man at "the Front" is and must be the only one to judge in individual cases of immediate and life-saving necessities, those who see the later results of treatment are perhaps called upon to show in what directions any method may require modification.

The cases mentioned are reported with the sanction of Colonel Robinson, C.B., A.M.S., Officer Commanding the Hospital.

The sketches are the work of Cpl. Miller, R.A.M.C.

NOTES ON STABLE MANAGEMENT.

By Temporary Captain Herbert A. Lake, M.B., M.R.C.V.S.

Royal Army Medical Corps.

The Royal Army Medical Corps has supplied some of the best horsemen that Great Britain has known. The regular Royal Army Medical Corps officer, too, is generally a sportsman and has a considerable knowledge of horses, especially if he has served abroad. But at the present time many temporary officers find themselves with a horse of whose habits of life they know little, or, perhaps as transport officers of field ambulances, in charge of a number of animals.

It is therefore at the suggestion of Colonel Blackham, the A.D.M.S. of the cavalry division to which I belong, that these few notes are written with a view to helping those officers who have not had previous experience with horses, as grooms and subordinates are often ready to take advantage of a lack of knowledge on the part of the officer.

There is not much to be said about stabling on active service, often one has to be content with the most dilapidated shanty and at times the horse is fortunate if he has even a roof over him. But with a little ingenuity the transport officer can generally make the stable fairly comfortable. The flooring may be improved by draining and laying with ashes or gravel, and though straw or peat moss may be difficult to obtain under service conditions, sawdust, shavings or dried leaves make good substitutes. Although the horse is able to stand for long periods and rests while doing so, as practically all muscular strain is taken from the legs by a stout band—the suspensory ligament—yet he should be encouraged to lie down whenever possible. Improvised screens will keep out bad weather and draughts; but horses standing in unprotected places should be turned back to the wind, a position they always assume if free to take their choice. Projecting nails or hooks must be searched for and removed or knocked flat, as, unnoticed, these may be the cause of severe wounds. Animals inclined to kick or worry others should be either kept apart or separated by logs suspended from the roof.

Feeding.—Before entering into details of feeding, one or two anatomical facts will enable a medical man to understand clearly the principles of horse-feeding.
Clinical and other Notes

Firstly, the horse has a small stomach—comparatively very small—but an intestine of great size, where large quantities of food can be stored. Secondly, there is no gall-bladder, so that the flow of bile is continuous. The stomach is said to work at its best when not more than two-thirds full. A horse when turned out at grass is in the nearest approach to the natural state that we are likely to see him, and he then spends almost the whole of his time feeding. The stomach, as we have said, a small one, when sufficiently full, passes the ingesta continuously into the intestine at the rate that fresh food is entering.

Now the Army horse is allowed twelve pounds of corn daily and ten pounds of hay. To work at its best, three pounds of oats with hay are about as much as the stomach can deal with at a time, so it follows that he should be fed as often as possible, at least four times a day. "Little and often" then, is a sound rule for horse-feeding.

Corn, of course, is a highly concentrated form of food compared to grass, and bulk is essential, this being supplied by the hay.

Many horses bolt their food so that oats and hay are swallowed without sufficient mastication. Some do this because they are frightened of being robbed by their neighbours, and others from greed. So that it is best to give hay in nets and to mix the corn with a substance that cannot be swallowed without chewing, such as cut hay or the chaff that is thrown away at threshing time. Nervous horses are not so likely to hurry if they are fed in nose-bags and away from their neighbours.

When carrots are given they should be sliced, not cut across into rings, or a greedy horse may choke himself with a large piece. Horses enjoy licking rock salt, and when it is not available they may gnaw the walls or eat their dung.

