his injuries in a very singular manner. He was using a pickaxe in one of the Dublin streets when, on making a heavy blow, his pick struck on a large flint, and at the same time penetrated the main gas-pipe in the street. The fire struck from the flint ignited the gas which escaped, and the workman received severe burns about the head, face, and left arm.

Acute Oedema of Scrotum.—A boy, aged twelve, lately came to the hospital with acute oedema of the scrotum. About four days previously he fell on the spike of a railing, which explained the inflammatory condition of the part. Mr. Croly pointed out the similarity which existed in its appearance and that which usually presented itself in the extravasation of urine. The ether spray having been applied, Mr. Croly made an incision on one side, and gave exit to some pus and fluid.

STATION HOSPITAL, CAWNPORE, INDIA.

CASE OF HYDROPHOBIA; NECROPSY; REMARKS.

(Under the care of Surgeon S. J. RENNIE, A.M.D.)

J. B.—, Private 2nd Scottish Rifles, was admitted to hospital on Feb. 17th, 1883, complaining of pain and stiffness in his right shoulder, and spasm of the muscles of the glottis on swallowing liquids. There was no history of a bite from a dog or any other animal. The spasms were of short duration, and at first did not occur except when the patient attempted to swallow liquids, but afterwards the slightest breath of air or the application of the hand to his chest immediately produced a most distressing state of affairs. During the paroxysms great protrusion of the eyeballs was noticed. There was great mental excitement and a very heavy look about the face. The temperature was normal, and the bowels were open. He took his food well, but immediately he attempted to swallow liquids the spasm returned.

On admission, he was ordered a saline purge, and at night he had one drachm of solution of hydrochlorate of morphia. He did not sleep much.—18th: Ordered twenty minims of tincture of nux vomica, fifteen grains of bicarbonate of potash, fifteen grains of bromide of potassium, and ten minims of tincture of opium three times a day. The spasms still continue. Bowels have been opened; temperature normal. Takes his food well, which is the regulation low diet. In the evening his tongue was covered with a white fur, and the pain in the shoulder severe. Ordered compound camphor liniment to shoulder, and ten grains of Dover's powder to be taken at once. Temperature 99°; pulse 90, full and strong. 19th: Seemed a little better; ordered blister to shoulder; spasms not so frequent; to continue medicine. Evening: Much worse. Temperature 100°; pulse 112, full and bounding. Ordered twenty grains of chloral hydrate and twenty grains of bromide of potassium at once. Some delirium had now showed itself. The draught was repeated at 9 P.M., when he was very violent, and presented all the symptoms of the hydrophobic state. His face was flushed and his eyes sparkling, and he was constantly attempting to expectorate the viscid mucus that hung about his gums and teeth. He struggled in his fits, and bit and struck at everyone who came near him. The draught, which was repeated three times, had no effect on him, and it took four strong men to constantly hold him. The slightest breath of air or motion in the room was sufficient to bring on a fit of wild fury. Towards morning he seemed exhausted, and the fits became less frequent.—20th: To-day he is very delirious, but has frequent lucid intervals, in which the poor fellow begs people not to come near him for fear he may hurt them. He also seems to feel acutely his position. His constant attempts at expectoration are very distressing to him, and the saliva has to be frequently wiped from his mouth. He took some milk and beef-tea, but refused water, the sight of which at once produced a convulsion. His head was shaved and an ice bag applied to both head and spine. 10.50 A.M.: Patient has just died suddenly during a convulsion, which was apparently less severe than usual. There was no previous sign of any marked exhaustion. He had suffered considerably the previous year from acute rheumatism and also from ague, and had just returned from the hills, where he had been sent for his health.

Necropsy, five hours after death.—Body well nourished; rigor mortis marked; there was considerable cutaneous hypostatic congestion; no marks or scars of bites discoverable. Right shoulder especially examined. Brain: Weight 2lb. 11 oz.; much congested; some lymph was deposited along the edges of the longitudinal fissure; arachnoid vessels congested; substance of brain firm; puncta vascu-

losa marked, showing congestion; no fluid in ventricles. Spinal cord: Vessels much congested; marked softening of substance in dorso-lumbar region, with inflammatory thickening of membranes; the softened spot was an inch and a half in length, and opposite the last dorsal vertebra; the cord was almost entirely disintegrated at this place, the posterior columns suffering most. Lungs: Very much congested, and exuding frothy mucus on section. Liver: Weight 3lb. 15 oz., also very much congested. Heart: Weight 11 oz.; auricles empty; both ventricles contained dark fluid blood; valves healthy. Spleen: Weight 8 oz.; on section firm, but filled with dark grumous blood. Kidneys: Right 5 oz., left 4 oz.; both intensely congested, but otherwise healthy. Bladder: Moderately distended. Stomach: Congested; intestines contained no entozoa.

Remarks.—There was no history of a bite from a dog or any other animal. The man, however, was one who was always out shooting, and also kept pets, and may have fondled a rabid animal, or may have shot a mad jackal or fox, and having torn his hand with a thorn may thus have become inoculated during the process of skinning. At any rate, the symptoms were those of hydrophobia, which was borne out by the post-mortem examination, the appearances being similar to those which were observed in two cases of undoubted hydrophobia which I have had the opportunity of seeing—viz., softening in the dorso-lumbar region with congestion of the membranes, and also general congestion of all the organs of the body. The case was a peculiar one from the first, owing to the earlier symptoms being marked by the intense pain in the shoulder, but the subsequent development of the disease left little doubt as to its true nature, in which Brigade-Surgeon Carter and Surgeon-Major Irving, who saw the case in consultation concurred.

Reviews and Notices of Books.

SPAS AND MINERAL WATERS.

The Mineral Waters of Europe, including a short Description of Artificial Mineral Waters. By C. R. C. TICHBORNE, LL.D., F.C.S., Professor of Chemistry at the Carmichael College, Dublin, and PROSSER JAMES, M.D., Lecturer on Materia Medica and Therapeutics at the London Hospital. London: Baillière, Tindall, & Cox. 1883.—The treatment of various diseases by baths and mineral waters is daily attracting more and more attention. There is, of course, nothing peculiar or special in this mode of administering drugs, for mineral waters are simply medicines of complex composition, largely diluted, and containing in solution various salts and gases derived from the soils through which they pass. The book before us is replete with valuable information, and contains much to excite the interest and curiosity of those who have not made the subject a special study. We are told in the preface that nearly all the waters in general use as medicinal agents have been submitted to careful chemical analysis, the work extending over a period of nearly three years. It cannot be too generally known that the analyses of waters as given in many of our textbooks are anything but reliable. They have been copied and recopied year after year, and not only has every error been perpetuated with religious fidelity, but in many cases they were originally obtained from advertisements issued by the proprietors or others interested in the springs. It should be remembered, too, that mineral waters are liable to change from time to time in chemical composition, this variation being most marked in those containing large quantities of salts in solution. During the last few years the whole subject of water analysis has undergone a complete revolution, the spectroscope now affording means of detecting small quantities of the rarer metals not possessed by chemists fifteen years ago. Professor Tichborne, for example, in 1868 found lithia for the first time in the Schwalheim waters, although they had been carefully examined by Liebig only six years previously. Another point of practical importance is that many so-called mineral water