styled in Italy), a celebrated sculptor, was born at Douay in 1524, and died at Florence in 1608. He went early to Italy, and studied at Florence, where his best works still remain. His two most celebrated productions are the single bronze figure of Mercury, poised on one foot, resting on the head of a zephyr, as if in the act of springing into the air (in the Florentine gallery), and the famous marble group of the Rape of the Sabines, which received this name, Lanzi informs us, after it was finished. It is now in the Loggia de Lanzi of the ducal piazza. Giovanni was also employed at Genoa, where he executed various excellent works, chiefly in bronze. All his pieces are characterized by great spirit and elegance.

BOLSENA, a town of Italy, in the province of Rome, and the district of Viterbo, 10 miles S. by E. of Orvieto. It is situated on the north shore of the lake of the same name (*Lago di Bolsena*), and probably occupies the site of the Roman city of Volsinii. The principal remains are the ruins of an amphitheatre and those of a temple, which is popularly called *il Tempio di Norzia* after the Etruscan goddess Norsia, and there are numerous other relics scattered throughout the city or built into the walls of its modern buildings. Volsinii was originally one of the most powerful of the Etruscan cities, and occupied a position among the hills; but after a series of struggles with the Romans, the Volsinians were finally subdued about 280 B.C., their city was razed to the ground, and themselves obliged to settle in a less defensible site in the plain. The only event of interest in the history of the new town was its being the birthplace of Sejanus, the favourite of Tiberius. Its present population is only 2690. The Lake of Bolsena is about 10 miles in length by 8 in breadth, and is surrounded by well-wooded hills. It contains two small islands, Bisentina and Martana, in the latter of which Amalasontha, the wife of Theodatus, king of the Goths, was put to death by his orders.

BOLTON, or BOLTON LE MOORS, a municipal and parliamentary borough of England, in the county of Lancashire, 11 miles N.W. of Manchester, in 53° 35′ N. lat. and 2° 37′ W. long. It is divided by the Croal, a small tributary of the Irwell, into Great and Little Bolton, the former of which is situated on the south side of the stream. The town is on the whole well arranged and well built, and great improvements and extensions have been effected since 1860. An abundant supply of water is obtained from the neighbouring hills and stored in reservoirs at Belmont, Sharples, and Heaton. The waterworks, formerly in the hands of a company founded in 1824, have been the property of the corporation since 1847. The water rises by natural pressure to a height of 80 feet. Bolton possesses a large number of churches, but few are remarkable for either antiquity or architecture. The parish church of St Peter's, a building of somewhat early date, was rebuilt in an elaborate style about 1868. Among the educational establishments may be mentioned Lever's Grammar School, founded in 1641, where Dr Ainsworth, the Latin lexicographer, and Lemprière, of the *Classical Dictionary*, were formerly masters. A new town-hall, a market hall, a fish-market, an exchange, a theatre, and assembly rooms, are among the chief buildings. There are several public libraries and a mechanics' institute; and in 1855 a large Church of England institute was erected. During the great cotton famine the unemployed operatives were set to work on a large public park, which was opened in 1866. The cotton manufacture in various departments is still the most important in the town; in 1871 it gave employment to 8708 men and 11,353 women of twenty years of age and upwards. Various other industries, however, are extensively carried on. In 1871, 1030 adult workmen were employed in the manufacture of machinery, and 2524 in the iron manufacture; while silk-weaving was the occupation of 881, linen-weaving of 289, and paper-making of 306. Bleaching is also extensively carried on, and there are chemical works, dye-works, and calico-printing establishments. The coal mines in the neighbourhood give employment to nearly 4000 miners. Bolton is a place of some antiquity, but had little importance till the introduction of the woollen manufacture by Flemish immigrants about 1337. Several centuries afterwards its industries received a further development from a body of French refugees, driven from their own country by the Edict of Nantes. During the civil war of the 17th century the inhabitants espoused the popular side, and their town was taken by storm in 1644 by the royalists under Prince Rupert and the earl of Derby. The 18th century saw a great stimulus given not only to Bolton but to all England by the inventions of Arkwright and Crompton, who were both natives of the parish. It was here that cotton velvets were made for the first time (in 1756) and muslins (1782) by means of machinery. In 1791 a canal was constructed from Manchester to Bolton, and in the following year an Act of Parliament was passed for enclosing Bolton Moor. This measure was soon succeeded by a large extension of the town, which has since continued to increase from year to year. The municipal borough, with an area of 1748 acres, contained in 1851 10,394 inhabited houses for a population of 61,171; and in 1861, 13,129 houses for a population of 70,395. In 1871 the borough, with an increased area of 1822 acres, included 16,286 houses, and the population was 82,853. The parliamentary borough, which owes its existence to the Reform Bill of 1832, returns two members to parliament.

