A DESCRIPTION AND NOTES ON USES OF A MOBILE DRESSING STATION.

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"The medical service in the field is organized to ensure rapid evacuation of sick and wounded, including prisoners of war. The efficiency with which this system is organized and administered greatly affects the mobility and morale of the Army." (Field Service Regulations, Vol. I, 1930, Section 112.)

With the idea of assisting in the evacuation of sick and wounded a Mobile Dressing Station has been designed. The following short description will enable the main points to be understood.

**DESCRIPTION OF A MOBILE DRESSING STATION.**

The dimensions of the body are as follows: Length, 14 feet. Height (inside): 6 feet 6 inches (not as shown on plan). Width (inside): 6 feet.

There are two entrances, at the front and rear, in a central position, 2 feet 6 inches wide; the doors open outwards, and are fitted with gas curtains.

The dressing station is lighted by circular port holes at the front and rear, 9 inches in diameter. There are also two lights in each side, each light 4 feet by 1½ feet. In the roof there is a light 2 feet by 1½ feet placed directly over the stretcher (*vide* plan).

Windows are to be gas tight when closed, made of triple glass, and fitted with screens or curtains to prevent light shining through at night.

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[Diagram of a Mobile Dressing Station]

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There are two ventilators in the roof as in modern buses, capable of being made gas tight.

The window area (approximately 29 square feet) gives ample lighting by day. Electric light, from an accumulator beneath the floor, is available at night. The main illumination should fall on the stretcher. The current would be generated by the engine pulling the Mobile Dressing Station.

There are cupboards and boxes, made preferably of light metal material. There is a cook's cupboard for medical comforts, crockery and cooking utensils; the top of cupboard is used as a table by the cook. Also a
cupboard beneath the sink for cleaning materials and oil for the stove. There is a linen cupboard for pyjamas, blankets, etc.

Equipment boxes are arranged as shown in the diagrams; there is a fitment on top of the boxes to allow a loaded stretcher to rest thereon without the patient coming in contact with the box underneath.

The equipment boxes provide seats for two patients when the stretcher is not in position. Seats should be upholstered in washable leather. Medical equipment is carried in the equipment boxes.

A shelf is provided 6 feet long by 6 inches wide, 3 feet 6 inches from floor, hinged on to the near side of the body, supported by brackets, to hold bowls, trays, etc., while a patient is being dressed.

There is a table hinged to the near wall for the use of the clerk when recording particulars in the admission and discharge book, field medical card, etc.

A stand like an umbrella-stand is provided for carrying an oxygen cylinder.

A bottle rack is placed as shown on the plans, padded for carrying containers (? vulcanite) of lotions (eusol, bicarbonate, etc.) and anaesthetics. It is below the level of the loaded stretcher.

A sink 2 feet by 1 foot by 1 foot is placed as shown on the plans. The water tank above the sink is fed by pumping from a larger tank beneath the floor; the sink discharges by a pipe through the offside wall near the floor. The water tank above the sink should be 1 foot by 1 foot by 6 inches and would hold 3 gallons (approximately). The water tank beneath the floor should be accessible for cleaning, filling, and chlorinating, and should hold about 15 gallons, if possible.

Steps are not shown in the diagrams; they should be hinged to turn up at the entrance and exit as in a motor ambulance, or preferably, a ramp should be fitted at each end. The ramps should stow away beneath the floor when not in use.

The chassis should be like the usual trailer chassis, sufficiently strong to carry the weight over rough ground. The four-wheeled type is preferable, the tyres being pneumatic. The chassis should be fitted with a hand brake, operated from inside the body. The springing should be such that whilst sufficiently sprung for easy travelling, the vehicle will not sway with the movements of the personnel when the dressing station is in use halted.

The trailer could be adapted for traction by a tractor, motor ambulance, or light lorry. In an emergency it could be manoeuvred into position by hand.

It is for consideration whether the mobile dressing station should be self-propelled, e.g., the chassis of a forward drive twenty-eight-seater bus could be well adapted to the needs of the body. There would be only one entrance and exit door for the stretcher in such a case, at the rear. A side entrance for personnel or walking patients could be used. The use of such a bus chassis would also permit the “cooking area” to be cut off by a
partition from the "dressing area." The self-propelled dressing station could be used for drawing "ambulance trailers" in which the patients are "retained" till evacuation is possible. Such "ambulance trailers" could also be drawn by light lorries, buses, armoured fighting vehicles, arriving and departing from the scene of action.

If in trailer form, communication between the drawing agent and the trailer dressing station would be necessary; a simple communication cord would suffice.

