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THE WAR IN SOUTH AFRICA.

CAPTAIN M. L. HUGHES, R.A.M.C.

Killed in Action.

THE appearance of the name of Captain M. Louis Hughes in the list of officers killed in the action at the Tugela River on December 15th produced a profound feeling of sorrow among those who knew either the man or his work. He was acting as Assistant Sanitary Officer to the troops at Aldershot when he was chosen by Sir Redvers Buller (who had learnt to know his merits at Aldershot) to serve on his personal staff, and to act as sanitary adviser.

Captain Louis Hughes received his medical education at King's College, London, where he was Assistant Demonstrator of Anatomy. He obtained the diploma of L.R.C.P.Lond., M.R.C.S.Eng., and L.S.A.Lond., in 1889, and entered the Army Medical School at Netley by the competitive examination of August, 1889. He passed out of Netley in February, 1890, taking first place and being awarded the Parkes Memorial Bronze Medal. He received his commission as Surgeon-Captain at that date.

Captain Hughes was known to military men as an enthusiast in his profession, and as one having the care and well-being of the soldier thoroughly at heart. Not only has he brought credit by his scientific researches to the great department to which he belonged, but in matters of practical detail, whether of sanitary or physical moment, he showed the spirit of true genius. For the soldiers' benefit he systematised and placed on a scientific basis so empiric a subject as chiropody, a subject of the first importance to the fighting capacity of the soldier. For the soldiers' benefit he taught the meaning of sanitation to soldiers, and thereby spread the teaching of his great predecessor Parkes amongst all classes of the army. As Assistant Sanitary Officer at Aldershot he successfully carried through several hygienic improvements and reforms which were urgently needed. The history of science will always have a place for his name.

His able, original, and scientific work on Undulant Fever fully entitles him to a high place. The unclassified, ill-understood, and practically unnamed fever, which found its most virulent expression at Malta, and was hence named Malta or Mediterranean fever, had long puzzled medical men in both the navy and army. Captain Hughes's first station abroad was happily Malta. He landed there in 1890, and immediately took up the study of the prevalent fever. The time and energy with which he worked on scientific methods for six years at this subject served to introduce true scientific precision into our conceptions of Malta fever. The result of his researches was published in a volume entitled *Mediterranean, Malta, or Undulant Fever* (Macmillan, 1897). On returning to England he was selected as one of the secretaries to the first meeting of the Section of Tropical Diseases at the Edinburgh meeting of the British Medical Association in 1898; and it was largely owing to his excellent organisation

and keen enthusiasm that the experiment of holding this section was so successful as to warrant its becoming a regular part of the programme at the annual meetings.

At Aldershot, although in official charge of the bacteriological as well as the chemical laboratory, Captain Hughes's concern in this department was no mere official supervision. From time to time carefully-conducted investigations were carried out by him there, and we only hope that his unpublished work may not be altogether lost by his untimely death.

We have in our ranks but few men, whether in military or civil life, who have done so much work of real scientific value as Hughes accomplished in the short time allotted to him. It is only ten years since Captain Hughes received his diploma, and his name is known and honoured by all grades of his profession. The news of the battle of Colenso just received tells how Sir Redvers Buller fearlessly exposed himself to the rifle and shell fire of the enemy; how the members of his staff, of which Captain Hughes was one, were hit and their horses killed, and it was in this storm of missiles that Captain Hughes was killed. We mourn his loss as a scientific worker, we sympathise sincerely with his wife and child, and the British soldier has cause to remember with affection one who worked so well in their behalf during times of peace, and in time of war laid down his life in the service of his country.

Dr. Patrick Manson who is so well qualified to appraise the value of Hughes's work, and who was President of the Section of Tropical Diseases when Hughes was secretary, has sent in the following tribute to his memory:

Captain Hughes called on me a day or two before he left for the seat of war. The object of his visit, so he explained, was to thank me for a trifling favour, to ask for suggestions on such special lines for pathological investigation as the opportunity of his service in Natal might afford and to say good-bye. The visit and its object were characteristic of the man; his punctilious acknowledgment of even a small favour, his keen interest in the science of his profession, and his courtesy. I saw a good deal of Captain Hughes in

connection with his Secretaryship of the Tropical Section at the Edinburgh meeting of the Association, as well as on other occasions, and I learned to regard him as an ideal army surgeon—soldierly in his bearing, gentle as the physician ever should be, and a devoted and successful but very modest student of his profession. His untimely death is a loss, not only to the Royal Army Medical Corps, but also to the profession at large and to medical science. His work on Mediterranean Fever shows what he was capable of doing, both as an original investigator and as a writer. It is by far the best work on the subject of which it treats. In its completeness, thoroughness, conscientious accuracy, and lucidity it is a model. Since Bruce discovered the micrococcus melitensis no individual worker has done so much as Hughes towards relegating Mediterranean fever to its proper pathological niche. Doubtless had the Boer bullets spared him, he would



have given us more and even better work than this, for, as I understood from him, he was eager to get on, relying for advancement, not on patronage, on seniority, or on chance, but on professional merit, hard work, and his deserts. Surgeons in the services sometimes complain of lack of opportunity for original work, of the discouraging interruptions arising from the frequent changes of station and other exigencies of their respective services as being inimical and even fatal to successful endeavour, and even of official discouragement. Hughes has not lived in vain, if his bright example in struggling against and in overcoming such difficulties be taken to heart. His book is permanent evidence of the vast amount of research, literary and scientific, that can be got through, even by the hardest worked among them, if they make the most of their opportunities.

