress grain.



SCOUTS Horsemen sent out before

distance before the army, in order to discover the movements of the enemy.

SCREW. One of the six mechanical powers, consisting of a spiral thread or groove cut round a cylinder; when the thread is on the outside, it is a male or convex screw; but when it is cut along the inner surface of the cylinder, it is a female screw, otherwise called a nut.



SCRIBE. A doctor in the Jewish law, whose business it was to write and interpret the scripture.

SCRIBING (among Carpenters). Filing the edge of a board to the side of another.

SCRIP. A bag hastily carried by pilgrims.

SCRIP (in Commerce). That part of any loan which remains unpaid for by the subscribers.

SCRIVENER. One who draws up and engrosses writings. The company of scrivengers in London was incorporated in 1616.

SCRUPULA. A measure consisting of hard scallings in the glandulae of the neck and ears.

SCRUPLE. A small weight equal to twenty grains.

SCRUPLES BELIEVED. That part of the diameter of the moon which enters the shadow.

SCRUTINY (in Law). An examination of willages or titles in its execution, for the purpose of ascertaining whether they are good or not.

SCULL'SHOT, or SCULL, denoted an engraver's stone, denoting that he engraves or corrects the press.

SCULPTURE. An art which employs itself not only carving in wood, stone, or marble, but also including engraving in all its kinds, and casting in brass, lead, wax, &c.

SCULL. A little one for rowing a boat with.

which intersect the six greater circles of the sphere at right angles.

SECONDARY PLANETS. Those which revolve as satellites round the primary planets.

SECRETARY. One who is employed in writing letters, &c. for a person.

SECRETION. The separation of some fluid from another in an animal or vegetable substance by means of glands.

SECT. A religious party.

SECTION. The cutting of one plane by another.

SECTOR. A mathematical instrument used in measuring proportional quantities.

SECTOR OF A CIRCLE. That portion of a circle comprehended between two radii and an arc.

SECUNDUM ARTEM. By the rules of art.

SECLAR GAMES. Games among the Romans, so called because they were celebrated but once in a seculum or age.

SECLAR PRIEST. One who has not taken monastic vows.

SEDAN. A close chair in which persons are carried by men, used in both in England, and in some other places.

SEDIMENT. Whatever settles or sinks to the bottom of a fluid.

SEED. The essence of the fruit of every vegetable, containing the rudiments of the new vegetable.

SEMENT. Any part of a line in a triangle or other figure, cut off by a perpendicular let fall upon it.

SEMENT OF A CIRCLE. A part cut off by a chord, or that portion comprehended between an arc and a chord.

SENIOR, GRÆVE. The sultan of empires of the Turks.

SEIGNORY. The jurisdiction and power of a lord.

SEIZING. A sea term for binding two vessels together.

SEIZURE in Law. An arrest of freehold, that is prohibited or others are forbidden.

SELENIUM, or SKAGENITE. The sulphate of lime.

SELENOGRAPHY. A description of the face of the land.

SELLING OUT (among Stockholders). A transfer of one's share of stock from one person to another, in distinction from buying in, which is the purchase of the stock held by another.

SELLING OUT (among Military Men in England). The selling one's commission.

ing half, or semicircle, half a circle; semicircle, half a circle, &c.

SEMIMETALS. Fossil bodies that are metals, yet in some measure to be fired by fire.

SENIORITY. Priority of birth.

SENIORITY (among Military Men). Priority in the time since the raising of any regiment, or an officer's receiving his commission, &c.

SENSE. That faculty of the soul, whereby it perceives external objects by means of impressions made on particular parts of the body, called the organs of sense, and then conveyed to the sensory; the senses are five, namely, seeing, hearing, smelling, taste, and feeling.

SENSIBLE HORIZON. See HORIZON.

SENSITIVE PLANTS. Plants of the mimosa tribe, which have the extraordinary property of closing on being touched.

SENTICOSÆ. One of Linnaeus's natural orders of plants, including the rose, hrier, hawthorn, &c.

SENTINEL. A private soldier placed in watch at some post.

SEPIARIE. One of Linnaeus's natural order of plants, including such as grow wild in hedges or are used for hedges, as the hrier, privet, &c.

SÉPOYS. Natives who serve in the army in India.

SEPTEMBER. The ninth month of the year, so called because it was Septimus Mensis, the seventh month of Romulus's year.

SEPTENNIAL. Every seven years, an septennial parliament, i. e. new parliaments chosen every seven years, as they are at present appointed in England.

SEPTUAGESIMA. The first Sunday in Lent.

SEPTUAGINT. The Greek translation of the Bible from the Hebrew into the Greek by seventy-two Jewish interpreters, by order of Ptolemy Philadelphus, king of Egypt.

SEQUESTRATION (in Law). The separating a thing in controversy from the possession of both parties, till the right be determined by course of law.

SEQUESTRATION (in the Civil Law). The act of the ordinary disposing of the goods and effects of a person deceased, whose estate no one will settle with.

SERAGLIO. The palace of the grand signior.

SERGE. A woollen stuff manufactured in a loom.

SERGEANT, or SERJEANT at Law. In England, the highest degree taken in the common law, answering to BAR of

(in Military Affairs). An appointed to teach the soldiers.

SET AT ARMS. In England, to attend the king, across the lake.

Successively, in order.

Rank or progression of numbers by some rule, as in arithmetic by addition, 1, 2, 3, 5, geometrical progression by 2, 4, 8, 16, &c.

SETTE. A series consisting of a number of terms, to the end possible to come.

S. An order in the Libonian the rite amphibia, including have no feet, fins, nor are naked on the earth without.

Frequently armed with a fang, the viper, the snake, the scorpion, and coon. The beautiful animal of the cat like the panther, and about 1800. It is a native of

SEED. A tree, the fruit of which is used in medicine.

A poor scholar at Oxford, working in a house of four to ten on other students for pay.

A skin incised upon the part of the blood, and also

In England, a sitting of judges upon their commission, as days and termers, &c.

Of the *SEVEN* SEASONS. In some held every quarter by sailors, whereof one is of the

The sinking below the surface of the sea or plants.

DOG, or **SEVEXE.** A sportsman's first.



(in Law). When the defendant's position is demanded, demand of his own, to set off

or counterbalance the debt either wholly or in part.

SETPON. A sort of tissue in the neck formed by means of horsehair or fine thread drawn through the skin.

SETS (among Gardeners). The young plants of white thorn or other shrubs, which are raised as quick for hedges.

SKIVER. A spongy or gutter made to carry water away into the sea.

SEXAGENARY. One who has lived sixty years.

SEXAGESIMAL ARITHMETIC. A mode of computing by sixties, such as the division of a degree into sixty minutes, a minute into sixty seconds.

SEXAGESIMA SUNDAY. The sixtieth day before Easter.

SEXTANT. The sixth part of a circle, or an arc comprehending sixty degrees; also an astronomical instrument like a quadrant, except that its limb only comprehends sixty degrees.

SEXTON. An officer who digs the graves, and assists the minister at funerals.

SEXUAL SYSTEM (in Botany). The system of classifying plants, invented by Linnæus, and formed from the parts of fructification, (as the stamens and the pistils). From the number of stamens are formed the classes monandra, diandra, triandra, &c. for such plants as have one, two, three, or more stamens; from the number of pistils are formed the several orders under these classes, as monogynia, digynia, trigynia, &c. for such plants under each class as have one, two, three, or more pistils.

SHACKLES. A sort of fetters for malefactors, which confine the legs; also for animals that go astray.

SHADDOCK. A shrub, the fruit of which resembles a lemon.

SHADOW (in Optics). A privation or diminution of light, by the interposition of an opaque body.

SHADOWING (in Painting). The art of duly representing light and shade in a picture.

SHAFT. The body of a column.

SHYFT (among Miners). A hole like a well, which miners make to free the works from the springs that are in them.

SHAGREEN. A kind of rough-grained leather, prepared from the skin of the horned bill, and used for watchcases, &c.

SHAMMY, or **CRIMSON.** A soft leather prepared from the skin of the cheviot goat.

SHAMBOCK. A name in Ireland for the trefoil.

SHE

SHANK. That part of the fore leg of a horse that is between the knee and the second joint next the foot; also the long and cylindrical part of different things, as the shank of a candlestick, &c.

SHARE. The cutting part of a plough.

SHARK. A voracious fish, that inhabits the sea only, and grows to an enormous size.



SHARP. A half note, signifying an elevation, marked thus



SHEARS. A tool made in the form of scissors, for clipping hedges, &c.

SHEATH. A case for a knife or sword.

SHEATH-BILL. A bird inhabiting the South Sea Islands, which has the upper mandible of its bill covered with a sheath.

SHEATHING. The covering nailed on a ship's bottom, to protect the planks from worms.

SHEEP. A domestic animal, much valued both for its flesh and its wool. Of the different breeds of this animal, the South Downs, Leicester, and Norfolk are the most esteemed in England. It is one of the most profitable part of the live stock of a farm, where the lands are dry. In



the United States, the merino breed brought from Spain is preferred for the wool.

SHEP-SHEARING. The spring sea-

SHI

son, when the fleeces of the sheep are sheared or cut off.

SHEET. A large linen cloth laid on a bed.

SHEET. A breadth of paper, that admits of being folded into a given form.

SHEET (among Mariners). A rope fastened to the corner of a sail.

SHEET-ANCHOR. The largest anchor in a ship.

SHEICK. The chief of a tribe among the Arabs.

SHEKEL. A Jewish silver coin, worth about half-a-crown sterling.

SHELF (among Miners). A hard coat of earth, which lies under the mould.

SHELL. A crustaceous covering of fishes or fruits.

SHELL-FISH. Fish invested with a hard covering, either testaceous, as oysters, or crustaceous, as lobsters.

SHERIFF. or **SHIRE-SHERIFF.** In England a reeve or officer of the shire, who, as keeper of the king's peace, is the next man in the county. He is appointed by the king for every county except Middlesex, where he is elected, according to ancient usage, by the livery of London. In the United States, the Sheriff is an officer who attends upon court, has charge of the prisoners, sees to the execution of writs, &c.

SHIELD. A weapon of defence, borne on the arm, to turn off lances; also another name for an escutcheon, by which it is represented.

SHIP. A general name for all large vessels which navigate the seas, particularly those equipped with masts, especially those equipped with three masts and a lower mast, the masts being composed of mast, each of which is provided with yards, sails, &c.

SHIP-BUILDING. The practical branch of naval architecture, or the art of constructing vessels according to certain draughts.

SHIP-MONEY. An imposition formerly charged upon the ports, cities, towns, &c. of England.

SHIPPING. A general term for what ever relates to ships.

SHIPS OF WAR. Vessels commonly called **Men of War.** Vessels properly equipped with artillery, ammunition, and all the implements of war necessary for attack and defence. Ships of the first rate or upwards; of the second from 100 to 110 guns and guns; third rate from 94 to 74 guns; fourth rate, from 56 to 60 guns; fifth rate, from 38 to 44 guns; and sixth rate, from

ends of several coccons are joined and reeled together out of warm water, into which they are put for the purpose of softening their natural gum, and making them stick.

SILK-TROWEE, or **SILK-TROWERS**. One who throws or spins silk so as to fit it for weaving. The company of silk-trowers in London, was incorporated in 1625.

SILKWORM. The worm from which silk is most commonly procured.

MALE.



FEMALE.



SILVAN. Pertaining to woods, as the silver aspens, &c.

SILVER. The whitest of all metals, is considerably harder than gold, but not quite so durable or malleable. It ignites before it melts, and requires a strong heat to fuse it; it is chiefly found in South America.

SILVERING. The art of covering the surfaces of substances with a thin coating of silver. It is of particular use for culinary utensils, as it resists the corroding power of vinegar, &c.

SIMILAR (in Mathematics). An epithet mostly applied to figures, angles, &c. which have the same disposition and combination of the parts.

SIMONY (in England). The corrupt presentation of any one in an ecclesiastical benefice, for money, gift, reward, or benefit.

SIMPLE (in Medicine). What is not mixed with any other thing, as opposed to a compound.

SIMPLE (in Pharmacy). A general name for all herbs which have any particular medicinal virtue.

SIMPLER. One who gathers simples for the druggist.

SIMULTANEOUSLY. At one and the same moment.

SINECURE. An office to which little or no personal service is attached.

SINE DIE, i. e. **WITNESS BAR**. A term in law for a defendant who is dismissed court without trial.

SINE OF AN ARC. A right line drawn from one end of an arc perpendicular to the radius drawn to the other end.

SINE QUA NON. What cannot be dispensed with.

SINEW. The ligament which joins two bones.

SINGULAR NUMBER (in Grammar). A noun which denotes a single thing.

SINKING FUND. A portion of the public revenue set apart to be applied to the reduction or diminution of the national debt. This measure of appropriating a part of the revenue of the country for the discharge of the public debt was adopted in Holland in 1655, and in the Ecclesiastical States in 1665. But the particular fund so called in England was first adopted by Mr. PITT.

SIPHON. See **STRUER**.

SIR. A title of address to baronets and knights, coupled with their Christian name, as Sir William or Sir John, &c.; also a general complimentary form of address.

SIRIUS, the **DOGSTAR**. A very bright star of the first magnitude in Canis Major.

SIRACUSO. A periodical wind in Italy and Barbary, which prevails about Easter.

SKELETON. An assemblage of the



bones of any animal, dressed, dried, and preserved in their natural position.

SLEET. A sort of snow made of the stony

ses are the grindstone and the filtering stone.

SANGLAC. The governor of a Turkish province.

SANHEDRIM. The supreme council or court of judicature among the Jews.

SAP. The juice or fluid part of a tree, which is a mucilaginous liquid, sometimes strongly saccharine, so as to yield a large quantity of sugar, and also to furnish a strong fermented liquor.

SAPPERS. Soldiers attached to the engineers, and employed to assist in the labour of sapping.

SAPPHIRE. A hard and precious stone of a beautiful azure or sky-blue colour, nearly as transparent and glittering as the diamond.

SAPPIING. A working underground to gain the descent of a ditch, counter-scarp, &c.

SARCOCOL. A gum resin brought from Persia and Arabia in small grains, and supposed to be the product of a tree called by botanists the genus succosilla.

SARCOPHAGUS. A sort of stone coffin, which consumed the bodies placed in them in the space of forty days. It was used by the ancients sometimes instead of burning the bodies by fire.

SARDONYX. A precious stone, consisting of a mixture of chalcidony and cornelian stone.

SARMENTOSÆ (in Botany). One of Linnæus's natural orders, consisting of plants which have climbing stems and branches, like the vine.

SARSAPARILLA. The root of the rough emblic, a plant growing in Peru. It has a bitterish taste, and is much used in medicine.

SASH (among Carpenters). A frame of wood with pieces of glass for a window.

SASH. A girdle round the waist, which in the army is worn by the officers.

SASSAPARA. A yellow, subserena wood of an aromatic scent, common in America.

SATELLITE. A secondary planet moving round another, as the moon does round the earth, so called because it attends the primary planet from rising to setting, after the manner of the satellites who attended on the eastern princes as a guard. Jupiter has four such satellites, Saturn seven, and Herschel six.

SATIN. A glossy kind of silk stuff.

SATIRE. A biting sort of poetry, written to expose the follies of men.

SATURATION. An impregnation of a fluid with as much of any solid substance as it can dissolve. Thus water

will dissolve about one third of its weight of common salt, and when it holds thus much in solution, it is said to be saturated with it, because, if more be added, it will remain solid.

SATURDAY. The last day in the week, so called from Saturn.

SATURN (in Heathen Mythology). A son of Cœlus and Terra, and the god of time, commonly represented with a scythe, to denote the destroying power of time; sometimes with wings, to denote the swiftness of time, and with shackles, to denote the slow revolution and motion of the planet Saturn.



SATURN. One of the primary planets, the tenth in order of distance from the sun, which is thirty years in performing his sidereal revolution. He is marked by this character ♄.

SATURNALIA. A festival at Rome, in commemoration of the golden age, or the age of Saturn, when all men enjoyed their liberty, as the poets tell us.

SATURN'S RING. A broad, opaque, circular air, which encompasses the planet like the wooden horizon of an artificial globe.