The medical equipment might be as follows: Suitable contents of Nos. 1 and 2 surgical panniers. Splints, Thomas, thigh and arm, with hinged rings, could be affixed to the walls on hooks. An oxygen cylinder with Haldane’s apparatus would be useful. Bleaching powder and additional medical equipment for gas cases should be supplied.

Other equipment would consist of: blankets, pyjama suits, stomach warmers; medical comforts; primus stove; saucepan; kettle; drinking basins; spoons; stationery (admission and discharge book, field medical cards); slop bucket; fire extinguisher fixed to wall; an anti-gas spray.

Spare equipment, such as extra supplies, could be carried in the light lorry which carries personnel and draws the mobile dressing station.

**General Uses of a Mobile Dressing Station.**

A mobile dressing station provides shelter, which is the great essential when dressing casualties. Rain, wind, dust, heat and cold—all these are handicaps to be avoided, if possible. A mobile dressing station provides shelter where neither buildings exist nor tents can be used. This means that it can get further forward on occasions than an advanced dressing station relying on buildings for shelter.

A mobile dressing station is more mobile than the present advanced dressing station. Even with a mechanized cavalry field ambulance it takes thirteen minutes to open an advanced dressing station and nine minutes to close it. Mobility is of especial use in a retirement and there is hardly a limit to the number of positions a mobile dressing station could take up in these conditions. There is no loss of time packing up and therefore possibly more adequate treatment for the wounded.

In an encounter battle, although the mobile dressing station would be following with the M.T. in bounds, it would probably be brought into action at least as quickly as an advanced dressing station of an ordinary field ambulance could be established at present.

Another advantage is that the equipment is where it is wanted when required, and not possibly packed in more than one wagon some distance away.

It is considered that the use of mobile dressing stations would assist especially in the evacuation of wounded from armoured mobile forces, e.g., tank brigades and armoured car regiments.

A mobile dressing station would be capable of conforming with the
rate of movement of an armoured force, e.g., it can easily do 30 to 50 miles a day, or move with a brigade at 8 m.p.h. Advantage would be taken of the halts to deal with casualties; the long halts required by the brigade would be of especial service.

**ARMoured Car Reconnaissance.**

It is suggested that the regimental medical officer should accompany the Armoured Car Regiment with, say, two motor ambulances and a mobile dressing station instead of his medical van. By keeping with the headquarters of the regiment, he receives information of the location of casualties amongst the personnel of the armoured cars reconnoitring an area. He could proceed there—escorted by an armoured car if necessary—with his mobile dressing station and an ambulance, pick up and dress his cases and rendezvous again with the cases at the headquarters of the regiment. He would know the location of the headquarters of the regiment, either by previous arrangement or by wireless received by his escorting armoured car.

Other cases might possibly be returned on the armoured cars to the headquarters of the regiment. These the regimental medical officer dresses and loads into his ambulances. He can always re-dress cases and feed his patients at halts. His staff would be his orderly and R.A.M.C. stretcher bearers and ambulance orderlies. He might want a cook extra.

**'Bus Columns.**

Columns for the conveyance of infantry, when accompanying an armoured force, must obviously have medical personnel and motor ambulances in order that these foot troops may keep pace with the force. Casualties from enemy air action, raiding armoured fighting vehicles, accidents, would be expeditiously dealt with in a mobile dressing station, then passed to the accompanying motor ambulances and be carried forward with the column.

**A Mixed Tank Brigade in the Attack.**

With a mixed tank brigade in attack a tank regimental aid post has been suggested, and there is much in favour of it. It would at least carry the regimental medical officer and his orderly and dressings. During the short halts, when the tank companies are rallying, the regimental medical officer might be able to dress cases and possibly even collect some into his tank. If he could not collect them, he would wire back their location to "B" echelon. It would then be the duty of the O.C. Field Ambulance to direct his light sections with motor ambulances to the localities, with an escort of armoured fighting vehicles if necessary.

The tank regimental aid post is not established at present, and unarmoured vehicles, whether motor cycles or mobile dressing stations, would be unreliable in the attack. This means that casualties could not be collected until after the attack. If the attack is successful, delay, with
its consequences, would be the main adverse circumstance with which to contend.

The location of casualties would be notified by other armoured fighting vehicles during the action to Brigade Headquarters and so back to "B" echelon. The O.C. Field Ambulance at "B" echelon could pass this information forward by his motor cyclists to his sections. Alternatively, the information regarding the location of casualties could be received direct by the light sections from Brigade Headquarters if the light sections had wireless.

The light sections of the Field Ambulance should be well forward, close to "A" echelon—say, within two miles—with an escort of armoured fighting vehicles if necessary.

