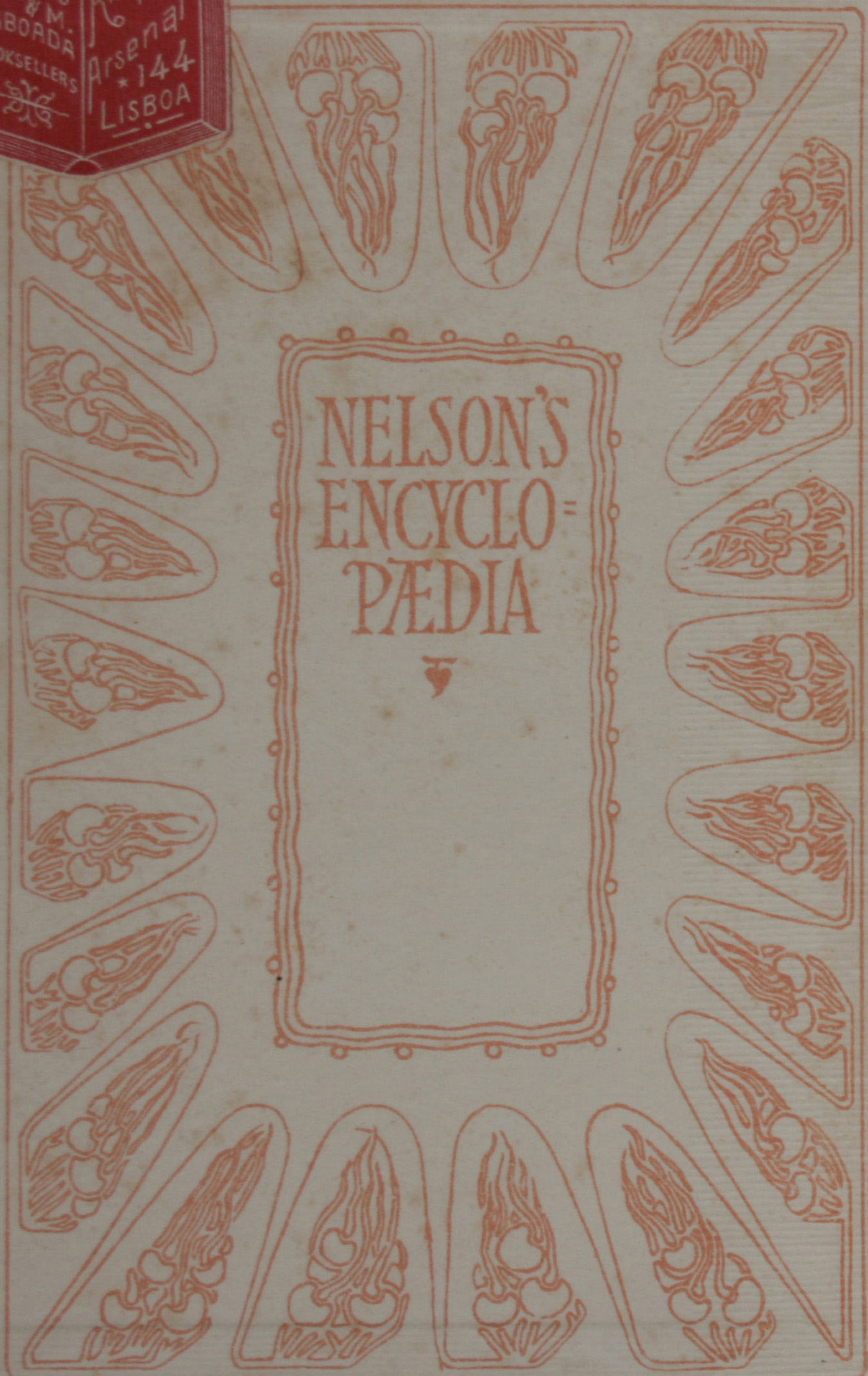


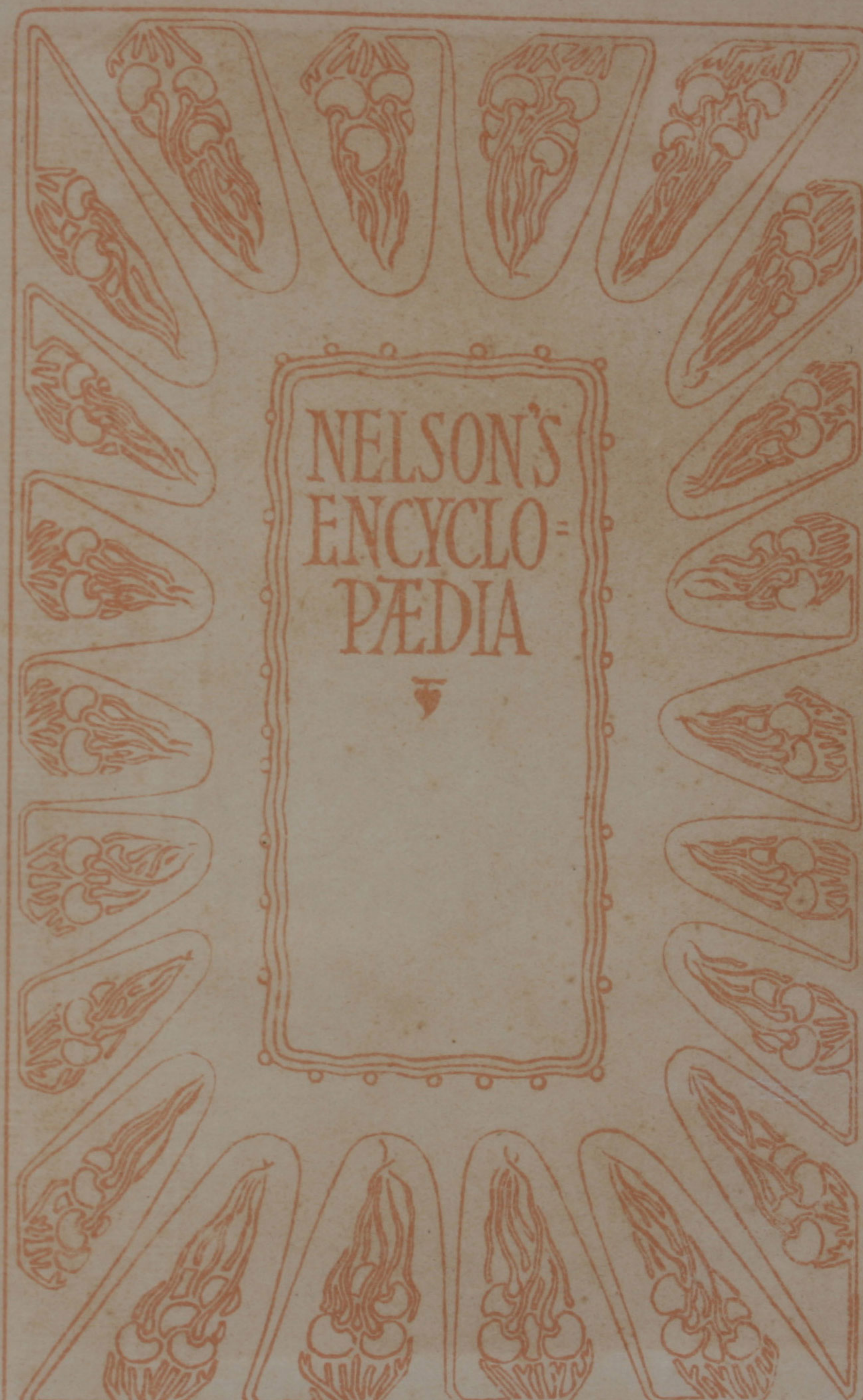
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NELSON'S ENCYCLOPÆDIA

VOL. I.

A—Anor

P

MISSOURI BOTANICAL GARDEN

GEORGE ENGELMANN PAPERS

1846-1852

NELSON'S
ENCYCLOPÆDIA

VOL. I.

A—Anor

THOMAS NELSON AND SONS

LONDON, EDINBURGH, DUBLIN, LEEDS

PARIS, LEIPZIG, AND NEW YORK

PUBLISHERS' PREFACE.

THIS Encyclopædia has been prepared with the view of meeting the requirements of the ordinary intelligent man and woman who, in the course of their reading or writing, frequently feel the want of a reliable book of reference which can be easily handled and quickly consulted. The specialist must find his material in books dealing with his special subject; the ordinary reader requires a work which may be consulted on any subject, and where accurate information may be found in a convenient form.

The special features of this publication may be thus summarized:—

(1.) *Convenience in use.* An encyclopædia has hitherto meant a row of bulky and weighty volumes, often requiring special shelf accommodation and special apparatus for support while in use. This Encyclopædia, on the contrary, may find a place on any bookshelf or writing-table, and can be handled without any difficulty. While the bulk of this work has been kept within so narrow limits, space has been allotted to such illustrations and diagrams as are necessary to elucidate the text, and a number of full-page pictures have been added which increase both the artistic and the informative value of the work.

(2.) *Facility in reference.* Instead of long and comprehensive treatises, the work is arranged into numerous

short articles, thus reducing to a minimum the time required to find the information desired. With the same aim, the language is throughout popular rather than technical.

(3.) *Adaptation to modern conditions.* The most recent changes in the various sciences and industries, and other departments of thought and action, have been kept in view throughout.

(4.) *Accuracy and reliability.* The articles have been written by recognized authorities, each working within his own special department of knowledge.

(5.) *Guidance in research.* For the purposes of the student, no mere reference book is sufficient; hence care has been taken to give at the end of articles very full lists of books which may be used for further study and research.

As to its contents, this Encyclopædia is based on the 'Harmsworth Encyclopædia,' which was issued by us in fortnightly parts and enjoyed an unprecedented popularity, and on our American 'Nelson's Encyclopædia,' which is published on the 'loose-leaf' system. The present work is, however, much more than a mere reprint: while the best has been retained from both the older works, hundreds of new articles have been written, many re-cast, and all revised immediately before publication.

LIST OF CONTRACTIONS USED IN THIS WORK.

ac., acres.	Gr., Greek.	stn., station.
agric., agricultural.	Heb., Hebrew.	s.v., under the word.
alt., altitude.	I., isl., island.	Syr., Syriac.
anc., ancient.	ibid., the same.	temp., temperature.
ann., annual.	i.e., that is.	terr., territory.
Ar., Arabic.	in., inches.	trans., translated.
Aram., Aramaic.	Ital., Italian.	trib., tributary.
arr., arrondissement.	Lat., Latin.	U.S.A., United States of America.
A.S., Anglo-Saxon.	lat., latitude.	vil., village.
aver., average.	l. bk., left bank.	vol., volume.
bor., borough.	lit., literally.	W., west.
bur., burgh.	long., longitude.	wat.-pl., watering-place.
c. (circa), about.	m., miles.	yds., yards.
cap., capital.	mrkt. tn., market-town.	—
cf., compare.	Mt., mts., mount, moun- tain, -s.	Railways —C.R., Cale- donian Railway; C.P.R., Canadian Paci- fic Railway; G.E.R., Great Eastern Railway; G. & S.W.R., Glasgow and South - Western Railway; L. & N.W.R., London and North- Western Railway; N.B.R., North British Railway, etc., etc.
co., county.	munic., municipal.	Bibliography —Biog. Dict., Biographical Dictionary; Encyc. Brit., Encyclopædia Britannica; Proc. Royal Geog. Soc., Pro- ceedings of the Royal Geographical Society; Jour., Journal; Hist., History; Mag., Maga- zine, etc., etc.
Com., Commission.	N., north.	
comm., commune.	N.T., New Testament.	
cub. ft., cubic feet.	O.T., Old Testament.	
Dan., Danish.	par., parish.	
dep., department.	parl., parliamentary.	
dist., district.	Per., Persian.	
div., division.	pop., population.	
Du., Dutch.	Port., Portuguese.	
E., east.	prov., province.	
eccles., ecclesiastical.	q.v., which see.	
ed., edition; edited.	R., riv., river.	
e.g., for example.	r. bk., right bank.	
Eng., English.	R.V., Revised Version.	
episc., episcopal.	ry., railway.	
est., estimated.	ry. jn., railway junction.	
et seq., and following.	S., south.	
F., Fahrenheit.	Sans., Sanskrit.	
fort. tn., fortified town.	seapt., seaport.	
Fr., French.	Sp., Spanish.	
ft., feet.	sp. gr., specific gravity.	
Ger., German.	sq. m., square miles.	
gov., government.		

NELSON'S ENCYCLOPÆDIA.

A

A. The original sound in English of the letter A was, of course, that which it had in the Greek and Latin alphabets. In most European languages it has retained this value (French, German, Welsh, etc.), and occasionally also in English words (*e.g.* *psalm*). This should always be its value in scientific notation (so Murray's *Dictionary*); it is phonetically described as the back 'wide' vowel. Of the other values which A has now acquired in English, that in the word *man* is a characteristic English sound which is altogether wanting in French and German (symbolized by Murray as *æ*). The 'rounding' into *â* (Murray, *Q*), as in 'tall' and 'water,' has many parallels (Gaelic, Hebrew). But quite unnecessary confusion has been caused by allowing A to assume the value of its modern name (*ē* in Murray), which properly belongs to the symbol *E* (which see). In the early Semitic alphabet A had a slight consonantal sound which is known as the glottal stop. It is sometimes pronounced in German before vowels, especially at the beginning of a word. In the Semitic languages it shows a marked tendency to become

silent. Its choice by the Greeks to denote A perhaps implies some previous association with that vowel. A is the standard Greek form transmitted to the Latin alphabet. The Greek uncial *α* is no doubt a modification of this, although more like the old Semitic form *Ⲁ*: *a* is its Latin representative; written cursively, it becomes *a*. It may be noted that forms like *u* occur in the national alphabets, and that the Greek uncial is apt to be confused with *Δ*. The early Semitic form has changed more in the Semitic than in the European alphabets. The horns in Hebrew *א* are the remains of the two cross strokes; Arabic *ا* has lost even these. The name *aleph*, Greek *alpha*, means an 'ox.' Some think that the original sign represents a head and horns.

A as a symbol in logic is the universal affirmative. A is in musical notation the sixth note of the natural diatonic scale of C, and the first note of the relative minor scale; called *la* in Italy, France, and Spain. In concert pitch, A has about 440 vibrations per second, or a multiple of that number. Continental tuning-forks

are set to this note. Most stringed instruments have a string tuned to it, which in the violin is the second string, in the viola and violoncello the first, and in the contrabasso generally the third. It is the note given by the oboe, or organ, for tuning the orchestra. The key of A major has three sharps. A was the first or lowest note on the staff up to the 10th century. As a symbol of order or eminence, A denotes the first of a series, or the chief of a class. In the calendar, A is the first of the seven dominical letters. In old books of which only the alternate pages are numbered it denotes left-hand pages.

A, as an abbreviation, denotes many words of which it is the initial letter—*e.g.* Academy (R.A.), *anno* or *annus* (A.D.), *ante* (A.M.), Antiquaries (F.S.A.), Artillery (R.A.). In medical formulæ A or *aa* (Gr. *ana*) signifies that equal parts of each ingredient are to be taken; in Roman antiquities it stands for *absolvo* ('I acquit') on the judge's tablet; in textual notes on the Old and New Testaments it denotes the *Codex Alexandrinus*.

A I in shipping, first-class. See LLOYD'S REGISTER.

Aa ('water' or 'stream'), name of many rivers in France, Switzerland, and Russia. Alternative forms are ACH, AACH, ACHEN.

Aachen (Fr. *Aix-la-Chapelle*; anc. *Urbs Aquensis* or *Aquisgranum*), tn., Rhine prov., Prussia, 40 m. w.s.w. of Cologne; stands on the edge of an important coal field, and possesses well-known sulphur springs and baths for rheumatism and gout. The city is noted for needles, sewing-machines, cloth, woollen, glass, buttons, machinery, cigars, and chemicals. In 1897 the town of Burtscheid was incorporated with Aachen, which it adjoins on the s. Charlemagne, who made Aachen the capital of his Germanic dominions, died (814) and was buried in the town.

Between 1801 and 1815 Aachen was annexed to France. Two treaties of peace were signed here, the first in 1668, the second in 1748, and a European Congress was held in 1818. Pop. of Aachen and Burtscheid 145,000.

Aal, red dye obtained from the root of *Morinda citrifolia* (allied to madder), used greatly for dyeing cotton cloth in India; centre of industry at Gujarat.

Aalborg, tn. and port in N.E. of Jutland, Denmark, on Liim Fjord. It is an important commercial centre, and a bishopric. Pop. 32,000.

Aalen, tn., Würtemberg, Germany, on the Kocher, 45 m. E. by N. of Stuttgart; has iron works and woollen mills. Pop. 10,500.

Aalesund, tn., Romsdal Co., Norway, 65 m. s.w. of Kristiansund; fishing port. Destroyed by fire, Jan. 1904, but since rebuilt. Pop. 12,000.

Aali Pasha, MEHEMET EMIN (1815-71), Turkish statesman, was born in Constantinople; Turkish ambassador to London (1840-4); foreign minister (1846-52); represented Turkey at the congress of Paris (1856); took part in suppressing the Cretan rebellion (1867-8); and brought about the submission of the Khedive of Egypt (1869). He was five times grand vizier, and an ardent advocate of reform.

Aalst. See ALOST.

Aalten, tn., Guelders prov., Netherlands, 30 m. E. of Arnhem; manufactures textiles. Pop. 7,500.

Aar, or AARE, Swiss river; rises in canton Bern in the Grimsel at about 6,250 ft.; traverses Lakes Brienz and Thun. It flows through the city of Bern, and by Solothurn, Aarburg, Olten, Aarau, and Brugg to the Rhine near Waldshut. Length 175 m.

Aarau, cap. of canton Aargau, Switzerland, on the Aar, 42 m. N.E. of Bern; has silk, cotton, tile, ribbon, and cement factories. Pop. 8,000.

Aard-varck ('earth-pig'). See CAPE ANT-EATER.

Aard-wolf (*Proteles cristatus*), a burrowing, nocturnal animal, closely related to the hyæna. It is confined to S. Africa, and feeds on carrion and insects.

Aarestrup, CARL LUDWIG EMIL (1800-56), Danish lyric poet, born at Copenhagen; practised as a doctor. His *Efterladte Digte* (1863) created a sensation by their erotic tone. See his *Samlede Digte*, ed. by Georg Brandes in 1877.

Aargau (Fr. *Argovie*), a canton of Switzerland, s. of the Rhine. Area, 542 sq. m. Pop. 215,000, nearly all German-speaking. It was admitted into the Swiss Confederation in 1803. Cap. Aarau.

Aarhus, or AARHUUS, port on E. coast of Jutland, Denmark, 22 m. s.s.e. of Randers, with a good harbour. Exports grain, flour, butter, cattle, pork, and beef. Pop. 56,000.

Aaron, the elder brother and the colleague and interpreter of Moses. Having been consecrated to the high-priesthood (Ex. 28, 29; Lev. 8), he is regarded as the ancestor of all lawful priests in Israel. Though always second to Moses in prominence, he too sometimes received the divine law and performed miracles (Num. 17:1-10); his budding rod was deposited in the ark (Heb. 9:4). His great sin was the making of the golden calf (Ex. 32:4); for a subsequent fault he was denied entrance into Canaan (Num. 20:8-13), and died, aged 123, on Mount Hor, in Edom (Num. 20:23-29), being succeeded by his third son, Eleazar. See MOSES, and references quoted.

Aaron's Beard, the name of two different plants—*Hypericum calycinum* ('rose of Sharon'), so named because of the tufted, beardlike stamens of its yellow flowers; and *Saxifraga sarmen-tosa* ('mother of thousands'), a Chinese plant, often seen hanging at cottage windows.

Aaron's Tomb (*Kabr Harun*), on E. peak (4,360 ft.) of Mount Hor, is, according to ancient tradition, the place where Aaron was buried.

Aasen, IVAR ANDREAS (1813-96), Norwegian philologist and author, of peasant origin, and self-educated. In 1848 his *Norske Folkesprogs Grammatik* was published, and his *Ordbog over det Norske Folkesprog* in 1850. Aasen reconstructed an eclectic 'national' language (*Landsmaal*) out of the existing Norwegian dialects; his efforts in this direction being chiefly concentrated upon a grammar (*Norsk Grammatik*, 1864), a dictionary (*Norsk Ordbog*, 1873), which has been supplemented by the *Norsk Ordbog* (1890-2) of Hans Ross, and the publication of original poems, etc.

A.B., Bachelor of Arts. See DEGREE, UNIVERSITY.

A.B., 'able-bodied' seaman. In the British navy a boy between fifteen and sixteen and a half years enters a naval training ship, and signs on for twelve years from the age of eighteen as an ordinary seaman; and then, after gaining some knowledge of gunnery, he is rated an able seaman. From the rating of A.B. he may be advanced to be successively a second-class petty officer, first-class petty officer, chief petty officer, warrant officer, chief warrant officer, and lieutenant.

Ab, fifth Jewish month, when the year was reckoned from spring, eleventh after the present autumn reckoning; nearly our August. On the 9th of Ab both temples were destroyed (586 B.C.: 70 A.D.).

Ababde, vil., Egypt, on r. bk. of the Nile, 50 m. N. of Assiut, near which are the ruins of Hadrian's city of Antinoë, and of the still older Ansineh, famed for its oracles.

Ababdeh, pastoral Arab Mohammedan tribe living in the hilly district about the frontiers of

Upper Egypt and Nubia, between the Red Sea and the Nile.

Abaca, or ABAKA. See MANILLA HEMP.

Abaco, GREAT, or LUCAYA (80 m. by 20 m.), one of the Bahama Is., E. of Great Bahama. Pop. 3,300. LITTLE ABACO is N.W. of Great Bahama.