SAVOY. A sort of winter cabbage with a crumpled leaf, which is greatly improved in flavour by being exposed to frost.

SAWMILL. A mill for sawing trees into boards, planks, &c.

SAWYER. A mechanic employed in sawing timber. There are two ways to cut a piece, one, of (C) (D) (E) (F) @ the pit, or below, and the other straight on the timber.

SCA. A creeping perennial, as it affects rocky or stony

CH. A semicircular arch rises the Saxon style.



FILE. A mode of building the Saxons in Great Britain.

S. A plant cultivated in its leaves a medicinal herb.

E. One of Linnaeus's naturalizing plants with rough

leaves, fig. 60.

D. A lemniscate position, shown as by operators.

o Mathematics. The degree of a curve or of right lines given on a circle.

(in Music.) A series of 230 falling towards sentences in geography, a scale of miles in measuring the distance of Astronomical scale of notation, of progress on which any arithmetic is founded, as the scale, which computed by

o TRIANGLE. A triangle (and angles are all unequal).

Two wooden bowls suspended of a balance, one for weights, and the other the weight.



OP. A sort of oyster.

SCALP. The skin that covers the skull bone.

SCAMMONY. A concreted, resinous juice, light and friable, of a grayish brown colour, and disagreeable smell.

SCANNING. Measuring Latin verses by the syllables and feet.

SCANTLING. The measure, size, or standard, by which the dimensions of any thing, particularly timber, is determined.

SCAPEMENT (in Clock Work). The means of communicating the impulse of the wheels to the pendulum. Common scapements consist of the swing wheel and pallets only.

SCAPULA. The shoulder-blade.

SCARF. A sort of sash worn by officers in the army, and also by divines, as well as females, over the left shoulder and down the right side.

SCARP SKIN. The first and outermost of the three lamina of which the skin is composed.

SCARIFICATION. Incisions made in the skin, as in cupping.

SCARP. The slope on that side of a ditch which is next to a fortified place, and looks towards the field.

SCAVENGER. A person whose duty it is to see that the streets be cleaned from dirt and dust.

SCENOGRAPHY. The perspective representation of a play on a stage.

SCHEDULE (or List). A scroll of paper or parchment appended to a will or any other deed, sign an inventory of goods, &c.

SCHIST. A name given to different kinds of stones of a stony formation, but particularly those of the argillaceous kind.

SCHOLIUM. A note or annotation on an ancient author.

SCHOOL. A place set apart for the instruction of youth.

SCHOOL (in Philosophy). A system of doctrine as delivered by particular teachers, as the Platonic school, the school of Aristotle, &c.

SCHOOL (in Theology). The age of the church and the form of divinity that succeeded the fathers.

SCHOOL (among Painters). The style and manner of painting among the great masters of the art at any particular period, as the Italian, Flemish, Dutch, Spanish, and English schools.

SCHOONER. A small, fast sailing vessel with two masts, whose main and fore-sets are suspended by gaffs, running from the mast to the stern. It is employed in

trade by those whose speculations require despatch.



SCIAGRAPHY. The art of finding out the hour of the day or the night by the shadow of the sun or the moon.

SCION. A graft or young shoot of a tree.

SCHOTTIC. A sphere or globe of wood with a hole, in which is placed a sense, so constructed that it may be turned round every way, and used in making experiments in a darkened room.

SCIE FACIAS. A writ of execution which lies a year and a day after judgment given.

SCIRRHUS. A hard tumour of some gland.

SCITAMUNE. One of Linnaeus's natural orders, comprehending gages, cardamom, spears, and other aromatic plants.

SCISSORING (in Music). Collecting and arranging the several detached parts of a piece into a certain order.

SCORPI. One of the twelve signs of the zodiac, marked with ♏.

SCORPHON. An insect, having eight legs, which resembles the scab, but much smaller. It is armed with a scorpion sting, the puncture of which in hot climates is very dangerous.

SCREEN. An instrument in husbandry which consists of a frame and wire work, with which wheat is cleared of the dust and the chaff grain.



However sent our some war.

distance before the army, in order to discover the movements of the enemy.

SCREW. One of the six mechanical powers, consisting of a spiral thread or groove cut round a cylinder; when the thread is on the outside, it is a male or convex screw; but when it is cut along the inner surface of the cylinder, it is a female screw, otherwise called a nut.



SCRIBE. A doctor in the Jewish law, whose business it was to write and interpret the scriptures.

SCRIBING (among Carpenters). Fitting the edge of a board to the side of another.

SCRIP. A bag formerly carried by pilgrims.

SCRIP (in Commerce). That part of any loan which remains unpaid for by the subscribers.

SCRIVENER. One who draws up and engrosses writings. The company of scrivengers in London was incorporated in 1610.

SCROPULA. A disease consisting of hard swellings in the glandules of the neck and ears.

SCRUPEL. A small weight equal to twenty grains.

SCUPLIES ECLIPSED. That part of the diameter of the moon which enters the shadow.

SCRUTINY (in Law). An examination of suffrages or votes at an election, for the purpose of ascertaining whether they are good or not.

SCULPT, or SCULP, annexed to an engraver's name, denotes that he engraved or carved the piece.

SCULPTURE. An art which comprehends not only carving in wood, stone, or marble, but also such as engraving in all its kinds, and casting in bronze, lead, wax, &c.

SCULL. A little war for rowing a boat.

at rowed with sculls.
which rises in the top of

swelling raised in the

ence, the symptoms of
pits in the hands and
the legs, a foul breath,
and eating too much salt

are holes cut in the
enough to admit a man,
ack in the sea between
which was very frequent

among the ancients. It
is whelped Charybdis.

struments for mowing,
steel blade attached at
end of six or eight feet

turn there is frequently
that is called a cradle.

is represented below.



strait of water which
of one or more countries,
the Mediterranean Sea,
of the Marmora or the
the Baltic. A sea is less

Mares.

Case (in Zoology). A
class animal inhabiting
islands and countries,
with hunted for its skin.



of metal having coats of
by device engraven upon
in wax made by the seal.

The impression or de-
press which is put to any

deed by way of ratification. In England,
the great seal is the seal used for the united
kingdom of England and Scotland,
and sometimes of Ireland. The privy seal
is that which the king uses to such grants,
&c. as pass the great seal.

SEALER. In England, an officer in
Chancery, who seals the writs and instru-
ments there made.

SEALINGWAX. A hard wax made of
gum lac, resin, &c. which is used in seal-
ing letters, &c.

SEALSKIN. The skin of the seal.

SEAMEN. Men brought up to the sea
life.

SEAMEW. A sea bird about 18 inches
in length.

SEAFORCUPINE. A fish found in
America, which puffs itself out in the
shape of a bladder when enraged.

SEARCHERS. Women appointed to
examine all persons immediately after
their decease.

SEASONS. The four portions of the
year, namely, Spring, when the sun enters
Aries; Summer, when he enters Cancer;
Autumn, when he enters Libra; and Win-
ter, when he enters Capricorn.

SEA STAR, or STARFISH. An animal
inhabiting the sea, which adheres to the
bottoms of ships, and renews any of its
parts which it loses.



SEA-URCHIN. An animal inhabiting
the sea, which is armed with five sharp
teeth.

SEAWEEEDS. A sort of herbs found
floating on the surface of the sea, which
are botanically called algae.

SEA-WOLF. A voracious fish found in
the north of Europe.

SEAWORTHY. An epithet for a ship
fit for a voyage.

SECOND. Any right angle that cuts
another, whether a right line or a curve.

SECOND (in Geometry and Arithmetical).
The sixtieth part of a minute, marked
thus $''$.

SECONDARY (in Law). The second
man in any place, who is next to any chief
officer.

SECONDARY CIRCLES. Circles

which intersect the six greater circles of the sphere at right angles.

SECONDARY PLANETS. Those which revolve as satellites round the primary planets.

SECRETARY. One who is employed in writing letters, &c. for a person.

SECRETION. The separation of some fluid from another in an animal or vegetable substance by means of glands.

SECT. A religious party.

SECTION. The cutting of one plant by another.

SECTOE. A mathematical instrument used in measuring proportional quantities.

SECTOR OF A CIRCLE. That portion of a circle comprehended between two radii and an arch.

SECUNDUM ARTEM. By the rules of art.

SECULAR GAMES. Games among the Romans, so called because they were celebrated but once in a *seculum* or age.

SECULAR PRIEST. One who has not taken monastic vows.

SEDAN. A close chair in which persons are carried by men, used at Bath in England, and in some other places.

SEDIMENT. Whatever settles or sinks to the bottom of a fluid.

SEED. The essence of the fruit of every vegetable, containing the rudiments of the new vegetable.

SEGMENT. Any part of a line in a triangle or other figure, cut off by a perpendicular line let fall upon it.

SEGMENT OF A CIRCLE. A part cut off by a chord, or that portion comprehended between an arc and a chord.

SEIGNSIOR, GRAND. The sultan or emperor of the Turks.

SEIGNORY. The jurisdiction and power of a lord.

SEIZING. A sea term for binding two ropes together.

SEIZURE (in Law). An arrest of merchandise, that is prohibited or otherwise forfeited.

SELENIUM, or Selenium. The sulphate of lime.

SELENOGRAPHY. A description of the face of the moon.

SELLING OUT (among Stockbrokers). A transfer of one's share of stock from one person to another, in distinction from buying in, which is the purchase of the stock held by another.

SELLING OUT (among Military Men in England). The selling one's commission.

SEMI. A prefix to many words, signifi-

ing half, as *semicircle*, half a circle; *semi-colon*, half a colon, &c.

SEMIMETALS. Fossil bodies not combustible, yet in some measure to be fused by fire.

SENIORITY. Priority of birth.

SENIORITY (among Military Men). Priority in the time since the raising of any regiment, or an officer's receiving his commission, &c.

SENSE. That faculty of the soul, whereby it perceives external objects by means of impressions made on particular parts of the body, called the organs of sense, and then conveyed to the sensory; the senses are five, namely, seeing, hearing, smelling, taste, and feeling.

SENSIBLE HORIZON. See *HORIZON*.

SENSITIVE PLANTS. Plants of the monoon tribe, which have the extraordinary property of closing on being touched.

SENTICORSE. One of Linnæus's unanimal orders of plants, including the pine, birch, hawthorn, &c.

SENTINEL. A private soldier placed to watch at some post.

SEPIARIE. One of Linnæus's natural order of plants, including such as grow wild in hedges or are used for hedges, as the hter, privet, &c.

SEPOYS. Natives who serve in the army in India.

SEPTEMBER. The ninth month of the year, so called because it was *Septimus Mensis*, the seventh month of Romulus's year.

SEPTENNIAL. Every seven years, or septennial parliaments, i. e. new parliaments chosen every seven years, as they are at present appointed in England.

SEPTUAGESIMA. The first Sunday in Lent.

SEPTUAGINT. The Greek translation of the Bible from the Hebrew into the Greek by seventy-two Jewish interpreters, by order of Ptolemy Philadelphus, king of Egypt.

SEQUESTRATION (in Law). The separating a thing in controversy from the possession of both parties, till the right is determined by course of law.

SEQUESTRATION (in the Civil Law). The act of the ordinary depositing of the goods and chattels of a person deceased, whose estate no one will settle with.

SERAGLIO. The palace of the grand seignior.

SERGE. A woollen stuff manufactured in a town.

SERGEANT, or SERJEANT at Law. In England, the highest degree taken in the common law, answering to that of doctor in the civil law.

SHANK. That part of the fore leg of a horse that is between the knee and the second joint next the foot; also the long and cylindrical part of different things, as the shank of a ranshestick, &c.

SHARE. The cutting part of a plough.

SHARK. A voracious fish, that inhabits the sea only, and grows to an enormous size.



SHARP. A half note, signifying an elevation, marked thus



SHEARS. A tool made in the form of scissors, for clipping hedges, &c.

SHEATH. A case for a knife or sword.

SHEATH-BILL. A bird inhabiting the South Sea Islands, which has the upper mandible of its bill covered with a sheath.

SHEATHING. The covering used on a ship's bottom, to protect the planks from worms.

SHEEP. A domestic animal, much valued both for its flesh and its wool. Of the different breeds of this animal, the South Down, Leicester, and Northfolk are the most esteemed in England. It is one of the most profitable part of the live stock of a farm, where the lands are dry. In



the United States, the merino breed brought in is preferred for the wool.

SHEARING. The spring season,

when the fleeces of the sheep are sheared or cut off.

SHEET. A large linen cloth laid on a bed.

SHEET. A breadth of paper, that admits of being folded into a given form.

SHEET (among Mariners). A rope fastened to the corner of a sail.

SHEET-ANCHOR. The largest anchor in a ship.

SHEICK. The chief of a tribe among the Arabs.

SHEKEL. A Jewish silver coin, worth about half-a-crown sterling.

SHELF (among Miners). A hard coat of earth, which lies under the mould.

SHELL. A crustaceous covering of fishes or fruits.

SHELL-FISH. Fish invested with a hard covering, either testaceous, as oysters, or crustaceous, as lobsters.

SHERIFF, or *SHIRIFF*. In England a reeve or officer of the shire, who, as keeper of the king's peace, is the first man in the county. He is appointed by the king for every county except Middlesex, where he is elected, according to ancient usage, by the livery of London. In the United States, the Sheriff is an officer who attends upon court, has charge of the prisoners, sees to the execution of writs, &c.

SHIELD. A weapon of defence, borne on the arm, to turn off blows; also another name for an escutcheon, by which it is represented.

SHIP. A general name for all large vessels which navigate the seas, particularly those equipped with three masts and a bowsprit, the masts being composed of a lower mast, topmast, and topgallant mast, each of which is provided with yards, sails, &c.

SHIP-BUILDING. The practical branch of naval architecture, or the art of constructing vessels according to certain draughts.

SHIP-MONEY. An imposition formerly charged upon the ports, cities, towns, &c. of England.

SHIPPING. A general term for whatever relates to ships.

SHIPS OF WAR, commonly called *MEN OF WAR.* Vessels properly equipped with artillery, ammunition, and all the implements of war necessary for attack and defence. Ships of the first rate or class mount from 100 to 110 guns and upwards; of the second from 90 to 100 guns; third rate from 64 to 74 guns; fourth rate, from 50 to 60 guns; fifth size, from 38 to 44 guns; and sixth size, from

ends of several cocoons are joined and reeled together out of warm water, into which they are put for the purpose of softening their natural gum, and making them stick.

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SILKWORM. The worm from which silk is most commonly procured.

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FEMALE.



SILVAN. Pertaining to woods, as the *Silva nymphæ*, &c.

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SIMPLE (in Pharmacy). A general name for all herbs which have any particular medicinal virtue.

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SIPHO. See *Syrinx*.

SIR. A title of address to baronets and knights, coupled with their Christian name, as Sir William or Sir John, &c.; also a general complimentary form of address.

SIRIUS, the *DOGSTAR*. A very bright star of the first magnitude in Canis Major.

SIROCCO. A periodical wind in Italy and Barbary, which prevails about Easter.

SKELETON. An assemblage of the



bones of any animal, cleaned, dried, and preserved in their natural position.

SIZ. A sort of glue made of the strands

which ascends rivers in vast sheets in the spring season.

SMELTING (in Metallurgy). The fusion or melting of ores, in order to separate the metallic from the earthy or stony parts. The art of fusing ores after washing is one of the most important operations in metallurgy.

SMITH. One who works in iron. The company of blacksmiths in London, was incorporated in the sixteenth century.

SMITHERY. The art of working iron into particular shapes as occasion requires.

SMOKE. A humid matter, exhaled in the form of a vapour, which ascends from the fire.

SMOKE-JACK. See **JACK**.
SMUGGLERS (in Law). Those who get prohibited goods, clandestinely and fraudulently imported.

SMUT. A disease in wheat, which consumes the germ and substance of the grain. It is a sort of fungus.

SNAIL. A sort of testaceous animal, of which there are numerous species, that vary mostly in regard to their shells. Snails without shells are called slugs.

SNAKE. An amphibious animal, which resembles an eel in its cylindrical body.

SNEEZING. A convulsive contraction of the chest.

