

weakening of its walls, and the consequent accumulation and fermentation of partially digested food. This condition gives rise to much discomfort, heartburn, and pain, and to the occurrence every few days of a copious vomiting of fermenting material, in which may be found on microscopic examination the fungoid growths of *Sarcina* and *Torula*. With the continuance of the disease the symptoms tend to increase and to wear out the patient's strength, since little or no assimilation is possible, and death sooner or later takes place from inanition. For a long time this condition was regarded as incurable in every case, till the method of treatment, originally suggested by Küssmaul, of washing out the stomach daily or less frequently was found to yield remarkably beneficial results in almost all cases, and, in many instances of non-cancerous disease, to accomplish an actual cure. This plan of treatment is now largely resorted to, and it has proved to be a valuable addition to the therapeutics of gastric diseases.

(J. O. A.)

STONE, a market-town of Staffordshire, England, on the river Trent, and on the North Staffordshire Railway, 7 miles south of Stoke and 7 north of Stafford. Part of the walls remain of an abbey which dates from the foundation of a college of canons in 670. The present church was opened in 1750. The inhabitants are employed chiefly in shoemaking, but malting, brewing, and tanning are also carried on. The population of the urban sanitary district (estimated area 1000 acres) was 5669 in 1881.

STONE. See VESICAL DISEASES.

STONEHENGE, one of the most remarkable examples of the ancient stone circles, is situated in Salisbury Plain, Wiltshire, about 7 miles north of Salisbury. It consists of two circles and two ovals with a large stone in the centre. The outer circle, about 300 feet in circumference, is composed of upright stones about 16 feet in height and 18 feet in circumference, with others of similar size placed horizontally on their tops. Originally there were thirty uprights and thirty imposts, but now only seventeen uprights and seven imposts retain their position. The inner circle, which is about 9 feet distant from the outer circle, consisted originally of forty single stones, much smaller in size, and, unlike those of the outer circle, showing no evidence of having been hewn. The larger of the ovals was composed of five pairs of trilithons standing separate from each other, and rising gradually in height from east to west. Only two of these now remain entire; one of the uprights of the grand central trilithon has fallen, and is broken in two pieces; the impost though fallen is entire, and the other impost is 9 feet out of the perpendicular; another trilithon fell outward on the 3d June 1797; and of a third one of the uprights is still standing, the other upright and the impost having in their fall been broken into three pieces. The inner oval consisted originally of nineteen stones, of which there are remains of eleven, tapering in form and taller than those of the inner circle. In the centre of the smaller oval is the supposed altar stone, 15 feet in length. The whole is surrounded by a vallum and ditch about 370 yards in circumference. From the north-east an avenue, marked by a bank and ditch on each side, proceeds for a distance of 594 yards, after which it divides into two branches, one going eastwards up a hill between two groups of barrows, and the other north-westwards about 300 yards to the cursus or race-course. The cursus, which is enclosed between two parallel banks and ditches running east and west, is a mile and 176 yards in length, with a breadth of 110 yards. There is a smaller cursus a little to the north. In the avenue there is a cromlech or bowing-stone 16 feet in length, called the Friar's Heel, and in a line with it, within the area of the work, there is a large prostrate stone on which it is supposed the victims were immolated. Barrows lie around on all sides.

Stonehenge is first mentioned by Nennius, in the 9th century, who asserts that it was erected in commemoration of the 400 nobles who were treacherously slain near the spot by Hengist in 472. A similar account of its origin is given in the triads of the Welsh bards, where its erection is attributed to King Merlin, the

successor of Vortigern. Inigo Jones, in his work on Stonehenge, published in 1655, endeavours to prove that it was a temple of the Romans, but later writers of authority are generally agreed that it is of Druidical origin, although there are differences of opinion as to its probable date, some placing it at 100 years before Christ and others in the 5th century. It seems most probable that the inner circle and inner oval, constructed of smaller stones of granite, which must have been brought from a distance, is of earlier origin than the outer circle and oval.

Among numerous writings on Stonehenge may be mentioned *Stonehenge and Abury*, by Dr William Stukeley, 1740, reprinted in 1840; *Davies's Celtic Researches*, 1804, and *Mythology of the Druids*, 1809. Hoare's *Ancient Wiltshire*, vol. i. 1812; Brown's *An Illustration of Stonehenge and Abury*, 1823; the article on Stonehenge in the *Quarterly Review* for July 1860; Long's *Stonehenge and its Barrows*, 1876; Gidley, *Stonehenge Viewed in the Light of Ancient History and Modern Observation*, 1877.

STONE MASONRY. See BUILDING, vol. iv. p. 468.

STONINGTON, a borough and seaport of the United States, in New London county, Connecticut, is situated on Long Island Sound, 139 miles from New York by the railway to Providence and Boston. It is built on a narrow rocky point, and is a quiet quaint-looking town, largely frequented as a summer watering-place. Its industries comprise silk-throwing and the manufacture of silk machinery, and it has a considerable interest in sealing. Here and there may still be seen traces of the bombardment by the British under Sir Thomas Hardy in August 1814. The harbour is protected by two breakwaters; it is the terminus of a daily line of steamers from New York. The population of the township was 6313 in 1870, and 7355 in 1880. Settled in 1649, the borough was incorporated in 1801.

