Besides these, other varieties depending on the pro­minence of certain symptoms are occasionally met with. The chief changes in the body after death from heatstroke are those of anæmia of the brain and congestion of the lungs, together with softness of the heart and of the muscular tissues generally. The blood is dark and fluid and the blood corpuscles are somewhat altered in shape. Attacks of sunstroke are apt to leave traces of their effects upon the constitution, especially upon the nervous system. A liability to severe headache, which in many cases would seem to depend upon a condition of chronic meningitis, epileptic fits, mental irritability, and alterations in the disposition are among the more important. It is often observed that heat in any form is ever afterwards ill borne, while there also appears to be an abnormal suscep­tibility to the action of stimulants. The mortality from sunstroke is estimated at from 40 to 50 per cent.

*Treatment.—*In respect of this disease means should be adopted to prevent attacks in the case of those who must necessarily be exposed to the sun. These consist in the wearing of loose clothing, with the exception of the headdress, which ought to be worn close to the head, in due attention to the function of the skin, and in the avoidance of alcoholic and other excesses. Cold water may be drank in small quantities at frequent intervals. Sleeping in the open air in very hot seasons is recommended. The treatment of a patient suffering from an attack necessarily depends upon the form it has assumed. In all cases he should if possible be at once removed into a shaded or cool place. Where the symptoms are mostly those of syncope and there is a tendency to death from heart failure, rest in the recumbent position, the use of diffusible stimulants, such as ammonia or ether, &c., together with friction or warmth applied to the extremities, are the means to be adopted. Where, on the other hand, the symptoms are those of apoplexy or of hyperpyrexia, by far the most successful results are obtained by the use of cold (the cold affusion, rubbing the surface with ice, enemata of ice-cold water). The effect is a marked lowering of the temperature, while at the same time a stimulus is given to the respiratory function. Mustard or turpentine applied to the nape of the neck or chest is a useful adjuvant. Should the temperature be lowered in this way but unconsciousness still persist, removal of the hair and blistering the scalp are recommended. The sub­sequent treatment will depend upon the nature of the resulting symptoms, but change to a cool climate is often followed by marked benefit. (J. O. A.)

SUPERIOR, Lake. See Lake and Sτ Lawrence.

SURABAYA. See Java, vol. xiii. p. 605 *sq.* The population in 1880 was 122,234.

SURAKARTA, or Solo. See Java, vol. xiii. pp. 601, 606 *sq.* Its population was 124,041 in 1880.

SURAT, a district of British India, in the Guzerat division of Bombay presidency, lying between 20° 15' and 21° 28' N. lat. and 72° 38' and 73° 30' E. long. It has an area of 1662 square miles, and is bounded on the N. by Broach district and the native state of Baroda ; on the E. by the states of Rájpipla, the Gáikwár Bánsda, and Dhar- ampur ; on the S. by Thána district and the Portuguese territory of Daman ; and on the W. by the Arabian Sea. It has a coast-line of 80 miles, consisting of a barren stretch of sand drift and salt marsh ; behind that is a rich highly cultivated plain, nearly 60 miles in breadth at the em­bouchure of the Tápti, but narrowing to only 15 miles in the southern part ; and on the north-east are the wild hills and jungle of the Dangs. The only important rivers are the Tápti and the Kim, the former of which is ordinarily navigable for native craft of from 18 to 36 tons. The district contains a large number of tanks for irrigation ; and a canal is projected from the Tápti with head works at Kamlápur, 35 miles from Surat. The fauna of the dis­trict consists of a few tigers, stragglers from the jungles of Bánsda and Dharampur, besides leopards, bears, wild boars, wolves, hyænas, spotted deer, and antelopes. The climate of Surat varies with the distance from the sea. Near the coast, under the influence of the sea-breeze, an equable temperature prevails, but 8 to 11 miles inland the breeze ceases to blow. The coast also possesses a much

lighter rainfall than the interior, the annual average ranging from 30 inches in Olpád to 72 in Chikhli, while at Surat city the average is 46 inches. The Bombay, Baroda, and Central India Railway runs through the district from north to south. A magnificent iron-girder bridge crosses the Tápti at Surat city.

The census of 1881 returned the population of Surat at 614,198 (306,015 males, 308,183 females), of whom Hindus numbered 415,031, Mohammedans 55,547, Parsis 12,593, and aboriginals 118,664.

I here are only two towns in the district with a population exceed­ing 5000,—namely, Surat (*q.v.)* and Bulsar (13,229). The culti­vated area in 1884-85 was returned at 726,583 acres, and the area available for cultivation at 81,663. The total area of crops in 1884- 85 was 550,233 acres, including 66,096 twice cropped. Rice occu­pied 103,972 acres, wheat 38,617, and *joár* 108,644; cotton is also largely cultivated, and its culture is greatly increasing. Grain, cotton, timber, oil, sugar and molasses, and piece goods are the chief articles of export. Almost the whole female population is engaged in spinning cotton thread, and the weaving of cotton cloth in hand looms is carried on in the chief towns ; silk is also manu­factured in considerable quantities, as well as brocades and em­broidery. In 1884-85 the revenue of the district amounted to £378,061, of which the land-tax contributed £268,644. Surat was one of the earliest parts of India brought into close relations with European countries, and its history merges almost entirely into that of its capital, long the greatest maritime city of the peninsula. By an arrangement made in 1799 the English were placed in posses­sion of Surat city and the town of Rander ; subsequent cessions under the treaties of Bassein (1802) and Poona (1817), together with the lapse of the Mandvi state in 1839, brought the district into its present shape. Since the introduction of British rale the district has remained comparatively tranquil ; and even during the period of the mutiny peace was not disturbed, owing in a great mea­sure to the steadfast loyalty of its leading Mohammedan families.

SURAT, capital and administrative headquarters of the above district, is situated in 21° 9' 30" N. lat. and 72° 54' 15" E. long., on the southern bank of the Tápti, distant from the sea 14 miles by water and 10 by land. Its origin appears to be comparatively modern, tradition assigning the foundation of the town to the beginning of the 16th century. As early as 1514 it was described by the Portuguese traveller Barbosa as a “very important seaport.” During the reigns of Akbar, Jahángír, and Sháh Jahán it rose to be the chief commercial city of India. From 1573 to 1612 the Portuguese were undis­puted masters of the Surat seas and part of the seaboard. But shortly after 1612 the city of Surat became the seat of a presidency under the English East India Company, and the Dutch also had made it their principal factory in India. During the 18th century it probably ranked as the most populous city of India, its population being at one time estimated as high as 800,000 ; but with the transfer of its trade to Bombay the numbers rapidly fell off, until in 1847 its inhabitants numbered only 80,000. Thenceforward the city began to retrieve its position, and in 1881 its population numbered 107,154 (54,524 males and 52,630 females).

SURBITON, a suburb of Kingston in Surrey, England, is finely situated on the river Thames, 12 miles south-west of London by the London and South-Western Railway. It consists chiefly of villa residences embosomed in woods and gardens. Along the river an esplanade has been con­structed, forming a pleasant promenade. Surbiton is the headquarters of the Kingston Rowing Club and the Thames Sailing Club. The recreation ground, in connexion with which there is a reading-room and library, is much fre­quented for athletic meetings and bicycle races. In the town there is a cottage hospital. The population of the urban sanitary district (area, 1000 acres) in 1871 was 7642, and in 1881 it was 9406.

SURETY, in law, is the party liable under a contract of Guarantee *(q.v.).* In criminal practice sureties bound by Recognizance *(q.v.)* are a means of obtaining compliance with the order of a court of justice, whether to keep the peace or otherwise.