Abaculi, small cubes of coloured glass, enamel, stone, or other material, used in marquetry and mosaic work.

Abacus. (1.) A flat stone, square, octagonal, or circular, and either plain or variously ornamented, placed above the capital of a column. (2.) An instrument to facilitate calculation, used by the ancient Greeks, Romans, Egyptians, Hindus, and Mexicans. It consists of a board in which parallel grooves are cut to contain pebbles, or a rectangular frame of wires on which beads are strung. The latter form exists in the *tschotü* of Russia and the *suau-pan* of China, and is used in Europe for teaching arithmetic (Eng. 'ball-frame'; U.S.A. 'adder'). See Knott's *Abacus*; Gow's *Hist. of Greek Mathematics* (1884).

Abaddon, Hebrew word for 'ruin' or 'destruction.' Though sometimes used generally (Job 31: 12), it is often equivalent to *Sheol*, the place of the dead (Prov. 15: 11), or, more particularly, that of the lost. Sometimes it is personified, as in Job 28: 22; while in Rev. 9: 11 it is the name of the 'angel of the abyss,' and is interpreted as Apollyon ('the destroyer'), made familiar by Bunyan in his *Pilgrim's Progress*.

Abadeh, vil., Persia, half way between Ispahan and Shiraz; noted for wood-carving. Pop. 5,000.

Abaissé, or ABASED ('lowered'). In heraldry, when an ordinary or other charge, which would naturally occupy the centre of the shield, is placed *lower* than the centre, it is blazoned *abaissé*; this

term is sometimes applied to the wings of an eagle displayed, when inverted.

Abakansk, tn., Yeniseisk, Siberia, near the junction of the Abakan with the Yenisei R.; has coal mines and iron works, and ancient tombs. Pop. 2,000.

Abalone, EAR-SHELL, or AWABI, shell-fish (Haliotidæ) of the E. and W. Pacific coasts. The shell is used as mother-of-pearl, and the flesh is dried and eaten.

Abana, or AMANAH, and PHARPAR, rivers of Damascus (2 Kings 5: 12); the former, now called Barada, flows through the city; the identity of the other is still in doubt.

Abancourt, CHARLES XAVIER JOSEPH D' (1758-92), a supporter of Louis XVI. in the French revolution; made minister of war (June 1792); killed at Versailles by the populace.

Abandonment. See CRUELTY TO CHILDREN; DOMICILE; INSURANCE, MARINE; POSSESSION; RAILWAYS; TRADE MARKS.

Abanilla, tn., Spain, prov. of and 16 m. N.N.E. of Murcia. Pop. 6,700.

Abano, wat.-pl., Italy, prov. of and 6 m. S.S.W. of Padua. Its hot saline springs (98° to 181° F.) were known to the Romans. Pop. 4,500.

Abano, PIETRO DI (1250-1316), physician, born at Padua; became professor of medicine at Padua. He was a disciple of Averrhoes, and given to the study of alchemy and astrology; was brought before the Inquisition on a charge of heresy, and condemned to death, but died before the sentence could be carried out. His most famous work is *Conciliator Differentiarum quæ inter Philosophos et Medicos versantur* (1472). In his *Tractatus de Venenis* (1472) he deals with antidotes to poisons.

Abanto, tn., prov. Vizcaya, Spain, 9 m. N.W. of Bilbao; rich iron-ore mines. Pop. 7,000.

Abarbanel. See ABRAVANEL.

Abarim, a range of highlands E. of the Dead Sea, containing Pisgah, where Moses viewed the Promised Land, and Mount Nebo, 2 m. E., where he died and was buried.

Abasa, or **ABASINS**, Circassian tribe, of Indo-European origin, akin to the people of Abkhasia.

Abatement. (1.) In England legal proceedings formerly abated, or ended, on the marriage, death, or bankruptcy of one of the parties, or some change of interest in the matter in dispute. This does not now happen, if the cause of action survives in some one before the court (Rules of the Supreme Court, Order XVII.). Criminal proceedings do not now abate on the death of the prosecutor (*R. v. Truelove*, 5 Q.B.D. 336), nor on the demise of the crown (4 Wm. & M. c. 18, s. 6; 1 An. c. 2, s. 4). Pleas in abatement were formerly allowed, but were abolished by Order XXI. R. 20, of the Rules of the Supreme Court. Without admitting or denying the cause of action, the defendant set up some facts, the legal effect of which was to preclude the plaintiff from succeeding—*e.g.* one of the parties was alleged to be under age. Pleas in abatement to criminal indictments have also become obsolete since powers of amendment were given to the court. When the owner of a freehold estate dies and his heir succeeds, and a stranger wrongfully enters and takes possession before the heir, an abatement of the freehold is said to occur, and the seisin in law of the heir is reduced to a right of entry. (*Coke upon Littleton*, p. 277.) Where the assets of a testator are not sufficient to satisfy all his legacies, general legacies must abate, *i.e.* be reduced in equal proportions, before specific legacies are touched. See also **NUISANCES**. (2.) Marks of disgrace invented by heralds and annexed to coat armour, to denote some dishonourable or dis-

loyal act or quality in the bearer, said to be nine in number, but seldom or ever used. See **LEGACY**, **NUISANCE**, **REBATE**.

Abattoir (Fr. *abattre*, 'to slaughter'), a public slaughterhouse. The first abattoirs were those of Paris, established in 1818, on the recommendation of the commission of 1810. In the construction of an abattoir careful consideration must be given to the selection of the site. It must not be near dwelling-houses; it should admit of extension; and control should be had, if possible, over any buildings in the immediate neighbourhood. It should be easy of access, adjacent to the cattle market, and close to main thoroughfares and railways. A good water supply is most important. The abattoir must include accommodation for lairing, killing, dressing, cooling, inspection of suspected animals and meat, offices, and various buildings for the treatment of the feet, intestines, and blood. The slaughterhouse proper ought to be separate from the rest of the building. The walls and floors should be smooth and impervious, to prevent absorption, and to admit of thorough cleansing. The offal is usually removed in trucks or in barges, to be used as manure; in Chicago it is disposed of by means of Tobey's drive. (See *Pract. Mag.*, vol. v. pp. 255-6.) Other systems have been tried on the Continent—*e.g.* destructors, chemical treatment—but the sewage farm method is preferred in Britain. A public health officer and a veterinary surgeon, acting in conjunction, are essential to the administration of a good abattoir.

Abauzit, **FIRMIN** (1679-1767), born at Uzès, France; fled to Geneva on the revocation of Edict of Nantes; assisted in translating the New Testament into French (1726), and became librarian at Geneva, 1727. He was a great

scholar, much esteemed by Newton, Voltaire, and Rousseau. Of his *Works* (Gen. 1770, and Amst. 1773) some parts have been translated by Harwood (Lond. 1774).

Abba (Aram. 'father'), a devotional expression for the Divine Fatherhood, and apparently the chief appellation of God used by Jesus in prayer, occurs three times in the New Testament (Mark 14: 36; Rom. 8: 15; Gal. 4: 6), accompanied by its Greek equivalent. It is supposed to have been used as a sacred proper name; servants were forbidden to use it to their masters.

Abbadie, ANTOINE THOMPSON D' (1810-97), French savant and explorer; of French-Irish parentage; born at Dublin, but educated in France, whither his parents removed in 1818; sent by the Académie des Sciences on a mission to Brazil (1835); occupied with the exploration of Abyssinia (1837-48); a member of the Académie des Sciences (1867), and of the Bureau des Longitudes (1878); received the Arago medal, along with Lord Kelvin (1896). He bequeathed his estate of Abbadie, yielding 40,000 fr. yearly, to the Académie des Sciences, on condition of its publishing a catalogue of 500,000 stars within fifty years. His chief works are *Un Catalogue raisonné de MSS. Ethiopiens* (1859); *Géodésie d'Ethiopie* (1860-73); *Observations relatives à la Physique du Globe faites au Brésil et en Ethiopie* (1873); *Dictionnaire de la Langue Amarinna* (1881); *Géographie de l'Ethiopie* (1890); *Reconnaisances magnétiques* (1890).

Abbadie, ARNAUD MICHEL D' (1815-93), accompanied his brother Antoine to Abyssinia, and wrote *Douze Ans dans la Haute-Ethiopie* (1868).

Abbadie, JACQUES (1654-1727), Protestant theologian, a native of Nay, in Béarn, France; pastor of a French Protestant church in

Berlin (1676), and, in 1688, pastor of the French church of the Savoy in London. William III. nominated him dean of Killaloe, Ireland. He died in Marylebone. His best-known work is *Traité de la Vérité de la Religion Chrétienne* (1684), an apologetic work inspired by the Cartesian philosophy. Other noteworthy books are *L'Art de se connaître soi-même* (1692); *Défense de la Nation Britannique* (1692), a vindication of the revolution of 1688; and a book on *La Grande Conspiration d'Angleterre* (1696).

Abbas (c. 566-652), uncle of Mohammed, was taken prisoner at the battle of Bedr, and afterwards became the leading supporter of the faith. He was the founder of the dynasty of the Abbasides, who were caliphs of Bagdad from 750 until the Mongol conquest in 1258. See CALIF and CALIFATE.

Abbas I., 'THE GREAT' (1557-1628), Persian monarch, ascended the throne in 1586; defeated the Uzbegs at Herat (1597), and the Turks in many battles (1601-9), and, with British assistance, drove the Portuguese from Ormuz (1622). His dominion extended from the Tigris to the Indus. He established the capital at Ispahan, and was the author of many important reforms.

Abbas Hilmi. See KHEDIVE.

Abbas Mirza (1783-1833), Prince of Persia, son of Shah Feth-Ali, was commander in the Russian campaigns of 1811-13 and 1826-8, in which Persia lost her Caucasian territories. He was recognized as Shah by the treaty of 1828.

Abbas Pasha (1813-54), grandson of Mehemet Ali, succeeded his uncle, Ibrahim Pasha, as viceroy of Egypt, 1848. His rule was wasteful and reactionary.

Abbate, NICCOLO DELL' (1512-71), Italian painter; born at Modena; studied under Correggio; assisted Primaticcio in decorating

the palace of Fontainebleau. His best works are the altar-piece of San Pietro (Modena), and *The Execution of the Apostles Peter and Paul* (Dresden).

Abbates Milites, or ABBACOMITES, lay abbots in the 10th century, who deputed deans or priors to the spiritual oversight of their abbeys.

Abbazia, health resort in Istria, Austria, at the head of the Gulf of Fiume, 9 m. w. of Fiume. It is well sheltered: mean summer temp., 77°; winter, 50° F. Pop. 1,500.

Abbé, at first meaning abbot, was early applied in France to any ecclesiastic, a sense which the word still holds. See ABBOT.

Abdess, superior of a nunnery; chosen by the secret votes of the nuns; must be over forty years old, and have kept the vows of the order for at least eight years; receives episcopal benediction, and exercises the temporal and spiritual duties of an abbot, except confession and preaching. She may take part in synods.

Abbeville (*Abbatis Villa*), tn., dep. Somme, France, on the Somme R., 15 m. from its mouth in the English Channel. Manufactures textiles, and has trade in wheat and linseed. Noted for the Church of St. Wolfram (Gothic of the 15th century). In 1259 a treaty was concluded here between Louis IX., king of France, and Henry III., king of England. Another treaty was concluded here in 1527 between Henry VIII. and Francis I. of France. Pop. 21,000. See Prarond's *Histoire d'Abbeville* (1899).

Abbey, the abode of a community of monks or nuns, originated among the early Christian hermits of the Egyptian desert as a cluster of separate huts built round that of an anchorite of distinguished piety. The name signifies the institution as well as the building. As the monastic system became

organized, there arose a form of architecture suited to its needs. The principle adopted by the Benedictines, that an abbey should be entirely self-contained, led to great complexity in the many thousand buildings erected by that order throughout W. Europe. These included the church, the centre of the whole monastic life; the chapter-house; the pisalis, or calefactory, the common room of the monks; the refectory, or dining-room; dormitories; cloisters; buildings devoted to the reception of guests; the almonry, where the needs of the poor were relieved; infirmary and physician's residence; library and writing-room; schools for novices and children; besides bakehouse, brewery, workshops, stables, and farm buildings. The gardens were filled with vegetables, fruits, and medicinal herbs; and the whole abbey was surrounded by a wall. Among British abbeys are Westminster, Canterbury, York, Tewkesbury (Benedictine), Durham, Fountains, Kirkstall (Cistercian), Bolton, Bristol, Holyrood (Augustinian). The first British abbey was founded at Bangor in 560. Henry VIII. suppressed many of the smaller foundations in 1525 and following years, and abolished all institutions of this kind in 1539-40. See PRIORY and MONASTICISM; also Walcott's *Church and Conventual Arrangement* (1861); Bonney's *Abbeys and Churches of England and Wales* (1887); Billings's *Baronial and Eccles. Antiq. of Scotland* (4 vols. 1848-52); and books by Willis.

Abbey, EDWIN AUSTIN, R.A. (b. Philadelphia, U.S.A., 1852), American artist; mainly self-taught. In 1878 he came to England. His first academy picture was *A May-Day Morning* (1890). In 1896 he was elected A.R.A., in the year of his fine picture *Richard III. and Lady Anne* (etching by M. L. Flameng);

and R.A. in 1898, his diploma picture being *A Lute-Player*. Abbey is best known for the frescoes which he, together with Puvis de Chavannes and John Sargent, executed in the Boston Public Library, U.S.A. This work—*The Quest of the Holy Grail* (completed in 1901 in fifteen panels)—marks an important era in the development of American art. Other works are *Hamlet* (1897), and *King Lear's Daughters* (1898). A reredos for the American Church of the Holy Trinity, Paris (1903). In 1901 he was commissioned by King Edward VII. to paint his *Coronation*. Later works include *A Measure* (1904) and the decorative panels for the dome of Pennsylvania State Capitol (1908).

Abbeyfeale, mrkt. tn., Ireland, co. of and 36 m. s.w. of Limerick. Pop. 1,000.

Abbeyknockmoy, par. and vil., Ireland, co. of and 18 m. N.E. of Galway; has ruins of 13th century abbey. Pop. 2,000.

Abbeyleix, mrkt. tn., Ireland, in Queen's co., 8 m. s. of Maryborough. Pop. 9,000.

Abbiategrosso, tn., Italy, prov. of and 17 m. s.w. of Milan, on the Naviglio Grande Canal; has silk manufactures. Pop. 12,000.

Abbot, the head of a monastery. The name was first given as a title of honour to aged or distinguished monks. In the East the corresponding title is archimandrite or hegumenos. In the West, in orders founded after the eleventh century, superiors are known, not as abbots, but as priors, guardians, rectors, ministers, etc. An abbot may preside over one house, or over many houses united in a monastic congregation; he may be exempt from episcopal jurisdiction, and be subject directly to the Pope; he may be mitred—*i.e.* have the right to wear the insignia of a bishop; he may hold political

rank, like the prince-abbots of Germany, or the twenty-eight English abbots who sat in the House of Lords immediately before the dissolution of the monasteries. He may be chosen for life or for three years. An abbot must be at least twenty-five years old, and (according to the modern law) a priest. The choice is made by the professed monks who are in holy orders, and confirmed by the bishop, or, in case of exempt monasteries, by the superior abbot or by the Pope. He must, as a rule, receive solemn benediction for his office at the hands of a bishop; he may empower priests to absolve his subjects, etc. In important cases he must obtain the consent of the community. *Com-mendatory abbots* are persons who enjoy the revenues of an abbey without necessarily being monks. Originally appointed for the protection of the monasteries in troublous times, they were afterwards appointed as a mark of royal favour. Hence the courtesy title of *abbé*, or *abbate*, given to secular unbeneficed clerics.

Abbot, CHARLES (1757–1829). See COLCHESTER, LORD.

Abbot, EZRA (1819–84), Unitarian Biblical scholar; born at Jackson, Maine, U.S.A.; became Bussey professor of New Testament criticism at Harvard (1872–84); edited Hudson's *N.T. Concordance* (1870), and (with Dr. Hackett) Smith's *Dict. of the Bible* (1867–70); and assisted the American committee for N.T. revision (1871–81). He edited Alger's *Doctrine of a Future Life* (1864), and wrote *Authorship of the Fourth Gospel* (new ed. 1891). See Barrows' *Ezra Abbot* (1884).

Abbot, GEORGE (1562–1633), archbishop of Canterbury; born at Guildford; gained a fellowship at Oxford in 1583, and became master of University College, dean of Winchester, and vice-chancellor (1600) of Oxford; assisted in the

translation of the Bible (1604); bishop of Coventry and Lichfield (1609), then of London (1610); succeeded Bancroft as archbishop in 1611. As president of the Essex Divorce Commission, he incurred the king's displeasure by opposing the petition (1613). His accidental shooting of a gamekeeper at a hunting party caused him much trouble—bishops-elect refused to be consecrated by a homicide; and the king allowed a commission of inquiry, but formally pardoned him. Then ill-health and the accession of Charles I. (who favoured Laud) crippled his influence, and in 1627 he was deprived of authority. An ardent Calvinist, he opposed both Catholics and Arians, and did not scruple to employ torture and the stake. His *Lectures on Jonah* have been reprinted (1845); and his account of his sequestration is contained in Arber's *Eng. Garner* (1882). See Hook's *Lives of the Archbishops of Canterbury* (1876).

Abbot, LEMUEL (1760–1803), a portrait painter of some celebrity, largely self-taught. His portraits of Cowper and Lord Nelson are well known.

Abbot, ROBERT (1560–1617), bishop of Salisbury; brother to George Abbot, archbishop of Canterbury; was master of Balliol College, Oxford, and a well-known preacher, but his reputation rests chiefly on his writings in defence of the reformation and the royal supremacy; as, *The Mirror of Popish Subtleties* (1594); *Defence of the Reformed Catholike of Mr. William Perkins* (1606–9); and a book on the Gunpowder plot, *Antilogia adversus Apologiam Andreae Eudæmon Joannis* (1613). See Featley, in Fuller's *Abel Redivivus* (ed. 1651), and Anthony à Wood's *Athenæ Oxon.*

Abbot, WILLIAM (1789–1843), playwright and actor, made his first appearance at Bath; afterwards performed principally in

light comedy at Covent Garden. He created the parts of Appius Claudius and Modus in Sheridan Knowles's plays of *Virginus* and *The Hunchback*. He was the author of two melodramas, *Youthful Days of Frederick the Great* (1817) and *Swedish Patriotism* (1819). He died at Baltimore, U.S.A.

Abbot of Unreason, also LORD OF MISRULE, the master of the revels at the season of Christmas, the former being his title in Scotland, the latter in England. At Oxford and Cambridge the part was filled by a Master of Arts, who superintended the annual representation of Latin plays by the students, and took charge of their Christmas diversions. His 'reign' lasted from All-Hallows Eve to Candlemas Day. The revels of the London Inns of Court (*e.g.* Inner Temple and Gray's Inn) were presided over by a Lord of Misrule. In Scotland these mimic festivities were suppressed in 1555. See Leigh's *Accedence of Armorie* (1612), and ch. xiv. and note thereon in Scott's novel, *The Abbot* (1821).

Abbots-Bromley, par. and tn., Staffordshire, England, midway between Stafford and Burton-on-Trent. Pop. 1,400.

Abbotsford, the home of Sir Walter Scott from 1812–32, is an estate on the r. bk. of the Tweed, 3 m. from Melrose. In 1811 Scott bought a farm of 110 acres, called Cartleyhole (not *Clartyhole*, as Lockhart calls it), and named it Abbotsford. In 1813 he added the hilly tract from the Roman road near Turnagain to Cauldshiels Loch; in 1815, Kaeside, 'a large lump of wild land'; and, in 1817, the lands of Toftfield, which he bought for £10,000. The house stands on a terrace between the river and the road from Melrose to Selkirk. It is a picturesque, irregular building in the Scottish baronial style. Abbotsford, com-

pleted only in 1825, was involved in the collapse of 1826, and was not liberated till 1847, on the death of Scott's son. The Scott Collection of books, paintings, and relics is held in trust by the Dean and Council of the Faculty of Advocates, who leave it in the keeping of Scott's representatives. See Scott's *Familiar Letters* (1894); Lockhart's *Life*; Washington Irving's *Abbotsford*; Scott's *Journal* (1890); Jeffrey's *Hist. of Roxburghshire* (1864), vol. iv.; Ornsby's *Memoirs of J. R. Hope-Scott* (1884); Hannay's *Glimpses of the Land of Scott* (1888); Mrs. Maxwell Scott's *Abbotsford* (1893), and *Making of Abbotsford* (1897); Napier's *Homes and Haunts of Sir Walter Scott* (1897).

Abbotsford Club, now extinct, founded in 1834, on the model of the Bannatyne and Maitland Clubs; printed works of history and antiquities having relation to Scott and the Waverley Novels. Issued 34 vols. (1835-64).

Abbotshall, par., Fifeshire, Scotland, adjoining Kirkcaldy. Sailcloth is manufactured. Pop. 7,700.

Abbots - Langley, par. and hamlet, Herts, England, 3 m. N. of Watford. Reputed birthplace of Nicholas Brakespeare (Pope Adrian IV.). Pop. 3,500.

Abbott, CHARLES (1762-1832). See TENTERDEN, LORD.