Arms of Bolton.

BOLZANO, BERNHARD, Catholic theologian and philosopher, was born at Prague on the 5th October 1781. He distinguished himself by his proficiency in mathematics, a study for which he always retained a predilection, and in philosophy. At the age of twenty-four he took orders, and was appointed professor of the philosophy of religion at the philosophical faculty in Prague. His lectures, in which he endeavoured so to present the system of Catholic theology as to show its complete harmony with reason, were received with eager interest by the younger generation of thinkers. But his views met with much opposition; and it was only through the powerful protection of the Prince Archbishop Salm-Salm that he was enabled to retain his chair. At last, in 1820, he was accused of being connected with some of the students' societies, and was compelled to resign his professorship. Several doctrines extracted from his works were condemned at Rome, and he was suspended from his priestly functions. The remainder of his life was devoted to literary work. He died at Prague in 1848. Bolzano's works are very numerous, filling, according to Erdmann, twenty-five volumes. The most important are the *Wissenschaftslehre* (4 vols., Sulzbach, 1837), containing some admirable discussions on logic, and the *Lehrbuch der Religions-wissenschaft* (4 vols., Sulzbach, 1834), which contains a philosophic representation of all the dogmas of the Catholic theology. In some respects it resembles the earlier work of Georg Hermes, for whom Bolzano had a great veneration. Some of the best of his minor works are on the philosophy of mathematics; such are—*Betrachtungen über Elementargeometrie, Beiträge zur begründeteren Darstellung der Mathematik, Begründung der Lehre von der drei Dimensionen des Raums.* (See *Lebensbeschreibung des Dr Bolzano* (an autobiography), 1836; Wisshaupt, *Skizzen aus dem Leben Dr Bolzanos*, 1850. A good account of Bolzano's philosophical position will be found in Erdmann. *Grundriss der Ges. d. Phil.* ii. p. 385. *seq.*)

BOMBAY

BOMBAY, a Presidency and Governorship of British India, consisting partly of British districts, and partly of native states under the protection of Her Majesty's Indian Government. This territory extends from 28° 32′ to 13° 65′ N. lat., and from 66° 43′ to 76° 20′ E. long.; and is bounded on the N. by Beluchistán, the Panjáb, and the native states of Rájputáná; on the E. by the native state of Indor, the Central Provinces, West Berar, and the Nizám's dominions; on the S. by Madras and Mysor; and on the W. by the Arabian Sea. Area, including Sindh, 188,195 square miles, viz., 124,943 British, and 63,252 under Native rule. Population, 25,624,696 souls, viz., British districts, 16,352,623; Native states, 9,272,073. Bombay Presidency comprises three British divisions or commissionerships, the northern, the southern, and the Sindh divisions, with the following 24 districts:—Bombay, Ahmadábád, Kairá, Pánch Mahals, Broach, Surat, Tánná, Kolábá, Khándesh, Násik, Ahmadnagar, Belgám, Kánárá, Dhárwár, Káladgí, Púná, Ratnágiri, Sátárá, Sholápur, Upper Sindh Frontier, Karáchí, Haidarábád, Shikárpur, and Thar Párkar. The Native states are under the supervision of British political officers, and are divided into 16 agencies, viz., Baroda, Kachh, Káthiáwár, Kairá, Surat, Sholápur, Sátárá, Kolhápur, South Marhattá Country, Rewákánta, Máhikánta, Páhlanpur, Sáwantwárí, Tanná, Kolábá, and Dhárwár. The Presidency also includes the Portuguese possessions of Dáman, Diu, and Goa.

