

that, when ignited at the top of the tube, the mixture burns with a very hot, non-luminous flame. Bunsen burners are used for heating by gas, both for technical and domestic purposes.

Bunsen Cell. See CELL, VOLTAIC.

Bunt. See PLANTS, DISEASES OF.

Bunter, in geology the lowermost subdivision of the Triassic or New Red Sandstone, so called from a German word meaning 'variegated.' It consists of mottled red sandstones and breccias, with interpolated pebble beds. Few fossils are found in these rocks, which seem to have been deposited in old salt lakes, in countries subject to desert conditions. In Britain their principal exposure is in the Midland counties (*e.g.* Cheshire and Staffordshire), where their greatest thickness is about 2,000 feet. The red sandstones have been used for building—*e.g.* Chester cathedral.

Bunting, a general term applied to birds belonging to the family Emberizidæ. They are related to finches, and common examples are the yellowhammer, corn-bunting, and snow-bunting.

Bunting, JABEZ (1779-1858), 'second founder of Methodism,' was a Manchester tailor's son. In London he filled the highest posts in his denomination, and transformed the Methodist Society into a self-governing church, over which he exercised great authority. His chief interest was in the Wesleyan missions. See *Life* by T. P. Bunting (1859).

Buntingford, mrkt. tn., England, co. of and 10 m. N. by E. of Hertford; manufactures leather and malt. Pop. 5,000.

Bunyan, JOHN (1628-88), author of the *Pilgrim's Progress*, was born at Elstow, Bedfordshire, where people of his surname can be traced back to the 12th century. Nevertheless there is good reason

to believe that John Bunyan belonged to a caste of itinerant tinkers or gypsies. For a full discussion of this question, reference may be made to F. H. Groome's *Gypsy Folk-tales*, pp. 293-295 (1899).

Bunyan's early youth, according to his own account, was notoriously ungodly; but although he fought for a few months as a soldier in the Parliamentary army, his marriage to a young woman of religious character when he was only nineteen, his subsequent baptism and admission to 'church privileges,' and the fact that his *Sighs from Hell* (a record of spiritual struggle) appeared when he was just two-and-twenty, all point to his having abandoned his evil ways at the very outset of his career. Bunyan soon began (1655) to preach in the villages, and his graphic discourses had a powerful effect upon his hearers. In 1656 he wrote his *Gospel Truths Opened* and *A Vindication* of it (1657), both directed against the Quakers; and at the assizes in the following year an indictment was preferred against him for preaching at Elstow. Although for the time he escaped punishment, soon after the restoration he was convicted (Nov. 1660) as 'a common upholder of several unlawful meetings and conventicles,' and was committed to Bedford jail, where he remained for twelve years, till 1672. During his imprisonment he wrote the first part of his immortal allegory, the *Pilgrim's Progress* (1677); though the Rev. John Brown assigns this to Bunyan's second imprisonment, of six months' duration, in 1675. During the earlier and longer imprisonment he also wrote four other books—viz. *The Holy City, or the New Jerusalem* (1665); *Grace Abounding to the Chief of Sinners*, an autobiographical and devotional narrative (1666); *Jus-*

tification by Jesus Christ (1671); and *Defence of the Doctrine of Justification* (1672). In 1671, the year before his release, Bunyan was elected pastor of the Baptist church at Bedford. In 1673 he published his *Differences about Water Baptism no Bar to Communion*; in 1680, *The Life and Death of Mr. Badman*; in 1682, *The Barren Fig-tree*; in 1684, the second part of the *Pilgrim's Progress* and *The Holy War*; in 1685, *The Pharisee and the Publican*; and in 1688, *The Jerusalem Sinner Saved*, *Solomon's Temple Spiritualized*, and *The Water of Life*. He died at Snow Hill, Holborn, and was buried at Bunhill Fields, London.

A full list of Bunyan's works was given in Charles Doe's *Catalogue Table* (1691). One of the most carefully collected editions is that entitled *The Works of John Bunyan, with an Introduction, Notes, and Sketch of his Life and Contemporaries*, by George Offor (3 vols. 1862). George Whitefield published an edition of the works in 1767, and Mason's edition, with notes, appeared in 1785. Southey's edition (1830) is one of the best, and his *Life of Bunyan* still holds its place. The Hanserd Knollys Society published an exact reprint of the first edition, edited by G. Offor (1847). See also *Lives of Bunyan* by Ivimey (1809), Phillip (1839), J. A. Froude, 'English Men of Letters Series' (1880), J. Brown (1885), Edmund Venables (1888), and W. Hale White (1904).

Bunzlau, tn., prov. Silesia, Prussia, 24 m. w. of Liegnitz; famous for its brown pottery ware. Birthplace (1597) of the poet Opitz. Pop. 15,000.

Buol - Schauenstein, KARL FERDINAND, COUNT VON (1797-1865), Austrian diplomatist and statesman. He represented Austria at Turin (1844) and at St. Petersburg (1848), where he played

a conspicuous part in the Hungarian war, and was ambassador at London (1851). On the death of Prince Schwarzenberg, in 1852, he became Austrian prime minister, an office which he held till 1860.

Buonamacubwar, dist., N.E. Rhodesia, near the Congo frontier, 110 m. N. of Broken Hill; has great copper mines, to which the railway at Broken Hill is to be extended.

Buonaparte. See BONA-PARTES, THE, and NAPOLEON.

Buonarroti. See MICHELANGELO.

Buonvincino. See MORETTO.

Buoy (Du. *boei*), a floating object intended to mark a navigable channel, to warn a vessel against submarine danger, or to serve as an anchorage. Its smallest and simplest form, an anchor-buoy, is a closed cask or block of wood fastened by a thin rope to an anchor. Cable buoys are used to buoy up cables in a rocky anchorage, so as to prevent them from being worn. Can buoys are cone-shaped, and are generally used for marking sandbanks or shallows. Of these are nun buoys. Mooring buoys are buoys strongly moored, to which vessels may make fast instead of anchoring. Buoys, as indications to pilots, were first used in the estuary of the Thames in 1538. Buoys which are marked with black and white perpendicular stripes now denote a mid-channel, and must be passed close to avoid danger. A green buoy marks a wreck. Perches with balls, cages, etc., mark turning-points in a channel. Each country has its own rules as to the meanings to be attached to the colours and other marks shown on buoys. Many buoys are fitted with bells, automatic whistles or sirens, and lights, to call the attention of ships to their neighbourhood. See Sir F. G. D. Bedford's *Sailor's Pocket Book* (1890), *Sailing Direc-*

tions, and various publications of the Hydrographic Office, London, and of Trinity House.

Buoyancy. See SHIPBUILDING, HYDROSTATICS, SPECIFIC GRAVITY.

Buprestis, a genus of beetles whose members are remarkable for the metallic brilliancy of their colouring, especially in the case of tropical forms. The colouring is chiefly present in the hard wing-covers, which are often used as ornaments. Thus, the native chieftains of S. America used formerly to string the wing-covers of *B. gigantea* together into a circlet, and use them as leg ornaments. The British representatives of the family Buprestidæ are small and rare. See also SCARAB.

Buquoy, or BOUQUOY, KARL BONAVENTURA DE LONGUEVAL, BARON VON VAUX, GRAF VON (1571-1621), Austrian field-marshal, of French descent, born at Arras. Entering the service of Austria, he distinguished himself in the campaigns of the Rhine (1596-9); was defeated by Maurice of Nassau in 1600 near Nieuwpoort; laid siege to Ostend; and captured 's Hertogenbosch (Bois-le-Duc). In 1618 he commanded the imperial forces in Bohemia, successfully withstood the Bohemian emigrants and the Hungarians under Bethlen Gabor, and was wounded in the battle of the White Mountain (1621), which sealed the fate of Bohemia. He died in a further expedition against Bethlen Gabor, at the siege of Neuhausel (1621). See Weyhe-Eimke's *K. B. von Longueval Graf von Buquoy* (1876).

Bur. See BURDOCK, THISTLE.

Buran, the Jagatai Turki name for a sandstorm or snowstorm in Central Asia, though the phenomenon is not confined to that part of the world, but ranges from the Caucasus to the extremity of Siberia. The storm is swift

in its onset, the sky, in the height of the storm, the *kara-buran* ('black storm'), becoming black as midnight, and the atmosphere impenetrably thick with fine sand or snow, often in the higher mountains fine needles of semi-glaciated snow, while the wind blows with terrific velocity. The less violent storm is known as a *sarik-buran*, or 'yellow storm.' Vivid descriptions will be found in Sven Hedin's *Through Asia* (1898) and *Central Asia and Tibet* (1903).

Burano, isl., Italy, 5 m. N.E. of Venice; famous for its lace. Pop. 8,000.

Burbage, JAMES (d. 1597), English actor, one of Lord Leicester's players (1574), built the first place in London (1577) specially intended for theatrical purposes, 'The Theatre' (Shoreditch). He erected later the Blackfriars Theatre (1596).

Burbage, RICHARD (?1567-1619), son of the above, became joint-proprietor of Blackfriars Theatre, and in 1599 transferred 'The Theatre' from Shoreditch to Southwark, under the name of the Globe. As an actor, chiefly at the Globe, Burbage excelled all rivals in tragedy. He filled the chief parts in Shakespearean plays (*e.g.* Richard III., Hamlet, Lear, Othello), in those of Ben Jonson, and of other writers. See Halliwell-Phillipps's *Outlines of the Life of Shakespeare* (1885).

Burbot, or EELPOUT (*Lota vulgaris*), a fish of the cod family, which is confined to fresh water, and is widely, though locally, distributed in Europe. It is easily recognized by the long, tapering body, the small head with a barbel on the chin, the elongation of the second dorsal and anal fins, and the small scales. In some parts of Europe its flesh is greatly esteemed as food.

Burchiello (1404-48), Italian poet, whose real name was DO-

MENICO DI GIOVANNI, and who received his nickname from a certain portion of his poems, which deal with the most inconsistent themes, and are put together 'anyhow' (*alla burchia*). Born at Florence, he wrote some sonnets against Cosimo de' Medici, which compelled him to leave his native city (1434). In Siena, where he led a vagrant life, his satirical writings eventually caused him to be imprisoned. He died at Rome in great poverty. Many of his sonnets deal, in a burlesque vein, with his personal affairs; others, again, are directed, in a satirical spirit, against the Sieneese and against individuals in high places. The comic *genre* of this poet led to many imitations, and came to be called *burchiellesco*. The first edition of the poems appeared in 1472, and the best so far is that of Lucca and Pisa (1757, dated from London); a critical edition by V. Rossi is in preparation. A commentary was attempted by F. Doni (Venice, 1553). See Gargani's *Sulle Poesie del D. Burchiello* (1877); Mazzi's *Il Burchiello Saggio di Studi sulla sua Vita e sulle sue Poesie* (1878).

Burckhardt, JAKOB (1818-97), Swiss historian of art, born at Basel; in 1850 became professor of art history at the university of his native town. His principal work is *Der Cicerone eine Anleitung zum Genuss der Kunstwerke Italiens* (1855; 8th Ger. ed. 1901; new Eng. ed. 1879), which became a classic because of its clear and useful descriptions—it deals with sculpture and architecture as well as with painting. In *Die Kultur der Renaissance in Italien* (1860; 8th Ger. ed. 1902; new Eng. ed. 1890) he analyzes with vivid force and literary skill the circumstances which brought about the renaissance, and the special characteristics of that particular period. His other noteworthy books in-

clude *Geschichte der Renaissance in Italien* (1867; 4th ed. 1905), which deals with Italian architecture; *Die Kunstwerke der Belgischen Städte* (1842); *Die Zeit Konstantins des Grossen* (1853; 2nd ed. 1898); and *Griechische Kulturgeschichte* (ed. Oeri, 3 vols. 1898-1900). See Trog's *Jakob Burckhardt* (1898).

Burckhardt, JOHN LEWIS (1784-1817), Eastern traveller, was born at Lausanne. He came to England in 1806 with a letter of introduction from the anatomist Blumenbach to Sir Joseph Banks, through whose influence he was engaged by the African Association to explore N. Africa. Having visited (in Oriental attire, and under the name of Sheik Ibrahim) Palmyra, Damascus, and Lebanon, he proceeded to Cairo, made two journeys to Nubia (1814), and thence to Mecca and Medina, returning to Cairo in 1816. Driven by the plague from Cairo, he visited Mt. Sinai, but returned in 1817 to Cairo, to join the Fezzan caravan to the interior of Africa. Attacked by dysentery, he died at Cairo before it started. His great collection of Oriental MSS. was left to Cambridge University. He wrote *Travels in Nubia* (1819); *Travels in Arabia* (1829); *Notes on the Bedouins and Wahabys* (1830); *Arabic Proverbs* (1830).

Burdekin, riv., Queensland; rises in Sea View range, flows by Charters Towers and Ravenswood gold fields, and falls into the Pacific Ocean at Upstart Bay.

Burden, term applied formerly to the tonnage measurement of a ship. See DISPLACEMENT.

Burden, a Scots law term signifying an encumbrance on property, either heritable or movable, secured by a legal conveyance under the hand of the person who is receiving the obligation. To be effective, the deed must contain the sum for which it is

granted and the name of the granter, and in the case of landed property must also be recorded in the Register of Sasines. See the Land Title Acts (Scotland), 1868 and 1874.

Burder, GEORGE (1752-1832), English divine, born in London; became pastor of Congregational churches at Lancaster (1778), Coventry (1784), and Fetter Lane, London (1803). He was the chief founder of the Religious Tract Society (1799) and of the British and Foreign Bible Society (1804), and edited the *Evangelical Mag.* See *Memoirs* by H. F. Burder (1833) and Cobbin (1856).

Burdett, SIR FRANCIS (1770-1844), British politician, entered Parliament for Boroughbridge in 1796; and in 1807, by his return for Westminster—which he represented for thirty years—at the head of the poll, won the first triumph for parliamentary reform. Burdett made himself unpopular with the government by supporting vigorously freedom of speech and Catholic emancipation, as well as by protesting against the suspension of the Habeas Corpus Act, against the existing prison discipline, and against the enormous taxation. At length he was sent to the Tower for a breach of privilege. After the Reform Act of 1832 Burdett took no very prominent part in public affairs, and his opinions, like those of his friend, John Cam Hobhouse, rapidly veered towards Conservatism.

Burdett, SIR HENRY CHARLES (1847), founder and editor of the *Hospital*, and a well-known authority in hospital administration and finance. He founded the national pension fund for trained nurses and hospital officials (1888), and was secretary of the Share and Loan Department, London Stock Exchange (1883-97). He was made K.C.B. in 1897. Among his compilations are *Burdett's Official Intelligence of British,*

American, and Foreign Securities (since 1882); *Burdett's Hospitals and Charities* (annually); *The Hospitals and Asylums of the World* (1891-3); *Burdett's Official Nursing Directory* (since 1897); *How to become a Nurse* (1905); and *The Nursing Profession* (new ed. 1909).

Burdett-Coutts, ANGELA GEORGINA, BARONESS (1814-1906), daughter of Sir Francis Burdett; inherited in 1837 the great wealth of her grandfather, Thomas Coutts, a London banker. She was distinguished for the financial aid she gave to benevolent and philanthropic schemes: for instance, she organized, in 1859, the London Shoelack Brigade, and built model lodging-houses in Nova Scotia Gardens; in 1870 she founded Columbia Market; and she established a reformatory home for women at Shepherd's Bush. The weavers of E. London, the Irish fishermen of Cape Clear, the Turkish peasantry after the Russo-Turkish war of 1877, the aborigines of S. Australia, have all received assistance from her. She effected considerable reforms in the teaching of girls at national schools, and it was she who initiated the present system of inspecting primary schools by travelling inspectors. She liberally endowed the colonial bishoprics of Cape Town, Adelaide, and British Columbia, subsidized Sir Henry James's topographical survey of Jerusalem, and gave pecuniary assistance to Rajah Brooke in Sarawak. In 1871 Queen Victoria, in recognition of her philanthropic work, conferred upon her a peerage, and in 1881 she married Mr. W. L. Ashmead Bartlett. The Baroness Burdett-Coutts edited, in 1893, *Woman's Mission*, a 'Series of Congress Papers on the Philanthropic Work of Women, by Eminent Writers' (8 vols.). She was appropriately honoured by

burial in Westminster Abbey. It was a saying attributed to King Edward VII. that the baroness was, after his mother, 'the most remarkable man in the kingdom.'

Burdett-Coutts, WILLIAM LEHMAN ASHMEAD BARTLETT- (1851), M.P. for the city of Westminster since 1885, was born at Plymouth, U.S.A. In 1881 Mr. Ashmead Bartlett married Baroness Burdett-Coutts, whose name he then assumed, and in all of whose philanthropic works and schemes he has interested himself since 1877, when he acted as her special commissioner in the distribution of her Turkish Compassionate Fund. In 1900 his allegations in the *Times* against the conduct and management of the military hospitals during the war in S. Africa led to the appointment of a commission of inquiry, and to the appointment of a committee to consider the organization of the Army Medical Department (1901). Mr. Burdett-Coutts is also a prominent advocate of railway reform, and it was due to his efforts that the government introduced the Railway (Accounts and Returns) Bill in 1910.

Burdock (*Arctium Lappa*), a plant of the Compositæ, common in temperate regions of the Old World, and naturalized in America. The flower-head, a 'bur,' is covered with small hooks, and readily attaches itself to any passing body, thus securing wide distribution of the seeds. It is used medicinally as a diaphoretic and diuretic, and in Japan is eaten as a vegetable.

Burdon-Sanderson, SIR JOHN SCOTT, BART. (1828-1905), English physiologist, was born at Jesmond, near Newcastle. In 1858 he investigated diphtheria, and in 1866 cattle plague and cholera. He was appointed physician to the Consumption Hospital, Brompton,

and the Middlesex Hospital (1860-70), and was elected first principal of Lambeth Brown Institution (1871-8), and Jodrell professor of physiology in University College, London, in 1874. In 1883 he became first Waynflete professor at Oxford, and was virulently attacked by the anti-vivisectionists, including Freeman and Ruskin. He also investigated the sensitive activity of plants and the electrical organs of the skate. He received the Royal Society's medal in 1883. From 1895 to 1903 he was regius professor of medicine at Oxford, and filled places on the Royal Commissions on Hospitals (1883), Tuberculosis (1890), and London University (1892-4). He received a baronetcy in 1899.

Burdur, or BULDUR, tn. in Anatolia, Asia Minor, 68 m. N. of Adalia, near the salt lake Burdur Göl (20 m. long). The chief industries are linen-weaving and leather-tanning. Pop. 12,000.

Burdwan. See BARDWAN.

Burdy, SAMUEL (1760-1820), born at Dromore, Co. Down, author of *A Life of Philip Skelton* (1792), a racy biography of a poor Donegal clergyman, highly praised by Macaulay.

Bure, picturesque riv., Norfolk, England. Length, 50 m. See BROADS.

Bureaucracy is a term applied to the highly-centralized forms of administration in which the officials of a department or bureau are responsible only to their administrative superiors, and are not amenable, in their official capacity, to the common law of the land. Prussia is the typical bureaucratic country, but most of the continental nations have a similar form of highly-centralized administration, with extensive powers of regulation, superintendence, and inspection over the lives and actions of the subject by officials who are respon-

sible only to the head of their own department. For bureaucracy in England, see Ramsay Muir's *Peers and Bureaucrats* (1910).

Buren. See VAN BUREN.

Burette, in chemistry, is an apparatus used in volumetric analysis to deliver accurately measured quantities of liquids. It consists of a vertical glass cylinder of uniform bore, usually graduated in cubic centimetres, and fitted with a stopcock from which any desired quantity of a solution can be allowed to flow.

Burg, tn., prov. Saxony, Prussia, 15 m. by rail N.E. of Magdeburg; the seat of important cloth manufactures, dating from the 12th century, but in part founded by French and Walloon immigrants. Pop. 24,000.

Burgage Tenure. (1.) In England, a form of tenure in boroughs by which the tenant holds of the lord of the borough by a certain rent. It is characterized by many customs, which must be strictly proved—*e.g.* borough English and dower. It is almost extinct. See *Coke on Littleton*, p. 108. (2.) In Scotland, the tenure of property in royal burghs. Most of the characteristics of this tenure were abolished by the Conveyancing (Scotland) Act, 1874, s. 25; and practically the only difference between burgage holding and modern feus is the existence of separate registers of sasines in the burghs where the tenure exists. See W. Green's *Encyc. of the Law of Scotland* (1896).

Burgas, tn., Bulgaria, on the Black Sea, 55 m. S.W. of Varna, connected by rail with Sofia, and in steamboat communication with Odessa and Constantinople. Exports grain, wool, tallow, butter, and rose-water. Pop. 11,000.

Burgdorf (Fr. *Berthoud*), a picturesque and ancient industrial town on the Emme, in the Swiss canton of Bern. It is 12 m. N.E. of Bern. Here Pestalozzi

established a school in 1797. It manufactures ribbons and silks, and is a depôt for the Emmen-thal cheese. Pop. 9,000.

Burgee, the distinguishing pennant of a yacht club, is a V-shaped pennant, with the point away from the staff.

Bürger, GOTTFRIED AUGUST (1747-94), German poet. In 1772 he received an appointment as *amtmann* at Altengleichen, near Göttingen; this post he resigned in 1784, and became *docent* (private lecturer) at Göttingen. The title of extraordinary professor was conferred on him in 1789. Bürger admired Shakespeare, learned much from Herder's literary criticism, and found models of popular ballads in Percy's *Reliques* (1765). He is often regarded as before all a writer of ballads. Of these, *Lennore* (1774) is the most famous; William Taylor's rendering of it had a marked influence on that of Sir Walter Scott. Other well-known ballads are *Das Lied vom braven Mann* (1776), *Der wilde Jäger* (1778), *Der Kaiser und der Abt* (1784). Bürger was one of the first to restore the sonnet to honour. There are good editions of his poems by A. E. Berger (1891), and by Grisebach (1894), who also issued his *Abenteuer des Freyherrn von Münchhausen* (1890), retold and amplified. See *Life*, in German, by Döring (1827; new ed. 1848) and W. von Wurzbach (1900).

Burger, SCHALK WILLIAM (1852), late president of the Transvaal, succeeded to that position on the flight of President Kruger from Lorenzo Marques for Europe on October 19, 1900. Mr. Schalk Burger was, up to the period of the Jameson Raid (1895-6) at all events, one of the few progressive members of the First Raad. In the war of 1880 he had invested the English garrison at Lydenburg, but failed to compel its surrender. He was (1895) chairman of the Assembly, and in 1896 was chosen a

member of the executive council. In 1897 he was chairman of the Industrial Commission, which went a long way in admitting the grievances of the Uitlanders. In 1898 Schalk Burger was an unsuccessful candidate for the presidency in opposition to Kruger. He was with Louis Botha during a portion of the Tugela operations, and was present at the battle of Spion Kop. On the death of General Joubert (March 27, 1900) he was appointed vice-president of the Transvaal. He remained in the field with Louis Botha till the end of the campaign, and was one of those who signed the terms of surrender at Vereeniging.

Burgers, THOMAS FRANÇOIS (1834-81), president of the Transvaal republic, was a minister of the Dutch Reformed Church for eight years. In 1864 he was suspended for heresy, but on appeal was acquitted. He succeeded Pretorius as president of the Transvaal in 1872, and in 1875 unsuccessfully attempted to negotiate the Delagoa Bay railway scheme in Britain and in Europe. He conducted an unsuccessful war with Secocuni in 1876, one result of which was the British annexation of the Transvaal on April 12, 1877.