Abbott, EDWIN ABBOTT (1838), theologian; born in London; taught at King Edward's School, Birmingham, and at Clifton College; headmaster of the City of London School (1865-89); Hulsean lecturer (1876), etc. His scholarly publications include *Bible Lessons* (1872); *Through Nature to Christ* (1877); *Shakespearean Grammar* (1870); *Latin Prose* (1873); ed. of Bacon's *Essays* (1876); *Bacon and Essex* (1877); *Francis Bacon* (1885); *Philochristus* (1878); *Onesimus* (1882); *Kernel and Husk* (1886); *Philo-*

mythus (1891); *Anglican Career of Newman* (1892); *The Spirit on the Waters* (1897); *St. Thomas of Canterbury* (1898); *Clue: a Guide through Greek to Hebrew Scripture* (1900); *Corrections of Mark adopted by Matthew and Luke* (1901); *From Letter to Spirit* (1903); *Johannine Vocabulary* (1905); and *Johannine Grammar* (1906); *Silvanus the Christian* (1906); *Apolo- gio* (1907); *Notes on New Testament Criticism* (1907); *The Message of the Son of Man* (1909).

Abbott, EVELYN (1843-1901), fellow of Balliol College, Oxford; an authority on classical literature and philology; wrote *A Hist. of Greece* (3 vols. 1901). He contributed the articles HISTORY OF GREECE, SPARTA, and others, to this work.

Abbott, SIR FREDERICK (1805-92), major-general Royal (Bengal) Engineers; took part in the first Burmese war (1825), the Afghan war (1842), and the first Sikh war (1846); lieut.-governor of the East India Co.'s Military College at Addiscombe (1851-61); served on several royal commissions; devoted his leisure to investigations in connection with the microscope and the polarization of light.

Abbott, SIR JOHN JOSEPH CALDWELL (1821-93), Canadian premier, born at Argenteuil, Lower Canada; called to the bar in 1847, he was solicitor-general (East) in the Liberal ministry of 1862, and carried through the Insolvent Act of 1864. He supported the Confederation coalition (1864-7), and later organized the first Canadian Pacific Railway Company. Called to the Senate in 1887, he was Conservative leader there till 1891, when he succeeded Sir John Macdonald as first minister.

Abbott, JOHN STEVENS CABOT (1805-77), was Congregational minister at Worcester, Roxbury, and Nantucket, Mass. He published *Hist. of Napoleon* (1868); *Hist. of*

the Civil War in America (1863-5); *American Pioneers*, 12 vols.

Abbott, LYMAN (1835), D.D., LL.D., editor of the *Outlook* (with Mr. Roosevelt as assistant editor), son of Jacob Abbott; born at Roxbury, Mass.; became a pastor, and succeeded Henry Ward Beecher at Brooklyn (1888-99). With his brothers, Benjamin and Austin, he published legal works and novels, under the pseudonym 'Benanly,' and many books on religious subjects—*e.g.* a *Dict. of Religious Knowledge* (1872), *Evolution of Christianity* (1892), *Theology of an Evolutionist* (1897), *Life and Literature of the Ancient Hebrews* (1901), and a *Life of H. Ward Beecher* (1903); *Industrial Problems* (1905), etc.

Abbottabad, chief tn. of Hazara dist., Punjab, India, 45 m. N. of Rawal Pindi. Pop. 7,800.

Abbreviations are distributed throughout this work in alphabetical order. See also PALÆOGRAPHY.

Abbreviators, the draughtsmen of papal bulls, etc. See BULL.

Abd (Ar. 'slave,' 'servant,' 'worshipper'), in Mohammedan countries, forms, in composition with Allah (God) and with other words, many of the common Arabic personal names—*e.g.* Abdullah, Abd-el-Kader.

Abd-el-Kader, or ABDUL-KADIR, EMIR (1807-83), Algerian patriot, was the son of a marabout of Mascara, with whom he twice performed the *hajj*, and visited the shrine of Sidi Abdul-Kadir at Bagdad. Preaching a *jihād* (holy war) against the French, he opened the campaign at Oran in 1833. Concluding a treaty with the French, he was recognized as emir in 1834; but war was soon resumed, and Abd-el-Kader fled to Morocco in 1843. In 1847 he gave himself up to General De Lamoricière, and was sent to Toulon. Released by Louis Napoleon in 1852, he received a

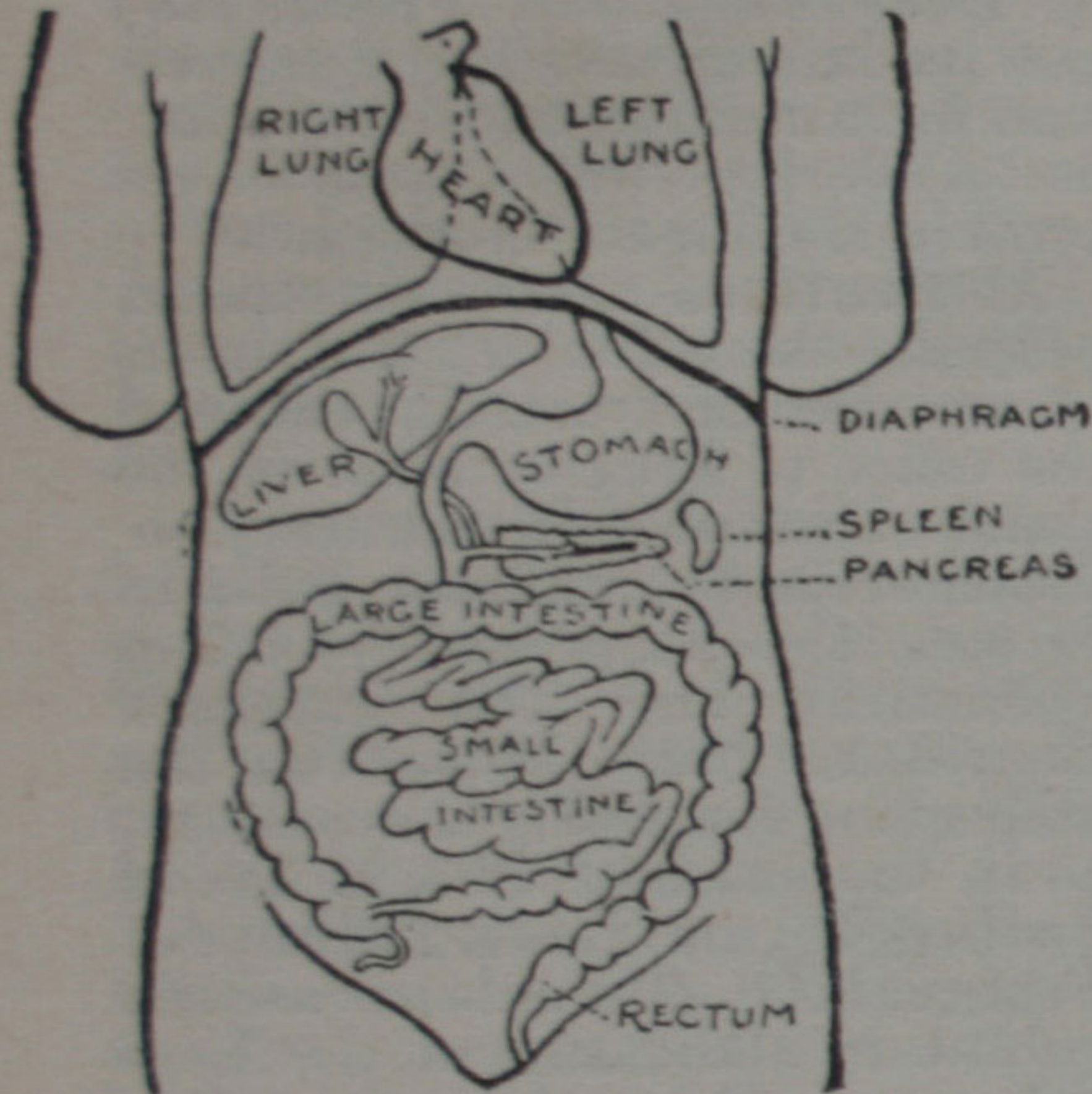
pension of 100,000 francs (1863), and finally resided at Damascus. He wrote a work on the Consolations of Philosophy (translated in 1858 into French under the title *Rappel à l'Intelligent: Avis à l'Indifférent*), and contributed commentaries to *Les Chevaux du Sahara* of E. Daumas (trans. by J. Hutton, 1863). See *Lives* by Churchill (1867) and Pichon (1899).

Abdera, tn., Thrace, on the Ægean Sea. It was the birthplace of Democritus and Protagoras; but its inhabitants had a reputation for stupidity, and 'Abderite' or 'Abderian' was a term of reproach, similar to 'Gothamite.'

Abdication, the surrender, properly the voluntary surrender, of an office of trust, especially of the office of king or head of the state. Instances of voluntary abdication are the dictator Sulla in 79 B.C., the Emperor Diocletian (305 A.D.), and the Emperor Charles V. (1555). More often the abdication was really compulsory, as in the cases of Charles IV. of Spain (1808), and Louis-Philippe of France (1848). There is no case of a voluntary abdication of the English crown. Edward II., after being solemnly deposed by the barons, was forced to express his consent (1327). Richard II.'s enforced resignation was confirmed by an Act of Deposition (1399). The convention of 1688, after the flight of James II., resolved that, having endeavoured to subvert the constitution of the kingdom by breaking the original contract between king and people, and having withdrawn himself out of the kingdom, he had abdicated the government, and that the throne was thereby vacant; but James certainly never considered himself as having resigned his crown.

Abdomen. In systematic zoology this term is used to describe the posterior region of the body in insects, crustaceans, arachnids, and other arthropods which have

the body divided into regions. The abdomen in arthropods is typically segmented, or divided into rings; but the segments tend to disappear in parasitic or much-modified forms. In vertebrates it is the cavity supported by the pelvis, separated from the thorax by the diaphragm, and surrounded by muscular body-walls, and encloses the intestines, liver, spleen, pancreas, kidneys, bladder, and internal genital organs. A deli-



The Abdomen.

cate serous membrane, the peritoneum, lines the abdomen and its viscera, permitting a smooth, gliding movement of the organs. It is the seat of the inflammation known as peritonitis. Wounds involving the peritoneum were, until recent years, calculated to be fatal in over eighty per cent. of cases. Recent experience in S. Africa has, however, made the prognosis much more favourable. See PERITONEUM SURGERY.

Abdominal Surgery. See SURGERY.

Abduction. (1.) OF WOMEN. In England and Ireland the law relating to the abduction of women is now contained in secs. 53-55 of the Offences against the Person

Act, 1861, and sec. 7 of the Criminal Law Amendment Act, 1885. There are three cases in which abduction is a *felony* punishable with fourteen years' penal servitude, and two cases in which it is a *misdemeanour* punishable with two years' imprisonment. It is a felony—(a) By force to take away or detain against her will any woman of any age with intent to marry or know her, or cause her to be married or known by some other person (24 & 25 Vict. c. 100, s. 54). (b) With the like intent, and from motives of lucre, to take away or detain against her will any woman of any age who has or is presumptively entitled to property (*ibid.*, s. 53). (c) With the like intent and motives, fraudulently to allure, take away, or detain out of the possession and against the will of her parents, or those having lawful charge of her, any such woman under the age of twenty-one (*ibid.*, s. 53). In cases (b) and (c) the offender is incapable of taking any of the woman's property, which will be settled for her benefit by the court in the event of a marriage. It is a misdemeanor—(a) Unlawfully to take or cause to be taken out of the possession and against the will of her parents, or those having lawful charge of her, any unmarried girl under sixteen (*ibid.*, s. 55). No intent has to be proved, and reasonable belief that the girl was sixteen is no defence. (b) To take or cause to be taken out of the possession and against the will of her parents, or those having lawful charge of her, any unmarried girl under eighteen with intent that she shall be unlawfully known by any man, whether a particular man or not (48 & 49 Vict. c. 69, s. 7). Reasonable belief that the girl was eighteen is a good defence. This last-mentioned act applies to Scotland, where it is also, by the common law, a crime to carry off and confine any per-

son forcibly and without lawful authority, or to abduct women for the purpose of rape or marriage. (2.) OF CHILDREN. It is a felony in England, punishable with penal servitude for seven years, or imprisonment, and, in the case of males under sixteen, with whipping, by force or fraud to take or entice away or detain any child under fourteen with intent to deprive its parent or guardian of the care of such child, or to steal any article on its person, except when the person charged claims any right to the possession of such child. (3.) OF VOTERS. Under the Corrupt and Illegal Practices Act, 1883, any person who prevents the free exercise of the franchise of any elector by abduction is guilty of a corrupt practice, and is punishable with imprisonment for one year, or a fine of £200, and is also disqualified to vote, sit in Parliament, or hold municipal office for seven years. This act now applies to parliamentary, municipal, and local government elections. See Russell, *On Crimes*; Stephen's *Criminal Law*; Rogers's *Law of Elections*.

Abdul-Aziz (1830-76) succeeded his brother, Abdul-Medjid, as Sultan of Turkey in 1861. His reign was troubled by the cholera epidemic at Constantinople (1865), revolts in Crete and Herzegovina, and by the Bulgarian atrocities of 1876. In May 1876 he was deposed, and within a week was found dead, whether by suicide or assassination is not known. See Lusignan's *Reign of Abdul-Hamid II.* (trans. 1889).

Abdul-Hamid I., or AHMED IV. (1725-89), Sultan of Turkey, son of Ahmed III.; succeeded his brother, Mustapha, Jan. 21, 1774. The chief events of his reign were the successes of the Russians, the treaty of Kainardji (July 21, 1774), the annexation of the Crimea in 1783, and the siege of Ochakov in 1788.

Abdul-Hamid II. (1842), son of Abdul-Medjid, became Sultan in 1876, in succession to his brother, the insane Murad V.; deposed 1909. Events of his reign were: Servian war (1876); Russo-Turkish war (1877-8); the Armenian atrocities, which occasioned the epithets, 'great assassin' (Gladstone, *Letter to Duke of Westminster*, 1897) and 'Abdul the damned' (sonnet by William Watson); the disturbances in Crete; and the Greco-Turkish war (1897). The revolution organized by the 'Young Turks' (1908) for political reform in the Ottoman Empire was the direct cause of Abdul-Hamid's deposition. In 1909 the National Assembly met and voted unanimously the deposition of the Sultan who, according to the Declaration, by his misdeeds had forfeited the right to position of Khalif. Abdul-Hamid's younger brother was proclaimed Sultan under the title of Mahomed V., 27th April 1909. See Buxton's *Turkey in Revolution* (1909); also M'Cullagh's *The Fall of Abdul Hamid* (1910).

Abdul-Kadir, surnamed AL-GILANI (1078-1166), a Moslem saint and mystic, was born in the province of Gilan, Persia, and died at Bagdad. He wrote on Moslem law and mystical divinity, as well as a book of odes. But he is most noted as a saint, and founder of the Kadiriya order. See Brown's *Dervishes* (1868); Trumelet's *Les Saints de l'Islam* (1881); Chatelier's *Les Confréries musulmanes du Hedjaz* (1887).

Abdul-Kadir. See ABD-EL-KADER.

Abdullah-el-Teishi-es-Sayyid (1830-99), known as the 'Khalifa,' successor of the Mahdi, Mohammed Ahmed, was born in Dar Fur, of the Baggara tribe; succeeded to the Mahdi's position in 1885; defeated the Abyssinian emperor John in March 1889, but was beaten by the Italians at Agordat in 1893.

by Lord Kitchener at Omdurman in 1898, and by Sir R. Wingate at Om Debrikat, in which battle Abdullah perished.

Abdul-Latif-al-Bagdadi (1162-1231), a Moslem savant born at Bagdad. He studied and taught medicine and philosophy at Cairo and Damascus, and died at Bagdad. He wrote a *Hist. of Egypt* (ed., with Lat. trans., by White, 1800; French trans. by De Sacy, 1810; and Eng. trans. in Pinkerton's *Voyages*, vol. xv. 1814).

Abdul-Medjid (1823-61), Sultan of Turkey, succeeded his father, Mahmud II. (1839), and in 1841 concluded peace with Mehemet Ali of Egypt. He followed up the reforms of his father by the organic statute of Gulhana (Nov. 3, 1839), securing the rights of person and property to all his subjects without distinction of religion; and, counselled by Stratford Canning from 1842, he introduced many reforms, which form part of the treaty of Paris (March 30, 1856). He resisted in 1853 those claims of Russia to a protectorate over his orthodox subjects which led to the Crimean war. He instituted the Imperial Order of the Medjidieh (1852).

Abdur-Rahman, Arab chief, fought at the battle of Toulouse (721); invaded Aquitaine in 732, sacked Bordeaux, and carried destruction as far as Burgundy. In 732 he was defeated and slain by Charles Martel, leader of the Franks, after seven days' fighting.

Abdur-Rahman I. (731-787), founder (755) of the Omniade dynasty of Cordova, was born at Damascus. He was engaged in almost constant warfare, and conquered the Iberian peninsula northwards to the Pyrenees.

Abdur-Rahman II. (788-852), fourth Omniade ruler of Cordova, and son and successor of Al-Hakim I. (822). His reign was disturbed by intestinal wars, and by those against the French, the

Astures, and the caliph of Bagdad. He wrote *Annals of Spain*.

Abdur-Rahman III., or ABDE-RAME (912-961), eighth and greatest ruler of the Omniade dynasty in Spain. His great wars against the Christian princes, Alfonso III. of Leon and Sancho of Navarre, culminated in the defeat of their combined forces in 918. He was defeated by Ramiro II. of Leon at Alhandega (939); but on Ramiro's death he assisted the deposed Sancho I. to regain his throne. He did much to promote Mohammedian unity in Spain. See Dozy's *Hist. des Musulmans d'Espagne*.

Abdur-Rahman Khan (1830-1901), Ameer of Afghanistan (1880), did much to consolidate the power of his country, define its boundary, and improve its social conditions. He was succeeded by his son, Habibullah Khan. See AFGHANISTAN; also *Life* by S. Wheeler (1895); *Autobiography* (1901).

Abecedarians (from A B C), a nickname applied to an extreme section of the German Anabaptists in the 16th century who despised all human learning.

A Becket, THOMAS. See BECKET.

À Beckett, ARTHUR WILLIAM (1844-1909), journalist, son of Gilbert Abbott à Beckett, was born in London; war correspondent to the *Standard* and the *Globe* in the Franco-German war; staff of *Punch* (1874-1902); published *Our Holiday in the Highlands* (1874), *London at the End of the Century* (1900), *The à Becketts of Punch* (1903), and *Recollections of a Humorist* (1907).

À Beckett, GILBERT ABBOTT (1811-56), comic writer and journalist; born in London; called to the bar, and was a metropolitan police magistrate (1849-56). He wrote numerous plays, edited *Figaro in London*, and was on the original staff of *Punch*; wrote leaders for the *Times*, *Morning Herald*, etc., *Comic Histories of*

England and Rome (illus. by Leech), *Comic Blackstone* (illus. by Cruikshank), and *Quizziology of the British Drama*.

Abegondo, com. Spain, prov. of and 12 m. s.e. of Coruña. Pop. 7,500.

Abel, the second (perhaps twin) son of Adam; a shepherd, who, having offered to God a more acceptable sacrifice than his brother Cain, was slain by the latter out of jealousy (Gen. 4:1-8). In the New Testament 'righteous Abel' is regarded as the first martyr, and as a hero of faith (Matt. 23:35; Heb. 11:4). See Dillmann's *Genesis* (1882).

Abel, SIR FREDERICK AUGUSTUS (1827-1902), chemist, was born in London; professor of chemistry at the Royal Military Academy (1851-5); chemist to the War Department (1854-88). He was a high authority on explosives, and especially improved the manufacture of gun-cotton. He was part inventor (with Professor Dewar) of cordite, and invented the closest apparatus for determining the flash-point of petroleum. He was the first director of the Imperial Institute (1887), and published *Gun-Cotton* (1866), *The Modern History of Gunpowder* (1866), *On Explosive Agents* (1872), *Researches in Explosives* (1875), and *Electricity applied to Explosive Purposes* (1884).

Abel, HEINRICH FRIEDRICH OTTO (1824-54), historian, born at Reichenbach, Würtemberg; was for several years engaged in the Prussian diplomatic service; appointed professor of history at Bonn (1851). His works include *Makedonien vor König Philipp* (1847); *Das neue Deutsche Reich und sein Kaiser* (1848); *König Philipp der Hohenstaufe* (1852); *Die deutschen Personennamen* (1853); *Die deutschen Kaiserdynastien* (1851); and *Die Legende vom heiligen Nepomuk* (1855).

Abel, NIELS HENRIK (1802-29), Norwegian mathematician; distinguished himself by his able development of the theory of elliptical functions and algebraic equations. See his *Works* (pub. in French, 1839), and *Life* by Bjerknæs, also in French (1885).

Abel, ROBERT (b. 1859), cricketer (retired), a member of the Surrey County Club. In 1886 he scored 144 against Australia. Highest score, 357, not out. In 1888, 1890, and 1891 he was at the head of the county averages, and in 1895 at the top of professional averages.

Abélard, or ABAILARD (Lat. *Abalardus*), PIERRE (1079-1142), theologian and scholastic philosopher, was born at Pallet (Palais), near Nantes, whence he received the epithet 'Doctor Palatinus.' He lived when the controversy of the scholastic philosophy between nominalism and realism was at its height; studied under Roscellin, and then under William of Champeaux, the champions, respectively, of the opposing principles. He became, at thirty-six years of age, the most famous teacher in Europe, and his school at Notre Dame was crowded by students from every land. Abélard rose above the abstract controversy of the schools, and taught a critical as opposed to the prevalent dogmatic method.

Abélard is chiefly remembered for the story of the love of Héloïse, niece of Fulbert, canon of Notre Dame, who, believing that Abélard had deceived his ward, procured an outrage upon him. Abélard then became a monk at St. Denis; Héloïse, a nun of Argenteuil. Having suffered imprisonment for heresy, by judgment of the synod of Soissons in 1121, Abélard retired to a hermitage—the 'Paraclete'—where eager students surrounded him; and later was called to preside over the abbey of St. Gildas-de-Rhuys in

Brittany, while Héloïse directed a sisterhood at Paraclete. Leaving the abbey after ten years, Abélard again became a teacher of great influence; but his enemies accused him of heresy, and Abélard set out for Rome, to die in the priory of St. Marcellus, near Châlons. His body was taken to Paraclete, where Héloïse was laid beside him in 1163; their remains were placed (1817) in one tomb, within the churchyard of Père-la-Chaise in Paris.

