

by numerous streams from the Siwálik, while the Eastern Jumna and the Ganges Canals, which traverse the district from north to south and issue from its north-west and north-east corners, cover the district with a network of irrigation channels. The only large rivers are the Ganges, which enters Saháranpur 180 miles from its source, by a well-marked gorge formed in the rock at Hardwár; and the Jumna, which debouches into the plain about 123 miles from its source, at a place called Khára. The district has abundant means of communication: the Sind, Punjab, and Delhi Railway traverses it for a distance of 42 miles, with stations at Deoband, Saháranpur, and Sarsáwa; and it has numerous roads, both metalled and unmetalled. The climate of Saháranpur is that of the North-Western Provinces in general; at one season it is tropical, at another partially European. Its average annual rainfall is about 37 inches. Wild animals are plentiful, including the tiger, leopard, wild cat, lynx, hyena, and wolf.

By the census of 1881 the population of Saháranpur numbered 979,544 (530,427 males and 449,117 females). By religion there were 653,272 Hindus, 317,535 Mohammedans, and 1793 Christians. Five towns had populations exceeding 10,000 each, namely, SAHÁRANPUR (*q.v.*), Hardwár Union (28,106), Deoband (22,116), Rurki (12,815), and Gangoh (12,089). Rurki (Roorkee) is a town of considerable importance, situated in 29° 52' 25" N. lat. and 77° 55' 40" E. long. It is the headquarters of the Ganges Canal workshops and iron-foundry, with the Thomason Civil Engineering College, for the instruction of natives and others in practical engineering; it contains also an excellent meteorological observatory. Hardwár municipality, which lies 39 miles north-east of Saháranpur town, on the right bank of the Ganges, is the most frequented of all Hindu places of pilgrimage, and is largely used for the bathing festivals. Every twelfth year, when Jupiter is in Aquarius, a great fair or *kumbh-mela* is held, which attracts an immense number of people; as many as 3,000,000 attended in 1882.

Of a total area of 2221 square miles 1256 are cultivated and 331 are cultivable waste. Cereals form the principal products. The chief spring crops are wheat, barley, pulses, and oil-seeds; and the staples of the rain crops are rice, jowar, bajra, and vegetables; the cultivation of cotton and indigo is also carried on, the latter in much greater quantities since the introduction of canal irrigation has rendered its out-turn less precarious than formerly. The commercial importance of the district depends mostly on its raw materials. It manufactures broad-cloth, jewellery, and sweetmeats; among the articles produced at the Rurki workshops are steam-engines, pumps, printing presses, lathes, and mathematical instruments. The gross revenue of Saháranpur in 1883-84 amounted to £172,960, of which the land-tax contributed £118,067.

During the later years of the Mogul empire Saháranpur was the scene of much strife and suffering on account of the perpetual raids of the Sikhs, but in 1785 the district under Ghulam Kádir enjoyed comparative tranquillity. On his death the country fell into the hands of the Mahrattas, but it was for a time occupied by the adventurer George Thomas, until his death in 1802. It was afterwards overrun by Sikhs and Mahrattas, remaining practically in the hands of the former until their final defeat in November 1804, when it passed under British rule. Several disturbances subsequently took place among the native chiefs; but from 1824 to 1857 nothing occurred to disturb the peace of the district. The mutiny in this part was soon quelled.

SAHÁRANPUR, principal town and administrative headquarters of the above district, is situated in 29° 58' 15" N. lat. and 77° 35' 15" E. long., on a small stream (the Damaula Nadi) in an open level country. Its height above the sea is over 900 feet. The town possesses a fine botanic garden, where early experiments were made in tea and cinchona culture. Amongst its buildings are an old Rohilla fort, used as a court-house, and a handsome Mohammedan mosque. A considerable trade is carried on in grain, sugar, molasses, and country cloth. The population in 1881 was 59,194 (31,506 males and 27,688 females).

SAIDA. See SIDON.

SAIGA. See ANTELOPE, vol. ii. p. 102.

SAIG-ON, the capital of French Cochin China, occupies an area of 1000 acres, on the right bank of the Saigon river or Don-nai (one of the streams that inscuate with the deltaic branches of the Me-kong), about 60 miles from

the China Sea. In 1884 it was connected by rail with Mytho, 37 miles south-west on one of the branches of the Me-kong, with which it had obtained direct water-communication in 1877 by the opening of the Canal de Cho-gon.

The present city has been practically created since 1861, and its fine streets, boulevards, squares, and public buildings make it one of the most attractive towns in the East, as it was well planned and the plan not unworthily carried out. The town possesses a governor's palace or citadel (cost 12,000,000 francs) with a grand

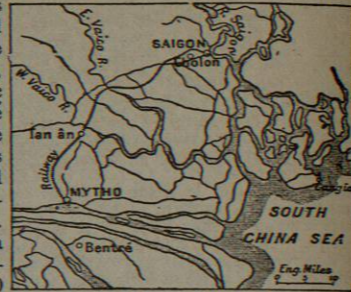


FIG. 1.—Map of Saigon District.

façade, a cathedral (1877; cost 2,500,000 francs), a palace of justice (1882), a chamber of commerce, a large military hospital, municipal gardens, and botanical gardens with collections of wild beasts. Among the educational institutions are the Collège Chasseloup-Laubat and the Collège d'Adran, the latter in memory of Bishop Piqueaux de Behaigne, whose tomb is in the vicinity of the town. There is a large arsenal with upwards of 100 European employés and a special establishment for the artillery with machine-shops and foundries. A floating-dock was constructed in 1868; a much larger one (cost 3,400,000 francs) sank in 1880-82 at its first trial and became a wreck. The population of Saigon in 1881 was 13,348. The Europeans, exclusive of the troops, numbered only 965 (913 French). The Chinese element was the strongest, and next came the Anamite. The municipality consists of fifteen members, of whom four are Anamites, the rest, including the mayor, being French. As a commercial centre Saigon is one of the principal towns in the colony, but most of the trade is really done at Cholon, 4 miles off on the Arroyo Chinois and Rach-lo-gon, but connected with Saigon by a steam tramway. Though it has its own local government and officials, Cholon is practically part of the capital. Chinese émigrants from Bien-hoa were its founders in 1778, and the Chinese still form half of its population and almost monopolize its trade. In 1881 it had 39,925 inhabitants (83 Europeans). Wide streets have been opened up through its original complexity of lanes and substantial quays constructed for miles along the Arroyo. A fine granite-paved market stands in the heart of the town. Rice is the great staple of the Saigon-Cholon trade, finding purchasers mainly at Hong-Kong, Java, and the Philippines. Other articles are black pepper, gamboge, and cocoa-nut oil. In 1883 8,648,243 piculs of rice, worth more than £2,000,000, were exported. In 1884, leaving out the Messageries Maritimes, 503 vessels (568,077 tons), of which 239 (253,871 tons) were British, cleared from Saigon. Fig. 2 shows the relative positions of Saigon and Singapore.



FIG. 2.

Saigon was the native capital of Lower Cochin China and the residence of the governor of the southern provinces. In 1836 it was fortified for the emperor Gia Long by Colonel Ollivier. The French under Admiral Rigault de Genouilly captured it in 1858, and it was part of the territory ceded in 1861. The importance of the old town may be judged by the vast mounds of brick and stone which still crowd the ancient necropolis on one of the two roads between Saigon and Cholon.