Burgess. In England, since 1835, the municipal electors of a borough are the burgesses. (For burgesses before the Municipal Corporations Act of 1835, whose rights in certain respects have been preserved, see FREEMEN.) The burgesses who elect the councillors are the persons qualified under s. 9 of the Act of 1882, as amended by s. 3 of the County Electors Act, 1888. In general, they are the occupiers of houses or other buildings of any value, or of land of the annual value of £10, in the borough, who have paid rates and resided in, or within seven miles of, the borough for a year, and they include unmarried

women otherwise qualified. They are entitled to be, and must be, enrolled; and the burgess roll is the register of municipal electors. By the Honorary Freedom of Boroughs Act, 1885, the council have power to admit persons of distinction to the honorary freedom of the borough. For the City of London, see LONDON—*Government*. In the rest of London there are no burgesses. In Scotland the municipal electors may be admitted as burgesses (23 and 24 Vict. c. 47), but the register of municipal electors is not the burgess roll; and burgesses are still admitted either under the special provisions of the burgh charter, or by right of birth, apprenticeship, or marriage, or by election by the magistrates. By 39 and 40 Vict. c. 12, an attempt was made to assimilate, in some respects, the law of Scotland to that of England as regards the creation of burgesses, and it was provided that rated occupiers for three years of land or premises in the burgh should be burgesses; but this did not entitle them either to be admitted to the guilds or trade corporations, or to share in property held for behoof of their members, or in property belonging to the burgh. The magistrates admit persons of distinction as honorary burgesses.

Burgess, EDWARD (1848-1901), American yacht-designer, was born at West Sandwich in Massachusetts. He began designing yachts at Boston in 1883, and designed in succession three successful defenders of the America Cup—viz. the *Puritan* (1885), the *Mayflower* (1886), and the *Volunteer* (1887).

Burgess, JOHN BAGNOLD (1829-97), English painter, was born in Chelsea, and studied at the Royal Academy schools (1851). For thirty years he visited Spain annually, and is specially noted for his treatment of subjects in

Spanish life. His best works are *Bravo Toro* (1865); *The Letter-writer* (1882); *The Meal at the Fountain: Spanish Mendicant Students* (1883); *Rehearsing the 'Miserere,' Spain* (1894). He became A.R.A. in 1877.

Burgess Hill, tn., Sussex, England, 9 m. N. of Brighton; manufactures bricks and tiles. Pop. 5,000.

Burgh (Scotland). There were formerly in Scotland, in the words of Skene, 'three kinds of burghs—burghs of barrony, burghs of regality, and royal burghs. Burghs of barrony are such as the barron hath full power to choose their baillies; burghs of regality are such as the lord of the regality hath full power to choose their baillies; royal burghs are so called because they hold immediately of the king'—i.e. a royal burgh was created by a charter from the king, and the charter usually conferred on the inhabitants the right to elect its officers, but their rights gradually fell into disuse. The reform of these 'close corporations' was carried out by an Act of 1833, and the election of magistrates and councillors was again put into the hands of the inhabitants. Latterly two new classes of burghs have arisen—(1) parliamentary burghs, which, either separately or along with other burghs, return a member to Parliament; (2) police burghs—i.e. populous places which may, by authority of the sheriff, adopt the Police Acts, and which are governed in practically the same way as royal and parliamentary burghs, except that they have no special licensing authority, but are under the county licensing courts. See *Burgh Government* (1905); also BAILIE, LOCAL GOVERNMENT, PROVOST.

Burghers. See SECESSION CHURCH.

Burghersdorp, tn., Albert dist., Cape of Good Hope, 243 m. by rail N.W. of E. London. It was

in Boer hands for the first six months of the S. African war. Pop. 3,000.

Burghley, WILLIAM CECIL. See BURLEIGH.

Burghs, CONVENTION OF, a yearly meeting of the commissioners of royal burghs in Scotland, held in Edinburgh. The convention, which dates back to 1487, has now lost much of its importance through municipal and parliamentary representation and extension of local government.

Burgin, GEORGE B. (1856), novelist and journalist. He accompanied Baker Pasha to Asia Minor as secretary of the Reform Commission in Armenia. He has written, among other novels, *The Way Out* (1900), *A Son of Mammon*, *A Goddess of Gray's Inn* (1901), *The Shutters of Silence*, *The Ladies of the Manor* (1903), *The Land of Silence*, *The Hermit of Bonneville* (1904), *Devil's Due* (1905), *A Simple Savage* (1908), and *The King of Four Corners* (1910).

Burgkmair, or BURCKMAIR, HANS (1473-1531), German painter and engraver, born at Augsburg. His early German style is well represented by the portrait of himself and wife in Vienna; his later more Italian style by the *Adoration of the Kings* in Augsburg. His great repute rests on his woodcuts, which rank high for their dramatic force and ingenuity, and for their truth to the life of his time. Among the most important of his engravings are *The Triumph of Maximilian* (135 prints) and the *Genealogy of the Emperor* (237 prints); also 52 plates for the *Book of the Tournay*, and 104 designs for a German translation of the *Offices of Cicero*, and 200 for the German translation of Petrarch's *Fortune*. See Wilmot Buxton's *German, Flemish, and Dutch Painting* (1881).

Burglary is the breaking and entering a dwelling-house between

9 p.m. and 6 a.m. with intent to commit a felony. The breaking may be either actual (*e.g.* forcing open a closed window or door) or constructive (*e.g.* gaining admission by conspiracy with a servant). The entry of the smallest portion of the person, such as a hand, is enough. The breaking and entering may be by different persons acting together, and may be on different nights. A burglar is liable to penal servitude for life. Entering a house by night without breaking, with intent to commit a felony, is punishable with seven years' penal servitude. Being found by night (*a*) armed, or (*b*) with housebreaking implements, or (*c*) in a dwelling-house, coupled in each case with felonious intent, is a misdemeanour punishable with five years' penal servitude. Housebreaking is the same as burglary, except that it may be by day, and the breach may be of any building, not necessarily a dwelling-house. It is punishable with fourteen years' penal servitude, and the attempt with seven years'. In Scots law, the offence is housebreaking with intent to steal, and it is the worst aggravation of theft. There is no distinction between day and night, or between a dwelling-house and other closed buildings. See Stephen's *History of Criminal Law* (1883) and Russell's *Treatise on Crimes and Misdemeanours* (1909). See also HOUSE.

Burglary Insurance. See INSURANCE.

Bürglen, vil. in the Swiss canton of Uri, at the entrance to the Schächenthal, and 1½ m. s.e. of Altdorf. It is the supposed birthplace of William Tell. Pop. 1,700.

Burgomaster, the chief magistrate in Belgian, Dutch, German, and Austro-Hungarian towns.

Burton, JOHN WILLIAM (1813-88), British ecclesiastical writer,

was born at Smyrna. From 1863-76 he was vicar of St. Mary the Virgin, Oxford; from 1868-75, Gresham professor of divinity; and in 1876 he was appointed dean of Chichester. He wrote a large number of treatises on ecclesiastical questions, from the point of view of a conservative of the Low Church type. Among his works are *Life and Times of Sir Thomas Gresham* (1839), *Oxford Reformers* (1854), *Historical Notices of the Colleges of Oxford* (1855), *Letters from Rome* (1862), *The Athanasian Creed* (1872), *The Revision Revised* (1883), and *The Lives of Twelve Good Men* (2 vols. 1888). See *Life* by Goulburn (1892).

Burgos. (1.) Province, N. Spain, lying between Alava and Navarre. On the whole the province is mountainous, but especially in the N. and N.E. To the S. lies the table-land of Old Castile. In the E. rises the lofty peak of Cerro de San Millan (6,995 ft.), while in the extreme S. is the pass of Pancorbo. The soil is generally poor, but the plains produce cereals and vines; fine merino sheep are raised on the pasture lands; coal, lignite, iron, copper, silver, and lead are found. The chief rivers flowing through the province are the Ebro, for 62 m.; the Douro, for 37 m.; the Pisuerga; and the Arlanzón. There are potteries, stone quarries, and factories for linen and cotton. Want of railways and of good roads has militated very much against development. Area, 5,480 sq. m. Pop. 340,000. (2.) City, cap. of above prov., on riv. Arlanzón. It stands on the Northern Ry., 142 m. N. of Madrid, was the early capital of the rulers of Castile, and afterwards it shared with Toledo the honour of being the royal residence. Its principal glory now is its superb Gothic cathedral (1221), which is one of

the noblest in the world. The castle (now in a ruined condition) was besieged by the British in 1812, and surrendered in 1813. The fortifications were destroyed by the French (1813). The Cid Campeador, the local hero, is buried here. The monastery of the Cartuja and the historical nunnery of Las Huelgas, in the neighbourhood, are of the highest interest. Burgos is an archbishop's see. It is the centre of a wheat-growing district, and there is some industry in leather, cloth, and hosiery. Pop. 30,000.

Burgoyne, JOHN (1722-92), English soldier and dramatist. Entering Parliament in 1768, he criticised the War Office and foreign policy, and by his political career won favour at court. Burgoyne is remembered for his American expedition (1774-7), the failure of which, though due to the incapacity of others, made him for a time very unpopular. He also wrote dramas—as, *The Lord of the Manor* (1780), and *The Heiress* (1786), described by Horace Walpole as one of the most pleasing domestic compositions. See his *Works* (2 vols. 1808); De Fonblanque's *Political and Military Episodes of John Burgoyne* (1875); and Bernard Shaw's play, *The Devil's Disciple*.

Burgoyne, SIR JOHN FOX (1782-1871), R.E. officer, illegitimate son of the above, rendered important services while commanding the engineers in Portugal (1809-13) and in America (e.g. at Fort Bowyer), and as virtual second in command in the Crimean war. For his Crimean work Burgoyne was assailed by the press, but later became a popular hero, and was made baronet and field-marshal. See his *Life and Correspondence*, by Hon. G. Wrottesley (2 vols. 1873); Sir J. T. Jones's *Journal of the Sieges..... in Spain* (1814); A. H. Kinglake's *Invasion of the Crimea* (1899).

Burgrave, or **BURGGRAVE**, a title frequently borne in the middle ages by the military commandant of a German town. He was appointed by the emperor or by a bishop of the empire. There were burgraves of Nuremberg, Augsburg, Meissen, Regensburg, Magdeburg, and other towns. The title subsequently became hereditary in certain noble families—e.g. that of Brandenburg.

Burgstadt, tn., Saxony, 9 m. N.W. of Chemnitz; manufactures gloves, boots, hosiery, cottons, etc. Pop. 7,300.

Burgsteinfurt, tn., Westphalia, Prussia, 18 m. N.W. of Münster. Pop. 5,500.

Burguillos, comm., Spain, prov. of and 40 m. S.E. of Badajoz. Pop. 5,800.

Burgundii, a powerful German tribe whose original home was between the Oder and the Vistula; they were of the same race as the Vandals. The Gepidæ drove them from their first habitations into the country about the Main. Early in the 5th century A.D. the usurper Jovinus invited them to settle on the left bank of the Rhine; hence arose the duchy and county of Burgundy.

Burgundy (Fr. *Bourgogne*), former province of France, now forming all or part of the departments Ain, Aube, Côte-d'Or, Haute Marne, Nièvre, Saône-et-Loire, and Yonne. The Burgundians invaded the country with the Vandals, 410 A.D., but were vanquished by the Franks in 523, and again became independent in the 9th century. The struggle for supremacy in France between the Burgundians, the French, and the English fills an important chapter of mediæval history. In 1477, on the death of its last duke, Charles the Bold, Burgundy was attached to the crown of France. The name is now mainly associated with the wine of the province. The finest wine is grown

on the slopes of hills in Côte-d'Or, and is celebrated for its rich flavour. It is divided into three classes—the wines of Basse Bourgogne (Chablis, Montrachet, etc.), Haute Bourgogne (Clos-Vougeot, Chambertin, Corton, Pommard, and Volnay), and the Maconnais and Beaujolais. The annual yield of the vineyards is about $4\frac{1}{2}$ million gallons.

Burgundy Pitch is prepared by melting and straining the exudation from the stem of the spruce fir. It is hard, brittle, reddish brown and opaque, sweet, and aromatic. It is soluble in glacial acetic acid, by which the common adulterants can be detected, and is used as a basis for plasters, having a stimulating action on the skin.

Burhanpur, tn., Nimar dist., Central Provinces, India, 270 m. N.E. of Bombay; was the seat of the Deccan princes of the Mogul empire until 1635; was taken by General Wellesley in 1803; and in 1860 became British territory. It contains the remains of a palace built by Akbar, and a mosque by Aurungzebe. Fine cottons and brocaded silks are manufactured. Pop. 34,000.

Burial, LAWS OF. In England every baptized person not a suicide, excommunicate, or a murderer, is entitled at common law to be buried in the churchyard of his parish by a Church of England clergyman, without fee. The baptism may be of a kind recognized by any Christian sect. Before 1823, one who had committed *felo de se* was buried at cross roads with a stake through his body, on a coroner's warrant; but now, by the Interments (*Felo de se*) Act, 1882, he may be buried, even by a clergyman of the Church of England, with any service other than the burial service of the Church of England. Murderers in the United Kingdom are buried in the prison where they are

hanged. The duty of burying the dead rests primarily on the executor. A husband is liable for a wife's burial, and a father for a child's; while, in default of any one else, a householder is bound to provide for the burial of a person dying in his house. Guardians of the poor may bury a pauper if no one else is liable to do so, and must bury those dying in their institutions, as well as drowned bodies left by the tide (Drowned Persons Interment Acts, 1808 and 1886); and in Scotland, under the Public Health Acts, the local authority is bound to bury any unclaimed body. Under the Infectious Diseases Act, 1890, persons dying of infectious diseases must, under certain circumstances, be buried, or removed to a mortuary, within forty-eight hours. Similar provisions as to Scotland are contained in the Public Health (Scotland) Act, 1897, and as to London in the Public Health (London) Act, 1891. It is not larceny to steal a dead body, but it is an offence to remove a body when buried, except under a faculty or an order of the Home Secretary (Burial Act, 1857). A coroner may order the exhumation of a body. The parson is the freeholder of the churchyard on trust for the parishioners, and he may not bury non-parishioners without the consent of the churchwardens, nor erect or remove a vault or tombstone without a faculty. By the Burial Acts, 1852 and 1853, churchyards can be closed by order in council. No building can be erected on a closed burial ground (Disused Burial Grounds Act, 1884), though it may be conveyed to the local authority as an open space (Open Spaces Act, 1906). Although a parson is not entitled to any fee for burials or for the erection of tombstones at common law, such fees may be due by custom if reasonable

and certain in amount. Under the Burial Acts, 1852 to 1906, the opening of new burial grounds in cities may be forbidden by order in council. These acts provide means for the establishment of burial boards. A burial board may be a town council, an urban district council, or a parish council. It may buy land for a graveyard, and divide it into consecrated and unconsecrated ground; but by the Act of 1900 it need not consecrate any part unless required by a reasonable number of inhabitants. Since 1880 a clergyman has been authorized to perform burial in unconsecrated ground, and a layman to bury in consecrated ground, with or without service. Burial boards may, by the 1900 Act, build undenominational chapels at their own expense, and denominational chapels at the expense of the denomination. Formerly a Church of England chapel might be built at the board's expense. Boards may alienate vaults in perpetuity. The thorny question of fees has been settled by the Burial Act, 1900. Fees in the consecrated and unconsecrated portions of a burial ground are to be the same, and to be payable to ministers irrespective of denomination, and to be approved by the Secretary of State. Fees to incumbents for monuments are abolished, but the rights of present incumbents are preserved, and no alteration is to be made in any event for fifteen years from 1900. Burial boards cannot appoint a chaplain; and a parson's liability to bury his parishioners remains unaltered. Unconsecrated burial grounds cannot be used for any other purpose without leave of the Local Government Board. In addition to public graveyards, there are many private cemeteries established by private act, and mainly governed by the Cemeteries Clauses Act, 1847.

Local authorities may also provide cemeteries under the Public Health (Interments) Act, 1879. In Scotland there are no restrictions as to the places in which persons may be buried, and such places are regarded as sacred. The heritors are bound to provide and, if necessary, enlarge kirkyards for the parishioners generally; but by the Local Government (Scotland) Act, 1894, they may transfer the kirkyard to the parish council. Public burial grounds may be provided, under the Burial Grounds (Scotland) Acts, 1855-1886, by the local authority (which, except in burghs, is the parish council), on a requisition by two councillors or ten ratepayers. Kirkyards injurious to health may be closed either under the Public Health (Scotland) Act, 1867, or by the Secretary for Scotland under the Burial Grounds (Scotland) Act, 1855. See Baker, *On Burial Laws* (6th ed. 1901); also CEMETERY and CREMATION.

Burial Customs. Although burial strictly means interment, or, at any rate, conveys the idea of covering over, a brief mention may here be made of the various modes of disposing of the dead, whether under ground or otherwise. Probably the method still followed by the Siberian Chukchis, by some tribes of Eskimos, and by the Tibetans, as described by Sven Hedin, was that first practised by man—viz. carrying the corpse a short distance from the encampment, and there leaving it to be devoured by dogs or vultures. Similarly, the Masai, the Wakamba, and other African tribes deliberately leave the bodies of their dead to be food for the hyænas. Equally callous is the Mashona treatment of criminals; for although the command of a chief—'Throw him to the crocodiles,' or 'Give him to the hyænas'—is interpreted in the



Egyptian Burial Ceremonies.

(By permission, from the large facsimile sheets of the 'Book of the Dead,' published by the Department of Oriental Antiquities, British Museum.)

The upper part shows the mummy on a boat-shaped bier drawn by oxen, the wife kneeling beside it, and a priest officiating in front. In the lower part the mummy is supported upright in front of the tomb by Anubis, the wife again kneeling; priests officiate at a table of offerings—one reads the burial service, and one brings forward an offering; behind are mourners. The cow and calf symbolize the Rising Sun, and Heaven.

first place as an order for immediate death by a spear or a club, yet it also indicates the ultimate destiny of the corpse. The Hindu practice of committing the dead to the waters of the sacred Ganges had probably a like origin, although latterly accompanied by the most reverent rites. The same may be said of burial at sea, which, in certain phases, was nothing more than the getting rid of a corpse by tossing it overboard, but which, as practised nowadays, is a solemn and devout ceremony. Akin to these is the Malay usage, by which a man, recognizing the near approach of death, puts out in his boat alone to sea; which bears some resemblance to the Viking (Vik-man, or Scandinavian sea-rover) practice of putting a corpse aboard a ship which was set on fire, though the more usual custom was to bury it under the warrior's ship, or to build a mound over it on some sea headland. The Parsee custom is to expose the corpse on a tower, there to have the flesh devoured by vultures, thus avoiding the greater horror of putrefaction. Analogous, but not obviously with the same aim, is the method, followed by the Siberian Yakuts and the Canadian Siccanees, of placing the dead in a covered coffin, which is then hung up between two trees. Cremation, once more coming into vogue, was formerly a widespread practice, and urns containing incinerated remains are frequently disinterred in many parts of Europe. Burial in the earth, in mounds, and in stone vaults has been, and with little variation still is, the most usual European form of sepulture. These latter modes of burial ought perhaps to be regarded as a development of the practice among mound-dwellers of leaving the body of the deceased within the mound that had once been his house, and closing the entrance.

In the Aleutian Isles it was customary to close merely that compartment which had been the dead man's special retreat, while his kinsfolk continued to inhabit the other parts of the mound-dwelling as before. (See Lord Avebury's *Prehistoric Times*, 1900, pp. 124-129.) Similar in nature is the hut-burial of the Maoris and of various tribes in Africa and S. America. In some cases the corpse is merely buried underneath the floor of the hut; in other cases the door is closed, and the hut becomes a tomb. Among primitive nations it was often the custom to place beside the corpse his weapons and utensils, for use in the other world; and in the case of a chief, his wives, slaves, and steed were killed at his grave, that they might bear him company, and serve him as in this life. Faint traces of such usages still survive in the customary British ceremonial at the funeral of an officer. The Hindu *sati*, or *suttee*, is another illustration of this idea. As a rule, corpses are and have been buried lying at full length; but in many early European and in modern Eskimo interments the body is doubled up. Embalming for purposes of preservation was the process adopted by the ancient Egyptians, and in a modified form it persists to the present day. *Endocannibalism* (see CANNIBALISM) may also be regarded as a burial custom.

Burial Societies. See FRIENDLY SOCIETIES.

Burian, STEPHEN, BARON OF RAJECZ (1851), a Hungarian of Slovak descent; he became imperial finance minister for Austria-Hungary and administrator of Bosnia-Herzegovina in 1904. From 1897-1904 he was minister to Greece. He is an authority on the Balkan question.

Buriats, a Mongol race inhabiting the district round Lake Baikal, Transbaikalia, and the south of

government of Irkutsk, in Siberia. Originally nomads, they are now in part successful agriculturists. A sluggish, harmless race, they are really adherents of Shamanism, though they profess Lamaist Buddhism. They are estimated to number about 210,000.

Buridan, JEAN, a French philosopher of the 14th century, became rector of the University of Paris (1327). He was one of the most subtle dialecticians of his age, and his works consist of commentaries on Aristotle (1447-9 and 1518). 'Buridan's ass' is a phrase well known as an argument in illustration of free will. It supposes the case of an ass standing equidistant between two bundles of hay, and finding difficulty in making choice of either. His works were published by J. Durlard in 1516.

Buriti Palm (*Mauritia flexuosa* or *vinifera*), two of the largest S. American fan palms (100-125 ft. high), growing on swampy land from S. Brazil to the W. Indies. From the sap the natives obtain, by fermentation, an intoxicating liquor; and the pulp of the fruit is eaten, and is preserved in sugar. The leaf fibres are used for cords, mats, etc., the pith as cork, and the stem yields a kind of sago.

