Hallam's restriction to this country were removed. His book passed through many editions on the Continent within forty years; it won the high praise of Galileo. Gilbert has been called "the father of modern electricity" by Priestley, and "the Galileo of magnetism" by Poggendorff. When the British Association last met at Bradford in 1873 the modern theory which largely reverts to Gilbert's way of formulation, and refers electric and magnetic phenomena to the activity of the ether instead of attractions at a distance, was of recent growth; it had received its classical exposition only two years before by the publication of Clerk Maxwell's treatise. The new doctrine was already widely received in England on its own independent merits. On the Continent it was engaging the strenuous attention of Helmholtz, whose series of memoirs, deeply probing the new ideas in their relation to the prevalent and fairly successful theories of direct action across space, had begun to appear in 1870. During many years the search for crucial experiments that would go beyond the results equally explained by both views met with small success; it was not until 1887 that Hertz, by the discovery of the ethereal radiation of long wave-length emitted from electric oscillators, verified the hypothesis of Faraday and Maxwell, and initiated a new era in the practical development of physical science.

Animal Electricity.

Professor F. GOTCH delivered an evening address on Animal Electricity. He said that animal electricity, if strictly interpreted, had a most extensive scope, commensurate indeed with all forms of animal life. The study had, however, a special significance in connection with one class of living structures—namely, those which constituted the nervous system. There was absolutely no doubt that organs of an essentially nervous type existed the prime object of whose activity was the production of electrical disturbances. Such were the electrical organs found in a few groups of widely different fishes. Every electrical organ was built up of columns containing a vast number of special structures arranged in series, and to make these essential features clear, and at the same time to bring forward all known instances of electrical fish, a series of slides were shown. As to the characters of the organ shock, Professor Gotch exhibited a living specimen of Malapterurus, which had been lent for the purpose by the Liverpool Corporation Museum through the kindness of the director, Dr. Forbes. Experiments were made to show that the shock of the fish could effect the mercurial column of a capillary electrometer, and that in this way photographic records of the shock could be obtained. Such photographic records showed that each shock was multiple, that is to say, the electrical organ, once it had been made to produce its shock, would go on doing so automatically. The power of each blow—in other words, its electromotive force—was astounding in a fish about 8 inches long. Professor Gotch had determined that under favourable conditions the first electrical disturbance could reach a maximum of 200 volts, and that this could develop in two-thousandths of a second. This astounding voltage would be produced when the electrical effect in each single disc reached only four-hundredths of a volt. Illustrations were then given of the mode of following the electrical disturbance occurring in a nerve during the passage of a single nervous impulse from a very large number of experiments made in conjunction with Mr. G. J. Burch, F.R.S. Professor Gotch said that it appeared that the nerve electrical effect was very similar to that present in each disc of the electrical organ. Finally, he brought forward evidence to show that there must be an electrical disturbance in the nerve-endings of the organ whenever a nervous impulse might be produced outside the nerves. The astounding effects produced by the electrical organs of fishes thus had their physiological counterpart in nerves; and in this, as in other departments of natural science, Nature showed no gulf.

Next Meeting.

The meeting of the British Association in 1901 will be held in Glasgow under the presidency of Professor A. W. Rucker, F.R.S.

Retirement of a General Secretary.

It was announced that Professor E. A. Schäfer was retiring from his position as one of the General Secretaries.

THE WAR IN SOUTH AFRICA.

BRITISH PRISONERS AT PRETORIA.

THE report of the Court of Inquiry held at Pretoria last June to inquire into the treatment of British prisoners, but more especially of sick prisoners in the hands of the Boers in and near Pretoria, which was issued by the War Office on September 12th, together with Lord Roberts's observations thereon, makes very disagreeable reading. Lord Roberts's comment with reference to the treatment of sick prisoners is as follows:

(*a*) The inhuman treatment of the sick prisoners throws the greatest discredit on the authorities at Pretoria, who must have been aware that proper hospital accommodation and equipment had not been provided, that suitable food and medical comforts were not forthcoming, and that the supply of medicines and medical appliances was wholly insufficient. That the deficiencies referred to in the correspondence were to some extent made good by the exertions and liberality of private individuals does not exonerate the Government of the South African Republic from its responsibility in this matter, and the indifference which was shown to the sufferings of the sick among the British prisoners is the more inexcusable when it is remembered that the sick among the Boer prisoners have invariably received the same care and attention as our own sick soldiers.

Lord Roberts adds that the efforts of Drs. P. H. Haylett and R. von Gernet to ameliorate the condition of their patients, and the assistance rendered by burghers and British civilians, by whom a fund to supply the deficiencies was raised, are the only gratifying features in the correspondence. He adds, on the other hand, "that it would be difficult to condemn too strongly the conduct of Dr. H. P. Veale, M.B.(Cambridge), whose heartlessness in ignoring the disgraceful treatment of the sick prisoners, and the remonstrances addressed to him by the medical officers in immediate charge of them, calls for the severest reprobation."

