

at Antwerp, and he died in that city on the 12th March 1628. The usual statement that he died at an earlier date at Hamburg or Lübeck is incorrect. Little of his music has been published, and the opinions of critics differ much as to its merits. A claim made on his behalf to the composition of the music of the English national anthem has given rise to much discussion, but it seems now generally agreed that the claim is not well founded. Contemporary writers speak in the highest terms of Bull's skill as a performer on the organ and the virginals.

BULLA (literally a bubble) was the term used by the Romans for any boss or stud, such as those on doors, sword-belts, shields, &c. It was applied, however, more particularly to an ornament, generally of gold, worn suspended from the neck by children of noble birth until they assumed the *toga virilis*, when it was hung up and dedicated to the household gods. See COSTUME. In ecclesiastical and mediæval Latin, *bullæ* denotes the metal seal of oval or circular form, bearing the name and generally the image of its owner, which was attached to official documents. The bulla of the empire was of gold, while the Papal bulla was of lead. See BULLS and BRIEFS.

BULLFINCH (*Pyrrhula vulgaris*), a species of conirostral bird belonging to the family *Fringillidae*, of a bluish-grey and black colour above, and generally of a bright tiled beneath, the female differing only in having its colours somewhat duller than the male. It is a shy bird, not associating with other species, and frequents well-wooded districts, being very rarely seen on moors or other waste lands. It builds a shallow nest composed of twigs lined with fibrous roots, on low trees or thick underwood, only a few feet from the ground, and lays four or five eggs of a bluish white colour speckled and streaked with purple. The young remain with their parents during autumn and winter, and pair in spring, not building their nests, however, till May. In spring and summer they feed on the buds of trees and bushes, choosing, it is said, such only as contain the incipient blossom, and thus doing immense injury to orchards and gardens. In autumn and winter they feed principally on wild fruits and on seeds. The note of the bullfinch, in the wild state, is soft and pleasant, but so low as scarcely to be audible; it possesses, however, great powers of imitation, and considerable memory, and can thus be taught to whistle a variety of tunes. Bullfinches are very abundant in the forests of Germany, and it is there that most of the piping bullfinches sold in this country are trained. They are taught continuously for nine months, and the lesson is repeated throughout the first moulting, as during that change the young birds are apt to forget all that they have previously acquired. The bullfinch is a native of the northern countries of Europe, occurring in Italy and other southern parts only as a winter visitor. White and black varieties are occasionally met with; the latter, it is said, on the authority of White of Selborne, may be produced by feeding the bullfinch exclusively on hemp-seed, when its plumage gradually changes to black. It breeds in confinement, and hybrids between it and the canary have been produced.

\* BULLINGER, HENRICH (1504–1575), an eminent Reformer, was born at Bremgarten, near Zurich. He studied at Emmerich and Cologne, where he read some of Luther's works, and after his return home lectured at the abbey of Kappel. In 1527 he heard Zwingli at Zurich, and in the following year he accompanied him to the great conference at Berne. He was made pastor at Bremgarten in 1529, and married one Anna Adlischwegler, formerly a nun. In 1531 he had to fly to Zurich in consequence of the Catholic victory at Kappel, and was soon afterward appointed minister of the principal church. He was a powerful upholder of the Zwinglian doctrine of the Lord's

Supper, and wrote an able defence against Luther. He had also numerous controversial writings against the Anabaptists. His printed works are very numerous, and many of them were translated into English. They form ten vols. folio. Bullinger died at Zurich in 1575.

