and Westminster College (1897; Presbyterian). There is a state Art Institute, which gives an annual exhibition, provides for a course of public lectures on art, and houses in its building the state art collection. The city has always been interested in music and the drama : the regular choir of 500 voices of the Mormon Tabernacle (organized in 1890) is one of the best choruses in the country, and closely connected with its development are the Symphony Orchestra and the Salt Lake Choral Society. Brigham Young was an admirer of the drama, and the Salt Lake Theatre (1862) has had a brilliant history. There is a Young Men’s Christian Association (organized in 1890). The principal clubs are the Alta, University, Commercial, Country, and Women’s. There are a Masonic Temple and buildings of the Elks and Odd Fellows.

Salt Lake City is the great business centre of Utah and one of the main shipping points of the West for agricultural products, live stock (especially sheep), precious metals and coal; and the excellent railway facilities contribute greatly to the commercial importance of the city. In 1905 the value of the factory products was $7,543,983, being 76∙3% more than in 1900 and being nearly one-fifth of the total value of the factory products of all Utah. There are three large steam-car repair shops in the city. Among the more valuable manufactures are: newspapers, books, &c*.* ($924,495 in 1905), malt liquors, confectionery, flour, foundry and machine-shop products, dairy products, salt, knit goods, mattresses, sugar, cement, &c. Electricity is largely used in the newer factories, the power being derived from Ogden river, near Ogden, about 35 m. away, and from cataracts in Cottonwood canyon and other canyons.

The city is governed under a charter of 1851. The government is in the hands of a mayor, elected for two years, and of a unicameral municipal council, consisting of 15 members, elected from the five wards of the city for two years or for four years. The municipality owns the water works. In 1909 the assessed valuation, real and personal, was $52,180,789; the tax levy was $677,411; and the city debt was $4,399,400 (exclusive of $1,528,000, the bonded in­debtedness of the city schools).

The history of the city is largely that of the Mormons (*q.v.*)and in its earlier years that of Utah (*q.v.*)*.* The Mormons first came here in 1847; an advance party led by Orson Pratt and Erastus Snow entered the Salt Lake Valley on the 22nd of July. President Brigham Young upon his arrival on the 24th approved of the site, saying that he had seen it before in a vision; on the 28th of July he chose the site for the temple. In August the city was named “ the City of the Great Salt Lake,” and this name was used until 1868 when the adjective was dropped by legislative act. In the autumn the major body of the pioneers arrived. The first government was purely ecclesiastical, the city being a “stake of Zion” under a president; “Father” Joseph Smith was the first president. The gold excitement of 1849 and the following years was the source of the city’s first prosperity: the Mormons did not attempt to do any mining— Brigham Young counselled them not to abandon agriculture for prospecting—but they made themselves rich by outfitting those of the gold-seekers who went to California overland and who stopped at the City of the Great Salt Lake, the westernmost settlement of any importance. On the 4th of March 1849 a convention met here which appointed a committee to draft a constitution; the constitution was immediately adopted, the independent state of Deseret was organized and on the 12th of March the first general election was held. In 1850 the city had a population of 6000, more than half the total number of inhabitants of the Great Salt Lake Valley, which, as well as the rest of Utah, was largely settled from Salt Lake City. In January 1851 the general assembly of the state of Deseret chartered the city; and the first municipal election was held in April of the same year; the charter was amended in 1865. Immigration from Europe and especially from England was large in the earlier years of the city, beginning in 1848. Salt Lake City was prominently identified with the Mormon church in its struggle with the United States government; in 1858 it was entirely deserted upon the approach of the United States troops. Since the Civil War, the non-Mormon element (locally called “ Gentile ”) has steadily increased in strength, partly because of industrial changes and partly because the city is the natural point of attack on the Mormon church of other denominations, which are comparatively stronger here than elsewhere in Utah.

See the bibliography under Mormons and under Utah; and particularly E. W. Tullidge, *History of Salt Lake City* (Salt Lake City, 1886), the famous descriptions in Captain Stansbury’s report (1850), and in R. F. Burton’s *The City of the Saints* (1861), and 1L H. Bancroft, *History of Utah* (San Francisco, 1890).