With the personnel of the section as at present constituted should be the regimental medical officer, regimental stretcher bearers, a mobile dressing station and, say, four motor ambulances.

The order to search the ground would come from the Brigade Commander, who alone would be in a position to know whether and when this would be feasible.

The regimental medical officer and regimental stretcher bearers would search the ground, give first aid to the wounded and concentrate them at suitable points to which the mobile dressing station could get forward or from which the field ambulance bearers could move the cases to the mobile dressing station. After being dressed, the casualties would be loaded into the accompanying ambulances and evacuated to "B" echelon. The regimental medical officer and regimental stretcher bearers would have to return to "B" echelon and would need transport—lorry or ambulance.

When the mixed tank brigade is withdrawing after action to its rendezvous with "B" echelon, it may be necessary on occasion to send up motor ambulances and a mobile dressing station to meet the brigade and relieve it of casualties returning in armoured fighting vehicles. An escort may be necessary again here. This movement would probably be to a flank out of the line of the successful advance just made by the brigade, and therefore these cases would not be collected by the light sections searching the battle ground.

It is suggested that the collection of casualties under the above conditions, where the regimental medical officer is unable to accompany his unit into action and must wait till after the action, renders the appointment of regimental medical officer obsolete, and it would be better for the work to be done by field ambulance personnel. The concentration of the brigade at "B" echelon in the intervals of fighting will also lend itself to concentration of medical work and personnel at the field ambulance. In a brigade attack it would possibly be better to consider the brigade as a whole rather than its individual components and collect from the brigade area—this again means that the regimental medical officer would not be required, but
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the collecting might be performed by two or three sections of the field ambulance, a saving of officer personnel being effected.

The Approach March of a Mixed Tank Brigade.

(a) It does not seem possible or necessary to have medical personnel with the vanguard.

(b) With the main guard, depending on its strength, should be a medical officer with his tank regimental aid post. Casualties in the van, flank or main guards could be sought, dressed, collected or left for the people behind, their location being notified by wireless as usual.

If no armoured regimental aid post is provided no medical personnel could accompany the main guard (nor the main body of “A” echelon). The nearest medical personnel would be at “B” echelon, unless light sections and mobile dressing stations under escort could be close up, say two to three miles behind “A” echelon. The location of casualties would be passed back as usual.

Medical Arrangements at “B” Echelon.

(a) On the March.—The field ambulance with “B” echelon would be closed. If “B” echelon is attacked from the air or by raiding armoured fighting vehicles there might be some casualties. A mobile dressing station would be of use here—the patients when dressed being transferred to the accompanying motor ambulances and carried forward on the resumption of the march.

(b) Halted.—The field ambulance, centrally sited in the perimeter camp, would open up the main dressing station, send out motor ambulances as necessary and prepare to receive casualties.

If dressing stations could not be opened at once owing to rapid movement of the force, casualties would be much better attended to in mobile dressing stations than in motor ambulances.

If the main dressing station could be opened, the mobile dressing stations would not be as necessary, but even here they might be used as dressing rooms or operating theatres, especially if patients are retained some days at “B” echelon before it is possible to evacuate them.

The personnel of the Headquarters of a cavalry field ambulance should possibly be on a surgical team basis in view of the retention of patients for some days.

(c) Evacuation from “B” Echelon.—However long retained, it will be possible at some stage to evacuate the patients from “B” echelon. Long distance evacuation in convoys taking two to three days is envisaged. Mobile dressing stations would be easily convertible to the role of travelling operating theatres accompanying the convoys of stretcher cases in motor ambulances.

Walking wounded (if these had not all become stretcher cases) might
have to be evacuated in returning lorries—here again convoys should be accompanied by medical personnel and mobile dressing stations.

Twenty-eight seater buses and lorries might be converted to the carriage of stretchers, if suitable apparatus were designed and carried, and an economy in motor ambulance transport thus effected.

CONCLUSION.

It is hoped that the utility of a mobile dressing station in war has been demonstrated. In peace, on manoeuvres, it should also prove useful. In civil life the mobile dressing station might be found useful whenever large bodies of people gather together, e.g., at race-courses, etc. It might be of service on the roads for accidents; at large fires; mine and train accidents, etc. Stationed at the main fire station of a large town frequent opportunities for its use would be found. The Voluntary Aid Societies and motoring organizations might be persuaded to adopt the idea and construct experimental dressing stations.

No doubt modifications of the actual dressing station shown in the plans could usefully be made, but it is suggested that the underlying principle of a really mobile dressing station could be adopted with advantage to the efficiency of the collection, treatment and evacuation of wounded.