BULLION is a term applied to the gold and silver of the mines brought to a standard of purity. The term is of commercial origin, and has reference to the precious metals as a medium of exchange. It followed from this office of gold and silver that they should approximate in all nations to a common degree of fineness; and though this is not uniform even in coins, yet the proportion of alloy in silver, and of carats alloy to carats fine in gold, has been reduced to infinitesimal differences in the bullion of commerce, and is a prime element of value even in gold and silver plate, jewellery, and other articles of manufacture. All the new gold and silver coinage of France, Germany, Spain, Italy, Belgium, and the United States—probably of a still wider circle of the principal coining countries in the world—contain nine-tenths of pure metal. The coinage of Russia is on the British standard of eleven-twelfths, as nearly as it can be expressed in simple fractions of pure gold and silver, the alloy in silver being a little more in all cases than the alloy in gold. Bullion, whether in the form of coins, or of bars and ingots stamped, is subject, as a general rule of the London market, not only to weight but to assay, and receives a corresponding value.

The recognition of gold and silver from the earliest times as a convenient means of purchase, their ultimate adoption as a prevailing standard of value, their coinage by all the richer states into pieces of money, in virtue of which their circulation and absorption have been immensely increased, and the extent to which they have become the necessary financial reserve of Governments, banks, trading companies, and merchants, have given to these metals a greatly more extended use and importance than they could have acquired in the ordinary process of arts and manufactures; though even in this latter sphere, as gold and silver become more abundant and communities richer, the purposes to which they are applied and the demand for them are susceptible of much expansion. Writers of high authority have attempted at various periods to estimate the production of gold and silver, and correlatively their use and consumption in the monetary system and the arts; but there is scarcely any subject of statistical inquiry on which it is so difficult to arrive at more than conjectural results. Yet in view of the theoretical speculations that arose on the Californian and Australian gold discoveries, the produce of these new fields of supply may here be worthy of notice. The Californian mines were computed to have in three years yielded gold to the value of £35,000,000 sterling. The Australian mines, still more prolific, were estimated in three years from their opening to be equal to an annual produce of £20,000,000 sterling. Such results, sustained over a considerable period of years, presented a phenomenon similar to the more slowly developed effects of the discovery of the South American mines in the 16th century; and it must be admitted that California and Australia, after many reverses in their mining industry, remain the most gold-productive countries in the world. But their produce of bullion has of late years much fallen in amount.

The director of the United States' Mint, in his report for 1875, estimates the annual yield of gold and silver in California and other United States possessions at \$100,000,000, or about £20,000,000. The total export of bullion and specie from Australia, after deducting the import (chiefly intercolonial), varied in the fifteen years 1858–1872 from 11½ to 7½ millions sterling per annum, the general tendency being towards the lower amounts in the later years (*Statistical Abstract for Colonial and*

*other Possessions of United Kingdom, 1874*). The annual average export in these fifteen years was £9,747,635, and must be held to measure amply the produce of the gold and silver mines of Australia. The annual production of bullion in the United States and Australia cannot, on these data, be estimated at more than 28 millions sterling. Humboldt found the annual produce of the gold and silver mines of America, Europe, and Northern Asia, at the beginning of the century, to be about £9,700,000. The yield of gold and silver from the same sources in 1850–57 was estimated by McCulloch, in the *Commercial Dictionary*, to be £14,000,000. The old gold and silver mines can hardly have become more productive since the advent of the Californian and Australian diggings, so that it would appear the latter have increased the visible annual supply of gold and silver about threefold, or from £14,000,000 to £42,000,000. Japan, so far as can be judged from the exchanges, must now be added to the list of gold-producing countries. For several years in succession Japan has exported considerable and apparently increasing amounts of treasure, or gold and silver coins of its own mint. In 1874 this export amounted to \$13,332,794, or nearly three millions sterling (Sir Henry Parkes's *Summary of Consular Reports*). During the first six months of 1875 the imports of bullion from Yokohama to London were £1,257,170 gold, £95,080 silver; and not improbably the next great access of the product of gold-mines may be from that part of the world. But notwithstanding this marked increase of gold and silver since 1850, when one considers the increase of population, the still greater increase of trade and industry, and the vast extension of financial and commercial affairs in the same period, it may be held doubtful whether gold and silver have lost any of their old proportion to the need for them and to the work they have to do.

