

Take a second small strap, slip the buckle end of it over the hook of the haversack sling, carry the other end of the strap to, and pass it through the buckle at the other end of the sling, and carry it back to the hook and buckle off.

This allows of increased or decreased extension, and is accessible and easy of adjustment.

A small splint can be made by rolling the bag of the haversack, from which the sling to form the "butt-loop" was detached; when tightly rolled and pressed flat, it can be applied over the seat of the fracture, and fastened with the two remaining straps.

The puttee is next wrapped round the chest and tied off.

The feet may be fastened together by means of the patient's belt.

When used for fractures of the leg alone, the pieces of wood are equal and of suitable length, their application being similar, with the exception of the "fork" band and the puttee round the chest. It may be added that the spare puttee could be used as a bandage to fix this splint, also that the splint is padded, and wherever the soldier is, his puttee and coat are usually available. For the leg this device acts as an excellent box-splint.

Report.

TACTICAL EXERCISE FOR MEDICAL OFFICERS.

BY LIEUTENANT-COLONEL S. WESTCOTT, C.M.G.
Royal Army Medical Corps.

THE following is a short account of a medical staff ride held at Mhow, Central India, in connexion with the course of war training reported in a previous number of the JOURNAL.

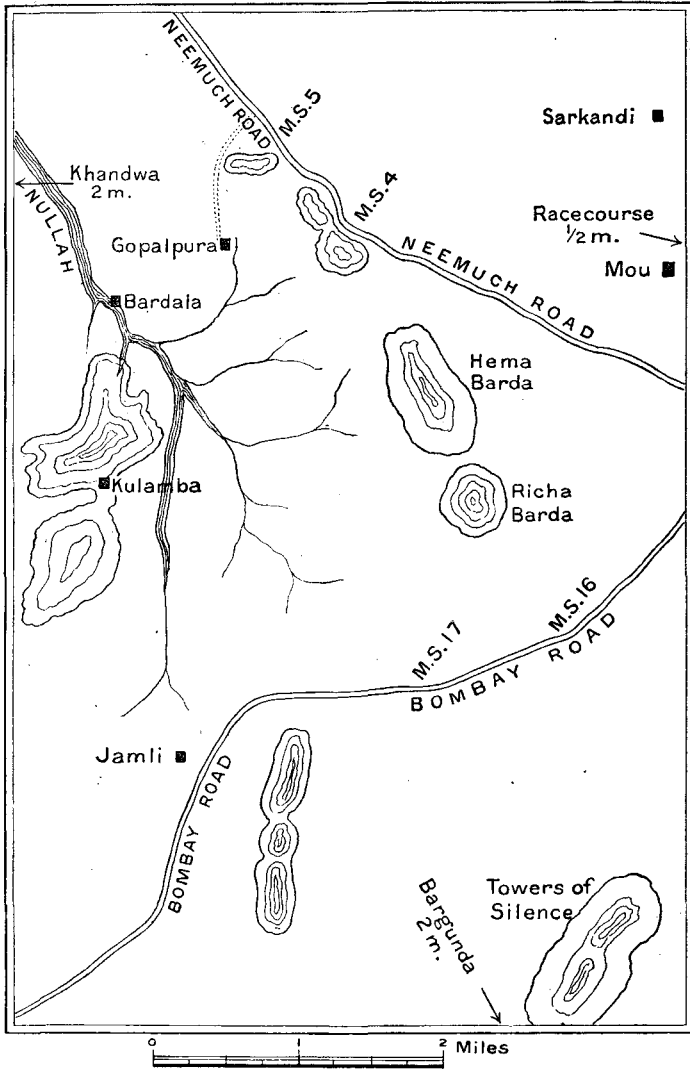
Station orders by Major-General J. S. S. Barker, C.B., commanding 5th Division, and Commanding at Mhow. Thursday, October 6, 1910.

(697) *Tactical Exercises*.—A tactical exercise for medical officers, with skeleton troops will be held on Friday, October 14. All medical officers available will attend.

(2) Lieutenant-Colonels Short (R.H.A.), Smith (2nd Rajputs), and Betham (101st Grenadiers) will act as brigade commanders. Each will be accompanied by eight mounted men with flags to represent troops. These troops will be detailed by Officer Commanding Inniskilling Dragoons.

(3) The Officers Commanding 2nd East Lancashires, 2nd Rajputs, and 101st Grenadiers will each detail four officers to act as battalion

commanders, and the Officer Commanding Brigade Royal Horse Artillery will detail a Captain or Major to act as commander of the divisional artillery.