Dr. Veale in his evidence stated that he along with Drs. Knobell and Lingbeek were the three medical members of the Transvaal Branch of the Geneva Red Cross Society. Dr. Veale was responsible for the care and medical attendance of the prisoners of war at the racecourse but denied that he had anything to do with the sanitary arrangements, although he admitted that it would be his duty as medical officer attending the sick to notice and try to remedy anything in the arrangements of the hospital or its precincts prejudicial to health. He stated that he did bring several points to notice, and considered that everything in the racecourse hospital was reasonably satisfactory when he left at the beginning of December.

Dr. P. H. Haylett, who was appointed to take charge of the hospital at the racecourse in December, stated that there was no adequate provision of medicines, considerable difficulty in obtaining stimulants, and no means of keeping the hospital buildings clean. The refuse of the hospital was left close to the buildings, there were no sheets, and but a few pillows. In January he went out to Waterval as medical officer for the prisoners there, and at once reported in writing to Dr. Veale, condemning the sanitary arrangements, the water supply, and the hospital building and its equipment. Eventually, protests having been unavailing, Dr. Haylett resigned, and in February Dr. Rudolph von Gernet was appointed in his place. Dr. Gernet stated that he found the prisoners housed in sheds built of corrugated iron open towards the front and with leaking roofs. The central road was higher than the floor of the sheds, so that the rain water drained into them and the men were lying in water on the bare ground. The surroundings were in an indescribably filthy condition. The latrines were within 50 yards of the night camp in which the men slept. These latrines, which consisted of trenches, were filled by the heavy rain and the contents were floated all over the place. The supply of drinking water was insufficient, the prisoners were clothed in rags, and though the building used as a hospital was satisfactory, the furniture was absolutely unsatisfactory. For 60 in-patients and 20 orderlies there were only 21 bedsteads, 11 mattresses and 49 blankets. Nearly all the sick were lying on the floor without bedding or pillows, and there were 41 typhoid cases for whom there were no suitable medicines. The food supply of the hospital was insufficient.

Dr. von Gernet took vigorous action and brought the deficiencies before the notice of the Committee charged with the care of the prisoners. This Committee acted promptly,

and President Kruger took an interest in the question, so that eventually the defects noted were remedied. It therefore appears clear that had Dr. Veale shown at an earlier date more vigour and independence, and better appreciation of the responsibilities he had accepted, these defects would have been earlier remedied.

THE MOOI RIVER HOSPITAL, NATAL.

WE are indebted to Mr. Charles S. S. Johnston, architect, of Edinburgh, for the following extracts from a communication which he has received from Major Henry H. Johnston, R.A.M.C., giving some particulars as to the results of the treatment of enteric fever at that hospital. It will be remembered that an interesting account of this hospital, from the pen of the late Sir William Stokes, was published in the BRITISH MEDICAL JOURNAL of April 28th. In that paper is embodied a note by Major H. H. Johnston describing the precautions taken to prevent the spread of enteric fever. Major Johnston writes as follows:

Since No. 4 General Hospital was opened on January 6th, 1900, there have been up to the present date, August 10th, a total of 6,581 patients treated in it and 207 deaths. For wounds received in action there have been 1,707 admissions and 46 deaths; operations, 222. For enteric fever, 1,150 admissions and 114 deaths. The mortality from enteric fever has been 10 per cent., which is very low, and as there are only 2 patients dangerously ill out of the 51 enteric fever patients remaining in hospital, the percentage mortality from that disease will not be perceptibly increased.

In addition to the admissions for enteric fever there have been a large number for so-called simple continued fever, many cases of which were probably mild cases of enteric fever but from which there have been no deaths. If these doubtful cases were added to the admissions for enteric fever, the percentage mortality for the latter disease would be still lower than what I have mentioned.

The enteric fever patients have been well looked after in this hospital. They are treated in double-roofed and walled marquees, with wooden floors, and there are six beds in each marquee. There is one nursing sister for every six marquees (36 patients), and in each marquee there are two ward orderlies from 6 A.M. to 8 P.M., and one orderly from 8 P.M. to 6 A.M. The night orderly is on duty for a week at a time; he has hot chocolate and biscuits at 2 A.M., and he has no day duty to perform during his week's turn of night duty. This system is infinitely better than that of making the orderlies throughout the whole hospital take their turns of night duty in addition to their daily work, because, under the latter system, which prevails throughout the army, the orderlies are fatigued and sleepy at night after their day's work, and there is also the risk of orderlies from the surgical wards having their hands contaminated with enteric excreta and infecting patients' wounds.