SNIFE. A heath bird, nearly allied to the woodcock.



SNOW. A well-known meteor, formed by the freezing of the vapour in the atmosphere.

SNUFF. A narcotic powder prepared from the leaves of the tobacco plant.

SOAP. A composition of oil or fat, and potashes, or any other alkali. The soft soap is made of potash, and oil or tallow; the Spanish or Castile soap, of oil of olives, and soda or barilla; black soap is a composition of train oil and an alkali.

SOCIETY. A name given to any association of persons uniting together, and co-operating to effect some particular object, as the societies or academies for promoting of literature, charitable societies, societies of public charity, missionary societies, or sending missionaries abroad, &c.

SODA. A mineral alkali, sometimes found in a native state, as in the lakes in Egypt, which, being dried by the heat of the sun, leave beds of soda, or natron, as it is there called. Soda is, however, for the most part, procured from a plant, botanically called the salada soda, which grows among the cliffs on the coast, and also from other plants on the seashore; but, in this case, it is more or less pure, according to the nature of the plant from which it is procured. Soda resembles potash very much, but it is rather more fusible; and when it comes into the air, it crumbles into powder instead of deliquescing, as potash does.

SODA WATER. Water impregnated with carbonic acid gas.

SOLICITANT. Self-styled.

SOIL. The ground in a state for cultivation, or for the growth of plants.

SOLAR SYSTEM. That system of astronomy, which is founded on the hypothesis that the sun is the immovable center of the universe, round which all the other planets revolve at different distances, and in different spaces of time.

SOLDER. A metallic composition used by plumbers and other artificers, for the purpose of uniting metallic bodies more firmly together. Iron is generally soldered with copper, copper and brass, with tin.

SOLE. An European fish much valued for the table.

SOLECISM. An impropriety of speech contrary to the rules of grammar.

SOLICITOR. A person who is employed in conducting suits in courts of equity.

SOLID (in Geometry). A magnitude which has length, breadth, and thickness.

SOLID (in Physics). A body whose minute parts are so connected together as not to yield readily to the impression of external force, in distinction from a fluid.

SOLIDITY. That property of matter by which it excludes every other body from the place which it occupies.

SOLITARY CONFINEMENT. The confinement of prisoners by themselves in cells.

SOLO (in Music Books). A name for any part that is performed by one single person.

SOLSTICE. The time when the sun is at the greatest distance from the equator, namely, 23° 26'; which happens about the 21st of June, when he enters the zodiac of Cancer, or the summer solstice; and about the 21st of December, when he enters the zodiac of Capricorn, which is the winter solstice.

(SOLSTITIAL POINTS) The two

S P A

SPICA, in astronomy, the first of the stars of Capricorn, when seen.

SPERMATOPHYTES or **SPERMATOPHYTES**. A class of plants which produce seeds without the aid of water.

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S P E

SPAN. An English measure of six inches.

SPANISH FLY. An insect which is used in raising dusters.

SPAR. Any sort of earth which breaks easily into cubical or laminated fragments with polished surfaces.

SPARROW. A bird so nearly allied to the finch, that they are classed by Linnaeus under the generic name of fringilla. But the sparrow differs in its habits essentially from the finch. It is a mischievous, cunning, peevish bird, that is very destructive in corn fields, and in the roofs of houses where it builds. We here speak of the European species. In America, there are several varieties, of which the chipping bird is the most common.

SPARROW-HAWK. A kind of short-winged hawk.

SPASM. An involuntary contraction of the muscular fibres.

SPATHACEAE. One of the Linnæan natural orders, comprehending plants very similar to the lilaceous plants, as the narcissus, &c.

SPATULA. An instrument for spreading salvas or plasters.

SPAVIN. A disease in the feet of horses, which causes them to swell.

SPEAKER OF THE HOUSE OF COMMONS, in England, a member chosen by the house, and approved by the king, who regulates all their proceedings, and speaks in the name of the whole on all public occasions. The speaker of legislative bodies in the United States has similar duties.

SPEAKING-TRUMPET. A sort of trumpet used at sea, by the help of which persons may hear at a great distance.



SPEAR. A sort of lance with a sharp point.

SPECIAL JURY (in Law). A jury of a higher order of persons, sworn in by a particular cause.

SPECIALTY (in Law). A bond, bill, or similar instrument.

SPECK. Gold or coin, in distinction from other money.

SPECIES. Any particular plant, animal, or mineral, contained under a genus.

SPECIFIC. A medicine having a particular efficacy.

SPECIFIC GRAVITY. The relative



See, a variety of other dogs of this kind.

proportion of the weight of bodies of the same bulk, which is determined by immersing them in any fluid.

SPECTRUM. A luminous spot formed by a ray of light on a white surface, when admitted through a small hole.

SPECULUM. Any polished body impervious to the rays of light, such as polished metals, looking-glasses, &c.

SPERMACEUM. An oily substance found in the head of the physifer macrocephalus, a species of whale.

SPHERE (in Geometry). A solid contained under one uniform round surface, such as would be formed by the revolution of a circle about a diameter thereof, as an axis.

SPHERE (in Astronomy). The longitude and latitude which exists over globes, and in which the heavenly bodies appear to be fixed, at an equal distance from the eye.

SPHERICS. The doctrine of the sphere, particularly of the several circles described on its surface, with the method of projecting the same on a plane.

SPHEROID. A solid body approaching to the figure of a sphere.

SPHINX. A fabulous monster of Thebes, said to have put forth riddles, and to have killed those who could not respond them; also an Egyptian statue, with the head of a woman and the body of a lion.

SPIDER. An insect which is remarkable for its ingenuity in forming its web, which it effects by means of papille or teats at the bottom of its belly. It uses its web as a snare for flies and other insects, whom it seizes and kills with great ferocity.



SPIDEL-WORT. A perennial and a flowering plant, cultivated in gardens.

SPINAGE. A pot-herb.

SPINE (in Anatomy). The bony column, which consists of the twenty-four vertebrae of the back.

SPINET. A musical instrument something similar to a harpsichord.

SPINNING. The act of drawing silk, flax, or wool, into threads, which is performed either by means of a wheel, or by spindles particularly constructed for the purpose.

PINSTEEL (in Law). In England, an

addition usually given to unmarried women, from a viscount's daughter downwards. The term is also used in the United States, in application to any unmarried woman.

SPIRACULA. Holes or pores in the abdomen of insects, through which they breathe.

SPIRAL. A curve line, which in its progress always recedes more and more from its centre.

SPIRE. A steeple that rises tapering by degrees, and ends in a point.

SPIRITS. A general name for all volatile substances subjected by distillation, now confined by chymists to alcohol.

SPLEEN (in Anatomy). A spongy viscus, of a livid colour, lying on the left side of the body.

SPLICING. Joining one rope to another.

SPLINTER. A small shiver of wood or bone suddenly and violently broken off.

SPOKES. The bars in the wheel of a carriage.

SPONDEE. A foot of two syllables.

SPONGE. A substance white, at one time, was supposed to be a sea-weed growing on rocks, but now discovered to be a sort of zoophyte, that is torpid, and clothed with a gelatinous porous flesh, by which it absorbs or rejects water at pleasure.

SPOONBILL. A bird so called from its flat orbicular beak, which is in the shape of a spoon.



SPONTANEOUS. An epithet for things that act of themselves, without any apparent external agency, as the spontaneous combustion of vegetable substances, which when tightly dried, and closely bound, will burst into a flame; or the spontaneous generation of the limbs or parts of animals which have been cut off or destroyed.

SPOTS ON THE SUN. An Irish phrase observed on the sun, moon, and

stare of which, little is very similar to a herring, is a species of the same generic name of clupea. sprinkling of the sea lip of a wave in stormy

(astronomy). One of the ring in the northern hemisphere enters Aries, about

contain or source of water round.

(Mechanics). A piece, filed to give an elastic chime, as the spring of a watch underneath.



A species of African

A lively and pleasant very rapid in raising

taken at noon and

It beam of pale creaming diagonally. fluid extracted by dissolving

L. A sleek and white of trachea or molasses, of spruce, well boiled to coat it afterwards added station.

A kind of French or son in America.

Seasons.

USE (in England). A as piece of temporary seasons erected for dirt, before going on the ch server as timber.

The use of untreated which are scraped and a lot into the ends of

of metal made to fit (seasons), and armed with and for raising horse on. hired to watch the minutely what passes up.

in the Navys. A detachment in any expedition. in the Army. A body to two hundred. (geometry). A quadrilateral

figure, whose angles are right angles, and sides equal.

(in Arithmetic). The product of any number multiplied by itself; also the squares of linear measures, as a square foot, a square yard.

(among Carpenters). An instrument for squaring their work or reducing it to a square.

(in Military Affairs.) A body of soldiers formed into a square.

(SQUARY ROOT). A number which, multiplied in itself, produces the square number; thus, 2 is the square root of 4.

(SQUIRREL). An agile animal, that climbs dexterously, and leaps nimbly from tree to tree. It lives mostly on seeds and fruit. The most common varieties in North America are the gray, red, and striped.



(STACK, or BICA). A structure of hay or corn, so formed that it may be ditched by way of defence from the west. The stem or body of the stack should be about two thirds, and the roof one third, of the whole stack. A funnel or chimney, called the well, is frequently left in circular stacks, to prevent their heating too strongly. As a preservative against the wet, when the hay or corn is stacking, tick-cloths are fixed up.

(STADIUM). A Greek long measure, equal to our furlong; also the race-course among the Greeks.

(STAFF). An ensign of office.

(in the Army). A specified number of officers acting together.

(among Mariners). A light pole erected in a ship, on which the colours are hoisted.

(STAFF-OFFICERS). Those officers who constitute the staff.

(STAGE). The elevated place in the arena of a theatre, where the actors perform their parts; also any elevated place for the purpose of exhibiting any thing, or of carrying on any work in building.

STAGE-COACH. A public vehicle, so called because the horses go only a certain distance at a time, which is called a stage.

STAG-BEETLE. An insect which lives in the decayed trunks of trees.

STAG. An elegant animal, the male of which has branching and recurvate horns. The branches of a well grown stag are at least six or seven. This animal is not found in America.



STALACTITES. A sort of calcareous matter, consisting of carbonate of lime, carbonic acid, and water. It is found suspended from vaults or the roofs of caverns in calcareous mountains.

STALK, STALK (in Botany). That part of a plant which receives the nourishment from the root, and distributes it to the other parts.

STALL. A particular seat in a cathedral; also a partition in a stable; and an open shop in a market or fair.

STAMEN (in Botany). One of the principal parts of fructification in plants, on which Linnæus's sexual system is founded.

STAMINA. The simple original parts of an animal body, which existed in the embryo.

STAMP. Any instrument with which an impression is made; also in England, paper bearing a particular mark or impression, which is used for receipts, deeds, and other instruments, and for which a tax is paid.

STANDARD. An original weight or measure by which other measures are regulated. These measures are submitted in England, to the keeping of a magistrate, or deposited in some public place, as the Exchequer.

STANDARD (in Military Affairs). A flag or banner, borne as a signal for the forming of troops into a body. The signal

standard of England is a flag in which the imperial arms of England, Scotland, and Ireland are quartered, with those of Hanover.

STANNERIES. Tin mines or works.

STAPLE (in England). A town where there were public storehouses for merchandises.

STAPLE COMMODITIES. Articles

such as wool, cloth, lead, &c. which might be laid up in the staples or storehouses without damage.

STAR. A general name for the heavenly bodies, but more particularly for what are otherwise denominated fixed stars, as distinguished from planets, comets, satellites, &c. The stars were distinguished by the ancients into different collections, included within imaginary figures, called constellations. The particular stars in each constellation have been moreover distinguished, by the moderns, by the letters of the Greek, and also according to their magnitude, from the first or largest to the sixth or the smallest that are visible to the naked eye.

STARBOARD. The right hand of a ship, when looking towards the head or fore part.

STARCH. A powder drawn from wheat flour, and used in stiffening linen.

STAR-CHAMBER (in England). A court where anciently the Lord Chancellor, assisted by others, used to sit to punish riots, suppress, and other great offences.

STARBUCK. See **FEARLESS.**

STARLING. An European bird about nine inches long, that is very docile, and may be easily taught to speak.

STATICS. That branch of the science of mechanics which teaches the properties of bodies in respect to their weight, equilibria, &c. when in a state of rest. See **Mechanics.**

STATIONER. A dealer in paper, pens, and all writing utensils, &c. The stationers in London, form one of the city companies.

STATUARY. A branch of sculpture employed in the making of statues.

STATUES. Figures of men or other objects formed, with the chisel, of metals or stone, &c., or carved in wood, and cast in plaster of Paris, or in different kinds of metals.

STATUTES (in England). Acts of parliament made by the three estates of the realm, which are either public or private. The contents of Westminster must have the concurrence of the public scribes without being specially pleaded, but not so of private statutes. In the United States the

STOCK (in Commerce). Any fund consisting of money or goods employed by a person in trade, particularly the sum of money raised by a company for carrying on any trading concern.

STOCK-BROKER. One who deals in the public funds for others.

STOCK-DOVE. An European bird, supposed to be the original stock of the various kinds of pigeons.

STOCK-EXCHANGE. The place where stock is bought and sold.

STOCK-JOBBER. A speculator or dealer in the public stocks or funds.

STOCKING. A covering for the legs, made either of silk, wool, cotton, or thread, &c. knit with the hands or wove in a frame.

STOCKS (in Domestic Policy). The public funds or government securities, which bear an interest, and are regularly bought and sold.

STOCKS (in Law). A mode of confining the legs of disorderly persons by way of punishment; which was obtained by statute.

STOCKS (in Shipbuilding). A frame of timber for building pinnaces, ketches, and other small craft, also sometimes small frigates.

STOICS. A sect of philosophers among the ancients, who maintained that pain was no evil, and many other paradoxes of a similar nature.

STOLE, *Græc. de reg.* In England, the head officer in the bedchamber of a king or prince.

STOMACH. The menstruum, being receptacle in the lower region, destined to receive the food and convert it into chyle.

STONE. A hard mineral, that may be used in various ways in building. The principal component parts of stones are silica, alumina, strontia, lime, and magnesia; sometimes the oxides of iron, manganese, nickel, chromium, and copper are also found to enter into their composition.

STONE-FRUIT. Fruit having its seed enclosed in a stony substance.

STONEHENGE. A pile of huge stones on Salisbury Plain, in England, six miles distant from that city, which is generally admired by antiquaries to have been a British temple. It consists of the remains of four ranks of rough stones ranged one within another, and sustaining others that are laid across and fastened by mortises.

STONE-WARE. A general name for every thing which is manufactured of earth or clay, particularly the coarse sorts of earthen-ware.

STOP (in Music). The pressure of the strings by performers on the table of a violin, by which they are brought into contact with the finger board.

STOP OF AN ORGAN. A collection of pipes similar in tone and quality, which run through the whole or a great part of the compass of an instrument.

STORAX. The gum benzoin.

STORAX, or *Navas Storax*. The materials laid up in store for the use of the navy, such as ordnance, ammunition, masts, sails, cordage, &c.

STORK. A bird nearly allied to the heron and the crane, with which it is classed by Linnaeus under the present name of ardea. It is a white bird, having the orbits of the eye naked. This bird is a native of Europe, Asia, and Africa, and feeds upon amphibious animals. In East India and Germany the storks are much favoured, and are to be seen on the tops of the houses, and even in the public streets



STORMY PETREL. See *FALCON*.

STRAIT, or *STRAITS*. A narrow part of the sea shut in by land on both sides as the Straits of Gibraltar, &c.

STRATUM. A bed or layer, and *STRATA*, the beds or layers, of different earths or mineral substances of which the whole earth is composed.

STREAMER. A flag or pendant in a ship.

STREPTITEROS. A species of Gnat, with tall spind horns, found in the island of Crete.

STRIKE. A measure of capacity, containing four bushels.

STRONTIA. A sort of poisonous earth. **STROUDS**. The several twists of the end of a cable.

STRUMA. A scrofulous swelling.

STUCCO. A composition of white marble pulverized and mixed with plasters of Paris. It is used on walls, or in making ornaments &c. &c.