The first of Abélard's works to be printed was the ethical discourse *Scito teipsum* (1721). But it was only in Victor Cousin's *Ouvrages inédits d'Abélard* (1836-59) that his principles were made plain. Cousin printed the *Dialectica*, and Abélard's logical commentaries upon Aristotle, Boethius, and Porphyry, together with portions of his work *Sic et Non*, a collection (to serve discussion) of opposite views on points of doctrine. Stölzle published in 1891 a long-hidden treatise on the Trinity. Selections from another work, *Glossulæ super Porphyrium*, are accessible in the notable monograph *Abélard* (1845) by the Comte de Rémusat, who also wrote a philosophical drama with the same title (1877). See also works on Abélard by Wilkens (1855), Carrière (1853), Deutsch (1883), and Gingold (1906); also Gabriel Compayré's *Abélard and the Origin and Early Hist. of Universities* (Great Educators Series), 1893; Pope's *Epistle of Eloisa to Abélard*; *Life* by Joseph M' Cabe (1901).

Abelin, JOHANN PHILIPP (d. c. 1635), historian; better known by the pseudonym, JEAN LOUIS GOTTFRIED; born at Strassburg; founded the *Theatrum Europæum*; and wrote *Arma Suecica* (1631), *Inventarium Sueciæ* (1632), *Historia Antipodum* (1655), etc.

Abelmoschus. See HIBISCUS.

Abencerrages, an ancient and powerful Moorish family of Gra-

nada, who were at feud with the family of Zegriss, and were, it is traditionally said, massacred within the hall of the Abencerrages in the Alhambra in the 15th century. Their story is found in Gines Perez de Hita's *Guerras Civiles de Granada*, on which Chateaubriand's *Aventures du dernier des Abencérages* and Cherubini's opera are based.

Aben-Ezra. See IBN-EZRA.

Abeokuta, or ABBEOKUTA ('under a rock'), tn., Lagos, prov. Southern Nigeria, on Ogun R., 60 m. by rail n. of Lagos. Pop. 150,000.

Aber, 'at the mouth or confluence of' two rivers, or a river with the sea. By some the *a* of *aber* is thought to be *ath* (pron. *ah*), a 'ford,' as in Abernethy.

Aberaeron, or ABERAYRON, wat.-pl., Cardiganshire, Wales, 15 m. s.s.w. of Aberystwyth. Pop. 1,300.

Aberavon, or ABERAFON, par. (1,943 ac.), munic. bor. and mrkt. tn., Glamorganshire, Wales, on r. bk. of the Avon; forms part of the parl. bor. of Swansea. Tin, copper, and steel works. Pop. 7,600.

Abercarn, vil., 10 m. N.W. of Monmouth, England, with collieries and iron works. Pop. 13,000.

Aberchirder, tn., Scotland, co. of and 9 m. s.w. of Banff. Pop. 1,100.

Abercorn, stn., N.E. Rhodesia, at s.e. end of L. Tanganyika, established in 1889.

Abercorn, JAMES HAMILTON, FIRST DUKE OF (1811-85), succeeded his grandfather as Baron Hamilton (1818); lord-lieutenant of Ireland (1866-8 and 1874-6) under the Derby and Disraeli ministries; created duke in 1868. He claimed the dukedom of Châtelherault in France, as heir to the house of Hamilton; but Napoleon III. decided against him (1864). See *Times*, Nov. 2, 1885.

Abercrombie, JOHN (1780-1844), the celebrated physician, was born

in Aberdeen; became one of the foremost consulting physicians in Edinburgh, and was appointed physician to the king in Scotland (1824). His papers in the *Edin. Med. and Surg. Jour.* (1816-24) formed the basis of his later works, *Diseases of the Brain* (1828) and *Diseases of the Stomach* (1828). Besides minor essays on religious subjects, he published *The Intellectual Powers* (1830) and *The Moral Feelings* (1833), which were popular.

Abercromby, DAVID (d. c. 1702), Scottish physician and philosophical writer, of whose life we know only what is told by himself in *Protestancy to be Embrac'd* (1682). He wrote *Nova Medicinæ Praxis* (1685; repr. 1740); *De Variatione et Varietate pulsus Observationes* (1685); *Ars explorandi Medicas Facultates Plantarum ex solo Sapore* (1685-8); *Discourse of Wit* (1686), in which Reid's philosophy of common sense is taught; *Academia Scientiarum* (1687); *A Moral Discourse of the Power of Interest* (1690), etc. In 1833 James Maidment published *A Short Account of Scots Divines*, by him. See Haller, in *Bibliotheca Medicinæ Tract.*, vol. iii. p. 619.

Abercromby, SIR RALPH (1734-1801), son of George Abercromby of Tullibody, near Alloa; fought under Prince Ferdinand of Brunswick in Germany (1758); served under the Duke of York in Flanders (1793-5); and on his return to England was made a Knight of the Bath. In 1795-6 he conducted the campaign in the W. Indies. In 1799 he commanded the first division in the expedition to Holland; and in 1801 landed at Aboukir Bay, in Egypt. On March 21 he repulsed the attack of the French under General Menou, but was himself wounded, and died on March 28. Abercromby did much to improve the discipline of the army, and was universally respected for his courage, uprightness, and personal

charm. See the *Memoir* (1861) by his son James, Lord Dunfermline.

Aberdare, tn., Glamorganshire, Wales, about 4 m. s.w. of Merthyr-Tydfil. Coal mines and tin works. Pop. 45,000.

Aberdare, HENRY AUSTIN BRUCE, FIRST BARON (1815-95), born at Aberdare, Glamorganshire; M.P. for Merthyr-Tydfil (1852), for Renfrew (1869); under-secretary for the Home Department (1862); Privy Councillor (1864); Home Secretary (1868), when he carried through the Licensing Act of 1872; and became Lord Aberdare (1873), and Lord President of the Council (1873-4). He was first chancellor of the University of Wales (1894). He wrote a *Life of General Napier* (1864), *National Education* (1866), and *Speech on the Education of the Poor Bill* (1867).

Aberdeen, a royal, munic., and parl. bur. of Scotland, 130 m. N.E. of Edinburgh by rail (Forth and Tay Bridges). It was constituted a county of a city in 1899. The parliamentary burgh consists of a N. and a S. division, each sending one member to Parliament. Aberdeen rose into importance in the 12th century, when it became the see of the north, and received its charter as a royal burgh from William the Lion in 1179. It took an active part on behalf of Bruce. It is a handsome town, built chiefly of granite, and so called 'the Granite City.' Of modern edifices, the chief are the fine Municipal Offices in the Scottish Baronial style, the Post Office and Parish Council Offices in Renaissance style, Marischal College in Gothic, and the United Free Church College in Tudor, the new Market, Trades Hall, Royal Infirmary, Asylum, Grammar School, Theatre, Art Gallery and School, and Gordon's College. Of its churches, the most noteworthy are St. Nicholas, containing the East and the West; and the

Roman Catholic pro-cathedral. Chief industries are quarrying and working in granite, salmon and herring fisheries, fish-curing, engineering, chemical tanning, brewing, distilling, paper-making, and shipbuilding, and manufactures of woollens, linen, jute, and combs. The trade of the port is valued at over £1,500,000 per annum, of which two-thirds are imports. Pop. 185,000. See Smith's *New and Old Aberdeen* (1882); Fraser's *Historic Aberdeen* (1905); and Walker's *Handbook to the City and University* (1906).

ABERDEEN UNIVERSITY derives its origin from the union in 1860 of 'The University and King's College of Aberdeen' (founded in 1494-5 at Old Aberdeen) and 'The Marischal College' founded at New Aberdeen in 1593. It has about 1,000 students, and a library of about 200,000 volumes. Along with Glasgow University it returns one member to Parliament. Large extensions of Marischal College were inaugurated in 1906 by King Edward VII.

Aberdeen, chief tn. Aberdeen district, Cape of Good Hope, 140 m. N.W. of Port Elizabeth. Pop. 2,600; dist. 8,500.

Aberdeen, co. seat of Brown co., South Dakota, U.S.A., 280 m. W. of Minneapolis; manufactures chemicals. Pop. 6,000.

Aberdeen, GEORGE HAMILTON GORDON, FOURTH EARL OF (1784-1860), was born in Edinburgh; appointed minister to Vienna (1813), and signed the treaty of Töplitz; Foreign Secretary in Wellington's ministry (1828-30); Colonial Secretary (1834-5). His Non-Intrusion Bill (1840) failed to avert schism in the Scottish Church. Foreign Secretary in Peel's administration (1841), he negotiated the Tahiti incident (1844), the peace with China, the Ashburton treaty (1842), and the Oregon treaty (1846); resigned office with Peel (1846), and became

prime minister (1852). His cabinet, termed the 'Coalition Ministry,' which included Lord John Russell, Palmerston, Gladstone, and the Duke of Argyll, did not fulfil its promise; the alliance with France and the Crimean war were consequences of a weak and 'drifting' policy; the commissariat was grossly mismanaged; and a majority having been returned in favour of Roebuck's motion calling for inquiry, Aberdeen resigned (1855). He wrote an *Inquiry into the Principles of Beauty in Grecian Architecture* (1822). His *Correspondence* was privately printed (1858-88). See *Life* by Sir A. Gordon (1893); Kinglake's *Crimea*.

Aberdeen, ISHBEL MARIA, COUNTESS OF (1857), youngest daughter of first Baron Tweedmouth, married seventh Earl of Aberdeen in 1877. She is much interested in all questions affecting the welfare of women; was President of International Council of Women (1893-99, and 1904-9); and has published *Through Canada with a Kodak* (1893), and *Ireland's Crusade against Tuberculosis* (1908).

Aberdeen, SIR JOHN CAMPBELL GORDON, SEVENTH EARL OF (1847), grandson of the fourth earl; succeeded to the title (1870); lord-lieutenant of Ireland (1886); governor-general of Canada (1893-8); was again appointed lord-lieutenant of Ireland in Sir H. Campbell-Bannerman's administration (1905).

Aberdeen Line, a steamship company plying between London and Australia *via* the Cape; is managed by Messrs. G. Thompson, Ltd.; founded 1824. Fleet, 5 vessels, aggregating 33,594 tons gross.

Aberdeenshire, a maritime co. in the N.E. of Scotland, bounded on the N. and E. by the North Sea. Greatest length, from N.E. to S.W., about 86 m.; breadth, from N.W. to S.E., 47 m.; coast-line, 62 m.; area (excluding foreshore), 1,980 sq. m. Pop. 350,000. The pre-

dominant rocks are granite and gneiss. Towards the sea the land is fertile and comparatively level, but a great portion lies in the mountainous region of the Grampians, which form in the s.w. the group of the Cairngorms. The principal rivers are the Deveron; Ythan; Don, with the Urie (82 m.); and the Dee (87 m.). They are all noted salmon rivers. The coast fisheries are very productive. The county is divided politically into two divisions, each sending one member to Parliament. The county town is Aberdeen. See Smith's *New Hist. of Aberdeenshire* (1875); Watt's *Aberdeen and Banff* (County Histories: 1900).

Aberfeldy, vil., Perthshire, on R. Tay, 11 m. n.w. of Dunkeld. Pop. 1,500.

Aberfoyle, vil., S.W. Perthshire, Scotland, 16 m. w. of Stirling. Associated with Scott's *Rob Roy*. Pop. 1,000.

Abergavenny (the *Gobannium* of the Romans), mrkt. tn. and munic. bor., W. Monmouthshire, England, 16 m. w. of Monmouth. It stands on an eminence in the valley of the Usk. Its castle, still partly inhabited, was the scene of the treacherous murder of Welsh princes by William de Braose (1176). Collieries and iron works in the vicinity. Pop. 8,000.

Abergele, summer resort, N. Denbighshire, Wales, 30 m. w. by n. of Chester. Pop. 2,000.

Abernethy, vil., Perthshire, Scotland, 9 m. by rail s.e. of Perth. In the 6th century it was the chief seat of Pictish power. It has a round tower, 74 ft. high, dated variously, by different inquirers, from the 8th to the 11th century. Pop. 600. See Forsyth's *Chronicles of Abernethy* (1900).

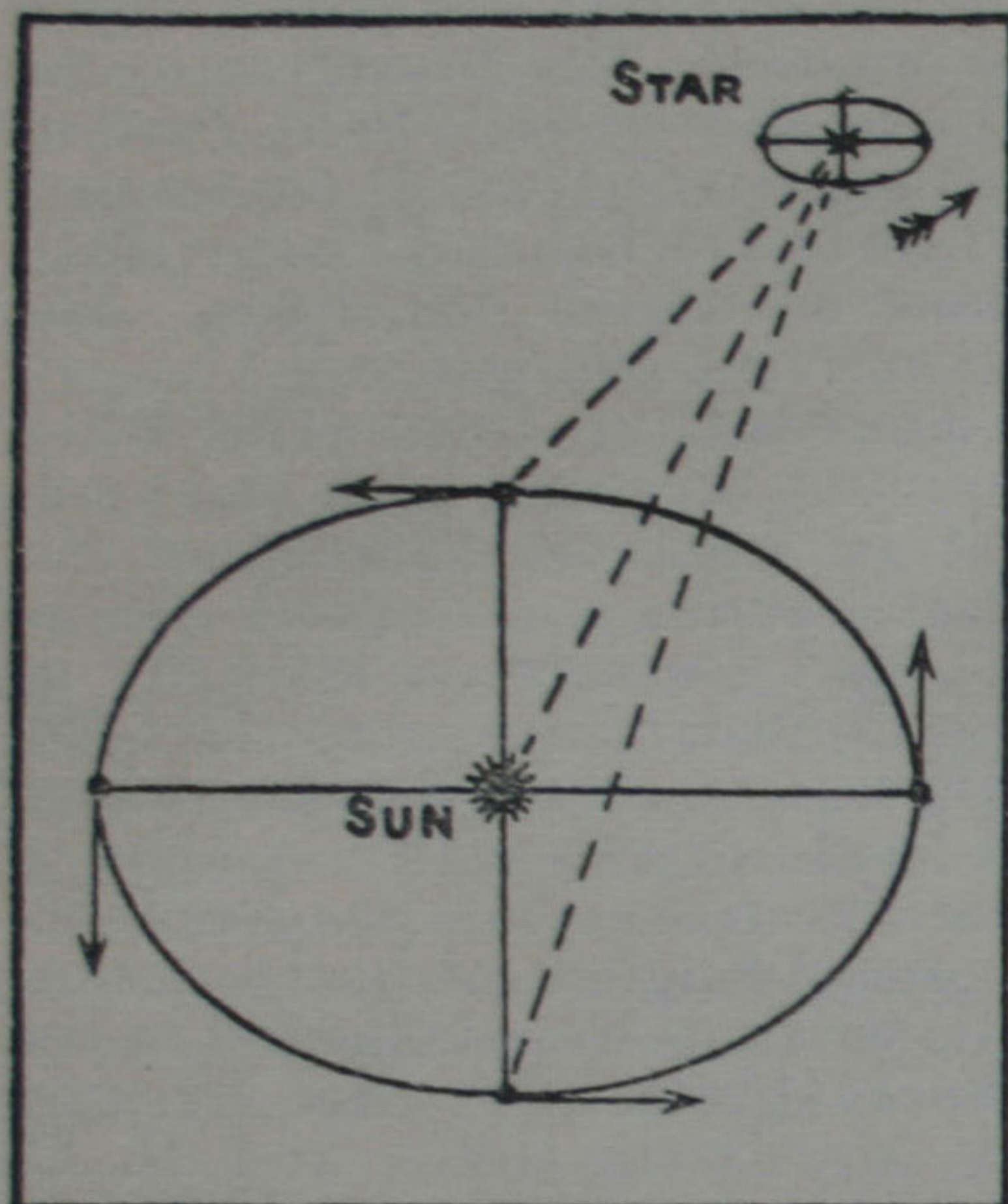
Abernethy, JOHN (1680-1740), Irish Presbyterian clergyman; appointed minister of a church in Antrim (1703); received calls from churches in Dublin and Belfast

(1717). The synod agreed that he should go to Dublin, but he decided to remain at Antrim. His refusal caused a division in the Irish Presbyterian Church. In 1730 he went to Dublin, and engaged in the controversy relative to the Test Act (1731), which he opposed. His *Discourses on the Divine Attributes* (1740-2), *Posthumous Sermons* (1748-51), containing a Life by Duchal, and *Tracts* (1751), show advanced principles. See manuscript *Diary* (6 vols.).

Abernethy, JOHN (1764-1831), eminent surgeon; born and studied in London; surgeon of St. Bartholomew's Hospital (1815-27), and lecturer on anatomy at the College of Surgeons (1814-29). His insistence on the connection of local diseases with disorders of the digestive system has deeply influenced English medical practice. His writings were collected in the *Works* (4 vols. 1830). See *Memoirs* by Macilwain (1853), and B. C. Brodie's *Autobiography* (1865).

Aberration, an apparent displacement of the heavenly bodies towards the point of the heavens towards which the earth is moving, due to the combined effects of the earth's orbital motion and of the finite velocity of light. Each star, consequently, describes annually about its true position a small ellipse, the semi-major axis of which is parallel to the ecliptic, and being the same for all stars is known as the 'constant of aberration.' Its accepted value is 20'47". And since it stands for the ratio of terrestrial to luminous speed, the distance of the sun can thence be deduced when the velocity of light has been independently determined. This explanation is very simple on the old corpuscular theory of light, but presents great difficulties on the wave theory of light. (See ÆTHER.) A similar but much smaller effect, depending upon the earth's axial move-

ment, is known as 'diurnal aberration.' A third variety, called 'planetary aberration,' arises from the delay in the visibility of a moving luminous body caused by the progressive transmission of light.



Aberration of light.

Aberration, SPHERICAL AND CHROMATIC, in optical instruments, means the deviation of part of a pencil of rays from the point through which every component ray of the pencil should pass, if the theoretical conditions for distinct vision are to be rigorously fulfilled. It is of two kinds, spherical and chromatic. Spherical aberration results from the sphericity of the lens surfaces, or of the mirror used to produce the image of the object, distant or near according as the instrument is a telescope, camera, or microscope. Consider in particular the case of a convex lens. (See LENSES.) Parallel rays passing through the lens are brought very nearly to a focus; but no lens with spherical surfaces will bring all rays exactly to this focus, even though these rays are of the same colour and refrangi-

bility. The amount of deviation of any particular ray from the focus will depend upon which part of the lens it passes through. Lenses might be ground with suitable forms of surface to produce perfect focussing for a particular kind of light from a source at a definite distance; but these would not have the same accurate focussing effect upon other kinds of light, or upon rays coming from sources at different distances. For ordinary use of telescopes and microscopes this imperfection is not of great significance, and in high-class types of instruments other causes operate which are as effective as spherical aberration in diminishing definition. Chromatic aberration is due to quite a different cause—*viz.* the different refrangibilities of the coloured components of white light. When a single lens is used, the different coloured rays from a given source are brought to different foci, thereby producing an image fringed with colour. (See DISPERSION.) This defect—a much more serious one than any that practically arises from spherical aberration—is almost entirely removed by means of achromatic combinations of lenses. These are compound lenses formed of lenses of different kinds of glass; and their action depends upon the fact that there is no necessary relation between refraction and dispersion. See TELESCOPE.

Abersychan, par. and tn., W. Monmouthshire, England, 2 m. N. of Pontypool; has iron and steel works and collieries. Pop. 18,000.

Abertillery, par. and tn., Monmouthshire, England, 5 m. N.W. of Pontypool; has collieries and tinplate works. Pop. 33,000.

Aberystwyth, port and wat. pl., Cardiganshire, Wales; seat of University College of Wales and of the Welsh National Library. Industries are slate-enamelling

and lead-mining machinery manufacture. Exports lead and blende ore. Pop. 8,000.

Abeshr (Fr. *Abêchr*), cap. of Wadai, in the French Congo. It is on the Sudan *hajj* caravan highway, between Khartum and Kuka, N. Nigeria. Vogel (1855-6) was killed there. Pop. estimated at about 25,000.

Abeyance. If a freehold estate has no present owner, the freehold is in abeyance. For reasons based on the old law of real actions and feudal services, the freehold cannot be put in abeyance by any voluntary act of the owner, and any limitation which purports to create a freehold estate *in futuro*, and thus to put the freehold temporarily in abeyance, is void. But an abeyance sometimes arises by operation of law, as during the period between the death of a corporation sole—a bishop, for example—and the appointment of his successor. In England, a female peerage will fall into abeyance if it descends upon coparceners—*i.e.* sisters who are together the one heir of their ancestor—but the crown may revive it in any one of them. In Scotland there is no abeyance in this case, as a female peerage descends to the eldest daughter or her heir. See Challis's *Real Property*, pp. 90, 104.

Abettor is one who is present aiding and abetting at the commission of a crime. He is sometimes called a principal in the second degree, as distinguished on the one hand from the principal in the first degree, who actually committed the crime, and on the other from an accessory, who was not present.

Abgar, the titular name of twenty-eight kings of Edessa in Mesopotamia, one of whom was said to have sent a letter to Jesus, asking Him to share his kingdom and cure his disease, and to have received a reply from Christ. The letters were translated by Euse-

bius, but were discredited by Pope Gelasius in 494. See Lipsius, *Die Edessenische Abgarsage* (1880), and Tixeront, *Les Origines de l'Eglise d'Edesse* (1888).