PHYSICAL ASPECTS.—The Bombay Presidency consists of a long strip of land along the Indian Ocean from the south of the Panjáb to the north of Mysor, from 25° to 14° 3′ N. lat. The coast is rock-bound and difficult of access; and though it contains several bays forming fair-weather ports for vessels engaged in the coasting trade, Bombay, Karáchí in Sindh, and Kárwár alone have harbours sufficiently landlocked to protect shipping during the prevalence of the south-west monsoon. The coast-line is regular and little broken, save by the Gulfs of Kambay and Kachh, between which lies the peninsula of Káthiáwár.

Mountains.—Speaking generally, a range of hills, known as the Western Ghát (ghauts), runs down the coast, at places rising in splendid bluffs and precipices from the water's edge, at others retreating inland, and leaving a flat fertile strip of 5 to 50 miles between their base and the sea. In the north of the Presidency on the right bank of the Indus, the Hálá mountains, a continuation of the great Sulaimán range, separate British India from the dominions of the Khán of Khelát. Leaving Sindh, and passing by the ridges of low sand hills,—the leading feature of the desert east of the Indus,—and the isolated hills of Kachh and Káthiáwár, which form geologically the western extremity of the Aravali range, the first extensive mountain range is that separating Gujarát from the states of Central India. The rugged and mountainous country south of the Taptí forms the northern extremity of the Sáhyádri or Western Ghát. This great range of hills, sometimes overhanging the ocean, and generally running parallel to it at a distance nowhere exceeding 50 miles, with an average elevation of about 1800 feet, contains individual peaks rising to more than double that height. They stretch southwards for upwards of 500 miles, with a breadth of 10 to 20 miles. The western declivity is abrupt, the land at the base of the hills being but slightly raised above the level of the sea. As is usually the case with the trap formation, they descend to the plains in terraces with abrupt fronts. The landward slope is in many places very gentle, the crest of the range being sometimes but slightly raised above the level of the plateau of the Dakhín. Their best-known elevation is Mahábaleshwar, 4800 feet high, a fine plateau, 37 miles from Púna, covered with rich vegetation, and used by the Bombay Government as its summer retreat and sanitarium. In the neighbourhood of the Sáhyádri hills, particularly towards the northern extremity of the range, the country is rugged and broken, containing isolated peaks, masses of rock, and spurs, which, running eastward, form watersheds for the great rivers of the Dakhín. The Sátpurá hills separate the valley of the Taptí from the valley of the Narbadá, and the district of Khándesh from the territories of Indor. The Sátmálá or Ajantá hills, which are rather the northern slope of the plateau than a distinct range of hills, separate Khándesh from the Nizám's dominions.

Plains.—The more level parts of Bombay consist of five well-demarcated tracts—Sindh, Gujarát, the Konkan, the Dakhín or Deccan, and the Karnatic. Sindh, or the lower valley of the Indus, is very flat, with but scanty vegetation, and depending for productiveness entirely on irrigation. Gujarát, except on its northern parts, consists of rich, highly cultivated alluvial plains, watered by the Táptí and Narbadá, but not much subject to inundation. The Konkan lies between the Western Ghát and the sea. It is a rugged and difficult country, intersected by creeks, and abounding in isolated peaks and detached ranges of hills. The plains of the Dakhín and Khándesh are watered by large rivers, but as the rainfall is uncertain, they are generally, during the greater part of the year, bleak and devoid of vegetation. The Karnatic plain, or the country south of the River Krishná, consists of extensive tracts of black or cotton soil in a high state of cultivation.