When the coffers of the great banks of Europe were filled with the virgin gold of California and Australia, one of the first consequences was a desire on the part of countries in which silver was either a collateral standard of value with gold, or the sole standard of value, to discard the silver standard and adopt gold as the sole standard, involving in either case a large displacement of silver coinage and reserve, and a large infusion in its room of gold coinage and reserve. This result was exhibited in the mint operations both of France and England. In the former country silver retains its quality of legal tender in a modified degree; but the proportion of silver authorized by the Bank Charter Act of 1844 has long disappeared from the bullion reserve of the Bank of England, which now consists wholly of gold. It was one of the first resolutions of the German Empire, on the conclusion of the war of 1870–71, not only to make gold the sole standard, but to dislodge all the old silver money of the German States; and in the same connection it may be observed, that the director of the United States' Mint, in reporting £20,000,000 as the annual produce of the United States' mines, uses this fact as an argument for the immediate resumption of specie payment—or, in other words, that the American people, by a strenuous effort, should strive to keep as much of the bullion-product of their mines at home as may enable the whole currency of the Union to become either gold and silver, or of convertible gold value. This preference for the more precious metal as the sole standard of value, and for gold and silver coin as a medium of general circulation, may be expected to extend throughout the world in proportion as the produce of the mines may be increased; and in this respect alone there is a vast opening for the beneficial use both of gold and silver. It gives some idea of the immense service of bullion in the international exchanges, as well as in the replenishment of

the internal metallic circulations, to observe that in the thirteen years 1858–70 the annual average registered import of gold and silver (real value) to the United Kingdom was £27,083,330, the average annual export £22,095,346; and that in the same thirteen years the average annual coinage of gold and silver in the Royal Mint was £4,854,661, or nearly equal to the annual excess of imports over exports of bullion, which flows in all this volume through London to and from every part of the globe—(*Statistical Abstract for United Kingdom, 1872*).

While the production of gold has declined of late years from the maximum attained after the Californian and Australian discoveries, the production of silver has begun to increase, and in the rapid development of minerals containing this metal, is generally expected to increase in the future. But it would seem premature from the facts of past experience to anticipate any permanent depreciation of the value of silver in relation to gold. The price of silver in the market of London from 1833 to 1873 ranged from 59d. to 62½d. per oz., and during that time fully maintained its standard value in par with that of gold—(*Table of Messrs Pixley and Abell, bullion-brokers, London*). But in the subsequent years a decline in the price of silver has occurred, and it fell in 1875 to 56d. per ounce. This may be the result of temporary causes, such as (1) the fact of £20,000,000 of German silver, displaced by the new gold coinage hanging over the market; and (2) a cessation of demand for India and China, which the exchanges of the East with Europe may at any time alter.

BULLS AND BRIEFS, PAPAL, are the two kinds of authoritative letters issued by the popes in their official capacity as head of the church, the bulls being the more important. They are distinguished from each other by several marks.

A bull is written on thick polished parchment, commonly in angular Gothic characters, and in Latin; it is always open; it commonly begins with the name of the Pope, but without adding any number (e.g., Pius, not Pius IX.), then follows the term *episcopus*, then *servus servorum Dei*, then either the phrase *ad perpetuam rei memoriam*, or the greeting *in Domino salutem et apostolicam benedictionem*. It closes with the place and the date, which is commonly given according to the kalends, nones, or ides of the month and the year of the pope. The chief mark, however, of a bull is the seal. The popes use three kinds of seals—1, the signet-ring; 2, since the end of the 5th century, the *bullæ*; 3, from the 13th century, the *annulus piscatoris*. A bull is sealed with the second, the *bullæ*, and from this it derives its name. The *bullæ* is a globular seal of lead; on the one side there is, in modern times, the heads of St Peter and St Paul, with the letters S. PE. and S. PA.; on the other side is the name of the Pope. Formerly the *bullæ* often bore other impressions; the name of the Pope was always given, but sometimes the title *Papa* was impressed on the opposite side; sometimes a Scriptural image, such as the Good Shepherd. The popes evidently began to use this particular seal when, from the growing weakness of the empire, the temporal authority of the bishop of Rome began to be a real thing, and the popes assumed the consular dress and insignia; for the *bullæ* had been used by the emperor of Constantinople, and its use was permitted to many of the great officers of state who were accustomed to act for the emperor. The *bullæ* was the common imperial seal, and was used not merely by the emperors of the East, but also by the early German emperors, and even by some of the minor European sovereigns. It was sometimes made of gold, sometimes of silver, often of lead, and it was not until the earlier part of the Middle Ages that the leaden *bullæ* became the distinctive mark of a Papal charter.

