TRAINING A (MECHANIZED) CAVALRY FIELD AMBULANCE—EGYPT, 1936.

BY MAJOR J. BRYAN FOTHERINGHAM.
Royal Army Medical Corps.

In January, 1936, No. 1 Cavalry Field Ambulance was formed at Crookham Camp, and proceeded to Egypt in early February as a "reinforcement" medical unit for that particular 1936 emergency.

On arrival in Egypt the unit was accommodated under canvas on a patch of desert at Helmieh some ten miles from Cairo. Although No. 1 Cavalry Field Ambulance was the first fully mechanized medical unit ever to leave England, the 2/3rd Cavalry Field Ambulance—also fully mechanized—had already been formed in Egypt and had proceeded to the Western Desert some time before our arrival.

We were more or less up to strength in N.C.O.s and men, but not so as regards officers. Our C.O. was Lieutenant-Colonel R. C. Paris, R.A.M.C., and he was supported by three temporary R.A.M.C. officers, a regular quartermaster and myself. In addition, we had attached to our unit a most efficient, zealous, and charming R.A.S.C. officer. Our Serjeant-Major and N.C.O.s were all serving soldiers, but with, I think, one exception, all privates were reservists serving on a six months' contract. This was the case with our R.A.M.C. personnel, and most of the R.A.S.C. were also reservists.

After our arrival at Helmieh on February 14 our transport gradually arrived, and we soon had quite an imposing car park.

As second-in-command of the unit my duties were practically wholly those of training officer, and I was glad that I had voluntarily taken a refresher course of lectures on gas a month or two before joining the ambulance. Not one of us had any idea how a mechanized field ambulance functioned. Perhaps I had better state here that I am making no remarks in this paper on tactical handling of a cavalry field ambulance. Unfortunately, as a reinforcement unit we never had a single opportunity of working with a cavalry brigade on any exercise, and also at a comparatively early date after our arrival in Egypt many of our officers and men were posted elsewhere, either for temporary or permanent duty. On one or two occasions drafts of men from a general hospital in Alexandria joined us, and they received the same training that the original members of the unit had received. We made it a point in our

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training to change over N.C.O.s and men to the different jobs in the unit where this was possible.

I am not going into many details of the organization and equipment of a cavalry field ambulance. Full details regarding personnel, transport and equipment can be found in the Field Service Manual for the Medical Services of the Army, 1932, and from War Equipment Tables, etc. An excellent summary of the personnel, transport, etc., of a cavalry field ambulance is given in Chapter VII, Part II, of "The Army Medical Services in War" by Lieutenant-Colonel T. B. Nicholls, R.A.M.C. It will be sufficient to say here that a cavalry field ambulance is a small mobile medical unit and that it is divided into a headquarters and four sections.

The personnel and transport consist of ten officers, a hundred and sixty-seven other ranks and some forty vehicles.

The basic principles of our training were that the R.A.M.C. personnel should know the organization of a cavalry field ambulance, that they should have a sound working knowledge of the contents of the different panniers, and, in fact, of all medical and ordnance equipment, that they should know their first aid thoroughly, know how to load and unload lorries speedily, be able to open and close main dressing stations and advanced dressing stations, and that they should be thoroughly trained in defence against gas and in the treatment of casualties from gas.

It was equally necessary that our R.A.S.C. personnel should know the organization of the unit, that they should be proficient in the care and maintenance of their vehicles, that they should be trained in defence against gas, that as many as possible should have a good working knowledge of map reading, and that all should become expert at driving any type of unit vehicles over desert country.

We commenced training within three days of our arrival in Egypt, and the following is a list of training items carried out in the unit as far as the R.A.M.C. personnel was concerned. I doubt if it covers all our training activities.

Lectures and Demonstrations.

PRACTICAL TRAINING.


I think I should say here that our gas training was taken seriously. Every aspect of chemical warfare was studied. The care of our respirators was regularly carried out. We never opened an M.D.S. or an A.D.S. without making a first aid and decontamination centre down wind. Much work was done by the men when actually wearing their respirators. At my request, not theirs, they generally wore their respirators when I lectured them on chemical warfare!