Rivers.—The chief river of Western India is the Indus, which enters the Presidency from the north of Sindh, and flowing south in a tortuous course, falls into the Arabian Sea by several mouths, such as the Ghizrí creek, Khudí creek, Pitiání creek, Sisá creek, Hajámrí creek, Vathó creek, Mall creek, Wárí creek, Bhitiárá creek, Sir creek, and Khorí creek. In the dry season the bed varies at different places from 480 to 1600 yards. The flood season begins in March and continues till September, the average depth of the river rising from 9 to 24 feet, and the velocity of the current increasing from 3 to 7 miles an hour. Next to the Indus comes the Narbadá. Rising in the Central Provinces, and traversing the dominions of Holkar, the Narbadá enters the Presidency at the north-western extremity of the Khándesh district, flows eastward, and after a course of 700 miles from its source, falls into the Gulf of Kambay, forming near its mouth the alluvial plain of Broach, one of the richest districts of Bombay. For about 100 miles from the sea the Narbadá is at all seasons navigable by small boats, and during the rains by vessels of from 30 to 50 tons burden. The Táptí enters the Presidency a few miles south of the town of Burhanpur, a station on the Great Indian Peninsula Railway, flows eastward through the district of Khándesh, the native state of Rewákánta, and the district of Surat, and falls into the Gulf of Kambay, a few miles west of the town of Surat. The Táptí drains about 250 miles of country, and is, in a commercial point of view, the most useful of the Gujarát rivers. Besides these there are many minor streams. The Banás and the Saraswatí take their rise in the Aravali hills, and flowing eastward through the native state of Páhlanpur, fall into the Rann of Kachh. The Sabarmatí and the Máhi rise in the Máhikánta hills, and flowing southwards drain the districts of Northern Gujarát, and fall into the

sea near the head of the Gulf of Kambay. The streams which, rising in the Sáhyádri range, or Western Ghâts, flow westward into the Arabian Sea, are of little importance. During the rains they are formidable torrents, but with the return of the fair weather they dwindle away, and during the hot season, with a few exceptions, they almost dry up. Clear and rapid as they descend the hills, on reaching the lowlands of the Konkan they become muddy and brackish creeks. The Kanarese rivers have a larger body of water and a more regular flow than the streams of the Konkan. One of them, the Sheráwatí, forcing its way through the western ridge of the Ghâts, plunges from the high to the low country by a succession of falls, the principal of which is 890 feet in height. The Sáhyádri, or Western Ghâts, also throw off to the eastward the two principal rivers of the Madras Presidency, the Godávarí and the Krishná. These rivers collect countless tributary streams, some of them of considerable size, and drain the entire plain of the Dakhín as they pass eastward towards the Bay of Bengal.

Lakes.—The Manchar Lake is situated on the right bank of the Indus. During inundations it attains a length of 20 miles, and a breadth of 10, covering a total area estimated at 180 square miles. But the most peculiar lacustrine feature of the Presidency is the Rann or Lake of Kachh (*Cutch*), which, according to the season of the year, is a salt marsh, an inland lake, or an arm of the sea Its area is estimated at 8000 square miles. It forms the western boundary of the province of Gujarát, and when flooded during the rains, unites the Gulfs of Kachh (Cutch) and Kambay, and converts the territory of Kachh into an island. In the dry season the soil is impregnated with salt, the surface in some places being moist and muddy, and in others, like a dry river bed or sea-beach, strewn with gravel or shingle. The Rann is now used as the great source of salt supply for the whole Presidency. Its present condition is probably the result of some natural convulsion. But whether the Rann is an arm of the sea from which the waters have receded, or an inland lake whose seaward barrier has been swept away, still remains a matter of discussion.