"Non auro, non argento, sacra Bulla refulget,  
Insignit chartas plumbea forma sacras."

The word *bulła*—meaning first a bubble, then any kind of small ornament "*quasi inflata*," then a seal of a globular shape—came to be applied to a charter sealed with such a globular seal, and since the 15th century, exclusively to Papal letters of the first rank. If the bull is *in forma gratiosa* the seal is attached by threads of red and yellow silk; if *in forma rigorosa*, hemp is used. If the Pope issues a bull before he is enthroned, nothing is put on the seal, and the bull is commonly called *bulła blanca*. Before the time of Nicholas IV. such bulls were only valid if confirmed after enthroning. Since then they have been valid without confirmation. Consistorial bulls are issued after consultation with the consistory of cardinals, and are signed by all the cardinals consulted. Ducange (*Gloss. Med. et Inf. Lat.*) says that consistorial bulls are often sealed with the signet-ring.

A *brief* is not so important as a bull. It is written upon white paper, or thin parchment, in modern cursive characters, and is sometimes sent open, sometimes closed. It begins with the name of the Pope, then the title *Papa*, then the number of the Pope, then the phrase *ad perpetuam rei memoriam*, or *in Domino salutem et apostolicam benedictionem*; it ends with the name of the place, and the date (the day of the month, the year A. D., and the year of the Pope), and, finally, the words *sub annulo piscatoris*. The principal mark of the brief is its seal. It is sealed with red wax, with the signet called "the fisherman's ring," which dates from the 13th century, and bears a representation of St Peter fishing in a boat, and the name and the number of the Pope. The distinction between briefs and bulls is not much older than the 15th century. In the early Middle Ages the word *breve* was used to denote all sorts of short charters, and Ducange in his *Glossary* gives over a hundred different kinds of these. Papal bulls and briefs, like all other important legal instruments, are liable to be forged, and hence Roman Catholic jurists have made a special study of the various marks by which they are able to tell the age of a charter. The bulls and briefs of greatest importance have been published in *Bullaria* collections which have been put forth at different times under the authority of the church. The most important of those collections is the *Bullarium Magnum Romanum, a Leone Magno usque ad Benedictum XIV.*, Luxembourg, 1727–1758, 19 vols. fol., and its continuations.

BÜLOW, FRIEDRICH WILHELM (1755–1816), a Prussian general, was born at Falkenberg on the 16th February 1755. He entered the army at the age of fourteen, rose slowly, and in 1797 was placed at the head of a battalion. He took part in the campaigns of 1806–7, and in 1809 was made major-general and brigadier of infantry. On the renewal of the war against France in 1813 he took the field with the rank of lieutenant-general, was engaged in the battle of Möckern, and stormed the defences of Halle. He was victorious over Oudinot at Luckau and Grossbeeren, and over Ney at Dennewitz. He led the attack on the fortifications at Leipsic, and was conspicuous in the Prussian victory at Laon. To him also belonged the honour of closing the campaign by the capture of Montmartre. For his valuable services he was raised to the rank of general, and made Baron Dennewitz, with a handsome revenue. During the Hundred Days he commanded the fourth army corps, and by his rapid march contributed to Blücher's success at Waterloo. After the conclusion of the war he retired to Königsberg, where he died on the 25th February 1816.