A military correspondent, who had good opportunities of judging Captain Hughes's work, writes: For the last three years he acted as assistant sanitary officer to the troops at Aldershot, an office created by the present enlightened head of the Army Medical Service. During this period he had charge of the bacteriological and chemical laboratories at that important military centre, and extended and improved their organisation immensely. He was a capable bacteriologist, and held the diploma in Public Health. He arranged the medical portion of the combined medical and engineering course of lectures, delivered to all quartermasters at Aldershot, to initiate them into the rudiments of sanitation connected with their important duties. In this course, which was first ordered by H.R.H. the Duke of Connaught, when in command at Aldershot, and which was cordially supported by Sir Redvers Buller, who succeeded him, Captain Hughes took a prominent part and became the medical instructor, and so effectively did he perform his duty that many of those who attended his classes were able to obtain by examination the certificate of the National Health Society, given for knowledge of the rudiments of sanitation. Again, when chiropody was started in the army at Aldershot, Captain Hughes took it up with his usual energy, delivered lectures, and framed a syllabus of instruction, which it is understood the War Office will utilise when the question reaches a more advanced stage, as it doubtless would have done before this had it not been for the war in South Africa. Captain Hughes's death is regarded as a serious loss by the medical service, where his scientific acquirements were to the advantage of the army generally, and tended to enhance the position of the army medical service in public estimation. When Captain Hughes was killed he was serving on the staff of Sir Redvers Buller as his personal medical attendant, for which office he was selected by that officer, who had a good knowledge of his merits from his experience of him at Aldershot. Captain Hughes leaves a wife and child to mourn his death.

From Our Special Correspondent in Capetown.

November 30th, 1899.

THE WOUNDED AT CAPE TOWN.

ARRIVAL OF THE WOUNDED FROM BELMONT.

MILITARY medical matters here are beginning to assume a busy aspect. The wounded from Belmont arrived on November 26th in the ambulance trains which I have described previously and which have proved admirably fitted for their purpose. Several of the wounded men told me that they were most comfortable on the way down. A few Boer wounded were included in the consignment. All were conveyed to No. 1 General Hospital, Wynberg, with commendable despatch. In order to supplement the ambulance waggons, and to prevent the delay in conveyance from Wynberg Station to the hospital, several large vans belonging to furniture firms here were brought into requisition and answered the purpose exceedingly well.

WOUNDS OF THE ABDOMEN AND GROIN.

Many of the injuries are of a severe character, there being as before a large proportion of wounds of the extremities, and of these again many were somewhere in the neighbourhood of the hip joints. Why this should be it is difficult to say. One hypothesis is that the enemy aims at the sporrans of the Highlanders, but as the proportion is just as evident with the

other corps this will hardly hold water. Curiously enough, however, a man belonging to the Transvaal Ambulance told me quite spontaneously that some of the commandants had directed the Boers to aim by preference at the abdomens of our men, on the ground that Mauser bullet wounds would be more effective in that region than anywhere else. I paid little attention to the remark at the time, but it has since struck me that this may in a measure account, allowing for indifferent marksmanship, for the large number of wounds of the hip, groin, and thigh. One curious case of a penetrating abdominal wound, unfortunately ending in death, was described to me by Major Simpson, R.A.M.C. The man had been hit at Belmont; when he arrived here he had manifest peritonitis, and death resulted soon after arrival. There was a Mauser wound, apparently an entrance aperture, 3 inches below, and 2 to the left of the umbilicus. Just over the crest of the left ilium was an apparent exit wound, naturally ascribed to the same bullet. Near this latter wound a movable body could be felt, which was thought to be a detached fragment of the ilium. *Post mortem*, two bullets were found, one just above the crest of the ilium; this was the supposed fragment of bone. This bullet had evidently entered at the wound near the umbilicus, and, without damaging the small intestine, had perforated the descending colon just above the sigmoid flexure, and impinged against the ilium. The wound near the ilium was the entrance wound of another bullet, which was found loose in the lesser sac, just below the great curvature.

PENETRATING WOUNDS OF THE CHEST.

The few penetrating wounds of the chest are all doing remarkably well. In some cases there have been absolutely no symptoms; in others nothing more than a little early hæmoptysis, and in a few some pleural effusion. One chest wound was rather curious. The bullet had entered close to the right nipple, had traversed the chest laterally, apparently just grazing the posterior aspect of the sternum, then emerging at almost identically the same spot on the opposite side, it finally entered the left ulna an inch or so below the elbow, smashing that bone severely. The chest wound has healed without the least trouble. The arm wound has unfortunately become septic, and was looking rather bad. A man wounded at Belmont, the bullet having entered just below the spine of the left scapula, and emerged in the right mid-axillary line, at the level of the seventh rib, had yesterday a little effusion in both pleuræ, but no other untoward sign, and only a very slight rise of temperature. I saw one Martini wound, and two undoubtedly inflicted by some kind of soft-nosed bullet, both amongst our men.