Climate.—Great varieties of climate are met with in the Presidency. In its extreme dryness and heat, combined with the aridity of a sandy soil, Upper Sindh resembles the sultry deserts of Africa. The mean maximum temperature at Haidarábád, in Lower Sindh, during the six hottest months of the year, is 98°·5′ in the shade, and the water of the Indus reaches blood heat; in Upper Sindh it is even hotter, and the thermometer has been known to register 130° in the shade. In Kachh and in Gujarát the heat, though less, is still very great. The Konkan is hot and moist, the fall of rain during the monsoon sometimes approaching 300 inches. The table-land of the Dakhín above the Ghâts, on the contrary, has an agreeable climate except in the hot months, as has also the southern Marhattá country; and in the hills of Mahábaleshwar, Singarh, and other detached heights, Europeans may go out at all hours with impunity. Bombay Island itself, though in general cooled by the sea breeze, is oppressively hot during May and October. The south-west monsoon generally sets in about the first week in June, and pours down volumes of rain along the coast. From June to October travelling is difficult and unpleasant, except in Sindh, where the monsoon rains exert little influence.

Forests.—Bombay Presidency possesses two great classes of forests—those of the hills and those of the alluvial plains. The hill forests are scattered over a wide area, extending from 23° to 14° N. lat. Most of them lie among the Sáhyádri hills or Western Ghâts. The alluvial forests lie in Sindh, on or close to the banks of the Indus, and extend over an area of 550 square miles. The principal timber trees in the forests are—teak; blackwood of two varieties (*Dalbergia Sisu* and *Dalbergia latifolia*), *Dalbergia ujainensis*, *Pterocarpus Marsupium*, *Terminalia glabra*, *Acacia arabica*, *Acacia Catechu*, *Nauclea cordifolia*, *Nauclea parvifolia*, *Bidelia spinosa*, *Hardwickia binata*, *Juga xylocarpa*, *Populus euphratica*, and *Tamarix indica*. The forests contain many trees which, on account of their fruits, nuts, or berries, are valuable, irrespective of the quality of their timber. Among these are the mango (*Mangifera indica*); the jack (*Artocarpus integrifolia*), *Zizyphus Jujuba*, *Ægle Marmelos*, *Terminalia Chebula*, *Calophyllum Inophyllum*, *Bassia latifolia*, and *Pongamia glabra*. The jungle tribes collect gum from several varieties of trees, and in Sindh the Forest Department derives a small revenue from lac. The palms of the Presidency consist of cocoa-nut, date, palmyra, and areca catechu.

Geology.—Geologically the Bombay Presidency is divided into two tracts: the north-western part, consisting of Sindh, Kachh (Cutch), and Gujarát; and the south-western, comprising the Marhattá country. Undulating sandy plains, with scattered craggy hills, are found in Gujarát; the immense alluvial flats to the north being, for the most part, deserts of blown sand, and the fertile country consisting of a belt along the borders of the sea. In Sindh, the country, except on the banks of the Indus, or where reclaimed by irrigation, is an arid tract of gravel and sand, from which rise steep scarps of limestone ranges. The rocks of Gujarát, Kachh, and Sindh, are only partially represented in the more southern peninsula, and are continuous with the formations found in Persia and Arabia. In the Marhattá country the greater portion of the surface is composed of nearly horizontal strata of basalt and similar rocks.

Population.—The census of 1872 returns the total area of the Presidency, including Sindh, at 188,195 square miles, and the total population at 25,624,696 souls. Details, however, are only available for the British part of the Presidency, which contains an area of 124,943 square miles, and a total population of 16,352,623 souls. The average density of population in the British districts is 131 persons per square mile, but it varies from a maximum of 29,291·13 in Bombay city to 14·20 in Thar and Párkar. Total number of houses in the British districts, 2,164,338; and average number of persons per house, 4·99. Of the total population of the British portion, 12,440,659, or 76·08 per cent., are Hindus; 2,847,756, or 17·4 per cent., Muhammadans; 192,245, or 1·17 per cent., Buddhists; 106,133, or 0·65 per cent., Christians; 67,115, or 0·41 per cent., Pársís; 603,836, or 3·69 per cent., aborigines; and 94,879, or 0·58 per cent., of unspecified religion or nationality. The males number 8,547,100, or 52 per cent. of the population; the females, 7,805,523, or 48 per cent. The percentage of the total number of children under twelve years of age is 31·65. The Hindus are most numerous in Satára, and fewest in the Upper Sindh Frontier district. The Muhammadans form nearly the whole population of Sindh, and are least numerous in the Pánch Mahals. Except in Sindh, the Buddhists are widely scattered throughout the whole Presidency. The Christians are chiefly confined to Bombay city, Tánná, the Indo-Portuguese possessions, and the larger cantonments, such as Púna. The British districts of the Presidency contain upwards of 26,800 villages, and 175 towns of upwards of 5000 inhabitants. Besides Bombay city, there are 213 municipalities established under Act 26 of 1850. Of these, 4 have an income of over £10,000; 27 of over £1000; 22 of over £500; 94 of over £100; and 66 of under £100. Exclusive of the town of Bombay, the total municipal revenue realised in 1872–73 amounted to £198,857. Average rate of municipal taxation, 2s. 1½d. per head of the town population. The principal sources of municipal revenue are the *octroi* duties, house tax, and wheel tax.