Burke, EDMUND (1729-97), statesman and political philosopher, was born at Dublin on Jan. 12, 1729. In 1756 he published the *Vindication of Natural Society*, a satire upon Bolingbroke; and the *Philosophical Inquiry into the Origin of our Ideas of the Sublime and the Beautiful*, an important contribution to the study of aesthetics. When in 1759 Dodsley founded the *Annual Register*, Burke, to whom the plan of the book was due, became its editor, and remained a contributor until 1788. In 1761 he accompanied W. G. Hamilton ('Single Speech') to Ireland. 'Whiteboyism' was then breaking out,

and Burke sketched a fragment on the Irish penal laws. He always advocated a generous policy towards Ireland and her religion. On his return to London (1763) he mixed in literary society, and made lasting friendships with Johnson and other members of the Literary Club, to which he was himself admitted in 1764. His public life now began. Lord Rockingham, the chief of the remnant of the old Whig party, was called to office, and Burke became (1765) his private secretary. At this time Parliament was controlled by the 'king's friends,' a body of men who stood outside the old party groups, and in effect represented the parliamentary influence of the crown. They acted under the royal orders, and were able for a time to make the king's will supreme. The disturbances arising out of the election of Wilkes for Middlesex (1768), and his rejection by the House of Commons, marked the extent of the evil; and in *Thoughts on the Cause of the Present Discontents* (1770) Burke denounced the system, and demanded a return to regular party government. Then a greater problem tested his powers as a statesman and political theorist. His sane and generous views on the rebellion of the American colonies, and the disastrous policy of the ministry of Lord North (1770-82), found expression in his speeches on *American Taxation* (1774) and on *Conciliation with America* (1775), also in the *Letter to the Sheriffs of Bristol* (1777). In their union of sound statesmanship and lasting political wisdom these treatises form 'the most perfect manual in our literature for one who approaches the study of public affairs, whether for knowledge or for practice' (Morley's *Burke*). In 1774 he exchanged the constituency of Wexford, which he had represented

since 1765, for that of Bristol; but his independent attitude in regard to the restrictions on Irish trade and the relief of Catholics cost him the seat in 1780, and after that he sat for Malton (1780-94). In 1780 he brought forward his *Plan of Economical Reform*, designed to check extravagance in the administrative departments, and to abolish certain sinecures which supported the corrupt influence of the crown. Two years later Lord Rockingham returned to power, and Burke became paymaster-general; but in three months the ministry was dissolved by the death of Rockingham. Burke and Fox refused to serve under his successor, Lord Shelburne, and by an alliance with their old enemy, Lord North, formed the coalition ministry (1783) under the Duke of Portland, in which Burke was again paymaster-general. The defeat of the ministry (Dec. 1783) on Fox's, or rather Burke's, East India Bill closed Burke's brief tenure of office. (He was never in the cabinet.) His eloquent speech on the East India Bill was the prelude to his great crusade against the abuses of the E.I.C. The speech on the *Nabob of Arcot's Debts* (1785), and the orations which were crowned with the impeachment of Warren Hastings (1788), reveal his profound knowledge of India and his acute sensibility to her wrongs. The same reverence for established faiths and institutions urged him to write *Reflections on the French Revolution* (1790). In the proceedings of the National Assembly he saw a revolt against law and order which seemed to him to threaten an upheaval of the entire political systems of Europe. The publication of the *Reflections* proved to be an event of European importance, but in the Whig party it created a painful division, which was accen-

tuated by the *Appeal from the New to the Old Whigs* (1792). Burke broke off his friendship with Fox, and severed the political ties of a lifetime, but he carried with him a number of the Whigs. His hatred of the revolution grew almost to frenzy, and in the four *Letters on a Regicide Peace* (1796) sobriety and good taste gave place to violent declamation. In retiring from Parliament in 1794 he was granted pensions amounting to £3,700 a year, which his lifelong pecuniary troubles made welcome. He died on July 8, 1797, and was buried at Beaconsfield, in Bucks. As an orator, Burke was too discursive and profound to be popular. His writing, however, is essentially rhetorical, and his greatness lies, as Johnson says, in his 'copiousness and fertility of allusion,' splendour of imagination, and pregnancy of phrase. The union of justice and freedom, are to him the great ends of statesmanship. But he failed to appreciate the social phenomena which underlay the revolution, and in his respect for the past he was too apt to forget the abuses of the present. Among his other works are: *Hints for an Essay on the Drama* (c. 1465), *Account of the European Settlements in America* (1757), *Abridgment of Eng. Hist.* (1757), *Observations on the Present State of the Nation* (1769), *Address to the King* (1776), *Two Letters to Gentlemen in Bristol* (1778), *Letter to a Member of the National Assembly* (1791), *Observations on the Conduct of the Ministry* (1793), *Remarks on Policy of Allies* (1793), *Report on the Lords' Journal* (1794), *Thoughts and Details on Scarcity* (1795), *Letter to a Noble Lord* (1795). A collected edition of his works was begun in 1792 and finished in 1827; *Works and Correspondence* (8 vols. 1852); *Select Works*, Payne (3 vols. 1874-8), notable for its excellent intro-

ductions; *Letters, Tracts, and Speeches on Irish Affairs*, Matthew Arnold (1881); *Life*, by Sir J. Prior (1824); *Burke: a Historical Study* (1867), by John Morley, and also his *Burke* ('English Men of Letters,' 1879); *Life*, by G. Chadwick (1902); and Macaulay's *Essay on Warren Hastings* (1841).

Burke, JOHN (1787-1848), Irish genealogist, was born in Co. Tipperary, Ireland. In 1826 he first published his *Peerage*—a genealogical and heraldic dictionary, an edition of which appears every year. See Burke's *Landed Gentry*, s.v. 'Burke of Elm Hall.'

Burke, SIR JOHN BERNARD (1815-92), genealogist, second son of the above, was born in London, and called to the bar of the Middle Temple in 1839. He succeeded Sir J. Betham as Ulster king-of-arms (1853), and was knighted in 1854. Sir Bernard Burke edited for many years, in succession to his father (1847), the annual issue of the *Peerage*; and his most interesting works include *History of the Landed Gentry* (1843-9), *Family Romance* (1853), *Vicissitudes of Families* (1859), *Rise of Great Families* (1873).

Burke, ROBERT O'HARA (1820-61), Australian explorer, was born in Co. Galway, Ireland; the leader of an expedition across the Australian continent which left Melbourne in August 1860. Dissensions early arose, and at Cooper's Creek several members returned; but Burke and Wills pushed on, and reached the tidal waters of the Flinders R. They died of starvation on their way back, but had achieved the distinction of being the first white men to cross Australia from south to north. See *Burke and Wills's Exploring Expedition* (1861).

Burke, THOMAS HENRY (1829-82), son of William Burke of Co. Galway, was successively private secretary to Sir Thomas Redington, Edward Cardwell, Sir Robert

Peel, and Lord Carlingford, and was appointed under-secretary for Ireland (1869). In 1882 he and Lord Frederick Cavendish, chief secretary, were murdered in Phoenix Park, Dublin, by Carey, Fitzharris, Brady, and other members of the Irish Invincibles.

Burke, WILLIAM (d. 1798), born in London, was a kinsman of Edmund Burke, whom he assisted with the *Account of the European Settlements in America* (1757), and in 1759 came into notice by his *Remarks on the Letter to Two Great Men*—a reply to Lord Bath's letter to Pitt and the Duke of Newcastle. In 1765 he was made an under-secretary of state, but resigned the following year. He was member for Great Bedwin, Wiltshire, from 1766-74. Ruined by speculation in 1769, he went in 1777 to India, where he held several important appointments. He returned to England in 1793. Attempts have been made to prove his authorship of the letters of Junius. See Morley's *Edmund Burke*, MacKnight's *Life of Edmund Burke*, Walpole's *Memoirs of the Reign of George III.*, and Almon's *Anecdotes*.

Burke, WILLIAM (1792-1829), the accomplice of William Hare in the Edinburgh murders, was born at Orrery, Co. Cork, Ireland. In 1827 he lived in Tanner's Close, Edinburgh, in a lodging-house kept by Hare. The two men used to inveigle wayfarers into their house, make them drunk, and then suffocate them in such a manner as to leave no sign of violence on the bodies (this has subsequently been known as burking), with the object of selling them (for £8 to £10) for dissection to Dr. Robert Knox. Suspicion having been aroused, Burke and Hare were arrested; the latter turned king's evidence, and Burke was executed. See MacGregor's *History of Burke and Hare* (1884).

Burkhan-Buddha, a Tibetan mountain range, often regarded as the central section of the E. Kuenlun system, reaches an elevation of over 16,000 ft., and runs for more than 120 m. along the north edge of the Tibetan plateau in about 36° N. lat. See KUENLUN MOUNTAINS.

Burlamaqui, JEAN JACQUES (1694-1748), Swiss jurist, member of a family from Lucca that found refuge at Geneva. After travels in England and France, he became professor of law and magistrate at Geneva. His chief work, which had a great vogue, especially in England, was put into the *Principles of Natural Law* (2 vols. 1748-52), this being the English version (by Nugent) of *Principes de Droit Naturel* (1747) and *Principes de Droit Politique* (1751). A complete edition of his works appeared under the title *Principes du Droit de la Nature et des Gens* (8 vols. 1766-9; new ed. 5 vols. 1820). See Life in Senebier's *Histoire Littéraire de Genève* (1786).

Burleigh, BENNET, British war correspondent, was born in Glasgow. He fought in the American war, and was twice sentenced to death, and since 1882 has been on the staff of the *Daily Telegraph*. He was war correspondent during the first Egyptian war (1882), the French campaign in Madagascar, the desert campaign from Korti to Metammah, the Ashanti, Atbara, and Omdurman expeditions. His dispatches from S. Africa during the Boer war (1899-1902) were trustworthy and interesting. He acted as correspondent during the Russo-Japanese war. He published *Empire of the East* (1905).

Burleigh, or BURGHLEY, WILLIAM CECIL, LORD (1520-98), an English statesman, was born at Bourne, in Lincolnshire, the son of a wealthy squire. In 1547 the Protector Somerset made him master of requests, and subsequently his secretary; but

when Somerset fell, Burleigh was imprisoned for two months in the Tower. His merits were so conspicuous, however, that in 1550 he was appointed secretary of state, and shortly afterwards knighted. His domestic policy was salutary and enlightened. He assented to, without approving, Northumberland's scheme for altering the succession; and when Mary came to the throne he conformed to the Catholic religion, and became friendly with Cardinal Pole, although remaining at heart a Protestant. Consequently, on the accession of Queen Elizabeth, he was appointed chief secretary of state; and from 1558 till his death he practically guided the destinies of England. It was largely owing to Burleigh's sagacity that the reign of Elizabeth was so illustrious. In 1560 Burleigh went to Scotland as commissioner to end the war. His foreign policy was anti-Spanish. He desired to form a Protestant confederacy against the Catholic powers. The execution of Mary Queen of Scots he ceaselessly advised, as absolutely necessary for the safety of his own sovereign and country. He was created Baron Burghley in 1571, and (1572) Lord High Treasurer, which post he held until his death. He was buried in Westminster Abbey. From his eldest son came the Exeter branch of the Cecils, and from his second son the Salisbury branch. See the *Burghley Papers*, edited by Murdin (1759); the *Histories* of Froude and Lingard; Macaulay's *Essay* (1889); Camden's *Annals and Hist. of Elizabeth* (1635); the *Calendar of State Papers*; E. Nares's *Memoirs of Lord Burghley* (1828-31); M. A. S. Hume's *The Great Lord Burghley* (1898); and A. Jessopp's *William Cecil, Lord Burghley* (1904).

Burlesque (from Ital. *burla*, 'mockery,' 'jesting'), a composi-

tion treated in a way to excite laughter. The usual method is to set forth the subject in a ludicrous light, by emphasizing its incongruities, its oddities, its inconsistencies; but burlesque differs from satire in that it is neither inspired nor shaped by moral condemnation or *sæva indignatio*. Burlesque is closely allied with *burletta*, a comic opera interspersed with songs, corresponding with the entertainment styled in France a *vaudeville*. Although pure burlesque originated in the time of Aristophanes, modern burlesque, so called, was practically an Italian invention, its two greatest exponents being Berni and Gozzi. The best of English burlesques, far behind those of Italy, are Chaucer's *Rime of Sir Thopas*, Beaumont and Fletcher's *Knight of the Burning Pestle*, Buckingham's clever ridicule of the contemporary play-writing entitled *The Rehearsal*, Smith's *Rejected Addresses* (burlesques on the opening of Drury Lane Theatre, supposed to be written by famous writers of the time), and Butler's *Hudibras*. Scarron is perhaps the most distinguished French writer in this vein. The best burlesque ever written is the *Don Quixote* of Cervantes. There is a distinct note of burlesque in the comic operas of Sir W. S. Gilbert. Burnand's burlesques (*Strapmore, The Colonel, Black-eyed Susan*) also deserve mention here. One of the varieties of burlesque is parody, a favourite form of modern literary composition. See Hamilton's excellent collection of *Parodies*; Adams's *Book of Burlesques*; and *Burlesque Plays and Poems*, in Morley's 'Universal Library.'

Burlingame, ANSON (1820-70), American diplomatist, was born in New York State, and practised as a lawyer in Boston. He was sent by Abraham Lincoln to China as ambassador (1861); and on his return (1867) Prince Kung, regent

of the empire, requested him to act as special Chinese envoy to the United States and the great European powers. His success was marked by the treaty (1868) in which China first officially accepted the principles of international law. He died in St. Petersburg.

Burlington. (1.) City, Iowa, U.S.A., the co. seat of Des Moines co., on the Mississippi, 166 m. N. by W of St. Louis. It is the seat of Burlington University, and is a prosperous manufacturing town and an important railroad centre. Pop. 24,000. (2.) City and port of entry, Burlington co., New Jersey, U.S.A., on Delaware R., nearly opposite Bristol, 20 m. N.E. of Philadelphia; seat of Burlington Episcopal College. The city has an extensive industry in garden and dairy produce, and manufactures boots and shoes. Pop. 8,000. (3.) City, Vermont, U.S.A., the co. seat of Chittenden co.; situated on the E. shore of Lake Champlain, 36 m. W.N.W. of Montpelier. It has an extensive commerce, especially in Canadian lumber; also valuable marble and stone quarries, and a great variety of manufactures. It is the seat of the University of Vermont (1791), and the State Agricultural College is also situated here. Pop. 21,000. (4.) See BRIDLINGTON.

Burlington House, in Piccadilly, London, was erected about 1665. The Royal Academy, in March 1867, acquired a lease of it, and of a portion of the garden behind. Exhibition galleries and schools were built on the garden site, and opened in 1869, further additions being made in 1884. In the upper story which was then added to the old house, diploma works, the Gibson statuary, and other works of art are stored. The new wings of Burlington House, built and owned by the government, are now the head-

quarters of the following societies: Royal (since 1857), Antiquarian, Astronomical, Linnean, Chemical, and Geological.

Burlus, LAKE, a shallow lake in the Nile delta, E. of Rosetta, Egypt; it is 40 m. long by 16 m. wide. It abounds in fish.

Burma, an important adjunct of the British Indian empire, is bounded on the N. by Assam and China; on the E. by Chinese territory, Annam, and Siam; on the S. by Siam; the Bay of Bengal forms the W. boundary, except at the N.W. corner, where the province touches the petty states of Tipperah and Manipur. Burma covers an area of about 236,500 sq. m., including the native states, or without them of about 168,500 sq. m. A semicircle of mountain ranges marks the N. frontier, and the country is intersected by hills which trend generally N. and S. On the S.W. are the Arakan (with the Blue Mountain at the N. extremity) and the Tenasserim hills. Parallel with the Arakan hills is the range of mountains called the Pegu Yoma. The two principal rivers are the Irawadi and the Salwin. The former, navigable beyond Bhamo, about 900 m. from the sea, traverses the valley of the Arakan and Pegu Yoma, spreads itself into a gigantic delta, and finds an outlet in the Bay of Bengal. The latter flows into the Gulf of Martaban. Most of the other fertilizing streams of Burma also flow S. The coast-line is much indented, and is studded with islands (Mergui Archipelago, etc.).

There can be no doubt as to the vastness of Burma's mineral resources. Petroleum is found on the banks of the Irawadi. There are important amber mines and marble quarries. In the ruby mines, situated about 60 or 70 m. from Mandalay, some of the finest specimens of these precious stones have been found.

Gold, silver, and coal have been discovered in the country towards the N.E., but are not yet exploited. Forests cover an area of nearly 29,000 sq. m.; a long way the most valuable timber is teak. Rice forms the staple food of the inhabitants, and large quantities are exported. Other important products are wheat, cotton, and tobacco. Total exports reach £9,000,000, and imports £8,000,000 per annum. The rivers teem with fish and aquatic birds. The elephant, rhinoceros, tiger, leopard, and many species of deer haunt the jungles, as well as jungle and pea fowl, pheasants, partridges, and quails.

Akyab, Maulmain, and Rangoon are the chief seaports. Internal communication is chiefly carried on by water, but two lines of railway have their terminus at Rangoon: the one extends to Prome, on the Irawadi; the other stretches *via* Pegu to Mandalay, and N. to Myitkyana. A branch extends into the valley of the Upper Salwin, and is intended in time to reach the Chinese frontier.

Burma is under the political control of the government of India, and is ruled by a lieutenant-governor. For administrative purposes the province is divided into two parts—Lower and Upper. Lower Burma (cap. Rangoon) covers an area of nearly 81,200 sq. m.; Upper Burma (cap. Mandalay) has an area of nearly 87,500 sq. m.; native states, about 68,000 sq. m. Though no part of Burma can be said to be under native rule, the petty chieftains in the Shan States and in the Chin, Arakan, and Kachin hills have considerable influence over their sometimes turbulent followers.

The Burmese are Buddhists. At Mandalay there is a small community of Mohammedans. There is a college at Rangoon (over 100 students). A large percentage of the people, beyond the

priesthood, have passed through the monasteries scattered over the country, and are proficient in native ecclesiastical lore. A conservative, light-hearted race, callous of life and jealous of their faith, the people are ordinarily of a kindly disposition. Under provocation they are apt to become vindictive and very cruel.

In ancient times civil war, conflict with Siam, and invasion by Chinese hordes were frequent. The first collision, on Burmese soil, between European powers, took place about the middle of the 18th century, when the French, as partisans of the Peguans, opposed the British, as supporters of Burman rule. Having assisted in the consolidation and extension of Burmese empire, the British found themselves called upon to repel an invasion of Bengal by Burmese troops, and this led to the first Burmese war, which began in 1824 and lasted two years. Peace was unbroken until 1852, when political and commercial complications again drove the British into war, which, however, terminated in less than twelve months. As a result the whole of the territory now known as Lower Burma passed into the possession of the crown. Upper Burma maintained its independence until January 1886, when gross misrule and barbarous cruelties led to a war (1885) with the Indian government, and to the deposition of Thebaw and the annexation of his kingdom.

Temples, tombs, and other monuments of archæological and historical interest exist at Pagan, Ava, Sagaing, Mandalay, Tagaung, Prome, Pegu, Toungoo, Maulmain, and many parts of Arakan. Some striking specimens of Buddhist religious architecture at Pagan have been much shattered by earthquakes. Efforts are being made for the conservation of the ancient monuments. Pop. of Lower Burma, 5,500,000; of

Upper Burma, 4,000,000; native states, 1,000,000. Total, 10,500,000.

Language and Literature.—

Burmese, an isolating language, is composed of mere roots incapable of composition or inflection, and altered by affix and prefix into different parts of speech. It prevails throughout Burma, except in coastal villages where Talaing is taught in Buddhist monasteries. The alphabet, consisting of ten vowels and thirty-two consonants, is a circular variety of the ancient Deva Nagri, introduced from Ceylon (450 A.D.) by the Buddhist missionary Buddhagosa ('Voice of Buddha'). Buddhist doctrine, at first oral, was subsequently written in Pali, the language of the sacred books. Burmese is akin to the Tibetan tongue, while Talaing has been wrongly connected with the Kolarian group of Central India—the former being soft and labial, as Italian; the latter harsh and guttural, as Arabic. The order of words in Talaing is natural, in Burmese inverted. Thus, Csoma de Körös, in his Tibetan grammar, gives the order of words in the phrase 'in a book seen by me' as 'me by seen book a in.' Burmese is monosyllabic, except in words of Pali origin, and is written from left to right, without any division between the words. The symbol '5' is used before beginning an epistle, alluding to the five commandments (*Pegnytseng*), supposed to be borne in mind by the writer. Many words of similar spelling and slightly different pronunciation render the language difficult of acquisition. Sex is indicated by an affix, and vowels combined with consonants by symbols. In combining a noun and a numeral the genus is added. Thus, 'two oxen' is expressed, 'oxen two animals.' Burmese literature is divided into sacred and secular, the for-

mer written in Pali, the latter in Burmese. The two great metaphysical works of Indian origin are the *Bee-da-gat thoon-bon*, or *Pitakatayan* (The Three Baskets), and the *Baideng*. The former contains the three great divisions of the Buddhist scriptures, and is voluminous, being made up of *Thuttan* (The Rule), sermons of Gautama; *Winiya* (Discipline), rules for the priesthood; and *Abhidhamma* (Pre-eminent Truths), expressed in short dogmatic sayings. The *Baideng*, in four parts, one of which has been lost, treats of mathematics and astronomy, or rather astrology. The secular writings comprise chronological history, medicine, topography, ballads, and romances purer in sentiment than those of India. The drama, a national institution, is immensely popular. The dialogue is chiefly recitative, and solos, choruses, and dancing are interspersed, the music being sweet and attractive. Burmese war-boat songs are stirring and lively, the steersman (*pai-neng*) delivering the recitative, and the crew joining in the refrain, to which their roars keep time. Books, composed of leaves of the Palmyra palm joined at the ends by string, are bound between wooden covers, gilt, and lacquered in coloured devices. The letters are engraved with an iron stylus, and rendered visible by means of a mixture of charcoal and fragrant gum, the latter acting as a preservative against insects. See Fytche's *Burmah, Past and Present* (1878); Wheeler's *History of India and Burma* (1880); *The British Burma Gazetteer* (1880); Mason's *Burma: its People and Productions* (1882); Phayre's *History of Burmah* (1883); Murray's *Handbook for India and Burma* (1891); Forchhammer's *Notes on the Languages and Dialects of Burma* (1884); Slack's *Manual of Burmese* (1888); *Anglo-Burmese*

Grammatical Reader (1889); St. John's *Burmese Reader* (1894); Judson's *English and Burmese Dictionary* (1894); Sir J. G. Scott's *Burma* (1907); and O'Connor's *Mandalay and other Cities of the Past in Burma* (1907). The most comprehensive work on the subject is Alleyne Ireland's *Province of Burma* (1908).

Burmann, a learned Dutch family, of whom the most distinguished members were FRANZ BURMANN (1628-79), theologian, born at Leyden. He wrote several commentaries on books of the Old Testament. His son, PETER BURMANN THE ELDER (1668-1748), a famous member of the Dutch philological school, was born at Utrecht. He became professor of rhetoric and history at Utrecht in 1696, later of Greek literature and politics, and in 1715 professor of rhetoric at Leyden. His works, chiefly editions of the Latin classics, include *De Vectigalibus Populi Romani* (1694; new ed. 1737), *Sylloge Epistolarum* (1727), and editions of Horace (1699), Petronius (1709), Velleius Paterculus (1719), Quintilian (1720), Justin (1722), Valerius Flaccus (1724), Ovid (1727), *Poetæ Minores* (1731), Suetonius (1736), Lucan (1740).—PETER BURMANN THE YOUNGER (1714-78), philologist, nephew of the preceding, born in Amsterdam, was professor at Franeker (1736-44), and at Amsterdam (1744-77). He published *Anthologia Veterum Latinorum Epigrammatum* (2 vols. 1759), besides editions of Virgil (1746), Aristophanes (1760), Claudian (1760), Propertius (1780), etc.—JOHANN BURMANN (1706-99), botanist, brother of Peter the younger, wrote *Thesaurus Zeylanicus* (1737), *Rariarum Africanarum Plantarum Decades* (1738-9), *Flora Malabarica* (1769), *Index alter in omnes Tomos Herbarii Amboinensis Rumphii* (1769).

Burn, AMOS (1848), English chess-player, was born at Hull.

He has taken a prominent part in the international tournaments since 1886, winning those of Nottingham (1886), Amsterdam (1890), and Cologne (1898) outright. He is one of the finest English amateur chess-players of the day.

Burn, RICHARD (1709-85), English legal writer, was vicar of Orton, in Westmorland (1736-85). He wrote *The Justice of the Peace and Parish Officer* (1755; 29th ed. 1845), a book of great value; *Ecclesiastical Law* (1760; 9th ed. 1842); *Hist. of Westmoreland and Cumberland* (1771); and *Hist. of the Poor Laws*.

Burn, WILLIAM (1789-1870), Scottish architect, practised very successfully first in Edinburgh (1814), his native town, and then in London (1844). He made his reputation by public buildings—e.g. St. John's Church and the Melville Monument, Edinburgh; but more by domestic architecture—e.g. Riccarton, Niddrie, Tynninghame, and other mansions in many British counties.