Our training was carried out either in camp at Helmieh or at some spot in the desert anywhere between Cairo and Suez. We bivouacked out for a night in the desert on several occasions. This gave us practice in making our M.D.S. and A.D.S. in such a fashion that light could not be seen by hostile aeroplanes, etc. We frequently went runs at night along the Suez road, using only our side and tail lamps. Not nearly such an easy matter as it sounds, particularly on really dark nights! On moonlit nights we did a certain amount of desert driving. To drive expertly over desert country takes much experience. It is very easy to get "bogged" in soft sand. Drivers have to learn to avoid this, and if stuck in soft sand to know how to extricate their vehicles.

With regard to the training of R.A.M.C. personnel in driving motor vehicles, we tried this for a little but could get no official permission to carry on. Personally, unlike many officers in our corps, I do not think it feasible that we should have our own R.A.M.C. personnel driving and looking after field ambulance transport, although it might be useful if a percentage of the men knew how to drive. I found it quite simple to drive an 18 h.p. Austin touring car, fitted with large tyres, over the desert, but certainly
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could not have passed any driving test when attempting to drive a 30 cwt. lorry—even on the level.

Although our 30-cwt. 6-wheeled lorries and 6-wheeled ambulances stood up well to the work they did over rough country, the general consensus of opinion was that we should have been better served with 4-wheeled Ford V8 vehicles fitted with large “desert tyres.” We considered that the motor cycles were adequate for intercommunication purposes, although they frequently broke down in the desert. The training of the R.A.S.C. personnel was effectively carried out by Lieutenant A. Provan, R.A.S.C., our attached R.A.S.C. officer.

A point I should like to bring in here is the answer to an obvious question. How long did it take to train this Cavalry Field Ambulance up to a standard when it was fit to take the field in actual warfare? I consider a fair answer to this is to say four weeks. We were inspected by the D.D.M.S., Egypt (Colonel J. H. Campbell, D.S.O.), four weeks after our arrival in Egypt. We “did our stuff” in camp and as realistically as possible in the desert, and were given an extremely good report by the D.D.M.S. for our efforts. I still think we put up a very decent show for him!

THE "STRETCHER SPLINT."

I have mentioned earlier that the R.A.M.C. personnel were given instruction in the application of the Thomas splint and in the “Stretcher Splint.” An explanation of the latter is necessary as few people seem to know it. In late 1918, when I was with a field ambulance in the 7th Division, one of our officers produced a cutting from some medical journal explaining how a stretcher could be used to provide extension in the case of a man with a fractured femur, where no Thomas splint was available. We were out of the line at the time and practised this method with the help of some of our men. I do not know who first called it the “Stretcher Splint,” but I have always used that term myself. During the last “push” in Italy in 1918 I was running an A.D.S. and my stock of Thomas splints ran low; I then used this method of extension on one or two German or Austrian prisoners with fractured femurs, and with satisfaction to both sides.

Personally, I consider that all R.A.M.C. personnel should know this method. It is not meant to supplant the Thomas splint, but there are many occasions in war when one just cannot raise a Thomas splint when it is required. A patient with a fractured femur can be first-aided by this method until such time as he can be put up on a Thomas splint.

Fig. 1 shows a man on a “Stretcher Splint” side by side with a comrade put up on a Thomas splint. It is a very simple method, not so painful or so brutal as it looks, and can be carried out by two men.
The details of applying this substitute for a Thomas splint are as follows:

1. A clove hitch with a bandage or puttee is placed round the foot of the injured limb and fastened to a near pole and runner of the stretcher.
2. The sound limb is bandaged loosely to the injured limb.
3. Large pads are then placed in each axilla.
4. Wide bandages are placed over these pads and tied in half knots over the shoulders, then crossed under the patient's head and tied loosely to the stretcher poles.
5. The foot end of the stretcher is then raised until the stretcher is perpendicular. The weight of the patient gives extension which is increased by tightening the two shoulder bandages. These are now securely tied to the stretcher poles and runners.
6. The stretcher is lowered, the wound dressed, and Gooch splinting if available applied.
7. Pads are placed between the ankles and knees. The bandage already round the ankles is tightened and a broad bandage placed firmly round both knees.
8. A figure-of-eight bandage is then applied round both feet and fastened off to both handles of the stretcher.