Abhorrrers, a name given (1679-80) to the Court or Prerogative party, who signed addresses to the crown 'abhorring' the petitions presented by certain of Shaftesbury's followers. The latter (named 'Petitioners,' 'Excluders,' 'Protestants,' 'Country Party') besought the crown not to prorogue Parliament further, in order that the Exclusion Bill against the Duke of York, afterwards James II., might be proceeded with, and that measures might be taken, in the Protestant interest, 'to smite the king through the duke's side.' The Abhorrrers (known also as 'Tantivies,' 'Masqueraders,' and 'Papists in Masquerade') received the nickname of 'Tories,' and the Petitioners that of 'Whigs;' and these terms superseded 'Abhorrrers' and 'Petitioners,' 'Court Party' and 'Country Party.' See R. Lodge, *Political History of England*, viii. (1910).

Abiathar, son of Ahimelech the high priest, escaped when Doeg slaughtered the priests at Saul's command (1 Sam. 22:20), and joined David at Keilah. Appointed high priest with Zadok (1 Chron. 15:11), he became David's counsellor (1 Chron. 27:34), and remained faithful to him during Absalom's rebellion (2 Sam. 15:24), but later joined Adonijah in his revolt (1 Kings 1:7, 19), and was therefore deposed from the priesthood by Solomon (1 Kings 2:26).

Abib, first Jewish month, when the year was reckoned from spring; seventh, according to the present reckoning—nearly our April. In it, later called Nisan, the feast of Passover is celebrated.

Abich, WILHELM HERMANN (1806-86), geologist, born at Ber-

lin; professor of mineralogy at Dorpat (1842); went to Vienna (1877). He explored the Caucasus, Russian Armenia, N. Persia, and Daghestan, and published *Geologische Forschungen in den Kaukasischen Ländern* (3 vols. 1878-88), *Ueber die geologische Natur des armenischen Hochlandes* (1893), etc.

Abies. See FIR.

Abigail, wife of Nabal the Carmelite, who, by her tactful speech and gifts, dissuaded David from his purpose of revenge against her churlish husband (1 Sam. 25:18-35). After Nabal's death she became the wife of David (ver. 39-42), and, after a short period of captivity among the Amalekites, resided at Hebron, where she bore David a son, named Chileab or Daniel (2 Sam. 3:3; 1 Chron. 3:1). In speaking to David she called herself 'thine handmaid,' and her name has thus come to be colloquially used for 'waiting maid,' 'servant.'

Abijah, the name of several individuals mentioned in the Bible, of whom the most notable are the following:—(1.) A king of Judah (c. 920-917), also called Abijam, the son and successor of Rehoboam. The account of him given in 1 Kings 14:31 to 15:8 is supplemented by 2 Chron. 13, according to which he gained a victory over Jeroboam, of whose army no fewer than half a million were slain, near Mount Zemaraim, in the hill country of Ephraim. He was succeeded by his son Asa. (2.) A son of Jeroboam I., who succumbed in childhood to a severe illness (1 Kings 14). (3.) One of the descendants of Eleazar, the son of Aaron, who was chief of the eighth of the twenty-four courses of David's priests (1 Chron. 24:10; cf. Luke 1:5, 'Abia'). (4.) A son of Samuel (1 Sam. 8:2, R.V.), whose corrupt administration of justice gave the elders of Israel a colourable plea for their demand for a king. For other

bearers of the name, see 1 Chron. 2:24 (Abiah); 7:8 (R.V.); 2 Chron. 29:1 (mother of Hezekiah).

Abilene, city, Texas, U.S.A., co. seat of Taylor co., 160 m. w. of Fort Worth; has grist, flour, and planing mills. Pop. 10,000.

Abimelech. (1.) A king of Gerar, who, owing to Abraham's misrepresentation, took Sarah into his harem; but being divinely warned in a dream, soon restored her to her husband (Gen. 20). A remarkably similar story is told also in connection with Isaac and Rebekah (Gen. 26). (2.) Son of Gideon and a Shechemite woman, who persuaded the Shechemites to make him their king, and who, by assassination, got rid of all his seventy half-brothers except Jotham (Judg. 9). The Shechemites ultimately rebelled against Abimelech, and while assaulting Thebez he was struck by a piece of a millstone cast from the wall by a woman, and, to save himself from the disgrace of having died by female hands, he ordered his armour-bearer to kill him. See G. F. Moore's *Judges*, 237 *et seq.*

Abingdon, a munic. bor. and mrkt. tn., Berkshire, England, 6 m. s. of Oxford. It dates from about 675, when a Benedictine monastery was founded. Manufactures ready-made clothing and carpets. Pop. 6,500.

Abinger, SIR JAMES SCARLETT, BARON (1769-1844), Lord Chief Baron of the Court of Exchequer, born in Jamaica; called to the bar (1791); entered Parliament as member for Peterborough (1819); became attorney-general in Canning's ministry (1827), and in Wellington's (1829-30); raised to the bench, with title of Baron Abinger, under Peel's ministry (1834). See *Memoir* by P. C. Scarlett (1877); Foss's *Judges of England* (1864), ix. 255-61; Martin's *Masters of the Bench of the Inner Temple* (1833), p. 93.

Abington, or **HABINGTON**, EDWARD (1553-86), took part in the Catholic plot hatched by Babington against Queen Elizabeth; was sent to the Tower, and, protesting innocence, was executed in St. Giles's Fields on Sept. 20, 1586.

Abington, MRS. FANNY (1737-1815), English actress, born in London; was a flower-girl and domestic servant. During her career on the stage (1755-99) she created thirty original characters, her most famous being Lady Teazle.

Abington Law, an English equivalent of the well-known Scottish 'Jeddart (Jethart, Jedwood) justice'—hanging a man in haste, trying him at leisure—from the summary hanging of a man at Abington by Major-Gen. Brown during the commonwealth. See **LIDFORD LAW**.

Ab initio. See **TRESPASS**.

Abiogenesis, the production of living from non-living matter, was generally believed in until recent times, but was disproved by Pasteur, Tyndall, and others. The present attitude of biologists is a reserved scepticism, which just allows the possibility of spontaneous generation. Under unknown conditions in the past, abiogenesis may have occurred; but up till now experiments tend to show that life is produced only from life. See Huxley in *Brit. Assoc. Report* (1870).

The subject has recently been revived by Dr. Charlton Bastian, who claims to have demonstrated the fact of the origin of life from non-living material. The evidence advanced has not, however, been accepted by biologists. See his *Nature and Origin of Living Matter* (1903) and the *Evolution of Life* (1907).

Abipones, one of the chief peoples of Gran Chaco, Argentina, between the Bermejo and Rio Grande; a fine tall race, with black eyes, aquiline nose, and long

black hair. See Dobrizhoffer's *Account of the Abipones* (1822).

Abishai, nephew of King David, and one of his most courageous and faithful followers (1 Sam. 26:6). He assisted in the night expedition to the camp of Saul (1 Sam. 26:6-9). After David's accession he took part with Joab in numerous wars (2 Sam. 2:18, 24; 3:30), was faithful to the king in Absalom's rebellion, and became one of the captains of the kingdom (2 Sam. 23:18; 1 Chron. 11:20).

Abjad is the first of eight mnemonic words which tell the numerical order of the Arabic alphabet from 1 to 1,000; also the name for the whole system, which is much used in amulets, etc., and for the alphabet, as in the phrase *huruful-abjad*, 'the letters of the alphabet.'

Abjuration. (1.) **OF THE REALM**. If a person accused of any crime except treason or sacrilege took sanctuary, and within forty days confessed, and took the oath that he abjured the realm, and would depart from it forthwith, and would never return without leave of the king, he saved his life; but his blood was attainted and his goods forfeited. All right of private sanctuary was abolished by 21 Jac. I. c. 28. (2.) **OATH OF**. 13 Wm. III. c. 6 provided that holders of any office under the king, extended to members of parliament, ecclesiastics, and lawyers, by an act of George I., should take an oath renouncing and abjuring allegiance to the son of James II. This oath was superseded in 1858 by a single oath, which took the place of the oaths of allegiance, supremacy, and abjuration, and contained words renouncing and abjuring allegiance to any one claiming a right to the crown except the present royal family (21 & 22 Vict. c. 48). A new form of oath was introduced in 1867 by 30 & 31 Vict. c. 75, and words of

abjuration were omitted. The Promissory Oaths Act, 1868 (31 & 32 Vict. c. 72) prescribes the form of oath now in use, and directs who shall take it.

Abkhasia, or **ABASIA**, dist., Kuttais, Caucasia, along the Black Sea littoral; produces wheat and wine. Chief town, Sukhum Kale. It became Russian in 1809-10, but was not pacified till 1864. Pop. 30,000.

Ablaut. The use of the term *ablaut* in philology is due to Jacob Grimm (*Deutsche Grammatik*). The word gradation may be employed as its equivalent in English (Skeat, Sweet, etc.). It finds special application in the comparative grammar of the Indo-European languages. Monosyllabic speech-elements, both bases and suffixes, show a marked tendency in these languages to split up and become, by vowel change, each a group of related syllables. Each group is a regular series, in virtue of its adherence to one of several possible schemes of variation (e.g. *sing, sang, sung*). The regular vowel change of such a series is called gradation. It is an inheritance from the Aryan parent speech, and is connected there with the influence of the accent. The differentiation at first was phonetic only; afterwards it was utilized in the expression of differences of meaning. The most important use of gradation as a means of expressing grammatical distinction occurs in the inflection of the so-called strong verbs. The varying forms or grades are there employed to mark differences of tense. The existing types of tense gradation may be distributed into seven classes, which are exemplified in the English verbs *fall, shake, bear, give, drink, drive, choose* (Skeat's examples). The regularity of the sequence has been obliterated in some verbs by phonetic changes of limited application. A good account of 'ablaut' (in

French, *apophonie*) will be found in Victor Henry's *Précis de Grammaire comparée de l'Anglais et de l'Allemand* (1893). See also Skeat's *English Etymology* (1889), and Brugmann's *Grundriss*, vol. i. (1886).

Able-bodied Seaman. See A. B.

Ablution, a rite symbolizing the purification of the soul by the cleansing of the body. In the Roman Catholic Church the word indicates the washing of the chalice and the priest's fingers with water and wine after mass.

Abner, a Hebrew warrior, son of Ner (1 Sam. 14:51), cousin of Saul, and captain of the army. He proclaimed Ish-bosheth king (2 Sam. 2:8), joined David (2 Sam. 3:12), and was killed by Joab (2 Sam. 3:27).

Abney, SIR WILLIAM DE WIVELLESIE (1844), English chemist and physicist, was born at Derby, and educated at the Royal Military Academy, Woolwich. Became instructor in chemistry to the Royal Engineers, Chatham; assistant-secretary to the Board of Education (Science Dept.) in 1899, and adviser to the Board in 1903; as also a member of Council for Education to the War Office. His researches in light, including stellar photometry, in photography, and in spectroscopy are of great value. His writings on these subjects include *Instruction in Photography* (11th ed. 1905); *Treatise on Photography* (1875); *Colour Vision, Colour Measurement and Mixture* (1893); and many papers in the *Philosophical Trans.* and the *Proc. Royal Society*. In 1900 Captain Abney was made a K.C.B. in recognition of his scientific attainments. Among his works in other fields are *Thebes and its Five Great Temples* (1876), and *The Pioneers of the Alps*, in collaboration with C. D. Cunningham (1888).

Abo, port, Finland, Russia, 95 m. w. by N. of Helsingfors, 50 m.

from the open sea. Coaling station; exports timber, paper, wood-pulp, and metal goods, and has shipbuilding. Here was signed the peace of Abo between Sweden and Russia in 1743. Pop. 45,000.

Abo, IBO, or EBOE, tn., S. Nigeria, on r. bk. of the Niger (Quorra), 80 m. from the sea. Exports palm oil. Pop. 8,000.

Abolitionists, advocates of the abolition of slavery in the United States, were organized in 1775 in Philadelphia, Benjamin Franklin being their first president. But in 1760 the Quakers had made the holding of slaves a matter of church discipline. Gradually the states in the north abolished slavery; and the great N.W. Territory, including Ohio, Indiana, Illinois, Michigan, Wisconsin, and a certain portion of Minnesota, were protected against slavery by the ordinance of 1787. The territory called the Louisiana purchase, including also what is now Iowa, Oregon, Kansas, Nebraska, and a part of Minnesota, came in as free states by embodying in their state constitutions laws against slavery. The abolition of the slave trade by Great Britain in 1807, and in 1808 by the United States, gave the abolitionists great encouragement, as so far their efforts had been practically futile. In 1816 the National Colonization Society was formed. Indirectly it was organized that the South might be rid of her free blacks, but its real object was that a colony might be furnished outside of the States for the emigration of the negro. In 1829-30 the feeling against slavery and its existence had become so well grounded that the leaders, especially William Lloyd Garrison, resorted to more aggressive methods, and insisted upon immediate abolition. In 1831 Garrison began to publish the *Liberator* in Boston, and in 1832 the New England Anti-Slavery Society was formed.

In 1833 another was organized in Philadelphia. Garrison visited England, and secured from prominent men a condemnation of the Colonization Society. In many quarters the feeling against the abolitionists was strong, and in the south rewards were offered for the capture of the leaders. In 1840 the American Anti-Slavery Society was formed by abolitionists opposed to the radical methods of Garrison, who made attacks upon both church and state, and had allowed dangerous social ideas to creep into the society, such as free love, community of property, and the then new idea of women's rights. The Liberty Party, an outgrowth of the abolition sentiment, united with the Free Soil Party; and in 1856 they joined with the Republicans. They gave great assistance to the negro in his efforts to escape, by means of an organization known as the 'Underground Railway.' Finally the civil war brought about the legal emancipation of the slave. See *Wm. Lloyd Garrison: The Story of his Life* (4 vols. 1885-89); *Wilson's History of the Rise and Fall of the Slave Power in America* (1872); *Williams's History of the Negro Race in America* (1882); *Frothingham's The Abolition of Slavery* (1878); *Cambridge Modern History* vii. 12-19 (1903).

Abomey, tn., Dahomey, French W. Africa, 70 m. N.N.W. of Porto Nova, 65 m. N. of Whydah; former capital of Dahomey; occupied by the French, Nov. 17, 1892. Trade in ivory, palm oil, and gold. Pop. 12,000.

Abondance (Ital. *Abbondanza*), tn., Haute-Savoie, France, 25 m. E. of Geneva; famous for the vache-ries cheese. Pop. 1,500.

Abony, tn., Pest co., Hungary, 50 m. S.E. of Budapest; agricultural centre. Pop. 15,000.

Aborigines. This word was first used of the original inhabit-

ants of Italy; it was afterwards extended to the inhabitants of other countries when first known; now it generally means the natives found in a country by European colonists. The word is also used of plants and animals, to denote the flora and fauna indigenous to a place. The abolition of slavery in the British dominions (1833) led to the formation of the Aborigines Protection Society. The Kidnapping Act, 1872, and the Pacific Islanders Protection Act, 1875, were passed for the protection of the natives of the Pacific islands, and for regulating the importation of them into the Australasian colonies, including Fiji. The British North America Act, 1867, gives exclusive legislative authority with regard to Indians to the Dominion (of Canada) Parliament. The constitutional acts of several of the colonies contain provisions for the protection of the natives. The General Act of the Brussels Conference, signed July 2, 1890 (*Hertslet's Treaties*, vol. xix. p. 278), sets out what the powers declare to be the most effective means of counteracting the slave trade in the interior of Africa, and contains in ch. vi. restrictive measures concerning the drink traffic, intended to protect the native population from the abuse of it. For Australian aborigines, see AUSTRALIA.

Abortion denotes the expulsion of a fœtus incapable of life, and medically the term is applied to those cases occurring before the sixth month of pregnancy. Later, the term used is miscarriage.

The causes of abortion may depend upon the health of the fœtus, or on that of the mother. Any illness of the mother during pregnancy is apt, either by lowering the general health, or by a more direct action, to induce abortion or miscarriage. Certain drugs, mental or physical shock, over-

exertion, or a muscular strain or a fall, may have the same effect.

Preventive treatment consists in living a sane life, not inactive, but quiet, regular, and healthy, with special care to avoid exhaustion, excitement, and crowded rooms, and the pressure of tight clothes. Should abortion be threatened (principally by bleeding and pain), the patient must *at once* take to bed, and send for medical assistance. Cold compresses, changed before they grow warm, will help to check the hæmorrhage temporarily; but for this purpose it is of the greatest importance to lie quiet. Should abortion take place, and skilled assistance be unobtainable, absolute quiet, complete rest, and cleanliness are the most important points. Unless a woman treat herself as carefully after an abortion or a miscarriage as she would after a confinement, she runs not only grave immediate danger, but also risks chronic invalidism later. Intentional abortion, except when judged necessary by medical men in consultation, and performed by them with the care necessary for any surgical operation, is not only always criminal, but often proves suicidal. In law, procuring, or attempting to procure, abortion, whether by the woman herself or by another, is in England a felony, and in Scotland a crime, punishable by penal servitude for life, or by imprisonment. If the woman dies, or if the child is born alive but dies because of premature birth or the means used, it is murder. In England, to supply any poison or instrument, knowing that it is intended to be used to procure abortion, is a misdemeanour punishable by penal servitude not exceeding five years, or by imprisonment. See PREGNANCY, HÆMORRHAGE IN.

Aboukir, or ABUKIR (anc. *Kanobos*), vil., Aboukir Bay,

Egypt, 13 m. N.E. of Alexandria. Aboukir Bay, 16 m. wide, was the scene of the Battle of the Nile (Aug. 1, 1798), in which Nelson defeated the French. At Aboukir, Bonaparte, with 6,000 men, defeated an army of 18,000 Turks (July 25, 1799); and there Sir Ralph Abercromby landed in face of the French, whom he defeated (March 8, 1801), and compelled them to quit Egypt. In the vicinity are many ancient remains.

Abousambul. See IPSAMBUL.

About, EDMOND FRANÇOIS VALENTIN (1828-85), French novelist and dramatist, born at Dieuze, Lorraine; devoted himself to fiction and journalism, and produced *La Grèce contemporaine* (1854), the first of a long list of works. In the Franco-German war he accompanied Macmahon's army as special correspondent of the *Soir*; he was editor of the *XIX^e Siècle* from 1875, which he founded with Sarcey; and was elected a member of the Academy (1884), but died (in Paris) before his reception. His fame rests principally upon his novels, such as *Roman d'un Brave Homme* (1880; Lond. 1880); *Le Nez d'un Notaire* (1862; Lond. 1882); *Le Roi des Montagnes* (1856); *Madelon* (1863); *L'Homme à l'Oreille Cassée* (1862); *Trente et Quarante* (1865), all of which have been translated into English.

Abra, rugged, volcanic prov., Luzon, Philippine Is. (area, 3,280 sq. m.; pop. 49,000); watered by river of same name.

Abracadabra, a cabalistic word used by the Gnostics and others of the second century and later as a spell to secure the assistance of good spirits against evil; supposed, when written in the form of a triangle and worn round the neck for nine days, to act as a charm against fevers, etc. First occurs in a poem by Sammonicus, second century.

Abraham. The account of Abraham given in Gen. 11:31 ff. is less a connected biography than a series of tableaux. As Abram, the son of Terah, he comes before us a noble figure, great in moral and religious attributes, as also in material possessions. A native of Ur of the Chaldees (in Mesopotamia, or, less likely, Uru, now Mugheir, in Babylonia), married to his half-sister Sarai, he migrates to Haran in Upper Mesopotamia; thence, in obedience to a divine command, to Canaan, which land is thereupon promised to his seed (Gen. 12:1-6). Thenceforward he lives the life of a nomad chief, wandering mainly in the districts around Shechem, Beth-el, and Hebron. While sojourning in Egypt, he imperils Sarai's honour by misrepresenting her as only his sister (*cf.* the similar action in Gerar, Gen. 20:1-11); but he shows true self-denial in giving the choice of pasture land to his nephew Lot, and true courage in his successful attack upon the victorious Chedorlaomer, while the tenderness of his nature is evinced in his unwillingness to expel Hagar and Ishmael from his tent at Sarai's instigation, and in his pathetic intercession on behalf of Sodom. The promises grow ever in splendour: Jehovah makes a covenant with him, ordaining the rite of circumcision, and changing his name from Abram to Abraham (and Sarai's to Sarah), as the credentials thereof; heavenly messengers are commissioned to visit him, and his prayers have power on high (Gen. 17, 18). At length Isaac is born, and the crowning expression of Abraham's faith is given in his willingness to obey God even to the extent of offering up the son of promise as a sacrifice (Gen. 21, 22). After Sarah's death Abraham marries Keturah, and has six sons by her; and at last, at the age of 175, he is laid to rest beside Sarah in the cave of Mach-

pelah (Gen. 25:1-10). No quite satisfactory explanation has been given of the names Abram, Abraham, or Sarai, Sarah. The patriarch plays a great rôle in later Judaism, as also in the New Testament; many remarkable legends have gathered round his name; and to the Arabs he is, as Ibrahim, the first and greatest Moslem. On the more debatable or extra-biblical points, the commentaries (e.g. Dillmann's *Genesis*, trans. by Stevenson, 1897) and the recent Bible dictionaries (e.g. Hastings's; and Cheyne's *Encyc. Bib.*) may be consulted with advantage. For Assyrian relations, see Tomkins's *Studies on the Times of Abraham*; for Abraham's place in Biblical history and theology, see Schultz's *O.T. Theology* (trans. by Paterson, 1892), and Kittel's *History of the Hebrews*, i. (trans. by Taylor, 1895).

Abraham, HEIGHTS OF, or PLAINS OF, S.W. of Quebec, along the St. Lawrence, the scene of the battle between Wolfe and Montcalm (Sept. 13, 1759), which added Canada to the British empire. In 1908 the Plains were made a Canadian National Park.