STORACE, STEPHEN (1763-1796), dramatic composer, was born in London in 1763. His father, Stefano Storace, an Italian contrabassist, taught him the violin so well that at ten years old he played successfully the most difficult music of the day. After completing his education at the Conservatorio di Sant' Onofrio at Naples, he produced his first opera, *Gli Sposi Malcontenti*, at Vienna, in 1785. Here he made the acquaintance of Mozart, in whose *Nozze di Figaro* his sister, Anna Selina Storace, first sang the part of Susanna. Here also he produced a second opera, *Gli Equivoci*, founded on Shakespeare's *Comedy of Errors*, and a "Singspiel" entitled *Der Doctor und der Apotheker*. But his greatest triumphs were achieved in England, whither he returned in 1787. After creating a favourable impression by bringing out his "Singspiel" at Drury Lane, under the title of *The Doctor and the Apothecary*, Storace attained his first great success in 1789, in *The Haunted Tower*, a genuine English opera, which ran for fifty nights in succession, and retained its popularity long after the opening of the present century. *No Song No Supper* was equally successful in 1790; and *The Siege of Belgrade* scarcely less so in 1791. The music of *The Pirates*, produced in 1792, was partly adapted from *Gli Equivoci*, and is remarkable as affording one of the earliest instances of the introduction of a grand finale into an English opera. These works were followed by some less successful productions; but *The Cherokees* (1794) and *The Three and the Deuce* (1795) were very favourably received, and the music to Colman's play, *The Iron Chest*, first performed March 12, 1796, created even a greater sensation than *The Haunted Tower*. This was Storace's last work. He caught cold at the rehearsal, and died in consequence, March 19, 1796.

The character of Storace's music is pre-eminently English; but his early intercourse with Mozart gave him an immense advantage over his contemporaries in his management of the orchestra, while for the excellence of his method of writing for the voice he was no doubt largely indebted to the charming vocalization of his sister Anna. This lady, who has attained lasting honour as the original representative of Susanna in *Le Nozze di Figaro*, was born in London in 1766, completed her education at Venice under Sacchini, sang for Mozart at Vienna, and first appeared at the King's Theatre in London in 1787. After contributing greatly to the success of *The Haunted Tower* and her brother's later operas, she crowned a long and brilliant career by winning great laurels at

the Handel Commemoration at Westminster Abbey in 1791, retired from public life in 1808, and died August 24, 1817. During her stay in Vienna she married John Abraham Fisher, a celebrated violinist; but he used her so cruelly that she refused to bear his name, and in her will—bequeathing property to the amount of £50,000—styled herself "spinster."

STORAX. It has been explained in INCENSE (vol. xii. p. 718) and LIQUIDAMBAR (vol. xiv. p. 687) that the storax of commerce and the pharmacopœia (used as an emollient) is derived from the Oriental liquidambar tree. The storax of the ancients, on the other hand, a solid gum which does not now occur in commerce, appears to have been the product of the beautiful white-flowered shrub *Styrax officinalis*, which is still common on Carmel and elsewhere in Syria. It was much used as an incense, and formed an early and important article of Phœnician trade (see Movers, *Phœnicier*, ii. 3. 101, 223 sq.). It is probable that the Greek word *στίραξ* is of Semitic origin, representing the Hebrew *צרי*, which the English version renders "balm" (Lagarde, *Mittheilungen*, p. 234 sq.).

STORK (A.S. *Storc*; Germ. *Storch*), the *Ciconia alba* of ornithology, and, through picture and story, one of the best known of foreign birds; for, though often visiting Britain, it has never been a native or even inhabitant of the country. It is a summer-visitant to most parts of the European continent,—the chief exceptions being France (where the native race has been destroyed), Italy, and Russia,—breeding from southern Sweden to Spain and Greece, and being especially common in Poland.<sup>1</sup> It reappears again in Asia Minor, the Caucasus, Persia, and Turkestan, but further to the eastward it is replaced by an allied species, *C. boyciana*, which reaches Japan. Though occasionally using trees (as was most likely its original habit) for the purpose, the Stork most generally places its nest on buildings,<sup>2</sup> a fact familiar to travellers in Denmark, Holland, and Germany, and it is nearly everywhere a cherished guest, popular belief ascribing good luck to the house to which it attaches itself.<sup>3</sup> Its food, consisting mainly of frogs and insects, is gathered in the neighbouring pastures, across which it may be seen stalking with an air of quiet dignity; but in the season of love it indulges in gestures which can only be called grotesque,—leaping from the ground with extended wings in a kind of dance, and, absolutely voiceless as it is, making a loud noise by the clattering of its mandibles. At other times it may be seen gravely resting on one leg on an elevated place, thence to sweep aloft and circle with a slow and majestic flight. Apart from its considerable size,—and a Stork stands more than three feet in height,—its contrasted plumage of pure white and deep black, with its bright red bill and legs, makes it a conspicuous and beautiful object, especially when seen against the fresh green grass of a luxuriant meadow. In winter the Storks of Europe retire to Africa,—some of them, it would seem, reaching the Cape Colony,—while those of Asia visit India. A second species, with much the same range, but with none of its relative's domestic disposition, is the Black Stork, *C. nigra*, of which the upper parts are black, brilliantly glossed with purple, copper, and green, while it is white beneath,—the bill and legs, with a patch of bare skin round the eyes, being red. This bird breeds in lofty

trees, generally those growing in a large forest. Two other dark-coloured, but somewhat abnormal, species are the purely African *C. abdimii*, and the *C. episcopus*, which has a wider range, being found not only in Africa but in India, Java, and Sumatra. The New World has only one true Stork, *C. maguari*,<sup>4</sup> which inhabits South America, and resembles not a little the *C. boyciana* above mentioned, differing therefrom in its greenish-white bill and black tail. Both these species are very like *C. alba*, but are larger, and have a bare patch of red skin round the eyes.