SAIL, SAILCLOTH, SAILMAKING. A sail is a sheet of canvas (or other material of the requisite flexibility and strength) by the action of the wind on which, when spread out or extended, a vessel is moved through the water. Sails are supported and extended by means of masts, yards, gaffs, booms, bowsprit—all technically termed "spars"—and stays or slanting ropes. In the first experiments for impelling vessels by sails the least complicated form, that of a single square sail erected on a single mast, was no doubt adopted. To the quadrangular the triangular sail would soon be added; and single sails of both these forms are known to have been used at very early periods. Subsequently the trapeziform and trapezoidal sails also came into use. As vessels increased in size, thereby requiring a greater surface of canvas to impel them, it became necessary to use not only more sails but also an increased number of masts; and the number and disposition of the several kinds of sails could be almost indefinitely varied according to the ideas of navigators, the services required of the vessels, the places in which they were employed, and the size of the crews. Thus a great variety of rig naturally arose. Leaving out of account the many nondescript styles adopted in the case of boats and small craft, all modern vessels may, for general purposes, be considered as belonging to one or other of the following categories—cutter, schooner, three-masted schooner, brigantine, brig, barquette, barque, or full square-rigged ship; but the cardinal distinction is that by which they are classified as *square-rigged* or *fore-and-aft-rigged* (compare SEAMANSHIP and SHIP). These expressions can be easily explained by reference to any three-masted ship. The mast nearest the bow or head is known as the fore-mast, the next abaft or nearest the middle of the ship as the main-mast, and the third or that nearest the stern as the mizzen-mast. Each mast consists of several sections, that attached to the hull being called the lower or standing-mast, the next above that the top-mast, the next the top-gallant-mast, above which may rise a pole or royal-mast. On each of these masts, and at right angles with it, is a yard denominated "square," which is hung (slung) by the middle and balanced. These yards are named according to their situation, those placed on the fore and main standing-masts being called respectively the fore and main lower-yards, that on the mizzen the cross-jack-yard; those on the top-masts are called the top-sail-yards, those on the top-gallant-masts the top-gallant-yards, and those on the royal-masts the royal-yards. To each of these yards a sail is bent or attached, taking its name from the yard; thus the principal sail upon the fore-lower-yard is called the fore-course or fore-sail; the next above, upon the fore-top-sail-yard, is the fore-top-sail; above which, upon the fore-top-gallant-yard, is the fore-top-gallant-sail; and above all, upon the fore-royal-yard, is the fore-royal. In like manner on the main-mast we have the main-course or main-sail, main-top-sail, main-top-gallant-sail, and the main-royal. Similar appellations are given to those on the mizzen-mast; in large merchant-ships, by means of a sky-sail-pole, a sail termed "sky-scraper" is sometimes set above the royals, but not so frequently as formerly. Such square sails can be placed at right angles to the direction of the keel of the ship, a position given to them when going before the wind; the same sails can also, by means of braces, be placed obliquely to the keel with a side wind, commonly termed by seamen "on a wind" or "by the wind." In addition to these there are sails between the masts, set either on gaffs (unbalanced) or on stays, also others beyond the extremities of the ship, extended principally by means of the bowsprit, which, in addition to supporting the fore-mast by a stay, also supports the jib and flying-jib-booms for extending the sails still farther

forwards; the means for extending the after-sail are the driver or spanker-boom and the gaff. Sails extended or set on gaffs and on stays are called "fore-and-aft," and are generally or approximately in a vertical plane passing through the keel; but a certain degree of obliquity can be given them by easing off the sheet or aft lower corner of the sail. A ship fitted as above described would be termed "square-rigged," the square sails predominating both in importance and in number. A square-rigged line-of-battle ship would be supplied with the following descriptions of sails¹ :—

Square.	Fore-and-Aft.
Fore-course or fore-sail.	Flying-jib.
" top-sail.	Jib.
" top-gallant-sail.	Second jib.
royal.	Fore-gaff-sail.
Main-course or main-sail.	" try-sail (storm-sail).
" top-sail.	Main-gaff-sail.
" top-gallant-sail.	" try-sail (storm-sail).
royal.	Mizzen-try-sail (storm-sail).
Mizzen-top-sail.	Spanker.
" top-gallant-sail.	Stay-sail-fore (storm-sail).
royal.	" " top.
Studding-sail-fore.	
" " top.	
" " top-gallant.	
" sail-main-top-gallant.	

In the fore-and-aft-rig the principal sails are of course fore-and-aft; a cutter (vessel with one mast) when fully equipped carries the following :—

Fore-and-Aft.	Square.
Jib-top-sail.	Square-sail (set flying).
Jib.	
Fore-sail.	
Boom-main-sail.	
Gaff-top-sail.	

The several sides of a sail have separate names applied to them, the upper part or side being known as the "head," the lower part as the "foot"; the sides in general are called "leeches," but the weather or side edge where the wind enters the sail, of any but a square-sail, is called the "luff," and the other edge the "after-leech." The two top corners are "earings," but the top corner of a jib, &c. (triangular, one corner only), is the "head"; the two bottom corners are in general "clews"; and the weather clew of a fore-and-aft-sail or of a course while set is the "tack."

The relative importance of particular sails in the working of a ship varies according to conditions of weather, and is a matter for the judgment of the officer in command. The following table, however, shows approximately what sails are commonly set "by the wind," presuming that the effect on the ship in relation to her stability is safe :—

Winds as commonly distinguished.	Sails commonly set "by the wind."
Light airs	Courses, top-sails, top-gallant-sails, royals, spanker, jib, flying-jib, and all light sails.
Light breezes	
Moderate breezes	
Fresh breezes	Royals and flying-jib taken in, in a sea way, to two reefs in the top-sails.
Strong breezes	Single-reefed top-sails, and top-gallant-sails, in much sea, two reefs in the top-sails to taking in top-gallant-sails.
Moderate gales	Double-reefed top-sails to treble-reefed top-sails, reefed spanker, and jib.
Fresh gales	Close-reefed top-sails, reefed courses, to taking in spanker, jib, fore and mizzen top-sail.
Strong gales	Reefed courses, close-reefed main-top-sail, fore-stay-sail, mizzen-try-sail, to taking in the main-sail.
Heavy gales	Close-reefed main-top-sail, storm stay-sails, to storm stay-sails or close-reefed main-top-sail only.
Storms.	

¹ Some ships (merchant-liners) have two jibs, inner and outer, &c.

To the casual observer sails when spread and in use appear merely as so many large pieces of cloth; but some of them are of very considerable size; it is not at all unusual in full square-rigged ships for a main-course or main-sail to contain 1000 yards of canvas (24 inches wide), and a main-top-sail nearly as much,—the single suit for such a vessel comprising upwards of 10,000 yards. Courses and top-sails are made reducible; in the British navy they are reduced by means of reefs (two in courses, four in top-sails), each fitted with spilling, slab, and reef lines and becket, and toggles on the yard (reef-points throughout being now obsolete). In the merchant service double top-sails—upper and lower—are much in use on account of handiness in reducing sail; there is also “patent reefing gear,” such as Cunningham’s, which allows reefing to be done as much as possible from deck. The dimensions of masts and yards, quantity of canvas or area of sail, centre of gravity of each sail (from which the moment of sail is obtained and compared with the moment of stability), centre of effort of the sails, and other important calculations necessary in relation to the body of the vessel are made by constructors and naval architects.

Sailcloth is obtainable from any description of fibrous material capable of being woven into cloth, having sufficient compactness and closeness of texture, and possessing the requisite strength for sustaining the heavy pressure which sails often have to bear in severe weather. Several descriptions of fibre might be enumerated which would to a certain extent serve for sailcloth but for the absence of quality of endurance or resistance; hemp has been and is now occasionally used, as also a mixture of cotton and linen yarn, or cotton only,—especially in America; but in the United Kingdom FLAX (*q.v.*) is the usual staple material, since, when well manufactured, it possesses the qualities of flexibility and lightness, and, what is still more important, the element of strength in a very large degree.