Burnaby, FREDERICK GUSTAVUS (1842-85), English cavalry officer and traveller. A man of enormous physical strength, great size, and delightful manner, he was especially distinguished by his extraordinary intrepidity and love of perilous adventure and of battle. His unusual knowledge of languages helped him in many adventurous journeys. He travelled in equatorial and southern America; acted as *Times* correspondent with the Carlist forces in 1874; in the following year followed Gordon to the Sudan; attempting, that winter, to reach Central Asia, he 'rode to Khiva,' where he was stopped by a wire from the Duke of Cambridge. In 1876 he went 'on horseback through Asia Minor' to study Turkish administration; commanded, in 1877, a Turkish brigade in the war with Russia; engaged in adventurous aeronautic expeditions,

one of which, in 1882, was 'a ride across the Channel;' was wounded at El Teb (1884) under Graham; and in 1885 was killed at Abu Klea, where he fought as a volunteer. See *Ride to Khiva* (1876); *On Horseback through Asia Minor* (1877); *A Ride across the Channel* (1882); also Ware and Mann's *Life* (1885).

Burnand, SIR FRANCIS COWLEY (b. 1836), English dramatic author, and editor of *Punch* (1880-1906). He is the author of nearly one hundred dramatic pieces, chiefly burlesques and comedies. 'Mokeanna,' his first contribution to *Punch* (1868), was followed by the 'Happy Thoughts' series, containing many amusing hits on leading novelists—such as 'Strapmore,' a parody on Ouida's *Strathmore*, and issued since in book form. Among his best-known dramatic productions are *Black-eyed Susan*, *The Colonel*, and the libretto of Sullivan's opera *The Chieftain* (1894). He was knighted in 1902. In 1904 appeared his *Records and Reminiscences*.

Burne, SIR OWEN TUDOR (1837-1909). As private secretary to two Indian viceroys, as secretary for many years of the Political and Secret Department of the India Office, and as a member of the Secretary of State's Council, Sir Owen Burne was the official confidant of several eminent Victorian statesmen. Born at Plymouth, he was given a commission in the army. He reached Calcutta in the Mutiny year, and as a young subaltern was in fifteen of the later actions, mostly in Oudh, including the final siege and capture of Lucknow. He rendered conspicuous service, and was recommended for the V.C. In 1860 he became military secretary to the commander-in-chief, Sir Hugh Rose (afterwards Lord Strathnairn), and in 1868 private secretary to the viceroy, Lord

Mayo, who was assassinated in February 1872 at Port Blair. He published his *Reminiscences* in 1907.

Burne-Jones, SIR EDWARD, BART. (1833-98), British artist, of Welsh descent, was born in Birmingham. A fine classical scholar, he went to Oxford (1853) to study for the church. A sudden awakening of his genius came from his friendship with his fellow-undergraduate William Morris, and with D. G. Rossetti. Thenceforth he devoted himself absolutely to art. At first he studied (1856) under Rossetti, and worked with him on the walls of the Oxford Union. Together with Rossetti and Morris he has profoundly affected the renaissance in England of decorative art and the artistic crafts. He designed stained-glass windows for churches in England, America, India, Germany, France; and the mosaic decorations in the apse of the American Church, Rome, are his work. The earlier paintings show the influence of Rossetti; but individuality was asserted in *The Merciful Knight* (1864). During a visit to Italy in 1862 with Ruskin, Burne-Jones learnt much from Botticelli and something from Mantegna. His draughtsmanship is fine and clear; his composition shows indefatigable scholarship and poetic fancy; his typical figures of brooding melancholy symbolize the struggle of the human soul with destiny; his colour is rich and suggestive, his finish elaborate and expressive. An associate (1864) of the Royal Society of Painters in Water Colours, he resigned (1870) owing to a misunderstanding, and later was re-elected. Down to about 1875 he worked principally in water colours, but after that date most of his pictures were done in oils. In 1885 he was elected A.R.A., but exhibited one picture only, and resigned in 1893. He was created

baronet in 1894. Among his paintings are *The Mirror of Venus, Pan and Psyche, The Beguiling of Merlin* (1877), *Perseus and Andromeda, The Days of Creation* (1877), *Love among the Ruins*, and *The Briar Rose* (1890). The Tate Gallery possesses *King Cophetua and the Beggar Maid* (1884); Manchester, the *Sibylla Delphica*; Glasgow, *The Brazen Tower*; Liverpool, *Sponsa di Libano*; Birmingham, *The Star of Bethlehem* (1891), thirty cartoons for windows, and several studies and sketches. In 1903 were published a series of twenty-five designs by him entitled *The Beginning of the World*. See 'Sir Edward Burne-Jones,' by Julia Cartwright, in *Art Annual* (1894); Malcolm Bell's *Burne-Jones: Life and Work* (new ed. 1901); *Memorials of Burne-Jones*, by G. B. J. (1904); Ruskin's *The Art of England* (1884), and *The Mythic Art* (1883); Alexandre's *Essay on Sir E. Burne-Jones* (1907); and *Life* by Malcolm Bell (1909).

Burnell, ARTHUR COKE (1840-82), English Sanskrit scholar, born at St. Briavels, Gloucestershire. He was in the Indian civil service from 1857-68, and afterwards became an authority on Sanskrit and S. Indian dialects, his principal work being *Classified Index to the Sanskrit MSS. in the Palace at Tanjore* (1880). He has also published *Catalogue of a Collection of Sanskrit MSS.* (1869), *The Law of Partition and Succession* (1875), *Brâhmanas of Sâmaveda* (1873-8), *Handbook of S. Indian Palæography* (1874), *The Aindra School of Sanskrit Grammarians* (1875). A translation of the *Ordinances of Manu* appeared in 1884.

Burnes, SIR ALEXANDER (1805-41), traveller in Asia, a native of Montrose, Scotland, entered the Indian army in 1821. His knowledge of languages led to his being employed as interpreter, then entrusted with special mis-

sions by the Indian government. In 1832-3 he explored in disguise Afghanistan, Bokhara, and Persia, and published *Travels into Bokhara* (1834), which proved very popular. In 1839 he was appointed political resident in Kabul, but two years later fell a victim to the Afghan mob. See Sir J. W. Kaye's *Lives of Indian Officers* (1889).

Burnet. Three perennial plants bearing the name of burnet occur wild in Britain. The common burnet (*Sanguisorba officinalis*) occurs in damp meadows, and bears heads of purplish flowers, each with four stamens, in late summer; the common salad burnet (*Poterium Sanguisorba*) occurs in dry meadows, and bears heads of crimson flowers. The prickly salad burnet (*P. muricatum*) is much like the last named. All three plants have pinnate leaves, serrated at their margins, but those of the salad burnets have the taste of cucumber.

Burnet, GILBERT (1643-1715), bishop of Salisbury, was the eldest son of Robert Burnet of Crimond, Aberdeenshire, and was born in Edinburgh. In 1665 he was ordained by the bishop of Edinburgh, and appointed minister of the parish of Saltoun in East Lothian, where he remained until 1669, when he was elected to the chair of divinity in the University of Glasgow. It was at this time that he declined the offer of a Scottish bishopric—an offer which was again made to him when he published (1672) his *Vindication of the Authority, Constitution, and Laws of the Church and State of Scotland*. In 1674 he proceeded to London, and was appointed chaplain at the Rolls Chapel and lecturer at St. Clement's. The first two volumes of his *History of the Reformation of the Church of England* appeared in 1679-81, but the third volume was only published the year before his

death. Throughout his life Burnet exercised a great influence on British politics. His fearless criticism of Charles II. and his championship of Lord William Russell so aroused the displeasure of the king that he deprived Burnet of both his chaplaincy and his lectureship. The revolution of 1688 had no stronger supporter than Bishop Burnet, who at length accepted the episcopal dignity under William of Orange, being consecrated bishop of Salisbury in 1689. His predilections were strongly Whig and anti-Catholic. In 1701 he was chairman of the committee for the final consideration of the Bill of Rights. He supported the Act of Toleration, and opposed the 'High Church and Sacheverell' party; but his unvarying loyalty to the Church of England was nowhere more practically manifested than in his organization (1704) of Queen Anne's bounty. He was also a warm supporter of the policy of carrying out a legislative union between England and Scotland. His most famous achievement, *Bishop Burnet's History of his own Time*, was not published until 1724-34, and even then not without mutilations; the first complete version was issued by Dr. Routh at Oxford, in 6 vols., in 1823 (newer ed. 1897). See *Lives* by Le Clerc, Flaxman, and Clarke and Foxcroft (1907), Wyon's *Reign of Queen Anne*, and Guizot's *Notice sur Burnet*—a masterly criticism.

Burnet, JOHN (1784-1868), engraver and painter, was born at Musselburgh, near Edinburgh. He went to London (1806), where he was welcomed by Wilkie, illustrated the *Novelist*, and executed large plates of Wilkie's works—e.g. *The Blind Fiddler* (1806-10). He painted many landscapes; his *Greenwich Pensioners* is well known. Among his publications are *A Practical Treatise*

on *Painting* (1822-7), *Rembrandt and his Works* (1849), and, with Allan Cunningham, *Life and Works of Turner* (1852).

Burnet, THOMAS (?1635-1715), master of Charterhouse, is remembered for two books, eloquent and fine in style, but fanciful in matter—*Telluris Theoria Sacra* (1681-9), an attempt to account for the shape of the earth as a gigantic egg whose shell was crushed at the deluge; and *Archæologiæ Philosophicæ* (1692), an attempt to reconcile this theory with Gen. i. See *Life* by Heathcote, prefixed to 7th ed. of *Theoria* (1759).

Burnet Moths, the name given to the species of the genus *Zygæna*, which are moths remarkable for their bold colouring, the wings being usually spotted and marked with green, red, and black. The caterpillars are hairy, and the spindle-shaped cocoons are attached to vertical blades of grass or stems of plants. There are four British species of burnet moth, the commonest being the six-spotted burnet (*Zygæna filipendula*).

Burnett, FRANCES HODGSON (1849), English novelist, spent her early life in Manchester, and there gained her knowledge of Lancashire scenes and dialect. In 1865 her parents removed to the United States, and Miss Hodgson began to write stories for the American magazines. She was made famous by her story 'That Lass o' Lowrie's,' published in *Scribner's*, and then in book form (1877). It was followed by *Haworth's* (1879), and *A Fair Barbarian* (1881). *Little Lord Fauntleroy* appeared in 1886, and both as novel and as drama achieved exceptional success. Other novels are *A Lady of Quality* (1896; dramatized), *His Grace of Ormonde* (1897), *The Making of a Marchioness* (1901), *The Little Unfair Princess* (1902), and *The Dawn of a To-morrow* (1907).

Burnett, GEORGE (1822-90), Scottish genealogist, born in Aberdeenshire, was called to the Scottish bar (1845), but gave up law for genealogical and heraldic studies, and was appointed Lyon king-of-arms (1866). He edited several volumes of *Exchequer Rolls of Scotland, 1264-1507* (1881-90), and wrote *Popular Genealogists, or the Art of Pedigree Making* (1865), *The Red Book of Menteith Reviewed* (1881), *Treatise on Heraldry, British and Foreign* (with Rev. John Woodward, 1891), and other works.

Burnett, JAMES. See MONBODDO.

Burney, CHARLES (1726-1814), English musician, was born at Shrewsbury, and became a pupil (1744-7) of Dr. Arne; organist at Lynn (1751-60), and at Chelsea Hospital (1783-1814). Wrote a *History of Music* (1776-89).

Burney, CHARLES (1757-1817), English classical scholar, son of the preceding, was born at Lynn, Norfolk. He took orders, and held several livings. Burney wrote in the *Monthly Review* and *London Magazine*, of which he was editor, and published several works, including *Tentamen de Metris Æschyli* (1809), *Philemonis Lexicon Technologicum* (1812), and *Epistolæ ineditæ R. Bentleyi* (1807). He collected a valuable library, which was purchased for the British Museum by the state; he was considered one of the chief exponents of English scholarship. See Mme. D'Arblay's *Memoirs of Dr. Burney*.

Burney, FRANCES, MME. D'ARBLAY (1752-1840), born at King's Lynn. In 1760 she went to London, where she met the most cultured people of the day, including Johnson, Garrick, and the Thrales. *Evelina, or the History of a Young Lady's Entrance into the World*, was published anonymously in 1778. It achieved an immediate success. *Cecilia, or the Memoirs*

of an Heiress, followed in 1782, with even greater *éclat*. In 1786 she became second keeper of the robes to the queen; but her health broke down under the restraint of court life, and she retired on a pension in 1791. Two years later she married General D'Arblay, a French refugee. In 1795 she produced *Edwy and Elgiva*, a tragedy, which proved a failure. *Camilla, or a Picture of Youth*, her third novel, appeared in 1796, and *The Wanderer, or Female Difficulties*, her last, in 1814. Much of her married life was spent in France (1802-12); thereafter she lived chiefly in England. Her *Diary* (published with her letters, 5 vols., in 1842, and 2 further vols. in 1846) forms an almost continuous narrative from 1778 to 1800, and, in its brilliant sketches of court life and society, exhibits at their best her signal powers of satire and observation. The simplicity of theme which marked *Evelina* gave way in *Cecilia* to a more ambitious but less successful plot; and the fresh manner of her earliest novel deteriorated more and more with each successive work, under the influence of Dr. Johnson's literary style, till in the *Memoirs of Dr. Burney* (1832) all is stilted rhetoric and pompous sentiment. In taking the satire of domestic life as the theme of her novels she marked a new departure, and became the precursor of Miss Edgeworth and Jane Austen. In 1890 Mrs. Ellis edited Fanny Burney's *Early Diary, 1768-78*, 2 vols. See Boswell's *Life of Johnson* (ed. Birkbeck Hill, 1886); Macaulay's *Essay on Madame D'Arblay; Evelina and Cecilia* (1881 and 1882), with introductions by Annie Raine Ellis; L. B. Seeley's *Fanny Burney and her Friends* (1895); *Diary and Letters of Madame d'Arblay*, ed. C. Barrett and Austin Dobson (6 vols. 1905); and Constance Hill's *The House in St. Martin's*

Street: Being Chronicles of the Burney Family (1906).

Burnham, FREDERICK RUSSELL (1861), American scout, was born on the frontier of Minnesota. Going out to S. Africa in 1893, Burnham was enlisted in the service of the British S. Africa Company, and was one of the handful of men under Major Wilson who were intent on the capture of Lobengula, the Matabele king. Burnham, however, made his way through the Matabele back to the main body to hurry up reinforcements. In the second revolt of the Matabele (March 1896) Burnham again took service with the Chartered Company, and distinguished himself by shooting the high priest of the Kaffirs, M'limo, who had instigated the revolt. Burnham next appeared in the gold fields of Klondike. But almost before he had settled in Alaska, Lord Roberts summoned him to S. Africa for special service in the Boer war (1899-1902). He destroyed the railway between Johannesburg and Pretoria. When Broadwood's convoy was captured at Sanna's Post (March 31, 1900), Burnham was taken prisoner, but escaped. His last exploit was to destroy the railway east of Pretoria, which prevented the Boers from getting their British prisoners away by train.

Burnham Beeches, a picturesque part of an ancient forest in Buckinghamshire, England, 5 m. N.W. of Slough. In 1900 some fine patches of the ancient forest were purchased by the corporation of London for a public recreation ground. Burnham Beeches was a favourite resort of the poet Gray. Dropmore, a seat 2 m. N.W. of Burnham village, is noted for its fine collection of Coniferæ, and for a magnificent avenue of cedars of Lebanon, both planted by Lord Grenville. See Sheahan's *Hist. of Buckinghamshire* (1862).

Burnie, a port on the shores of Emu Bay, Tasmania, the terminus of the Western Ry., connecting with Launceston and Hobart, about 90 m. W.N.W. of Launceston. Pop. 1,750.

Burning. See COMBUSTION.

Burning Bush, a popular name given to several deciduous and evergreen ornamental shrubs of the genus *Euonymus* and order Celastrineæ, with deep scarlet and purple flowers. They are natives of temperate regions, and are propagated by cuttings in autumn or grown from seed.

Burnley, mrkt. tn., munic., parl., and co. bor., E. Lancashire, England, on L. & Y.R., 21 m. E. of Preston. Area, 4,015 ac. The town was incorporated in 1861; parl. bor. (returning one member to the House of Commons) in 1867; co. bor. in 1889; and other townships amalgamated with the township of Burnley in 1894. The public buildings include Victoria Hospital, mechanics' institution and school of science, and technical school. The town has grown within recent years from a small place to a great manufacturing centre. There are fine public parks and numerous recreation grounds. Cotton spinning and weaving, iron-founding, the making of weaving machinery, coal-mining, and stone and slate quarrying are among the chief industries of town and neighbourhood. The Leeds and Liverpool and other canals facilitate transport. Pop. 108,000.

Burnouf. (1.) JEAN LOUIS (1775-1844), French philologist, born at Urville, became assistant professor of rhetoric at the Lycée Charlemagne in Paris, and was soon afterwards presented to the chair of rhetoric at the Lycée Imperial, which he held till 1826. He was professor of Latin rhetoric at the Collège de France and president of the Ecole Normale (1811-22). From 1830-6

Burnouf was inspector-general of studies, and on his retirement was made librarian of the university. The *Méthode pour Etudier la Langue Grecque* (1814) and *Méthode pour Etudier la Langue Latine* (1840) are his most important works. (2.) His son EUGÈNE (1801-52), born at Paris, devoted himself to the study of Oriental languages; in 1826 published an *Essai sur le Pali*, and from that date was a constant contributor to the *Journal Asiatique* and the *Journal des Savants*. He is remembered for his deciphering of the Zend MSS. brought to Paris by Anquetil Duperron, his lithographed edition of the *Vendidad-Sadé* (1829-43), and his *Commentaire sur le Yaçna* (1833-4), which first made Zoroastrianism known to the West. Other works include an edition of the *Bhâgavata Purâna* (Sans. and Fr., 1840), *Introduction à l'Histoire du Bouddhisme* (1845), and *Lotus de la Bonne Loi* (pub. posthumously, 1852). In 1832 he succeeded Chézy as professor of Sanskrit in the Collège de France, and the same year was elected a member of the Académie des Inscriptions. See *Lives* by Barthélemy Saint-Hilaire (1892) and Berger (1893). (3.) EMILE LOUIS (1821), Orientalist, cousin of the preceding, was born at Valognes (Manche). He published *Méthode pour Etudier la Langue Sanscrite* (1859), *Dictionnaire Classique Sanscrit-Français* (1863-4), *La Mythologie des Japonais d'après de Koku-si-Ryakel* (1875), *Mémoires sur l'Antiquité* (1879), *Les Chants de l'Eglise Latine* (1887), and *The Science of Religions* (1885; Eng. trans. 1888).

Burns, SIR GEORGE. See INVERCLYDE, LORD.

Burns, JOHN (1858), English statesman and M.P. for Battersea (London) since 1892, began his public career as an aggressive leader of the extreme labour movement, and

a prominent member of the Social Democratic Federation. In 1886 he was prosecuted for using 'seditious language and inciting to riot,' but was acquitted. The assertion of the right to hold public meetings in Trafalgar Square in defiance of the public authorities brought him (1887) a short term of imprisonment. He was, in those days, the head and front of every strike or lock-out or labour agitation of any importance in the country, and figured with special prominence in the London dock strike of 1889. He advocated the nationalization of land, railways, and mines. As a boy he worked in a candle factory and an engine works. He was working at a printing-machine establishment when he was first elected to the London County Council in 1889. In December 1905 he was appointed President of the Local Government Board in Sir Henry Campbell - Bannerman's administration, with a seat in the cabinet, and retained that office in Mr. Asquith's government of 1910. He was largely responsible for the Housing and Town Planning Act, 1909. Of recent years, without losing touch with the life and opinions of the working classes, he has shown a sense of the need for national discipline and organization which has given him the confidence of all serious citizens.

Burns, ROBERT (1759-96), Scottish poet, was the son of a gardener, and was born at Alloway, near Ayr, Scotland, on Jan. 25, 1759. William Burnes left Alloway, where he had tried market-gardening, when his son Robert was about seven, and took the small farm of Mount Oliphant, about two miles distant. Burnes employed no servant, and his sons had to work incessantly in the fields: the hardship of his early life broke Robert's health, and produced a tendency to hypochondria.

The farm at Mount Oliphant was a complete failure; and in 1777, when the poet was eighteen, the family removed to the farm of Lochlea, in the parish of Tarbolton. Before this time a juvenile love affair and the bitterness of his lot had inspired him to poetical composition. At Lochlea life was somewhat easier. Robert read less, but mixed more freely in society, became a noted philanderer, and wrote verses on his loves; he was also an active member of a bachelors' club or debating society. After a brief stay in the town of Irvine, for the purpose of learning flax-dressing, where he met 'acquaintances of a freer manner of thinking and living than he had been used to,' he returned to farming at Lochlea, and devoted himself more assiduously to poetry.

On their father's death (in difficulties), in 1783, Robert and Gilbert took the farm of Mossgiel, in the parish of Mauchline, two or three miles from Lochlea. But for them, as it had been for William Burnes, farming was a losing game. Industry was of no avail against adverse circumstances, and Robert submitted more and more readily to his destiny as a poet. The song *Mary Morison* was a product of the Tarbolton period. The *Epistle to Davie* was the prelude to a brilliant period of poetry at Mossgiel, which in a year or two furnished the contents of that treasure of the bibliophile, the Kilmarnock Burns. The birth of an illegitimate child brought Robert under ecclesiastical discipline, and an inherited liberalism in theology impelled him to use his talent in the controversy, which was then at its height, between 'Old Lights' and 'New Lights' (afterwards Moderates and Evangelicals) in the Church of Scotland. The result was a series of satires which brought him the friendship

of a number of the liberal clergy, and, being circulated in manuscript, made for him a wide reputation for latitudinarianism. The poet had now reached his intellectual prime. To this period belong *The Twa Herds*, *Holy Willie's Prayer*, the *Address to the Unco Guid*, *The Holy Fair*, and the *Address to the Deil*. To the winter of 1785-6 are assigned the last of these, and also *To a Mouse*, *Hallow E'en*, *Man was made to Mourn*, *The Cottar's Saturday Night*, *The Jolly Beggars*, *To James Smith*, *The Vision*, *The Author's Earnest Cry and Prayer*, *The Twa Dogs*, *The Ordination*, and *Scotch Drink*.

In the spring of 1786 it became necessary for him to acknowledge as his wife Jean Armour, a Mauchline girl, and in order to support her he thought of going to Jamaica to seek his fortune. To procure money for his passage, he collected the best of his work into a volume which was published at Kilmarnock in July of the same year. The Armours had previously cast him off—he was not considered socially good enough for the daughter of a master mason—and, according to tradition, he made love to and would have married, but for her sudden death, Mary Campbell, a Highland servant, whose personality has been a will o' the wisp to his biographers, and who was the subject of some of his most exquisite poems. The publication of the Kilmarnock volume changed the current of his life. The gentry of Ayrshire were proud to patronize the author; the Jamaica venture was abandoned with the birth of his son by Jean Armour; Dr. Blacklock, the blind poet and critic, eulogized the poems in the *Edinburgh Magazine*; and before the year was out, Burns, who had made £20 by the sale of 600 copies of his book, was in Edinburgh ar-

ranging for the publication of a second edition.