WOUNDS OF THE HEAD.

I saw one bullet wound in which the frontal bone was slightly "ploughed" for about 2 inches, without any apparent fracture, but with some diplopia resulting. In another case the projectile had glanced along the cranium, but without causing any fracture of the outer table; but, as the patient was hemiplegic, he was trephined over the seat of injury, and extensive fracture of the inner table discovered. He is now doing well.

WOUNDED PRISONERS.

The Boer prisoners are not, as a rule, severely hurt. The two worst cases are those of Field-Cornet Pretorius and a man named Impey. The former has sustained a Lee-Metford wound of the knee-joint, with a fracture of the patella, which has got more or less septic, but does not appear likely to lead to anything worse than a stiff knee. The latter was hit rather curiously. A bullet entered just below the outer canthus on one side and emerged in the temporal region on the other. He is quite blind on the side of emergence. The Boer wounded are kept in separate wards, but are, of course, in every way on the same footing as the others, and one of them, whom I knew slightly some years ago, was loud in his praise of the attention he and his comrades are receiving.

THE WYNBERG HOSPITAL.

The General Hospital is proving quite equal to the tolerably heavy demands made upon it, and not even the most critical civilian could find anything to find fault with. In appointments no civil hospital could possibly surpass it. The

operating theatre is perfect in its way, and the whole place reflects very great credit on Colonel Supple and Major Simpson, who superintended its conversion from an ordinary hut camp to its present purpose.

Lieutenant-Colonel Hodson is in charge of the surgical, and Major Barnes of the medical division. Major Simpson is doing duty under the former. Colonel Stevenson, the officer in charge of the lines of communication, is evidently not disposed to rest altogether on his Netley laurels, but is taking an active interest in the executive work of the hospital. He, for one, may be commended to the notice of the next post-prandial speaker who feels inclined to reproach the R.A.M.C. seniors with falling into an administrative groove.

One of the civil surgeons, Mr. Freemantle, has been detailed as pathologist to the hospital, a very commendable step.

The wounded from Graspan arrived here this afternoon.

FIELD AND STATION HOSPITALS IN CAPE COLONY.

Full details of the field and station hospitals have not yet been completed, or at least are not for publication, but one station hospital—No. 3—has been established at De Aar, and several field hospitals are at Orange River or thereabouts. There are about nine hospitals for the reception of the various troops guarding the lines of communication between here and De Aar, but these are not used for any but the local detachments, of whom there are a goodly number, owing to the suspicion entertained about possible attempts on the line by colonial sympathisers with the enemy. Two of these small hospitals—those at Victoria West and Richmond Road—are under departmental civil surgeons, detached from the General Hospital staff, the rest under local civil practitioners.

Lord Methuen has with him a field hospital for each brigade, and one for his divisional troops.

A general hospital is to be established at Rondebosch, a suburb of Capetown between here and Wynberg. The position chosen by Colonel Supple, who is making arrangements for it rapidly, is on a gentle slope, in an admirable situation. Another general hospital still on the water may, I am told, possibly be fixed at Queenstown.

The station hospital at Capetown itself has been extended to take 300 patients. It is fairly occupied now, principally with cases of pneumonia and the like, contracted by men on the transports. When the troops have ceased to arrive, it may be used as an additional general hospital.

ABUSE OF THE GENEVA FLAG.

There can, unfortunately, be but little doubt that the Boers have been abusing the Geneva flag. I am told, on the authority of an eye-witness, that at Belmont they actually fired from cover of an ambulance waggon, and at the same battle several Boers professing to be St. John men, and wearing the badge on their arms, were found fully armed—a very suspicious circumstance. One can only hope that these breaches of usage are the result of defective discipline and not of deliberate malice.

OFFERS OF LOCAL ASSOCIATIONS AND HOSPITALS.

Several local associations for the supply of comforts to the wounded have been established at different centres. They are all gradually being got into touch with Colonel Young. A good many offers of hospital accommodation have been made from various parts. These offers are admirably well-meant, but there is not the least necessity for the military authorities to accept them. Splitting the sick up into small batches would lead to a great amount of administrative trouble, and the general hospitals can be indefinitely expanded by tent accommodation. In the suburbs of Capetown—such as Rondebosch and Wynberg—wounded or sick would at this time of the year probably be far better under canvas than in permanent buildings. There will be no rain to speak of in this part for months; the heat, especially in the southern suburbs, will never be excessive; and the high winds prevalent in Capetown itself scarcely reach these places.

THE EXCELLENCE OF THE MEDICAL ARRANGEMENTS.

Now that the medical arrangements are being so fairly tested that one can judge of their efficiency, I am struck with the admirable way in which everything is being

managed. From the collecting station to the base not a hitch appears to have occurred anywhere. As it is the fashion in some quarters to decry the army medical arrangements, I think it right to put this on record. The brunt of the whole business has thus far fallen upon Colonel Supple, who as principal medical officer of the command before the arrival of the army corps staff, and as principal medical officer of the base since, has been responsible for most of the arrangements. He has certainly shown indefatigable activity and unerring judgment in all he has done—at least, so far as I can judge as an impartial outsider—and the work at a place like this, which is at present the only medical base both for arrivals and wounded from the front, complicated as it is by the fact of the general hospital being some miles away from the city, is no light task.