(4) The general and special ideas and divisional operation orders will be issued on the afternoon of October 13, and on receipt of these brigade commanders will issue their own orders.

GENERAL IDEA.

Two countries, **NORTHLAND** whose capital is **GWALIOR**, and **SOUTHLAND** whose capital is **NASIK**, and the boundary between which is the **NERBUDDA**, have been on the point of a quarrel for some time. On October 1, 1910, **SOUTHLAND**, whose mobilization arrangements are in a more forward state than those of **NORTHLAND**, declares war; and orders the troops at **BERWANI** (about a Division) to advance north-east along the **BOMBAY-AGRA** road, and hold the ground in the neighbourhood of **MOU**, so as to cover the advance of their main army up the **Ghats** (**VINDHIA** range).

The **NORTHLAND** Government despatches the garrison at **GOONA** (head-quarters of the **GOONA** Division) to drive back the advanced force of **SOUTHLAND** down the **GHATS**; reinforcements from **BHOPAL** are ordered to join the **GOONA** Force, and the main **NORTHLAND** Army is ordered to concentrate at **GWALIOR**.

The **GOONA** Force (strength as below) arrived at **INDORE** on October 10, and found some of the **SOUTHLAND** troops entrenched across the **INDORE-MOU** road on the **RAO** ridge.

Goona Force.—Two Squadrons Cavalry, 1 Brigade Royal Field Artillery, 1 Brigade British Infantry, 1 Brigade Indian Infantry, 1 Battalion Pioneers, 1 Field Company (S and M), 2 British Field Hospitals, 1½ Indian Field Hospitals.

The **NORTHLAND** reinforcements from **BHOPAL** (strength as below) were still two days north of **INDORE**, but the General Officer Commanding **GOONA** Division attacked at once, and after severe fighting on October 11, drove **SOUTHLAND** force from the **RAO** ridge, and bivouacked on the ground gained; **SOUTHLAND** retired to hills four miles south-west of **MOU**.

Bhopal Force.—Two Squadrons Cavalry, 2 Mounted Batteries, 1 Brigade British Infantry, 1 Field Company (S and M), 1 British Field Hospital, ½ Indian Field Hospital.

General Officer Commanding **GOONA** force then decides to wait at **RAO** two days, until the **BHOPAL** force reaches him. This force arrives on October 13, and the **GOONA** Division being then complete, the General Officer Commanding moves forward and camps on night of 13th at **SARKANDI** and **MOU**.

SPECIAL IDEA.

Reports are received by General Officer Commanding **GOONA** Division on 12th and 13th, that parties of the enemy have been seen entrenching on **TOWERS OF SILENCE** Hill, on hills one mile east of **JAMLI**, and on the hills to west and north-west of **JAMLI**.

At midday on 13th information is received from native spies that a large **SOUTHLAND** force of all arms has arrived at **KHAL GHAT** on **NERBUDDA**, 23 miles south-west of **MANPUR** and is making preparations to cross the river on the 14th.

On afternoon of 13th the General Officer Commanding GOONA Division personally reconnoitres the enemy's position, and finds that he is occupying the hills mentioned above. He comes to the conclusion that the enemy's right is at the TOWERS OF SILENCE and his left at KULAMBA.

He determines to attack the SOUTHLAND position on morning of 14th before reinforcements can arrive from KHAL GHAT.

Note 1.—MHOW cantonment is supposed to be non-existent.

Note 2.—The 1st Brigade consists of:—11th Infantry, 12th Infantry, 13th Infantry, 14th Infantry; 2nd Brigade consists of: 21st Infantry, 22nd Infantry, 23rd Infantry, 24th Infantry; 3rd Brigade consists of: 31st Infantry, 32nd Infantry, 33rd Infantry, 34th Infantry.

Note 3.—As regards the times given in "Operation Orders" for the movement of troops, the hours 5 a.m. and 5.30 a.m. have been entered as being suitable for the actual operations. In the tactical exercise, however, for the convenience of officers, these will be taken to be 7.30 a.m. and 8 a.m. respectively.

Note 4.—Lieutenant-Colonel Westcott, C.M.G., V.H.S., R.A.M.C., will officiate as Principal Medical Officer of the GOONA DIVISION.

Operation Orders, No. 5.

By Major-General J. S. S. Barker, C.B.

Commanding Goona Division.

Sarkandi

Reference 1 in. Map of Country.

13th Oct., 1910.