The following points may be regarded as of primary importance (or securing sailcloth or canvas of a superior quality and durability. Whatever flax is used, it is absolutely necessary that the “warp” and “weft” of the canvas be spun wholly from the “longs,” be free from blacks and any mixture of short flax, well dressed or heckled, and that the yarn be well and evenly spun and properly twisted. Both warp and weft yarn should be twice boiled with the best American pot and pearl ashes, and carefully and thoroughly washed and cleansed. No acid chloride of lime or other preparation of chlorine, nor any deleterious substance, should be used in any stage of the process, otherwise the integrity of the fibre will most probably be interfered with; the only advantage got is that the cloth looks much whiter, which for yachts and pleasure-boats is perhaps desirable, but for naval and mercantile uses is not at all necessary. The yarns are first boiled a sufficient length of time in a solution of the best American pot ash, in fixed proportions of ashes, green yarn, and water, then mill-washed (beating process), and subsequently carefully washed in a considerable stream of clear running water, and wrung. They are again boiled for a sufficient length of time in a solution of American pearl ashes, in due proportions of ashes, green yarn, and water, then carefully rinsed, or washed in a clear stream of water, carefully dried, and frequently shaken in the course of drying, so that the fibres of the flax may be equally stretched. These repeated boilings, &c., have the effect of cleansing, bleaching, softening, and removing all vegetable impurities which may be hanging about; no starch, tallow, paste, or weaver’s dressing of any description should be used, otherwise the fabric will tend to mildew if allowed to remain damp for any time. Sailcloth is made in bolts, mostly 24 inches wide, but also 18 inches wide, and for yachting purposes frequently still less wide, upon the ground that the narrower the cloth the flatter and better will the sail stand to its work. It is generally made of eight different qualities in respect of thickness, numbered 1 to 8 accordingly; the heavier numbers—Nos. 1, 2, and 3—are used for storm and other sails that have to do heavy work, the remaining numbers for the lighter descriptions of sail. The weight of each bolt of canvas 24 inches wide, from Nos. 1 to 6 inclusive for 39 yards in length and

their top-sails also in two parts, upper and lower or cap-top-sails, an arrangement which makes it easier to reduce or shorten sail; they also have a mizzen course (cross-jack), and carry several light stay-sails so as to catch every breath of wind.

for Nos. 7 and 8 for 40 yards in length, is about as follows, viz., No. 1, 46 lb; No. 2, 43; No. 3, 40; No. 4, 36; No. 5, 33; No. 6, 30; No. 7, 27; No. 8, 25 lb. The weight of each bolt of narrower canvas is in proportion. The warp (or lengthwise) should consist of the following proportions of clean unstarched yarn, viz.:

No.	not less than 26 lb.	164 score reed.	600 double threads
1	24	164	600
2	22	154	600
3	21	144	600
4	19	134	600
5	18	124	600
6	15	114	600
7	14	104	600
8	14	104	800

As a rule about 40 yards in length may be considered as the average content of each bolt. Particular attention should be paid to the weaving, that the texture be struck sufficiently close, and the selvages be evenly and well manufactured; what is termed a slack selvage (that is, one selvage longer than the other) is not only awkward for the sailmaker but unsatisfactory both in wear and appearance, the slack side showing itself puckered. Sailcloth made upon these conditions is very likely to be a good article; tests, however, can be applied, generally to strips 1 inch wide from Nos. 1 to 6 inclusive, and 1½ inch wide from Nos. 7 and 8. Weft and warp (24 inches in length) in each case are placed in a small testing machine, which has a dial plate with a spring underneath; vices are attached to grip the strips, one vice to the spring, the other in connexion with a long screw with a handle; by turning this handle the vices are drawn asunder until the strip breaks, and the hands on the dial-plate indicate the strain in pounds. The following is a fair test of strength for the various numbers of good sailcloth:—

No.	Weft.	Warp.	No.	Weft.	Warp.
1	450 lb.	340 lb.	5	370 lb.	260 lb.
2	400	320	6	350	250
3	440	300	7	300	330
4	400	280	8	350	310

It is not at all unusual, however, to find some sailcloth stand a strain considerably in excess of this. Freedom from blacks, twist and span of the yarn, stiffening, calendering, &c., can be discovered by observation and a magnifying glass, excessive dressing by a little tincture of iodine.

Sailmaking is a very old branch of industry in connexion with the navy and commerce, and it still continues to be important notwithstanding the enormous extent to which steam is now employed in navigation.

The operations of the sailmaker may be stated as follows. The dimensions of mast and yards and sail plan being supplied, the master sailmaker is enabled to determine the dimensions of each sail—after due allowance for stretching—in terms of cloths and depth in yards—if a square sail, the number of cloths in the head, number in the foot, and the depth in yards; if a fore-and-aft sail (triangular), the number of cloths in the foot, and the depth in yards of the luff or stay and of leech or after-leech; if a fore-and-aft sail (trapezium form), the number of cloths in the head, number in foot, and the depth of mast or luff and of after-leech. These particulars obtained, there is got out what is technically termed a “casting,” which simply means the shape, length, &c., of each individual cloth in the sail. These figures are given to the cutter, who proceeds to cut out the sail cloth by cloth in consecutive order, numbering them 1, 2, 3, 4, &c.; the series of cloths thus cut out are handed over to the workman, who joins them together by carefully made double flat seams, sewn with twine specially prepared for the purpose, with about 120 stitches in a yard. In the heavy sails the seam is about an inch and a half in width and in the British navy stuck or stitched in the middle of the seam to give additional strength; the seams in the lighter sails are about an inch wide. The whole of the cloths are then brought together, and spread out, and the tabling (or hemming, so to speak) is turned in and finished off with about 72 stitches to a yard. Strengthening pieces or “linings” are affixed where considered necessary, in courses and top-sails such pieces as reef-bands, middle-bands, foot-bands, leech-linings, bunt-line cloths; in top-sails (only) a top-lining or brim; in other and lighter sails such pieces as mast-lining clew and head, tack, and corner pieces; holes, such as head, reef, stay (luff), mast, cringle, bunt-line, &c., are also made where required, a grommet of line of suitable size being worked in them to prevent their being cut through. The next thing to be done is to secure the edges of the sail,—an important operation, as much depends upon this whether the sail will stand well and do its work efficiently. Bolt-rope, a comparatively soft laid rope made from the finer hemp yarn (Italian) is used for this purpose; in the British navy it ranges from 1 inch (increasing in size by quarter inches) up to 8 inches inclusive, the size selected for each part of a sail being determined by the amount of strain it will have to bear; it is then neatly sewn on with roping twine specially prepared, the needle and twine passing between and clear of every two strands of the rope in roping. Where slack sail has to be taken in, it is the practice to leave it to the judgment of the sail-

