tons hempseed, 135,300 bushels colza-seed, 3177 tons colza oil. In 1883 the vintage yielded 22,636,636 gallons of wine, the average quantity of recent years being 21,809,018 gallons. The red wines of Mâconnais (especially those of Thorins) are those in highest repute ; Pouilly produces the best white wines. The industrial classes are represented by 150,983 individuals. The coal-basin of Creusot, the sixth in importance in France, produced in 1882 1,269,783 tons. A pit at Épinac is 3937 feet deep. Iron-ore was extracted in 1882 to the amount of 28,654 tons. Slate, limestone, building-stone, millstones, granite, marble, marl, plaster, bitu­minous schists, peat, kaolin, manganese (4360 tons per annum), and certain precious stones are also found in the department. The most celebrated mineral waters are those of Bourbon-Laney, six out of the seven springs being thermal. They are strongly saline. Metal-working is principally carried on at Creusot, which, with its 13,000 workmen and its 13 smelting furnaces, 100 puddling ovens, 4 Bessemer apparatuses and 4 Martin’s ovens, &c., produced in 1882 63,989 tons of iron (965 tons of rails, 21,984 tons of sheet-iron) and 99,823 tons of steel (72,085 tons of rails, 7056 tons of sheet- iron). The engine works produce all sorts of machines, including about 100 locomotives. The Châlon branch works turn out ships, boats, bridges, and boilers, other foundries and forges in the de­partment produced in 1882 175,113 tons of cast iron and certain quantities of copper and bronze. The cotton manufacture employs 14,000 spindles and 2000 looms, silk 2900 spindles and 2500 hand- looms, wool-spinning 350 spindles, other industrial establish­ments are potteries, tile-works, glass-works (6,000,000 bottles at Épinac alone), distilleries, oil-works, mineral-oil works, cooperages, tanneries, flour-mills, sugar-works—the total number being 850 with 1372 steam engines of 27,780 horse-power. The commerce of the department, especially as regards its exports, deals mainly with coal, metals, machinery, wine, cattle, bricks, pottery, glass. It is facilitated by five navigable streams (181 miles),—Loire, Arroux, Saône, Doubs, Seille,—the Canal du Centre which unites Chalon-sur-Saône with Digoin on the Loire, and the canal from Roanne to Digoin and the lateral Loire Canal, both following the main river valley. The total length of the canals is 90 miles. There are 365 miles of national road, 7098 of other roads, and 487 miles of railway. Saône-et-Loire forms the diocese of Autun ; it is part of the district of the 8th corps d’armée (Bourges), and its uni­versity is that of Lyons. It is divided into five arrondissements, —Mâcon, Chalon-sur-Saône, Autun, Charolles (3350 inhabitants in the town), Louhans (4280),—50 cantons, and 539 communes ; the most populous commune is Creusot (28,000 inhabitants, 16,000 in the town). Montceau-les-Mines (4560) is also a mining centre. Cluny (3500) is celebrated for its abbey, now occupied by the nor­mal school of secondary instruction, and Paray-le-Monial (300) for its pilgrimage.

SAO PAULO, a city of Brazil, capital of a province of the same name, is situated on the north-western slope of the Serra do Mar, on a left-hand tributary of the Tiete, a confluent of the Paraná. It is an old and irregularly built city, with some picturesque old churches and con­vents. The centre of the provincial railway system, 86 miles distant from Santos *(q.v.)* its seaport on the Atlantic coast, and 143 miles from Rio de Janeiro, the city has developed very rapidly within recent years. One of the two academies of law which Brazil possesses is seated at São Paulo. The most important public buildings are the cathedral, the provincial governor’s and the bishop’s palaces, and the theatre. A new system of water-supply and drainage was constructed in 1879-80 by English engineers under a Brazilian company. The population of the city in 1879 numbered about 35,000.

Founded by the Jesuits as a college, São Paulo was made a town in 1560 instead of Santo André, destroyed by order of Mendo de Sa. In 1711 it became a city, in 1740 a bishopric, and in 1823 an “ imperial city. ”

SÂO PEDRO DO RIO GRANDE DO SUL. See Rio Grande do Sul.