(1) The enemy are reported to be holding a position from TOWERS OF SILENCE through JAMLI to KULAMBA. Reinforcements may reach him on the 16th October. Our main army began to leave GWALIOR by route march on 10th October.

(2) The General Officer Commanding proposes to attack the enemy's position early on the 14th, and drive him down the Ghats before reinforcements can reach him. To do this his intention is to occupy the hills of HEMA BARDA and RICHA BARDA with the advanced guard, while the main body assembles at the 4th and 5th milestones on the NEEMUCH road, and then attacks in the direction of KULAMBA. The cavalry will be posted near KHANDWA with a view to operating against the enemy's left and rear.

(3) An advanced guard (as below) will pass MOU village at 5 a.m. and occupy the high ground at HEMA BARDA and RICHA BARDA. The cavalry $\frac{1}{2}$ squadron will then move off to East and guard our left flank. Special attention to be paid to the BARGUNDA road. When HEMA BARDA and RICHA BARDA have been occupied, the main body of the 3rd Brigade will be closed up in rear of and between the two hills under cover, and will form the General Reserve under orders of the General Officer Commanding Division.

Lieutenant-Colonel Betham, $\frac{1}{2}$ Squadron 51st Cavalry (less 12 orderlies).
No. 3 Brigade Indian Infantry (less $\frac{1}{2}$ Battalion).

(4) The main body under command of General Officer Commanding

will assemble on NEEMUCH road as follows: No movement to be made across the NEEMUCH road (in a South Westerly direction) until orders are received from General Officer Commanding Division.

(a) 1st Brigade (with attached troops as below) will leave SARKANDI at 5-30 a.m. and march direct to 5th milestone on NEEMUCH road: from there it will advance via BANJARIA and BARDALA against the hills 1 mile North West of KULAMBA.

Lieutenant-Colonel Short, 1st Brigade (British). Pioneer Battalion, 1 Field Company S. and M.

(b) 2nd Brigade (with attached troops as below) will leave Mou at 5-30 a.m. and march direct to 4th milestone on NEEMUCH road; from there it will advance direct on KULAMBA.

Lieutenant-Colonel Smith, 2nd Brigade (British). 1 Field Company S. and M.

(c) The R.F.A. Brigade (less one battery) will leave its bivouac at 5-30 a.m. and march between the two Brigades to $4\frac{1}{2}$ milestone on NEEMUCH road.

(d) The mountain batteries will follow the R.F.A. Brigade.

(5) The 51st Cavalry (less $\frac{1}{2}$ squadron) will march from its bivouac at 5 a.m. via TI and CHOTI DHANEAR to PITAMPUR. From there it will advance to KHANDWA and await an opportunity for taking effective action in the fight. During the march to PITAMPUR a flank guard will be detached to hold the high ground near 4th and 5th milestones on NEEMUCH road until the arrival of the main body there.

(6) The Supply Column and 2nd line Transport with escort (Major H., 34th Battalion, 4 companies 34th Battalion), will leave camp at 6 a.m. and will halt at South end of Race Course. Animals to be grazed.

(7) The Divisional Ammunition Column will be at KAKERPURA.

(8) The BEARER COMPANIES will accompany troops, under orders to be issued by the P.M.O.

He will also issue orders and communicate them to all concerned regarding the disposition of the Field Hospitals.

(9) A central signalling station will be established on high ground near 4th milestone on NEEMUCH road: Brigadiers and Artillery and Cavalry Commanders to maintain constant communication with it.

(10) Reports for General Officer Commanding Division up to 6-30 a.m. to be sent to his camp at SARKANDI: after that hour to the high ground by the 4th milestone on NEEMUCH road.

Issued at 5 p.m. October 13, 1910.

To.

G.O.C 1st Brigade. No. 1

G.O.C 2nd Brigade. No. 2

G.O.C 3rd Brigade. No. 3

P.M.O Division. No. 4

C.R.A Division. No. 5.

H. R. Blore, Major

for Colonel,

General Staff.

Goona Division.

The ideas and maps having been received were distributed to the Officers and Warrant Officers attending, with orders to appreciate the General Idea, and to appreciate the Special Idea from the point of view of their appointments, only.

A "pow-wow" was held on the evening of the 13th, at which the appreciations were discussed and the personnel distributed as follows:—

Principal Medical Officer Goona Division, Lieutenant-Colonel Westcott, R.A.M.C.

Staff Officer to Principal Medical officer, Captain Honeybourne, R.A.M.C.

1st Brigade, Senior Medical Officer, and charge of 1 Battalion, Lieutenant Dalgleish, R.A.M.C.