If rough ground has to be traversed, then a broad bandage can be placed round the stretcher and patient at the level of his hips and securely tied.
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Note.—It is important that the clove hitch be made with strong material, and the knots very securely tied. Otherwise, when raising the stretcher to a perpendicular position, a worse accident than a fractured femur may occur to the patient. He could easily sustain concussion or a broken neck.

The larger the pads in the axillas the less pressure there will be on the axillary arteries.

I have purposely not given a list of bandages of definite lengths and description as this is pointless where improvisation may be essential.

FIG. 2.—Section Lorry Load.

LOADING OF VEHICLES.

Much time was spent in practising the loading and unloading of vehicles. There was very little difficulty in doing this with headquarters' lorries, and no special method of packing these vehicles was evolved. It was a different matter with the section lorries, as a section lorry carries eight men and all the section equipment. Carelessly loaded lorries driven over rough country lead to damage of equipment and considerable discomfort to the personnel carried in the lorries. We found that to make satisfactory advanced dressing stations we had to carry some additional equipment. Our section lorries had a load capacity of 30 cwt., and they carried between 27 and 28 cwt. for many weeks without difficulty over very rough country. Strictly speaking, we had no right to carry more than 75 per cent of a vehicle's load capacity.

An average time for a section's personnel to load a section lorry was three minutes, and our best time was two minutes fifteen seconds.

Fig. 2 shows our method of loading a section lorry.

The additional equipment that we carried weighed 75 pounds and consisted of the following items:
It is possible that by this time a gas treatment pannier, pyjama suits and bleaching powder may form part of a section's lorry load.

Formation of Main Dressing Stations.

Before giving details of the methods we adopted in forming M.D.S.s and A.D.S.s, I must mention something about "covers, waterproof, black, G.S. 30 feet by 20 feet." In the Field Service Manual for the Medical Services, 1932, 8 of these are shown, 4 for headquarters and 1 for each section.

In Colonel Nicholls' book (page 113) he gives 5 as the total number, 1 for headquarters and 1 for each section.

The waterproof covers drawn by No. 1 Cavalry Field Ambulance in England were approximately 30 by 30 feet, and their weights varied between 161 and 252 pounds, depending on the amount of impregnated tar. They were black, dirty, unwieldy to handle, and when in use soon showed signs of wear. When used to form the roofs of our A.D.S.s they must have shown up beautifully from the air. We exchanged all but one of them in Egypt for green rot-proof canvas covers, weighing "officially" 190 pounds, but actually weighing about 150 pounds. We found these new covers very satisfactory and very much easier to handle. The old black covers looked to me to be similar to the type of covering one sees over railway goods wagons.

Now for our type of main dressing station. It was a very simple affair. On arrival at the site selected for a M.D.S. four lorries were placed end to end so as to form two sides of a square, and then a 30 by 30 feet canvas cover was drawn over their tops to form a roof, which was prevented from sagging by a criss-cross arrangement of ropes fastened to the lorry roofs. While this was being constructed the operating tent was pitched and the gas panniers placed at the site chosen for the first-aid and decontamination centre for gas cases. For this purpose we had retained one of our old black tarpaulins, which was painted in white, showing the different "rooms" of the decontamination centre. It was very useful for instructional purposes. When our large red cross on its white background had been pegged out, panniers, etc., unpacked, operating tent equipped, evacuation centre completed (the same pattern as our section A.D.S.), cookhouse functioning, the remaining headquarters transport in line, and the latrine and urine pits dug and screened, the M.D.S. was then ready to receive casualties.
Fig. 3.—M.D.S., etc., from 4,000 feet.

It took us on the average thirty minutes to form a M.D.S. from the time of arrival of the Headquarters at the M.D.S. site. Fig. 3, taken from the air at 4,000 feet, shows the lay-out of our M.D.S.

If considered necessary to form a more elaborate main dressing station than the standard one of our unit, then a receiving section, mortuary, etc., could easily be formed with the 30 by 30 feet canvas covers, plus the small additional equipment we used in forming our A.D.S. shelter. However, the policy in a mobile unit must be to try to cut down loads and not to increase them.