maker; but where possible it is better to set up the rope by means of a tackle to a strain approximate to what it will have to bear when in use, and whilst on the stretch mark it off in yards, as also the edge of the sail in yards, so that by bringing the marks together in roping the sail will stand flat. In the British navy the largest size of rope sewn on to a sail is 6 inches; sizes above this are used for foot and clew ropes of top-sails and courses, being first wormed, parcelled (that is, wound round with strips of worn canvas), tarred, and served over with spun yarn; the foot of the sail is then secured to it by being marled in. Where two sizes of bolt-rope used in roping a sail have to be connected, it is effected by a tapered splice. Cringles (similar to the handle of a maund) formed by a strand of bolt-rope, mostly having a galvanized iron thimble in them as a protection, are then stuck where necessary, as at the corners, sides or leeches, mast or luff; they are required either for making stationary or hauling “taut” by tackle or otherwise certain parts of the sail when in use. Fore-and-aft sails, such as spankers, gaff-sails, and storm try-sails, are reduced in size by reef-points made of stout line (4 to 20 lb), crow-footed in the middle, a hole being pierced through every seam; one-half of the point is passed through and the crowfoot sewn firmly to the sail; the number of reefs depends upon the size of the sail, and the reefs are placed parallel to the foot. The sails—now finished in respect of making—have to be fitted, that is, such ropes have to be attached to each of them as are necessary for proper use; such ropes may be summarily stated as follows—head-earings, robands, reef-earings, reef-lines, spilling and slab lines, reef-tackle pendant, reef-points, bow-line bridles, bunt-line toggles, bunt-becket, leech-line strops and toggles, toggles in clews, sheet ropes, down-haul, lacing, head and stay, tack-rope (gaff top-sail), tack lashing, bending strops, matting, and gaskets.

The tools and appliances of a sailmaker are not very numerous:—a bench about 7 feet long and 15 inches high, upon which he sits to perform the greater part of his work; palms for seaming and roping to fit the hand, made of hide lined with leather, a plate properly tempered being fixed in it having chambers to catch the head of the needle, thus acting as a thimble in forcing it through the several parts of canvas in seaming, and between the strands and through the canvas in roping; needles of various sizes, that for seaming being the smallest; and fids, splicing, serving, and stretching knife, rubber, sail-hook, bobbin for twine, and sundry small articles. (E. J. E.)

SAINFOIN (*Onobrychis sativa*) is a low-growing perennial plant with a woody root-stock, whence proceed the stems, which are covered with fine hairs and bear numerous long pinnate leaves, the segments of which are elliptic. The flowers are borne in close pyramidal or cylindrical clusters on the end of long stalks. Each flower is about half an inch in length with lanceolate calyx-teeth shorter than the corolla, which latter is papilionaceous, pink, with darker stripes of the same colour. The indehiscent pods or legumes are flattened from side to side, wrinkled, somewhat sickle-shaped and crested and contain only a single seed. In Great Britain the plant is a native of the calcareous districts of the southern counties, but elsewhere it is considered as an escape from cultivation. It is native throughout the whole of central Europe and Siberia; but it does not seem to have been cultivated in Great Britain till 1651, when it was introduced from France or French Flanders, its French name being retained. It is grown as a forage plant, being especially well adapted for dry limestone soils. It has about the same nutritive value as lucerne, and is esteemed for milch cattle and for sheep in winter. Sinclair speaks in high terms of its value for this latter purpose.

SAINTE. The New Testament writers have much to say about the relations of the “saints” (as members of the various churches are usually called) with their living contemporaries, but are comparatively reticent on their duties and privileges with regard to their departed brethren. Long before the close of the 4th century, however, certain very definite practices in the way of commemoration and invocation had sprung up, which ultimately found doctrinal expression in the authoritative documents alike of the Eastern and of the Western Church. (1) *Commemoration*.—Under FUNERAL RITES, MANES, &c., allusion has already been made to the ancient custom of visiting the tombs of deceased relatives at certain periods and there

offering various gifts. With certain modifications, this practice was retained by the early Christians; they celebrated the Eucharist at or near the grave, laid oblation on the altar in the name of the departed, and in the pre-communion prayer made supplication for the peace of their souls. Thus among the usages “originated by tradition, strengthened by custom, observed by faith,” Tertullian (*De Cor. Mil.*, 3; comp. *De Ech. Cast.*, 11) mentions “the offerings we make for the dead as often as the anniversary comes round” (comp. SACRIFICE, p. 139). If such commemoration was usual in domestic circles, it was little likely to be omitted by Christian congregations in the case of those who had “spoken to them the word of God,” least of all when the bishop had also been, as was so often the case, a martyr. In the very instructive document of the 2d century, preserved by Eusebius (*H. E.*, iv. 15), in which the martyrdom of POLYCARP (*q.v.*) is described, we are told that the followers of the martyr, having taken up the bones, deposited them “where it was proper that they should be.” “There also, as far as we can, the Lord will grant us to assemble and celebrate the natal day of his martyrdom in joy and gladness.” Cyprian (*Ep.*, 36) exhorts that the days of death of those who have died in prison should be carefully noted for the purpose of celebrating their memory annually; and all the earliest extant liturgies contain commemorations of the departed. The names to be commemorated were written on the diptychs (see DIPTYCH). (2) *Invocation*.—It is not difficult to understand how a belief in the efficacy of the prayers of departed saints—especially of martyrs—should at an early date have taken a practical form. Martyrs were believed to pass into the immediate presence of God, and the supposed nature of their claims there is not dimly indicated in the document already referred to, which once and again speaks of Polycarp as “a noble victim selected from the flock,” “a rich and acceptable sacrifice to God.” The readers of Cyprian are familiar with the use made of the intercession of living “martyrs” by the lapsed to secure their reconciliation with the church; but positive evidence of the intercession of the dead being invoked for obtaining favour with God is not forthcoming so soon. Perhaps, indeed, Cyril of Jerusalem (c. 350) is the earliest author to make express allusion to the practice (*Cat. Myst.*, v. 9): “we commemorate . . . patriarchs, prophets, apostles, martyrs, . . . that God at their prayers and intercessions (*προσεβαιας*) would receive our supplications.” In the liturgies, however, the oblation still continued to be offered “for all martyrs and confessors” as well as for others, and Augustine was the first to declare (*In Joann.*, Tract. 84) that “at the table of the Lord we do not commemorate martyrs in the same way that we do others who rest in peace so as to pray for them, but rather that they may pray for us that we may follow in their footsteps.”

For the subsequent development of Catholic practice see the various church histories; compare also CANONIZATION, LITANY, RELICS, IMAGE WORSHIP, &c. Previous to the Reformation ecclesiastical legislation mainly sought to check the popular tendency towards something like polytheism. The Tridentine doctrine is “that the saints who reign along with Christ are to be honoured and invoked, that they offer prayers for us, and that their relics are to be venerated.” All the churches of the Reformation, on the other hand, while in one form or another commemorating “all thy servants departed this life in thy faith and fear,” practically concur in the teaching of the Church of England (Art. xxii.), that “the Romish doctrine concerning . . . invocation of saints” is “a fond thing, vainly invented, and grounded upon no warranty of Scripture, but rather repugnant to the word of God.”

ST ALBANS, a city, municipal borough, and market town of Hertfordshire, England, is finely situated on an eminence above the river Ver, on the main line of the Midland Railway and on branches of the London and North-Western and the Great Northern lines, about 24 miles

north-west of London and 5 miles west from Hatfield. The abbey or cathedral church, in some respects one of the most remarkable ecclesiastical buildings in England, is described below. St Michael's church to the west of the town, within the site of the ancient Verulamium, was originally constructed in the 10th century partly out of the ruins of the town. Considerable portions of the Norman building remain; the church contains the tomb of Lord Chancellor Bacon. St Stephen's church, dating from the same period, contains some good examples of Norman architecture. St Peter's church has been in great part rebuilt, but the nave of Early Perpendicular remains. The (restored) clock-house in the market-place was built by one of the abbots in the reign of Henry VIII. There is an Edward VI. grammar-school. The principal modern buildings are the corn exchange, the court-house, the prison, the public baths, and the public library. There are a number of charities and benevolent institutions, including the hospital and dispensary, and the almshouses founded in 1734 by Sarah duchess of Marlborough. The principal industries are the manufacture of silk and straw-plaiting. There are also breweries and ironfoundries. The population of the municipal borough (area, 997 acres, extended in 1879) in 1881 was 10,931; the population of the same area in 1871 was estimated at 8239.

