Clinical and other Notes.

NOTES ON THE SANITARY ARRANGEMENTS ON AN AMBULANCE TRAIN.

WITH SUGGESTIONS FOR ARRANGEMENTS FOR USE ON "ORDINARY" TRAINS CARRYING CONVALESCENTS.

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The letter from Lieutenant-Colonel Goggin in the June number of the Journal raises two points of great importance.

The following notes of the sanitary arrangements actually used on an ambulance train may be of interest.

I was in charge of No. 1 Ambulance Train (Natal) from October, 1900, to June, 1901. During that time a great number of cases of enteric fever and dysentery were carried between different hospitals; they were in all stages—early, acute, and convalescent.

The latrines of the train were of the ordinary type. They were made of a metal cylinder which perforated the floor of the carriage. It rose some twenty inches or so above it and was fitted with a wooden rim, to form a seat, and with a wooden cover. The cylinder ran down below the carriage to within a short distance of the ground. Both the rim and cover worked on a hinge, and could be lifted when the latrine was used as a urinal. The danger of spreading disease by allowing the excretion of infectious cases to fall on the line was obvious. As the train ran along, the feces and urine were distributed in a thin layer over the "metalling" of the line; they were soon dried by the sun and blown broadcast by the wind and "dust devils."

A plan for preventing this occurred to me. I submitted it to the Principal Medical Officer, Natal (Surgeon-General Clery, C.B.), and with his authority and approval, I had the following arrangements carried out in the railway workshops at Durban.

A metal bucket was made about two feet deep and of such size as to fit closely into the cylinder of the latrine. To prevent it slipping through it had a lip which caught on the top of the cylinder. It was provided with a removable handle, which fastened into catches on each side, and with a tightly fitting lid. The wooden rim and cover were altered to allow of their fitting down closely over the bucket.

I am unable now to give the exact capacity of these buckets, but they proved amply large. They were used by patients able to move about, and the contents of bedpans and urinals were emptied into them.
infection of the excreta was ensured by the use of 5 per cent. carbolic acid solution, both in the buckets and in the bedpans and urinals. The jolting and swaying of the train mixed it up thoroughly with the excreta.

On arriving at our destination, the lids and handles were put on, the buckets lifted out and carried away. The contents were disposed of with the infectious excreta of the hospital, the buckets cleansed and put back in the train. On a journey lasting more than a day the buckets would require to be emptied en route. This I had done when the train was halted for the night, as trains were not allowed to run after dark; the orderlies of the train dug a pit on the veldt and emptied the buckets into it, covering it in well afterwards.

I found these arrangements to work satisfactorily all the time I was in charge of the train. Certainly the buckets were not pleasant to look at while their contents were jolted about by the movements of the train, but no latrine bucket in use is exactly pleasing to the eye. No unpleasant odour was appreciable on account of the carbolic, and the latrines being in separate compartments.

The system is a simple one as the buckets are easily made; it is inexpensive and it is efficient. One may venture to hope that by its use at all events one channel of spreading infection was closed.

The other point mentioned in Colonel Goggin's letter is that of convalescents travelling by "ordinary" train.

The term "ordinary" train was used in South Africa to mean a train without any special structural arrangements for sick—one in which the men travelled in the same numbers per carriage as in ordinary passenger traffic. They were at the same time "special" trains, inasmuch as they were run specially for sick, and for sick alone.

The men travelling by these trains were, as a rule, invalids going to the port of embarkation from hospitals which were within a day's run of the sea. The trains were "made up" at certain large stations and sent up empty to the hospital the invalids were coming from.

Now in any train-load of convalescents only a certain proportion would be cases of enteric or other infectious disease, and, unlike the early febrile cases carried on an ambulance train, the diagnosis would have been established. They would consequently be easily kept together, and it would be only for them that special sanitary arrangements would be required.

It seems to me, therefore, that it would be quite feasible to have a number of buckets made, such as I have described, for use in these trains. They could be kept either at the stations where the trains are "made up," or at the hospitals themselves.

It would be known beforehand how many infectious cases were to travel by the train, and the requisite number of buckets could be fixed into the latrines. On arrival at the destination their contents could be disposed of with the infectious excreta of the hospital—if there was one—or of the ship, or by arrangement with the local sanitary authority.