SAPOR (Shâpúr or Shaitpuhr), the name of three Sásánian kings. See Persia, vol. xviii. pp. 608-610.

SAPPAN WOOD is one of several red dyewoods of commerce, all belonging to the Leguminous genus *Cæsalpinia,* or to the closely allied genus *Peltopharum.* It is a native of tropical Asia and the Indian Archipelago, but, as it is one of the most esteemed of the red dyewoods, its cultivation has been promoted in the West Indies and Brazil. The wood is somewhat lighter in colour than Brazil wood and its other allies, but the same tinctorial

principle, brazilin, appears to be common to all. See Brazil Wood, vol. iv. p. 241.

SAPPHIRE, a blue transparent variety of corundum or native alumina. It differs, therefore, from the Oriental ruby mainly in its colour. The colour varies from the palest blue to deep indigo, the most esteemed tint being that of the blue cornflower. It often happens that a crystal of sapphire is particoloured, and hence a fine cut stone may derive its tint from a deep-coloured portion at the back, instead of being uniformly tinted throughout. The sapphire is dichroic, and the colour of a fine velvety stone may be resolved by means of the dichroiscope into an ultramarine blue and a yellowish-green. The origin of the blue colour of the sapphire has not been satis­factorily determined, for, although oxide of cobalt may produce it, and is invariably used for colouring imitations of the stone, yet the presence of cobalt is not always revealed in the analysis of the sapphire. According to lapidaries the hardness of the sapphire slightly exceeds that of the ruby, and it is therefore the hardest known mineral, excepting diamond. In consequence of its great hardness it was generally mounted by the ancients in a partially rough state, the surface being polished but not cut. Notwithstanding its hardness it has been occasion­ally engraved as a gem. There seems no doubt that the ancient σάπϕειρος*,* as well as the sapphire ( םם׳ך) of the Old Testament (Job xxviii. 6), was our lapis lazuli, while the modern sapphire seems to have been known under the name of ύάκινϴος or *hyacinihus* (King).

The finest sapphires are obtained from Ceylon, where they occur with other gem stones as pebbles or rolled crystals in the sands of rivers. The sapphires have generally preserved their crystalline form better than the associated rubies. Some of the slightly-cloudy Ceylon sapphires display when cut *en caboehan* an opalescent star of six rays, whence they are called *star-sapphires* or *asterias.* The principal localities in Ceylon yielding sap­phires are Rakewana, Ratnapura, and Satawaka. A few years ago sapphires were discovered in Siam (in the pro­vince of Battambong), but the stones from this locality are mostly dull and of too dark a colour. In Burmah they occur in association with rubies, but are much less numerous. They have also been recently found in Paldar, north of the Chandrabagha range. The sapphire is widely distributed through the gold-bearing drifts of Victoria and New South Wales, but the colour of the stones is usually too dark. Some of the finest specimens have come from the Beechworth district in Victoria. Coarse sapphire is found in many parts of the United States, and a few stones fit for jewellery have been obtained from Corundum Hill, Macon county, North Carolina, and from the other localities mentioned under Ruby. The sapphire also occurs in Europe, being found in the basalts of the Rhine valley and of Le Puy in Velay, but not sufficiently fine for purposes of ornament. The sapphire has been artificially reproduced by similar methods to those described in the article Ruby.

SAPPHO (in Attic Greek Σαπϕώ, but called by herself Ψάπϕω, which is necessitated by the metre also in *Anthol.,* ix. 190, though Alcaeus, himself an AEolian and her contemporary, calls her Σαπϕώ), incomparably the greatest poetess the world has ever seen, was a native of Lesbos, and probably both was born and lived at Mytilene. For the idea that she migrated thither from Eresus is merely a conjecture to explain a perfectly imaginary diffi­culty caused by the grammarians who invented another Sappho, a courtesan of Eresus, to whom to ascribe the current scandals about the poetess. She was the daughter of Scamandronymus and Cleis, of whom nothing more is known. The epistle of Sappho to Phaon, ascribed to