The Storks form the *Pelargi* of Nitzsch, as separated by him from the Herons and the Ibises, but all three are united by Prof. Huxley in his group *Pelargomorpha*. The relations of the Storks to the Herons may be doubtful; but there is no doubt that the former include the *JABIBU* (vol. xiii. p. 529) and its allies, as well as the curious genus *Anastomus* (with its lower mandible hollowed out so as only to meet the maxilla at the base and the tip), of which there are an African and an Asiatic species. Two other remarkable forms probably belong to the *Pelargi*. These are *Baleniceps rex* and *Scopus*

Shoe-Bill or Whale-Headed Stork. (After Wolf in *Trans. Zool. Soc.*)

*umbretta*, each the sole member of its own genus, and both from Africa. The former, first brought to Europe by Mr M. Parkyns from the White Nile, was regarded by Gould, who described it in the *Zoological Proceedings* (1851, pp. 1, 2, pl. xxxv.), as an abnormal Pelican. This view was disputed by Reinhardt (*op. cit.*, 1860, p. 377), and wholly dispelled by Prof. Parker in the *Zoological*

<sup>4</sup> This was formerly believed to have occurred in Europe, but erroneously, as was shown by Schlegel (*Rev. Critique*, p. 104).

*Transactions* (iv. pp. 269–351), though these two authors disagreed as to its affinities, the first placing it with the Storks, the last assigning it to the Herons. In singularity of aspect few birds surpass *Baleniceps*, with its gaunt grey figure, some five feet in height, its large head surmounted by a little curled tuft, the scowling expression of its eyes, and its huge bill in form not unlike a whale's head—this last suggesting its generic name—but tipped with a formidable hook. The shape of the bill has also prompted the Arabs to call it, according to their idiom, the "Father of a Shoe," and it has been designated "Shoe-bill" in English.<sup>1</sup> The other form that remains to be noticed is the *Scopus umbretta* of ornithologists, called the "Umbre" by Pennant. This was discovered by Adanson the French traveller in Senegal about the middle of the last century, and was described by Brisson in 1760. It has since been found to inhabit nearly the whole of Africa and Madagascar, and is the "Hammerkop" (Hammerhead) of the Cape colonists. Though not larger than a Raven, it builds an enormous nest, some six feet in diameter, with a flat-topped roof and a small hole for entrance and exit, and placed either on a tree or a rocky ledge.<sup>2</sup> The bird, of an almost uniform brown colour, slightly glossed with purple, and its tail barred with black, has a long occipital crest, generally borne horizontally, so as to give rise to its common name. It is somewhat sluggish by day, but displays much activity at dusk, when it will go through a series of strange performances. In all the Storks, so far as is known, the eggs are white, and in most forms distinguishable by the grain of their shell, which, without being rough, is closely pitted with pore-like depressions.

(A. N.)

**STORMS.** See METEOROLOGY, vol. xvi. p. 154.

**STORY, JOSEPH** (1779–1845), was born at Marblehead, Massachusetts, September 18, 1779, graduated at Harvard in 1798, and was admitted to the bar in Massachusetts in 1801. He was a member of the Democratic party, then weak in New England but all-powerful in the rest of the Union; and his district made him its representative in Congress for 1808–9. In 1811 one of the associate-justiceships of the United States supreme court became vacant, and Story was appointed to it, retaining the office for life. Here he found his true sphere of work. The traditions of the American people, their strong prejudice for the local supremacy of the States and against a centralized government, had yielded reluctantly to the establishment of the federal legislative and executive in 1789. The federal judiciary had been organized at the same time, but had never grasped the full measure of its powers. Soon after Story's appointment the supreme court began to bring out into plain view the powers which the constitution had given it over State courts and State legislation. The leading place in this work belongs to Chief-Justice John Marshall, but Story has a very large share in that remarkable series of decisions and opinions, from 1812 until 1832, by which the work was accomplished. In addition to this he built up the department of admiralty law in the United States courts; and his *Commentaries on the American Constitution* are still the leading authority on the interpretation of that instrument. He died at Cambridge, Massachusetts, where he was the head of the Harvard law school, September 10, 1845.

See *Story's Life and Letters of Joseph Story*; *Story's Miscellaneous Works*; *Story's Commentaries on the Constitution of the*

<sup>1</sup> Under one or other of these names it is mentioned by many African travellers; but the best account of it is that given by Von Heuglin (*Orn. Nordost-Afrika's*, pp. 1095–1099). In 1860 two living birds were brought to England by Mr Petherick and exhibited in the Zoological Gardens.