THE FUTURE.

One remark in conclusion, and that I make from an intimate knowledge of the field of operations, and of the people concerned. I believe there will be an enormous pressure on the resources of the department during the next few weeks. This will not be so much in the shape of medical cases, for the up-lands are very healthy at this time of the year, and the camp sanitary arrangements are reported to me to be very good. But there will be a very large number of wounded. The Boers will contest every inch of the advance to the bitter end. Wherever a natural fortification exists they will hold it, and although we shall in all cases doubtless drive them out, the loss we shall suffer will be great. So far as I can gather, the leaders have tolerably made up their minds to eventual defeat, but they are bent on its coming about at a cost which, to quote President Kruger, will "stagger humanity." It is as well to recognise this beforehand, and see that the medical *personnel* is sufficient for the future heavy demand.

THE MEDICAL ASPECTS OF THE BOER WAR.

BY A SOUTH AFRICAN CAMPAIGNER.

V.

OUR REVERSES.

WEEK by week the war appears to assume larger dimensions and more serious aspects. Fortunately however the reverses experienced have only had the effect which such experiences have invariably had upon the English. They make them redouble their efforts and become more determined than ever to win in the end. After all, what is the position to-day in South Africa compared with the position in India during the Mutiny? The men who suppressed that are not likely to be dismayed, and now we have one of the heroes of that very time, Lord Roberts, going out in supreme command to South Africa with Lord Kitchener as Chief of Staff.

General Gatacre.

One of the reverses sustained during the past unfortunate week was that of General Gatacre in Stormberg. Knowing the country as I do, I confess to some astonishment at the endeavour made to march a long distance for the purpose of attacking the Boers in these fastnesses. The country in the Stormberg district is of the most wild and mountainous description, and inasmuch as there was no garrison to relieve, nor any other special condition calling for the hazardous advance, I confess the movement seems difficult to understand. However, we are all accused of regarding ourselves as field marshals nowadays, and I do not propose to discuss the strategy further; but there is one peculiarity of General Gatacre's military policy which is distinctly open to comment from a medical point of view. General Gatacre, we are continually told, is known by the soldiers as "General Back Acher" on account of the extremely long and arduous marches which he is in the habit of giving his men as a form of exercise. The men, we are told, continually return from these marches extremely exhausted, and we submit that these severe bouts of exercise are not the way to develop "condition." A moderate and rational amount of exercise, with proper intervals of rest, produces fitness, but exhausting marches frequently have the very opposite effect. Some measure of this severity would appear to have been carried into the tactics exercised by General Gatacre in his last

march, which entailed upon his men a long train journey in the sun, followed by an exhausting night march immediately preceding an attack upon the enemy.

Magersfontein.

The list of casualties at Magersfontein appeared in detail on Saturday. The total loss in killed and wounded in these engagements was 957; this consisted of 125 killed, 642 wounded, and 190 missing. From this it will be seen that again the proportion of killed to wounded is by no means high, and that in face of the fact that our troops were gallantly storming a strongly entrenched position. Reuter's correspondent states that the ambulance service was magnificently organised. This is a gratifying tribute to the medical department, and we have the further testimony of Cronje himself in his despatch to Kruger, in which he commented on the completeness of the ambulance arrangements among the British forces. With regard to this battle I would add one word. It is true that Lord Methuen did not succeed in taking the position, but nevertheless it is certain that the loss inflicted upon the enemy was at least as great, if not greater, than our own, and it is therefore unfair to speak of this engagement as if it had been a defeat. Lord Methuen's column has marched with signal success from the Orange River, driving the Boers before him. The seizure of the Modder River was a most important one, and the holding of it is of the greatest strategic importance. That Lord Methuen should have accomplished it alone entitles him to our admiration; to be astonished that he did not then forthwith succeed in driving the reinforced Boers from their position in the Magersfontein is unreasonable.

The Tugela.

From the Tugela River we have the sad news that 82 officers and men have been killed, 667 wounded, and 348 missing, presumably prisoners, making a total of 1,097. Here again, the proportion of killed to wounded is small, and is pretty conclusive evidence that the wounds were inflicted almost entirely by the Mauser rifle, and probably many of them at long ranges. The individual shooting of the Boers is undoubtedly shown in this engagement. As with the operating surgeon the first essential is skill and knowledge in the use of his instruments, so surely with the soldier who is a rifleman, the first essential is knowledge and skill in the use of the rifle. In that knowledge and skill the Boer, especially the hunting Boer, and probably those very Boers selected to meet Buller on the Tugela, were undoubtedly proficient. Are our soldiers, when not actually engaged in fighting the enemy, now getting the one thing necessary to give them that skill—that is, field firing with the rifle? The veld is wide, and opportunities of camp life ample. What qualities the Boers have which our soldiers do not at present possess must be taught our soldiers. Marksmanship is not a difficult art, and may be learned, and nowhere more easily than on the South African veld. What opportunity, for instance, have the reservists recently rushed out had to acquire any skill with the rifle? Many of them have been for seven years working as artisans or labourers, without firing a shot. It is obvious that they must have some opportunity of acquiring the requisite skill.