Not only is the cathedral "a text-book of mediæval architecture from its beginning to its ending," but it "is still in style, material, and feeling that one among our great churches which most thoroughly carries us back to Old English and even to earlier days" (Freeman). Shortly after the execution of Britain's protomartyr, St Alban, probably in 303, a church was built on the spot. In 793 Offa of Mercia, who professed to have discovered the relics of the martyr, founded in his honour a monastery for Benedictines, which became one of the richest and most important houses of that order in the kingdom. The abbots Ealdred and Ealmer at the close of the 10th century began to break up the ruins of the old Roman city of Verulamium for materials to construct a new abbey church; but on account of the unsettled character of the times its erection was delayed till the time of William the Conqueror, when Paul of Caen, a relative of Archbishop Lanfranc, was in 1077 appointed abbot. Canterbury as built by Lanfranc was almost a reproduction of St Stephen's, Caen; but Paul, while adopting the same model for St Albans, built it on an immensely larger scale. The church was consecrated in 1115, but had been finished some years before. Of the original Norman church the principal portions now remaining are the eastern bays of the nave, the tower, and the transepts, but the main outlines of the building are still those planned by Paul. It is thus one of the most important specimens of Norman architecture in England, with the special characteristic that, owing to the use of the flat broad Roman tile, the Norman portions are peculiarly bare and stern. The western towers were pulled down in the 13th century. About 1155 Robert de Gorham repaired and beautified the early shrine and rebuilt the chapter-house and part of the cloister; but nothing of his work now remains except part of a very beautiful doorway lately discovered. Abbot John de Cella (1195-1214) pulled down the west front and portions of the north and south aisles. He began the erection of the west front in a new and enriched form, and his work was continued by his successor William de Trumpyngtone (1214-35) in a plainer manner. In 1257 the eastern portion was pulled down, and between the middle of the 13th and the beginning of the 14th century a sanctuary, ante-chapel, and lady chapel were added, all remarkably fine specimens of the architecture of the period. In 1323 two great columns on the south side suddenly fell, which necessitated the rebuilding of five bays of the south aisle and the Norman cloisters. Various incongruous additions were made during the Perpendicular period, and much damage was also done during the dissolution of the abbey to the finer work in the interior. The building within recent years has undergone extensive renovation, first under the direction of Sir Gilbert Scott, and latterly to a much greater extent under Sir Edmund Beckett. Its extreme length outside is 550 feet, which is exceeded by Winchester by 6 feet. The nave (284 feet) is the longest Gothic nave in the world and exceeds that of Winchester by about 20 feet. The length of the transepts is 175 feet inside. The monastic buildings have all disappeared with the exception of the great gateway.

To the south-west of the present city of St Albans stood the ancient Verulamium, one of the oldest towns in Britain, on Watling Street. It was the chief station of Cassivellaunus at the time of Cæsar's invasion, and under the Romans became a *municipium*. The ancient town which grew up around St Albans church was

completely destroyed by the Saxons between 500 and 560. During Wat Tyler's insurrection the monastery was besieged by the townspeople, many of whom were executed in consequence. At St Albans the Lancastrians were defeated on 21st May 1455, their leader, the duke of Somerset, being killed, and Henry VI. taken prisoner; there too Queen Margaret defeated the earl of Warwick on 17th February 1461. During the civil wars the town was garrisoned for the Parliament. On a printing press, one of the earliest in the kingdom, set up in the abbey the first English translation of the Bible was printed. A charter of incorporation was granted to the town by Edward VI. It returned two members to parliament until 1852, when it was disfranchised. It became a bishop's see in 1877. Nicholas Breakspear, the only English pope (Adrian IV.), was born near St Albans, and was elected its abbot in 1137.

See Matthew Paris, *Historia Major*; H. T. Riley, *Chronicle of the Monastery of St Albans*, 11 vols., 1863-73; Nicholson, *History of St Albans*; Buckler, *Norman Church of St Albans*; Neale, *Abbey Church of St Albans*, 1879; Sir E. Beckett, *St Albans Cathedral and its Restoration*, 1885.

ST ALBANS, a township and village of the United States, the capital of Franklin county, Vermont, at the junction of several divisions of the Central Vermont Railroad. The village lies on an elevated plain about 3 miles east of Lake Champlain, and has its principal buildings arranged round a public park. Besides being the seat of the extensive workshops of the railroad company, St Albans is the great cheese and butter market of the eastern States. In the neighbourhood, which is celebrated for the beauty of its scenery, are quarries of calico stone and variegated marble. The population of the township was 1814 in 1850, 3637 in 1860, 7014 in 1870, and 7193 in 1880. Being only 14 miles distant from the Canadian frontier, the village has more than once been the scene of political disturbances. In 1866 a band of 1200 Fenians, on their return from a fruitless invasion of Canada, were disarmed there by the United States troops.

ST AMAND-LES-EAUX, a town of France, in the department of Nord, at the junction of the Elnon with the Scarpe (a left-hand tributary of the Scheldt), 7½ miles by rail north-west of Valenciennes and 22 south-east of Lille. It has numerous industrial establishments, but is better known from the mineral waters in the vicinity. Though from Roman coins found in the mud it is evident that these must have been frequented during the Roman period, it is only two centuries since they began to be again turned to account. There are four distinct springs; the water (75° Fahr.) contains sulphates of lime and sulphur, and deposits white gelatinous threads without smell or taste. The black mud, which constantly gives out sulphuretted hydrogen, is composed of three strata—(1) a clayey peat, (2) clay, and (3) a composition of silica, carbonate of lime, oxide of iron, and aluminium. Numerous small sulphurous springs ooze through the lowest stratum and, soaking those above, form a slough in which patients suffering from rheumatism, gout, and certain affections of liver and skin remain for hours at a time. The population in 1881 was 7881 (commune, 11,184).

St Amand owes its name to St Amand, bishop of Tongres, who founded a monastery here in the reign of Dagobert. The abbey was laid waste by the Normans in 882 and by the count of Hainault in 1340. The town was captured by Mary of Burgundy in 1447, by the count of Ligne, Charles V.'s lieutenant, in 1521, and finally in 1667 by the French. The abbey has been destroyed, with the exception of the gateway flanked by two octagonal pavilions, now occupied by municipal offices; and of the abbey church there remains only the 17th-century façade.