SALTO, a town and river port of Uruguay and capital of a department of the same name, on the Uruguay river 60 m. above Paysandú. Pop. (1900, estimate) 12,000. It has railway con- nexion with Montevideo via Paysandú and Rio Negro (394 m.), and with Santa Rosa, on the Brazilian frontier (113 m.). It is also connected with Montevideo and Buenos Aires by river steamers, Salto being at the head of high water navigation for large vessels. There are reefs and rocks in the river between Paysandú and Salto that make navigation dangerous except at high water. Above Salto the river is obstructed by reefs all the way up to the Brazilian frontier, about 95 m., and is navigable for light-draft vessels only at high water. Farther up, the river is freely navigable to Santo Tomé (Argentina)—a distance of about 170 m. Travellers wishing to ascend the river above Salto usually cross to Concordia, Entre Rios, and go up by railway to Ceibo, near Monte Caseros, from which point small steamers ascend to Uruguayana, Itaqui, and other river ports. The streets of Salto are well paved and lighted with electricity, and there are some good public buildings. The town has two meat-curing establishments (*saladeros*) and is the shipping port for north-western Uruguay and, to some extent, for western Rio Grande do Sul (Brazil). Behind Salto lies a rich, undulating grazing country, whose large herds supply its chief exports.

The department of Salto—area, 4866 sq. m., pop. (1900) 40,589, (1907, estimate) 53,154—is an undulating, well-watered region occupying the north-west angle of Uruguay. Its industries are almost exclusively pastoral About one-third of its population are foreigners, chiefly Brazilians.

SALTPETRE (from the Lat. *sal,* salt, *petra,* **a** rock), the commercial name given to three naturally occurring nitrates, distinguished as (1) ordinary saltpetre, nitre, or potassium nitrate, (2) Chile saltpetre, cubic nitre, or sodium nitrate, (3) wall-saltpetre or calcium nitrate. These nitrates generally occur as efflorescences caused by the oxidation of nitrogenous matter in the presence of the alkalies and alkaline earths.

I. *Ordinary Saltpetre or Potassium Nitrate,* KNO3, occurs, mingled with other nitrates, on the surface and in the superficial layers of the soil in many countries, especially in certain parts of India, Persia, Arabia and Spain. The deposits in the great limestone caves of Kentucky, Virginia and Indiana have been probably derived from the overlying soil and accumulated by percolating water; they are of no commercial value. The actual formation of this salt is not quite clear; but it is certainly conditioned by the simultaneous contact of decaying nitrogenous matter, alkalies, air and moisture. The demand for saltpetre as an ingredient of gunpowder led to the formation of saltpetre plantations or nitriaries, which at one time were common in France, Germany, and other countries; the natural conditions were simulated by exposing heaps of decaying organic matter mixed with alkalies (lime, &c.) to atmospheric action. The salt is\* obtained from the soil in which it occurs naturally, or from the heaps in which it is formed artificially, by extracting with water, and adding to the solution wood-ashes or potassium carbonate. The liquid is filtered and then crystallized. Since potassium nitrate is generally more serviceable than the sodium salt, whose deliquescent properties inhibit its use for gunpowder manufacture, the latter salt, of which immense natural deposits occur (see below (2) *Chile saltpetre*)*,* is converted into ordinary saltpetre in immense quantities. This is generally effected by adding the calculated amount of potassium chloride (of which immense quantities are obtained as a by-product in the Stassfurt salt industry) dissolved in hot water to a saturated boiling solution of sodium nitrate; the common salt, which separates on boiling down the solution, is removed from the hot solution, and on cooling the potassium nitrate crystallizes out and is separated and dried.

As found in nature, saltpetre generally forms aggregates of delicate acicular crystals, and sometimes silky tufts; distinctly developed crystals are not found in nature. When crystallized from water, crystals belonging to the orthorhombic system, and having a prism angle of 61° 10', are obtained; they are often twinned on the prism planes, giving rise to pseudo-hexagonal groups resembling aragonite. There are perfect cleavages