SCOTCH-GLASS. A sort of glass obtained from a species of the glass, among the slate partitions of Linnæus.

SCOTTLE. One of the Linnæan natural orders of grasses, including the joint compound, as the *scottellaceæ*, &c.

SOCKET. The part of a pump, and a part of water, but not open a stone, which owing to the pressure of the atmosphere, allows very easily, and is not to be pulled without great force.

SUCKER. In fishes. — A young frog breathing from the lungs.

SUCKER. In anatomy. — A sort of fish, that allows to draw that it cannot be removed without great difficulty.

SUCKING-TIT. A bird, having a beak that is not a solid body, which allows very freely to the bottom and sides of vessels. It was called by the Japanese names, and in the Linnæan system receives a name.



SUFFERANCE. A term in law, applied to tenants. A tenant at sufferance, is one that continues after his estate is ended, and wrongfully holds against another.

SUFFRAGAN. A bishop that is subordinate to an archbishop.

SUFFRAGE. A vote at an election in favour of a person.

SUGAR. A sweet substance procured from many plants or parts of plants, as from the stems of the maple, birch, &c.; the root of the sugar-beet, &c.; the leaf of the ash, the rind of wheat, &c. — but particularly from the juice most in holding the expressed juice with quick lime or vegetable alkali, and is called powdered in the West Indies and Java — rather United States.

SUGAR-HAWK. The process of reducing the rock sugar when it comes from the sugar plantations.

SUGAR-PLANT. A plant growing in the East and West Indies, and other tropical countries, which consists of a knotted root, that rises sometimes to the height of twenty feet, but most of a more moderate size are preferred, that are full of juice. From this, sugar and molasses are made.

SUGAR OF LEAD. Acetate of lead.

SUI GENESIS. Of its own nature or kind.

SUIT. An action at Law.

SULPHATES. Salts formed by the

action of sulphuric acid, with different bases, as the sulphate of soda, called Glauber's salts; the sulphate of magnesia, called Epsom salts; as the sulphate of potash, the sulphate of zinc.

SULPHITES. Salts formed by the action of sulphurous acid with the different bases.

SULPHUR. A simple combustible substance, vulgarly called brimstone, which is found pure in great quantities. In combination with metals it forms the ore called pyrites. It is a nonconductor of electricity, and becomes electrically by friction. Its specific gravity is 1.996, &c.

SULPHUR, FLOWERS OF. A powder procured from sulphur when it is heated to the point of 171 degrees.

SULPHURETS. Compounds of sulphur with different alkaline metals and metallic bases, as the sulphuret of lime, of potash, &c.

SULPHURIC ACID. An acid containing sulphur (the basis) and oxygen. Concentrated sulphuric acid is called oil of vitriol.

SULPHUROUS ACID. An acid formed by the combination of sulphur with a less degree of oxygen than is requisite to form sulphuric acid.

SULTAN. The title of the emperor of the Turks. He resides at Constantinople. Many interior Asiatic princes are styled sultans.

SUMACH. A shrub which grows naturally in Syria, Palestine, Spain, and Portugal. From its pith, when dried and ground at the mill, is procured a powder used in tanning and dyeing.

SUMMER. One of the four seasons of the year, beginning, in the northern hemisphere, when the sun enters Cancer, about the 21st of June.

SUMMER (in Architecture). A thick piece of timber that supports a building.

SUMMONS. In Law: A citation by virtue of which any man is called to appear before a magistrate or judge.

SUMPTUARY LAWS. Laws regulating dress and domestic life.

SUN. The great luminary, supposed, according to the Copernican system, to be the immovable centre of the universe, having all the planets revolving around him at different distances, and in different periods of time. It is marked \odot .

SUNDAY. The sixth or Lord's Day.

SUN-FLOWER. A plant, the yellow flower of which spreads like the rays of the sun.

SUPER. A prefix signifying excess, as superabundant, superannuated, &c.

SWAN. A noble bird, nearly allied to the goose, with which it is classed by Linnaeus under the generic name of the anas. A species entirely black has been recently discovered in New-Holland.



SWARD. The root of grass on a meadow.

SWARTH. The row of grass as it falls from the scythe of the mower.

SWEEPS. Large ears used on board ship of war.

SWEEPSTAKES. The different stakes laid down by several persons, which all go by a sweep to one.

SWEETFEA. An animal which bears a beautiful sweet smelling shower.

SWIFT. A sort of bird which moves very swiftly; also a sort of bird.

SWIMMING. The act of sustaining the body in water, and moving in it as fishes and other animals do naturally, and as man also, by an acquired art, may do.

SWINE-STONE. A sort of calcareous earth.

SWIVEL. A small piece of artillery, that may be turned on a pivot in any direction.

SWORD. A weapon of offence, worn by a soldier's side.

SWORD-BEARS (in England). An officer who carries the sword of state before a magistrate.

SWORD-CUTLER. One who prepares swords for use.

SWORDFISH. A fish furnished with a swordlike snout with which it attacks other fish, particularly the whale.



SYCAMORE. A large tree like a fig tree, that grows very fast, and is used in plantations and pleasure grounds. It is vulgarly called button ball.

SYCOPHANT. An infamous name

the Athenians, who gave information of those that expected him contrary to law now taken for a tringing, sneaking flatterer.

SYLLABLE. An articulate sound formed by a vowel alone, or a vowel and consonant.

SYLLABUS. A list of the chief heads of a book.

SYLLOGISM. A logical argument consisting of three propositions, called the major and minor, which are the premises; and the question which, after it is drawn from the other two, is called the consequence or conclusion; thus, 'every animal has life; man has life; therefore man is an animal.'

SYMBOL. The emblem or representation of some moral quality by some animal or thing supposed to possess the same quality; as, a lion is the symbol of courage; two hands joined together, a symbol of union. These symbols were much used by the ancients in representing their deities, as the eagle, attributed to Jupiter is the symbol of his power.

SYMMETRY. A due proportion of all the parts to one another and to the whole.

SYMPATETIC INK. A kind of ink which, when written with, is invisible until it is held to the fire. It is made from the solution of lead, bismuth, gold, and green vitriol.

SYMPATETIC POWDER. A powder prepared from green or blue vitriol.

SYMPHONY. A concurrence or concert of several sounds agreeable to the ear, whether vocal or instrumental.

SYMPTOM. A sign or mark by which the nature of the disorder is discovered.

SYNALEPHA. A contraction of two vowels into one.

SYNCHRONOUS. Happening at the same time.

SYNOPE (in Medicine). A fainting or swooning.

SYNOPE (in Grammar). Taking a letter out of a word.

SYNOPE (in Rhetoric). A concise form of speech.

SYNOPE (in Music). The division of a note.

SYNDIC. A magistrate in Germany.

SYNOD. An assembly of the clergy.

SYNOD (in Astronomy). A conjunction of heavenly bodies, or comets of two planets in the same equal parts of the heavens.

SYNODICAL MONTH. The period wherein the moon departing from the sun, returns to a conjunction with him again. It is twenty-nine days, twelve hours

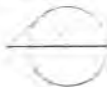
TALKER The head of the neck-line of the shirt, containing collar, cuffs, buttons, and pockets.

TALKING The form of an Indian tree, which has an extensive woody trunk and branches. It is used very much as a medicine.

TALIBITE or **TALIBIAN**, A kind of wood formed of pines.

TAL The bark of the oak, or other tree, ground or pounded, and used in tanning skins.

TALCUM A fine coating of earth or other matter which, rubbing it.



TALUS The mountain situated between the mountains of a rock water, like the the presence of forming with some species a high business water and is therefore used in preparing white wine instead of the stone of alum.

TALUS The quality of projecting water from the side of a stream, which after being heated in the sun, and then again cooled by the wind, and then again heated, and repeated in an alternate manner, and afterward it is used in the preparation of the bark of the oak, and is an ingredient in the preparation of a certain kind of wine.

TALUS A small animal which was formerly used in the preparation of some parts of wine.

TALUS A sort of bird.

TALUS A kind of worm in Spain.

TALUS A kind of worm resembling a tape in the form, which infests the arteries of the human body, and causes many disorders.

TALUS The mouth of the camera obscura.

TALUS A genus of animals of the class mammalia, order belinae, that inhabits South America.

TALUS A thick, black, acrimonious substance, obtained from old pines and fir trees.

TALUS The largest of all European spiders, the bite of which was formerly supposed to be venomous.

TALUS An allowance to the buyer for the outside package in the weighing of goods.

TALUS A sort of vessel much used by soldiers for eating.

TALUS A kind of mineral naturally used by the Greeks, a marble, and by the Romans.

TALUS The Chinese springiness of the tea.

TALUS A kind of the copper or better agreed upon, between two states in the past upon the grounds of their respective interests.

TALUS A narrow kind of bay of the sea.

TALUS A small country vessel in the Levant, having one mast and a square sail.

TALUS The medicinal substance formed on the sides of wine casks.

TALUS A kind of wood, and is a powerful stimulant of nature and of joints.

TALUS One of the two kinds of wood prepared by the Indians, which is distinguished by its color.

TALUS A kind of wood which is distinguished by its color and by its different uses.

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has been made ever since its first introduction into Europe in the seventeenth century. The tea plant is a native of

lenses upon which the effect of telescopes is founded are as old as Euclid at least, and wanted nothing but accident or reflection to lead to this mode of applying them.

Telescopes are either refracting or reflecting; the former consist of different lenses through which the objects are seen by rays refracted by them to the eye, and the latter consist of specula from which the rays are reflected and passed to the eye. The lens or glass turned to the object is called the object glass, and that next to the eye the eye glass, and when the telescope consists of more than two lenses all but that immediately next the object are called eye glasses. Great improvements have been made in the construction of telescopes, both reflecting and refracting. That constructed under Dr. Herschel's direction is the largest instrument of the kind, and possesses the highest magnifying power of any that was ever made. The tube of this telescope is thirty-nine feet four inches, it measures four feet ten inches, and every part of it is of iron that is rolled, or sheet iron, joined together by a kind of sewing, like the iron jannel of a stove. In order to command every altitude, the point of support is movable, and its motion is effected by the help of pulleys, so that it may be moved backward or forward and set in any altitude up to the very zenith. The tube is also made to rest with the point of support in a pivot which permits it to be turned sidewise.



TELLER. One in a bank, who receives, and pays out money.

TELLERS. Those who reckon the votes in any legislature.

TELLERS. In England, officers of the exchequer, who receive all moneys due to the crown.

TELLURUM. A kind of metal of a blue white colour, soft, brittle, and easily reducible to powder. It melts in a heat something above the fusing point of lead.

TELLUS (in Heathen Mythology). The goddess of the earth; the earth itself.

TEMPERAMENT (in Music). The accommodation or adjustment of imperfect sounds.

TEMPERATURE. The constitution of the air according to the diversity of the seasons, or the different situations of climate or circumstances.

TEMPERING (in Iron Works). Making iron and steel of a suitable degree of hardness or softness.

TEMPERING (among Brickmakers). The duly mixing the materials of which bricks are made, that they may be more easily cut and reduced to the proper shape.

TEMPLARS, or Knights Templars. An ancient order of knighthood, which was abolished at the beginning of the fourteenth century.

TEMPLE. A place appropriated for the performance of public worship.

TEMPLE (in Anatomy). The upper part on each side of the head, where the pain is felt.

TEMPORAL. Not spiritual; as the temporal revenues of the church in England, called the temporal, or temporalties.

TEMPORAL (in Anatomy). Pertaining to the temples, as the temporal arteries, &c.

TENACITY. The degree of force with which the particles of bodies cohere or are held together; a term applied particularly to metals which may be drawn into wire, as gold and silver.

TENAILLE. An network of a furrows. **TENANT** (in Law). One who holds lands by any right, particularly one who occupies lands or tenements at a yearly rent, for life, years, or will.

TENCH. A fish with a golden body and transparent fins, that inhabits rivers and ponds.

TENDER (in the Navy). A small ship that attends a larger.

TENDER (in Law). The offering of money in payment of a debt.

TENDON ACHILLES. That which connects the calf of the leg with the heel.

TENDONS. The substance of the muscles.

TENDRIL. The ending part of plants, as in the vine, with which they lay hold of any thing for support.

TENEMENT (in Law). Any thing which may be holden, particularly houses or any other buildings.

TENNIS. A game with a ball, driven by a racket.

TENNIS-COURT. The place where the game of tennis is played.

TENON. The square end of a piece of timber.

TENSOR (in Music). The middle part between.

TENSE. That part of a verb which denotes time, as the present tense, denoting the time that now is; the present or past, the time that was; and the future, the time that will be. Some times likewise denote

TESTAMENT (in Theology). Each of the volumes of the Holy Scriptures, that is the Old and the New Testament.

TESTATOR. A man who makes his will.

TESTATRIX. A female who makes her will.

TESTUDO. A machine among the ancients, which served to screen the soldiers when they approached the walls to mine.

TESTUDO (in Zoology). A genus of animals, including the marine turtle, the river turtle, and the land tortoise.

TETANUS. A locked jaw.

TETRADYNAMIA. One of the Linnaean classes of plants, including those plants the flowers of which have six stamens, four of them longer than the other two, as *anemone*, wallflower, cabbage, &c.



TETRAGYNIA. An order of plants under several classes, in the Linnaean system, the flowers of which have four pistils.

TETRANDRIA. One of the Linnaean classes, comprehending plants the flowers of which have four stamens, as the *scilla*, *bulb*, *plantain*, &c.



TETRARCH. Anciently the governor of the fourth part of a province.

TEXT. The original part of an author's work, as distinguished from any note or commentary.

TEXT. A passage of scripture chosen as the subject of a sermon.

TEXT (in Printing or Writing). A part of handwriting or form of letters by lawers and others.

TURQUS. A worker of mosaics by the Roman Catholics or *mosaists*.

THEATRE. A building constructed for dramatic exhibitions, with a stage for the performers, and pit, boxes, and galleries for the audience.

THEOCRACY. A government whereof God himself is the king, as that of the Jews before they were governed by king Saul.

THEODOLITE. An instrument used in surveying, for taking angles, &c. This instrument is supported on three small, moveable, having a limb, or a strong bell metal ring, upon which are three moveable indexes, a bell metal double over it a telescope, all suitably adjusted with screws.

THEOLOGY. The study of religion, or the science which instructs in the knowledge of God and divine things.

THEOREM. A position laid down as truth.

THEORY. A doctrine which combines itself to the speculative parts of a subject, without regard to its practical application, or illustration.

THERAPEUTICS. The healing art.

TERM.E. Heretics.

THERMOMETER.

An instrument for measuring the temperature of the air, as respects heat and cold, founded on the principle that the expansions of matter are proportional to the augmentations of the temperature. The invention of the thermometer has been ascribed to different authors, to Cornelius Drebbel of Alcmear chymicist; to Father Paul, by his biographer Fulgenzio; to Galileo by his biographer Viviani; to Santorini assumes the invention to himself, and his claim is fully admitted by Stalight and Foresti. The first form of this invention was the air thermometer, consisting of a glass tube bent at an angle, with a large glass open vessel or terminating in a ball with a narrow bottom. The vessel was filled with a coloured liquor that would not easily freeze, as aquafortis tinged with a solution of vitriol or copper. The ball at the top contained in it was in part expanded, and then the liquor pressed by the external air entered at the lower ball and rose to a certain height in the tube, according to the temperature. The air being forced out variations of heat and cold according to this form of the thermometer, which was first adapted, alcohol, or spirit of wine,

Florentine academy, one cylindrical glass tube, half an inch, and half of the other. To the tube divided from the middle part, upwards and downwards, is capable of a degree of rarefaction by heat and cold, when atmosphere increases the temperature rises in the tube, and decreases when the atmosphere decreases. As incoherences were each of these thermometers of M. Fahrenheit, which in a similar manner, Mr. employed mercury for this one since been universally ethical of constructing his which a representation is follows, a small ball is of a gross tube, of an mouth. The ball and are then to be filled with it has been previously the air, the open end of ing hermetically sealed, a ed by taking the two fixed 2° for the freezing point boiling point, and divide the space into equal parts,



prickly weed that infects

An order of fishes in the which have the ventrally under the thorax or chest, situated between the abdomen.