Watering is only second in importance to feeding. All large herbivora need large quantities of water and suffer greatly if deprived of it. When horses are watered together at troughs or a stream, none should be allowed to leave until the last has drunk his fill. Nor should it be supposed that a horse has necessarily finished drinking because he raises his head from the water. No faster pace than a walk should be allowed to and from the watering place, and one man cannot attend to more than two horses at a time. Bits should be removed before watering and if saddled the girths loosened. Clear running water is best; most horses are very particular about the state of the water they drink. A constant supply is ideal although not generally practicable, but there should be access to water at least three times a day.

Watering should always take place before feeding, because if the stomach be full of undigested grain this is likely to be washed into the intestine by a large draught of water and so cause colic. It is said, also, that water after a feed of corn causes it to swell and so may rupture the stomach, but as a supply of gastric juice is always present with food this is not apparent. The idea that horses should not be watered when sweating or warm from exercise is dying out.
Grooming increases the skin circulation, removes parasites and epithelial débris, and improves the appearance of the coat. It is said to be very important; but one sees farm horses that are never touched with a brush and apparently in the pink of condition. One great advantage is that as the groom goes over the whole body, the animal's condition is noticed and no wound or injury is likely to be missed. The curry comb is for cleaning the body brush, the horse should not be touched with it. The dandy brush is for the legs, mane and tail, and for removing caked mud. The hoofs should be picked out whenever the horse is groomed even if standing on dirty ground, so that the foot is constantly examined and old septic dirt removed. Bad work on the part of the groom is usually obvious under the belly, at the pole, or the point of the hock. The legs should not be washed or the fetlock hair cut, because this lock of hair drains off wet and protects the thin skin beneath.

Clipping is a subject over which different opinions are held, so perhaps it is well to give one's reasons for advocating it. The horse's coat adapting itself to weather conditions, in the summer is thin and short, but as the cold weather approaches becomes long and thick. The working horse having an unnatural amount of exercise tires more quickly with this heavy coat, sweats profusely, and when wet is very difficult to dry, so that he may have to stand for some time in this wet coat and perhaps in the cold. Therefore, it is the custom, usually in October or November, and again about the New Year, to remove this long coat by clipping, either over the whole body or in part. Thus, the animal may be clipped “trace-high,” that is, removing the coat below the level of the traces, generally leaving the legs but running the clippers along the under surface of the neck. Or again, the whole body may be clipped with the exception of the legs, or perhaps in a riding horse leaving a “saddle-patch” also.

In deciding which method to adopt one must first become acquainted with the divisional orders on the subject. If a free hand is given, I think that if a horse is standing in the open and not working hard, he should not be clipped at all, but if fairly comfortably housed and a rug is provided he is better clipped all over with the exception of the legs. If a riding horse with hairy legs, clip all over the first time but leave the legs the second. I see no advantage in leaving the “saddle-patch.”

When clipped, horses have a much smarter appearance, are much more easily cleaned and so more attractive to the groom, who will take more interest in them.

Hand or machine clippers may be used, the latter saving time and labour and generally producing better work. There is no need to singe afterwards. Some animals are fidgety while being clipped, but with quietness and patience all but the most restive can be dealt with. Grooms, however, are too fond of using more forcible methods of restraint.
and the commonest of these is the twitch. This is a stout stick with a loop of rope at one end. The loop is put over the upper lip and twisted tightly. The lip is liberally supplied with sensory nerves and one has only to pinch one’s upper lip firmly to understand why the horse is so easily managed when the twitch is applied. That it is of use as a last resource in some cases one is prepared to admit, but it should never be made use of without consideration and in my opinion only with the consent of an officer.

Shoeing is a difficult subject to deal with in a short note but the following points are important:

The shoe should be made to fit the foot accurately before being nailed on. Too often a badly fitting shoe is nailed on and the hoof is then cut and rasped to bring it in line with the shoe. The hoof should not be rasped above where the nails are clenched and then the less the better, nor should the frog be touched with the knife except, perhaps, to remove loose tags.

The shoes carried on the wagons and the saddles of riding horses should each fit the horse they are intended for, and before setting out on a journey one should examine them to see that they do.