He was welcomed warmly by two social sets—the literary and fashionable circle (including the Duchess of Gordon and the Earl of Glencairn), among which were Dugald Stewart, Blair, Robertson, Henry Erskine, Henry Mackenzie, and Lord Monboddo; and another circle of lawyers' apprentices and dissolute advocates, who made for him a social habitat of the same order as he had frequented in the Tarbolton bachelors' club and the Ayrshire masonic lodges. In the society of his intellectual peers, he found himself at once at home, behaved with native dignity, and impressed all with the strength of his personality and the originality of his mind. The first Edinburgh edition of his poems was published in 1787 by subscription, and ultimately he gained some £500 by it. Various proposals for a career were made to him, but he decided to go back to farming. While waiting for a settlement with his publisher, Creech, he spent the latter part of the year 1787 in a series of tours through Scotland, and made a second short stay in Edinburgh, where, the novelty of the ploughman-poet having worn off, he was less cultivated by society. It was at this time that he formed the connection with a grass widow, a Mrs. Macle hose, the Mrs. Macle hose of the 'Sylvander and Clarinda' correspondence.

In February 1788 he went home to Mossgiel with his £500, lent Gilbert £180, and married Jean Armour. He had taken a lease of the farm of Ellisland, in Dunscore parish, Dumfriesshire, and by the end of the year he was settled there. But Ellisland proved as unsuccessful as Mount Oliphant. The poet sank his little capital in it without hope of redemption, and in order to make a livelihood became

an exciseman. The double labour of farming and 'gauging,' however, proved too severe, and by the end of 1791 he was glad to break the lease and remove to Dumfries, where he spent the rest of his life in the service of the excise. At Ellisland he wrote a great many songs, including *Mary in Heaven*, *Auld Lang Syne*, and *Ye Banks and Braes*, for Johnson's *Scots Musical Museum*, to which he had begun to contribute during his stay in Edinburgh; also *Tam o' Shanter*, *The Whistle*, and *The Kirk's Alarm*. He was a welcome guest at the tables of the Dumfriesshire lairds, and was in the main satisfied with his social position, merely looking forward to promotion in the excise—a prospect which was blighted by his political ideas. He had written occasional partisan diatribes—*The Five Carlins*, for example—at Ellisland, and the editor of the *London Star* had offered him a permanent appointment, which he declined. He continued to devote his attention to political questions, and the French Revolution claimed his sympathy more and more. It is noteworthy, however, that on the threat of invasion he became a volunteer, and wrote *Does Haughty Gaul Invasion threaten?* His later years were embittered with neglect and pecuniary difficulties, and he died of rheumatic fever on July 21, 1796. He wrote songs to the last—for instance, *Duncan Gray* and *O wert thou in the Cauld Blast*.

Burns was the greatest of the Scottish vernacular poets, from whom he took his forms and metres, and the one great poetic genius of Scottish literature. In the vernacular he was at his best a supreme artist in words and an unequalled songwriter. See *The Life and Works of Robert Burns*, by Robert Chambers, revised by William Wallace

(ed. 1896); Henley and Henderson's *The Poetry of Robert Burns* (ed. 1896), containing Henley's famous and much criticized essay on the poet; T. F. Henderson's *Life of R. Burns* (1904); Carlyle's *Essays*, vol. ii. (1869); Leslie Stephen, in the *Dict. of Nat. Biog.*

Burns and Scalds are considered together, as for practical purposes their effects are the same, and differences in treatment depend only upon the extent of injury and the amount of sepsis (bacterial infection) present or to be feared.

The danger of a burn is proportionate to its superficial extent, and depends also partly upon its position. Death may be expected if half the surface of the body is affected, even though there be no depth of tissue destroyed. Burns on the trunk are more dangerous than those on the limbs, and children succumb more readily than adults. It cannot always be said what is the immediate cause of death. Shock, no doubt, accounts for many deaths, and sepsis for others. Exhaustion following profuse suppuration is another cause; and there are cases in which death has ensued owing to the direct effect upon the blood of great heat. Another danger is deep-seated inflammation, when the seat of the burn is over important organs. There is also a risk of dangerous swelling of the tissues of the throat after swallowing boiling or corrosive fluids. Shock, and the exhaustion consequent on it, must be combated by stimulants, blankets, and hot bottles. The exhaustion consequent on suppuration, which may come later, must be met by suitable dressings, and by the continued and careful use of stimulants. When the throat and cesophagus are affected, feeding may be carried on by the stomach-tube or by enemata; and difficult

respiration may require tracheotomy.

The local treatment of burns depends to some extent upon their position, depth, and extent. The aim is to counteract sepsis, or to prevent it; to relieve pain; and to prevent scarring, or, if that be impossible on account of the depth of burn, to make it as slight as possible, and to guard to the utmost against deformity by contraction. Thus, we first cleanse the burned surface with antiseptic lotion (sometimes under chloroform), and then apply suitable dressings, which are left undisturbed as long as it is safe. A burn on a limb may sometimes render amputation necessary. In cases of burns covering large surfaces, some recommend the continuous warm antiseptic bath, especially for children. Further, if the whole thickness of skin has been destroyed, attempts must be made to supply the deficiency by means of skin-grafting. The burned surface is first carefully purified, and for that purpose some use boracic lotion, some weak carbolic, while others use a two per cent. solution of picric acid. For after application, as dressing, orthoform and aristol are among the newer recommendations; but the dressing most in favour is picric acid, first advocated by French surgeons. A one per cent. solution is often enough, and this strength is practically a saturated solution. Strips of gauze, lightly wrung out in this lotion, are so placed as to cover the cleansed surface, and are themselves covered with antiseptic wool and a bandage. The dressing should be left undisturbed as long as possible, and may prove efficient for from four to six or seven days. It must be changed if suppuration soaks through, or if there are signs of sepsis. Pieces adherent should not be dragged off, but should

have the picric acid solution poured on them. The part, if a limb, may be kept at rest by a splint.

Burnside, suburb of Adelaide, S. Australia, 4 m. E. of the capital; is a great wine-producing district. Pop. 500.

Burnside, AMBROSE EVERETT (1824-81), American general, first saw service in the Mexican war. Early in the civil war he commanded a brigade for the North in the battle of Bull Run; then assisted M'Clellan in organizing the army; and for the capture of the island of Roanoke, in 1862, he was made major-general. He fought successful engagements at Newbern and Beaufort; and when the Confederates invaded Maryland, he assisted M'Clellan in defeating them at S. Mountain. Burnside led the left wing in the sanguinary battle of Antietam, and subsequently commanded one of the three great divisions of the army of the Potomac, and finally the whole army, from which he was transferred to the army of the Ohio. Defeated by the Confederates before Fredericksburg in 1862, he was relieved of his command, but later (May to August 1864) had charge of the 9th corps under Grant, and remained in active service until the close of the war. He was governor of Rhode I. from 1866 to 1869, and senator for the island from 1875 to 1881. While in Europe during the Franco-German war, he endeavoured to act as a peace negotiator between the parties. See *Life* by Poore (1882).

Burnside, HELEN MARION (1844), English artist and poet, has exhibited at the Royal Academy (1863), Columbian exposition (1895), and Society of Lady Artists (1897); was designer to the Royal School of Art Needlework (1880-9). She has written *Poems* (1864), *Driftweed* (1897), *Her Highland Laddie* (1897), *Tales for*

Children (1897), *The Deaf Girl Next Door* (1899), and *A Girl Without a Penny* (1907).

Burntisland, tn. and par. of Fifeshire, Scotland, on N. shore of Firth of Forth; 20 m. by rail (*via* Forth Bridge) from Edinburgh, and connected with Granton (5 m.), on s. side of firth, by steam ferry. It is a royal and parliamentary burgh, important coaling port with large docks, and a summer resort for golf and sea-bathing. There are several antiquities in the parish, including Rossend Castle (1382). Pop. 5,000.

Burnt Stones, antique gems of carnelian, sometimes engraved, found in Roman ruins. They appear to have undergone firing, to make a thin surface layer semi-opaque and give them a resemblance to sardonyx.

Burr, AARON (1756-1836), American soldier and statesman, was the grandson of Jonathan Edwards. He distinguished himself at Bunker Hill, in Arnold's expedition to Canada, and at Hackensack and Monmouth; he retired in 1779. In 1782 he was called to the bar, and from 1789-90 was attorney-general of New York State, from 1791-7 United States senator, and from 1801-5 vice-president of the United States. Defeated in a contest for the governorship of New York, he forced a duel upon the most formidable of his opponents, Alexander Hamilton, of whom he had long been jealous. Hamilton fell mortally wounded, and Burr was indicted for murder, but escaped punishment. He next endeavoured to raise a force to conquer Texas, where he intended to establish a republic. Jefferson proclaimed the scheme, and Burr was three times arrested and tried for treason and misdemeanour in 1806-7. Though he was acquitted his reputation was gone, and he went (1808) to Europe, where he interested several prominent men, in-

cluding Bentham, in filibustering designs upon Mexico. The British government ordered him to leave the country; and as he could obtain no encouragement from Napoleon, he returned to America in 1812. In Burr the finest gifts of nature were vitiated by a lack of moral character. See *Life* by Knapp (1835), *Memoirs* (1836) and *Journals* (1838) ed. by Davis, *Life* by Parton (1858) and by Todd (1902), *The Aaron Burr Conspiracy* by W. F. M'Cabe (1903), and Oliver's *Alexander Hamilton* (1905).

Burr, WILLIAM HUBERT (1851), American civil engineer, born at Watertown, Connecticut; has designed some of the most important works in America. His first public appointment (1876-84) was as professor of mechanics at Rensselaer Polytechnic Institute. In 1892 he became professor of engineering at Harvard, and in the following year at Columbia University. In 1899 he was appointed a member of the (Central American) Isthmian Canal commission. He has published *Stresses in Bridge and Roof Trusses* (1880), *Theory of the Masonry Arch* (1881), *Ancient and Modern Engineering and the Isthmian Canal* (1902), and *The Graphic Method by Influence Lines for Bridge and Roof Computation* (1905).

Burra, or KOORINGA, tn., S. Australia, on Burra Creek, 101 m. by rail N. by E. of Adelaide; contains the once famous Burra Burra copper mine, discovered in 1844, but now deserted. Pop. 2,600.

Burrard Inlet, 9 m. long, Strait of Georgia, British Columbia, N. of mouth of Fraser R., is one of the safest harbours on the Pacific. Vancouver city, the terminus of the Canadian Pacific Railway, stands on s. shore.

Bur-reed, popular name for the various species of *Sparganium*, of the Typhaceæ, with long reedlike leaves and globose flower-heads

like burs, whence the name; common in ditches in Britain.

Burriana, tn., prov. Castellon de la Plana, Spain, 8 m. s. by w. of Castellon, on railway from Tarragona to Valencia. A light railway now connects the port of Burriana with Castellon and Onda. Vegetables, fruit, and grain, and especially oranges and melons, are exported. Pop. 13,000.

Burritt, ELIHU (1810-79), American peace advocate, known as 'the learned blacksmith,' was born at New Britain, Connecticut. While working as a blacksmith he became proficient in mathematics, and especially in Oriental and modern languages, and translated all the Icelandic sagas relating to the discovery of America. In 1842, at Worcester, Massachusetts, he established the *Christian Citizen*, a weekly journal devoted to anti-slavery, peace, temperance, and self-culture. Visiting England, he projected (1847) the 'League of Universal Brotherhood,' which aimed at the abolition of war. About the same time he organized the first international peace congress, at Brussels, in 1848, and the second, at Paris, under the presidency of Victor Hugo, in 1849. In 1852 he became editor of the *Citizen of the World*, Philadelphia, in which he urged the compensated emancipation of southern slaves. Burritt paid a second visit to England in 1863, and in 1865-70 was United States consul at Birmingham, when he advocated an ocean penny postage. He wrote *Sparks from the Anvil* (1848), *Olive Leaves* (1853), *Thoughts of Things at Home and Abroad* (1854), *A Walk from John o' Groat's to Land's End* (1864), *Walks in the Black Country* (1868), *Lectures and Speeches* (1869), *Ten-Minute Talks* (1873), and *Chips from Many Blocks* (1878). See *Life* by Northend (1879).

Burroughs, JOHN (1837), American author, was born at Roxbury,

New York, and was given an appointment in the United States Treasury (1863-72). He wrote a series of books on nature—*Wake Robin* (1871), *Winter Sunshine* (1875), *Birds and Poets* (1877), *Locusts and Wild Honey* (1879), *Signs and Seasons* (1886), *Squirrels* (1900), *Ways of Nature* (1905), and *Bird and Bough Poems* (1906).

Burrows, CAPTAIN MONTAGU (1819-1905), British naval officer, saw active service in engagements with Malay pirates (1836), and at the capture of St. Jean d'Acre (1840). In 1862 he was appointed Chichele professor of modern history at Oxford—a chair which he occupied until 1900. Among his works are *Pass and Class* (3rd ed. 1866), *Constitutional Progress* (2nd ed. 1872), *Parliament and the Church of England* (1875), *Life of Admiral Lord Hawke* (1883; 2nd ed. 1896), *Wiclif's Place in History* (new ed. 1884), *Hist. of the Cinque Ports* (4th ed. 1895), *Commentaries on the Hist. of Eng.* (1893), *Hist. of Foreign Policy of Great Britain* (1895; 2nd ed. 1897). See his *Autobiography*, ed. by his son (1908).

Burrus, AFRANIUS, a Roman soldier, who in 52 A.D. was appointed sole commander of the prætorian guards. With Seneca he conducted the education of Nero, and it was mainly owing to his influence that Nero was declared emperor. Burrus did his best to prevent Agrippina's cruelty after Nero's accession, and later tried to save Agrippina herself, and Octavia, the emperor's wife, from Nero. Weary of his control, Nero caused him to be poisoned in 63 A.D.

Bursa and Bursitis. A bursa, or *bursa mucosa*, is a synovial sac interposed between muscles, tendons, or skin and bony prominences, for the purpose of lessening the friction to which these parts are exposed. Some bursæ are constantly present, but others

are developed as the result of occasional friction of muscles against each other or adjoining parts. They are liable to four kinds of disease. (1.) *Acute bursitis*, involving inflammation and suppuration, is most common in the bursa of the patella, or bone of the kneecap. The treatment consists in rest and hot fomentations, with incision and anti-septic dressings if pus forms. (2.) *Chronic bursitis*, or dropsy of the bursa, is an accumulation of fluid serum distending a bursa. The common form is 'housemaid's knee;' another is 'miner's elbow.' Treatment—rest, blisters, pressure, or aspiration. (3.) *Chronic enlargement, with fibroid thickening of bursa*. Treatment—removal by the knife. (4.) *Chronic bursitis*, with the presence of 'melon-seed' bodies. Treated by dissecting out the bursa, or opening it, evacuating its contents, and destroying the lining membrane by pure carbolic acid.

Bursar (*burse*, a doublet for 'purse'). (1.) In English universities, the fellow who acts as treasurer of a college. (2.) In Scotland, the holder of a bursary or annual allowance obtained by presentation or after examination, and corresponding with the English scholarship. Since 1901, under the Carnegie Trust, any student of Scottish parentage can obtain a bursary to cover the cost of matriculation and class fees in any faculty of a Scottish university.

Burscheid, tn., dist. Düsseldorf, prov. Rhineland, Prussia, 17 m. N.E. of Cologne, with various woollen mills. Pop. 6,300.

Burschenschaft, a federation of German undergraduates' societies which had their rise in the patriotic fervour excited by the Napoleonic invasions. The first corps was formed at Jena (1813). Two years later, on the occasion of a festal gathering in honour of liberty at the Wartburg, near

Eisenach, certain irresponsible students burnt the works of contemporary writers whose tendencies were obnoxious to them. This, and the murder of the dramatist Kotzebue in 1819 by a Jena student (Sand), led the governments of Central Europe to suppress them. Nevertheless they quickly revived (1821), only to be once more proceeded against in 1830-3, among those implicated, though quite innocent of offence, being Fritz Reuter, whose *Ut mine Festungstid* (1862) was written during his imprisonment. Although all special restrictions against the *burschenschaft* societies were withdrawn in 1848, and the establishment of national and imperial unity was accomplished in 1870, these patriotic associations still exist with great vitality: in 1902 they set up at Eisenach a permanent monument to the movement. See Keil's *Geschichte des jenaischen Studentenlebens* (1858), and Heyck's *Deutsche Burschenschaften* (1902).

Burslem, former munic. bor. and mrkt. tn., Staffordshire, England, on Grand Trunk Canal, 17 m. N.N.W. of Stafford; the 'mother of the Potteries.' The pottery trade, due to the presence of suitable clay in the district, was begun as early as 1644, when jet (black) and Rockingham (mottled) ware were made. Wedgwood was born in Burslem in 1735, and the Wedgwood Institute was opened in 1869. There are a fine town hall with a lofty clock tower, built in 1865, and a new art school, with valuable collection of Wedgwood pottery. China, Parian, porcelain, ironstone, and black ware are now made chiefly from imported clays. There are also colour works, flint mills, and coal and ironstone mines in the vicinity. Pop. 40,000. In 1910 Burslem and five surrounding boroughs were incorporated to form the new co. bor. of Stoke-on-Trent.

Burstadt, vil. of Hesse, Germany, prov. Starkenburg, 5 m. E. of Worms. Pop. 5,500.

Bürstenbinder, ELISABETH. See WERNER, ELISABETH.

Burt, RIGHT HON. THOMAS (1837), English labour leader, born in Northumberland, and M.P. for the Morpeth division of Northumberland since 1874, went to work in a coal mine when he was ten years old, and in 1865 was elected secretary of the Northumberland Miners' Mutual Confident Association. In 1882 he was president of the Miners' National Union, and nine years later occupied the presidential chair at the Trades Union Congress in Newcastle. When, in 1890, the German emperor convened the Labour Conference at Berlin, Mr. Burt was chosen one of the British representatives. From 1892 to 1895, in the Home Rule government, he was parliamentary secretary to the Board of Trade. In 1906 he was made a Privy Councillor. See *Life* by A. Watson (1908).

Burton, SIR FREDERIC WILLIAM (1816-1900), artist in water colours, was born in Co. Clare, Ireland, and at Dublin won a reputation as a painter of portraits in water colour. He lived in Munich from 1851 to 1858, and succeeded Sir W. Boxall as director of the National Gallery in 1874. He was knighted on his retiring in 1894. He published a catalogue of the foreign pictures in the gallery (1890), with critical and biographical notices of the artists. See *Magazine of Art*, May 1900.

Burton, JOHN HILL (1809-81), Scottish historian and author, was born at Aberdeen, where he studied. A good deal of hack-work preceded his biography of David Hume (1846), by which he gained distinction. The first portion of his *History of Scotland* appeared in 1853, and the

work was completed in 1870, in 7 vols. It shows great industry and learning, a sound and impartial judgment, but is wanting in imagination. In 1854 Burton was appointed secretary to the Prison Board of Scotland, and subsequently historiographer for Scotland. He was a constant contributor to *Blackwood*, in which the substance of both *The Book-Hunter* (1860) and *The Scot Abroad* (2 vols. 1862) appeared. A Memoir by his widow is prefixed to the large paper edition of *The Book-Hunter* (1882).

Burton, SIR RICHARD FRANCIS (1821-90), English traveller, linguist, and author, was born in Hertfordshire. Entering the E. India service in 1842, he explored the Nilgiri Hills, served for five years in Sindh with Sir C. Napier, and in 1851 published his first important work, *Sindh, or the Unhappy Valley*, supplemented by a volume describing the races inhabiting the valley of the Indus. Returning to England, he soon set out (1853) for Arabia, to visit the cities of Mecca and Medina. Burton, who spoke Arabic like a native, assumed the character of a wandering dervish, and succeeded in penetrating to the holy shrines. The account of his adventures, entitled *Narrative of a Pilgrimage to El Medinah and Meccah*, appeared in 1855-6. Then he turned his attention to Africa, and after a perilous journey to Harar in Somaliland, he started in 1856 with Captain Speke from Zanzibar, and penetrated to the lake regions of Central Africa, discovering Lake Tanganyika in 1858. He had already published his *First Footsteps in E. Africa, or an Exploration of Harar* (1856); and in 1860 he issued *The Lake Regions of Central Africa*. After this he was British consul successively at Fernando Po (1861), Santos in Brazil (1865), Damascus (1869), and Trieste (1871). The

outcome was the issue of various books—e.g. *Wanderings in West Africa* (1863); *Abeokuta and the Cameroon Mountains* (1863); *Explorations of the Highlands of Brazil* (1869). Among other works he wrote *The Book of the Sword* (1884); *Camoens: his Life and his Lusads* (5 vols. 1880-4); and a new and literal translation of the *Arabian Nights*, under the title of *The Thousand Nights and a Night* (16 vols. 1885-8). An expurgated edition was issued by his wife (1886), Isabel Lady Burton, who accompanied him in his later travels, assisted him with his writings, and herself published *Inner Life of Syria, Palestine, etc.* (1875), and *Arabia, Egypt, India* (1879). Burton was knighted in 1886. See the *Early, Public, and Private Life of Sir R. F. Burton*, by Francis Hitchman (1887); *Life of Captain Sir R. F. Burton*, by Lady Burton (2nd ed. by W. H. Wilkins, 1898); *The True Life of Sir R. F. Burton*, by Georgiana M. Stisted (1896); *Sir Richard Burton*, by Thos. Wright (1906); and *The Real Sir Richard Burton*, by W. P. Dodge (1907).

BURTON, ROBERT (1577-1640), English scholar, was born at Lindley, Leicestershire. He became (1599) a student of Christ Church, and obtained the college living of Oxford St. Thomas in 1616. He was also a fellow of Brasenose College. About 1630 a private patron gave him the living of Segrave in Leicestershire, but he continued to reside in Christ Church. In 1606 he wrote a Latin comedy called *Philosophaster*, which he had acted in Christ Church hall in 1618. It is a witty picture of an imaginary university (in Spain) of charlatans, and is much above the average of neo-Latin plays. In 1621 Burton published that singular *olla podrida* of erudition and nonsense, the model of Sterne's *Tristram Shandy* and Southey's *Doctor*,

the *Anatomy of Melancholy*. The English is quaint, familiar, and picturesque. With inordinate digressions and innumerable quotations, Burton ambles pleasantly through the elaborate divisions and subdivisions of his theme, treating successively of the causes and symptoms of melancholy, of the cure of melancholy, of love melancholy, and the melancholy of religion. Works: *Philosophaster*, ed. W. E. Buckley (1862); *Anatomy of Melancholy*, ed. A. R. Shilleto (1893). Portrait at Brasenose College (reproduced by Shilleto).

BURTON-ON-TRENT, par., co. bor. (1901), munic. bor. (1878), Staffordshire and Derbyshire, England, on the Trent, 11 m. s.w. of Derby. The fine quality of the water, containing sulphate of lime, and derived from the Keuper (Triassic) marls of the district, has made Burton the English metropolis of beer. There are some eighteen breweries in the place, employing over 6,000 people, the largest being those of Bass and Allsopp. In addition to the brewing industries, there are engineering works; fireclay is found in the neighbourhood, and plaster and cement are made. The town has frequently suffered from Trent floods, the latest being that of 1875. There are eight recreation grounds and various literary institutions in the place. Pop. 55,000. See Molyneux's *History of Burton-on-Trent* (1869).

BURTRASK, tn., Västerbotten gov., Sweden, 50 m. N. by E. of Umea. Pop. (comm.) 8,500.

BURTSCHIED, former tn. of Rhenish Prussia; with cloth factories, needle works, etc., and hot mineral springs. It is now united to Aachen. See AACHEN.

BURU, or BULU, isl. of the Dutch E. Indies, situated between New Guinea and Celebes, and almost entirely surrounded by coral reefs,

It is mountainous, reaching an alt. of 8,250 ft. in Mt. Tomahu and Mt. Siel, but fertile. Principal products are cajeput oil and sago, with bamboos, rattan, betel nut, tobacco, and coffee. Area, 3,425 sq. m. Pop. about 20,000, mostly heathen Alfuras. Cap. Kajeli, or Cajeli.