TABLES (in Music). That the fundamental notes in

THREAVE OF CORN. sows, in four shocks of six

small line made of a few hair, or horse, from which wool, cotton, or thread

THRESHING. The beating the grain out of the ears of wheat with a flail.

THRESHING MACHINE. A machine for threshing wheat, instead of the old practice of threshing with a flail.

THRUSH (in Ornithology).—A genus of birds, the *turdus* of Linnæus, of which the principal species are the mistle thrush, the thrush or song thrush, in England, the fieldfare, and the black bird. The thrush is thrush, properly so called, is one of the finest singing birds in this country. Its song, which is rich and varied, commences early in the season, and continues for nine months.

THRUSH (in Medicine). A distemper in the mouths of children.

THUNDER. The noise occasioned by the explosion of electrical clouds.

THURSDAY. A kind of mackerel.

THURSDAY. The fifth day of the week, so called from Thor, the god of the Saxons and other northern tribes.

THYME. A fragrant herb.

TIARA, or PAPAL CROWN. An ornamental cap formerly worn by the Pontiffs, and since adopted by the Pope. See PAPAL CROWN.

TIBIA. The largest bone of the leg.

TIC DOLGHEUCK. A painful affection of the nerves.

TICK. A little insect, one species of which, called the dog tick, infests dogs.

TIDE. The regular periodical current of water, which when it rises is called the flux, and when it goes back is the ebb or reflux. This is ascribed by Newton to the attraction of the sun and moon, but particularly in the latter, owing to its proximity to the earth.

TIDE WAITER. A customhouse officer who sees to the goods landed on the quay.

TIER. A range of cannon mounted on one side of a deck.

TIERCE. A measure of liquids containing forty-two gallons.

TIGER. A large ferocious beast, of the



cat tribe, classed by Linnæus with the cat, under the generic name *felis*. It is a native of the hot climates of Asia, where

It is mentioned as a message. It is of no force and signifies a notice that it is not to be denied.

TILE. A thin piece of clay in a flat form, broad and thick so as to fit in the covering the roof of houses.

TILLAGE. The art and practice of preparing the ground by ploughing, harrowing, sowing, and other works of husbandry.

TILLES OR A SILE. A piece of wood flattened in the head of the wooden, by which it is named. In small ships and boats it is called the keel.

TIMBER. The wood of trees fitted and prepared for the use of the carpenter, as the wood of the oak, fir, pine, ash, beech, chestnut, walnut, elm, yew, spruce, and hemlock of trees. However, the oak, ash, and elm are properly distinguished timber trees. Felling of timber commences about the end of April in England.

TINE. A certain measure or portion of money distinguished by the name of the merchant's letter.

TINE in Wine. The measure of vessels is equal to two chaldrons or four bushels.

TINSEPLER. An instrument for cleansing tin.

TIN. A metal which is very heavy upon the scale. It is one of the lightest metals, and expands greatly when hammered.

TIN is now used for tin in a similar manner to that of a good tin in England.

TIN. A substance of any substance in which it is used.

TIN. A substance of tin.

TIN. The art of tinning iron or copper with a coat of tin, by immersing the article in melted tin. This is one of the most useful processes for which tin is employed, as it enables iron to be tinned and to stand in contact with the atmosphere without being oxidized.

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TINNING. A necessity of iron, brass, and other metals, which was first introduced in the time of the Romans.

TITLE (in Law). Any right, whether a person has in the possession, or an instrument whereby he can procure the right.

TITMUSE. A small European bird which feeds on the berries of other kinds which it attacks with great voracity.



TOAD. A reptile of unightly appearance, which was formerly accounted venomous, but now considered as harmless.



It is nearly allied to the frog, with which it is crossed by Linnæus under the generic name RANA.

TOBACCO. An herbaceous plant, remarkable for its narcotic properties, which



is used either in the leaf, which is smoked, or in the form of a pipe, when it is smoked. It is highly

land of Toloze, and was England by Sir Walter

impound spirituous liquor, mantle worn by Roman

NACT: An act passed in them and Mary in favour

ysment in towns, markets, sole and cattle bought and using through a turnpike

A baloon of the fish g and stimulating than the

A metal composed of copper ny formed in weight.

A degree of elevation which is, so as to determine its

A soft fleshy viscus, which taste and speech in microscopical which breaks the

A date seed at a certain use of seeds expiated or

The act of cutting off the

A sort of increasing number by a number of persons in of survivorship.

A procession of the colour

Common places, by the heads

TRAY: A description of one particular piece of truck and position (total, dry, &c.)

A herb which is endowed with power.



D, otherwise called the L-curve in Naval Affairs. An act by an American for of blowing up the British

81. A method and instrument from all parts of the world out up the end of August. It (very and truly, several kinds

being previously drawn together, when a gust of wind rushing from them strikes the ground in a round spot of a few perches diameter, and then proceeds for the distance of a mile or more, not in a straight line, but in all directions, tearing up all before it.

TORRID ZONE. That region at the distance of twenty three and a half degrees from the equator, where the heat of the sun is most violent.

TORTOISE. An amphibious animal that is covered with a hard shell; there are tortoises both on the land and in the water.



TORTOISESHELL. The shell which covers the tortoise is used in laying, and for various ornamental purposes.

TORY. A name given to those who hold high principles of government.

TUCAN. A bird of South America that has a very large bill.



TOUCH, or FALSIFICATION: One of the five senses, which is formed by the nervous particles of the skin. The sensations acquired by the sense of feeling are those of heat, hardness, softness, roughness, dryness, motion, distance, &c. &c.

TOUZE (in Portuguese). A fruit of gold and silver in the Mine.

TOUCHSTONE. The stone through which the fire is conveyed to the powder in a gun.

TOUCHSTONE: Among Assayers and Refiners. Little bars of gold, silver and copper combined together in all the different proportions and degrees of mixture. These are used in the trial called the touch, to discover the purity of any piece of gold or silver by comparing the

mark R leaves on the touchstone with those of the bars.

TOUCHSTONE. A siliceous sort of stone used in trying metals.

TOUCHWOOD. A sort of agaric that is used as tinder.

TOURNAMENTS. Military sports, where knights used to display their gallantry by encountering each other on horseback with spears or lances.

TOURNEQUET. An instrument for stopping the flow of blood after an amputation.

TOWER. A fortress or citadel, as the Tower of London.

TOXICOLOGY. The doctrine of poisons.

TRACHEA. The windpipe, a cartilaginous and membranous canal, through which the air passes into the lungs.

TRADE WINDS. The monsoons.

TRAGACANTH. A gum which exudes from a prickly bush, the *astragalus tragacanthis* of Linnæus, which grows wild in warm climates. The tragacanth is mostly brought from Turkey in lumps.

TRAGEDY. A drama representing some grand and serious action, and mostly termination in some fatal event.

TRAIKTORY. The path described by any moving body, as a comet describing a curve.

TRAIN. A line of gunpowder, forming a communication with any body that is to be set on fire.

TRAMMEL. A drag net, or large fishing net; also a tang net for catching birds.

TRAMMEL. An instrument for depressing axels on a bear; also a kind of shackles for a horse.

TRANSCRIPT. The copy of any original writing.

TRANSPORT. The moving over stock, &c. from the seller to the buyer.

TRANSPORT DAYS. Particular days appointed for the transfer of particular stocks.

TRANSFORMATION. The changing of one form into another, as applied to matter.

TRANSIT. The passage of any planet just by or over a fixed star or the sun's disk, particularly the transit of Mercury and Venus, which are interesting phenomena.

TRANSITIVE VERB. A verb which in its meaning passes over to an object, as to love or hate.

TRANSMIGRATION. The passing of the human soul out of one body into another, a doctrine which is ascribed to Pythagoras.

TRANSMUTATION. A supposed power of changing the base metals into gold, which alchemists pretended in possession.

TRANSMUTATION (in Chymistry). Any operation by which the properties of mixed bodies are changed.

TRANSPARENCY. The property of some bodies of giving passage to the rays of light, as distinguished from opacity.

TRANSPARENCY (among Painters). Any painting illuminated behind, so as to render it perfectly visible at night.

TRANSPORT. A vessel in which soldiers are conveyed by sea.

TRANSPORTATION (in England). Sending away criminals into a distant country, either for a term of years or for life.

TRANSPORTATION (in Commerce). The carrying of goods by land to a distance.

TRANSPPOSITION (in Music). The change made in a composition by which the whole is removed into a higher or lower key.

TRANSPPOSITION (in Algebra). The bringing any term of an equation over to the other side.

TRANSSUBSTANTIATION. The conversion of the bread and wine according to the doctrine of the Romish church into the actual body and blood of Christ, which is supposed to be miraculously wrought by the consecration of the priest.

TRANSVERSE. A cross, as a transverse axis in conic sections.

TRAP. A sort of mountain rock, composed of horizontal strata.

TRAPEZIUM. An (regular) quadrilateral figure.

TRAVERSE (in Law). That which the defendant pleads in bar to avoid the plaintiff's bill.

TRAVERSE (in Fortification). A trench made quite across the neck of a place.

TRAVERSE (in Navigation). The variation or alteration of a ship's course.

TRAVESTIE. The burlesque imitation of an author's style and composition.

TREASON in England is divided into High Treason and Petty Treason. High Treason is an offence against the king or his government, whether it be by imagination, word, or deed. Petty Treason is the crime of a man killing his husband, or a servant his master. Treason in the United States, extends to overt acts, such as forming a design against the government.

TREASURY. An office in whose care the treasury of the nation or of any company is committed. The Lord High Treas-

and has the charge of all
 by, &c. in the Exchequer.
 & still for grading roads,
 by persons stationed on
 It has been introduced
 sort of punishment.



TROVE (in Law). Mo-
 der treasure found hidden
 which belongs to the king
 who claims it by the king's
 prerogative.

The piece where the
 deposited.

MUSIC. The arched ar-
 cued to the voice of fe-

NOTE. The note in stan-
 ded on the line with the



ant with a woody trunk
 three decayed grass.

E. A sort of caricature

Dissectio fortificationum,
 surgical instrument, like
 King a broken lance from

(in Law). Any wrong
 done man to another, either
 or his property.

allowance for waste, or
 may be mixed with any

triumph. The common chord
 third, fifth, and eighth.

a examination of causes
 judge, which, as records
 are to be tried by a jury,
 laws of law by the judge,
 records by the record itself.

One of the Linnæan
 breeding plants the Romans

of which have three stations, as the cro-
 cus, *gladioli valeriana*, &c.

TRIANGLE. A figure bounded by three
 sides.

TRIBUNE. An officer among the Ro-
 mans, chosen from among the people to
 defend their rights.

TRICOCCO. One of Linnæus's naval
 orders of plants, comprehending such
 as have a three-armed stigma, as the eu-
 phorbia, &c.

TRIDENT. A three-forked instrument

TRIENNIAL. Every three years, as
 triennial parliaments.

TRIGGER. The catch of a gun lock,
 which when pulled down draws the cock
 and causes it to strike fire.

TRIGLYPH. A member of the Doric
 frieze.

TRIGONOMETRY. The art of mea-
 suring the sides and angles of triangles.
 The business of this science is to find the
 angles where the sides are given; and the
 sides of their respective ratios when the
 angles are given.

TRILLION (in Arithmetic). A billion
 of billions.

TRIM OF A SHIP. Her best posture,
 proportion of ballast, and hanging of her
 masts, &c. for sailing.

TRINITARIANS. Those who believe
 in the Trinity.

TRINITY. The doctrine of three uni-
 verses in the Godhead, namely, the Father
 the Son, and the Holy Ghost.

TRIO (in Music). A piece for three
 voices.

TRIUMPHAL CROWN. A crown



among the Romans given to a victorious
 general; it was made at first of wreaths
 of laurel, and afterwards of gold.

TRIMURTATE. A form of govern-
 ment in which three persons have rule, as
 the Emperor (three) of Pomepy, Cassa,
 and Cassana, and afterwards that of Au-
 gustus, Mars Augustus, and Lepidus.

TRIPLE CROWN. The title, or pa-
 pal crown.

TRIPLE TIME (in Music). A time consisting of three measures in a bar.

TRIPOD. The second seat, supported by three feet, on which the practitioners exercise.

TRIPOLI. A mineral of an earthy texture, but for the most part found completely indurated.

TRISECTION. The dividing a thing into three parts.

TRISYLLABLE. A word consisting of three syllables.

TRITON. A sea god.

TROCAR. An instrument used in tropical countries.

TROOP. A certain number of horse soldiers.

TROOPER. A horse soldier.

TROPICS (in Astronomy). Circles drawn at the distance of twenty-three and a half degrees on each side the equator, and on the north side called the Tropic of Cancer, that on the south the Tropic of Capricorn.

TROPICS (in Geography). The regions on the earth which lie within the tropical circles.

TROCADOURS. Ancient herds of Provence and Normandy.

TROVER. An action which a man has against any one who, having found his goods, or having them unjustly in his possession, refuses to deliver them up.

TROUGH. A hollow piece of wood, which serves to hold water or any other fluid.

TROUT. A fish of the salmon tribe.

TROWEL. A bricklayer's tool for spreading mortar.

TROY WEIGHT. A weight of twelve ounces to the pound, twenty pennyweights to the ounce, and twenty-four ing gold and silver. It is so called from Troy, a town in France.

TRUCE. A suspension of hostilities.

TRUFFLES. A sort of mushrooms.

TRUMPET. The loudest of all wind instruments, consisting of a folded tube, generally of brass.



TRUMPETER. The soldier who sounds the trumpet.

TRUMPETER-BIRD. A bird of South America, so called from its harsh cry, like the trumpet.

TUB (in Surgery). An elastic bandage worn in cases of hernia or rupture for putting a yard home to the meat.

TRUSS among Mariners). A machine for putting a yard home to the meat.

TRUSS (in Commerce). A bundle of hay or straw, containing fifty-six pounds.

TRUST (in Law). A right to receive the profits of land; and in equity to dispose of the land.

TRUSTEE (in Law). One who has an estate or money put into his hands for the use of another.

TUBE. Any pipe or canal which serves as a passage for air or any other fluid.

TUPAS. Beds of lime.

TULIP. A kind of plants which, for their diversity and beautiful arrangement of high prices.

TUMBRIL. A dung cart.

TUMOUR. A proternatural or hard swelling.

TUN, or TON. A vessel for wine and other liquors; also a certain measure of capacity, containing 242 gallons; also a burden of ships is estimated.

TUNIC. An under garment in use among the Romans.

TUNING (in Music). Rectifying the false sounds of musical instruments.

TUNISTEN. An opaque mineral of a white colour and great weight, composed of lime and other earthy substances.

TUNNEL. A subterraneous passage cut through hills, mountains, and even in some cases under water.

TURBOT. A sort of fish inhabiting the European seas, which grows sometimes to thirty pounds weight.

TURKEY. A large domestic bird, the young of which are exceedingly tender. The cock is very proud and irascible, and struts about with his tail expanded, when moved either by pride or anger.



This bird is found in a wild state, in the western country. The domestic turkey is the wild turkey tamed.

VACANCE. When one water, small money.

VACCINE. A kind of white substance of a granular nature, the Jews in consequence of their religious ideas call it an "unclean" part in the Jewish church as a filthy substance. The remaining of people who are so their destined is called "unclean" matter.

VACCINE. OXY. or like an acid.

VACUOUS. A space having closed sides.

VACUUM. An assistant in the right hand.

VACILLATING. Persons who vacillate between.

VACILLATING. In Law. An agreement to be a particular thing.

VACILLATING. The person who vacillates in peace against laws of an.

VACILLATING. The substance of a material subject is a legal.

VACILLATING. An action said to be but one kind in the abstract.

VACILLATING. One form of public service is exercised by administration & is observed in England.

VACILLATING. The keeping of two accounts under the law of government, as the laws of England and Scotland, and the laws of Great Britain and Ireland, in the former of which the same is applied to the jurisdiction of the several states under the same principles.

VACILLATING. A set of solid, steady approved of laws which provide great utility.

VACILLATING. A space or void the contrary.