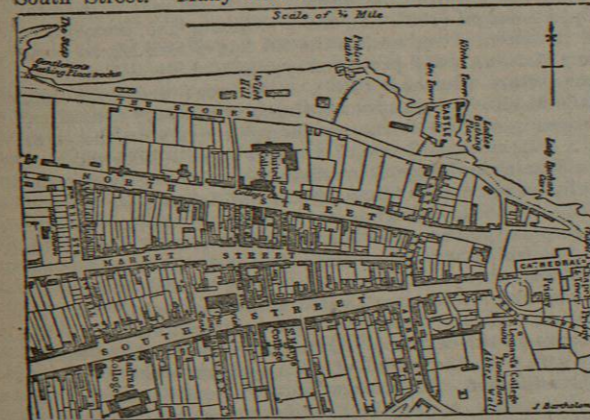
SAINTE-AMANT, MARC ANTOINE GERARD, SIEUR DE (1594-1661), the most eminent of a curious bacchanalian school of poets in France during the 17th century, was born at Rouen in the year 1594. Very little is known of his family except that it was of some position at Rouen, and the mysterious description which all his French biographers give of his father—that he was a sailor "qui commanda pendant 22 ans un escadre de la reine Élisabeth"—does not greatly assist an English imagination. It appears that Saint-Amant himself haunted taverns and

other resorts of gay society a good deal during his youth and manhood, that he attached himself at different times to different great noblemen—Retz (the duke, not the cardinal), Créqui, Harcourt, &c.—that he saw some military service, and sojourned at different times in Italy, in England (a sojourn which provoked from him a violent poetical attack on the country, only printed within the last thirty years), in Poland (where he held a court appointment for two years), and elsewhere. But details on all these points are both few and vague. Saint-Amant's later years were spent in France; and he died at Paris in 1661.

Saint-Amant has left a not inconsiderable body of poetry as various in style as Herrick's, and exhibiting a decided poetical faculty, hardly at all assisted by education. Of one class of his poetry the chief monument is the *Moise Sauvé*, published in 1653. The author calls this by the odd title of "idylle héroïque"; but it is to all intents and purposes an epic of the school of Tasso. It is not by any means without merit, and the alexandrine couplet is managed in it with much vigour and ease. The second and larger part of Saint-Amant's works consists of short miscellaneous poems on a great variety of subjects. The best of these are Bacchanalian, the oft-quoted *La Débauche* being one of the most remarkable convivial poems of its kind. All through his work flashes of strength and true poetical imagination occur; but he was rarely happy in his choice of subjects, and his execution is constantly marred by want of polish and form.

The standard edition of Saint-Amant, with life, notes, &c., is that in the "Bibliothèque Elzévirienne" by M. C. L. Livet (2 vols., Paris, 1855).

ST ANDREWS, a city, royal burgh, university town, and seaport of Scotland, in the county of Fife, is situated on a bay of the German Ocean and on a branch of the North British Railway, 9 miles east of Cupar and 11 south-south-east of Dundee. It occupies a platform of sandstone rock about 50 feet in height, running east and west and presenting to the sea a precipitous wall, which has been much encroached on by its action within recent years. The principal streets (North Street, Market Street, and South Street) diverge from the cathedral and run east and west, and Queen Street runs south from the centre of South Street. Many new houses and villas have been



Plan of St Andrews.

recently erected towards the south, north, and west. The prosperity of the city depends primarily on its educational institutions, especially the university. The golf links, which are considered the best in Scotland, and sea-bathing attract many residents and visitors. In the 16th century St Andrews was one of the most important ports north of the Forth, and is said to have numbered 14,000 inhabitants; but it fell into decay after the Civil War, and, although it has much increased in the present century, its trade has not revived to any extent. The harbour, protected by a pier 630 feet in length, affords entrance to vessels of 100 tons burden. The principal imports are wool and coals and the principal exports agricultural pro-

duce. The herring and deep-sea fishing is carried on by about 170 fishermen. The evidences of antiquity in the dwelling-houses are comparatively few. The city was never surrounded by walls, but had several gates, of which that called the West Port still remains. The most prominent ruins are those of the cathedral and the castle (see below). Among the modern public buildings are the town-hall (1858) in the Scottish baronial style, the golf clubhouse, the Gibson and fever hospitals, and the recreation hall (1884). The population of St Andrews in 1801 was only 3263, but by 1881 it had nearly doubled, being 6406. The parliamentary burgh in 1881 numbered 6458.

The cathedral originated partly in the priory of Canons Regular founded to the south-east of the town by Bishop Robert (1122-1159). Martine, who wrote in the end of the 17th century, states that in his time some of the buildings were entire and that considerable remains of others existed, but nearly all traces have now disappeared, with the exception of portions of the abbey wall and the archways, now known as the "Pends," forming the main entrance from the city. The wall is about three-quarters of a mile long and bears turrets at intervals. The cathedral was founded by Bishop Arnold (1159-1162), to supply more ample accommodation for the canons and for the celebration of the worship of the see than was afforded by the church of St Regulus. Of this older building in the Romanesque style, probably dating from the 10th century, there remain the square tower, 108 feet in height, and the choir, of very diminutive proportions. On a plan of the town c. 1530 a chance appears beyond, and on seals affixed to the city and college charters there are representations of other buildings attached. The cathedral which succeeded the church of St Regulus is represented in full outline in the plan of the town of 1530. It was constructed in the form of a Latin cross, the total length of the building inside the walls being 355 feet, the length of the nave 200, of the choir and lateral aisles 62, and of the lady chapel at the eastern extremity 50. The width at the transepts was 166 feet and of the nave and choir 62. According to Fordun the building was founded in 1159; but before it was finished the see witnessed the succession of eleven bishops, the consecration taking place in the time of Bishop Lamberion (1297-1328) in 1318, when the ceremony was witnessed by Robert the Bruce. When entire it had, besides a central tower, six turrets, of which two at the eastern and one of the two at the western extremity rising to a height of 100 feet still remain. The building was partly destroyed by fire in 1378, and the reparation and further embellishment were completed in 1440. It was stripped of its altars and images in 1559 by the magistrates and inhabitants of the city. It is believed that about the end of the 16th century the central tower gave way, carrying with it the north wall. Since then large portions of the ruins have been taken away for building purposes, and nothing was done to preserve them till 1826. The principal portions now remaining, partly Norman and partly Early English, are the eastern and western gables, the greater part of the southern wall of the nave, and the western wall of the south transept.

Closely connected with the fortunes of the cathedral are those of the castle, the picturesque ruins of which are situated about 250 yards north-west of the cathedral, on a rocky promontory now much worn away by the sea. It is supposed to have been erected by Bishop Roger about the beginning of the 13th century as an episcopal residence, and was strongly fortified. It was frequently taken by the English, and after it had been captured by the Scottish regent in 1336-37 was destroyed lest it should fall into their hands. Towards the close of the century it was rebuilt by Bishop Trail in the form of a massive fortification with a moat on the south and west sides. James I. spent some of his early years within it under the care of Bishop Wardlaw, and it is supposed to have been the birthplace of James III. From a window in the castle Cardinal David Beaton witnessed the burning of Wishart in front of the gate, and shortly afterwards he was murdered within it in his bedroom by a party of Reformers. The castle was taken from the conspirators by the French, among the prisoners captured being John Knox. Some years afterwards it was repaired by Archbishop Hamilton, but in a less massive and substantial form. It had in 1656 fallen into such disrepair that the town council ordered its "sleats and timmer, redd and lumps" to be devoted to the repair of the pier at the harbour. The principal remains are a portion of the south wall enclosing a square tower, the bottle dungeon below the north-west tower, the kitchen tower, and a curious subterranean passage.

The town church, formerly the church of the Holy Trinity, was originally founded in 1112 by Bishop Turgot. The early building was a beautiful Norman structure, but at the close of the 18th century the whole, with the exception of little else than the square tower and spire, was re-erected in a plain and ungainly style. Within the church Knox preached the sermon which led to the stripping of the cathedral and the destruction of the monastic

buildings. It contains an elaborate monument to Archbishop Sharp. Near the south-west of the town is the ruined northern transept of the chapel of the Dominican monastery founded by Bishop Wishart in 1274; but all traces of the Observantine monastery founded about 1450 by Bishop Kennedy have disappeared, except the well. The church of St Mary on the rock erected by the Culdees is supposed to have stood on the Lady's Craig now covered by the sea; and the foundations of another, also dedicated to the Virgin, to the west of the harbour were discovered in 1860, giving the full outline of the ground-plan of the building.