<sup>2</sup> Two figures of the nest are given by Holub and Von Pelzel (*Beitr. Orn. Südafrikas*, p. 279).

*United States*, and a great number of standard law-books of which he was the author. His supreme court decisions are in Cranch's, Wheaton's, and Peters's *Reports*; his circuit decisions in Gallison's, Mason's, Sumner's, and Story's *Reports*.

**STOTHARD, CHARLES ALFRED** (1786–1821), antiquarian draughtsman, son of Thomas Stothard, noticed below, was born in London on July 5, 1786. After studying in the schools of the Royal Academy, he began, in 1810, his first historical piece, the Death of Richard II. in Pomfret Castle. Having taken a strong interest from an early period in the costumes of different ages and nations, he published in 1811 the first part of his valuable work, *The Monumental Effigies of Great Britain*. He was appointed historical draughtsman to the Society of Antiquaries, and was deputed by that body to visit Bayeux, to make drawings of the well-known tapestry. He was made a fellow of the society in 1819, and subsequently engaged in numerous journeys with the view of illustrating the works of D. Lysons. While engaged in tracing a portrait from one of the windows of the church of Beer-Ferrers, Devonshire, he fell and was killed on the spot (May 27, 1821). His widow (afterwards Mrs Bray), along with her brother, completed his *Monumental Effigies*, left unfinished at his death. A biography, by his widow, was published in 1823.

**STOTHARD, THOMAS** (1755–1834), subject painter, was born in London on August 17, 1755, the son of a well-to-do innkeeper in Long Acre. Being a delicate child, he was sent at the age of five to a relative in Yorkshire, and attended school at Acomb, and afterwards at Tadcaster and at Ilford in Essex. Showing a turn for drawing he was apprenticed to a draughtsman of patterns for brocaded silks in Spitalfields, and during his leisure hours he attempted illustrations to the works of his favourite poets. Some of these drawings were praised by Harrison, the editor of the *Novelist's Library*, and, Stothard's master having died, he resolved to devote himself to art. In 1778 he became a student of the Royal Academy, of which he was elected associate in 1791, full academician in 1794, and librarian in 1817. He married before he was thirty; and it is recorded that, after attending the wedding ceremony, he spent the afternoon in quietly drawing in the schools, and, on leaving, requested a fellow student to accompany him "to a family party." "Do come," he said, "for I have this day taken unto myself a wife." He died in London on the 27th of April 1834.

Among his earliest book illustrations are plates engraved for *Ossian* and for *Bell's Poets*; and in 1780 he became a regular contributor to the *Novelist's Library*, for which he executed one hundred and forty-eight designs, including his eleven admirable illustrations to *Peregrine Pickle* and his graceful subjects from *Clarissa* and *Sir Charles Grandison*. Soon his hands were full of work, for all commissions were welcome to him. He contentedly designed plates for pocket-books, tickets for concerts, illustrations to almanacs, portraits of popular players,—and into even the slightest and most trivial sketches he infused a grace and distinction which render them of value to the collectors of the present time. Among his more important series are the two sets of illustrations to *Robinson Crusoe*, and the plates to *The Pilgrim's Progress* (1788), to *The Rape of the Lock* (1798), to the works of Gessner (1802), to *Cowper's Poems* (1825), and to *The Decameron*; while his figure-subjects in the superb editions of *Rogers's Italy* (1830) and *Poems* (1834) prove that even in latest age his fancy was still unexhausted and his hand hardly at all enfeebled. He is at his best in subjects of a domestic or a gracefully ideal sort; the heroic and the tragic were beyond his powers. The designs by Stothard have been estimated by Mr Wornum to number five thousand, and of these about three thousand have been engraved. His oil pictures are usually small in size, and rather sketchy in handling. Their colouring is often rich and glowing, being founded upon the practice of Rubens, of whom Stothard was a great admirer. He was a contributor to *Boydell's Shakespeare Gallery*, but his best-known painting is the *Procession of the Canterbury Pilgrims*, the engraving from which, begun by Schiavonetti and finished by Heath, attained an immense popularity. It was followed by a companion work, the *Flecht of Bacon*, which was drawn in sepia for the engraver, but was never carried out in colour.

In addition to his easel pictures, Stothard adorned the grand

staircase of Burleigh House with subjects of War, Intemperance, and the Descent of Orpheus in Hell (1799–1803); the mansion of Hafod, North Wales, with a series of scenes from Froissart and Monstrelet (1810); the cupola of the upper hall of the Advocates' Library, Edinburgh (now occupied by the Signet Library), with Apollo and the Muses, and figures of poets, orators, &c. (1822); and he prepared designs for a frieze and other decorations for St James's Palace. He also designed the magnificent shield presented to the duke of Wellington by the merchants of London, and executed with his own hand a series of eight etchings from the various subjects which adorned it.

An interesting, but most indiscriminately eulogistic biography of Stothard; by his daughter-in-law Mrs Bray, was published in 1851.