2nd Brigade, Senior Medical Officer, and charge of 1 Battalion, Lieutenant Hendry, R.A.M.C.

3rd Brigade, Senior Medical Officer, and charge of 1 Battalion, Captain Bennett, R.A.M.C., Sub-Assistant Surgeon Bhat, I.S.M.D.

Mountain Batteries, Assistant Surgeon D. Silva, I.S.M.D., Sub-Assistant Surgeon, I.S.M.D.

Brigade Royal Field Artillery, Assistant Surgeon Mason, I.S.M.D.

Pioneer Battalion, Assistant Surgeon Mackenzie, I.S.M.D.

No. 1 British Field Hospital, Major Bliss, R.A.M.C., Assistant Surgeon Sherard, I.S.M.D.

No. 2 British Field Hospital, Captain Bond, R.A.M.C., Assistant Surgeon Browne, I.S.M.D.

No. 3 British Field Hospital, Captain Foster, R.A.M.C., Assistant Surgeon Whitbread, I.S.M.D.

No. 1 Indian Field Hospital, Lieutenant Watson, I.M.S., two Sub-Assistant Surgeons.

No. 2 Indian Field Hospital, Lieutenant-Colonel Jenny I.M.S., two Sub-Assistant Surgeons.

Unit Medical Officers were reminded that they were under the orders of the Officers Commanding their units, and that the senior acted as Senior Medical Officer of the Brigade; they were instructed to co-operate with the Bearer Companies.

Officers Commanding Field Hospitals were reminded that they were not now attached to brigades, but were under the immediate orders of the Principal Medical Officer of the Division, their Bearer Companies were to maintain communications with the Medical Officers of the Brigades or areas to which they were detailed, and, with their Field Hospitals. Field Hospitals were to be opened on the echelon system. Officers Commanding were to act on their own initiative and keep the Principal Medical Officer informed of their dispositions and wants, the Principal Medical Officer would be either at the Headquarters of the Division or in touch with it by signal.

Each officer was to act in his appointment exactly as he would on

actual field service; he was to issue orders to those serving immediately under him and to keep a running narrative of events, including the orders he received and issued, and the action taken in connection with them.

The Ride met the General Officer Commanding two miles out of Mhow early in the morning of the 14th; there was a council of the Divisional Staff and the Brigade Commanders at which final orders were given for the attack and medical arrangements decided. The 1st Brigade was ordered to take the Kulamba position, unaided if possible; the 2nd Brigade was to march direct to it and remain concealed in reserve. The 3rd Brigade was to await orders at Richa-Hema Barda. The guns were to open fire from the hills at 4th milestone, and the Field Hospitals were disposed as follows:—

No. 1 British Field Hospital to the 1st Brigade. The Bearer Company to follow the Brigade until it reached the zone of effective rifle fire and then take cover, looking out for a water supply for the Dressing Station. The Hospital was to remain under cover of the hills at fifth milestone, 6,000 yds. from the enemy's position, until required.

No. 2 British Field Hospital to 2nd Brigade. The Bearer Company to accompany it, and the Hospital to remain under cover of the hills at fourth milestone, also 6,000 yds. from the enemy.

No. 3 British Field Hospital, one Section to the Artillery, and three Sections in reserve at the racecourse, three miles distant.

No. 1 Indian Field Hospital to No. 3 Brigade. The Bearer Company to accompany the Brigade, the Hospital to remain at Mou village, distant 8,000 yds. from the enemy.

No. 2 Indian Field Hospital one Section to 1st Brigade. Three Sections to be in reserve at the racecourse.

NARRATIVE—The 1st and 2nd Brigades advanced as ordered, the ground was so broken and the cover so good that there were no casualties until the 1st Brigade arrived within 400 yds. of the position, and then in the assault there were 320 casualties. The hill was carried without assistance from the supporting 2nd Brigade, which had no casualties.

In consequence of this victory, the 3rd Brigade was ordered to attack the Jamli position, and the 2nd Brigade to move in support. The Bearer Companies were ordered to accompany these Brigades, and the Hospitals, including those in reserve, to proceed by the Bombay Road to the sixteenth milestone, which was about two miles from the position, and await events. This attack was unsuccessful, there were many wounded, and the Medical Services were at work all night.

At Kulamba there were 64 killed and 256 wounded, of the latter 20 per cent or 43 were able to walk to the Hospital, 60 per cent or 161 could sit up, 15 per cent or 40 required lying down accommodation, and 5 per cent or 12 could not be moved.