TROOPSHIPS.

On Saturday I had an opportunity of visiting the *Avoca*, one of the transports sailing from Southampton with troops for South Africa. The arrangements on board struck me as admirable. The *Avoca* is one of the British India Company's ships, and principally intended for the conveyance of passengers. Her deck accommodation is fairly large, and I was interested to note that the authorities had wisely portioned off one half of the upper deck—which is usually reserved for first-class passengers—for the use of the men. On this deck it will be possible for the men during the voyage to take exercise, to drill, and generally to keep themselves usefully employed from a service point of view. What is known as poke drill, that is, pointing with the empty rifle, can at any rate be practised on board this and all other troopships. The voyage under these conditions should be found beneficial to officers and men both in health, and, in some slight measure, in necessary discipline.

NETLEY.

From the *Avoca* I ran down to Netley, where the P.M.O., Lieutenant-Colonel Charlton, received me. I visited various wards of the hospital, and saw among other patients men who had recently come home in the *Jelunga*. The papers had stated that these men were some of the wounded from the seat of war in South Africa, but I found that only one of the *Jelunga's* passengers was actually a wounded man, and he was not at Netley. Of the others I saw some of the privates, and among them found two or three men who had developed rupture and had been invalided home, the others were principally medical cases. One of the men I spoke to had been with the camp at the Orange River; they all spoke well of the treatment they had received at the front, on the railway journey down, and on board the transports, and they certainly are extremely comfortable and in good quarters at Netley.

SENDING HOME THE WOUNDED.

With regard to the disposal of the sick and wounded, a letter was written to the *Times* of December 13th by Sir Henry Howarth, inquiring why the sick and wounded are being sent home.

The Cape of Good Hope and Natal are, he says, two of the most famous sanatoria in the world. This being so, what possible justification can there be for sending home shiploads of sick and wounded men, who have to face the very real discomforts of a sea voyage, to cross the Bay of Biscay at this season, to arrive in England in the middle of winter, and perhaps to be landed, as the other day, in rain and fog?

To this Surgeon-General Hamilton (R.P.), lately P.M.O. in South Africa, replied as follows:

The climate at the Cape at this season is very hot and dry, that of Natal hot and damp—neither of them ideal places for sick and wounded men. No doubt the "karroo," or elevated tableland, is a suitable climate for cases of tuberculosis, but the accommodation, food, and attendance are so vile, that all good done by the climate is counterbalanced by the discomforts. From a military point of view it is absolutely necessary to send home all cases of sick and wounded not likely to be fit to rejoin their corps within a reasonable time. The chief base hospital is at Wynberg, a suburb of Capetown, about nine miles distant by rail. The regular hospital there can only accommodate about fifty sick, but the barracks close by have been taken over as a hospital, and can hold about 500 sick and wounded. These barracks are really only huts, and the accommodation, especially as regards the subsidiary buildings, is not at all ideal for hospital purposes. Tents at this time of the year are very hot. It is, therefore, most necessary to send home every case of wound or sickness not likely soon to be fit for duty, to make way for the fresh sick and wounded being sent down daily from the front.

Surgeon-General Hamilton's answer appears to be conclusive. No doubt the cases sent home will be those so severely wounded as to preclude any prospect of their again taking part in the campaign, and it is only natural that a man thus situated should desire to be near his friends. At the present time and with the modern appliances in the shape of hospital ships there is no reason why a man should suffer any hardship whatever during the voyage; in fact, the modern ocean steamer makes a much more comfortable hospital than tents or huts during the hot summer in South Africa.

FIELD RATIONS.

A correspondent has asked as to the field rations for our troops. "The health of the troops," he says, "in future depends in a great measure on it. It is desirable that it should be given to the profession in full detail." The ration is given as Appendix VII of the medical arrangements published for the information of the Field Force in South Africa, and is as follows:

RATIONS (DAILY SCALE).

FIELD SERVICE.

The rations for the troops will be as follows:

Meat.—One lb. fresh, salt, or preserved meat. Maconochie's ration = a ration of meat. When the supply of cattle is abundant, the ration of 1 lb. fresh meat during active operations may be increased by G. O. C. to 1½ lb.

Bread.—One lb. and a quarter fresh bread or 1 lb. biscuit, or 1 lb. flour or meal.

Groceries.—One-third of an oz. of coffee and ½ oz. tea, or double ration of either; 2 ozs. sugar, ½ oz. salt, ½ oz. of pepper; ½ oz. chocolate or cocoa when given in lieu of tea or coffee.

Lime Juice.—One-tenth of a gill with ½ oz. sugar when fresh vegetables are not issued, or when medical officer thinks necessary.

Vegetables.—One oz. compressed or ½ lb. potatoes or other fresh vegetables, or 2 ozs. split peas, or ½ lb. onions, or 2 oz. rice.

Spirits.—Half a gill when notified in general orders.

Tobacco.—Not exceeding 1 lb. per man per month from Army Service Corps on repayment; price to be fixed by G. O.