**STOURBRIDGE**, a market-town of Worcestershire, England, stands on an eminence on the south bank of the Stour, and on the Great Western Railway, on the borders of Staffordshire, 4 miles south-west of Dudley and 10 west of Birmingham. A branch canal connects the town with the Staffordshire and Worcestershire Canal. The Stour is crossed by a railway viaduct erected in 1882 at a cost of £13,835. The town possesses a corn exchange, a mechanics' institute, an Edward VI. grammar school, a Government school of art, and a blue-coat or hospital school. The manufacture of glass was established in 1556 by emigrants from Hungary, the place where they erected their manufactory being still known as Hungary Hill. Valuable fire-clay is obtained in the neighbourhood, and a great variety of fine bricks are made. There are also large iron and leather works. The town was originally called Bedcote, a name which the manor still retains. The population of the urban sanitary district (area 450 acres) in 1871 was 9376, and in 1881 it was 9757.

**STOVES AND FIREPLACES** are structures of iron and other materials in which fuel is burned for heating and ventilating apartments and for cooking food. Following the primitive open hearth, the first separate heating apparatus used by Egyptians, Greeks, and Romans was the brazier, an open basin of metal in which charcoal was consumed. The brazier is still in common use for industrial purposes, and in Continental countries it is widely employed both for cooking and for domestic heating. The Romans further were acquainted with the hypocaust, a separate chamber under the floor of the apartment to be heated (see *BATHS*, vol. iii. p. 434). In an improved form of hypocaust, flues were provided which conveyed the heat and products of combustion to the floors of other apartments at some distance from the fire. In the remains of Roman villas found in Britain the hypocaust is an invariable feature. The introduction of chimneys into houses in the early part of the 14th century opened the way to all modern improvements in the heating arrangements of apartments, and the efforts of inventors have been devoted to the securing of the thorough combustion of the fuel used, and to the utilization of the maximum amount of heat therefrom in the most healthful and agreeable manner. Compare *SMOKE ABATEMENT*.

The stove or close range, as distinguished from the open fireplace, distributes the largest amount of heat from the fuel it burns. In its simplest form the common stove consists of a case of iron, closed above, with its sole raised from the floor on which it stands. It has two small openings in one side, one on the level of the fire-bars for draught, and the other above for supplying fuel; and on the opposite side the products of combustion are carried away by a flue-pipe passing into a chimney. In a more complex form the height of the case or body is increased, and a series of horizontal flues or spaces are formed inside, through which the heated air and smoke pass, thus extracting more thoroughly the heat before it enters the chimney, and giving a greatly increased heating surface. Such stoves overdry the air in rooms, and, when they are externally heated to a high degree, floating particles are burned by falling on their surfaces, whence arises the disagreeable stuffy smell almost inseparable from their use. To mitigate this evil of overheating, linings of tiles, firebricks, and other non-conducting materials are with great advantage introduced between the heated iron and the air of the apartment. In ventilating stoves the outside casing of iron is entirely protected from the direct action of fire by a lining of firebrick. The inside is divided into several spaces or flues, and

air drawn from without enters by a separate flue, and passing through these spaces is heated and delivered into the apartment as a warm current. In another class, of which the gill stove is the type, there radiates from the fire-case a range of flanges or gills a few inches apart, which conduct the heat outwards and enormously extend the heating surface, counteracting at the same time the tendency to overheating. Cooking stoves or ranges have in their centre a fire space covered above with a removable top-plate, in which are circular openings whereby the cooking vessels can be brought into direct contact with the fire. At both sides there are one or more compartments which form ovens, and around these the heat from the fire is carried by flues; or at one side a water boiler may be placed, although generally a high-pressure boiler occupies a space immediately behind the fire. The flues which pass around all these spaces, and that also leading directly to the chimney, are controlled by dampers, so that the heat can be directed along any desired course.

Both as a heating and cooking agent coal gas is now being largely used, and many forms of stoves have been devised to meet its peculiar conditions as a gaseous fuel. Gas stoves present the obvious advantages of cleanliness, comparative freedom from smoke, and immediate readiness for use; and the flame and heat are under the most perfect control. Gas is used in open fireplaces as well as in stoves, a most efficient open heating arrangement being that devised by the late Sir Chas. W. Siemens, in which a combined fire of charcoal and coal gas is made. Small lamp stoves for burning mineral oils are also in use; but they share the serious disadvantage of certain simple gas stoves, from which the whole products of combustion pass into the room in which they are placed.

Fireplaces are entirely open in front; they radiate heat into the apartment; and flame, smoke, &c., pass direct into the chimney. The rapid passage of the heated air into the chimney carries away a large proportion of the heat, and this loss is particularly great in grates made entirely of iron. In modern grates of good quality the sides and back of the fire-basket are of fire-brick, which retains and throws out much heat. In slow-combustion grates the fire-basket is set low on the hearth, and air is admitted to the fuel only through the fire-bars in front. The back of the grate slopes in towards the hearth, where the fire space is comparatively narrow. By means of a door sliding down over the front from the upper part of the grate, the indraught of air can be modified at pleasure. In ventilating fireplaces the fire-basket is of iron lined with fire-brick, and in the space between the back of the grate and the wall flues are formed which are heated from the fire. Into these flues air from without is introduced, which, after being there warmed, passes into the apartment at suitable openings.