BULWER, SIR HENRY LYTTON EARLE (1804–1872), statesman and diplomatist, created a peer, under the title of Baron Dalling and Bulwer, in 1871. See DALLING.

BULWER-LYTTON, SIR EDWARD GEORGE EARLE LYTTON (1806–73), brother of the preceding, created a peer under the title of Baron Lytton, in 1866. See LYTTON.

BUNDEKHAND, an extensive tract, consisting partly of British districts and partly of native states, in the North Western Provinces of India, lying between 23° 52' and 26° 26' N. lat., and 77° 53' and 81° 39' E. long. It is bounded on the N. by the Jumna, on the E. by the Bāghalkhand or the Rewā state, on the S. by the Central Provinces, and the W. by the state of Gwalior.

It comprises the British districts of Hamirpur, Jalaun, Jhānsi, Lalatpur, and Bānda; the semi-independent states of Orchhā or Tehri, Datiyā, and Samthar; and the following petty states held under grants from the British Government, viz.:—Ajegarh, Alipurā, Ashtgarhi Jāgir, Tori-Fathpur, Bijná and Pahāri Bankā, Bāronā, Bāwanī, Beri, Bihat, Bijāwar, Charkhāri, seven Chaubiyānā Kalinjār Jāgirs, Chhatrapur, Garrauli, Gānrīhar, Jasū, Jignī, Khaniyā Dhānā, Lughāsi, Naigāon Ribahī, Pannā, and Sarilā. Length of Bundelkhand—200 miles from S.E. to N.W.; breadth, 155 miles; area variously estimated from 18,099 to 23,817 square miles.

The surface of the country is uneven and hilly, except in the N.E. part, which forms an irregular plain cut up by ravines scooped out by torrents during the periodical rains. The plains of Bundelkhand are intersected by three mountain ranges, the Bindhāchal, Pannā, and Bander chains, the highest elevation not exceeding 2000 feet above sea-level. Beyond these ranges the country is further diversified by isolated hills rising abruptly from a common level, and presenting from their steep and nearly inaccessible scarps eligible sites for castles and strongholds, whence the mountaineers of Bundelkhand have frequently set at defiance the most powerful of the native states of India. The general slope of the country is towards the north-east, as indicated by the course of the rivers which traverse or bound the territory, and finally discharge themselves into the Jumna.

The principal rivers are the Sindh, Betwā, Ken, Baighin, Paisuni, Tons, Pahuj, Dhasān, Bermā, Urmal, and Chandrawāl. The Sindh, rising near Sironj in Mālwa, marks the frontier line of Bundelkhand on the side of Gwalior. Parallel to this river, but more to the eastward, is the course of the Betwā. Still further to the east flows the Ken, followed in succession by the Baighin, Paisuni, and Tons. The Jumna and the Ken are the only two navigable rivers. Notwithstanding the large number of streams, the depression of their channels and height of their banks render them for the most part unsuitable for the purposes of irrigation,—which is conducted by means of *jhils* and tanks. These artificial lakes are usually formed by throwing embankments across the lower extremities of valleys, and thus arresting and accumulating the waters flowing through them. Some of the tanks are of great capacity; the Barwā Sāgar, for instance, is 2½ miles in diameter. Diamonds are found, particularly near the town of Pannā, in a range of hills called by the natives Band-Ahil.

The mines of Mahārājpur, Rājpur, Kimerā, and Gadāsia contain the finest diamonds; one dug from the last is reputed to be the largest in the world. It was kept in the fort of Kalinjās among the treasures of Rājā Himmat Bahādūr. In the reign of the Emperor Akbar the mines of Pannā produced diamonds to the amount of £100,000 annually, and were a considerable source of revenue, but for many years they have not been so profitable.

The tree vegetation consists rather of jungle or copse than forest, abounding in game which is preserved by the native chiefs. There are also within these coverts several varieties of wild animals, such as the tiger, leopard, hyena, wild boar, *nilgai*, and jackal.

