root, and a well-grown one from 32 to 64 lb, but more than half the weight is lost in drying. The more slender roots are generally left, and the stem is cut down near to the ground, the crown of the root being covered with leaves and earth. Thus treated, the plant con­tinues to grow, and roots may again be cut from it after the lapse of two years, but the yield will be smaller and the roots more slender and less starchy. In some varieties, as the Guayaquil and Mexican, the whole plant, including the rootstock, is pulled up. The Indians are guided in their selection of roots by the number of stems arising from the roots, by the thinness of the leaves, and the close­ness with which the stem is beset with prickles.

In several species of *Smilax* the roots become thickened here and there into largo tuberous swellings 4 to 6 inches long, and one or two inches in thickness. These tubers form a considerable article of trade in China, but are used to a limited extent only on the Continent, under the name of China root, although introduced into Europe about the same time as sarsaparilla. China root is obtained both in China and India from *Smilax glabra* and *S. lanceaefolia,* Roxburgh, and *S. China,* L. A similar root is yielded by *S. pseudo-China,* L., and S. *tamnoides* in the United States from New Jersey southwards ; by *S. balbisiana,* Kth., in the West Indies, and by *S. Japicanga* and *S. syringoides,* Griseb., and S. *Brasiliensis,* Spreng., in South America. All these are used as an alterative remedy in the localities where they grow. The amount of China root exported to Europe from Canton in 1872 was only 51,200 lb, although in the same year as much as 1,367,733 lb was exported from the city of Hankow to other Chinese ports. In 1882 Bombay imported from China 945 cwts. of the root. The name of Indian sarsaparilla is given to the roots of *Hemidesmus indicus,* R. Br., an Asclepiadaceous plant indigenous to India. These roots are readily distinguished from those of true sarsaparilla by their loose cracked bark and by their odour and taste, recalling those of melilot.

SARTHE, a department of the north-west region of France, formed in 1790 out of the eastern part of Maine, 29 communes of Anjou, and portions of Perche. Situated between 47° 35' and 48° 30' N. lat., and between 0° 25' W. and 0° 55 E. long., it is bounded N. by the depart­ment of Orne, N.E. by Eure-et-Loir, E. by Loir-et-Cher, S. by Indre-et-Loire and Maine-et-Loire, and W. by Mayenne. The Sarthe, a sub-tributary of the Loire, flows in a south­westerly direction through the department ; and the Loir, which along with the Sarthe joins the Mayenne to form the Maine above Angers, traverses its southern borders. The general slope of the country is from north to south-west. While the highest point (on the boundary towards Orne) is 1115 feet, the lowest, where the Loir leaves the depart­ment, is only 65. The hills that separate the streams rise as they advance north-east into Perche, or north-west into what are magniloquently called the Alpes Mancelles (1080 feet high). The Sarthe flows past Le Mans and Sablé, re­ceiving the Merdereau and the Vègre from the right, and the Orne and the Huisne from the left. The Loir passes La Flèche, and along its chalky banks caves have been hollowed out which, like those along the Cher and the Loire, serve as dwelling-houses and stores. The mean annual temperature differs but slightly from that of Paris. There are in the year 145 days of rain (with 12 of snow), 56 of frost, 180 of fogs, 20 of hail, and 14 of storm. The rainfall is about 24 inches, or rather below the average for France.

Of a total surface of 1,533,760 acres, 982,635 acres in the department are arable, 198,517 underwood, 190,176 in meadows and grass, 42,000 in moors, and 22,284 in vineyards. In 1881 the live stock comprised 61,400 horses, 6524 asses or mules, 182,195 cattle, 49,373 sheep (wool-clip 83 to 84 tons), 79,737 pigs, 24,369 goats, 12,898 hives (76 tons of honey, 211/2 tons wax). Poultry (capons, geese, &c.) form one of the most remunerative products of the de­partment, which sends yearly to Paris 250,000 fowls and 100,000 geese, and consumes or disposes of 10,000,000 eggs. The horses are, like those of Perche *(percherons),* famous for speed combined with strength. There are three distinct districts :—the corn lands to the north of the Sarthe and the Huisne ; the moorlands, partly planted with pine, between those two streams and the Loir ; and the wine-growing country to the south of the Loir. In 1883 the grain crop yielded 2,813,387 bushels of wheat, 951,039 of meslin, 714,248 of rye, 2,317,760 of barley, 1,993,049 of oats, 30,880 of maize, and 59,680 of buckwheat; and there were 9,536,312 bushels of potatoes and 92,521 of beans, pease, &c., 81,664 tons of beetroot, 4794 tons of hemp, and 6 of flax. In 1884 cider was produced to the extent of 15,473,414 gallons (average quantity per annum in previous years 8,628,444 gallons), and wine to 4,347,134 gallons