**STOW, JOHN** (1525–1605), historian and antiquary, was the son of Thomas Stow, a tailor, and was born in London, in the parish of St Michael, Cornhill, in 1525. His parents do not appear to have been rich, for his father's whole rent for his house and garden was only 6s. 6d. a year, and Stow himself in his youth went every morning to fetch the milk for the family from a farm belonging to the nunnery of Minorities. He learned the trade of his father, but possibly did not practise it much after he grew up to manhood. In 1549 he "kept house" near the well within Aldgate, but afterwards he removed to Lime Street ward, where he resided till his death. His first publication was *A Summary of Engliche Chronicles* in 1561, which was frequently reprinted, with slight variations, during his lifetime. Of the first edition a copy was said to have been at one time in the Grenville library. In the British Museum there are at present copies of the editions of 1567, 1573, 1587, 1590, 1598, and 1604. Stow having in his dedication of 1567 referred to the rival publication of Richard Grafton in contemptuous terms, the dispute between them became extremely embittered. Stow's antiquarian tastes brought him under ecclesiastical suspicion as a person "with many dangerous and superstitious books in his possession," and in 1568 Grindal, bishop of London, caused his study to be searched. An inventory was taken of certain books he possessed "in defence of Papistry," but he was apparently able to satisfy his interrogators of the soundness of his Protestantism. A second attempt to incriminate him in 1570 was also without result. In 1580 Stow published his *Annales, or a Generale Chronicle of England from Brute until the present yeare of Christ 1580*; it was reprinted in 1592, 1601, and 1605, the last being continued to the 26th March 1605, or, within ten days of

his death; editions "amended" by Howes appeared in 1615 and 1631. The work by which Stow is best known is his *Survey of London*, published in 1598, not only interesting from the quaint simplicity of its style and its amusing descriptions and anecdotes, but of unique value from its minute account of the buildings, social condition, and customs of London in the time of Elizabeth. A second edition appeared in his lifetime in 1603, a third with additions by Anthony Munday in 1618, a fourth by Munday and Dyson in 1633, a fifth with interpolated amendments by Strype in 1720, and a sixth by the same editor in 1754. The edition of 1598 was reprinted, edited by W. J. Thoms, in 1842, in 1846, and with illustrations in 1876. Through the patronage of Archbishop Parker Stow was enabled to print the *Flores Historiarum* of Matthew of Westminster in 1567, the *Chronicle* of Matthew Paris in 1571, and the *Historia Brevis* of Thomas Walsingham in 1574. At the request of Parker he had himself compiled a "farre larger volume," but circumstances were unfavourable to its publication and the manuscript is now lost. Additions to the previously published works of Chaucer were twice made through Stow's "own painful labours" in editions of 1561 and 1597. A number of Stow's manuscripts are in the Harleian collection in the British Museum. Some are in the Lambeth Library (No. 306); and from the volume which includes them were published by the Camden Society, edited by James Gairdner, *Three Fifteenth-Century Chronicles, with Historical Memoranda by John Stowe the Antiquary, and Contemporary Notes of Occurrences written by him* (1880). Stow's literary labours did not prove very remunerative, but he accepted poverty in a cheerful spirit. Ben Jonson relates that once when walking with him Stow jocularly asked two mendicant cripples "what they would have to take him to their order." This favour he, however, obtained from King James, who in March 1604 authorized him and his deputies to collect "amongst our loving subjects their voluntary contributions and kind gratuities," and himself began "the largesse for the example of others." If the royal appeal was successful Stow did not live long to enjoy the increased comfort resulting from it, as he died on the 6th April following. He was buried in the church of St Andrew Undershaft, where the monument erected by his widow, exhibiting a terra-cotta figure of him, still remains.

STOWELL, WILLIAM SCOTT, BARON (1745-1836), one of the ablest and most accomplished of English judges, especially in international law, was born at Heworth, a village about four miles from Newcastle, on 17th October 1745. His father was a "coalfitter" (or tradesman engaged in the transport of coal); his mother was the daughter of a small tradesman, Atkinson by name; his younger brother John became the famous Lord Chancellor ELDON (q.v.). Scott was educated at the Newcastle grammar school under the able tuition of the Rev. Hugh Moises. In February 1761 he gained a Durham scholarship at Corpus Christi College, Oxford, and was immediately admitted as a student of the university. In 1764 he graduated as bachelor of arts, and became first a probationary fellow and then—as successor to William (afterwards the well-known Sir William) Jones—a tutor of University College. In 1767 he took his M.A. degree. In 1772 he graduated as bachelor of civil law. As Camden reader of ancient history he rivalled the reputation of Blackstone (1774). Although he had joined the Middle Temple in 1762 (June 24), it was not till 1776 that Scott devoted himself to a systematic study of law. In 1779 (June 23) he graduated as doctor of civil law, and, after the customary "year of silence," commenced practice in the ecclesiastical courts. His professional success was rapid. In 1783 he became registrar of the Court of Faculties, and

in 1788 judge of the Consistory Court and advocate-general, in that year too receiving the honour of knighthood; and in 1798 he was made judge of the High Court of Admiralty. Sir William Scott twice contested the representation of Oxford university,—in 1780 without success, but successfully in 1801. He also sat for Downton in 1790. Upon the coronation of George IV. (1821) he was raised to the peerage as Baron Stowell. After a life of distinguished judicial service Lord Stowell retired from the bench,—from the Consistory Court in August 1821, and from the High Court of Admiralty in December 1827. His mental faculties became gradually feeble in his old age, and he died on January 28, 1836. Lord Stowell was twice married,—on April 7, 1781, to Anna Maria, eldest daughter and heiress of John Bagnall of Early Court, Berks, and on April 10, 1813, to the dowager marchioness of Sligo. By his first marriage he had four children, of whom two (a son and a daughter) died in infancy, a third (a son) died unmarried in middle life, while the eldest (a daughter) was twice married and survived her father.