British Bundelkhand contains a population of 2,161,495 souls. The total population of Bundelkhand, British and native, has been estimated at 2,260,714. The people represent various races. The Bundelās,—the race who gave the name to the country,—still maintain their dignity as chieftains, by disdaining to cultivate the soil, although by no means conspicuous for lofty sentiments of honour or morality. An Indian proverb avers that "one native of Bundelkhand commits as much fraud as a hundred Dandis" (weighers of grain, and notorious rogues). About Datiyā and Jhānsi the inhabitants are a stout and handsome race of men, well off and contented.

The prevailing religion in Bundelkhand is Hinduism.

The principal crops are wheat, *joār*, cotton, indigo, sugarcane, a red dye called *āch*, various kinds of millets and pulses, and *mahuā* (*Bassia latifolia*). Carpets are manufactured at Jhānsi, and paper at Kalpi. Bamboo and *Acacia catechu* from the jungles form important articles of trade. Principal routes—(1), from Allahābād to Nasrābād through Bānda; (2), from Fathipur to Sāgar through Bānda; (3), from Cawnpur to Jabalpur; (4), from Cawnpur to Gunā through Kālpī and Jhānsi; (5), from Bānda to Gwalior; and (6) from Agra to Sāgar. The Jabalpur line of the East Indian Railway passes through the native states of Bundelkhand. Principal towns,—Kālpī, Bānda, Jhānsi, Datiyā, Urchā, Jalaun, Chhatrapur, Mahobā, and Tehāri. The climate of Bundelkhand is sultry and unhealthy.

HISTORY.—Chandra Varmā, chief of the Chandel Rājputs, appears to have established the earliest paramount power in Bundelkhand towards the close of the 9th century A. D. Under his dynasty the country attained its greatest splendour in the early part of the 11th century, when its Rājā, whose dominions extended from the Jumna to the Nerbudda, marched at the head of 36,000 horse and 45,000 foot, with 640 elephants, to oppose the invasion of Mahmūd of Ghazni. In 1183 the Chandel dynasty was overthrown by Firthwi Rāj, the ruler of Ajmir and Delhi, after which the country remained in ruinous anarchy until the close of the 14th century, when the Bundelās, a spurious offshoot of the Garhwā tribe of Rājputs, established themselves on the right bank of the Jumna. One of these took possession of Urchā by treacherously poisoning its chief. His successor succeeded in further aggrandizing the Bundelā state, but he is represented to have been a notorious plunderer, and his character is further stained by the assassination of the celebrated Abulfaiz, the prime minister and historian of Akbar. Jajhar Singh, the third Bundelā chief, unsuccessfully revolted against the court of Delhi, and his country became incorporated for a short time with the empire. The struggles of the Bundelās for independence resulted in the withdrawal of the royal troops, and the admission of several petty states as feudatories of the empire on condition of military service. The Bundelās, under Champat Rāi and his son Chhatra Sāl, offered a successful resistance to the proselytizing efforts of Aurungzeb. On the occasion of a Mahometan invasion in 1782, Chhatra Sāl asked and obtained the assistance of the Marhattā Peshwā, whom he adopted as his son, giving him a third of his dominions. The Marhattās gradually extended their influence over Bundelkhand, and in 1792 the Peshwā was acknowledged as the lord paramount of the country. The Marhattā power was, however, on the decline; the flight of the Peshwā from his capital to Bassein before the British arms changed the aspect of affairs, and by the treaty concluded between the Peshwā and the British Government, the districts of Bānda and Hamirpur were transferred to the latter. Two chiefs then held the ceded districts, Himmat Bahādūr, the leader of the Sanyāsīs, who promoted the views of the British, and Shamsher, who made common cause with the Marhattās. In September 1803, the united forces of the English and Himmat Bahādūr compelled Shamsher to retreat with his army. In 1809 Ajaigarh was besieged by a British force, and again three years later Kalinjār was besieged and taken after a heavy loss. In 1817, by the treaty of Poonah the British Government acquired from the Peshwā all his rights, interests, and pretensions, feudal, territorial, or pecuniary, in Bundelkhand. In carrying out the provisions of the treaty, an assurance was given by the British Government that the rights of those interested in the transfer should be scrupulously respected, and the host of petty native principalities in the province is the best proof of the sincerity and good faith with which this clause has been carried out. During the mutiny of 1857, however, many of the chiefs rose against us, especially the Rānt of Jhānsi.