The battlefield was too rough for wheeled transport, the nearest road,

a "kutchra" bullock cart track, was at Gopalpura, distant a mile to a mile and a half, so the Dressing Station was formed there, the dandies were sent forward, and pioneers set to work to improve the road to the Field Hospital, which had been ordered to open at the fifth milestone.

For the removal of the wounded there were eight field, and sixteen blanket stretchers available from each Battalion, or ninety-six from the whole Brigade, and twenty dandies from the Bearer Company.

The trained stretcher bearers (two per company) were told off as experts, one to each stretcher, to supervise the untrained men, of whom 500 were handed over to the Senior Medical Officer of the Brigade.

Two journeys were made by the stretchers to the Dressing Station, whence the wounded were conveyed to the Field Hospital by twenty ambulance tongas (each accommodating two lying down and two sitting) and some country carts fitted with stretchers slung on webbing attached by double spring hooks to the framework, in two journeys.

Too much space would be required for the consideration of the appreciations and narratives of the Officers and Warrant Officers, but most of them were good and indicated the intimate knowledge of field service acquired during the previous four months' course of training.

One very marked defect was insufficient training in riding and the management of horses.

Riding mules were provided for sub-assistant surgeons; two went sick, to avoid riding, the others, with one exception, walked.

At the termination of the ride a "pow-wow" was held at which Lieutenant-Colonel Westcott gave an outline of medical assistance from the front to the Field Hospital.

In the discussion which followed, the most interesting points were:—

(1) The removal of Field Hospitals from Brigades and placing them directly under the Principal Medical Officers of Divisions. It is more than ever necessary that the Principal Medical Officer should not wander from Headquarters and its signal station; in the present fighting the front of the Division covered six miles, so that the selection by him of sites for Field Hospitals and Dressing Stations was impossible; every Officer was expected to realize the responsibility of his own particular position and to rely upon his own judgment. In the words of the Field Service Regulation Part 2: "It is necessary to train subordinates to work intelligently and resolutely in accordance with brief and very general instructions."

(2) It was considered necessary that, before entering a tactical zone, the Medical Officer of a unit should have a parade of all ranks to ensure that they are fully acquainted with the use of the first field dressing and the arrangements for dealing with wounded from the battlefield to the Dressing Station. The position of helpless wounded should be marked by a rifle stuck vertically into the ground by the bayonet.

(3) The General Officers Commanding were anxious that all Medical

Officers should realize that the object of war was to defeat the enemy, and that they should studiously avoid the disclosure of positions and intentions by thoughtless exposure of the Red Cross on ambulance tongas, mules, &c., they should practise concealment until operations in the presence of the enemy were over.

(4) The importance of reducing stretcher transport to its utmost limit by advancing the wheeled transport as near to the wounded as possible.

(5) The effective range of field guns, given in Field Service Regulations as 4,000 yards, was considered by the Commandant Royal Artillery to be underestimated; as far as ours were concerned, he was of opinion that a Field Hospital would not be safe within 7,000 yards.

(6) Field Hospitals should not be opened until there was indication of the result of a battle.

(7) The communication of strategical and tactical operations by General Officers Commanding to Principal Medical Officers. The General Officers Commanding approved of this in principle, but explained that situations sometimes arose in which the intentions of the General Officers Commanding were not communicated to anyone until the actual moment of action. Medical Officers should possess a sufficient knowledge of tactics, topography, transport and other military matters to enable them to co-ordinate and operate in harmony with all other branches of the service.

(8) The Transport Officer considered that Indian Army Transport carts are unsuitable for the transport of wounded; he would always prefer country carts fitted with the spring hooks mentioned above.

AN EXPERIMENTAL MARCH TO INVESTIGATE THE AMOUNT OF FOOD REQUIRED BY MEN ON ACTIVE SERVICE.¹

(Continued from page 308.)

APPENDIX I.

Diary of Experimental March.

October 11, 1909.—Arrived Tidworth at 9 a.m. Paraded twenty men of Loyal North Lancashire Regiment under Captain Body; weighed, took measurements, pulses, and blood pressures; also of three men, Army Service Corps; three men, Royal Army Medical Corps; and three officers, Royal Army Medical Corps. Marched at 11.30 a.m. for West Down. Day bright and cool, fresh S.S.W. breeze blowing, few clouds. Road undulating and on grass; pleasant and easy going. Halts and distance as in annexed table. About 1.30 got cloudy, and by 2 p.m.

¹ Under the supervision of the Research Committee—Hygienic Section, Army Medical Advisory Board.