Light.—Hospitals as required; guards horse picquets, officer's offices & candle per lantern authorised.

Fuel.—One lb. wood or coal, not to be issued when it can be obtained by the troops on the march. This is the maximum ration, and will be only issued when available. Cow dung is a substitute on emergency.

The scale of daily rations for civilian subordinates will be as follows :

- (a) White conductors same as European soldiers.
- (b) Native employees, including drivers and leaders.
 - 1 lb. meal, biscuit, or bread.
 - 1 lb. fresh or preserved meat.
 - 2 oz. sugar.
 - 1 oz. coffee or $\frac{1}{2}$ oz. tea.
 - $\frac{1}{2}$ oz. salt.

The following scale of equivalents which are to be considered as alternatives :

Meal } 1 lb. = $\frac{1}{2}$ lb. mealie flour or mealie meal.
 Biscuit }
 Bread }
 Meat, 1 lb. = $\frac{1}{2}$ lb. mealie flour or mealie meal where there is not a sufficiency of meat.

In all other matters not mentioned in the above the Allowance Regulations will be followed for equivalents, or in special articles not therein named G. O. C. will decide them.

While this will be adhered to as closely as circumstances will allow, it is quite probable that the exigencies of the campaign may bring about a considerable modification from time to time. It all depends upon the commissariat, together with the resources of the country in which the soldier finds himself. During a campaign in which I served there was considerable variety in the ration. We began with tinned meat, cattle were then captured from the enemy, and for the rest of the campaign fresh meat and milk were always forthcoming; then, again, for a week or two the neighbourhood of mealie fields enabled an unlimited quantity of fresh mealies to be substituted for much of the daily ration. It is well, therefore, to bear in mind that the ration must vary according to circumstances, sometimes with advantage to the soldier and sometimes with disadvantage.

CIVIL SURGEONS.

There have been countless applications for employment as civil surgeons with the forces in South Africa, and the Director-General of the Army Medical Department stated a week or two ago that he then had 400 names on his list. The surgeons serving in this capacity are attached to the Army Medical Department, and are styled simply "Surgeon." Their uniforms consist of plain khaki tunic, breeches, and puttees, and is in appearance almost exactly that of the combatant officers; they enjoy the rank and privileges, though not the title, of "Captain." Each one has a servant and a horse found him, and receives pay at the rate of £1 a day; he is engaged for twelve months, the department retaining a right to terminate his services at any time on the payment of two months' pay. His camp equipment is simple but complete; it consists of a canvas stretcher, cork mattress, with a blanket fixed on in the shape of a bag and a waterproof covering, which may be used or thrown aside as required, which, like the blanket, is also attached to the mattress. He also has a readily portable table, a small camp chair, and a tin case containing cup, plate, teapot, etc. These things are purchased by the surgeon, and then an advance of £40 out of his pay is made at the time of joining to enable him to meet the necessary outlay.

The completeness, thoughtfulness, and care with which the whole of the medical arrangements are being supervised have already been evidenced in the field, and cannot fail to be recognised at the close of the campaign.

BOER AMBULANCE.

The Boer forces, we are informed, have an ambulance which is under the superintendence of Captain Bleksley. Captain Bleksley has been in the employ of the Transvaal Government for some time as sanitary inspector in Johannesburg, and is well known to the writer. The ambulance arrangements of the Boers are of the most primitive description, but this is more the fault of the Boer commanders than of the ambulance department, who are probably but very poorly found in resources.

THE ROYAL ARMY MEDICAL CORPS AT MAGERSFONTEIN AND THE TUGELA.

Magersfontein.

In a message sent on December 12th from the battlefield in front of Magersfontein, Reuter's correspondent wrote:

The ambulance service was magnificently organised, and the bravery of the surgeons while attending to the wounded in the firing line is the subject of the highest admiration among our men.

The correspondent of the same agency at Orange River,

after announcing the arrival of two hospital trains with wounded from the action wrote:

Many acts of heroism are recorded. An officer of the Army Medical Corps attended the sick in the firing line until he was killed.

Happily it would seem that the statement that the officer was killed was shown by the official casualty lists to be incorrect. The medical officer attached to the Black Watch (2nd Batt. Royal Highlanders), which suffered so heavily at the outset, losing 45 killed and 184 wounded, besides missing, was Lieutenant H. E. M. Douglas, who is returned in the casualty list as wounded. The *Times* correspondent, telegraphing with regard to the same battle says:

The work of the medical staff was beyond praise. Their promptness in relieving and removing the wounded under hot fire was extraordinary, though the doctors were ultimately compelled to forego attending the wounded near the trenches, as many men who might otherwise have been saved were shot while being attended to, the enemy's fire being always drawn to those points.

The correspondent of the *Daily Telegraph* telegraphed:

The greatest bravery was shown by the officers and men of the Royal Army Medical Corps in dressing the injuries of the wounded and in bringing them in under a heavy fire. Cartenson, attached to the Seaforth Highlanders, went into action with the regiment early in the morning, and dressed the wounds of several men in the fighting line, and brought others to the rear.

When the ambulance was brought up about noon, [the] Boers would not allow it to come nearer than 500 yards.