BUNDI, a Rājput state of India, under the political

superintendence of the Government of India through its agent in Rājputānā, situated between 24° 58' and 25° 55' N. lat., and 75° 23' and 76° 36' E. long. It is bounded on the N. by the native states of Jaipur and Tonk; on the E. by the state of Kotal; on the S. by Sindhiā's territories; and on the W. by the state of Udaipur. Many parts of the state are wild and hilly, inhabited by a large Minā population, a race of robbers. Two rivers, the Chambā and the Nij, water the state; the former is navigable by country boats. Area, 2291 square miles; population in 1871–72, 224,000, or 97 to the square mile. The chieftain and the greater part of his followers are Rājputs. Principal crops—Indian corn, *joār*, wheat, pulses, and oil-seeds. Iron is found. The chief's annual income amounts to £50,000, derived from land-tax levied both in kind and money, and from customs. Thefts and petty robberies are still of frequent occurrence. Our political relations with Bundi commenced in 1804 during the Marhattā war, and in 1818 its chief accepted our protection. The present ruler has managed the state for the last fifty years, and done much to improve the condition of the people. Bundi pays an annual tribute of £4000 to the British Government.

BUNKER HILL, a small elevation, 110 feet high, in the town of Charlestown, 1 mile N. of Boston, in Massachusetts. One of the most celebrated battles in the war of American independence was fought here on the 17th of June 1775. The British remained masters of the field after a long and bloody contest. A commemorative obelisk, 221 feet high, has been erected in the centre of the grounds included within the redoubt on Breed's Hill. See BOSTON, vol. iv. p. 72.

BUNSEN, CHRISTIAN CHARLES JOSIAS, BARON VON (1791–1860), was born 25th August 1791, at Corbach, an old town in Waldeck, one of the the smallest of German principalities. He was of honourable but humble origin. His father, to eke out the scanty subsistence provided by his few acres of land, had entered a regiment "granted" to Holland by the prince. Without promotion or encouragement, he attended conscientiously to the drudgery of his post during twenty-nine long years, to return at last, in 1789, a widower, with broken health and a miserable pension. Brighter days were in store for him through the affections of his second wife and the birth of Christian. It is on record, how joyous were the evenings in that old fashioned Corbach home, when, after reading a chapter from the family Bible, and devoutly praying with his household, the kindly old man loved to prune, by pithy remarks and snatches of proverbial lore, the redundant enthusiasm and all-embracing fervour of his son. To the latter, success and a host of fond admirers seem from the first never to have been wanting. Nor did humility of demeanour, exquisite sympathy with all men, and an almost unexampled power of work ever fail him. The Corbach grammar school was brilliantly passed, and after it a first year of university studies, at Marburg, devoted to divinity. But Göttingen in those days attracted all superior minds, and the youth of eighteen found himself on his way thither with the last savings from his father's purse, intent upon appeasing his desire for those wider regions of philological and historical learning in which he knew his strength must lie. Again all avenues of outward success opened to the unpretending student; although so young he was entrusted with lessons at the Latin school, and soon after with the office of private tutor to W. C. Astor, only son of the well-known merchant king of New York.<sup>1</sup> Bunsen soon became the acknowledged though unobtrusive centre of a chosen band of students, few only of whom have failed to attain that reputation to which their abilities seemed to call them,

<sup>1</sup> Mr W. C. Astor, "the landlord of New York," as he has been called, died in November 1875.