By order of the A.D.M.S. of this cavalry division each ambulance horse is numbered on the hoof, and a book is kept by the shoeing smith who enters in it daily the number of each horse shod that day. From experience one recommends this plan strongly.

Exercise is of course most important. At least two hours a day are necessary, mostly walking, with some trotting on soft ground if possible. A gentle trot uphill provides plenty of muscular work and places but little strain on the legs and feet. Walk down hills. A halt, allowing the horses to graze for a few minutes, breaks the monotony and a different route each day is more interesting for both men and horses. Walk the last mile or so home so that the animals are cool on their return to the stable. The practice of passing the halter rope through the mouth should be forbidden. In fine weather horses should stand in the open air all day.

On the March.—When starting on a journey it is a wise precaution to see that the shoes are secure and that the harness is fitting properly and well put on. Carry a feed in a nose-bag. The start should be slow, a good plan is to walk the first mile or so. For long distances a gentle trot will take one a long way, and often more speedily in the end than a quicker pace that cannot be maintained without tiring the horse. “Festina lente” is a good motto for a journey. Walk down and up steep hills and the last part of the road home. Opportunities to water should be taken advantage of, and an occasional halt with a feed, slackening the girths, add greatly to the animal’s power of endurance. Remembering the aphorism of that sound sportsman, Mr. Facey Romford, “men can ask for what they want, horses can’t,” one should
always endeavour to actually see one's horse fed and comfortable, certainly before taking food oneself.

Dismount whenever possible. One need not enlarge upon what relief the horse must feel in losing his load, even for a few minutes, but there is another reason. The most serious cases of sore back are caused by necrosis resulting from continued pressure of the saddle. That is to say, the blood supply of the saddle-bearing area is seriously interfered with by the weight of the saddle and rider. When one sees riders sitting their horses almost the whole day through without attempting to dismount it is surprising that sore-backs are not more frequent than they are.

An occasional dismounted walk uphill is a great help to the horse, especially if the rider is tired, because galls are also caused by friction when a bad or weary horseman rolls about in the saddle. A walk rests the man's riding muscles and he rides better after it.

At a halt of any time saddles should be removed and the backs rubbed to restore the circulation.

On returning to the stable the horse is watered and given a little hay to stimulate the appetite before the feed of corn.

The saddle may be loosened and left in its place for half an hour, or it may be removed at once and the skin beneath it massaged.

Drying a horse with a long coat wet with sweat is a tiring and tedious process. He may, however, be rubbed down with straw and then a rug thrown over him with an armful of straw placed on the back beneath the rug with the ends of the straws projecting over the tail. By this the horse is kept warm, and as the straw affords ventilation and warmth he can be left to dry for a time.

If exhausted; warm oatmeal gruel supplies warmth and quickly digested food. Linseed gruel is good but takes a long time to prepare.

Bandaging the legs with puttees or rope made by twisting hay prevents loss of heat from parts where large blood-vessels come near to the surface.

Harness.—Badly-fitting harness should be immediately put right. Sometimes it appears to fit badly because it is not put on properly; often the bit is drawn too high, so as to wrinkle the corner of the lip, and this should not be. The curb chain is generally too tight. And one should remember that the prominent ridge running along the spine should never be touched by the saddle, or a gall will be the result. Sometimes the D at the pommel drops and may touch the withers, producing a wound. A plain surcingale must never be put on over a rug without a pad on either side of the prominent spine just referred to, to protect it. Straw or hay pads will answer the purpose.

In draught horses, the zinc plate which fits over the neck may be too narrow. One reason why it is made of metal is that it may be kept clean, but this does not always appear to be recognized.