VACILLATING. "And who were the authors of our nation and consequently the authors of the V. V. V."

VACILLATING. A form consisting of one or more parts.

VACILLATING. An institution established by public authority for the education of youth in the liberal arts, and providing of another; and the same in the Universities.

VACILLATING. An institution with the cow pox, intended as a preventive against infection from the small pox.

VACILLATING. In Philosophy. A space supposed to be devoid of all matter or body.

VACILLATING. The time of day when the sun is at the zenith.

VACILLATING. The time of day when the sun is at the nadir.

VACILLATING. The time of day when the sun is at the equinox.

VACILLATING. The time of day when the sun is at the solstice.

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VACILLATING. The time of day when the sun is at the equinox.

VACILLATING. The time of day when the sun is at the solstice.

V, the twenty second letter in the alphabet, stands as a numeral for 5, and formerly with a hook over it, that is, for 2000; as an abbreviation, V. G. V. M. gratia, V. L. vulgaris, &c.
 VACILLATING. In Law. A great or broken. In a right; the regular office or government.
 VACILLATING. In Law. The period between the end of one term and the beginning of another; and the same in the Universities.
 VACCINATION. Inoculation with the cow pox, intended as a preventive against infection from the small pox.
 VACUUM. In Philosophy. A space supposed to be devoid of all matter or body.
 VAGE MERTIN. The time of day

may be carried about with
in law). Beggars, strol-
chers who wander from
merely a young gentleman
not applied to a serving-
or
DOWN. A leech bestowed
on a general who first
ty's camp.



Kind of lid or cover to a
contrived to open one way
(mechanics). The princi-
pal a shell is composed,
but are distinguished into
those have only one piece,
one that have two pieces,
by those that have three

rick. An notice which
sign of alarm when the
great as to endanger the

An animal of the bot

Army. The front of the

Army). The foremost
and prominent
vexil on the top of build
a direction of the wind.
A water's exhibition that,
by heat, ascends in a cer-
tain atmosphere.
ornamental urn.



Architecture). Ornaments
on, niches, or pediments,
all various as the antique
is, &c.
in Geography and Navi-

gation). A deviation of the magnet
needle in the mariner's compass.

VARIETY. Any individual plant or
animal that differs from the rest of the
species in some accidental circumstances.

VARIORUM EDITIONS. Editions of
the Greek and Latin authors, with the
notes of different critics.

VARNISH. A thick, viscid, shining
liquid, used by painters and other arti-
sters to give a gloss to their works. Resin
is the principal constituent of varnish.

VEGETABLE. An organic body desti-
tute of sense and spontaneous motion, but
furnished with pores and vessels, by the
help of which it draws nourishment from
other bodies.

VEGETABLE MARROW. The fruit
of a plant of the gourd kind growing in
Peru. Its flesh is very tender, soft, and
of a buttery quality.

VEIN (among Miners). A space con-
taining ores, spar, clay, &c. when it
bears ore it is called a quick vein, when
it is a dead vein.

VEINS (in Anatomy). The long mem-
branous canals which return the blood
from the arteries to the heart.

VELLUM. The finest kind of parch-
ment.

VELOCITY. That affection of motion
whereby a moveable body is disposed to
run over a certain space in a certain time.

VELVET. A sort of fine shaggy silk
or cotton.

VENA CAVA, the Hollow Vein (in
Anatomy). The largest vein in the body,
so called from its great cavity or hollow
space into which, as a common channel,
all the lesser veins, except the pulmona-
ry, empty themselves. This vein receives
the blood from the liver and other parts,
and carries it to the heart.



VENEERING. A kind of inlaying of
thin slices of fine woods of different kinds
and colours.

VENA PORTA. The great vein situated at the entrance of the liver.



VENTILATOR. A contrivance for supplying rooms with fresh air.

VENTRICLE. A cavity of the heart or brain.

VENTRILQUIST. One who by art, or by a particular conformation of organs, is enabled in speaking to make the sound appear to come from the stomach, or from a distance.

VENUE (in law). The neighbourhood whence juries are to be summoned for the trial of causes.

VENUS. The goddess of beauty, and daughter of Jupiter.



VENUS (in Astronomy). One of the inferior planets, but the brightest and to appearance the largest of all, marked by the character ♀.

VERTEBRULÆ. One of Linnaeus's natural orders, containing birdlike plants, as the beanlike, thorn, &c.

VERB. A part of speech which serves to express action, passion, or existence; it is either active, passive, or neuter.

VERBATIM. Word for word.

VERDEGRIS. An acetate of copper used as a pigment; it is the rust of brass generated by laying plates of that metal in bulk with the backs of pressed grapes, and then scraping it off the plates.

VERDICT. The report or determination of a jury upon any cause.

VERDITER. A green paint.

VERGE. In England, the companion of the king's court.

VERGER. In England, an officer of a court or a cathedral, who carries a rod before the judge or the bishop.

VERJUICE. The expressed juice of the wild apple or crab.

VERMES. Worms, a class of animals in the Linnæan system, that are slow of motion, of a soft substance, extremely tenacious of life, capable of reproducing parts that have been destroyed, and inhabiting moist places.

VERMICELLI. An Italian dish.

VERSE. A line in poetry, consisting of a number of long and short syllables; also the division of a chapter in the Bible.

VERSIFICATION. The art and practice of making verses.

VERSION. A translation out of one language into another.

VERT. In England, every thing in a forest that bears a green leaf which may serve as a cover for deer.

VERT (in Heraldry). The colour of green on coats of arms, represented in engraving by lines drawn from the dexter chief to the sinister base.

VERTEBRÆ. A chain of little bones reaching from the neck down to the back, and forming the spine.

VERTEX (in Geometry). The top of any line or figure, as the vertex of a triangle.

VERTEX (in Anatomy). The crown of the head.

VERTICAL. Pertaining to the vertex or zenith; a star is said to be vertical when it is in the zenith.

VERTICAL CIRCLE. A great circle of the sphere passing through the zenith and nadir, and cutting the horizon at right angles.

VERTICAL POINT (in Astronomy). That point in the heavens which is over our heads, otherwise called the zenith.

VERTICILLATE. One of the Linnaean natural orders of plants, including those whose flowers grow in the form of a wheel, as the mint, &c.

VERTIGO. Giddiness.

VERVAIN. A perennial, a sort of mallow.

VESICLE. Any small vessels, either in the animal body or in plants.

VESPERS. The evening prayers in the Romish church.

VESPERTILLO. A genus of scintils in the Linnæan system, constituting the species of the bat and the vampire.

VESSEL. Any sort of small vessel for holding liquids.

VICE VERSA. On the contrary, the side being turned or changed.

VIDELICET, generally written *Viz.* That is, namely.

VIET ARMIS (in Law). By force of arms, terms in an indictment charging a felon and violent commission of trespass.

VIGIL. The service used in the British church on the night preceding a holyday.

VIGILS. Certain fasts preceding festivals.

VIGNETTE. A frontispiece, or an ornamental picture preceding the title page.

VILLAINS (in England). Men of base and servile condition, who in the feudal times were immediately attached to the lord, and bound to the land to do services for him.

VINCULUM (in Algebra). A mark or line drawn over a quantity, thus, $\frac{a+b}{c}$, denoting it to be one quantity.

VINE. A plant that flourishes most in warm countries, as Italy, Spain, Portugal, and France, whose cultivation forms a part of husbandry. It grows in those parts in the open fields, and is not suffered to run bushes. The fruit of the vine is the grape. The fruit of the vine is there an important article of trade.

VINGAGE. Wine or any other liquor exposed to the sun, until it is become acid. In this country vinegar is chiefly made from cider.

VINEYARD. A place set apart for the cultivation of the vine.

VIOL. A musical stringed instrument.

VIOLIN. A common musical stringed instrument, which requires great skill in the performer to make it agreeable.



VIOLONCELLO. A small base viol.

VIPER. An animal of the snake tribe, the bite of which is more or less venomous.



every where; in hot countries it is almost daily fatal.

V I R

VIOLET. A plant bearing a blue sweet scented flower; also the colour of the violet, or purple.

VIRGO. The sixth sign of the zodiac, containing from 22 to 210 stars, according to different authors.

VIRTUOSO. One skilled in antique or natural curiosities; a lover of the liberal arts.

VISCERA. The intestines.

VIS INERTIS. The power in bodies that are in a state of rest, to resist any change that is endeavoured to be made upon them to change their state. This, according to Newton, is implanted in all matter.

VISCOUNT (in England). A nobleman next in degree to an earl. A noblesman

was created by the reign of Henry VI.

VISCOUNT'S CORONET. Has necklets, like those of superior degree, but only pearls placed on the circle itself.



VISCER. Any organ having an appropriate use in the human body, as the liver, gall, bladder, &c.; but particularly the intestines.

VISION. The sensation in the brain, produced by the rays of light passing or acting on the optic nerves of the eye.

VISITATION (in England). An act of jurisdiction, whereby the bishop once in every year, visits the churches within his diocese or district, to see that the discipline of the church is observed.

VISITOR (in Law). An inspector into the government of a corporation.

VISUAL ANGLE. An angle under which an object is seen.

VISUAL POINT. A point in the horizontal line wherein all the ocular rays meet.

VITAL AIR, now called *Oxygen* The air of which the atmosphere is prin-

cipally composed, which is essential to the support of life in animals and plants.

VITAL FUNCTIONS. Those functions or faculties of the body, on which life immediately depends.

VITREOUS HUMOUR. The pellucid body which fills the whole bulb of the eye behind the crystalline lens.

mark it leaves on the touchstone with those of the bars.

TOUCHSTONE. A siliceous sort of stone used in trying metals.

TOUCHWOOD. A sort of agaric that is used as tinder.

TOURNAMENTS. Military sports, where knights used to display their gallantry by encountering each other on horseback with spears or lances.

TOURNQUET. An instrument for stopping the flow of blood after an amputation.

TOWER. A fortress or citadel, as the Tower of London.

TOXICOLOGY. The doctrine of poisons.

TRACHEA. The windpipe, a cartilaginous and membranous canal, through which the air passes into the lungs.

TRADE WINDS. The monsoons.

TRAGACANTH. A gum which exudes from a prickly bush, the astragalus longa, cantha of Linnaeus, which grows wild in warm climates. The tragacanth is mostly brought from Turkey in lumps.

TRAGEDY. A drama representing some grand and serious action, and mostly terminating in some fatal event.

TRAIKTORY. The path described by any moving body, as a comet describes a curve.

TRAIN. A line of gunpowder, forming a communication with any body that is to be set on fire.

TRAMMEL. A drag net, or large fishing net; also a long net for catching birds.

TRAMMELS. An instrument for drawing awails on a boat; also a kind of shackles for a horse.

TRANSCRIPT. The copy of any original writing.

TRANSFER. The making over stock, &c. from one seller to the buyer.

TRANSFER DAYS. Particular days appointed for the transfer of particular stocks.

TRANSFORMATION. The changing out of one form into another, as applied to insects.

TRANSIT. The passage of any planet just by or over a fixed star or the sun's disk, particularly the transit of Mercury and Venus, which are interesting phenomena.

TRANSITIVE VERB. A verb which in its meaning passes over to an object, as to love or hate.

TRANSMIGRATION. The passing of the human soul out of one body into another, a doctrine which is ascribed to Pythagoras.

TRANSMUTATION. A supposed power of changing the base metals into gold, which alchemists pretended to possess.

TRANSMUTATION (in Chemistry). Any operation by which the properties of mixed bodies are changed.

TRANSPARENCY. The property of some bodies of giving passage to the rays of light, as distinguished from opacity.

TRANSPARENCY (among Painters). Any painting illuminated behind, so as to render it perfectly visible at night.

TRANSPORT. A vessel in which soldiers are conveyed by sea.

TRANSPORTATION (in England). Sending away criminals into a distant country, either for a term of years or for life.

TRANSPORTATION (in Commerce). The carrying of goods by land to a distance.

TRANSPPOSITION (in Music). The change made in a composition by which the whole is removed into a higher or lower key.

TRANSPPOSITION (in Algebra). The bringing any term of an equation over to the other side.

TRANSUBSTANTIATION. The conversion of the bread and wine according to the doctrine of the Romish church into the actual body and blood of Christ, which is supposed to be miraculously wrought by the consecration of the priest.

TRANSVERSE. A cross, as a transverse axis in cubic sections.

TRAP. A sort of mountain rock, composed of horizontal strata.

TRAPEZOID. An irregular quadrilateral figure.

TRAVERSE (in Law). That which the defendant pleads in bar to avoid the plaintiff's bill.

TRAVERSE (in Fortification). A trench made quite across the neck of a place.

TRAVERSE (in Navigation). The variation or alteration of a ship's course.

TRAVESTIE. The burlesque imitation of an author's style and composition.

TREACLE. The scum of sugar.

TREASON (in England) is divided into High Treason and Petty Treason. High Treason is an offence against the king or his government, whether it be by imagination, word, or deed. Petty Treason is the crime of a wife killing her husband, or a servant his master. Treason in the United States, consists in overt acts, and includes a design against the government.

TREASURER. An officer whose office is to receive and disburse the money of any company is committed. The Lord High Treas-

TRIPLE TIME (in Music). A time consisting of three measures in a bar.

TRIPOD. The sacred seat, supported by three feet, on which the priestesses among the ancients used to deliver the oracles.

TRIPOLI. A mineral of an earthy texture, but for the most part found considerably indurated.

TRISECTION. The dividing a thing into three parts.

TRISYLLABLE. A word consisting of three syllables.

TRITON. A sea god.

TROCAR. An instrument used in tapping for the dropsy.

TROOP. A certain number of horse soldiers.

TROOPER. A horse soldier.

TROPICS (in Astronomy). Circles drawn at the distance of twenty-three and a half degrees on each side the equator, that on the north side called the Tropic of Cancer, that on the south the Tropic of Capricorn.

TROPICS (in Geography). The regions on the earth which lie within the tropical circles.

TROBADOUCS. Ancient lands of Provence and Normandy.

TROVER. An action which a man has against any one who, having found his goods, or having them unjustly in his possession, refuses to deliver them up.

TROUGH. A hollow piece of wood, which receives cold water or any other fluid.

TROUT. A fish of the salmon tribe.

TROWL. A fishwife's tool for spearing mussels.

TRON WEIGHT. A weight of twelve ounces in the pound, twenty pennyweights in the ounce, and twenty-four grains (the penny weight, used for weighing gold and silver. It is so called from Troy, a town in France.

TRUCE. A suspension of hostilities.

TRUFFLES. A sort of mushrooms.

TRUMPET. The highest of all wind instruments, consisting of a luted tube, generally of brass.



TRUMPETER. The soldier who sounds the trumpet.

TRUMPETER-BIRD. A bird of South America, so called from its harsh cry, like a child's trumpet.

TRUSE (in Surgery). An elastic bandage worn in cases of hernia or rupture for pulling a yard home to the mast.

TRUSS (among Mariners). A machine for pulling a yard home to the mast.

TRUSS (in Commerce). A bundle of hay or straw, containing fifty-six pounds of hay and thirty-six pounds of straw.

TRUST (in Law). A right to receive the profits of land; and in equity to dispose of the land.

TRUSTEE (in Law). One who has an estate or money put into his hands for the use of another.

TUBE. Any pipe or canal which serves as a passage for air or any other fluid.

TUFAS. Beds of lime.

TULIP. A kind of plants which, for the diversity and beautiful arrangement of their colours have fetched extraordinary high prices.

TUMBRIL. A dung cart.

TUMOUR. A preternatural or hard swelling.

TUN, or TON. A vessel for wine and other liquors; also a certain measure of capacity, containing 240 gallons; also a weight equal to 2240 pounds, whereby the burden of ships is estimated.

TUNIC. An under garment in use among the Romans.

TUNING (in Music). Rectifying the false sounds of musical instruments.

TUNSTON. An opaque mineral of a white colour and great weight, composed of lime and other earthy substances.

TUNNEL. A subterraneous passage cut through hills, mountains, and even in some cases under water.

TURBOT. A sort of fish inhabiting the European seas, which grows sometimes to thirty pounds weight.