The university was possibly a development of the "schools" which were in existence as early as the beginning of the 12th century, and were endowed by certain "rents and kune" payable to them from lands in the neighbourhood. Its immediate origin was due to a society formed in 1410 by Lawrence of Lindores, abbot of Scoon, Richard Cornwall, archdeacon of Lothian, William Stephen, afterwards archbishop of Dunblane, and a few others, for the instruction of all who chose to attend their lectures. A charter was granted in 1411 by Bishop Wardlaw, who attracted the most learned men in Scotland as professors, and bulls were obtained from the pope in 1413 confirming the charter and constituting it a *studium generale* or university. The lectures were delivered in various parts of the town until 1430, when a building called the "pedagogy" to the Faculty of Arts was granted by the founder of the university. St Salvator's College was founded and richly endowed by Bishop Kennedy in 1456; twelve years later it was granted the power to confer degrees in theology and philosophy, and by the end of the century was regarded as a constituent part of the university. In 1512 the university received a further addition by the foundation of St Leonard's College by Prior John Hepburn and Archbishop Alexander Stuart on the site of buildings which at one time were used as a hospital for pilgrims. In the same year Archbishop Stuart nominally changed the original "pedagogy" into a college and annexed to it the parish church of St Michael of Tarvet; but its actual erection into a college did not take place until 1537. By a bull obtained from Paul III. it was dedicated to the Blessed Virgin Mary of the Assumption. The outline of the ancient structure is preserved, but the general character of the buildings has been much altered by various restorations. They form two sides of a quadrangle, the library and principal's residence being on the north and the lecture-rooms and old dining-hall on the west. The university library, which now includes the older college libraries, was founded about the middle of the 17th century, rebuilt in 1764, and improved in 1829. The lower hall in the older part of the building has been used as a provincial meeting-place for the Scottish parliament. When the constitution of the colleges was remodelled in 1579 St Mary's was set apart to theology; and in 1747 the colleges of St Salvator and St Leonard were formed into the United College. The buildings of St Leonard's are now occupied as a high class school for girls. The college chapel is in ruins. The United College occupies the site of St Salvator's College, but the old buildings have been removed, with the exception of the college chapel, now used as the university chapel and the parish church of St Leonard's, a fine Gothic structure containing an elaborate tomb of Bishop Kennedy; the entrance gateway with the square clock tower rising to a height of 162 feet; and the janitor's house, with some class-rooms above. The modern building, in the Elizabethan style, forming two sides of a quadrangle, was erected between the years 1827 and 1847. The Madras College was founded and endowed by Dr Andrew Bell. It is attended by about 700 pupils. There are also several large boarding and day schools.

St Andrews (see SCOTLAND) is said to have been made a bishopric in the 9th century, and when in 908 the Pictish and Scottish Churches were united the primacy was transferred to it from Dun-Ed, its bishops being henceforth known as bishops of Alban. Turgot, who was appointed in 1109, was the first bishop who really filled the see. It became an archbishopric during the primacy of Patrick Graham (1466-78). This ceased in 1688. It was created a royal burgh by David I. in 1124. The St Andrews district of burghs returns one member to the House of Commons.

Martine, *History and Antiquities of St Rule's Chapel, St Andrews, 1787*; Grierson, *Delimitations of St Andrews, 1807*, 3d ed. 1838; *Reliquiae Divi Andree, 1797*; *Flora Cartarum Sancti Andree*, Bannatyne Club, 1841; Skene, "Ecclesiastical Settlements in Scotland," in *Proc. Soc. Antiq. Scot.*, 1862-63; *Histories of St Andrews by Lyon (1843) and Rogers (1849)*; Skene, *Celtic Scotland*. (T. F. H.)

ST ASAPH, a city and parliamentary borough of North Wales, in the county of Flint, is situated on an eminence in the Vale of Clwyd, near the junction of the Clwyd and Elwy, about 6 miles south-south-east of Rhyl and 6 north-north-west of Denbigh. It is somewhat irregularly built and has an antique appearance. On the brow of the hill is an encampment, *Bron-y-Wylva*, supposed to have been occupied by the Roman forces under Suetonius Paulinus. According to tradition the cathedral occupies the site of a church and monastery founded by St Ken-
 gern about 560, when he fled from Strathclyde. It was originally called Llan-Elwy, the church on the Elwy. It is uncertain whether the first bishop was Kentigern or Asaph, to whom Kentigern committed the charge of the church and monastery when he returned to Scotland. The ancient wooden structure was burnt down by the English in 1245; and again in 1278 the same fate befell the building. A third edifice was in great part destroyed during the wars of Owen Glendower in 1402. The greater part of the present building was constructed by Bishop Redman about 1480; the choir and chancel underwent restoration from the designs of Sir Gilbert Scott in 1867-68, and the nave in 1875, when a new roof was added. It is one of the smallest cathedrals in Britain, its total length being 182 feet, while the breadth across the transepts is 108 feet. It is a plain cruciform structure, chiefly Decorated, but with some Early English portions, with an embattled tower, 97 feet in height, rising from the intersection of the nave and the transept. In the south transept there is a library of nearly 2000 volumes, including some rare and valuable books. The bishop's palace is a comparatively modern structure. The town has a grammar-school (1882), county court offices, the union workhouse, and almshouses. The population of the borough (area, 1155 acres) in 1881 was 1901 and of the parish 3177.

ST AUGUSTINE, a city of the United States, capital of St John's county, Florida, has the distinction of being the oldest city in the States built by Europeans, and has recently become a popular winter watering-place. By rail it is 36 miles south-east from Jacksonville. It stands on a narrow sandy peninsula, not more than 12 feet above the sea, formed by the Matanzas and San Sebastian rivers, and is separated from the ocean by the northern end of Anastasia Island. The streets are very narrow, the principal thoroughfares being only 12 or 15 feet wide, and the balconies of the old houses often project so as almost to meet overhead. Along the sea-front for nearly a mile extends a granite-coped sea-wall (1837-43), which forms a fine promenade. At its northern end stands the old fort of San Marco (now Fort Marion), a well-preserved specimen of Spanish military architecture (finished 1756), with moat and outworks, walls 21 feet high, bastions at the corners, heavy casemates, dungeons, and subterranean passages. It is in the form of a trapezium, and covers about 4 acres. Like most of the Spanish buildings, it is constructed of coquina, a curious shelly conglomerate from Anastasia Island, which was easily quarried, but grew very hard on exposure to the atmosphere. The same material was used for paving the streets, which were thus kept extremely clean and firm. At the southern end of the sea-wall is the old Franciscan monastery, now used as United States barracks. Of the Spanish wall which ran across the peninsula and defended the city on the north side there only remains the so-called city gate. In the centre of St Augustine is the Plaza de la Constitution, which takes its name from the monument in the middle, erected in 1812 in memory of the Liberal Spanish Constitution. On this square stand the cathedral (1793), with a Moorish belfry, the old governor's palace, now used as a post-office and public library, and an Episcopal church in modern Gothic. Other buildings of note in the town are the convent of St Mary and the convent of the sisters of St Joseph. Modern villas and hotels have recently been erected in various parts. Palmetto straw goods are largely manufactured in St Augustine, the palmetto being one of the characteristic features of the surrounding landscape, to which orange and lemon trees also contribute. The climate is remarkably equable, the mean temperature for winter being 58°, and for the other seasons 68°, 80°, and 71° respectively. Frosts seldom occur, though that of 1835 killed many of the orange-

trees. In 1880 the total population of the city was 2293, but in winter northern visitors swell the number to 7000 or 8000.