Lord Stowell's judgments are models alike of literary execution and of judicial reasoning. His style is chaste yet not inornate, nervous without abruptness, and perfectly adjusted in every instance to the subject with which he deals. His decisions in the cases of *Dalrymple v. Dalrymple* (Dr Dodson's *Report*) and *Evans v. Evans* (1 Hagg., 35)—from their combined force and grace, from the steadiness with which every collateral issue is set aside, from their subtle insight into human motives, and from the light which they cast on the philosophy and dark history of marriage law—deserve and will repay attentive perusal. Lord Stowell composed with great care, and some of the MSS. which he revised for Haggard and Phillimore's *Reports* were as full of interlineations as a bill of the Lower House corrected by the Lords. Stowell's mind was judicial rather than forensic,—reasoning, not as for a dialectic victory nor so as to convince the parties on whose suit he was deciding, but only with sufficient clearness, fullness, and force to justify the decision at which he had arrived.

The chief doctrines of international law with the assertion and illustration of which the name of Lord Stowell is identified are these:—the perfect equality and entire independence of all states (Le Louis, 2 Dod., 248)—a logical deduction from the Augustinian philosophy and still one of the fundamental principles of English jurisprudence; that the elementary rules of international law bind even semi-barbarous states (Hurtige Hans, 2 Rob., 325); that blockade to be binding must be effectual (The "Betsey," 1 Rob., 93); that there cannot be a legal where there is no actual blockade; and that contraband of war is to be determined by "probable destination" (The "Jonge Margaretha," 1 Rob., 189). In the famous Swedish convey case (The "Maria," 1 Rob., 350; see too The "Recovery," 6 C. Rob., 348-9) Lord Stowell, in defiance of the complaints of those greedy merchants who, as Pufendorf, himself by choice a Swedish civilian, tells us, cared not how things went provided they could but satisfy their thirst of gain, asserted that "a prize court is a court not merely of the country in which it sits but of the law of nations." "The seat of judicial authority," he added, in words which have become classic, "is indeed locally here, in the belligerent country, but the law itself has no locality."

The judgments of Lord Stowell were, almost without exception, confirmed on appeal, are to this day the international law of England, and have become presumptive though not conclusive evidence of the international law of America. "I have taken care," wrote Justice Story, "that they shall form the basis of the maritime law of the United States, and I have no hesitation in saying that they ought to do so in that of every civilized country in the world." See Townsend, *Lives of Twelve Eminent Judges*, vol. II.; *Quarterly Review*, vol. LXXV.; W. E. Surtees, *Sketch of Lord Stowell and Eldon*; Creasy, *First Platform of International Law*; *Decisions*, by Dodson and Haggard.

STRABISMUS. See OPHTHALMOLOGY, vol. xvii. p. 785.

STRABO, the famous geographer and historian, was born at Amasea in Pontus, a city which had been Hellenized to a great extent. Of his father's family we know nothing; but several of his mother's relations, who were probably Greeks, had held important posts under Mithradates Euergetes and his famous son Mithradates Eupator. Dorylaus, a distinguished general of Mithradates Euergetes, was the great-grandfather of Strabo's mother. After the murder of that king, Dorylaus, who at that time was collecting mercenaries in Crete, where he had obtained the command

in a successful war of the Cnossians against Gortyn, settled at Cnossus. By Sterope, a Macedonian, he had a daughter and two sons,—Lagetas and Stratarchus. Dorylaus had a brother Philetærus, whose son Dorylaus was brought up with Mithradates Eupator. This king, at the instance of his friend invited back to Pontus the family of Dorylaus, who was himself now dead, as was also his son Lagetas. Strabo saw Stratarchus in extreme old age. The daughter of Lagetas was the mother of Strabo's mother. Moaphernes, an uncle of Strabo's mother, probably on the father's side, was governor of Colchis under Mithradates Eupator. His mother's father must have held an important position, for, seeing the impending downfall of the king, and also in anger against him for having put to death his kinsmen Tibius and Theophilus, he handed over fifteen forts to Lucullus. In spite of this, with the ruin of the king the fortunes of the family fell, since Pompey refused to ratify the rewards promised by Lucullus.