The favourable results obtained in this hospital are due to the good hygienic conditions under which the patients have been treated in a healthy bracing climate, 4,550 feet above sea level, under the skilful treatment of the civil surgeons, the care and devotion of the nursing sisters and orderlies, with the abundant supply of milk and other articles of food of good quality suitable for enteric fever patients.

The drinking water for the whole hospital is obtained from the Mooi river, and it is passed through a large automatic Pasteur-Chamberland filter containing about 350 filtering tubes.

The soldiers, especially those of the regular army, have been very good patients, cheerful, and always ready to submit to any operation that was recommended by the medical officers. They have received liberal diet and extras, and many presents of tobacco, notepaper, fruit, fish, biscuits, etc., from public aid institutions and private individuals.

From June 1st to July 31st the maximum temperature in the shade, in a Stevenson's screen 4 feet above the ground, has ranged between 50° F. and 74° F. by day, and the minimum in the same situation between 15° F. and 53° F. by night. The greatest daily range was 50° F. on July 7th, when the minimum was 15° F. and the maximum 65° F. The lowest range was 8° F. on July 31st, when the minimum was 53° F. and the maximum 61° F. on a cloudy day. There was frost on 20 nights in June and on 18 nights in July. Rain fell on 3 days in June and 5 days in July, but, with the exception of a heavy shower on the night of July 24-25th, only a few drops fell on each occasion. In all the occupied hospital marquees there are single and duplex "Diamond" oil stoves burning all night for warming purposes.

Major Johnston appends copies of the orders for the overseer of Indians, orders for wardmasters and orderlies dealing with enteric cases, a form for orderly medical officer's report, and orders for the non-commissioned officer in charge of disinfection.

CASUALTIES.

AMONG the casualties reported by Lord Roberts from Belfast, Transvaal, under date of September 9th, we regret to notice the name of Major G. Hilliard, R.A.M.C., C.M.G., who was severely wounded near Doornkop on September 6th. Major Hilliard succumbed to his wounds in the General Hospital, Newcastle, on September 7th. Major Hilliard was appointed Surgeon-Captain February 5th, 1887, and Major twelve years thereafter. He served in Ashanti under Sir Francis Scott in 1895-6, and received the star granted for that expedition. He went to the Gold Coast in 1895, and proceeded thence to the Cape of Good Hope in the following year, remaining in South Africa until his decease. He had nearly completed his 39th year.

We also regret to observe that among those reported missing on September 5th after the action near Warm Baths, is Mr. A. Cradock Fry, L.R.C.P., M.R.C.S., M.A., M.B., B.C.Cantab, of the 9th Battalion, Imperial Yeomanry.

RED CROSS SOCIETY.

At a monthly meeting of the Cape of Good Hope Society on September 3rd Sir John Furley, Chief Commissioner of the Red Cross Society, said that he had recently visited the hospitals in Pretoria, Johannesburg, and other centres, and that he found the arrangements for caring for the sick and wounded most excellent. All had abundant supplies. He spoke in glowing terms of the grand work accomplished by the London Central Committee, and hoped that it would become a permanent organisation. The result of the co-operation of the civil, military, and hospital organisations had been very gratifying. Sir John Furley added that the strain was now practically over, and he considered that there was no further need of appealing to the public for subscriptions, but he admitted that private assistance was necessary and would be welcome.

THE PLAGUE.

GLASGOW.

THERE are 16 cases of plague under treatment in Glasgow, an increase of 3 during the past week. No deaths have occurred from the disease during the week. Four cases are under observation as suspects, and 113 persons are detained as "contacts."

The source of the epidemic has not yet been discovered, though there is a general feeling in favour of some connection between it and shipping. Nothing so far has been discovered to indicate that the rats have had anything to do with the infection. Careful investigations are being made on this point, and the rats, which are being killed in large numbers in the infected area, are subjected to pathological and bacteriological examination by Dr. R. M. Buchanan, the city bacteriologist, but up to the present with negative results.

PREVALENCE OF THE DISEASE.

INDIA.

THERE were 449 deaths from plague during the week ending August 20th for all India, against 285 in the previous week. In Bombay City 51 deaths from plague occurred during the week ending August 19th; the death-rate in the city, however, has increased from 1,522 to 1,979. Cholera is responsible for much of the increased mortality, but unless an analysis of the ailments is before us, it is impossible to say whether pneumonia, fevers, etc., which play so important a part in plague epidemics, are used as terms to conceal the presence of plague or not. In the Presidency of Bombay, 64 deaths occurred, as against 45 during the previous week. For the week ending August 20th, 64 deaths occurred in Calcutta from plague; 103 in the Madras Presidency, and 210 in Mysore. The increase in this