Burujiird, cap. of Irak-Ajemi prov., Persia, 70 m. s.s.e. of Hamadan; has manufactures of cottons and felts; important trading centre. Pop. 25,000.

Burwood, munic. tn., New South Wales, 7 m. w. of Sydney, of which it is a residential suburb. Pop. 7,500.

Bury, munic. and co. bor. (5,835 ac.), parl. bor., and mkt. tn., Lancashire, England, on the Irwell, 9 m. n. by w. of Manchester. An important centre for woollen manufactures, introduced by the Flemings in the time of Edward III., it is now also a busy cotton town, with spinning and weaving mills, calico-printing works, bleach and dye works, paper-mills, foundries, and engineering establishments. The fly-shuttle was invented here by John Kay. Coal mines and free-stone quarries are numerous in the neighbourhood. An excellent technical school was erected in 1894, and the town possesses the valuable Wrigley art collection. A bronze statue commemorates Sir Robert Peel, born near the town in 1788. Pop. 60,000.

Bury, JOHN BAGNAL (1861), historian, was educated at Trinity College, Dublin, of which he was fellow from 1885 to 1902, in which year he succeeded Lord Acton as regius professor of modern history at Cambridge. Amongst his publications are *History of the Later Roman Empire from Arcadius to Irene* (1889), *History of Greece to the Death of Alexander the Great* (1900), his justly renowned edition of Gibben's *Decline and Fall* (6 vols. 1896-1900), and *Life of St. Patrick* (1905).

Bury, RICHARD DE. See AUNGERVILLE.

Burying Beetles (*Necrophorus*), insects of the family Silphidæ, which have the remarkable habit of making excavations under the dead bodies of small vertebrates, so as to bury them, several individuals combining in this work. In the buried carcass the females lay their eggs, so that an abundant food supply is ensured to the emerging larvæ.

Bury St. Edmunds, munic. and parl. bor., W. Suffolk, England, 23 m. n.w. of Ipswich. Its churches date from 1005 and 1200. It was a place of great importance in Saxon times, and capital of E. Anglia, and is said to have been the Villa Faustina of the Romans; but its present name is due to the burial in it of the murdered and canonized King Edmund (870). St. Edmundsbury, as it was then called, became a place of pilgrimage. To Edmund's memory Canute erected the Benedictine abbey (commenced in 1020 and consecrated in 1032), whose magnificence is attested by the gateways, arches, and Norman tower. Moyse's Hall, or Jews' House, dating from the end of the 11th century, has been converted into a museum. The botanic gardens, 12 ac. in extent, are entered from the abbey gate. The churches of St. Mary and St. James are interesting buildings. There is a large trade in agricultural produce, and the manufacture of agricultural implements is an important industry. Pop. 16,000. See *Bury St. Edmunds with its Surroundings* (1907), Barker's *History of Bury St. Edmunds*, and Astley's *Bury St. Edmunds* (1907).

Busa. See BOUSA.

Busaco, hamlet of Portugal, 12 m. n. of Coimbra, with remains of a monastery founded in 1268. On the heights of Busaco, Wellington repulsed a fierce attack made by Massena on Sept. 27, 1810.

Büsbach, vil. of Rhenish Prussia, 6 m. E. of Aachen; has textile manufactures. Pop. 7,500.

Busby. See UNIFORM.

Busca, tn., Italy, prov. of and 10 m. N.W. of Cuneo; has marble and alabaster quarries. Pop. (comm.) 9,000.

Busch, CARL (1862), Danish musical composer, born at Bjerre in Jutland; conducted concerts of his own compositions in Leipzig and Dresden (1898); he afterwards went to the United States, and continued his professional work. His works include *Orchestral Prologue to Tennyson's 'The Passing of Arthur,'* *Elegy for Stringed Orchestra,* *The League of the Alps,* *The Lady of Shalott,* *The Voice of Spring,* etc.

Busch, JULIAN HERMANN MORITZ (1821-99), called 'Bismarck's Boswell,' was a native of Dresden. In 1848 he entered political life; but despairing of reforms after the suppression of the revolutionary movements, he emigrated to America in 1851. Returning early in 1852, he published an account of his travels in *Wanderungen zwischen Hudson und Mississippi* (1853). Next year he made extensive travels in the Nearer East, descriptions of which are to be found in *Eine Wallfahrt nach Jerusalem* (1860; 3rd ed. 1881), *Bilder aus dem Orient* (1862), and *Bilder aus Griechenland* (1863). From 1856 he was a constant contributor to the *Grenzboten*, the organ of the Nationalist party, and in 1866 entered the service of the Prussian government. Called to Berlin in 1870, he became one of Bismarck's press agents, and held this position throughout the Franco-German war. His memory rests upon his works on Bismarck, which include *Bismarck und seine Leute während des Krieges mit Frankreich* (1899), in the form of a diary; *Unser Reichskanzler* (1884; Eng. trans. 1884); and *Tagebuchblätter* (Eng.

Memoirs of Prince Bismarck, 1870-93, 3 vols. 1898), a diary kept during twenty-five years' close intimacy with the chancellor. The book roused much ill-feeling in Germany.

Busch, WILHELM (1832-1908), German cartoonist, was born in Wiedensahl in Hanover. His gifts first excited notice in contributions (collected as *Bilderbogen*, 1875) to the well-known weekly, *Fliegende Blätter*, in 1859. He published a number of tales in doggerel, illustrated by himself; the most famous being *Max und Moritz* (1865). He also wrote a volume of poems, *Kritik des Herzens* (1874), and a short story, *Der Schmetterling* (1893), which tells how the idealist chased a butterfly and became a cripple. His works were collected and published under the title of *Humoristischer Hausschatz*.

Büsching, JOHANN GUSTAV (1783-1829), German man of letters, was born in Berlin; archivist in Breslau (1811), and professor of antiquities there (1816). With Von der Hagen he edited *Deutsche Gedichte des Mittelalters* (1808-25), *Sammlung Deutscher Volkslieder* (1807), *Grundriss zur Geschichte der Deutschen Poesie* (1812), and other works; and alone, *Erzählungen, Dichtungen, Fastnachtsspiele und Schwänke des Mittelalters* (1814).

Buschmann, JOHANN KARL EDUARD (1805-80), German philologist, born at Magdeburg. After a voyage to Mexico (1827-8), he assisted the Humboldts in the preparation of their works, and became librarian of the Royal Library at Berlin (1832), and a member of the Academy of Science (1851). Buschmann is remembered for his philological researches in Malay-Polynesian and S. American languages. His most important works (exclusive of those with the Humboldts) are *Ueber die aztekischen Ortsnamen* (1853), *Die Spuren der*

aztekischen Sprache in nordlichen Mexico (1859), *Die Völker und Sprachen Neumexikos* (1858), *Der Athapaskische Sprachstamm* (1856), and *Das Apache und der Athapaskische Sprachstamm* (1860-63). After the death of Wilhelm von Humboldt he edited and completed that author's well-known work, *Ueber die Kawisprache*, the third volume of which was entirely the work of Buschmann.

Bush, a word in general use in Australia, New Zealand, and Africa, to denote land covered with brushwood.

Bush Antelope, or **BUSH BUCK** (*Tragelaphus sylvaticus*), a small ungulate found in S. Africa, belonging to the group of harnessed antelopes, but without the white stripes usually present in these.

Bushel. See **WEIGHTS AND MEASURES**.

Bushey. (1.) Par. and urb. dist. (3,081 ac.), Hertfordshire, England, 2 m. S.E. of Watford; has an art school founded by Sir Hubert von Herkomer in 1882. Pop. 4,500. (2.) **BUSHEY PARK**, a royal park (1,110 ac.) on the Thames, par. of Teddington, Middlesex; was the residence of William IV. and Queen Adelaide, and is noted for its chestnut and lime trees.

Bushido ('the way of the warrior'), the ethical code of the Samurai of feudal Japan. It inculcates justice, courage, loyalty, politeness, truthfulness, honour, and self-control—even to the consummation of suicide (*hari-kari*). It gives high ideals and training, and is still powerful in the regulation of the life and institutions of the Japanese people. See Inazo Nitobé's *Bushido: Soul of Japan* (10th ed. 1905).

Bushire, **BUSHAHR**, or **BANDAR BUSHIRE** (properly **ABU-SHEHR**), seapt. city on E. shore of Persian Gulf. Vessels drawing 13 ft. of water can enter the inner harbour, but larger vessels anchor in the outer roads 6 m. off.

Originally a fishing village, it was chosen by Nadir Shah as a naval port and dockyard, and to it was transferred the E. India Company's station from Gombroon. The climate is sultry, and the town suffers from lack of good water. The chief exports are opium, gum, carpets, hides and skins, tobacco, raw cotton, mother-of-pearl, rose-water, wool, and horses, the total value being £400,000 per annum. The total imports are valued at about £700,000 per annum, the chief articles being cotton goods, specie, sugar, tea, silk goods, indigo, copper, kerosene. A British government department, 'the Indo-European Telegraph Department in Persia,' works the 675 m. of line with 3 wires between Bushire and Teheran. Pop. 25,000.

Bushmen, the true aboriginal people of S. Central Africa, now confined mainly to the Kalahari Desert, though it would appear that formerly they ranged as far north as Lake Tanganyika. They are known as *Bosjemans* or *Bosjesmans*—i.e. 'Bushmen'—to the Dutch, as *Saan* or *Zaan* to themselves, and as *Aba-tua* and *Makautu* to their native neighbours. 'Hottentots,' says Professor Keane, 'are fundamentally Bushmen, modified by crossings with the Negro and Negroid peoples advancing from the north. Though socially lower than the Hottentot, the Bushman has a greater share of natural intelligence; and rock pictures, some of which suggest actual portraiture, give evidence of considerable artistic taste and skill, and are correct in perspective. The Bushmen are a small, spare, wizened race of exceedingly hardy hunters and trappers, armed with bows and poisoned arrows, sheltering in holes or in caves. They stand at the lowest stage of human culture, with no sense of property,

social organization, religion, marriage rites, or family ties. Their language is characterized by 'clicks,' and their conversation to the European ear resembles 'the cackling of geese.' The above description refers to the Bushmen as untouched by civilization. In Bechuanaland they have adapted themselves to the superior civilization of their masters. See *Journal of the Anthropol. Institute* (1882, 1883); A. H. Keane, 'S. Africa,' in *Stanford's Compendium of Geography* (new ed. 1904); G. Bertin, 'The Bushmen and their Language,' *Journal of the Royal Asiatic Society*; W. H. J. Bleek's *Bushmen Folklore* (1875); F. C. Selous's *African Nature Notes and Reminiscences* (1908); and Theal's *History and Ethnography of South Africa* (1910).

Bushnell, HORACE (1802-76), American theologian, born in Litchfield, Conn.; became pastor of the N. Congregational church, Hartford, in 1833. His book, *God in Christ* (1849), denying the adequacy of language to express spiritual truth, involved him in a charge of heresy, to which he replied in *Christ in Theology* (1851). Another important work is *Nature and the Supernatural* (1858). His select works appeared in 8 vols. in 1876-7. See *Life* by Cheney (1880) and by Munger (1899).

Bushrangers was the term applied in Australia to the brigands or outlaws who infested the outlying settlements in Australia during the first three-quarters of the 19th century. They were at first escaped convicts, who had taken to the bush, and maintained themselves by preying on the lonely settlers. They were banded together in large numbers; but the Bushranging Act of 1830 (renewed in 1834), a very drastic measure, put a stop to bushranging on a large scale. The most notable

of these desperadoes were the Kelly brothers, who began their career of crime as cattle-stealers. In 1879 they pillaged Jerilderie, New South Wales, and repeated the exploit in 1880 at Glenrowan, Victoria; but they were shortly after brought to bay, and, though wearing coats of mail, were shot down, the leader being captured alive and afterwards hanged. See Henry Kingsley's *Geoffrey Hamlyn* (1859), and Boxall's *Australian Bushrangers* (2nd ed. 1902).

Bush-shrike, or ANT-SHRIKE (*Thamnophilus*), the name of several species of S. American passerine birds of the Formicariidæ. They are retiring in habit, frequenting dense thickets, and feed on insects, ants, grubs, eggs, etc.

Busiris, a mythical king of Egypt, and reputed founder of the city of Zeus, or Thebes. He was killed by Hercules. Milton (*Paradise Lost*, i. 307) applies his name to the Pharaoh who was overwhelmed in the Red Sea.

Busk, tn., Galicia, Austria, on the Bug, 30 m. E. by N. of Lemberg. Pop. (comm.) 6,700.

Busk, HANS (1815-82), English barrister, was called to the bar at Middle Temple (1841), and was high sheriff of Radnorshire (1847). He took a prominent part in the institution of the volunteer forces. The success of the movement was largely due to his practical treatises, especially *The Rifleman's Manual* (1858; 7th ed. 1860), *Company Drill* (1860), and *Rifle Volunteers* (1859; 7th ed. 1860). He was also the first to advocate lifeboat stations, and in 1859 he published *The Navies of the World*, containing suggestions for the development of the British navy.

Busk, RACHEL HARRIETTE (d. 1907), folklorist and traveller, was the sister of the above. Among her works are the *Folklore of Rome* (1874), and a representative collection of the *Folk-songs of Italy* (with contributions by Compa-

retti, 1887). Spanish folk-tales are contained in her *Patrañas* (1870), and two of her books deal with the Tyrolese. See also her *Sagas from the East* (1873).

Buskerud, mountainous co., Norway, chiefly forest and barrenfeld. Chief towns, Drammen (cap.) and Kongsberg. Area, 5,720 sq. m. Pop. 120,000.

Buskin, a high shoe, strapped under the ankle; especially used as a translation of the Greek *cothurnus*, the thick-soled boot used to increase the stature of tragic actors.

Busley, KARL (1850), German naval writer, born at Neustrelitz; became professor of the Naval Academy at Kiel in 1879. He has taken an active part in awakening in Germany the interest now taken in naval affairs: for example, he was one of the organizers (1882) of the Kiel Week (international regatta), and a founder (1887) of the Yacht Club. He takes also a great interest in aeronautics, and founded in 1903 the German Club for Aerial Navigation. Amongst his works are *Die Schiffsmaschine* (3rd ed. 1891); *Die neuern Schnelldampfer* (1893); *Der Kampf um den Asiatischen Handel* (2nd ed. 1898); *Die modernen Unterseeboote* (1899).

Busra. See BASRA.

Bussa. See BOUSSA.

Bussanga. See BORGU.

Busseto, tn., Emilia, Italy, 11 m. s. of Cremona. Verdi was born near by. Pop. (comm.) 8,000.

Bussora (BASSORA). See BASRA.

Bust. See SCULPTURE.

Bustard, a name applied to birds of the family Otididæ in general, but especially to *Otis tarda*, the great bustard, which was a native of Britain till 1838. It was the largest British land bird, the wing span being eight feet or more. It still exists in many parts of Europe, in N. Africa, and in Asia, and occurs in Britain as an occasional migrant.

Other bustards are widely distributed throughout the Old World.

Busto Arsizio, tn., prov. Milan, Italy, 20 m. N.W. of Milan, with calico and linen manufactures. In the church (1517-22) is a fine altar-piece by Gaudenzio Ferrari. Pop. (comm.) 20,000.

Butan. See BHUTAN.

Butane is the name of the two isomeric paraffins having the formulæ $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_3$ and $\text{CH}_3\text{CH}(\text{CH}_3)_2$. They are both inflammable gases, the first condensing to the liquid state at 1°C ., and the second at 17°C .

Butcher, SAMUEL HENRY (1850-1910), late professor of Greek at Edinburgh University (1882-1903), was born in Dublin, and from 1906 till his death was M.P. for Cambridge University. He published *Prose Translation of the Odyssey*, with Andrew Lang (1889); *Demosthenes* (1881; 2nd ed. 1907); *Some Aspects of the Greek Genius* (1891, 1893); *Aristotle's Theory of Poetry and the Fine Arts, with a Critical Text and Translation of the Poetics* (1895, 1897, 1903, and 1907); *Harvard Lectures on Greek Subjects* (1904). Elected president of British Academy of Letters in 1909.

Butcher-bird, name applied to many species of shrike (*Lanius*), from their habit of impaling their prey on thorns in the vicinity of the nest. The presence of this 'larder' of small mammals, birds, insects, and so on, gives the locality chosen the appearance of a shambles; hence the common name. See SHRIKE.

Butcher's Broom (*Ruscus*), the popular name for a few species of European dioecious shrubs of the order Liliaceæ. *R. aculeatus*, the British species, is interesting on account of its leaf-like stems, on which the flower appears. The fruit is a bright-red berry, which when roasted has been substituted for coffee. The plant was used by butchers to sweep their blocks, hence the name.

Bute, isl. in the Firth of Clyde, separated from Argyllshire by the Kyles of Bute, has an area (including Inchmarnock) of 47 sq. m., and is 15½ m. in length, with a varying breadth of 1½ m. to 6¼ m. The island is mostly grassy and hilly, with a few woods and plantations. Over three hundred men and boys are engaged in fishing. The climate is mild. Pop. 12,000.

The county of BUTESHIRE comprises the islands of Bute, Arran, the Cumbraes, Pladda, Holy Isle, and Inchmarnock. It has an area of 225 sq. m., or 139,658 ac. The islands, formerly a portion of the Norwegian kingdom, were recovered by Alexander III. after the overthrow of Haco at Largs (1263). Pop. 20,000. The county town is Rothesay. See J. E. Reid's *Hist. of the County of Bute* (1864), and J. K. Hewison's *Isle of Bute in the Olden Time* (2 vols. 1894-5).

Bute, JOHN STUART, THIRD EARL OF (1713-92), the most unpopular minister who ever held office in England, was born in Edinburgh; entered the service of Frederick, Prince of Wales, in 1747, and becoming groom of the stole to the son (George III.) of that prince in 1751, early acquiring great influence over him. After the accession of George III. he readily became the agent of the king in his opposition to Pitt, who had to admit him into his cabinet (1761). For a short period (1762-63) Bute was prime minister, till he was driven from office by the attacks of Wilkes in 1763. He was merely the agent of the king, to whose talents as an adroit politician justice is not always done. He organized for his royal master the corruption fund, and an office was opened at the Treasury for the purchase of members of Parliament for the king's interest. The responsibility for the desertion of Frederick the Great, for the peace of 1763, and for the initiation of a new policy towards

the American colonies, was not his, but the king's. After his fall he continued for some time to exert an influence over the king, but gradually fell back into retirement, devoting himself to scientific pursuits. He was a patron of literature, and gave Johnson an annuity of £300. He married the daughter of Lady Mary Wortley Montagu. (See MONTAGU, LADY MARY WORTLEY.)—His fourth descendant, JOHN PATRICK CRICHTON STUART (1847-1900), was born at Mount-Stuart, Isle of Bute, and in 1868 was admitted into the Catholic Church; he distinguished himself as an exponent of Catholicism, was known as a devoted student of Scottish history, and was a munificent benefactor of Glasgow and St. Andrews Universities. His principal works are *The Early Days of William Wallace* (1876), *The Burning of the Barns of Ayr* (1878), *The Roman Breviary* (trans. 1879), *The Coptic Morning Service for the Lord's Day*, and *Altars of St. Columba* (1882).

Butea, a genus of Indian shrubs or small trees of the Papilionaceæ. The resinous sap forms a gum known as Bengal kino. From the roots and bark of *B. frondosa* (the palas or dhak tree) a useful fibre is obtained, and from the flowers a yellow and orange-red dye. The seed yields moodooga oil, considered a vermifuge by the natives. Lac is obtained from the coccus which frequents the tree.

Butera, tn., Sicily, 9 m. N.N.W. of Terranova. Pop. 7,000.

Butler, bor., Pennsylvania, U.S.A., the co. seat of Butler co., situated 28 m. N. by E. of Pittsburg. It is in the oil region, and is well supplied with natural gas. Manufactures of glass, steel, and flour form the principal industries. Pop. 11,000.

Butler, ALBAN (1711-73), Roman Catholic biographer, educated at Douay, where he became

professor of philosophy and divinity; president of the English College at St. Omer (1768-73). His monumental work, *The Lives of the Saints*, was published 1756-59. It was the result of thirty years' labour. Among the works that appeared after his death were his *Moveable Feasts and Fasts* (1839), *Meditations and Discourses* (1791-3), and *The Life of Sir Tobie Matthews* (1795). See Life by his nephew, Charles Butler, *Catholicon*, iv. 184 (1799).

Butler, BENJAMIN FRANKLIN (1818-93), American soldier and statesman, was born at Deerfield, Massachusetts. He was a delegate to the National Convention at Charleston in 1860. When the civil war broke out in 1861, he entered Baltimore at the head of a Federal brigade, and was given command of the department of E. Virginia. In May 1862 Butler assisted Admiral Farragut in the reduction of New Orleans; but after its fall he governed the city with such severity that he aroused the undying hatred of the South, which nicknamed him 'Beast Butler.' Recalled and appointed in 1864 to command the department of Virginia and N. Carolina, he co-operated with General Grant in an unsuccessful attack on Richmond. Failing to capture Fort Fisher in December 1864, he was removed from his command for exceeding his instructions. He was returned to Congress by the Republicans of Massachusetts in 1866-79, and was one of the committee appointed to try President Andrew Johnson. He was elected governor of Massachusetts in 1882. See Parton's *General Butler in New Orleans* (1863), *Life* by Bland (1879), and his own *Autobiography* (1892).

Butler, CHARLES (d. 1647), English philologist, was born at High Wycombe, Bucks. In 1609 he published *The Feminine Monarchie*, a treatise concerning bees,

which contains a musical interpretation of the humming of a swarm. In 1625 appeared his *Συγγέμεια*, dealing with affinity as a bar to marriage; and in 1633 his *English Grammar*, in which he advocated phonetic spelling. His last work was *Principles of Musik in Singing and Setting* (1636).

Butler, CHARLES (1750-1832), Roman Catholic and legal writer, and a nephew of Alban Butler, continued and completed Hargrave's edition of *Coke upon Littleton*. His philological and biographical works (5 vols. 1817) contain dissertations on political and legal as well as ecclesiastical subjects, and his valuable letter-books are preserved in the British Museum. For many years he conducted an agitation to enlarge the freedom of English Catholics, but he was successfully opposed by Bishop Milner. See his *Reminiscences* (4th ed. 2 vols. 1824).

Butler, CHARLES HENRY (1859), American lawyer, born in New York, was a counsel for the Anglo-American commission for the delimitation of the Alaskan boundary (1898). He is the author of *Cuba must be Free* (1898), *The Voice of the Nation* (1898), *Our Relations with Spain* (1898), *Our Treaty with Spain* (1899), *Freedom of Private Property on the Sea* (1899), and *The Treaty-making Power of the United States* (1902).

Butler, LADY ELEANOR (?1745-1829), recluse of Llangollen, Wales, belonged to the house of Ormonde. She and a friend, Sarah Ponsonby, resolved to abandon society, and about 1774 they retired to the vale of Llangollen. Madame de Genlis has given an account of them in her *Souvenirs de Félicie* (1846).

Butler, ELIZABETH SOUTHERDEN, LADY, military painter, daughter of Thomas J. Thompson, and sister of Mrs. Alice Meynell, was born at Lausanne, Switzerland. Among her works may be

mentioned *Missing* (exhibited Royal Academy, 1873), *The Roll Call* (1874, purchased by Queen Victoria), *Balaclava* (1876), *Inkerman* (purchased for £3,000 by Fine Art Society, 1877), *Listed for the Connaught Rangers* (1879), *Scotland for Ever and Defence of Rorke's Drift* (1881), *Floreat Etona* (1882), *Evicted* (1890), *The Camel Corps* (1891), *Halt in a Forced March* (1892), *Dawn of Waterloo* (1895), *Steady the Drums and Fifes* (1896), *Tent-pegging in India* (1902), *Rescue of Wounded* (1905), and *A Cistercian Shepherd* (1908). She married in 1877 Major-general Sir William F. Butler. She has written *Letters from the Holy Land* (1903).