Abraham - a - Santa Clara—family name, ULRICH MEGERLE—(1644-1709), a great pulpit orator of the Roman Catholic Church; born near Messkirch in Baden; joined the Barefooted Augustinians (1662); court preacher (1677); from 1682-9 worked at Graz, but spent the rest of his life at Vienna. His style was fearless, humorous, and racy. The sermon, *Up, up, ye Christians!* (1683), against the Turkish menace, was used by Schiller in *Wallenstein's Lager*. His most typical book is *Judas der Ertz-Schelm* (1686-95). See also *Sämmtliche Werke* (21 vols. 1835-50); also Sexto's *Abraham-a-Santa-Clara* (1896).

Abrahamites, a Syrian sect of the Paulicians in the 9th century who denied the divinity of Christ. Also applied to a deistic sect in

Bohemia in the 18th century, who professed to be followers of Huss: they were expelled from Bohemia in 1783.

Abraham - men, a cant term, current 1573-1824, signifying half-naked vagabonds. One of the wards in Bedlam was named after Abraham, in allusion probably to Luke 16:22, and was devoted to mendicant lunatics, who wore a special badge, and were permitted to wander about the country begging. Hence the term 'Abram cove,' and the phrase 'to sham Abraham;' though the latter is also used in reference to forging bank notes, in allusion to Abraham Newland (d. 1807), cashier of the Bank of England. See *King Lear*, ii. 3, and Dekker's *Bellman of London* (1608; ed. Grosart, 1885).

Abraham's Bosom, a term applied by the Jews to the abode of the righteous after death. As a metaphor, it is borrowed from the custom of reclining at meals, the head of each guest leaning towards the breast of his left-hand neighbour; to be next the host was to lie in his bosom—i.e. to occupy the place of distinction. By some it is supposed that Abraham's bosom—otherwise the Garden of Eden and Paradise—denoted one of the compartments of the intermediate state in which all must sojourn for a time before entering the abode of final weal or woe. It is certain that the Jews of our Lord's time believed in an intermediate state with two localities; but it seems to be questionable whether the term 'Abraham's bosom' was then used of the intermediate resting-place of the righteous, and not rather of the higher paradise or heaven itself. The latter would seem the more probable, from the fact that in the only scriptural passage in which the phrase occurs (Luke 16:22 f.) its correlative Hades is plainly the place of

torment. See Salmond's *Chris. Doctrine of Immortality* (1895).

Abranchiata, vertebrates which breathe throughout life only by lungs, never by gills.

Abrantes, tn., prov. Estremadura, Portugal, on the Tagus, 88 m. N.E. of Lisbon. Strongly fortified. Trade in grain, olive oil, wine, and fruit. Pop. 7,500.

Abrasives, minerals used to put an edge on cutting instruments, or to polish metallic or other surfaces. They include burrstones, millstones, corundum, emery, garnet, grindstones, pulpstone, infusorial earth, tripoli, oilstones and whetstones, quartz, carborundum, and crushed steel.

Abravanel, or ABARBANEL, a family of Spanish Jews tracing its descent from the royal house of David. (1.) ISAAC BEN JEHUDA (1437-1508), minister of state to King Alfonso v. of Portugal, and from 1483 to 1492 chancellor to Ferdinand the Catholic, king of Castile; subsequently lived at Naples, in Corfu, and at Venice. He was distinguished for his high intellectual and moral qualities; author of a number of philosophical and exegetical treatises, his *chef-d'œuvre* being probably his exposition of the Messianic belief among the Jews in his Spring of Salvation, Salvation of his Anointed, and Herald of Salvation. See Carmoly's *Biographie d'Isaac Abravanel* (1857). (2.) LEO HEBRÆUS, physician at the court of Gonsalvo de Cordova, and friend of Pico de Mirandola. His principal work is the *Dialoghi di Amore* (written 1502; published 1535). In philosophy he was an eclectic, trying to combine Plato, Aristotle, and the Arabic philosophy into a harmonious system. See Zimmels's *Leo Hebræus* (1886).

Abraxas, a mystic word of Eastern origin, thought by the Gnostic Basilidians to signify the 365 spiritual orders of the divine manifestation, because in Greek

notation the equivalents of its letters yield that number. This sect, and later theosophists, cut the holy name on gems (abraxas stones), together with monstrous figures—*e.g.* a man with a cock's head and serpentine limbs. See King, *The Gnostics and their Remains* (2nd ed. 1887).

Abridgment and Abbreviation of Books, the reproduction of a book or other literary work in a shorter form, retaining the general scheme and arrangement, and the sequence of ideas. In early literary history an abridgment was recognized as a lawful use of another's book; but an abridgment, in the ordinary sense of the word, would now be held to be an infringement of copyright. Since *Gyles v. Wilcox* (1740), however, it has been accepted in various cases that a fair abridgment is allowed. In *Dodsley v. Kinnersley* (1761) the court went so far as to admit as a fair abridgment a magazine article containing about one-tenth of Dr. Johnson's *Rasselas*. A case of unfair abridgment of one of Dickens's Christmas Stories in 1844 was decided in favour of the plaintiff.

Abrogation, in English law, the repeal by a higher authority of an enactment by a lower; in ecclesiastical law, the annulling of any previous law. See REPEAL.

Abrus Precatorius (Gr. *habros*, 'elegant'), wild liquorice, a leguminous plant having seeds like small peas, of a scarlet colour, with a black patch at the end. These are used in India as weights (*rati*), and are strung together to form rosaries, whence their name 'prayer-beads.' They are said to have given origin to the carat, the jeweller's unit of weight.

Abruzzi, PRINCE LUIGI, DUKE OF THE (1873), geographer and mountaineer, third son of Amadeo, Duke of Aosta, and cousin of the king of Italy. He ascended Mount St. Elias, in Alaska, July 31, 1897,

when he determined its altitude and geological origin. His large and well-equipped Arctic expedition (1899-1900) reached latitude $86^{\circ} 33' N$. In 1906 he reached the summit of Ruwenzori in equatorial Africa, and conducted an expedition to the Karakoram Range of N.W. India in 1909. While there he reached the highest altitude yet attained by a mountaineer (some 25,000 ft.). See Filippi's *Ascent of Mt. St. Elias* (1900; Eng. trans.); *On the 'Polar Star' in the Arctic Sea* (1903; Eng. trans.); *Ruwenzori* (1908).

Abruzzi and Molise, territorial div. (compartimento) of Central Italy, occupies the half of the peninsula on the Adriatic side, to the E. of the province of Rome. It is traversed by the two main ranges of the Central Apennines. Forestry and pasturage are the chief occupations: cereals and wine are produced in the fertile lower valleys; saffron in Aquila. Asphalt is found in Chieti. Area, 6,380 sq. m. Pop. 1,500,000. The territory embraces the provinces of Aquila, Chieti, Teramo, and Campobasso—the last-named corresponding to Molise, and the first three to the Abruzzi.

Absalom, King David's third son, born at Hebron. Because of his personal charms, Absalom became a universal favourite, and his ambition made him a danger to the realm. Though forgiven by his father for the murder of his half-brother Amnon, he stirred up sedition, and raised a formidable insurgent force. His army was routed by the royal troops in the wood of Ephraim, and Absalom, fleeing upon a mule, was caught by the head in a tree, and killed by Joab, to the great sorrow of the king. See 2 Sam. 13-18.

Absalom and Achitophel, Dryden's greatest political satire, published (first part, 1681) on introduction of the Exclusion Bill.

It is an allegory of the history of King David, thinly veiling the real theme—the attempt by the court party, led by Shaftesbury (Achitophel), to secure the succession of the Duke of Monmouth (Absalom), Charles's illegitimate son. For a full criticism, see Ward's *English Poets* (1881-2).

Absalon, or AXEL, archbishop of Lund (1128-1201), born in Sjælland, Denmark. From 1157 onwards he energetically assisted King Valdemar to reconstruct the Danish state; took an active part in the struggle with the heathen Wends; and became successively bishop of Roskilde and archbishop of Lund (1178). After Valdemar's death (1182) Absalon's influence became still stronger, and he was of essential service to young King Canute in his successful struggle with Bogislav of Pomerania (1184). Absalon was of the best type of the mediæval warrior-priests, one of the greatest of Danish statesmen, yet pious and conscientious. A scholar himself, he supplied his clerk, Saxo Grammaticus, with the materials for his great history. See Estrup's *Absalon som Helt, Statsmand og Biskop* (1826).

Abscess, a collection of pus resulting from inflammation. It may be superficial or deep in situation, and of an acute or chronic nature. Acute abscess is usually accompanied by fever; chronic abscess may run an afebrile course, and is usually tuberculous in origin. It may be recognised by the feeling of 'fluctuation,' as of a sac containing liquid when the fingers are pressed over it. Treatment consists in evacuating the abscess, letting out the pus, and removing so far as possible the wall of the abscess. If the wound is deep the abscess is drained by a tube, which is left in until the pus formation has ceased. Vaccine therapy is also employed.

Absciss Layer, a layer of cork formed in autumn between the

base of the leaf and the stem in many deciduous trees. It divides across the middle, and causes the fall of the leaf, half of the cork remaining on the stem to cover the leaf-scar.

Absconce, a shaded lantern used in churches to light the lectern during the reading of absolution and matins.

Absentee, one who receives the profits of an estate or office without residing on the estate or performing the duties of the office. The practice has undoubted disadvantages for the country, but its precise economic effect is debated. The chief evils in the case of absentee landlords are probably the loss to the district of the benefits of personal expenditure and educational influence, and of the assistance which a leisured and wealthy class can render to its poorer neighbours, and the increased scope for the harsh methods of the middleman. Absenteeism of this kind has long been a sore grievance of the Irish people, and acts have been passed to check it, as 3 Rich. II. and 28 Hen. VIII., which taxed absentees at two-thirds of their net income. A tax of one-fifth was levied in Ireland on the incomes of absentees (1715-53); and a renewal of this legislation has been proposed more recently, but not carried into effect. See Senior's *Lect. on the Rate of Wages* (Lect. 2), and *Polit. Econ.*; Swift's *Drapier Letters*, No. 7; Arthur Young's *Tour in Ireland* (1780); Adam Smith's *Wealth of Nations*, v. 2; Brodrick's *Eng. Land and Landlords*; M'Culloch's treatises and essays on Money, etc.; Mill's *Unsettled Questions* (Essay 1), and *Polit. Econ.*; Miss Edgeworth's *Absentee*.

Absey Book (lit. A B C book), a primer for teaching the elements of reading; it sometimes included a catechism also. The term is used by Shakespeare in *King John*, i. 1. It is now obsolete.

Absinthe, a liquor made by distillation, containing alcohol and a number of essential oils, the chief among the latter being the oil of wormwood, to which the deleterious properties of the liquid are in great measure due. The green colour of absinthe should be due to chlorophyll, which is usually introduced by the maceration of the liquor with spinach or parsley; but various artificial colouring matters—*e.g.* indigo, turmeric, or copper sulphate—are frequently employed. The average composition of absinthe, according to Wynter Blyth, is as follows:—Alcohol, 50·00; oil of wormwood, 0·33; other essential oils, 2·52; sugar, 1·5; chlorophyll, traces; water, 45·65. The essential oil—derived from the wormwood—combined with the spirit, produces rapid intoxication. Absinthe is principally made and consumed in France and Switzerland (especially in Neuchâtel), and in some parts of the United States. The 'absinthe hour' in Paris means from 4 to 6 p.m. Absinthe was first introduced as a febrifuge in the Algerian army (1844), but is now prohibited in the French service. Absinthism, caused by excess in absinthe, is common in France. The symptoms are distinct from those of alcoholic poisoning. Absinthe seems to act directly through the higher nerve-centres, nervous symptoms being the most prominent throughout, appearing first in the forms of excitation, hallucinations, and terrifying dreams, and ending in delirium or idiocy. See ALCOHOLISM.

Absolute, that which is freed from relation, limitation, or dependence. As an adjective it is therefore applied (1) to the essence of a thing apart from its relations or appearances, and (2) to the complete or perfect state of being. Hence comes its substantival meaning of 'The Absolute' as the self-existent, self-sufficient Being,

that which is free from all limitation, the all-inclusive Reality. The absolute in one form or another forms a central feature in the philosophical systems of Spinoza, Schelling, and Hegel. The absolute was made a theme of discussion in British philosophy by Sir Wm. Hamilton, whose denial of the possibility of knowing the absolute gave rise to much controversy. For a view of the discussions which centre round the conception at the present time, see F. H. Bradley's *Appearance and Reality* (1893), with the criticism of it in A. S. Pringle-Pattison's *Man's Place in the Cosmos*.

In its general sense, *absolute* is opposed to *relative*: thus, in physics, in speaking of the motion of one body through space, we refer to its *absolute* velocity; in comparing the motion of two or more bodies, we speak of their *relative* velocity. In music, absolute is used to denote the definite pitch of a musical note, which does not vary with the pitch to which an instrument may have been tuned, but depends on a definite number of sound vibrations per second. For absolute monarchy, see ABSOLUTISM. For absolute alcohol, see ALCOHOL. For absolute zero of temperature, see TEMPERATURE.

Absolute Disposition, in Scots law, a conveyance, usually of heritable property, unqualified by any burden or reservation in favour of the disponent or of any other party.

Absolution is the remission of sin, or of certain consequences of sin, in virtue of power committed by Christ to His church. The claim to this power is usually based on Matt. 18:18 and John 20:19-23. In the former of these passages Christ empowers the church to enact conditions of fellowship—what it binds (*i.e.* forbids) or looses (*i.e.* pronounces lawful) on earth shall be bound

or loosed in heaven. The second passage goes further. There the risen Christ confers, not merely on His apostles, but upon all His disciples (*cf.* Luke 24:33), the Holy Ghost; and then, having thus endowed them with spiritual discernment, He gives them authority to remit or retain sin (*i.e.* to declare the true conditions of forgiveness). From the latter part of the 2nd century the church specially exercised the power in the case of persons excluded from its communion because of notorious and enormous sins—*viz.* murder, adultery, robbery, and apostasy from the Christian faith. Such persons were subjected to long and severe penance, but might be absolved by the bishop, who restored them to the church by imposition of hands and prayer. Great changes occurred in the custom of confession. The list of mortal or capital sins was extended; secret sins were secretly confessed; the penitent confessed sins of thought to the priest, after the example of the monks, who confessed such sins to their superior, though he, as a rule, was not a priest. But down to the 13th century absolution was simply a petition for the forgiveness of the penitent. Such is at this day the only form used in the Eastern Churches. The doctors of the church regarded the priestly absolution as declaratory, like the absolution in the daily service; or precatory, like that in the Anglican communion office. Largely under the influence of a treatise falsely ascribed to St. Augustine, the view obtained that God forgives through the priest, and the modern form, 'I absolve thee from thy sins,' was introduced. Absolution was now regarded as the one appointed means for remission of mortal sin after baptism. In the Roman Catholic Church absolution from sin can be given only by a priest empowered to do so

by his bishop or by the Pope. Absolution from the censures of the church may be given by any cleric authorized to do so. The word absolution is also used of certain prayers said over a corpse before it is taken from the church to the cemetery. See Freiburg's *Kirchen-Lexikon*, s.v. 'Absolution.'

Absolution, DAY OF. In the early church public absolutions were pronounced on Good Friday, or on the previous day, Thursday, on which our Lord was betrayed. So St. Ambrose (*Ep.* xxxiii., *Ad Marcel. Sororem*) says that 'the day on which the Lord gave Himself for us was that on which penances are remitted in the church.' In the Roman Catholic Church, in the time of Pope Innocent (Innocent, *Ep.* i., *Ad Decent.* c. vii.), penitents were absolved only on the Thursday before Good Friday, unless great urgency, such as imminent death, required otherwise. The Emperor Valentinian introduced (A.D. 367) the practice of civil absolution at the Paschal festival, granting pardon to criminals. Mention is made of this in the Theodosian Code (lib. ix., tit. xxxviii., *De Indulgentiis Criminum*, leg. iii. iv. *et seq.*). The monks who pleaded for Eutyches at the second Council of Ephesus evidently refer to both the ecclesiastical and civil customs in the granting of absolutions.

Absolutism, the term applied to that type of rule wherein the sovereign is not under constitutional check. Yet even the 'absolute' monarch or autocrat—a Czar—has checks: the instruments of his rule may be inefficient, and there are limits to the endurance and obedience of subjects. The 'enlightened despotisms' of the 18th century in Europe—those of Frederick II., of Joseph II., and of Catherine II.—were rooted in the maxims of benevolent monarchy, and had for their object strength and contentment at

home, so that there might be national power and success abroad. The absolutism of rulers, with active officials, in the middle ages and in modern history, has its analogy to-day in the demand for the concentration of the agencies and efforts of the state, and for the extension of its sphere: the conditions have changed, but the end is the same—efficiency. See GOVERNMENT; SOVEREIGNTY.

Absolutists, a name given to a Spanish political party which in 1819 wished to abrogate the constitution of 1812, and to restore the absolute power of the throne. Their opponents—the Exaltados—favoured the constitution which was afterwards abrogated (in 1814). Later on the Absolutists formed the Carlist party, while the Exaltados were Liberals, and supported Queen Isabel. See *Cambridge Modern History X.*, 7 (1907).

Absolvitor, DECREE OF, in Scots law, decree in favour of the defendant.

Absorption. Absorption of gases by liquids depends on the pressure, the temperature, and the nature of the particular gas and liquid. If the temperature remains constant and the pressure is altered, the amount of gas absorbed is directly proportional to the pressure (Henry's law): thus one volume of water at 15.5° c., and under ordinary atmospheric pressure, takes up one volume of carbon dioxide; whilst under a pressure of two atmospheres it absorbs an equal volume at that pressure, but, in accordance with Boyle's law, twice as great a mass of the gas. In the case of mixed gases, Dalton discovered that the quantity of each gas dissolved was such as if the others were absent, the pressure of each component being that which would obtain if it were spread over the whole volume. The volume of a gas dissolved diminishes with the temperature. Thus at 0° c. one

volume of water absorbs 1·8 volumes carbon dioxide; at 20° c. half that amount; whilst, on boiling, this gas is entirely expelled. The coefficients of absorption of some common gases are as follows: one volume of water at 15·5° c. absorbs ·015 volume of nitrogen, ·03 of oxygen, 3·25 of hydrogen sulphide, 450 of hydrogen chloride, and 727 of ammonia. Many solid bodies also absorb gases: thus iron and platinum take up hydrogen, palladium absorbs 936 times its volume of the same gas, and wood charcoal will condense 90 volumes of ammonia. In such cases the gas may be 'occluded,' and form a solid solution; or 'absorbed,' when it is likely held by an effect of surface tension; or it may even enter into chemical union.

Absorption in plants can only take place when the substance to be absorbed has been changed into the liquid form of solution; for all food has to pass through the actual cell-walls by a process of osmosis. In the case of the higher plants, the greater part of the water and dissolved substances which enter the plant do so by way of the roots, the root-hairs and the uncuticularized epidermal cells of the younger roots being the actual absorbing parts. In the case of ordinary terrestrial plants, the roots penetrate among the minute air-spaces between the small particles of solid earth. Each of these particles is covered with a layer of water adherent by attraction. This water is absorbed by the root-hairs, as also are any salts which it has in solution. Moreover, by force of capillary attraction, the water covering the neighbouring particles is continuously sucked in, as oil is sucked up by the wick of a lamp. In the case of plants with aerial roots, moisture drops or is deposited on the roots, and is absorbed together with the dissolved dust previously

deposited on the roots' external surface. Parasitic plants, again, send their roots into the substance of another plant, and thence derive both their water and dissolved food. But plants do not absorb all the soluble matter brought into contact with their roots. They exercise a selective power; and plants of a given species absorb definite foods approximately in a definite proportion only. The principal elements required by plants are carbon (see AERATION), nitrogen (in the form of nitrates), hydrogen and oxygen (in the form of water); oxygen also in the form of mineral salts (also in aeration), sulphur (as sulphates), phosphorus (as phosphates), silicon (as silica), chlorine (as chlorides), potassium, calcium, magnesium, and iron.

Absorption of light occurs whenever light falls upon a material surface and suffers refraction and reflection. Neither of these phenomena could be produced unless the light penetrated some distance into the substance. The vibrations in ether which constitute light act upon the particles of the substance and set them in motion, which is partly irregular, and produces heat. This involves an expenditure of energy, and hence the light loses part of its original energy; and this we call absorption. Opaque bodies absorb more light than transparent bodies; and yet it is the very opaque bodies like metals, which absorb a great proportion of the light falling upon their surfaces, which also behave as good reflectors. That great absorptive power should, in certain cases, be accompanied by great reflective power is not so paradoxical as it might seem at first glance to be. For absorption implies a taking in of vibratory energy from the disturbed ether; and the molecules being then set into vibration, may well become centres from which energy, in the form of light, may pass back again into the ether.

Most substances exert a general absorption, so that all kinds of radiation suffer diminution in passing through them; but they also exert a selective absorption, certain rays being more freely absorbed than others. It is this selective absorption which gives rise to the varied tints and colours of bodies, the colour of any body being determined by the excess of the corresponding kind of light in the radiations sent back from it or transmitted through it. A great law, first recognized in some of its applications by Prevost, and established independently by Balfour Stewart in Britain, and by Kirchhoff and Bunsen in Germany, asserts that a substance absorbs what it radiates, and the emissive and absorptive powers of any substance for each kind of ray are equal. The phenomena of fluorescence form an exception to this so-called law of exchanges. Some of the most striking instances of the law will be found discussed under SPECTRUM. See also DISPERSION.