Agricultural Products.—The staple crops are as follows:—Joár (*Sorghum vulgare*) and bájrá (*Holcus spicatus*) are the staple food grains in the Dakhín and Khándesh. Rice is the chief product of the Konkan. Wheat, generally grown in the northern part of the Presidency, but specially in Sindh and Gujarát, is exported to Europe in large quantities from Karáchí, and on a smaller scale from Bombay. Barley is principally grown in the northern parts of the Presidency. Náchaní (*Eleusine coracana*) and Kodrá (*Paspalum scrobiculatum*), inferior grains grown on the hill sides, furnish food to the Kulís, Bhils, Wáralis, and other aboriginal tribes. Of the pulses the most important are gram (*Cicer arietinum*), túr (*Cajanus indicus*), kultí (*Dolichos biflorus*), and mug (*Phaseolus Mungo*). Principal oil-seeds: til (*Sesamum orientale*), mustard, castor-oil, safflower, and linseed. Of fibres the most important are cotton, Dakhíní hemp (*Hibiscus cannabinus*), and san or tág (*Crotolaria juncea*). Much has been done of late years to improve the cotton of the Presidency. American varieties have been introduced with much advantage in the Dhárwár collectorate and other parts of the southern Marhattá country. In Khándesh the indigenous plant from which one of the lowest classes of cotton in the Bombay market takes its name, has been almost entirely superseded by the superior Hinganghát variety. Miscellaneous crops:—Sugar-cane, requiring a rich soil and a perennial water supply, and only grown in favoured localities, red pepper, potatoes, turmeric, and tobacco. In 1871–72, 3,379,937 acres were under cotton cultivation; in 1872–73 the area increased to 3,715,945 acres. The total out-turn was 260,444 *candies* (560 lb) in 1872–73, against 221,144 in 1871–72. A legislative enactment has been passed to prevent adulteration of cotton, and in 1872–73, 24 persons were convicted under it. In 1872–73, 2281 steam cotton gins were at work with 158 steam presses. Two model farms have been established in the Presidency—one at Hálá, near Haidarábád, in Sindh, and the other in Khándesh. Experiments have been instituted in the cultivation of fibres and tobacco. Large quantities of Carolina rice seed were distributed over the country, but the results hitherto cannot be deemed to have been successful. The same may be said of the endeavours which have been made to propagate the cinchona tree near Mahábaleshwar. Acreage under principal crops—Joár, 6,552,385 acres; bajrá, 4,560,271; rice, 2,009,115; wheat, 1,322,835; and pulses, 1,167,809 acres. The land system of the Presidency is complicated, each province having a variety of tenures of its own. But the most important, and by far the most universal, is the survey tenure created by the British administration, which gives a right of occupancy to the holder on condition of his paying the Government demand.