Condition.—Horses may be in poor condition from several causes—
some have bad grooms, others are robbed of food or worried by their neighbours. The remedies for these cases are apparent. When a horse is looking poor, the attendant will probably suggest that he has worms, which is no doubt the case. But nearly all horses harbour worms of one sort or another, and suffer far less from them than they would from the treatment often prescribed by the groom. During the late summer months one may notice about the forelegs small yellow bodies, smaller than a pin's head, each firmly attached to a hair. These are the eggs of the bot-fly. The horse takes these into mouth while licking the legs and so to the stomach, where they become fixed and grow into the bot, or larval state of the bot-fly. In the spring they pass out with the faeces, and many so-called vermifuges owe their popularity to this fact. One doubts whether the common varieties of worms found in the Army horse are likely to do much harm.

Rough or uneven molar teeth, however, often cause the animal to lose condition. If the sharp edges be rasped smooth the food is better masticated, and the improvement is often very striking. It is usually in old horses that this operation is necessary. If possible, veterinary advice should be sought before proceeding to rasp the teeth, as an unskilled farrier may do more harm than good.

Lice cause the horse a good deal of discomfort, and unless detected early and energetically treated soon spread through the stable. The first sign, generally, is that the buttocks show signs where the animal has rubbed against the stable wall, or the hair of the tail may have an untidy appearance from the same cause. By slowly stroking the hair up in the wrong direction the parasites may be seen as small, brownish bodies fixed to the skin. When these are found, the treatment is to isolate, and report to the veterinary officer, who will probably advise that the horse be clipped and dressed with a solution of nicotine in the strength of 1 to 80. The hair removed by clipping should be burnt. The nicotine solution will kill the lice but not the nits, so that three or four further washings will be necessary, one every four or five days. One should, if possible, choose what a washerwoman would call a "good drying day" for this and exercise afterwards until dry.

But if on examination one finds bare patches of skin and hair which comes out on rubbing with the finger, the case should be isolated and reported immediately to the veterinary officer as it may be mange, and this is a serious matter in an army.

It is usually the duty of the orderly officer to visit the stables at night. If he is not interested in horses this is often a farce. Each horse should be looked at, and this is possible without disturbing those that are lying. Rugs may be slipping from some, the surcingle too tight or without a pad beneath it on others, and on a close night the stable may need ventilation. If the transport officer is fond of horses and goes round
every night himself, he will find that this night visit will soon develop into a pleasure and a duty he will be sorry to miss.

In concluding these scattered and, I fear, ill-prepared notes, I cannot do better than quote from Whyte-Melville's excellent "Riding Recollections," where he says "of all our relations with the dumb creation, there is none in which a man has so entirely the best of it as the one-sided partnership that exists between horse and rider."

A METHOD OF TREATMENT OF "SHELL SHOCK."

By Captain E. T. C. MILLIGAN, M.D., B.S. Melbourne.

Royal Army Medical Corps.

A well-known method of treatment of hysteria has been applied at this Casualty Clearing Station to selected cases of what is now diagnosed as "shell shock." The results of this treatment have been so satisfactory that I desire to give some account of the details of the same in this brief note.

NATURE OF CASES TREATED.

The cases treated were those who "could not speak," "could not hear," "could neither speak nor hear"; cases of loss of memory; cases obsessed by the memory picture of recent terrible experience, their minds being occupied, to the exclusion of all other things, by the bursting of shells, in the trench or during the attack.

Other cases which have been treated are those of loss of function, partial or complete, in one or more limbs; of inability to walk, and of neuromimetic deformity of limbs.

We have endeavoured to select for treatment only cases of genuine hysteria and of conscious fraud.

Maligners with mimicry so close and acting so consistent that it was difficult to discriminate them from genuine hysteria, respond more easily to the method, though in a different manner.

CASES EXCLUDED FROM THIS TREATMENT.

Care has been taken to exclude all cases suffering from discoverable organic lesions of the special sense organs, the central and peripheral nervous system, and organic lesions of the above accentuated by hysteria. The underlying organic lesions in these cases must first be treated.

It is not the purpose of this note to classify the many different conditions caused by "shell shock," nor to suggest the pathological condition, psychic or physical, underlying them.

TREATMENT.

It is well known that during chloroform administration there is a stage before the involuntary struggling stage when a patient is highly