AN EXPERIMENT IN CONSERVANCY.

By Lieut.-Col. H. K. Allport.

Royal Army Medical Corps.

Feeling very strongly the necessity for a safer and cleaner method of conservatism in this country (India), and being convinced of the failure of the dry-earth system, I have been led to make the experiment which is here recorded. The method had previously been tried on a very much smaller scale and found clean and easy to manage. The effort is especially directed against the continued spread of enteric fever among our troops in India. As the question of cost is important, no initial expense was incurred.

A latrine of seven seats was selected in the Station Hospital and the dry earth removed from it. Into each pan was put 24 ozs. of mercuric chloride solution (1 in 4,000); this covered the bottom and sloping sides of the pans for two inches. The pans were cleaned twice a day, and the solution renewed. This was continued for two months, with the result that the latrine was the best kept in hospital. Flies disappeared; there was no perceptible smell, and no dust. The deposits were covered by the fluid. The latrine sweepers emptied the pans directly into the Crowley cart, instead of into the receptacle in the cleaning passage, thus avoiding much handling and getting rid of the receptacle altogether. The working of the latrine was found to be simpler and cleaner than by the dry-earth method. An important consideration is the lessening of labour and handling. Good sweepers are difficult to obtain, and become discouraged by being constantly checked for neglect of their latrines, which is largely due to the intricacies of the dry-earth procedure and carelessness of the soldier. The sweepers liked the wet system, and there was never occasion to find fault.

If a wet system were substituted there would be greater cleanliness and an absence of dust. Now, a sort of mud is formed by the mixture of earth with other matters; this mud sticks to everything it touches; it is washed away by rain, then dries, and is blown about by wind as dust, or carried about by the sweepers’ hands and clothing. You have only to trace the outgoings of persons and things from the latrine to immediately realise how wide the circle of possible infection may be.
Facts and arguments could be multiplied, but each sanitary officer, however wide or narrow his scope of observation, can see these for himself. The undoubted deodorant property of earth must be set aside; we allow ourselves to be blinded to the real danger; what is wanted is disinfection on the spot. Nitrification that may take place in the earth outside the station does not prevent infection in barracks.

If applied on a larger scale, concentrated solution of perchloride of mercury, coloured blue, would be supplied to latrines and diluted under supervision. Receptacles would be got rid of, and the pans emptied twice a day directly into the carts, which would stand behind the latrine. The solution could be used for disinfecting any part of the latrine or its belongings.

The plant at present in use will be available and the same establishment required, but the work will be easier and cleaner. The objections that I see are: (1) Poisonous properties of the solution; this may be neglected if suitable precautions are taken. (2) Increased cost to Government. My two months' working cost 8 annas a month; there will be no initial outlay required. The price of perchloride of mercury is Rs. 4 per lb.; 2 ozs. 48 grs. were used to make the solution for one month in the latrine of seven seats: value, annas 8.

Take the number of troops as 70,000; one seat to fifteen men gives 4,666 seats; dividing by 7 (the number of seats experimented on) gives 666 latrines of seven seats each at 8 annas per month, equal to a total cost of Rs. 333. This trifling expenditure would compare favourably with the present loss of money and efficiency from enteric, even if a slight diminution in the number of cases were the result.

I am assuming the efficiency of the means suggested against enteric; this could be fully tested by applying the method on a large scale to a station, or group of stations, and watching the results. I have shown that it is a cleanly, easily applied, and inexpensive system of working barrack latrines. Smell is not increased by withdrawing dry earth, and it is admitted that the disinfectant properties of the perchloride are superior to those of earth. A great advantage is gained by substituting water for earth, rendering all the cleaning processes easier and simpler, and getting rid of mud, which is really what the dry-earth method comes to in actual practice.