**Advanced Dressing Stations.**

An A.D.S. could be opened in fifteen minutes by a well-trained section. That is from the time the section lorry with its equipment and personnel arrived at the selected area. Our expert in the formation of the particular type of A.D.S. shelter we eventually found most satisfactory was Lieutenant (now Captain) J. Shields, R.A.M.C. The principle was to use the lorry canvas hood to form a lean-to shelter on one side of the lorry, to secure the 30 by 30 feet canvas cover to the lorry roof and to carry the cover away from the lorry on three ropes which acted as ridge poles. These ropes were attached to three poles securely fixed in the ground. They prevented the roof from sagging too much and helped to increase the head room available in the shelter. The sides of the canvas cover were then pegged down.

After much practice it was pitched more or less as a drill. The section serjeant and four R.A.M.C. privates erect the shelter and the lean-to, while the two corporals unload the equipment through the side of the lorry from under the cover and then unpack it. As stated before, the personnel of the section is one R.A.M.C. officer and seven R.A.M.C. Other Ranks:

- One serjeant for regimental duties.
- One corporal for clerical duties.
- One corporal for nursing duties.
- Two privates for nursing orderlies.
- One private for cook.
- One private for batman.

Then there are the three R.A.S.C. drivers, one for the section lorry, one for the two-seater Austin car, and one for the section motor cycle used for intercommunication. As soon as the section reaches the site for an A.D.S. the first duty of the R.A.S.C. drivers is the care and maintenance of their vehicles. Actually, they generally gave a hand at putting up the A.D.S., and this was a help on a really windy day. The ground area covered by our A.D.S. was 115 square yards.
It is considered that 30 by 20 feet covers are too small, and anything above 30 by 30 feet too large for the personnel of a section to deal with. Such an A.D.S. can be closed and the lorry loaded with equipment and personnel in ten minutes. I think our best time was six and a half minutes.

**Fig. 4.**—Uncamouflaged A.D.S.

**Fig. 5.**—Camouflaged A.D.S.

**Capacity of A.D.S.**

It easily provided "head cover" for the three section vehicles, and comparatively luxurious living accommodation for the section personnel when not receiving casualties.

As an A.D.S., it could accommodate 18 to 20 stretcher cases, 12 walking wounded and the personnel of the section. This still left sufficient room
for the section personnel to dress "wounded" and have access to the equipment. The head-room was adequate.

If used as the evacuation section of the M.D.S. it could accommodate 57 patients (27 stretcher cases and 30 walking wounded).

<table>
<thead>
<tr>
<th>Location</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under lorry lean-to portion</td>
<td>16</td>
</tr>
<tr>
<td>In interior of lorry</td>
<td>12</td>
</tr>
<tr>
<td>On lorry front seat</td>
<td>2</td>
</tr>
<tr>
<td>Under canvas cover</td>
<td>27</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>57</strong></td>
</tr>
</tbody>
</table>

Note:—Two bearers can remove 27 stretcher cases from under the canvas cover in five minutes; for example when M.A.C. ambulances are clearing the evacuation section of the M.D.S.

It may be considered that I have unduly stressed my remarks about these canvas covers, but I think we must presume that in mobile warfare there will be numerous occasions when there will be no buildings which can be utilized by a cavalry field ambulance for M.D.S.s or A.D.S.s. Our type of A.D.S. was not an elaborate affair, and compared with some of the A.D.S.s formed in static warfare where R.E. aid and plenty of material were available, was really only a collecting post. On Gallipoli in 1915, I saw something of the suffering of wounded men lying in rows under a strong sun, and the type of A.D.S. that we formed in No. 1 Cavalry Field Ambulance at least does give:

1. Protection from sun, rain, and to some extent from cold.
2. Some protection from dust and wind.
3. Some protection against being "spotted" by hostile aeroplanes if well camouflaged and well sited.
4. Temporary protection from mustard gas sprayed from the air.

Walking Wounded Collecting Posts.

We made no attempt to form W.W.C.P.s. As stated in para. 217, R.A.M.C. Training, 1935: "During mobile warfare, separate arrangements for the collection of walking wounded will seldom if ever be made."

Camouflage.