Ensor, however, went on alone within 300 yards of the enemy and brought back a wounded man, although a heavy fire was directed on him by the Boers.

Captain Probyn, attached to the Gordon Highlanders, walked erect up and down the firing line attending to the wounded officers and men under a hail of bullets.

All the doctors and stretcher-bearers, indeed, showed the greatest coolness.

There is evidently some error in names in this despatch. The medical officers attached to the other components of the Highland Brigade according to the official list are: 2nd Battalion Seaforth Highlanders, Major G. E. Moffett; 1st Battalion Highland Light Infantry, Lieutenant T. C. Mackenzie; 1st Battalion Argyll and Sutherland Highlanders, Captain J. E. Carter. The medical officer of the 1st Battalion Gordon Highlanders which advanced to the relief of the Highlanders Brigade after the surprise is Captain P. J. Probyn, who entered the service in 1896.

Lieutenant Ensor was originally attached for duty to No. 3 General Hospital as officer in charge of the x-ray apparatus. Lieutenants Douglas, Ensor, and Mackenzie only received their commissions last July, after passing through the Army Medical School at Netley. Major C. H. Burtchaell, who is reported to have been taken prisoner, was Secretary to the Principal Medical Officer of the First Division, that which includes the Guards, and officer in medical charge of the staff.

Reuter's agent telegraphing from the Orange River says:

The military hospital here is in a healthy position to the south of the camp. The wounded have nothing but praise for the treatment which they received at the hands of the medical department on the battlefield.

The Tugela.

Captain M. L. Hughes, who is reported killed in General Buller's disastrous action at the Tugela, was attached to the staff of the Principal Medical Officer of the force in South Africa as special sanitary expert. His death is a severe loss to the service and to the force in Natal. The 14th and 66th Batteries Royal Field Artillery, which had to abandon guns in this action, formed part of the field artillery of the 1st Infantry Division, and the medical officer was Lieutenant E. T. Inkson, who received his commission last July. The medical officer of the 1st Battalion Royal Inniskilling Fusiliers, which had ten casualties among the officers, is Major John Henderson Brannigan, who is probably the officer of the R.A.M.C. returned as slightly wounded. He entered the service in 1885.

THE RED CROSS TRAIN.

The contract for the construction of a special hospital train for the Central British Red Cross Committee was signed on October 18th, and the work which in ordinary times would have occupied eight months, has been finished in ten weeks. It was at first intended that the train should be composed of ten carriages; but as the railways are single lines of narrow gauge, with severe gradients, it was found necessary to limit the number to seven. The train consists of seven bogie corridor carriages, each about 36 feet in length and 8 feet in width, the passage through the centre being continuous. The

first carriage is divided into three compartments for linen and other stores, for two invalid officers and for two nurses respectively. The second carriage is also divided into a compartment for two medical officers, a dining room, and a surgery. The third, fourth, fifth, and sixth carriages are each constructed to carry eighteen invalids and four hospital orderlies. Owing the limited space the beds have been necessarily placed in three tiers. The difficulty of placing a helpless patient sideways on a bed closed on all sides but one from a gangway 2 feet 6 inches in width, in which there is only room for one bearer at the head of the stretcher, and one at the foot has been met by an arrangement of pulleys in the roof, which enables each bed with a patient on it to be raised to the proper level by one man, whilst the hands of the two bearers are thus left free to guide and fix it in position. Each carriage is provided with a stove, a lavatory, and a closet, and necessary storing lockers. The seventh carriage contains the kitchen and pantry, including berths for two cooks, and a compartment between for the guard. Cooking appliances, cisterns containing cold water storage, two large filters, a refrigerator, and everything necessary for 97 persons are provided; besides fitted cupboards, and drawers for linen clothing, surgical and medical stores, cutlery, glass, crockery, provisions, etc., two lockers have been placed in the roof of each carriage for linen, etc. The whole train is light and airy, and the enamelled white ironwork and fittings and the bright draperies produce a cheerful effect. As the train may have to be loaded in places remote from buildings, and exposed to sun, rain, and dust, an awning has been provided suspended to hooks over the carriage doors and supported by telescopic iron posts. Under this shelter invalids can be transferred from stretchers to the beds they will occupy in the train.

Towards the cost of the train the Borough of Windsor contributed £6,100 and Princess Christian added £650, the balance of a Red Cross fund invested in her name after the Soudan Campaign of 1885. In deference to the wish expressed by the royal borough, the train will bear in the centre panel on each side of every carriage, a conspicuous Red Cross on a white ground, encircled with the words, "Princess Christian Hospital Train." In sockets at the head of the train are two flags, the Union Jack and the Red Cross in accordance with Article VII of the Convention of Geneva. Sir John Furley, under whose supervision the train has been built, will accompany it to South Africa early next month.

THE AMERICAN HOSPITAL SHIP.

The alterations in the *Maine*, the ship lent by the Atlantic Transport Company to serve as a hospital ship, have been completed and the necessary funds for the alteration have been provided through the exertions of a committee of American residents in this country.