Menendez de Aviles arrived off the coast of Florida on 28th August (St Augustine's day) 1565, and accordingly he gave the name of that saint to the city which he shortly afterwards founded. His first act was to attack the French settlement on St John's river, and two years later the French retaliated on St Augustine (see FLORIDA, vol. ix. 340, and RIBAULT). In 1586 Drake attacked and plundered the town, and throughout the 17th century it frequently suffered from the raids of Indians, pirates, and the English settlers of South Carolina and Georgia. Occupied by the British from 1763 to 1783, it ultimately passed to the United States in 1821. During the Civil War it changed hands three times.

ST BARTHOLOMEW, or ST BARTHÉLEMY, a French island of the West Indies, in the archipelago of the Antilles, is situated in 17° 55' 35" N. lat. and 63° 60' 15" W. long., 108 miles north-north-west of Guadeloupe, of which, politically, it is a dependency. In form it is very irregular and the surface is mountainous. The soil, in spite of a scarcity of moisture, is not unfertile; and in some of the valleys the growing of vegetables is an important industry. Bananas, cassia, tamarinds, and sassafras are exported. In modern times zinc and lead ores have been found in the island, but they are not worked. Rocks and shallows make St Bartholomew difficult of access, and its port (Le Carénage), though safe during the greater part of the year, is capable of receiving only the larger class of coasting vessels. The chief town is Gustavia, near the port. The population was 2942 in 1883.

St Bartholomew, occupied by the French in 1648, was ceded to Sweden in 1784; but it was restored to France by the treaty signed at Paris, August 1877, with the full approval of the inhabitants, who had remained French in language and manners. Universal suffrage was introduced in 1830 and slavery abolished in 1848.

ST BRIEUC, a town of France, chef-lieu of the department of Côtes du Nord, 295 miles west of Paris by the railway from Brest, at the junction of a branch to Vannes by Pontivy. It stands 290 feet above the sea, between 1 and 2 miles from the English Channel, where Légue, on the left bank of the Gouet, serves as its seaport. About 600 vessels, with an aggregate of 27,600 tons, enter or clear per annum; the local shipowners take part especially in the Newfoundland and Iceland fisheries. St Brieuc is an old town with a considerable number of curious houses. The principal articles of trade are grain, flax, hemp, vegetables, honey, cider, butter, and eggs, which are despatched to England, and fish and game, which are sent in considerable quantities to Paris. At the fairs in bygone days the Breton women sold their hair for trifling sums. Nurseries of some size exist at St Brieuc, and in the neighbourhood are quarries of blue granite, giving employment to 300 workmen. St Brieuc is the seat of a bishopric in the province of Rennes, and has a cathedral dating from the 13th century, but partially rebuilt in the 18th, and extensively restored recently. The tombs of the bishops, the modern but delicately carved organ-loft, the tapestries, and the stained-glass windows deserve mention. The old monastery of the Capuchins is occupied by the civil hospital. The monastery of the Cordeliers contains the lycée, a library of 30,000 volumes, and a museum of archaeology and natural history, and the convent of the Ursulines has been turned into barracks. The episcopal palace, the prefecture, and the town-house were formerly private mansions, a class of old buildings which is steadily being reduced in number by the opening of new streets. A colossal image of the Virgin looks down upon the town, and the Duguesclin boulevard, on the site of the ramparts, has a statue of that hero. The population in 1881 was 14,869 (commune 17,833).

St Brieuc owes its origin and its name to the missionary St Bricous, who came from Wales in the 5th century, and whose tomb afterwards attracted crowds of pilgrims. The place was defended in

1375 by Olivier de Clisson against the duke of Brittany, and again attacked by the same Clisson in 1394, the cathedral suffering greatly in both sieges. In 1592 the town was pillaged by the Spaniards, in 1601 ravaged by the plague, and in 1625 surrounded by walls, of which no traces remain. Between 1602 and 1708 the states of Brittany several times met at St Brieuc, and during the Reign of Terror Chouans and Blues carried on a ruthless conflict with each other.

ST CATHARINES, a city and port of entry of Ontario, Canada, and the capital of Lincoln county, is situated 12 miles north-west of Niagara Falls and 35 south of Toronto (by water), on the Welland Canal and the Grand Trunk and Welland branch of the Grand Trunk Railway. It is celebrated for its artesian mineral wells, and contains a convent and a marine hospital. The manufacture of flour has long been a staple industry, and the abundant water-power is also utilized in cotton-mills, machine-shops, agricultural implement works, &c. Incorporated as a town in 1845, St Catharines had in 1861 a population of 6284, in 1871 of 7864, and in 1881 of 9631. A city charter was granted in 1875.

ST CHAMOND, a manufacturing town of France, in the department of Loire, 7½ miles east-north-east of St Étienne, at the confluence of the Janon with the Gier (an affluent of the Rhone), and on the railway from St Étienne to Lyons. Besides working a considerable number of coal-mines, St Chamond employs twelve mills in the silk manufacture, and from 12,000 to 15,000 looms (mostly driven by hydraulic machinery) in lace-making, and has a variety of other manufactures. The population was 14,149 in 1881.

St Chamond, founded in the 7th century by St Ennemond or Chamond, archbishop of Lyons, became the chief town of the Jarret, a little principality formed by the valley of the Gier. Silk-milling was introduced in the town in the middle of the 16th century by Gayotti, a native of Bologna, and perfected towards the beginning of the 19th by Richard Chambovet. Remains are found at St Chamond of a Roman aqueduct, which conveyed the waters of the Janon along the valley of the Gier to Lyons.

ST CHARLES, a city of the United States, the county seat of St Charles county, Missouri, is situated on the left or north bank of the Missouri 20 miles from its mouth, and 23 from St Louis by the St Louis and Omaha line of the Wabash, St Louis, and Pacific Railway, which crosses the river by a great iron bridge 6535 feet long, erected in 1871 at a cost of \$1,750,000. Besides one of the largest car-factories in the United States, the industrial establishments of St Charles comprise tobacco-factories, flour-mills, hominy-mills, creameries, woollen-factories, and breweries. St Charles College (Methodist Episcopal), chartered in 1838, the Lindenwood Female College (Presbyterian), the Convent of the Sacred Heart, and the Roman Catholic public library are the principal institutions. In 1850 the inhabitants numbered only 1498; by 1870 they were 5570, and in 1880 5014 (in the township 8417).

A Spanish post was established at St Charles in 1769. As a town it dates from 1809 and as a city from 1849. The first State legislature of Missouri met in the town in 1821 and St Charles continued to be the State capital till 1826.

ST CHRISTOPHER, or ST KITTS, one of the Leeward Islands, West Indies, situated in 17° 18' N. lat. and 62° 48' W. long. Its length is 23 miles, its greatest breadth 5 miles, and the total area 68 square miles. Mountains traverse the central part from south-east to north-west, the greatest height, Mount Misery, being about 4100 feet above sea-level. On the seaboard is Basseterre, the capital, the outlet of a fertile plain, which contains the cultivated land. The thermometer ranges from 78° to 84° Fahr. St Christopher is united with Nevis (*q.v.*) as one colony, with one executive and one legislative council (official and nominated) for the united presidency. In 1883 the revenue and expenditure were £34,000 and £33,000 respectively.