*Life*.—Though the exact date of Strabo's birth is unknown, a close approximation is possible. Clinton places it not later than 54 B.C. The most probable date lies between 64 and 62, since he speaks of certain events occurring at the former as "a little before my time," whilst he describes an occurrence in the latter year as "in my own time," phrases which he uses elsewhere with great exactness in speaking of persons and events. He received a good education in the Greek poets, especially Homer; he studied at Nysa under the grammarian Aristodemus, under Tyrannio the grammarian at Rome, under the philosopher Xenarchus either at Rome or Alexandria, and he had studied Aristotle along with Boethus (possibly at Rome under Tyrannio, who had access to the Aristotelian writings in Sulla's library). It is to be noted that from none of those teachers was he likely to learn mathematics or astronomy. He was at Corinth in 29 B.C., where he saw Octavian on his return from Egypt to celebrate his triumph for Actium. He was in Egypt in 24 B.C., and took the opportunity of ascending the Nile in company with the prefect Aelius Gallus. He was at Rome after 14 A.D., for he describes (v. 236) as an eyewitness the place where the body of Augustus was burnt in the Campus. He was still writing in 21 A.D. The date of his death is unknown. Strabo's statement that he saw P. Servilius Isauricus has caused some difficulty. This Servilius died at Rome in 44 B.C. at an advanced age. Some suppose that Strabo confused him with P. Servilius Casca, also called Isauricus, or some other distinguished Roman whom he had seen in Asia, but by his words he clearly means the conqueror of the Isaurians. This difficulty only arises from an entirely unwarranted assumption that Strabo was on his way to Rome for the first time in 29 B.C. We have seen that he studied under Tyrannio in that city; if he did so after 29 B.C. Tyrannio must have been very old, which Strabo would probably have mentioned, as he does in the case of Aristodemus. Although he had seen a comparatively small portion of the regions which he describes, he had travelled much, as he states himself: "Westward I have journeyed to the parts of Etruria opposite Sardinia; towards the south from the Euxine to the borders of Ethiopia; and perhaps not one of those who have written geographies has visited more places than I have between those limits. For those who have gone farther west have not gone so far eastward, and the case is the same with the regions between the northern and southern limits." The fullness of his description in certain places, contrasted with the meagreness and inaccuracy in others, seems to indicate that in the former cases he had actually visited the places, but that he is dependent on second-hand information for the latter. He tells us that he had seen Egypt as far south as Syene

and Philæ, Comana in Cappadocia, Ephesus, Mylasa, Nysa and Hierapolis in Phrygia, Gyarus, and Populonia. Of Greece proper he saw but little; he visited Corinth, Athens, Megara, and places in their vicinity, and perhaps Argos, although he was not aware that the ruins of Mycenæ still existed; he had seen Cyrene from the sea, probably on his voyage from Puteoli to Alexandria. He remained at the latter place a long time, probably amassing materials, and studying astronomy and mathematics. For nowhere could he have had a better means of consulting the works of historians, geographers, and astronomers, such as Eratosthenes, Posidonius, Hipparchus, and Apollodorus. When and where he went from Egypt we know not. It has been commonly assumed that he returned home to Amasea. For this there are no grounds. Probabilities are in favour of his having returned to Rome, where he undoubtedly resided in his old age. The place of his death is unknown; but, since we find him at Rome in what must in the course of nature have been the closing years of his life, it is not unreasonable to suppose that there he died. Various passages in his work indicate that he held by the Stoic rule.

*Works*.—His earliest writings were two (not one, as commonly stated) historical works now lost, which he himself describes (xi. 515) as his *Historical Memoirs* and his *Continuation of Polybius*. There can be no doubt but that these were two distinct works; for he speaks (ii. 70) of having treated of the exploits of Alexander in his *Memoirs*, a topic which could not have found a place in a work which began where that of Polybius ended (146 B.C.). According to Suidas, the continuation of Polybius was in forty-three books. Plutarch, who calls him "the Philosopher," quotes Strabo's *Memoirs* (Luc., 28), and cites him as an historian (Sulla, 26). Josephus, who constantly calls him "the Cappadocian," often quotes from him, but does not mention the title of the work.

The *Geography* is the most important work on that science which antiquity has left us. It was, as far as we know, the first attempt to collect all the geographical knowledge at the time attainable, and to compose a general treatise on geography. It must not be regarded as nothing more than a new edition of Eratosthenes. In general outline it follows necessarily the work of the last-named geographer, who had first laid down a scientific basis for geography on which his successors could not help building. Strabo made considerable alterations, but not always for the better. The three books of the older work formed a strictly technical geographical treatise. Its small size prevented it from containing any such general description of separate countries as Strabo rightly conceived to fall within the scope of the geographer. "Strabo indeed appears to be the first who conceived a complete geographical treatise as comprising the four divisions of mathematical, physical, political, and historical geography, and he endeavoured, however imperfectly, to keep all these objects in view." Moreover, the incidental historical notices, which are often of great value and interest, are all his own. These digressions at times interrupt the symmetry of his plan; but Strabo had all the Greek love of legendary lore, and he discusses questions relating to the journeyings of Heracles as earnestly as if they were events within recent history. He regarded Homer as the source of all wisdom and knowledge, and consequently accepted the Homeric geography in its entirety, as needing only proper explanation for the removal of all difficulties. On the other hand, he treats the work of Herodotus with undeserved contempt, and classes him with Ctesias and other "marvel-mongers"; and yet in some respects Herodotus had better information—for instance, in regard to the Caspian—than that possessed by Strabo himself.