Butler, GEORGE (1774-1853), headmaster of Harrow and dean of Peterborough, was born in Pimlico, London. He was senior wrangler at Cambridge (1794), and held the headmastership of Harrow School from 1805 to 1829, when he retired to the living of Gayton, Northamptonshire. In 1842 he became dean of Peterborough. He translated the *Statutes of Peterborough cathedral* (1853), and compiled a work on the scholars of Harrow (1849).

Butler, HENRY MONTAGU (1833), master of Trinity College, Cambridge, since 1886, was born at Gayton, Northamptonshire, and was senior classic (1855) at Cambridge, headmaster of Harrow (1859-85), dean of Gloucester (1885-6), and vice-chancellor of Cambridge University (1889 and 1890). Among his works are *Sermons Preached in the Chapel of Harrow School* (1861 and 1866); *Belief in Christ, and other Sermons* (1898); *University and other Sermons* (1899); *Public School Sermons* (1899); and *Ten Great and Good Men* (1909).

Butler, JAMES. See ORMONDE.

Butler, JOSEPH (1692-1752), English theologian and apologist, was born at Wantage in

Berkshire. In 1718 he became preacher at the Rolls Chapel, London, where he delivered the *Fifteen Sermons*, published in 1726. In 1721 he became a prebendary of Salisbury Cathedral. The bishopric of Bristol was conferred upon him in 1738, and that of Durham in 1750. Butler's fame rests on *The Analogy of Religion, Natural and Revealed, to the Constitution and Course of Nature*, which was published in 1736, and is a development of his *Three Sermons on Human Nature*. In the *Analogy* Butler seeks to show that the results of observation of the facts of nature fall in with the belief in a moral governor for which our consciences call—*i.e.* that there is an 'analogy' between nature and what he calls natural religion. He further maintains that the facts of observation are consistent with the Christian 'revealed religion;' but in this phase of the question his arguments undoubtedly lack the cogency which characterizes his *apologia* proper. A most acute criticism, from the agnostic point of view, will be found in Leslie Stephen's *English Thought in the 18th Century* (2nd ed. 1880). See Dr. J. H. Bernard's edition of Butler's *Works* (2 vols. 1900), and Gladstone's edition of the *Works* (1897; new ed. 1910), and his volume of *Studies* (1896); also *Butler*, by W. L. Collins (Philosophical Classics, 1880); the *Life* by Dr. Fitzgerald (1849; new ed. 1860); and Dr. T. B. Kilpatrick's edition of *Three Sermons on Human Nature* (1888).

Butler, MRS. JOSEPHINE E. (*née* GREY) (1828-1906), English author, was born at Milfield, on the Cheviot Hills. Her name was associated with higher education for women, the Married Woman's Property Bill, the repeal of the Contagious Diseases Act, and other social reforms. She wrote

a life of her father, *John Grey of Dilston* (1869), *Woman's Work and Woman's Culture* (1869), *The Constitution Violated* (1871), *Life of Catharine of Siena* (1878 and 1881), *Government by Police* (1879), *Life of Oberlin* (1882), *The Salvation Army in Switzerland* (1884), *Our Christianity Tested by the Irish Question* (1887), *Lady of Shunem* (1895), and recollections of her husband, *George Butler* (canon of Winchester, d. 1890). See *Autobiographical Memoir*, ed. by G. and L. Johnson (1909).

Butler, NICHOLAS MURRAY (1862), president (since 1902) and professor of philosophy and education, Columbia University, New York. He is a trustee of the Carnegie Foundation, and one of the chief educational authorities in the U.S.A. He has published numerous works on education and philosophy.

Butler, SAMUEL (1612-80), English poet, was born at Strensham, Worcestershire, and educated at Worcester Cathedral School. His first occupation was that of secretary to Mr. Jefferies, Earls - Croome, Worcestershire, where he gained the friendship of the painter Samuel Cooper. He was next in the household of the Countess of Kent at Wrest, Bedfordshire (1628), his duties associating him with John Selden. Then he was at Cople Hoo, Bedford, in the service of Sir Samuel Luke, a stern Presbyterian, and one of Cromwell's officers. Butler, while in this post, probably found poetic material, Luke himself presumably supplying the prototype for *Hudibras*. After the restoration he was secretary to the Lord President of Wales, under whom he was appointed steward of Ludlow Castle (1660). The legend that Butler was secretary to Buckingham when chancellor of Cambridge is scouted by Dr. Johnson, whose attitude is

strengthened by the bitter tone of the 'Duke of Bucks' in the poet's posthumous *Characters*. Powerful friends, including Clarendon, seem to have consistently disappointed him, thereby provoking the strong condemnation of Dryden, Oldham, and Otway. Butler published the first part of *Hudibras* in 1663, the second in 1664, and the third in 1678, and in the end he had not finished his ridicule of fanatical Puritanism. But what he gave is a masterpiece, showing complete command of the iambic tetrameter. Ostensibly a narrative, the poem owes nothing to the story. Its greatness rests on its droll, irresistible satire. The poem is a storehouse of pungent criticisms, terse epigrams, and wise saws. *Don Quixote*, the *Satyre Ménipée*, Cleveland's verses, and the *Musarum Deliciae* were all probably sources of inspiration; but direct and forcible originality everywhere prevails. Butler has numerous imitators, but no peers. Spurious *Remains* appeared in 1715, and R. Thyer published from the poet's MSS. *Remains in Prose and Verse* (1759; reprinted 1827). *The Elephant in the Moon, Cat and Puss*, and others have merit, but all are far below *Hudibras*.

Hudibras, with Hogarth's cuts, appeared in 1726. Zachary Grey edited the poem, with notes and preface (1744; 2nd ed. 2 vols. 1764; enlarged ed. 3 vols. with portraits, etc., 1819). Dr. T. Nash published the work with biography and fresh notes (3 vols. 1793; new eds. 1835-40 and 1847). A new edition by A. R. Waller appeared in 1905. John Towneley issued a French translation (1757; new ed. 1819), with engravings after Hogarth, and a key by Lettine le Jeune. For the 'Aldine Poets,' Mitford edited *Butler* (1835), also R. B. Johnson (1893). See J. Granger's *Biograph. Hist. of Eng.*, iv. 40 (1769-1806); 'Butler' in

Johnson's *Lives of the Poets* (1779-81); W. Hazlitt's *Eng. Poets* (1846) and *Comic Writers* (1819); H. Morley's *Character Writings of the 17th Century* (1891).

Butler, SAMUEL (1835-1902), author of *Erewhon*, spent some years of his early life in New Zealand. On his return to England he studied painting, and exhibited at the Royal Academy. In 1872 he published anonymously *Erewhon*, a romance in which philosophy and satire are interwoven with a description of an imaginary race whose characteristics and habits are in most respects an inversion of those of our own society. He followed up its success in 1901 with an equally clever sequel, *Erewhon Revisited*. Among his other works are *The Fair Haven* (1873), *Life and Habit* (1877), *Evolution, Old and New* (1879), *Alps and Sanctuaries of Piedmont* (1881), *Ex Voto* (1888), a *Life of Bishop Butler* (1896), the *Authoress of the Odyssey* (1897), a contention that the *Odyssey* was written by a woman, and an edition of Shakespeare's *Sonnets* (1899). He also published various musical compositions in collaboration with H. Festing Jones. In 1903 *The Way of All Flesh*, a novel written thirty years before, was published posthumously. His *Essays on Life, Art, and Science* were edited by R. A. Streatfield in 1904.

Butler, or BUTTLER, WALTER (c. 1600-34), promoter of the plot which resulted in the assassination of Wallenstein (1634), was a scion of the Irish Butlers (Ormonde). He enlisted as a private adventurer in the imperial army, and worked his way up to be colonel. After having assassinated Wallenstein at Eger, together with a fellow-countryman, Devereux, and two Scotsmen, Gordon and Leslie, he was created by the emperor a count of the empire and a major-general.

Butler, WILLIAM ARCHER (?1814-48), professor of moral philosophy in the University of Dublin, was born near Clonmel, of an old Irish family. When a student he contributed a number of poems and essays to the *Dublin University Review*. In 1837 he was appointed to the newly-instituted chair of moral philosophy. His principal works are lectures on the *History of Ancient Philosophy* (2 vols. 1856), and *Sermons, Doctrinal and Practical* (2 vols. 1849, 1856). See Memoir by Woodward, prefixed to *Sermons* (1849); *Dublin Univ. Rev.*, May 1842, July 1849.

Butler, SIR WILLIAM FRANCIS (1838-1910), Irish soldier and author, was born in Suirville, Tipperary; served in the Red River expedition (1869-70); went on a special mission to the Saskatchewan territories (1870); commanded the W. Akim native forces in Ashanti expedition (1873); was special service officer under Wolseley in Natal (1875); again served under Wolseley in the Sudan campaign (1884-85); brigadier-general in Egypt (1892-93). On his return to England in 1893 he was raised to the rank of major-general, and received a command at Aldershot. He commanded the troops at the Cape in 1898-9, and was chairman of the S. Africa War Stores Commission (1905). In 1906 he received a G.C.B. In 1877 he married Elizabeth Thompson (Lady Elizabeth Butler), the painter. He is author of *The Great Lone Land* (1872), *The Wild North Land* (1873), *Akimfoo* (1875), *Far Out* (1880), *Red Cloud, the Solitary Sioux* (1882), *The Campaign of the Cataracts* (1887), *Charles George Gordon* (1889), *Sir Charles Napier* (1891), *Life of Sir George Pomeroy Colley* (1899), and *From Naboth's Vineyard* (1907), a volume of S. African impressions. See *Autobiography*, edited by his daughter (1911).

Butlerage, an old English duty, whereby every ship importing over twenty tuns of wine was taxed two tuns for the crown. The duty, which was changed to a tax of two shillings on every tun in the reign of Edward I., was payable to the king's butler, whence the name.

Buto, an Egyptian goddess, specially honoured at Buto, north-east of Sais, her oracle being one of the most celebrated in Egypt. She was identified by the Greeks with Leto, the mother of Apollo. Her older name was Uto, and she was represented as a serpent, sometimes with wings, and wearing the red crown of Lower Egypt.

Butomus, a genus of hardy aquatic plants of the Alismaceæ, from two to three feet high, with slender triangular leaves and pink flowers, natives of Europe. See FLOWERING RUSH.

Bütow, tn., Pomerania, Prussia, 26 m. S.E. of Stolp. Pop. 7,000.

Butt, CLARA (1873), English singer, born at Southwick, Sussex; made her début in R.C.M. students' performance of *Orfeo* at the Lyceum Theatre (1892). She is the leading British platform contralto. In 1894 she sang at the Handel Festival, and in 1900 she married the singer, Kennerley Rumford.

Butt, ISAAC (1813-79), Irish politician, was born at Glenfin in Donegal. A successful barrister, he offered a strong opposition to O'Connell. But about 1852 his political opinions changed, and in 1871, when he represented the city of Limerick in Parliament, he was chosen leader of the Home Rule party. Among his writings are *The Transfer of Land by Means of a Judicial Assurance* (1857), *Home Government for Ireland* (1874), and *The Problem of Irish Education* (1875).

Butte, the largest city of Montana, U.S.A., the co. seat of Silverbow co. It lies in a pic-

turesque region of the Rocky Mts. at an alt. of 5,700 ft., and about 47 m. S.S.W. of Helena. Butte is the seat of several of the largest gold, silver, and copper mining companies in the United States, the mines of the region being among the richest in the country. The vast smelters of the Anaconda mine are about 25 m. distant. Pop. 40,000.

Butter consists of the coalesced globules of butter fat, along with small quantities of the other constituents of milk, and varying quantities of water. The exact chemical composition of butter will vary with the method of manufacture and the time of year; but the following analysis indicates the average composition of butter of good quality:—

	Fresh Butter.	Salt Butter.
Water.....	14.50	12.80
Fat.....	83.38	84.06
Curd.....	0.80	0.67
Milk sugar.....	1.12	0.69
Ash.....	0.2	1.78

Butter can be prepared directly from the whole milk, but the process involves considerable expenditure both of time and of labour, so that it is usual to separate the cream first either by mechanical separators or by the ordinary process of skimming in shallow pans. The fat being the lightest portion of the milk, and being only mechanically mixed with the other constituents, tends to rise when the milk is allowed to remain at rest. This natural separation is retarded, firstly, by the current set up in the cooling milk; secondly, by the semi-solid condition of the casein. In summer the milk is allowed to stand for twelve hours, and in winter for at least eighteen hours, before skimming or creaming. It has long been known that slightly sour cream churns more readily than fresh, but the cause of the difference is not well un-

derstood. Some butter-makers are of opinion that fresh cream makes the best butter; but the majority are in the habit of allowing the cream to sour, or, as it is termed, 'ripen.' The subsequent flavour and aroma of the butter depend mainly on the extent of the ripening; for not only is lactic acid produced, but a number of bacteria appear, and the decomposition products of these micro-organisms affect to a large extent the character of the butter.

The temperature of the dairy has a considerable influence on bacterial growth, and therefore indirectly on the character of the butter. In cold weather the lactic ferment becomes somewhat dormant, and an organism appears in the cream which produces a peculiar bitter taste. On the other hand, if the temperature is too high the butter tends to become rancid. The ripening process, therefore, is one which demands great skill and care. The next stage in the process is churning, in which the ripened cream is agitated by mechanical means until the fat globules coalesce. Temperature has a most important influence on this operation. Too low a temperature retards the production of the butter, while too high a temperature or too rapid churning causes the solid butter grains to enclose liquid fat. The best temperature for churning ripened cream is from 57° to 61° F. When the butter grains are about the size of sago the process is stopped; for if continued longer the butter forms lumps, from which it is almost impossible to remove the buttermilk. The buttermilk is now drawn off, and the residual butter washed in the churn with cold water; it is next removed to the butter-worker, where it is pressed to remove the water; and it is then ready to be made up into rolls or other form for market.

In preparing salt butter, brine is substituted for plain water for washing; the butter is afterwards mixed with more salt in the mechanical butter-worker. The amount of salt added varies according to requirements. If it is to be used at once, half an ounce to the pound of butter is sufficient; but if it is intended to be kept for some time, as much as one ounce to the pound will be required, and much more is often used. Butter salted in Britain in April and in May requires more salt than that prepared at other periods of the year. This is due to the fact that cows are changed at this time from stall feeding to grass. It is usually calculated that one pound of butter is furnished by from twenty-two to twenty-four pints of milk. The liquid which drains away from the butter in the churn is called buttermilk. The composition of this liquid differs from that of milk, inasmuch as nearly all the fat has been removed, and a portion at least of the milk sugar has been converted into lactic acid. The amount of fat present will depend on the care with which the butter has been prepared, but it should not be more than three-tenths per cent. Butter fat differs from other fats, either of vegetable or animal origin, in several important particulars. All fats, chemically considered, are glycerides of fatty acids; that is to say, they are capable of being decomposed in the presence of water into glycerin and fatty acids. Different fats vary both in the nature of the fatty acids produced and in the relative proportion of glycerin and acid. In the case of butter fat, the fatty acids are high and the glycerin proportionally low; the fatty acids usually amount to at least 94.5 per cent., of which at least 5 per cent. are volatile.

The following distinct glycerides are known to be present in butter fat—viz. stearin, palmitin, olein, butyryn, capronin, caprylin, caprin, laurin, myristin, and butin. See DAIRYING.

Butter, ROCK, a combination of alum and iron, soft and greasy to the touch, and having the appearance of butter, which exudes from aluminiferous rocks.

Butter-bur, the popular name of *Petasites vulgaris*, a plant of the Compositæ, growing in swampy ground, common in Britain. The pink flowers are on short, thick, erect stalks, and appear before the immense broad leaves resembling those of rhubarb.

Buttercup, a name applied to various species of *Ranunculus*, with cup-shaped, glistening yellow flowers.

Butterfield, WILLIAM (1814–1900), English architect, who did much to revive Gothic architecture, and largely developed the use of colour in ecclesiastic buildings by the aid of brick, marble, mosaic, and painted tiles. He was the designer of St. Augustine's College, Canterbury; Keble College, Oxford; the grammar school, Exeter; the chapel, quadrangle, etc., Rugby; All Saints' church, Margaret Street, London; St. Alban's, Holborn; St. Augustine's, Queen's Gate; and St. Thomas's, Leeds.

Butterfish, or GUNNEL (*Centronotus gunnellus*), a small fish belonging to the same family as the blennies, very common in shore pools. It owes its common name to the elongated, slippery form, which makes it exceedingly difficult to catch. Very characteristic are the black spots, placed at either side of the long dorsal fin, by which and its shape the fish can be readily recognized.

Butterflies constitute, together with moths, the large insect order Lepidoptera. From moths butterflies are not very

definitely separated, but, as the scientific name of *Rhopalocera* indicates, the latter have club-shaped antennæ, while the antennæ in moths vary greatly in shape. Further, in butterflies the posterior wings have a characteristic projecting shoulder, and this vein or nervure of these wings, which is called costal by entomologists, is strongly curved at its base. When at rest most butterflies fold their wings, so that the under surface only is visible, while moths do not. A distinction which is often made much of by popular entomologists, that the butterflies are diurnal and the moths nocturnal, is not reliable, for some moths fly by day. In general life, habits, and structure there are no striking differences between moths and butterflies. See LEPIDOPTERA.

Butterflies, or *Rhopalocera*, are divided into the following families: (1) *Nymphalidæ*; (2) *Erycinidæ*; (3) *Lycænidæ*; (4) *Pieridæ*; (5) *Papilionidæ*; (6) *Hesperiidæ*. Of these families the first is the largest, containing between 4,000 and 5,000 species, while the *Papilionidæ* contains perhaps the most beautiful forms. Among the *Nymphalidæ* are included the Danaides and the Ithomiides, butterflies with a relatively simple type of coloration, interesting because the theory of mimicry was largely based on the resemblances between them and other unrelated butterflies. The Danaides and Ithomiides are stated to be inedible and distasteful to birds, while their colour analogues (mimics) are believed to be edible. To the family *Nymphalidæ* belong also such common British forms as the species of *Vanessa*—e.g. the red admiral, the tortoise-shells, the peacock, Camberwell beauty, and so on, as well as the fritillaries and the purple emperor. In it are also included the remarkable leaf but-

terflies (*Kallima*), in which the under surface, in shape, colour, and markings, closely resembles a dead leaf, while the upper surface is brightly coloured. Like other butterflies, *Kallima* folds its wings on alighting, so that only the under surface is visible. The family Erycinidæ includes small butterflies with only one British species, the Duke of Burgundy fritillary (*Nemeobius lucina*). Among the Lycænidæ are included the 'blues,' so called from the colour of the upper surface. The Pieridæ include the common cabbage butterflies, or garden whites. They are remarkable for the prevalence of white, yellow, and orange colours, and for the fact that these tints are due to uric acid, or derivatives of this substance, stored in the wings as a pigment. The caterpillars are simple and unspecialized; they are often green in colour, a tint apparently due to the colouring matter of the food. Among the Papilionidæ, or swallow-tails, the females are strikingly different from the males, and though larger, do not display the same beauty of coloration. The members of the family are widely distributed. The family Hesperiidæ, or skippers, includes insects very different from other butterflies, both in structure and habits. The adults have in many cases a very rapid but jerky method of flight, and the larvæ in their habits resemble moths rather than butterflies.

For general accounts of butterflies, see 'Insects,' vol. ii. in the *Cambridge Nat. Hist.*, by D. Sharp (1899), and Kirby's *Elementary Text-book of Entomology* (1885). British butterflies may be identified from F. O. Morris's *Hist. of British Butterflies* (1853), and their caterpillars from *The Larvæ of British Butterflies and Moths* (8 vols., Ray Society, 1886). For the theory

of mimicry in relation to butterflies, see *A Naturalist on the Amazons*, by H. W. Bates (5th ed. 1884), and A. R. Wallace's *Darwinism* (1889). For the colours, see E. B. Poulton's *Colours of Animals*, 'International Science Series' (1890); and for the pigments of the wings, M. I. Newbigin's *Colour in Nature* (1898).

Butterfly Orchis, the popular name of two common British orchids, *Habenaria bifolia* and *H. chlorantha*, growing in heaths and thickets. *Oncidium Papilio*, a W. Indian orchid, is known as the butterfly plant, from its close resemblance to the insect.

Butterfly Weed, or PLEURISY ROOT (*Asclepias tuberosa*), a N. American herbaceous plant of the Asclepiadaceæ. The root is used as a purgative, diuretic, and expectorant; also, infused, as a remedy for pleurisy and rheumatism.

Butter-making. See DAIRYING and BUTTER.

Butternut (*Juglans cinerea*), an American tree of the Amentaceæ, allied to the walnut. The wood, dark yellow in colour, takes a fine polish, and is used in cabinet work; the bark yields a brown dye, and the nuts contain oil.

Butter-tree, trees of the genus *Bassia* of the Sapotaceæ, and other trees in different orders, the seeds of which yield a quantity of oily fat, used by the natives of India and Africa as butter and lamp-oil, in soap-making, commerce, etc. The native butter described by Mungo Park is supposed to have been obtained from *B. Parkii*, or other Central African species of *Bassia*.

Butterwort, the popular name of *Pinguicula vulgaris* of the Lentibulariaceæ, common in Britain and Europe, growing on wet ground. It is apparently stemless, with a number of radical yellowish-green fleshy leaves covered with small glands secreting a sticky digestive fluid

by which small insects are retained. The plant is one of the three British carnivorous plants, and obtains at least a portion of the necessary nitrogen from the digestion of the captured insects. The blue flower is produced on a tall stalk rising from the centre of the plant.

Buttevant, tn. and par., Co. Cork, Munster, Ireland, 20 m. N. by W. of Cork; it is the Mulla of Spenser, the tower of whose castle of Kilcolman stands 3 m. to the N.E.

Butt-joint, a joint (usually between iron plates) in which the two plates are brought to 'abut' together, and are then fastened together by cover-plates.

Buttons, as fasteners of dress, are essentially of modern use; ancient dress, which was of a looser nature than is modern, was wrapped round the body, or fastened with brooches or pins, tied together with strings or held together with girdles. Among the substances from which modern buttons are made are metals, celluloid, ebonite, shell, pearl, bone, glass, papier-maché, wood, jet, precious stones, porcelain, and enamel. Birmingham is the centre of the industry in England. Metal buttons without shanks are made by stamping. Those to which metal shanks are fitted have the disks punched and trimmed, and then attached to the wire shank with a little solder. Cast buttons are made by pouring molten metal into a mould, the loop of wire which forms the shank being suspended in it. For making covered buttons two thin sheet-iron stampings are used—one a circular disk, and the other a smaller black piece, or collet, with a hole in the centre and several sharp points at right angles on the edge. The stuffing, overlaid with strong cloth, is placed on the disk, which is laid on the

covering, the latter being gathered up over the materials. The collet is then forced down, the hooks holding it in position, while the stuffing forces the coarse cloth through the hole to form the shank, through which the needle is passed laterally. Shirt buttons are made of powdered steatite saturated with soluble glass; the mixture is forced into moulds, and is then baked and polished. Many other materials are moulded in a similar way. Buttons made from ivory, wood, and bone are turned on a button lathe. Mother-of-pearl buttons are cut out of the shell by a tubular saw, split, and polished on the lathe.