The ship has four large wards and one small isolation ward, providing accommodation altogether for 218 patients, on two decks. The bedsteads, which are of enamelled iron, are arranged in rows, head to foot, with narrow gangways between. Each bed has a spring mattress, a horse-hair mattress, and the ordinary furniture of a hospital bed, including a movable bed table. An operating room has been fitted up on the saloon deck, and is provided with an enamelled iron operating table with plate-glass top, instrument cupboards, sterilisers, etc., and also an x-ray installation, for which a Wimshurst influence machine has been fitted. The medical officer in charge is Surgeon-Lieutenant-Colonel Hensman; with this exception the whole of the staff of the ship are Americans. The medical men are Dr. G. E. Dodge and Dr. H. H. Hodman of New York, and Dr. C. H. Weber of Philadelphia. Miss M. E. Hibbard, the Superintendent of the Nursing, has five nurses under her, and Major Cabell, M.D., of the United States army will be in command of five non-commissioned officers.

On December 16th the Duke of Connaught visited the vessel, which was lying in the West India Dock, and presented a Union Jack to the ship in the name of the Queen. The ceremony concluded by the hoisting of the Union Jack at the mainmast, the Stars and Stripes at the mizzen, and the Red Cross at the foremast.

PREPARATIONS AT THE HOME HOSPITALS AND CONVALESCENT HOMES. The Seamen's Hospital Society has arranged that a number of beds in the Society's branch hospital in the Royal Victoria and Albert Docks shall be

placed at the disposal of the War Office for the reception of sick and wounded soldiers who, on their arrival at the Albert Docks from South Africa, may not be fit to at once travel further.

The Committee of Management of the Royal London Ophthalmic Hospital have offered to place a ward at the disposal of the War Office for the soldiers and sailors whose eyes may be injured in the war.

The London County Council has given permission to a committee of medical men and others residing in the neighbourhood of Hampstead to use Golder's Hill House as a temporary convalescent home for soldiers invalided from the Transvaal.

At Bath a local Committee has arranged for a certain number of beds at the Convalescent Home, Combe Down, for soldiers of the territorial regiments of the Western Counties, and of the Royal Artillery, Royal Engineers, and Cavalry within that area. It is proposed to increase the accommodation if necessary.

Lord Carrington has suggested that many more convalescent homes should be organised under military management, and has offered to lend a house near High Wycombe for the purpose.

Messrs. Maple and Co. have offered to provide 30 beds at the firm's convalescent home at Harpenden until the end of 1900, and will meet all expenses.

The Homes of Rest for Disabled Soldiers and Sailors received on December 15th a cheque for £3,000 from the Mansion House Fund.

THE SEVENTH DIVISION.

The Principal Medical Officer of the Seventh Division, which will be under the command of Major-General Tucker, C.B., is Lieutenant-Colonel J. A. Gormley, M.D., R.A.M.C. He entered the service in 1874, and served during the operations in the Malay Peninsula in 1875-76 (medal with clasp). During the Afghan war of 1878-80, he was in medical charge of the 51st Light Infantry, and took part with the expeditions against the Mohmunds, and into the Hissarik Valley (medal). He served in the Boer war of 1881, and with the Nile Expedition in 1884-85 (medal with clasp and Khedive's star). During the operations in South Africa under Sir Frederick Carrington, in 1896, he was Principal Medical Officer, and for his services at that time was mentioned in despatches, and promoted to be Brigade-Surgeon-Lieutenant-Colonel.

The medical officer appointed to the Staff of the Division is Major F. J. Morgan, R.A.M.C., who entered the service in 1887. He has been medical officer at the Tower of London since 1897.

MEDICAL ARRANGEMENTS FOR THE AUXILIARY FORCES.

It is not anticipated that any serious difficulty will be encountered in making the necessary medical arrangements for the Yeomanry and Volunteers who are to serve in South Africa. In the case of the Volunteers, as the force will be attached to regiments already provided with regimental medical officers, with existing brigade bearer companies and field hospitals, no medical help will be required. The Yeomanry Brigade should have no difficulty, as there are sufficient medical officers belonging to the service to supply assistance to the brigade, and the only regret will be that the brigade to be raised is not 6,000 in place of 3,000.

The Militia Medical Staff Corps will, it is believed, be adequate to meet all present needs.

The vital question is how to provide for any future force. There are 34 brigades of volunteers. Of this number, 30 are returned as having bearer companies. We believe that the authorities would act wisely if they had these bearers inspected, and ascertained how many would volunteer. A school for 200 or 300 bearers might be started, either in Aldershot or London. We believe that there is no doubt that the Volunteer Ambulance School of Instruction could supply officers and non-commissioned officers for a staff of instruction should this be necessary. A step in the direction of utilising the services of Volunteer bearers has already been taken, the Secretary of State for War having sanctioned the services of members of the Welsh Border Brigade Volunteer Bearer Company for employment. We learn that 37 non-commissioned officers and men have accepted, and will probably be sent to Netley and Aldershot to act as hospital orderlies, which they will no doubt do thoroughly well as they are reported to be in a high state of efficiency. At the late brigade camp the Senior Medical Officer, Lieutenant-Colonel P. Giles, F.R.C.S., was able to parade for Colonel Duke, R.A.M.C., the Principal Medical Officer of the North-West District, not only a complete bearer company, but a trained section of regimental stretcher bearers from each of the six regiments in camp.