TURKEY. A large domestic bird, the young of which are reckoned tender. The cock is very proud and irascible, and struts about with his tail expanded, when moved either by pride or anger.



This bird is found in a wild state in the western country. The domestic turkey is the wild turkey tamed.

UNA VOCE. With one voice, unanimously.

UNCTION. Anointing with consecrated oil, a practice among the Jews in consecrating kings and priests, also still in use at certain occasions. The anointing of persons who are on their deathbed is called extreme unction.

UNCTUOUS. Oily, or like an ointment.

UNDECAGON. A figure having eleven sides.

UNDER SHERIFF. An assistant to the high sheriff.

UNDERTAKERS. Persons who conduct funerals.

UNDERTAKING (in Law). An engagement to do a particular thing.

UNDERWRITER. The person who undertakes to insure against losses at sea.

UNDULATION. The tremulous or vibratory motion in a liquid.

UNICORN. An animal said to have but one horn in the forehead.

UNIFORMITY. One form of public worship, as prescribed by different statutes to be observed in England.

UNION. The bringing of two countries under one form of government, as the Union of England and Scotland, and the Union of Great Britain and Ireland. In the United States the term is applied to the confederation of the several states under one general government.

UNISON. Unity of sound, mostly applied to that which proceeds from different voices.

UNIT. A figure expressing the number one.

UNITARIANS. Those who deny the divinity of our Saviour, and consequently the doctrine of the Trinity.

UNIVALVE. A shell consisting of one valve or piece.

UNIVERSITY. An institution established by public authority for the education of youth in the liberal arts, and con-

fering degrees in the several faculties. In England an university consists of several colleges under the government of a chancellor, vice-chancellor, proctors, and heads, besides the heads of the halls or houses, as in the universities of Cambridge and Oxford.

URANIUM. A newly discovered metal soft and brittle, but hardly fusible before the blowpipe; but with phosphate of soda and ammonia melts into a glass-green glass.

URETER. The membranous canal which conveys the urine from each kidney to the urinary bladder.

URETHRA. A membranous canal which serves as a passage for the discharge of the urine.

URN. A vessel among the Romans, in which they put the names of those who were to engage at the public games, taking them in the order in which they were drawn out. In such a vessel also they threw in the notes of their votes at the elections.

URSA. The name of two northern constellations, namely, *Ursa Major* and *Ursa Minor*, the Great and Little Bear.

URSUS. A genus of animals in the Linnæan system, including the bear, badger, marten, glutton, &c.

USANCE. A determinate time fixed for the payment of a bill of exchange, reckoned either from the day of the bill's being accepted, or from the day of its date, and so called because it is regulated by the usage or custom of the place.

USHER (in Law). An officer who has the care and direction of the door of a court or hall.

USHER (in Schools). An assistant or lower master.

USHER OF THE BLACK ROD (in England). An officer whose business it is to bear the rod before the king at the feast of St. George and other solemnities.

USURY. The taking more interest for the loan of money than is allowed by law.

V

V, the twenty-second letter in the alphabet, stands as a numeral for 5, and formerly with a dash over it, thus \bar{V} , for 5000; as an abbreviation, *V. G. V. G. gratia*, *V. L. videlicet*, &c.

VACANT (in Law). A post or benefice wanting the regular holder or incumbent.

VACATION (in Law). The period between the end of one term and the be-

ginning of another; and the same in the Universities.

VACCINATION. Inoculation with the cow pox, intended as a preventive against infection from the small pox.

VACUUM (in Philosophy). A space supposed to be devoid of all matter or body.

VADE MEUM. The name of any

VENA PORTA. The great vein situated at the entrance of the liver.



VENTILATOR. A contrivance for supplying rooms with fresh air.

VENTRICLE. A cavity of the heart or brain.

VENTRILOQUIST. One who by art, or by a peculiar conformation of organs, is enabled in speaking to make the sound appear to come from the stomach, or from a distance.

VENUE (in Law). The neighbourhood where juries are to be summoned for the trial of causes.

VENUS. The goddess of beauty, and daughter of Jupiter.



VENUS (in Astronomy). One of the inferior planets, not the brightest and to this character ♀.

VERECULÆ. One of Linnaeus's natural orders, containing bristly plants, as the bramble, thorn, &c.

VERB. A part of speech which serves to express action, passion, or existence; it is either active, passive, or neuter.

VERBATIM. Word for word.

VERDUGIE. An acetate of copper used as a pigment; it is the rust of brass gathered by laying plates of that metal in beds with the husks of pressed grapes, and drying it off the plates.

VER. The report or determination upon any cause.

VER. A green paint.

VES

VERGE. In England, the compass of the king's court.

VERGER. In England, an officer of a court or a cathedral, who carries a rod before the judge or the bishop.

VERJUICE. The expressed juice of the wild apple or crab.

VERMES. Worms, a class of animals in the Linnæan system, that are slow of motion, of a soft substance, extremely parts that have been destroyed, and inhabiting moist places.

VERMICELLI. An Italian dish.

VERSE. A line in poetry, consisting of a number of long and short syllables; also the division of a chapter in the Bible.

VERSIFICATION. The art and practice of making verses.

VERSION. A translation out of one language into another.

VERT. In England, every thing in a forest that bears a green leaf which may serve as a cover for deer.

VERT (in Heraldry). The colour of green on coats of arms, represented in chief by lines drawn from the dexter chief to the sinister base.

VERTÈBRE. A chain of little bones reaching from the neck down to the back, and forming the spine.

VERTEX (in Geometry). The top of any line or figure, as the vertex of a triangle.

VERTEX (in Anatomy). The crown of the head.

VERTICAL. Pertaining to the vertex or zenith - a star is said to be vertical when it is in the zenith.

VERTICAL CIRCLE. A great circle of the sphere passing through the zenith and nadir, and cutting the horizon at right angles.

VERTICAL POINT (in Astronomy). That point in the heavens which is over our heads, otherwise called the zenith.

VERTICILLATÆ. One of the Linnæan natural orders of plants, including those whose flowers grow in the form of a wheel, as the mist, &c.

VERTIGO. Giddiness.

VERVAIN. A perennial, a sort of malva.

VESICLE. Any small vessel, either in the animal body or in plants.

VESPERE. The evening prayers in the Roman Church.

VESPERTILIO. A genus of animals in the Linnæan system, comprehending the species of the bat and the vampire.

VESSEL. Any sort of vessel used for holding liquids.

VICE VERSA. On the contrary, the side being turned or changed.

VIDELICET, generally written *Viz.* That is, namely.

VILET ARMIS (in Law). By force of arms, *viz.* in an indictment charging a forcible and violent commission of treason.

VIGIL. The service used in the British church on the night preceding a holyday.

VIGILS. Certain facts preceding funerals.

VIGNETTE. A frontispiece, or an ornamental picture preceding the title page.

VILLAINS (in England). Men of base and servile condition, who in the feudal times were immediately attached to the land, and bound to the lord to do services for him.

VINULUM (in Algebra). A mark or line drawn over a quantity, thus, $\overline{a-b}$, denoting it to be one quantity.

VINE. A plant that flourishes most in warm countries, as Italy, Spain, Portugal, and France, where its cultivation forms a part of husbandry. It grows in those parts in the open fields, and is not suffered to rise much higher than gooseberry or currant bushes. The fruit of the vine is there an important article of trade.

VINEGAR. Wine or any other liquor exposed to the sun, until it is become acid. In this country vinegar is chiefly made from cider.

VINEYARD. A place set apart for the cultivation of the vine.

VIO. A musical stringed instrument.

VIOLIN. A common musical stringed instrument, which requires great skill in the performer to make it agreeable.



VIOLONCELLO. A small bass viol.

VIPER. An animal of the snake tribe, the bite of which is more or less venomous.



are, in hot countries it is almost fatal.

VIOLET. A plant bearing a blue-scented flower; also the colour of the violet, or purple.

VIRGO. The sixth sign of the zodiac, marked thus ♍, and a constellation containing from 22 to 110 stars, according to different authors.

VIRTUOSO. One skilled in artifice or natural curiosities; a lover of the liberal arts.

VISCERA. The intestines.

VIS INERTIAE. The power in bodies that are in a state of rest, to resist any change that is endeavoured to be made upon them to change their state. Thus, according to Newton, is implanted in all matter.

VISCOUNT (in England). A noblesman next in degree to an earl. The first viscount was created by the reign of Henry VI.

VISCOUNT'S CORONET. Has neither flowers nor points raised above the circle, like those of superior degree, but only pearls placed on the circle itself.



VISCUS. Any organ having an appropriate use in the human body, as the liver, gall, bladder, &c.; but particularly the intestines.

VISION. The sensation in the brain, produced by the rays of light passing or acting on the optic nerves of the eye.

VISITATION (in England). An act of jurisdiction, whereby the bishop once in three years, and the archbishop once every year, visits the churches within his diocese or district, to see that the discipline of the church is observed.

VISITOR (in Law). An inspector into the government of a corporation.

VISUAL ANGLE. An angle under which an object is seen.

VISUAL POINT. A point in the horizontal line wherein all the ocular rays unite.

VITAL AIR, now called *Oxygen*. The air of which the atmosphere is principally composed, which is essential to the support of life in animals and plants.

VITAL FUNCTIONS. Those functions or faculties of the body, on which life immediately depends.

VITREOUS HUMOUR. The pellucid body which fills the vitreous humour of the eye behind the crystalline lens.

salt, of a very caustic phosphate generally found in clay state, or in a loose form. The three principal green vitriol, copperas, iron; the blue vitriol, or cerule; and the white vitriol, or gypsum.

W. Sulphuric acid; **W.** St. George's Dance, an accompanied with insubstantial.

W. By word of mouth. **W.** An epithet for animals in living young.

W. Musical sounds produced by human voice, also some other.

W. The fifth case in Latin.

An epithet for bodies that are white.

W. ALKALIDS. Ammonia.

W. WASHING. The process by which a body is dissolved into air.

A burning mountain, such as Vesuvius, and Etna, in Europe; and others, in Asia, Africa, and America.

W. WATTEN. See **WATTEN**. In music. The compass of voice in music.

W. WATTEN. A book, or a volume, in the form of a book.

W. WATTEN. An extreme noise upon the organ, instrumental part of divine service.

A spirit used in the tonic of medicine.

See **WATTEN**. A letter which affords a comb of itself.

W. The popular or vulgar name of a black lead.

A very ancient Latin translation, which was translated

from the Greek of the Septuagint. It is the only one acknowledged by the Roman church to be authentic.

W. VULCAN. The son of Jupiter and Juno, and the god of fire. He is commonly represented with a hammer, anvil, &c.



W. VULTURE. A bird common in all warm climates, that lives chiefly on putrid flesh, and is very useful in removing filth that would otherwise produce disease.



The turkey buzzard, common in the southern states, is a species of vulture so useful in clearing away offensive matter, as to be protected by law in large cities.

W.

The third letter of the alphabet, and the eighth in order. It was not known to the Greeks, or Romans, being a Teutonic and other northern letter.

An argillaceous earth. A black lead or black lead.

Black woad is an ore of manganese, found in Derbyshire in England.

W. WADDING. A strop of paper or tow forced into a gun, to keep in the powder and shot.

W. WAFER. Paste made of flour, eggs, and oil, &c. cut into a thin round cake.

WAL

WAS

and enhanced, for the purpose of making it to nearly professed, by the
 WAGER In the Roman Church. A that goes with assumed steps in
 this point of consecrated ground used at the the name of a
 the service of the sacrament.
 WAGER OF BATTLE. A mode of trial by single combat, which has lately been abolished in England.
 WAGER OF LAW. In England, a mode of trial in an action of debt by simple contract, where the defendant by his own oath, with that of eleven other persons called compurgators, declaring that he owes the plaintiff nothing, may discharge himself.
 WAGER. Money paid for labour.
 WAGON. A large kind of four-wheeled conveyance, much used in husbandry.



WAGTAIL. A bird that is continually wagging its tail.
 WAIVER. In England. Goods stolen, and afterwards waived or abandoned, which are forfeited to the king.
 WAIST. That part of a ship between the quarterdeck and fore-castle.
 WAITERS. In Law. Officers appointed to see that goods are not landed clandestinely. Those who go on board the vessels are called take-waiters; those who do this duty on shore are land-waiters.
 WAITS. In England, night musicians, who go their rounds in the night-time and play just before Christmas.
 WALKING LEAF. A singular insect of China, that has a neck longer than the rest of the body.
 WALLFLOWER. A plant bearing a sweet-scented flower.
 WALRUS. An animal of the seal kind inhabiting the northern seas, which in form resembles an ox.



WALTZ. A particular kind of dance, introduced into England from Germany.

WARD. In Law. A district within a city committed to the wardens charge, of one of the aldermen, as in the case of a guardian, or in private cases in England, under the special authority of the court of Chancery.
 WARDEEN. In England. One who has the charge or keeping of any person or by virtue of an office, as the warden of the Fleet, who has charge of the prisoners committed there; so likewise the warden of a college, or the warden of the Court Ports, &c.
 WARDNOTE. The count of each ward in the city of London.
 WARDROBE. A place for keeping clothes: also the clothes themselves.
 WARDROBE, CLERK OF THE. In England, an officer who takes charge of the king's wardrobe.
 WAREHOUSE. A place where merchandise are kept.
 WARNING-WHEEL. The third or fourth wheel of a clock, according to its distance from the first wheel.
 WARP. The thread extended lengthwise on the weaver's loom, which is crossed by the workman in forming the cloth, stuff, or silk.
 WARRANT in Law. A writ commanding an officer of justice to take up any offender.
 WARRANT OF ATTORNEY. An authority given to an attorney by his client to appear and plead for him.
 WARRANT, PRIZE (in the Navy). In England is issued by the admiralty, authorizing an officer to impress seamen.
 WARRANTING (among Horse-dealers). An assurance given by the seller to the buyer, that the horse sold, is free from all defects at the time of sale.
 WARREN (in Law). In England, a franchise or privileged place for keeping beasts and fowls of the warren, as hares, partridges, and pheasants.
 WART. A spongy substance growing near the eye of a horse.
 WASHES. A dangerous shore in Norfolk, England.
 WASHING (among Goldsmiths). Drawing particles of silver and gold out of substances.
 WASHING (among Painters). Colouring a pencil design with one colour, as Indian ink, &c.
 WASP. A stinging insect resembling a bee.
 WASTE (in Law). A spoil or destruction.

der, lightning, as also rain and hail, in such quantities as to inundate vessels, and overturn trees, houses, and every thing else which comes in its way.

WATERMILL. A mill that is put in motion by means of water.

WATER-WHEEL. An engine for raising water out of a well.

WATERWORKS. All kinds of machines employed in raising or sustaining water, as watermills, sluices, aqueducts, and the like.

WATTLE. A kind of hurdle used in making sheepfolds.

WATTLIES. Fleeshy appendages at the sides of the lower mandibles in some birds, as turkeys.

WAX. A soft, yellowish, and tenacious matter which with the bees form cells for the reception of the honey. It is a vegetable substance, that may be extracted from several plants, also a tenacious substance made of wax for the purpose of sealing letters.

WAXCHANDLER. One who makes candles of wax. The company of wax chandlers in London, was incorporated in the reign of Richard III.

WAY. A road, or the highway.
WAY (among Seamen). The ship's course.

WAYS AND MEANS (in England). The supplies for meeting the expenditure of the year, either voted by parliament or drawn from other sources.

WEAB, or WEIR. A dam made in steep water.

WEASEL. An animal of the same genus or kind as the otter, but differs very much in the shape, and resides on the land. It is a name for several of the species of the viverra and mustela of Linnæus. See *En 5122*.



WEATHER-GLASSES. Instruments contrived to show the state of the atmosphere, as barometers, thermometers, &c.

WEAVING. The art of forming single threads of silk, cotton, or flax, into a close fabric in a loom with a shuttle.

WEDGE. One of the mechanical powers, which has one end thick and the other

ally tapers to a thin edge. It is used particularly in cleaving wood.



WEDNESDAY. The fourth day of the week.

WEEK. A division comprising seven days. Fifty-two weeks make the year.

WEEPERS. Pieces of white cambric, ruche, or muslin, sewed upon the sleeves in deep mourning.