Public Works and Railways.—In 1872–73 the sum of £1,180,000 was expended on account of Public Works in the Bombay Presidency; and the allotment under this head tends annually to increase. In the same year there were five railways open—1. The Great Indian Peninsula Railway: total miles open, 1278; total capital invested, £25,569,568; total receipts during the year, £1,872,826; working expenses, £1,203,200; net profit, £669,626. 2. The Bombay, Baroda, and Central India Railway: miles open, 389; capital invested, £8,418,202; receipts, £564,931; working expenses, £338,786; net profit, £226,145. 3. The Khámgáon State Railway: miles open, 8; capital invested, £48,530; receipts, £1241; working expenses, £562; net profit, £679. 4. The Amráoti Railway: miles open, 5½; capital invested, £43,730; receipts, £2302; working expenses, £1241; net profit, £1061. 5. The Sindh section of the Sindh Panjáb and Dehli Railway: miles open, 106; capital invested, £2,646,106; receipts, £157,100; working expenses, £118,934; net profit, £38,166. Total miles open of the above five railways, 1786½; total capital invested, £36,726,136; total receipts in 1872, £2,598,400; total working expenses, £1,662,723; total net profit, £980,667. Besides these, the following railways are either in progress or about to be undertaken:—(1), State line, Southern Marhattá country; (2), Native State line, Viráwal, Junágarh, and Dhorájí; (3), Pátrí Branch (State line, light rail); (4), Anand and Dákor Branch; (5), Migángáon and Dhaboi Railway; (6), Wardhá to Hinganghát and Warorá: (7), Wadi to Haidarábád; (8), Khandwá to Indor. In 1872–73 the Bombay Telegraph Department had 4406 miles of wire in operation.

Post-Offices.—In 1372–73, 447 post-offices were distributed over the Presidency; total mileage of postal lines, 10,208 miles; total number of letters, parcels, &c., despatched and received, 17,601,982.

Mines and Quarries.—The Presidency of Bombay though deficient in mineral wealth, is abundantly supplied with stores of stone fitted for building and road-making purposes. At Teagar, in the Dhárwár district, iron-ore is mined and smelted, but the scarcity of fuel prevents operations being conducted on an extensive scale. There are also large slate quarries in Dhárwár. Mándargé hill is quarried extensively for stone, the right of working it being annually sold by public auction. In Belgám district are quarries, from which building stones, stone bricks, or oblong quadrangular blocks of soft rock are obtained in abundance. Limestone is also found in the river beds of this district. There are a few trap and laterite quarries in the Ratnágiri district. The trap stone is used for tank and well building, and for the plinths of houses; the laterite is used for house-building. Near Karáchí are five quarries containing a species of limestone, largely used in buildings in that town.

Manufactures.—The indigenous manufactures of the country have rapidly declined since the influx of Manchester goods. But cotton weaving is still carried on upon a small scale in every village of any importance. Dyeing is practised in most places where fresh water is procurable. Printed cotton goods are manufactured in all the large towns of Gujarát, and the further the locality is removed from the direct influence of railways the better the work is. This is owing to the competition of European cotton goods, which are sold much cheaper, and are more brilliant in colour, although less strong and durable, than the native manufactures. Most of the lower classes still wear home-spun and woven goods; but the cotton-mills erected in Bombay, Broach, and in other parts of the Presidency, have introduced threads and cloths, which are readily bought up, and upon which the native workmen display their taste and skill. The cloths manufactured for the Marhattá castes are of various kinds. Some are all cotton, or cotton and silk, some cotton silk with metallic threads, some silk with gold or silver thread. Ahmadábád, Yeolá, Ahmadnagar, Máligáon, Násik, Púná, and Dhárwár, are all celebrated for their cotton goods. Carpets, rugs, horse-cloths, towels, napkins, &c., made of cotton, are manufactured throughout the Presidency. Ahmadnagar has an ancient reputation for the strength and durability of its carpets; Khándesh and Dhárwár for druggets, rugs, and bullock cloths. A new future has lately been opened to manufacturing energy by the introduction of machinery from England. The ancient products of the Presidency, above named, are chiefly household industries: But large steam mills are now rapidly springing up in Bombay city, Broach, Surat, and other stations on the railway lines, especially in the cotton districts. Several of these employ over 1500 hands; one is reported to have nearly double