Absorption Lines and Bands, dark lines or bands in an otherwise continuous spectrum, produced when the light so examined passes through a vapour or other transparent body of lower temperature than that of the incandescent body. Every vapour, under these conditions, absorbs those rays which it would emit if it were the source instead of the absorber of light.

Abstemii, a name formerly given to those who refused to partake of the cup of the Eucharist because of their aversion to wine. Calvinists considered that such persons might be permitted merely to touch the cup; this the Lutherans strenuously opposed. The controversy has recently been revived in regard to the use of unfermented wine.

Abstract and Abstraction. An abstract term or idea, in the

logical sense, is one which expresses a quality or essence regarded apart from the individuals or particular objects of which it may be predicated—*e.g.* colour, man, wisdom. (See NOMINALISM.) Abstraction is the selective process by which such ideas are formed: for example, in forming the abstract idea of Man, the particular differences which distinguish one man from another are disregarded, and only the qualities common to all men, or those that belong to man as such, are retained. Abstraction in this sense is one aspect of generalization. The terms abstract and abstraction are also used in a depreciatory sense to signify a partial or limited view of a thing, in which the thing, being more or less isolated from its proper context or surroundings, is therefore imperfectly understood. But thinking may involve abstraction in the former sense, without being abstract in the latter—*i.e.* it may abstract from what is trivial, to fasten upon what is real and essential.

Abstract of Title, in English law, a short statement of the material parts of the deeds, wills, and other instruments, and of events, such as deaths, marriages, etc., under and by means of which a vendor or mortgagor makes out his title to the property to be sold or mortgaged. When an agreement has been made for the sale or mortgage of real or leasehold property, the purchaser or mortgagee has an implied right to an abstract of the title. It is usually prepared by the vendor's solicitor, and submitted to the purchaser's solicitor for perusal. See Dart's *Vendors and Purchasers*, vol. i. ch. viii.

Absurdum, REDUCTIO AD. See REDUCTIO.

Abt, FRANZ (1819–85), musical composer, born at Eilenburg, Prussia; was *Kapellmeister* at Zürich (from 1841) and at the Hof

Theater, Brunswick (from 1852). He wrote many pleasing songs, and part-songs for men's voices.

Abu is much used in Arabic in the formation of personal and topographical names. The common view is that 'paternity' is the primary meaning; but see W. Robertson Smith's *Kinship and Marriage in Early Arabia* (1885) for a discussion which assigns 'possession' as the primary and 'paternity' as the secondary meaning.

Abu, MOUNT, in s.w. of Rajasthan, India, and close to the Gujarat border; highest peak, 5,650 ft. above sea-level. Mount Abu possesses a beautiful lake, called the Nakhi Talao ('Gem Lake'), $1\frac{1}{2}$ m. by $\frac{1}{4}$ m., about 4,000 ft. above the sea; also temples of white marble and the most elegant and striking specimens of Jain religious architecture. It is a sanatorium for Europeans. See Fergusson's *Hist. of Ind. Architecture* (1876), and Candler's *Mantle of the East* (1910).

Abu-Abdallah. See AL-BATTANI and BOABDIL.

Abu-Bekr ('father of the maiden') (573-634) received this name in allusion to his daughter Ayesha, the only maiden among the wives whom Mohammed married. A man of wealth and position among the Koreish, as well as a native of Mecca, he was one of the first to believe in the prophet, and was his sole companion in the Hejira; and on the death of Mohammed (June 8, 632) was elected head of the Moslems, with the title of Caliph (*khalifa*, 'successor'). He reigned two years.

Abu-Hamid, tn., Egyptian Sudan, on the Nile, 200 m. s. of Wady Halfa, where the caravan highway from Berber crosses the Bishari Desert (240 m.) to Korosko. It was taken from the Mahdists (Aug. 7, 1897).

Abu-Klea, wells on the caravan highway across the Bayuda Desert, between Korti and Me-

tammah, from which it is 25 m. distant. Here Sir H. Stewart defeated the Mahdists (Jan. 17, 1885).

Abulfaraj (Lat. *Abulfaragius*), MAR GREGORY JOHN (1226-86), called by the Syrians Bar 'Ebh-raya, 'the son of the Hebrew,' but commonly known by his Latinized surname BAR-HEBRÆUS, was born at Malatia, in Armenia. After studying Greek, Arabic, and Syriac, he devoted himself to philosophy, divinity, and medicine, completing his studies at Antioch, where he began his monastic life. Ordained bishop of Gubos, near Malatia, Sept. 4, 1246, he was successively bishop of Lakabhin and of Aleppo, and was *maphrian*, or primate, of Taghrith and the East from 1264 until his death at Maragha. He was 'one of the most learned and versatile men that Syria ever produced' (Wright). Of his many works, the most celebrated is the *Chronicum Syriacum*, or Universal History. See Assemani's *Bibl. Orientalis* (1719-25); Gibbon's *Decline and Fall*; Badger's *The Nestorians* (1852)—i., p. 97, for epitaph; Renan's *De Philos. Peripat. apud Syros* (1852); Noeldeke's *Sketches from E. Hist.* (1892); Wright's *Syriac Lit.* (1894); and Budge's *Laughable Stories of Bar-Hebræus* (1896).

Abulfeda (1273-1331), born at Damascus; early achieved distinction in the field (against crusaders and Mongols) and by his pen. He was sultan of Hamah, but a vassal of the Mameluke sultan of Egypt, from 1310 till his death. Of his many works the most celebrated are: a *Universal History* down to his own day, and a *Geography*. The History has been edited (with Lat. trans.) by Reiske, *Annales Moslemici* (5 vols. 1789-94), and by Fleischer, *Hist. Anteislamica* (1831). The Geography has been edited by Reinaud and De Slane (1840), and trans. into French by Reinaud and Guyard (1848-83).

Abul Ghazi Bahadur (1605-63) gave up the khanate of Khiva in favour of his son, and devoted himself to writing a history of the dynasty of Jenghiz Khan, since translated into German and French (by Desmaisons, 2 vols. 1871-4).

Abulug, tn., prov. Cagaya, Luzon, Philippine Is., in a rich valley. Pop. 8,500.

Abu-Nuvas (762-810), lyric and Bacchic poet, born at Al-Ahwaz, in Susiana. His mother was a Persian washerwoman employed in a fuller's yard. Educated at Bassora by the poet Waliba and by Abu-'Ubaida; spent a year in the desert to acquire the Bedouin tongue; at Bagdad was a favourite of the Caliphs Haroun and Amin. Composed elegies, humorous verse, satires, etc., and, in later life, religious poems.

Aburi, tn., W. Africa, in the British colony of Gold Coast, 20 m. N.E. of Accra; botanical station; sanatorium; alt. 1,400 ft.

Abuse of Distress is any irregularity in making a distress—*e.g.* using a distrained animal or chattel. The user is liable to an action for damages.

Abuse of Process. Every court of justice has an inherent power to protect itself from the abuse of its own procedure, by staying a manifestly vexatious suit (*Metropolitan Bank v. Pooley*, 10 App. Cas. 210, p. 214). Order xxv. rule 4 of the Rules of the Supreme Court extends this inherent power in England by enabling the court to order any pleading to be struck out which discloses no reasonable cause of action or answer, and to dismiss an action appearing by the pleadings to be frivolous or vexatious. Where any person habitually and persistently institutes legal proceedings without any reasonable grounds, the court has power, on the application of the attorney-general, to make an order, under the Vexatious Actions Act, 1896, that no legal

proceedings be instituted by that person without the leave of the court. If criminal or bankruptcy proceedings be taken against any one maliciously and without reasonable cause, he has by the common law a right of action for damages.

Abu-Simbel. See IPSAMBUL.

Abu-Thubi, tn., Arabia, on an isl. in the Persian G., w. of Oman, principal town of the Banu Yas. It sends 600 boats to the pearl banks. Pop. 20,000.

Abu-Tig, or ABUTIGE, tn., Upper Egypt, on the Nile, 13 m. S.E. of Siut. Pop. 11,000.

Abutilon, a genus of shrubs belonging to the order Malvaceæ. They are easily grown in a light peaty loam. In most parts of Britain they may be grown out of doors from May to September. Even when grown all the year under glass, it is desirable to give them plenty of root space. Young plants should be propagated for pot work each spring. Take off the tips of growing shoots about four inches long, insert them singly in three-inch pots in light, sandy soil, and put them under a handlight in a warm house or on a hotbed, keeping them shaded from bright sunshine for about a fortnight. Remove them to the greenhouse, and pot in good soil, transferring them from time to time into larger pots.

Abyad, or ABIAD (Ar.), white, the feminine of which is *baida*, *beida*, or *beda*: Bahr-el-Abiad, White Nile.

Abydos, ancient city, Upper Egypt, near the modern Arabat-el-Madfuneh, on l. bk. of the Nile. During the 19th dynasty it was a place of great commercial importance; later it declined, and in early Christian times was in ruins. Here was the most famous tomb of Osiris; the tombs of the oldest dynasties of the Egyptian kings; ruins of the temple built by

Seti I., and dedicated to a number of deities—called by Strabo the Memnonium; and the fragments of another temple, built by Rameses II. From very early times Abydos was the seat of a famous oracle of the god Bes. See Flinders Petrie's *Royal Tombs of the Earliest Dynasties* (1900-1) and *Abydos* (1902-3); Mariette's *Abydos* (1869-80); MacIver and Mace's *El Amrah and Abydos, 1900-1* (1903).

Abydos, ancient tn. near Kale-i-Sultaniye, Asia Minor, on the Hellespont (Dardanelles), here less than one mile wide, opposite to ancient Sestos. Here Xerxes crossed (480 B.C.) by a bridge of boats. The place is associated with the tradition of Hero and Leander.

Abyla. See CEUTA and HERCULES, PILLARS OF.

Abyssal Life. One of the most interesting discoveries of the last half of the 19th century was the fact that the ocean has an abundant population down to its greatest depths, and is not, as was once supposed, inhabited only in its upper strata and in shallow water. The *Challenger* expedition not only proved that the great abysses of the ocean support an abundant and varied population, but also showed that all the large groups of marine animals are represented there, and that the fauna is not, as was expected by some, of a primitive type. Once the existence of abyssal animals was demonstrated, it was confidently believed that research would show the existence of 'living fossils'—*i.e.* of representatives of the fauna of by-gone days. As a matter of fact, although types were discovered, especially among echinoderms, more nearly related to fossil than to existing forms, it is nevertheless true that the striking discoveries made were of much-modified and not of primitive forms. In other words, the deep-sea animals show clear

signs of having been derived from shallow-water or surface forms, and they do not shed any light on the origin of life in the sea. Further, as was only to be expected from the great uniformity of the physical conditions, deep-sea animals tend to be widely distributed, the temperature, pressure, and other conditions not being affected by geographical position. At great depths the water is exceedingly cold; the sun's light cannot penetrate; the pressure is enormous; above all, plants, the basal food-supply elsewhere, are here necessarily absent. It follows that the animals must all be carnivorous, and must ultimately depend upon the dead organisms which drop downwards from the surface waters. Again, the striking peculiarities of form are associated with the peculiar conditions under which the animals are found. Many deep-sea animals, especially fishes and crustaceans, are blind, while others have exceptionally large eyes, as though to catch the faint gleams of phosphorescent light. Correlated with the reduction or absence of eyes in abyssal fish, we have a great development of delicate tactile organs, these being often produced by the elongation of some of the fin-rays. Very many abyssal animals possess phosphorescent organs, though it is still uncertain whether the power of emitting light is commoner in deep-sea or in pelagic forms. A very striking characteristic of virtually all abyssal animals is the uniformity of the body colour. Though the colours are very diverse when a collection from one locality is studied, they are very uniform if the individuals themselves be considered. The crustaceans, for example, are often a bright uniform scarlet, a colour which also occurs among the corals. Among fish dark tints are prevalent. In short, the colours of deep-sea animals show no direct relation



Types of Abyssal or Deep-Sea Animals.

1. *Gastrostomus Bairdii*. 2. *Chiasmodon niger*. 3. *Cottus bathybius*. 4. *Bathyteuthis abyssicola*. 5. *Octopus pictus*. 6. *Ibaccus Verdi*. 7. *Thaumastocheles zalenca*.
(All half natural scale except No. 1, which is 20 inches long.)

to their surroundings. The bones of deep-sea fish and the shells of molluscs and crustaceans are usually deficient in salts of lime. The last volume of the *Challenger* monographs, entitled *Summary of Results*, gives a historical account of deep-sea dredging. See also 'The Deep Sea,' by Sir John Murray, *R.S.G.S. Mag.*, Dec. 1910.

Abyssinia (Amhar. *Habasha* or *Abasa*), or ETHIOPIA (Ethiop. and Amhar. *Ityopya*; Lat. *Æthiopia*), an empire of N.E. Africa. It is bounded on the N. and E. by Eritrea and Somaliland, on the S. by British East Africa, and on the S.W. and W. by the Uganda Protectorate and the Sudan. The whole area is about 200,000 sq. m., and the pop. is estimated at 9 to 11 millions.

Abyssinia consists chiefly of an elevated irregular table-land, with a general elevation of 6,500 ft., rising in parts to 8,000 and 10,000 ft., and in summits to 15,000 ft. This *massif* is divided by deep ravines into many subordinate table-lands, above which, as bases, rise several mountain chains and table-mountains. The predominant formations are gneiss and schist, basalt and trachyte; columnar basalt in Lasta, Amhara, and Shoa; limestone and marble in Geralta, Enderta, and Harar; sandstone, chiefly red, in Temben. The determining physical agency has been volcanic. The main slope in the N. is drained by the system of the Nile, to which belong the Atbara, Abai, and Sobat. In the S.E. are the systems of the Webi, Shebeli, and Juba. The largest lakes are Tsana or Tana, Margherita (Abala), and Abaya. The chief physical characteristics are the separate table-lands, the deep narrow valleys or ravines, and the table-mounts.

The climate is determined by altitude, according to which a native division recognizes three zones. These are, lowlands below

5,500–6,000 ft., uplands up to 7,500–8,200 ft., and highlands above 7,500–8,200 ft. There are two seasons—the rainy, which lasts from June to September, and the dry. The lowlands are unhealthy, hot, and humid. Their vegetable life is tropical, comprising sugar-cane, cotton, coffee, indigo, aloe, baobab, tamarind, banana, sycamore, fig, tamarisk, and acacia: the total loss of foliage during the dry season is characteristic. To the lands of moderate elevation belong the vine, myrtle, bamboo, oil palm, banana, wheat, teff, dagusa, tobacco, pomegranate, orange, lemon, olive, and peach. In the highlands, which are chiefly pastoral, wheat, barley, and oats are grown up to 12,000 ft., above which the vegetation is alpine. Animal life is represented in the lowlands by the elephant, rhinoceros, hippopotamus, zebra, giraffe, gazelle, and many birds, reptiles, and insects; in the highlands by the buffalo, antelope, lynx, hyæna, lion, and ibex. The minerals comprise iron, gold, coal, salt-petre, sulphur, copper and silver, rock-salt, and numerous mineral springs.

The dominant race is Semitic (Tigré or Agazi in the N. and Amhara in the S.). The Hamitic is the aboriginal race, and is represented in the N. by the Agau and Falasha; in the S. by the Oromo (or Galla), the Sidama, and Gonza; and in the E. by the Afar (or Danakil), Faltal, and Somali. The Negritic are known as Shankela or Shangalle. Others occur sporadically, as the Adone (Bantu), on the Shebeli, and the Wato (or Waito). Pigmies are met with S. of Kaffa and the Oromo, as in the Doko. The Habashi or Makadi slaves, prized in the Moslem East for their good looks and intelligence, are Galla or Sidama. The profession of arms is most esteemed; industry and trade are looked down upon. The court or

official language is Amharic, but Geez or Ethiopic is that of the church and literature; Tigrai is the language of the Tigré. The native industries are the weaving of cotton and woollen cloths, and the working of metals and leather. The chief exports are gold, civet, ivory, coffee, wax, and gum-arabic. Camels are used from the coast through the lowlands; mules, horses, ponies, and donkeys in the highlands. A railway (186 m.) has been built from Jibutil to near Harar; and in 1909 a new company was formed to extend it to Adis Abeba and the Nile. The unit of currency is the Maria-Theresa dollar (value about 2s.); but a new coinage has been put in circulation, with the Menelik dollar (2s.) for the standard coin. In 1905 a charter was granted to the National Bank of Egypt for the establishment of a State Bank of Abyssinia.

The government is a despotic monarchy. At its head is the emperor, whose full title is *Negusa Nagast za-Ityopya*, 'King of Kings of Ethiopia.' Next to him come the kings (*negus*) of the subordinate states, and the governors (*ras*) of the chief provinces. In November 1907 the Emperor Menelik issued a decree announcing the constitution of a cabinet on European lines. The army, estimated at 150,000, and well armed with modern weapons, is organized territorially, and consists of a paid standing army, which garrisons the several provinces, and of a militia in local levies. The national religion is Monophysite Christianity, but Judaism is found among the Agau or Falasha; Islam is the faith of the Afar, Somali, and most of the Galla. At the head of the Abyssinian Church is the *abuna* ('our father'), who is a Coptic monk nominated by the patriarch of Alexandria; the head of the monastic orders is the *echage*, who is an Abyssinian.

Education is slight; but in 1907 it was made compulsory for males; the Psalms of David are chiefly taught. The civilization of Abyssinia has been long retarded by isolation and anarchy, but there is now a national awakening to the civilized world.

According to the evidence of speech, the Abyssinians—*i.e.* the dominant Semitic race—are immigrants from S. Arabia, where to this day a cognate dialect quite distinct from Arabic is spoken. The Abyssinian empire dates from the 1st century B.C. or the 1st century A.D., when these colonists founded the kingdom of Aksum, or Axum, on the downfall of the empire of the Ptolemies. The chief events of this period were the introduction of Christianity (*c.* 330) by Frumentius; the introduction of monachism from Egypt (*c.* 480) by the 'nine saints;' the translation of the Bible into Geez; the invasion of Yemen by Kaleb in 522, at the request of the Emperor Justinian, to avenge and protect the Christians of Najran; and the defeat of the Abyssinians at Mecca in 570. After the 7th century the kingdom of Aksum declined, and came to an end about 925, when an insurrection of the Agau or Falasha led to a revolution. Then followed a dynasty, known as the Zague, which held sway till 1270; its most celebrated member was Lalibala (*c.* 1200), who threatened to deprive Egypt of the Atbara flood by diverting it into the Marab, and had the ten rock-hewn churches excavated at the capital of Lasta.

Modern history begins with Yekuno Amlak (1270–85), who had his capital at Taguelat in Shoa, and made Amharic the language of court and state. His successors, to the middle of the 16th century, were occupied in repelling the advance of Islam. The Moslem aggression culminated in the reign of Lebna Deugel (1508–40), when

the redoubtable Grañ, in a succession of campaigns, gained possession of nearly the whole of Abyssinia. In this extremity aid was sought from Portugal. But the saving of the state (1543) was at the cost of the church, which, along with the dynasty, has been the main cohesive strength of the nation. The Jesuits, who came with the Portuguese, were expelled by Fasilidas (1632-7). Abyssinia suffered heavily from the Galla or Oromo, who, at the end of the 18th century, gained possession of Amhara and the person of the sovereign. Shoa had become independent. Kasa, chief of Kuara, succeeded in making himself master of the whole of Abyssinia between 1852-5, when he was crowned as Theodore II. Neguse, who had seized Tigré during Theodore's campaign against the Galla and Shoa in 1855, and was recognized king of Abyssinia by the French, was taken prisoner and put to death in 1861. After Theodore's death (1868), on the taking of Magdala by Sir Robert Napier, Ras Kasa of Tigré succeeded against his rivals, Gobaze of Lasta and Menelik of Shoa, and was crowned at Aksum (1872) as Johannes, or John. He repelled the aggression of the Khedive by his defeat of the Egyptians at Gura (1876), but was killed in battle with the Mahdists at Galabat (1889), and Menelik II. of Shoa, aided by the Italians, was crowned at Antotto. Having denounced the Uchali treaty of May 2, 1889, he assumed his full sovereign position by the Adis Abeba convention with Italy, Oct. 26, 1896, dealing with Eritrea, after the Italian defeat at Adua, March 1, 1896; and concluded the Anglo-Abyssinian treaty, May 14, 1897. In 1902 the boundaries of Abyssinia, Eritrea, and the Sudan were agreed upon, and the southern frontiers settled by treaties in 1907 and 1908. See Fumagalli's *Bibliografia Etiopica* (1893), un-

critically compiled; and Mas-saja's *I miei 35 Anni* (1886-93); D'Abbadie's *Géodésie* (1860-73), and *Géographie* (1890); Borelli's *Ethiopie Méridionale* (1890); Sape-to's *Etiopia* (1890); Portal's *My Mission* (1892); Munzenberger's *Abessinien* (1892); Bent's *Sacred City of the Ethiopians* (1893); Gleichen's *With the Mission to Menelik* (1895); Baratieri's *Mémoires d'Afrique* (1897-8); Smith's *Through Unknown African Countries* (1897); Vivian's *Abyssinia* (1901); Wylde's *Modern Abyssinia* (1900); Wellby's *Twixt Sirdar and Menelik* (1901); Gilmour's *Abyssinia* (1906); and Skinner's *Abyssinia of To-Day* (1906).