WEIGHT (in Mechanics). Any thing that is to be sustained, raised, or moved by a machine.

WEIGHT (in Commerce). Any body of a known weight that is made the measure of weighing other bodies. Two sorts of weights are admitted in England, namely, Troy weight and avoirdupois weight.

WELD. A sort of herb that grows in Kent, Herefordshire, and other parts of England, the stalk and root of which are used in dying bright yellow and lemon colour.

WELDING. Working two pieces of iron together by means of heat, until they form one mass.

WELL. A hole dug in the ground, of sufficient depth to admit the water as spring up. When the water is got out of it by means of a line and a bucket, it is a well properly so called, but when the water is raised by means of a pump, it is called a pump.

WEST. One of the four cardinal points of the horizon, at which the sun sets.

WHALE. A huge animal that inhabits most parts of the ocean and particularly the northern seas, and is said to measure sometimes from 50 to 100 feet. The blubber



of the whale contains the oil, which is an article of commerce, and the honey lamine to the upper jaw, which is called

WIND. A structure raised
a foot or two.

WINDMILL. A valuable grain, of which

WINDMILL. An European wind of
the most important
class of winds, which is
a structure of almost every

English, the name of these
of rights of the people in op-
penings of the crown.

WINDMILL. A solitary bird of
no musical song is often
it consists of a repetition
appears of, generally after-
rapidly, in a form of exqui-

WINDMILL. An eddy or vortex.

WINDMILL. An ornithology report
wind, that rises in a whirl-
of currents in the same
time.

WINDMILL. GALLERIES. Flaves
in gallery in St. Paul's Ca-
thedral, by their peculiar construc-
tion, so that whippers on the
side, to be heard by a per-
son in the opposite side,
which supposed by Newton
to be all the other columns.

WINDMILL. The rest of land.

WINDMILL. A tale of the end of the

WINDMILL. A festival in the
17th, that falls on the fifteenth
of

WINDMILL. A swollen affair.

WINDMILL. The followers of
St. John first opposed the use
I pursued the way for the
England.

WINDMILL. A kind of the duck tribe.



be seldom met by which a
bird will go to the disposal of
of his death. If by word of
consecutive will, but if by
4, it is a testament.

be current or stream of the
with the vapors that the air
is, which are supposed to be

raised and put into motion by the flow
of heat.

WILD MAN. A species of the monkey
in the East Indies.



WILD TURKEY. The original stock of
the tame turkey, peculiar to North Amer-
ica. Flocks of this noble bird are still
found in the woods of the western country



WINDBOUND. An epithet for a sick
that cannot have the part in account of
undissolvable winds.

WINDLASS. A kind of crane by which
great weights are raised, as guns, stoves,
&c. into a vessel.

WINDWARD. Towards the wind; as
a windward tide, a tide that runs against
the wind.

WINE. The fermented juice of the
grape, which is found to contain an acid,
alcohol, tincture, extract, aroma, and coloring
matter.

WINGS. The right and left divisions of an army.

WINGS (in Fortification). The large projecting sides of hornwork.

WINNOWING. Separating corn from the chaff by the help of the wind.

WINDMILL. A mill that is put in motion by means of the wind acting on the sails, as in the subjoined figure.



WINTER. That season of the year when, in the northern hemisphere, the sun is in the tropic of Capricorn, or in his greatest declination from the equator.

WIRE. A piece of metal drawn out to the size of a thread, or even smaller, according to the size of the hole which it is made to pass through. One single grain of gold admits of being drawn out into a wire 98 yards long.

WITNESS (in Law). One sworn to give evidence in a cause.

WOAD. A plant growing in France and on the coast of the Baltic, from which a blue dye of the same name is extracted. It is cultivated in the United States.

WOLF. A fierce animal of the dog tribe, found in almost all cold, and temperate climates. When pressed by hunger they become very bold and will attack man and



large animals. They sometimes assemble together upon the mountains, and encircling the deer will rush upon them and drive them over the precipices, where they are killed and become the prey of the wolves.

WOOD ENGRAVER. An artist who cuts figures and letters in wood, to serve the purpose of engraving on copper. This art has been carried to very great perfection, and in many respects will be found to effect the purpose quite as well as the sister art of copperplate engraving.

WOODCOCK. A wild fowl, and a bird of passage, which is esteemed for its flesh.



WOODPECKER. A bird, so called because it pecks holes in the bark of trees.

WOOL. The covering of sheep, which is an important article of commerce in this country. Much attention, therefore, is paid to the breed, and also to the feeding of sheep, to render their wool as perfect as possible.

WOOLPACK. Literally, a pack of wool; a name for the seat of the Lord Chancellor in the House of Lords in England.

WOOLSTAPLER. One who deals in wool, and collects it for the manufacturer.

WORD. An articulate sound that represents some idea to the mind; in Military Affairs, a watchword, or peculiar word which serves as a token or mark for all sentinels to detect spies or other persons who may wish to intrude into a camp.

WORM. A long winding pewter pipe, placed in a tub of water to cool and thicken the vapours in the distillation of liquors.

WORM (in Gunnery). The instrument used for drawing the charge out of a gun.

WRECK. The ruins of a ship at sea that has been dashed to pieces.

WREN. A small singing bird.



WRIT (in Law). A precept issuing out of some court of law, commanding something to be done touching some suit.

X and Y.

twenty-fourth letter of the alphabet, a numeral for 10, and with a line over it, \bar{X} , it stood formerly for 10,000. **Y.** A small three-masted vessel used in the Mediterranean.



Y.

twenty-fifth letter of the alphabet, a numeral for 100, and with a line over it (\bar{Y}), for 100,000.

Y. A tropical tree, the fruit of which is eaten by the natives.

YARD. A long measure containing 3 feet.

YARD (in Shipbuilding). A long piece of wood suspended upon the mast of a vessel to steady the sails to the wind.

YARD-ARM. That part of the yard in an older style of the mast which is shown at the ship.

YARN. One of the threads of which a cloth is made.

YAW. The tone that the sea takes in sending its apparent revolution through various signs of the zodiac.

YACHT. A small ship with one deck, carrying four, eight, or twelve guns, and thirty or forty men. They are in general employed as vessels of state.



YEAST. The head or foam that rises on beer.

YELLOWBIRD. The American Gold-finch.

YELLOWHAMMER. A small European bird, whose song resembles that of the Linnet.

YEWMAN (in Law). The first degree of freeholders, who have lands of their own and live by husbandry.

YEOMEN OF THE GUARD. A certain description of foot guards, a hundred in number, who always attend immediately on the person of the king.

YEW-TREE. A tree which is a native of Britain and most other countries of Europe, as also of North America. It is an evergreen, and remarkable for the hardness of its wood.

Z.

the twenty-sixth letter of the alphabet, rarely used as an abbreviation for an article and other words.

ZAFFRE. The color of saffron, employed for painting patterns of a blue color.

ZEBU. An animal common in India, resembling the ox, that is used both for weight and carrying burdens.

ZENITH. The vertical point of the heavens, 90 degrees distant from the horizon.

ZEPHYRE. A sort of zephyrous oris.

ZERO. The cipher (0).

ZINC. A metal of a bluish white colour, somewhat lighter than lead, possessing but little solidity or ductility. Specific gravity, 7,100.

ZODIAC. An imaginary belt in the heavens, in the middle of which is the ecliptic or sun's path. It has also twelve constellations within its space, which are called the twelve signs of the zodiac.

ZONE. A division of the earth's surface, of which there are five in number, distinguished according to the degree of heat to which each part is exposed, into two

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temperate, two frigid, and one torrid zone.
ZEBRA. An African animal of the horse tribe, about the size of a mule. It is beautiful, swift, and wild.



ZOOLOGY. That branch of natural history which treats of animals. That which treats of quadrupeds is also called by the general name of zoology, to distinguish it from ornithology, which treats of birds; ichthyology, which treats of fishes; entomology, which treats of insects; helminthology, which treats of worms; erptology, which treats of creeping things.

General zoology comprehends the whole animal kingdom, as this class of natural objects is styled by Linnæus. It is divided into six classes; these classes are subdivided into orders, and the orders into genera, and the genera into species.

The first class, *Mammalia*, comprehends seven orders, namely, the primates, bruta, fere, glires, pecora, belluine, and ceta. Under the Primates are four genera, namely, homo, man; simia, the ape, baboon, and monkey; lemur, the lemur; vesper-tilio, the bat. Of the Bruta there are the following genera, namely, the ant-eater; sloth; myrmecophaga, the ant-eater; dasy-pus, the armadillo; rhinoceros, the rhinoceros; sokotyro; elephas, the elephant; trichechus, the manse and walrus; and the mania. The Fere consist of ten genera, namely, phoca, the seal; canis, the dog, the wolf, the fox, and the hyena; felis, the lion, tiger, leopard, tiger-cat, the lynx, and the cat; viverra, the weasel, the skunk, the civet, the genet, and the fitchet; mustela, the otter, the marten, the ferret, the polecat, the ermine, and the stoat; ursus, the bear, the badger, the racoon, and the glutton; didelphis, the opossum, the marmoset, the phalanger, and the kangaroo; talpa, the mole;orex, the shrew; erinaceus, the hedgehog. The Glires consist of hystrix, the porcupine; cavia, the cavy; castor, the beaver; mus, the rat, musk-rat, and the mouse; arctomys, the muskrat; sciurus, the squirrel; myoxus, the dormouse;

dipus, the jerboa; lepus, the hare and the rabbit; and the hyrax. The Pecora consist of camelus, the camel and the llama; deer, the moose or elk; camelopardalis, the camelopard or giraffe; antilopanus, the antelope; capra, the goat; ovis, the sheep; and bos, the ox. The Belluina consist of hippopotamus, the river-horse; tapir, the tapir; and sus, the hog. The Ceta consist of monodon, the cachelot; balæna, the whale; physeter, the cachelot; delphinus, the porpoise, the dolphin, and the grampus. The second class, *Aves*, is divided into six orders, namely accipitres, picæ, anseres, grallæ, gallinæ, and passeræ. The Accipitres consist of four genera, namely, vultur, the vulture and the condor; falco, the eagle, the kite, the buzzard, the falcon, and the hawk; strix, the owl; lanus, the shrike, the butcher-bird, and the woodchat. The Picæ consist of the following genera, namely, ramphastos, the toucan; momotus, the motmot; psittacus, the parrot, the macaw, the parrotquet, the cockatoo, and the lory; buceros, the hornbill; vultur, the ani; glaucopsis, the wattle-bird; corvus, the crow, the rook, the raven, the jackdaw, and the jay; coracias, the roller; oriolus, the oriole; gracula, the grackle; paradisæus, the bird of paradise; locus, the paroquet, trogon, the curucut; cuculus, the barbet; yura, the wrenneck; picus, the woodpecker; alitta, the nuthatch; toxus, the tody; alcedo, the kingfisher; gubula, the jacamus; me-rops, the bee-eater; upupa, the hoopoe; certhia, the creeper; trochilus, the humming-bird; buphaga, and scythrops. The Anseres consist of anas, the swan, the goose, the duck, the shoveler, and the teal; mergus, the merganser, the goosander, the dunn-diver, and the smew; alca, the auk or razorbill; apterydotes, the penguin; procellaria, the petrel, diomedea, the albatross or man-of-war bird; pelicanus, the pelican, the cormorant, the shag, the crane, the gannet, and the booby; platus, the darter; phæton, the tropic bird; colymbus, the guillemot, the diver, and the grebe; larus, the gull, and the tarrock or kittiwake. The Grallæ consist of the phœnicopteros, the flamingo; platæa, the spoonbill; lamæda, the screamer; mycteria, the jabiru; canroma, the hostbill; scopus, the jauncer; ardea, the heron, the crane, the curlew, and the bittern; tantalus, the ibis; the whinril, the snipe, the woodcock, the godwit, and the red-shank; tringa, the sandpiper, the phalarop, and the purre-

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&c. The order Diptera contains ostrus, fly; musca, the fly; culicx, the crane-fly; the house-fly; the gnat; bombylius, the bumblebee, &c. The order Aptera contains podura, &c. The order termites, the white ant; the spring-tail; louse and crab-louse; acarus, the tick; harid, the head louse; scabies, the itch-mite; cancer, the spider; scorpion, the scorpion; the spider; lobster, prawn, shrimp, and quill; the flea, &c.

The sixth class, Vermes, is divided into five orders, namely, Intestina, mollusca, testacea, zoophytes, and infusoria. The order Intestina contains the following genera, namely, fasciola, the round worm; tenia, the tape-worm; godius, the hair-worm; lumbricus, the earth worm, and sipunculua, and the lug; hirudo, the leech; order Mollusca contains lapista, &c. The bare; doris, the sea lemon; artinia, the sea slug; siphonalia, the sea-urchin; the star fish; acorn shell; echinus, the sea-urchin, &c. The order Testacea contains lepas, &c. Turbo, the whorl; ark; conus; the snail; the sea ear; dentalium, the tooth shell; ostrea, the oyster; cardium, the cockle; mytilus, the mussel; argonauta, the sailing-buoy; nautilus, the nautilus; the scallop; bryozoa, the beard lichen, &c. The order Zoophytes contains spongia, the sponge; hydrea, the hydroid; tubipora, the tube worm, &c. The order Infusoria contains the genera volvox, monas, volvox, &c.

CUVIER'S ARRANGEMENT.

DIVISION I. VERTICBRATED ANIMALS, or those having a vertebral bone or back bone. — DIVISION II. MOLLUSCA, animals of soft texture. — DIVISION III. ARTICULATED, or jointed animals. — DIVISION IV. ZOOPLUTES, animal plants, or radiated animals.

DIVISION I. VERTICBRATED ANIMALS. Four classes. — Class I. Mammalia animals which give suck. Order I. B. Man, or two handed man. Order II. Quadrumania, or four handed man. Order III. Carnivora, animals which eat flesh. Subdivision II. Insectivora, animals which eat the flesh. Subdivision III. Herbivora, animals which eat the vegetable substance. A. Primate, bears, racoon, badger, &c. B. Digitivora, animals which walk on the sides of the feet; as the dog, kangaroo, &c. C. Ungulata, animals which walk on the hoofs; as the horse, ass, mule, &c. D. Ungulata, animals which walk on the hoofs, and have hoofs; as the horse, ass, mule, &c. E. Ungulata, animals which walk on the hoofs, and have hoofs; as the horse, ass, mule, &c. F. Ungulata, animals which walk on the hoofs, and have hoofs; as the horse, ass, mule, &c.

Class II. Birds. Order I. Birds of prey. Subdivision I. Scapular, as the vulture, eagle, falcon, hawk, &c. Subdivision II. Nocturnal, as the owl. Order II. Birds of song, as the sparrow, lark, &c. Order III. Birds of the water, as the grebe, swan, &c. Order IV. Birds of the air, as the kite, eagle, hawk, &c. Order V. Birds of the earth, as the quail, partridge, &c. Order VI. Birds of the sea, as the gull, vulture, &c. Order VII. Birds of the air, as the hawk, eagle, &c. Order VIII. Birds of the sea, as the albatross, &c. Order IX. Birds of the air, as the hawk, eagle, &c. Order X. Birds of the sea, as the albatross, &c.

DIVISION II. MOLLUSCA. Six classes, as the bivalve, nautilus, &c. Order I. Bivalvia, animals with two shells, as the oyster, scallop, &c. Order II. Univalvia, animals with one shell, as the nautilus, &c. Order III. Testacea, animals with a shell, as the limpet, &c. Order IV. Nudibranchia, animals without a shell, as the slug, &c. Order V. Cephalopoda, animals with a head, as the cuttle fish, &c. Order VI. Cirrhopoda, animals with tentacles, as the jelly fish, &c.

DIVISION III. ARTICULATED ANIMALS. Four classes, as the arthropod, insect, &c. Order I. Insecta, animals with six legs, as the fly, bee, &c. Order II. Arachnida, animals with eight legs, as the spider, &c. Order III. Crustacea, animals with ten legs, as the crayfish, &c. Order IV. Mollusca, animals with two shells, as the oyster, &c.

FINIS.