(average quantity 3,883,330). Fodder was grown to the amount of 381,110 tons; and there were considerable supplies of chestnuts and hazel nuts—Château du Loir being the principal market for the former. From the forests, which consist mainly of oaks, witch-elms, chestnut-trees, pines, and beeches, material is drawn to the value of £140,000. The agriculture of the district has made great pro­gress through the opening up of roads, improvements, draining, and irrigation. Besides mines of anthracite and coal (21,205 tons in 1882), iron-ore, marble, freestone, slate, millstones, clay, marl, lime, tuffeau (a kind of white chalky tuff), magnesia, and peat are all worked. The staple industry is the weaving of hemp and flax (3395 spindles, 4400 looms, 400 being power-looms). The cotton manufacture ranks next (8700 spindles, 185 looms, of which 100 are power-looms), while the woollen manufacture employs only 350 spindles and 161 looms. In the paper-mills 569 workmen are engaged, and the value of the paper and cardboard produced was £180,880 in 1881. Iron-foundries, copper and bell foundries, potteries, tile-works, glass-works and stained glass manufactories, currierics, engine and carriage factories, wire-gauze factories, flour­mills, and distilleries are also carried on ; and altogether about 256 steam-engines with 2480 horse-power are employed in those establishments. The commerce of the department is facilitated by 99 miles of navigable river (Sarthe and Loir), 250 miles of national roads, 6707 miles of other roads, and 352 miles of railway.

With its 438,917 inhabitants (1881) Sarthe has exactly the average density of population in France. From 1801 (380,821) to 1866 (465,615) the number was on the increase, but since that date there has been a decline. The department forms the diocese of Le Mans, has its court of appeal at Angers, and its university authorities at Caen, and constitutes part of tho territory of the fourth *corps d'armée* with its headquarters at Le Mans. The four arrondissements are named from Le Mans, the chief town; LaFlèche (9424 inhabitants), famous for its prytanée militaire ; Mamers (6070 inhabitants) ; and St Calais (3600). There are 33 cantons and 387 communes. Sablé (6000 inhabitants) contains a castle built for Colbert by Mansart ; and hard by was the celebrated Benedictine abbey of Solesmes.

SARTI, Giuseppe (1729-1802), musical theorist and composer, was born at Faenza, Italy, December 1, 1729, educated—according to the best accounts—by Padre Martini, and appointed organist of the cathedral of Faenza before the completion of his nineteenth year. Resigning his appointment in 1750, Sarti devoted himself with ardour to the study of dramatic music, and in 1751 produced his first opera, *Pompeo,* with great success. His next works, *Il Rè Pastore, Medonte, Demofoonte,* and *L’Olimpiade,* assured him so brilliant a reputation that in 1753 King Frederick V. of Denmark invited him to Copenhagen, with the appointments of hofkapellmeister and director of the opera. In 1765 he travelled to Italy for the purpose of engaging some new singers ; and mean­while the death of King Frederick put an end for the time to his engagement. @@1 He was recalled to Copenhagen in 1768, and for some years enjoyed an extraordinary amount of court favour ; but, though he carefully abstained from politics, the disasters from which both court and country so cruelly suffered at this critical period gradually undermined his position, and in 1775 he was banished from Denmark in disgrace. During his residence in Copenhagen Sarti composed a great number of operas, most of which were fairly successful, though few survived the epoch of their production. On his return to Italy in 1775 he was appointed director of the Ospedaletto—the most important music school in Venice ; this post, however, he relinquished in 1779, when, after severe competition, he was elected maestro di cappella at the cathedral of Milan. Here he exercised his true vocation,—composing, in addition to at least twenty of his most successful operas, a vast quantity of sacred music for the cathedral, and educating a number of clever pupils, the most distinguished of whom was Cherubini, who was never weary of singing his praises as the most accomplished musician and first teacher of the age.

In 1784 Sarti was invited by the empress Catherine II. to St Petersburg. On his way thither he stopped at

@@@1 It was probably during this temporary suspension of duty that he made the attempt to establish himself in London, but failed to obtain a hearing at the King’s Theatre.