We were never able to find out the policy about camouflaging or otherwise of advanced dressing stations. I was very keen to ascertain whether our particular type of A.D.S. could be camouflaged from air observation or not. It appeared to me that although we might demonstrate to the enemy that the M.D.S. was a medical unit, the A.D.S. would have to take its chance. If the tops or roofs of our A.D.S.s were each covered with a large red cross on a white background, then they might give hostile aeroplanes information regarding the concentration of troops. On the
other hand, we knew how difficult it was for mechanized vehicles to avoid being seen from the air.

In late April, 1936, the Officer Commanding No. 208 (A.C.) Squadron, R.A.F., kindly agreed to have our unit photographed from the air, so one afternoon we proceeded some thirty miles along the Suez Road and bivouacked near No. 2 Landing Ground, Suez. There we formed our usual type of M.D.S. on bare sandy ground, and then placed two A.D.S.s near by in scrub.

One A.D.S. was uncamouflaged and of our by then stereotyped pattern (fig. 4). The other was formed of a canvas cover previously painted by ourselves in the usual camouflage manner suitable for Egypt. Unfortunately, we could not paint the lorry hood cover as well. It would have taken ages to get permission! We made this A.D.S. as low as possible, and in such a manner as to give the minimum amount of shadow. We tied bits of scrub over it and threw sand on its roof (fig. 5). Finally we brushed over all adjacent wheel tracks, as we knew that these frequently showed up quite clearly from the air.

The following morning No. 1 Cavalry Field Ambulance was photographed from the air at 4,000, 6,000, and 8,000 feet. Fig. 3 was taken at 4,000 feet. From this photograph it is possible to see a considerable difference in the appearance from the air of the two A.D.S.s. The dark portion of the camouflaged A.D.S. is shadow thrown by the lorry and lorry lean-to.

A few days later I visited No. 208 Squadron at Heliopolis and talked to their expert in aerial photography about the aerial photographs of our unit. He gave me the following information—some of which I already knew and some which I wished I had known:

1. That in Egypt shadow was the greatest difficulty when trying to camouflage anything.
2. That with a larger canvas cover and making the A.D.S. tortoise-shaped and tapering all round, the A.D.S. would then probably have been invisible at say 4,000 feet.
3. That shadow could be camouflaged to a considerable extent by spreading something like "dirty" whitewash here and there over the shadow area.
4. That the A.D.S., situated as it was in scrub, would probably not have been spotted by an enemy observation plane flying at about 8,000 feet, and might easily have been missed by an observer flying at a considerably lower height.
5. That it was very important to pick a good site, shadow of hills, etc.
6. That our camouflaged A.D.S. was a very good piece of camouflage for a first attempt.
The R.A.F. officers I saw were astonished at what, if the necessity arose, the "contents" of our A.D.S. could be.

Unfortunately, we were never able to carry out any further experiments in camouflage as shortly after this our unit began to break up, and training became increasingly difficult to arrange for.

**Conclusion.**

I have endeavoured in this paper to give more or less in detail how No. 1 Cavalry Field Ambulance was trained. We were never put to any practical test which might have shown where our training was defective. I feel now that more attention should have been paid to map reading for R.A.M.C. personnel. We had a class for officers and there was some training for the R.A.S.C. personnel. As a unit we were essentially mobile, and I think we were fairly efficient. I know that we were all very keen.

There are many points in connection with a Cavalry Field Ambulance which I have left untouched, particularly the very important one of its tactical handling in mobile warfare. The organization and equipment, etc., of this type of unit may already be very different from what it was in 1936. If so, I wonder if one section is now equipped solely for the treatment of gas casualties and decontamination? Whether all 7-H.P. Austin cars have now box bodies? (Section Austins could carry extra petrol, gas treatment pannier, chloride of lime, etc., beside the section officer's valise!) Whether small Austin box cars could possibly be fitted with some gadgets so that, if necessary, they could carry one or two stretcher cases? Is there now wireless for intercommunication purposes as well as motor cycles? Lastly, have those "urinals, glass, plain" been scrapped?

I am indebted to Major H. W. Daukes, R.A.M.C., for the photograph of the "stretcher splint"; to O.C., No. 208 (A.C.) Squadron, R.A.F., for the aerial photograph; and to Lieutenant-Colonel R. C. Paris, R.A.M.C. (R.P.), for photographs Nos. 4 and 5.