Buttress, an abutment built outside a wall to relieve the latter of the outward thrust or pressure consequent on the weight of vault or arch. It has many forms, from that of a rectangular pier let into the wall, and usually extending outwards in terraces as it descends to the ground, to that of a free, arch-like structure, or 'flying buttress,' taking the pressure from the wall to solid foundations at a distance from the latter. The pinnacle was introduced to give weight to the buttress.

Buturlinovka (*Petrovskoi*), a township of Voronej gov., Russia, 85 m. S.E. of Voronej, on an affluent of the Don. Mills, tanneries, etc. Pop. about 23,000.

Butyl Alcohol has four isomeric varieties, the normal alcohol, $\text{CH}_3\text{CH}_2\text{CH}_2\text{CH}_2\text{OH}$, being a pleasant-smelling, somewhat oily liquid; b.p. 117° C., sp. gr. .82 at 0° C. Isobutyl alcohol, $(\text{CH}_3)_2\text{CHCH}_2\text{OH}$, is a liquid (b.p. 107° C., sp. gr. .817 at 0° C.) with a disagreeable smell, which occurs in fusel oil, and is believed to be partially the cause of the toxic action of crude spirits.

Butyl-chloral, $\text{CH}_3\text{CHClC}\text{Cl}_2\text{CHO}$, is prepared by passing

chlorine through acetaldehyde. It is an oily liquid (b.p. 165° c., sp. gr. 1.41 at 7° c.) that unites with water to form a hydrate. The latter is of similar properties to chloral hydrate, but has a specific action in relieving tic-douloureux. Under the name 'chloretone' it is used medicinally—*e.g.* in sea-sickness.

Butyric Acid, $\text{CH}_3\text{CH}_2\text{CH}_2\text{COOH}$, is a fatty acid occurring in butter fat, and in several vegetable fats and oils. It may be prepared by the fermentation of sugar or starch, mixed with water, skimmed milk, and putrid cheese, from which the specific bacillus that causes the action is derived. It is a thick, colourless liquid (b.p. 163° c., sp. gr. .98 at 0° c.), with a sour taste, and the odour of rancid butter. It is soluble in water, and gives rise to a series of salts and esters, the butyrates. Isobutyric acid ($\text{CH}_3)_2\text{CHCOOH}$ is an isomeric form.

Butyric Ether, or ESTER, a general name for compounds formed from butyric acid by the substitution of an alkyl for an atom of hydrogen. Ethyl butyrate (b.p. 120° c., sp. gr. .90 at 0° c.) is commercially prepared by heating butyric acid, sulphuric acid, and alcohol, and is used by confectioners, as it has a strong pineapple odour.

Bützow, tn., Mecklenburg-Schwerin, Germany, 20 m. s. by w. of Rostock. Pop. 6,000.

Buxa, BAXA, or BOXA, tn., E. Bengal and Assam, India, 75 m. N.N.E. of Rangpur, near Bhutan border. Pop. 14,000.

Buxar, or BUSCAR. See BAXAR.

Buxton, eccles. par., mrkt. tn., and wat.-pl. in High Peak div., Derbyshire, England, on the Wye, 22 m. S.E. of Manchester. It has long been popular for its natural hot mineral springs and its healthy position (987 ft. above sea-level). The market-place,

which is seventy feet above the lower part of the town, has an interesting old cross. The natural baths are at the west end, and the hot at the east end, of the crescent. Near the town is the Devonshire Hospital and Buxton Bath Charity for poor patients. Buxton has fine gardens, with pavilion and concert hall, opera house, golf links, and numerous hydrotherapeutics (season, May to September). Lime-working is the local industry. The horse show is important, Buxton being the centre of an important horse-breeding district. Pop. 10,000.

Buxton, SYDNEY CHARLES, (1853), English politician and author, is the grandson of Sir Thomas Fowell Buxton, of anti-slavery renown. Mr. Buxton, after serving for six years on the London School Board (1876-82), entered the House of Commons as member for Peterborough (1883-5), and then for the Poplar division of Tower Hamlets (1886), for which he has sat continuously ever since. In 1891 he induced the House of Commons to accept the 'fair wages' resolution, under which it is made obligatory on government contractors to pay to their employes not less than the current rate of wages. In the same year he got the minimum age for the employment of children as half-timers in factories raised from ten to eleven years. In the Home Rule Parliament of 1892 Mr. Buxton was under-secretary for the colonies (1892-5). In December 1905 he was appointed Postmaster-General, with a seat in the cabinet. He was a member of the South African (Jameson Raid) Committee in 1896, and of the Royal Commission on Education (1886-9). In 1910 he became President of the Board of Trade, succeeding Mr. Churchill. Mr. Buxton is the author of a *Handbook to Political Questions* (1880; 11th ed.

1902); *Political Manual* (1880; 9th ed. 1902); *Finance and Politics: an Historical Study* (1889); *Handbook to the Death Duties* (1893); *Mr. Gladstone as Chancellor of the Exchequer* (1901); and *Fishing and Shooting* (1902).

Buxton, SIR THOMAS FOWELL (1786-1845), English philanthropist, who married (1807) a sister of Elizabeth Fry. A speech which he delivered at the Mansion House in 1816, in favour of the Spitalfields weavers, excited deep public interest. Buxton entered Parliament for Weymouth in 1818. He gave a great deal of attention to the state of the prisons, and his pamphlet entitled *Inquiry into Prison Discipline* led to useful reforms. With Wilberforce he next championed, especially from 1824, the cause of the slaves in the W. Indies, and wrote *The African Slave Trade and its Remedy* (1839). He retired from the House of Commons in 1837, and in 1840 was created a baronet. Buxton's attention was also turned to the reform of the criminal code, the civilization of Africa by commercial, agricultural, and missionary enterprises, and the education of the poor and the improvement of their condition. See *Memoir and Correspondence*, ed. by his son (1872).

Buxtorf, JOHANN (1564-1629), German Hebrew scholar, was a native of Kamen in Westphalia. He was appointed professor of Hebrew at Basel in 1590, and became the most learned Hebraist of his time. His earliest book was a manual of Biblical Hebrew, containing a grammar and a vocabulary (1602); then appeared a work on the Jewish synagogue (1603), a lexicon of rabbinical Hebrew (1613), and an important work on the abbreviations employed in this form of the language. But his greatest work, published during his lifetime, was the folio Hebrew Bible, to-

gether with the Targum, and the commentaries of the rabbinical writers, Ben Ezra and Rashi (1618); to this was afterwards added (1620) *Tiberias, sive Commentarius Masorethicus*, giving an account of the Scripture text according to the Jewish tradition. Suddenly cut off by the plague, he left unfinished two important works afterwards completed and published by his son and successor (see below)—viz. a Concordance to the Hebrew Bible (folio, 1632), and a Chaldaic, Talmudic, and Rabbinic Lexicon (1639; new ed. 1866-74). See Diestel's *Geschichte des alten Testaments in der Christlichen Kirche* (1869), and Kautzsch's *J. Buxtorf der Aeltere* (1879).

Buxtorf, JOHANN (1599-1664), son of the above, and his successor (1629) as professor of Hebrew at Basel, edited and extended his father's writings. In a violent controversy with L. Cappel he claimed divine authority for the entire Masoretic text, vowels as well as consonants. These views were set forth in several treatises—*De Litterarum Hebraicarum Genuina Antiquitate* (1643), *Tractatus de Punctorum Origine* (1648), *Anticritica* (1653), and *Latin Dissertations* (1664). In 1629 he edited Maimonides's *More Na-Nebuchim*.

Buxus. See BOX.

Buys-Ballot. See BALLOT, BUYS.

Buys-Ballot's Law, a rule stating the relation between the direction of the wind and that of the barometric gradient. It may be enunciated in the following form: In the northern hemisphere, standing with one's back to the wind, the centre of lowest pressure is to the left hand, in a direction making an acute angle with that in which the wind is blowing. In the southern hemisphere the centre of lowest pressure is to the right hand. In

accordance with this law, the wind blows spirally inwards towards the centre of a cyclone, and spirally outwards from an anticyclone. See ANTICYCLONE, CYCLONE, FERREL'S LAW, WIND.

Buzeu, or BUZAU, tn., Roumania, on river of same name, 60 m. N.E. of Bucharest; see of a bishop. It existed as early as 1350, and was destroyed by the Tartars (1637-9). Pop. 22,000.

Buzuluk, tn., Samara gov., Russia, 107 m. E. by S. of Samara city by rail. Tanneries, copper foundries; trade in horses, cattle, and cereals. Pop. 15,000.

Buzzard, a name applied to birds of prey belonging to the sub-family Buteoninæ, distinguished by their rather slow and heavy flight, the short rounded head, and strongly-curved beak. The so-called common buzzard (*Buteo vulgaris*) is now rare as a breeding species in Britain. Buzzards are widely distributed over the globe, but are absent from the Australian region. They live chiefly upon small mammals, but also eat reptiles, young birds, and insects.

B.W.G., or BIRMINGHAM WIRE GAUGE. See WIRE.

By, JOHN (1781-1836), engineer of the Rideau Canal, Canada, served in the Peninsular war, and in 1826 went to Canada, where he constructed the Rideau Canal, between the St. Lawrence and the Great Lakes—a work which cost about a million sterling. Bytown, named after him, was later called Ottawa. See *Pall Mall Mag.*, June 1898.

Byblos, a city of great antiquity on the Phœnician coast, between Berytus and Tripolis; it was the chief seat of the worship of Adonis. See JEBAIL.

Bygdea, comm., Vesterbotten gov., Sweden, on Gulf of Bothnia, 25 m. N.E. of Umea. Pop. 6,600.

Byker, eccles. par. and tnship, in city of Newcastle-on-Tyne,

Northumberland, England; manufactures lead, pottery, etc.; has collieries. Pop. 45,000.

By-laws (Dan. *by*, 'a town'). The term is commonly used to signify local laws made by a local governing authority for the regulation of affairs within its own area. In its widest extension it describes any order, rule, or regulation made by an authority subordinate to Parliament, and includes not only the orders and rules made by a chartered company—such as the British South Africa Company—for the administration of its territory and the management of its company business, but the articles of association of any limited company. By-laws of a local authority, when duly confirmed by the competent authority (usually the Local Government Board or Board of Trade), have the force of an Act of Parliament. Prior to confirmation the public must be afforded an opportunity of examining them, and opposing them if necessary. By-laws may depend upon custom, charter, or statute. Customary by-laws occur in the regulations of trade guilds, or of boroughs or manors. By-laws resting on charter are made by bodies incorporated by charter, and those dependent on statute derive their authority from a particular Act of Parliament. A valid by-law does not exceed the limits imposed by the enabling power; if dependent on a statute, it has been duly confirmed by the proper authority, and it is reasonable in itself and not contrary to the general law of the country.

Bylazora. See KOPRULU.

Bylini, a name given to the heroic ballads of Russian popular poetry. Besides the legendary heroes, they celebrate historical persons, such as St. Vladimir, Ivan the Terrible, Boris Godunov, and Peter the Great. The popu-

lar bards who transmitted them orally are now only to be found in the remotest provinces of Russia. Although Richard James, chaplain of the English embassy in Russia, collected (1619) a goodly number of them in the 17th century, it was not until the second half of the 19th that interest was keenly aroused in them. They are divided into several cycles, as those dealing with the legendary heroes; the cycle of Kiev, the chief heroes of which are Vladimir and the peasant Ilya Muromez or Ilya from Murom—this is the principal cycle; the cycles of Novgorod, of Moscow, of Peter the Great, etc. The principal collections of *bylini* were made by Ribnikov (4 vols. 1860-71), by Kireievski (1868-74), and by Sobolevskii (6 vols. 1895-1900). Avenarius in 1885 published an anthology of *bylini*. See Rambaud's *La Russie Epique* (1876), Wollner's *Untersuchungen über die Volksepik der Grossrussen* (1879), and Ralston's *Russian Folk-tales* (1873) and *The Songs of the Russian People* (2nd ed. 1872).

Byng, GEORGE. See TORRINGTON, VISCOUNT.

Byng, JOHN (1704-57), English vice-admiral, a son of Admiral George Byng. In 1756 he fought an unsatisfactory action off Minorca, and being convicted subsequently by court-martial of not having done his best, was sentenced to be shot. He was accordingly executed on board the *Monarch* at Portsmouth, on March 14, 1757, as a penalty for his too strict observance of forms, rules of discipline, and points of naval etiquette; there was no imputation upon his honour or his courage. See Charnock's *Biographia Navalis* (1796); Clowes's *Royal Navy* (1896-1901).

By-products. Secondary products produced in the course of manufacturing a principal product are called by-products.

The utilization of by-products, formerly allowed to run to waste, is essentially a modern development, and in certain complex industries by-products now form the main source of profit. The vast importance of by-products dates from the artificial production of aniline colouring matter from coal tar by the English chemist Perkin in 1856. Although the pioneers were English, German chemists subsequently developed this branch of industry in a remarkable degree. The following are some of the more important by-products:—

Alkali and Sulphuric Acid.—

In the Leblanc process of preparing sodium carbonate, the hydrochloric acid obtained in the first stage was formerly allowed to escape, and caused much nuisance. This was avoided by collecting it by solution in water, the acid eventually forming one of the most valuable products of the process. The 'alkali waste' also produced, and consisting chiefly of calcium sulphide, was another troublesome by-product, as it not only needed land for its deposit, but also gave off an offensive smell. Of recent years this difficulty has been removed by the recovery of the sulphur; but the methods have now lost their importance owing to the diminished application of the Leblanc process. In the ammonia-soda process of making sodium carbonate, the only by-product is a solution of calcium chloride, which is usually run to waste; whilst in the electrolytic process the chlorine simultaneously obtained is utilized for making bleaching powder, though apparently more is produced than can be profitably employed. In the manufacture of sulphuric acid the burnt pyrites is sold to be treated for the copper it contains, the residual iron oxide going to the iron smelter.

Gas Works.—In distilling coal for illuminating gas, and in the manufacture of 'Mond gas,' etc., tar and ammoniacal liquor are very important by-products. The preparation from coal tar by Perkin of the colouring matter mauve was followed by the discovery of many other dyes, which are now manufactured in great quantities and of every conceivable shade. Of special importance is the artificial production of alizarin, the colouring matter of the madder root, by Graebe and Liebermann, in 1869, and of indigo by Baeyer in 1878; the former having practically destroyed the cultivation of madder, and the latter having become a dangerous competitor with the natural indigo so largely cultivated in India. Besides dyes, many valuable drugs, such as antipyrin, phenacetin, etc., and flavouring and sweetening agents, such as benzaldehyde and saccharin, are also prepared from coal-tar products. Minor by-products of the gas works are the cyanides and sulphur that can be extracted from the purifying materials.

Blast-furnaces and Coke Ovens also yield tar and ammonia, as well as a combustible gas which is now largely utilized for heating and driving gas-engines. The slag from blast-furnaces is employed to a small extent to make paving setts, cement, slag wool, and road metal; whilst the slag from basic steel hearths, when finely ground, is a valuable manure. In the preparation of *charcoal*, tar, acetic acid, wood spirit, and inflammable gases are by-products, but the greater part of these is generally wasted. In *brewing*, the malt, after extraction, serves as food for cattle, the excess of yeast is available for baking, and the carbon dioxide set free in the fermentation can be collected and compressed for the manufacture of aerated

waters, to force beer through service pipes, etc. In *distilling*, the disposal of the 'burnt ale' is a serious question. If run into streams it produces a very objectionable pollution, whilst other methods of getting rid of it are costly and not thoroughly effective. Decomposition by bacteria has had but little success; the most hopeful method of disposal is by some process of evaporation, the product being used for manure. *Soap and candle works* produce considerable quantities of glycerin as a by-product; *wool-scouring* yields wool grease, employed in the manufacture of lanoline, soaps, and lubricants; the *pressing of seeds for oil* yields a 'cake' valuable for cattle food; *meat-canning factories* produce glue, bone manure, hair, gut, fats, etc.; the *fermentation of wine* is the source of tartaric acid; whilst the residues of the *beet-sugar industry* produce alcohol, potassium compounds, methyl chloride, etc., and those of the *cane-sugar industry* produce molasses and golden syrup. See DYEING, BREWING, DISTILLATION, SODIUM, SULPHURIC ACID, TAR, COAL TAR, SLAG, SOAP, CANDLE, WOOL, and SUGAR.

Byrd, or BIRD, WILLIAM (?1538–1623), English musical composer, was 'bred up to musick under Thomas Tallis.' He was organist of Lincoln Cathedral in 1563, and in 1569 succeeded to a vacant post in the Chapel Royal, London. He published much sacred music, including three masses; was an indefatigable composer of music for the virginals (e.g. *Parthenia*, c. 1608, in conjunction with Bull and Orlando Gibbons); and in 1588 contributed the first English madrigals to a collection entitled *Musica Transalpina* (1588).

Byrgius or BURGI, JUSTUS or JOOST (1552–1633), Swiss mathematician, born in Lichtensteig, in

canton St. Gaul. He was for many years in the service of William IV., Landgrave of Hesse, for whom he constructed globes and a large number of astronomical instruments, and in 1603 entered that of the Emperor Rudolf II. See *Life* by Gieswald (1856).

Byrlaw, a code of law, of very ancient date, by which rural communities were governed in minor affairs, such as the valuation of stock, the allocation of common land, or the limitation of boundaries. This system prevailed in Great Britain until the end of the 18th century, and is not yet absolutely extinct. The 'byrlaw men' forming these courts were elected from the yeomen and farmers. For full references, see Murray's *New Eng. Dict.*

Byrne, JULIA CLARA (1819-94), English social writer, was the sister of Hans Busk. Her works include *Flemish Interiors* (1856), *Realities of Paris Life* (1859), *Undercurrents Overlooked* (2 vols. 1860), which led to reform in workhouses; *Gheel, the City of the Simple* (1869); *Pictures of Hungarian Life* (1869), *Gossip of the Century* (1892), etc.

Byrnie (Norse, *brynja*), the ringed coat of mail worn by the ancient Scandinavian warriors.

Byrom, JOHN (1692-1763), English poet and stenographer, was born at Broughton, near Manchester. While at Cambridge he contributed to the *Spectator* (No. 603) a playful pastoral, *Colin and Phæbe*, which attracted much notice. In 1716 he travelled abroad and studied medicine at Montpellier, and in 1718 returned to England, and taught a system of shorthand invented by himself at London, Manchester, and Cambridge: it was soon superseded by better methods. His diary and letters reveal his association with Bentley, Bishop Butler, Collins, Clarke, and Wesley. His poems, first published in 1773, are witty

and facile. See *Byrom's Journal and Remains*, Chetham Soc. (1854-7); Chalmers's *Life* in 'English Poets.'

Byron, GEORGE GORDON NOEL, LORD (1788-1824), one of the great poets and literary forces of the 19th century, was born in Holles Street, London, on Jan. 22, 1788. His father, Captain John Byron, nephew of the fifth or 'wicked' Lord Byron, having squandered his wife's fortune, died at Valenciennes in 1791, and Mrs. Byron settled in Aberdeen. In the year 1798 Byron succeeded to his grand-uncle's title and estates, and he and his mother settled at the family seat of the Byrons, Newstead Abbey, Nottinghamshire. Two years were spent in a school at Dulwich, and then he went (1801) to Harrow—his experiences at that famous school forming the subject, in later years, of his *Childish Recollections*. The year 1803 is marked by his passion for Mary Anne Chaworth of Annesley. In 1805 Byron entered Trinity College, Cambridge, where he caused considerable anxiety to his friends and the authorities by his irregularities. During this period his poetic impulses had begun to find expression, and in 1807 he published his *Hours of Idleness*. It was severely criticized by Brougham in the *Edinburgh Review*, and Byron retorted in 1809 with his satirical *English Bards and Scotch Reviewers*. On coming of age Byron went abroad, and spent two years in making a tour through Spain, Albania, Greece, Turkey, and Asia Minor. After publishing *The Curse of Minerva*—a poem now only valuable from its rarity—he issued, in 1812, the first two cantos of *Childe Harold*. The success of this splendid poem was immediate. *The Giaour* and *The Bride of Abydos* both appeared in 1813, and in 1814 the fine ode to *Napoleon Buonaparte*, *The Corsair*, and *Lara*. The *Hebrew Mel-*

odies, published in 1815, were written for a selection of melodies arranged by Braham and Nathan.

On Jan. 2, 1815, Byron married Anne Isabella Milbanke, daughter of a wealthy Durham baronet. In January 1816 she left him and returned to her parents. The true cause of this separation has never been ascertained, but it was final. Byron then went abroad, and settled for a time in Switzerland, where he wrote the third canto of *Childe Harold*, *The Prisoner of Chillon*, *The Siege of Corinth*, *Parisina*, the *Dream*, and part of *Manfred*. While in Switzerland Byron met the Shelleys, and formed a friendship with the poet, and contracted an illicit alliance with Claire Clairmont, a connection of the second Mrs. Shelley. From Switzerland Byron passed on to Venice, where in 1819 he became acquainted with the Countess Guiccioli. For three years he spent most of his time in the countess's society, living successively at Ravenna, Pisa, and Genoa. In 1817 he finished *Manfred*, and in the same year were produced *The Lament of Tasso*, *Darkness*, and the *Monody on Sheridan*. *Beppo* appeared in 1818, and *Mazeppa* in 1819. The publication of *Don Juan* began in 1819, and continued for five years. To the year 1821 belong the *Letters to Murray on Bowles's strictures on Pope*, *Marino Faliero*, *The Prophecy of Dante*, *Sardanapalus*, *The Two Foscari*, and *Cain*. To the *Liberal*, a Radical periodical conducted for a brief period by Leigh Hunt, Byron contributed *The Vision of Judgment* (1823), a poetical parody upon a poem of that name by Southey. In the *Liberal* also appeared, in 1823, *Heaven and Earth*, a dramatic poem by Byron, founded on a passage in Genesis. *Werner* was published in 1822, the year in which Lord Byron fulfilled the melancholy duty of witnessing

the cremation of Shelley's body. In 1823 appeared *The Island*, a poem suggested by some of the incidents in the mutiny of the *Bounty*; *The Age of Bronze*, a satire in heroic verse; and the first canto of the *Morgante Maggiore di Messer Luigi Palei*, a translation. *The Deformed Transformed*, the last work by the poet, was published in 1824.

Resolved to aid the Greeks in their struggle for independence, Byron sailed from Genoa, and on Jan. 4, 1824, arrived at Missolonghi. His physical powers proved unequal to the strain, and he died of rheumatic fever on April 19. His body was taken to England, and interred at Hucknall-Torkard, near Newstead.

The keynote of Byron's character was an extraordinary and egotistical sensitiveness, which was a contributory cause of many of his troubles, and everywhere finds expression in his verse. Yet he was capable of great generosity and high feeling. Misanthrope and cynic though he was in some of his moods, he was, nevertheless, a man of many noble impulses; and 'the great poetic heart' asserts itself again and again, even in such a poem as *Don Juan*. And although he chose to play, and in a still greater degree to simulate, the rake and libertine, yet he has written several passages which are the outcome of a deep spiritual feeling. Byron's name and works exercised a wonderful fascination over his foreign contemporaries, and almost the whole of European literature was for a time under the influence of his inspiration.

The best edition of his works is that published in 1898-1901—the *Poetry* (5 vols.), edited by Ernest Hartley Coleridge; and the *Letters and Journals* (6 vols.), by R. E. Prothero (1901). W. E. Henley's edition (1897) is also deserving of notice. His *Life* has been written by the poet Moore (1832-3), Elze