Acacia, a genus of thorny trees and shrubs (order Leguminosæ, sub-order Mimoseæ), of which 430 species are found in tropical and sub-tropical regions throughout the world, but especially in Australia and Africa. They have small flowers crowded into round or elongated heads; the leaves are bipinnate (doubly-feathered), except in species adapted to desert life, in which the leaf for the most part disappears, its function being performed by a flat and spiny leaf-stalk. Stunted acacias form the scrub ('wattles') of Australia and of the Sudan, where zarebas (enclosures) are formed of them. Most Australian species have no leaflets, but the leaf-stalk becomes flattened into a phyllode, which presents its thin edge to the light, and thus the tree gives little shade. *A. arabica*, or babul tree, much cultivated in India, gives a hard timber; the bark is used in dyeing and tanning; its leaves form an important fodder; and the red babul gum is used as a substitute for true gum-arabic, and is eaten by the natives in times of famine. *A. catechu* yields a resinous extract, catechu, used in medicine as a powerful astringent. *A. Senegal*, growing in W. Africa and India, is valuable for gum-arabic.

Academy, an institution for the cultivation of learning, of letters, or of art. The name has been applied to many and various organizations, such as schools, universities, colleges for instruction in particular arts and sciences, and societies of scholars, literary men, and artists. The present article, however, confines itself exclusively to academies which have for their object the promotion of learning and of letters. The **PLATONIC ACADEMY** originated in a gymnasium and pleasure garden about one mile north of Athens, called after the hero Academus, and presented by Cimon to the Athenian public. It was frequented by Plato and his disciples for nearly fifty years; and the successive 'schools' which developed the doctrine after his death (348 B.C.) derived the name *Academies* from the place where their common master taught. The first or 'old' Academy (347-270 B.C.), which was led by Speusippus, Xenocrates, Polemon, Cantor, and Crates successively, was Pythagorean in tendency. Cicero calls it 'the workshop of every artist,' and says that the teaching of its followers comprised all liberal learning, all history, and polite discourse. The second or 'middle' Academy (316-241 B.C.), founded by Arcesilaus, insisted on the sceptical element in the Platonic teaching; and this method was further developed by the third or 'new' Academy (214-129 B.C.), led by Carneades, who denied all knowledge of reality, and set up the doctrine of probability as a practical guide in life. Some distinguish a fourth Academy, of Philo of Larissa, and a fifth, of Antiochus, both of whom were teachers of Cicero; these later schools were more dogmatic in method. Although not bearing the name of Academy, the school of learning which had its centre at the museum in Alex-

andria (300 B.C.-500 A.D.) was essentially an institution of the same kind. Charlemagne's **PALATINE ACADEMY**, founded before the year 800, was devoted to the study of mathematics, history, and letters; and the University of Oxford had its origin in the Academy of Alfred the Great in that city. But the revival of letters gave rise to the Academy in its modern form. The **ACCADEMIA DELLA CRUSCA**, founded in Florence in 1582, had as its object the purification of the Italian language, and for that purpose it published, in 1612, the *Vocabulario della Crusca*. The most illustrious of all academies is the **INSTITUT DE FRANCE**, founded at Paris in 1795 'for the encouragement of science and of methods of research, by the publication of discoveries, by correspondence with other learned societies, and by the preparation of scientific works.' The Institute comprises five academies, and has a common fund and library for all, though each academy is autonomous. The annual public session of the Institute is held on October 25 (see Alfred Potiques' *L'Institut national de France*, 1871). The **ACADÉMIE FRANÇAISE**, most famous of the five, originated (1630) as the informal weekly meetings of a few literary friends, in the house of Valentin Conrart. Assemblies of any kind were illegal at that time, and the members were pledged to secrecy; but the fame of the society soon reached Richelieu, who offered his patronage and incorporation by letters patent (1635). The Academy then formulated its rules and objects, of which the chief were 'to labour with all care and diligence to give certain rules to the language, to render it pure, eloquent, and capable of treating the arts and sciences.' By another of its articles, the Academy undertook to compose a dictionary, a grammar, and trea-

tises on rhetoric and poetry. The sessions of the forty members began in 1637. The dictionary, edited by De Vaugelas, was first published in 1694; 7th ed. 1878. The *Dictionnaire historique de la Langue Française*, of which the first volume was published in 1858, has reached its fourth volume. The Academy has included almost all the most important French writers. After a member has been elected by ballot, the sanction of the government is obtained to his election, when he becomes entitled to his chair for life, with a salary of £60. The nature of the Academy's influence has been much debated. It has probably hindered originality to some extent, but many critics agree with Renan, Sainte-Beuve, and Matthew Arnold that to its labours we owe the exquisite simplicity of the language. See Mesnard's *Histoire de l'Académie Française* (1859); also Pellisson's *Histoire de l'Académie*, ed. Charles Livet; Rouxel's *Chronique des Elections à l'Académie Française* (1888); Matthew Arnold's *Essays in Criticism* (1st Series, Essay 2): 'The Literary Influence of Academies.' In 1663 four members of the *Académie Française* were entrusted by Colbert with the editing of the legends on public monuments, and with the preparation of devices and inscriptions for medals; and this commission, increased to a membership of forty, was incorporated by De Pontchartrain as the *Académie des Inscriptions et Médailles* (1706). The name was changed to ACADÉMIE DES INSCRIPTIONS ET BELLES-LETTRES (1716), and it became a section of the *Institut de France*. Its members are distinguished for their researches in history, archæology, and classical literature. Among its works are *Histoire Littéraire de la France*; *Recueil des Historiens de France*; *Corpus Inscriptionum Semiticarum*. See Desjardin's

Comptes Rendus des Séances (1858). The ACADÉMIE DES SCIENCES, founded by Colbert in 1666, became a class of the Institute in 1795. It is divided into eleven sections, each with six members, and has two permanent secretaries. Publications: *Mémoires*, and *Comptes Rendus Hebdomadaires des Séances*. See Maindron's *L'Académie des Sciences* (1887). The ACADÉMIE DES BEAUX-ARTS originated as an academy of painting and sculpture, which received definite form from Mazarin in 1655, and was united with the Academy of Architecture in 1795, as the fourth section of the Institute. It received its present name in 1819. Four volumes of the *Dictionnaire de l'Académie des Beaux-arts* have already appeared. The ACADÉMIE DES SCIENCES MORALES ET POLITIQUES (fifth class of the Institute), was founded in 1832. It publishes *Mémoires* (beginning 1835), and *Séances et Travaux* (beginning 1842). See Aucoc's *L'Institut de France: Lois, Statuts et Réglements* (1889). France possesses about thirty other academies in the principal provincial towns, the most important of which are the academies of Lyons (1700), Marseille (1726), and Toulouse (1782).

ROYAL BRITISH ACADEMY.—From time to time efforts have been made to found a British Academy on the model of the French, but it was not until June 28, 1901, that the British Academy was founded, having for its object the promotion of the study of moral and political science, including history, philosophy, law, politics and economics, archæology and philology. A royal charter was granted by the King in August 1902, and the Academy started with a total of forty-nine members. The maximum number of ordinary members is not to exceed one hundred. The Academy embraces four divisions:—(1) History and Archæology—president,

Rt. Hon. Lord Reay; (2) Philology—president, S. H. Butcher, M.P. (died 29th Dec., 1910); (3) Philosophy—president, Prof. B. Bosanquet; (4) Jurisprudence and Economics—president, Sir W. R. Anson, M.P. General president, S. H. Butcher, M.P.

The oldest academy in Germany was the *AKADEMIE DER WISSENSCHAFTEN*, founded in Berlin in 1700 by Frederick I., on the plan suggested by Leibniz, who was its first president. Although opened in 1711, its real organization dates from 1812. It is divided into four sections. The number of active members is over sixty. It has published *Abhandlungen* since 1811. Other important German academies are the Academy of Sciences at Munich, founded in 1759, and the Association of Sciences at Göttingen, founded in 1742. In Holland there are the Royal Academy of Sciences at Leyden, the oldest in the country; another at Haarlem, founded in 1752; and another at Amsterdam (1852). Each of these publishes *Verhandelingen*. The Royal Academy of Sciences at Vienna, founded in 1847, is divided into two sections—philosophical and scientific. It contains sixty active members. Besides *Memoirs*, it has published many valuable books, chiefly connected with the history of Austria. The oldest academy of the empire is the Bohemian Society of Sciences in Prague, founded in 1769, and incorporated by charter in 1785. The Hungarian Academy was founded at Budapest in 1825. Belgium has the *Académie Royale des Sciences* at Brussels, founded in 1773, and divided into three sections—science, literature, and arts. In Italy, in addition to the *Accademia della Crusca* at Florence, which is still of great importance, there are the Milan Academy, removed there in 1820 from Bologna (it is styled the

Instituto Lombardo di Scienze, and has published *Memorie* since 1820), and the Academy of Sciences (formerly *Accademia dei Lincei* at Rome, originally founded in 1603, revived 1870). In Portugal—the *Academia Real das Sciencas*, divided into three sections; founded in 1779, and reorganized in 1851. It publishes *Memorias*. In Roumania—the *Academia Română* in Bucharest, founded in 1866, and divided into three sections. It publishes *Annale*, and has begun the issue of a *Dictionary* of the Roumanian language. In Russia—the Imperial Academy of Sciences at St. Petersburg, founded in 1725 by the Empress Catherine I. Its chief merit has been the promotion of the study of Oriental languages and customs. It possesses a rich and valuable collection of manuscripts, a large library, museum, etc. Its publications are issued under the general title of *Mémoires*. In Spain—the *Real Academia Española* at Madrid, founded by Philip V. in 1713; it has published *Memorias* since 1793. In Sweden—the Royal Academy of Sciences (*Svenska Vetenskapsakademien*) in Stockholm, founded in 1741. It is divided into seven classes, and numbers ninety members. In 1893 it began the publication of a national *Dictionary* of Swedish. There is an academy at Upsala (1719), which has published *Acta* since 1740. In Norway—the *Videnskabs Selskab* at Christiania, founded in 1859, and the *Norske Videnskabers Selskab* at Trondhjem, founded in 1760. In Denmark—the Royal Academy of Sciences at Copenhagen, founded in 1743.

In the United States there are many academies. Amongst the oldest is the American Academy of Arts and Sciences in Boston, founded in 1780; its aim is to cultivate any science or art which contributes to the utility, honour, fame, and well-being of

a free, independent people. The American Philosophical Society at Philadelphia (since 1780), founded by Franklin. The Columbian Institute at Washington (since 1821), which has a membership of 228. The National Academy of Sciences, founded at Washington in 1863 as a national institute.

In Asia the most important academy is the Asiatic Society at Calcutta, founded in 1784, which publishes the very valuable *Asiatic Researches*. See SOCIETIES; also *Minerva*, an admirable annual guide, in German, to all universities, museums, libraries, and societies; and *Official Year-book of the Scientific and Learned Societies of Great Britain and Ireland*.

Academy (THE ROYAL) OF ARTS, London, at Burlington House, Piccadilly, was founded in 1768 by George III., with Sir Joshua Reynolds as its first president. Its original quarters were in Somerset House; in 1834 it was removed to Trafalgar Square, and to its present site in 1869. It consists of forty members, thirty associates, and a few foreign honorary members. An annual exhibition of painting, sculpture, etc. by living artists is held in Burlington House, lasting from May till August; and a winter exhibition of the works of Old Masters. The only exception has been the winter exhibition of 1909, which was devoted to the M'Culloch collection—entirely of modern work. In connection with the Royal Academy are the schools which give instruction in art to students who pass the entrance examination (held on 1st January and 1st July of each year). The teaching is supervised by academicians and associates, elected annually. There are many prizes, the chief being the gold medals and travelling studentships of £200 each for

historical painting, sculpture, and architecture, and the Turner gold medal and scholarship of £50 for landscape, all tenable for one year. See *Royal Academy of Arts: Abstract of Constitution and Laws of the Royal Academy of Arts* (1894), *Laws Relating to Schools, the Library, and the Students* (1903); Sandby's *History of the Royal Academy* (1862); Graves's *The Royal Academy of Arts: a Complete Dictionary of Contributors . . . 1769 to 1904* (1904, etc.); Hodgson and Eaton's *The Royal Academy and its Members, 1768-1830* (1905).

Academy, THE. This journal was started in 1869 as 'a monthly record of literature, learning, science, and art.' Two years later it was converted into a fortnightly paper, and in 1874 it first appeared as a weekly, at the price of sixpence. Its first editor and proprietor was Charles Appleton, who introduced the practice of signed criticism. In the first number articles appeared above the signatures of Matthew Arnold, Sidney Colvin, Professor Huxley, John Lubbock (now Lord Avebury), Mark Pattison, and John Conington. After the death of Appleton in 1879 the influence of the *Academy* somewhat waned; but in 1896 the property was acquired by Mr. John Morgan Richards, when, under the editorship of Mr. Lewis Hind, a new stimulus was given to its career. The title of the paper was changed to the *Academy and Literature* in 1900, when the *Times* ceased the publication of *Literature*. In 1903 Mr. Teignmouth Shore succeeded Mr. Hind as editor. Early in 1905 the paper was purchased by George Newnes, Ltd., and was edited by Mr. P. Anderson Graham. It has changed hands frequently since.

Acadia, or ACADIE, name given to Nova Scotia by the early French

settlers. The name was changed to Nova Scotia in 1621. See NOVA SCOTIA.

Acajutla, seapt., Pacific coast, Salvador, Central America, 12 m. s. of Sonsonate, of which it is the port.

Acambaro, tn., Guanajuato, State Mexico, 112 m. w.n.w. of Mexico City. Pop. 8,500.

Acanthus, or BEAR'S-BREECH, a genus of tall, herbaceous plants of the order Acanthaceæ, with large, thorny-toothed leaves; mostly weeds, but some are cultivated for their foliage. It has no indigenous representative in Britain. It occupies a position between the foxglove and dead-nettle orders. The leaves of *Acanthus spinosus* are supposed to have suggested the acanthus of architecture. See Day's *Nature in Ornament*, p. 35.

A cappella, or ALLA CAPPELLA, a musical term implying that a composition is to be sung as ecclesiastical music. Frequently it means that the voices are unaccompanied, or accompanied only by an instrument (usually the organ) played in unison with the voices.

Acapulco, port in Guerrero, Mexico, on the Pacific, 230 m. s.s.w. of city of Mexico; one of the best harbours in the country. Exports hides, cedar, and fruits. In July-August 1909 it was practically destroyed by earthquakes. Pop. 5,000.

Acarina, an order of arachnids, including mites and ticks, which are usually parasitic for a part at least of their life, but sometimes live freely on organic débris. The body is unsegmented, and consists of fused cephalo-thorax and abdomen. See MITES and TICKS.

Acarmania, dist., N. W. Greece; with Ætolia it forms the prov. (nomarchy) of Acarnania and Ætolia, stretching n. from Gulf of Patras. It produces currants, wine, oil, and tobacco. Area,

3,013 sq. m. Pop. 140,000. In ancient times its inhabitants were behind the Greeks in civilization; they lived mostly in villages, not in towns, kept up the practice of bearing arms in their daily life, and subsisted largely by piracy. See Oberhummer's *Akernanien*, etc. (1887).

Acarus, or DEMODEX FOLLICULORUM, a minute parasitic mite which infests the hair follicles and sebaceous glands in man. It is very common, and is of no practical importance. The size varies from one-fiftieth to one-hundredth of an inch, and, as in mites in general, four pairs of legs are present, which are here rudimentary.

Acatalectic Measures, metres which do not allow of the excision of an unaccented syllable at the beginning or the end of the line. See CATALECTIC VERSES.

Accad. See AKKAD.

Accelerando (Ital.), a musical term indicating that the *tempo* is to be gradually increased.

Acceleration, the rate at which the velocity of a moving body changes. That of a falling body, due to gravity, is indicated by *g*, and amounts to a little over 32 ft. per second per second. If *s* be the number of seconds during which a body falls, then $s^2 \times 16\frac{1}{2}$ ft. is the distance through which it passes. See KINEMATICS; KINETICS.

Accent. (1.) A grammatical sign used to distinguish the varying sounds of the same vowel. They are three in number—*viz.* grave (`), acute ('), and circumflex (^), as exhibited in the French words *père, été, tête*.

(2.) The stress laid in pronunciation upon one syllable of a word, corresponding with *emphasis* the stress laid in elocution upon a word or words in a phrase. In Old English the first syllable of simple words bore the accent, and the inflectional parts remained unaccented, as now—*e.g. love, lóv-*

able, loveliness. Again, nouns compounded with a prefix threw the accent back on the prefix; but verbs similarly compounded retained their former accent. Thus in modern English we say *outcome* (noun), but *outdo* (verb). This principle was extended to words borrowed from other languages, and hence we have such pairs as *accent* (noun) and *accént* (verb), *éxpert* (noun) and *expért* (verbal participle). Words taken from other languages generally conform to the same principles as native Teutonic words—*i.e.* they throw the accent as far back as possible towards the beginning of the word. Thus we no longer say *aventúre* or *soláce*, as was still possible even at the beginning of Elizabeth's reign. Nevertheless there are words of native origin which have run counter to this rule: *almighty* and *misdeed* were originally accented on the first syllable. Most English words have only one accent, but in the case of long words, like *dissimúlation*, we may also have a secondary accent—in this case on the second syllable. This secondary accent is scarcely perceptible in ordinary speech, but is of considerable importance for metrical purposes. The English habit of gliding quickly over the unaccented syllables of a word has given us some of our most curious derivations, such as 'proxy,' from French *procuracie*, and 'alms,' from Greek *eleemosyne*. For accent in its metrical aspect, see under VERSE. See Sweet's *English Sounds*; Kellner and Bradley's edition of Morris's *English Accidence*, ch. ix.

(3.) In music, accent is the regular recurrence of stress or emphasis upon certain notes, always (unless syncopated) upon the first note of a bar; while a slighter accent falls on the third note of a bar in common time, or the fourth in a bar of $\frac{6}{8}$ time.

Acceptance. See BILL OF EXCHANGE.

Acceptilation, a term in Scots and civil law—remission of a debt without receiving full payment.

Accession, DEED OF, in Scots law, is a deed by the creditors of a bankrupt or insolvent debtor, by which they approve of a trust executed by the debtor for the general behoof, and bind themselves to concur in the arrangement of his affairs proposed.

Accession of Property. In Lat. *accessio* meant an increase or addition to something already ours. Hence in Roman law it came to mean the mode of acquiring property by the natural or artificial increase, addition to, or improvement of things already ours. Thus the owner of land became entitled to plants and trees growing upon it, and to the increase or addition to it arising from accretion and alluvion; and the offspring of animals belonged to the owner of the mother. When the increase, addition, or improvement was artificial, as by the addition to our property of the property or work of others (houses built on our land, or embroidery worked on our cloth), the owner of the principal thing became entitled to what was accessory to it, subject generally to the payment of compensation, and subject also to certain exceptions. For example, when the result of expending work upon another's goods was the production of a new thing, the rule was reversed, so that when a man made wine from another's grapes, he kept the wine and paid for the grapes; again, when an artist painted a picture on the tablet of another, he kept the picture and paid for the tablet. (See Sandars's *Institutes of Justinian*, p. 98; Hunter's *Roman Law*, p. 53.) The English and Scots law on this question substantially follows the Roman. See Blackstone; Stephen's *Commentaries*; Broom's

Legal Maxims; and Bell's *Dictionary*; also FIXTURES.

Accession of Sovereign. See CROWN.

Accessories, the paraphernalia, other than the shield, of a heraldic achievement—*viz.* the helm, wreath, crest, cap, crown, mantling, badge, scroll, etc.

Accessory. An accessory *before the fact* is a person who, either himself or by a third person, though absent at the time of the commission of the felony, instigates another to commit a felony which is committed as the natural and probable consequence of his instigation. An accessory *after the fact* is a person who, knowing that a felony has been committed, takes active steps to shelter the felon from justice or enable him to escape. Formerly an accessory could only be tried with or after the principal, but now he may be tried independently. The punishment is generally the same as for a principal. There are no accessories to treasons or misdemeanours, as all persons concerned are either guilty as principals or not at all. The law of Scotland does not recognize accession after the fact. See 24 & 25 Vict. c. 94; Stephen's *Digest of Crim. Law*, art. 40 ff.; Russell, *On Crimes*, p. 169 ff.; Bell's *Dictionary*.

Acci, a Latin name of Cadiz, alternating with Gades in bibliography.

Acciaccatura, a 'grace-note' played as close as possible before the note which it accompanies, the latter retaining its accent.

Acciajuoli, DONATO (1428-78), Italian historian, philosopher, and statesman, gonfalonier of Florence (1473). Wrote *Lives of Hannibal, Scipio, and Charlemagne*, and *Commentaries on Aristotle*.

Accidence, that part of grammar which deals with inflections, or changes in the form of words

produced by the declension of nouns and adjectives or the conjugation of verbs; while syntax deals with the arrangement of words in a sentence.

Accident. (1.) In law. See EMPLOYERS' LIABILITY. (2.) In logic, accident signifies a predicate which neither is contained in nor can be inferred from the definition of its subject—*e.g.* the predicate *black* as applied to the subject *crow*. If all crows without exception were black, blackness would be an 'inseparable accident' of the subject *crow*, but otherwise it is a 'separable accident.' See also SUBSTANCE.

Accidentals, signs in musical score which raise (sharp ♯, double sharp x) or lower (flat ♭, double flat bb) the notes beside which they are placed to the extent of one or two semitones, or revoke previous sharps or flats (natural ♮). They affect only the bar in which they occur.

Accident Insurance. See INSURANCE.

Acclimatization. All organisms display what is known as periodicity in regard to the main phenomena of life, especially those of growth and reproduction. This periodicity is directly conditioned by the physical environment, especially by what are known as the climatic factors, such as temperature, moisture, light. Any sudden alteration of these environmental conditions destroys the necessary harmony between organism and its surroundings, and tends to the destruction of the organism. On the other hand, organisms are as capable of physiological as of morphological variation; and if the climatic conditions change slowly, they can adjust themselves to these, and become acclimatized. This acclimatization has been very extensively practised by man, as in the case of domestic animals, but it also occurs without his aid. There is some doubt as to the effect