Any one who has been even only a short time in India must have been struck by the great difference in that country between the theory and practice of sanitation. While the origin of disease is clearly recognised, only spasmodic efforts are made to combat it. Numerous and excellent circulars emanate from various offices, but practical sanitation does not even approach the standard therein laid down.

This discrepancy calls for enquiry, and the explanation is, I think, a simple one. The recommendations are made by professional men, but the execution is left to laymen. It is like putting a delicate instrument into the hands of a tyro. Untrained as the regimental officer is in sanitary matters, he has, as a rule, only the faintest idea of the raison d'être of any suggestions made to him by his medical adviser. Often to him it is but a "doctor's fad" to be borne with, to be carried out perfunctorily if necessary, but to be quietly shelved later if possible. If he does take sanitation seriously he often, with the best intentions, either does something or leaves something undone, which renders the whole null and void. If this is true of the officers it is still more so of the men. The former are at least educated men who have heard of a bacillus, to the latter the whole matter is simply foolishness. It is but in rare instances that they trouble to conform to the simple sanitary rules laid down for their guidance. And from a class imbued with this spirit are drawn the "sanitary orderlies" who, without further training, are supposed to become efficient inspectors of nuisances. It is not to be wondered at that the results are not good.

Another drawback is the lack of unity in present-day sanitary administration. The Senior Medical Officer is nominally the Sanitary Officer of the Station, but his duties are so manifold that, though he may lay down principles, it is impossible for him personally to supervise details. This is left to the various medical officers in "sanitary charge" of units. These must, and do, vary considerably in the way in which they carry out their duties. Some who are especially interested in sanitation are continually finding out defects and pressing the Commanding Officer for reforms. Others, whose tastes
lie in different directions, are content with that minimum of cleanliness which may be attained by a weekly inspection at a fixed hour. Moreover, owing to the frequent moves in India, medical officers in charge of units are being continually changed. A "keen" man succeeds a "slack" man, and vice versa, until bewildered by the multiplicity of his advisers, the Commanding Officer seeks refuge in a masterly inactivity by which he seeks to tide over a reforming period in the hope that the reformer's successor may be less zealous. Not only is there thus per se great inequality in the condition of the various lines, but a heavy drag is put on sanitary progress. In too many cases also has this experience of the variability of our professional opinion reacted unfavourably on the estimation in which it is held. In short, the drawbacks of a regimental system of sanitation appear almost as great as those formerly associated with regimental hospitals. Is, as a matter of fact, the one system more defensible than the other? The Station Hospital has replaced the various regimental ones with conspicuous success. The natural corollary, and one which I venture to think would prove equally successful, is to replace the regimental sanitarian with his casual sanitary orderly by a "Station Sanitary Officer" with a staff of trained inspectors.

There should be little difficulty in finding suitable men for the position of "Station Sanitary Officer," or, as I shall call him in this paper, "Medical Officer of Health." All officers of the Royal Army Medical Corps have to pass through a sanitary course at the College, and there will probably always be sufficient men who, though not necessarily in possession of a diploma in Public Health, have the knowledge and the tastes to undertake con amore the duties of a Public Health Officer. The case is far different with the remainder of the proposed Station Sanitary Staff, the "Sanitary Inspectors." There is absolutely no provision in the Army for such a body of men, they would have to be created. There exists, of course, a scheme for providing a sanitary branch in the Royal Army Medical Corps, but the men of the Royal Army Medical Corps have not yet been authorised for India. Besides, it might not be amiss if, by throwing these positions open to all Non-commissioned Officers generally, a certain amount of sanitary knowledge became diffused throughout the Army.

The scheme I would propose is as follows: Twice or three times a year a sanitary course would be held at the Headquarters of the Division, by the Divisional Sanitary Officer. Each regiment would be required to detail a certain number of Non-commissioned Officers
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and men to attend this course. Only those who had successfully passed through such a course should be eligible for certain positions, such as cook-house orderlies, soldier in charge mineral water factory, or Non-commissioned Officer in charge R.A.T.A. or coffee shop. From among the Non-commissioned Officers attending this course, those showing special aptitude should be selected for further instruction, to be given at Command Headquarters by the Commanding Sanitary Officer. At the end of this course there would be an examination. Those men who were successful should be granted a certificate, wear a special badge, and draw, when employed, extra duty pay at the rate of 4 annas or more a day. They would be detailed for duty with Divisions, and be at the disposal of the Divisional Principal Medical Officer who would appoint them to stations. The Senior Medical Officer should have the right to fine them so many days’ extra duty pay for neglect of duty, while for continued inefficiency the Principal Medical Officer should be able to return them to regimental duty. Otherwise, they should only be liable to be recalled with the sanction of the General Officer Commanding, and of course for active service.

Every year, in this manner, a certain number of men would be put through elementary sanitary training, while a few would go on to more advanced courses. By this ever-increasing body of men, the vast mass of ignorance and indifference, with which we have to struggle, might gradually become leavened. The important bearing this might have on active service I will discuss later; at present I will confine myself to the question of peace administration in a cantonment. The entire regimental lines would be divided into sanitary districts, which might or might not correspond to the boundaries of the various corps, and be administered by the Medical Officer of Health as a sanitary whole. This officer would have at his disposal a staff of Sanitary Inspectors, one for each district, and a fixed establishment of sweepers. Both Sanitary Inspectors and sweepers should be removable from one sanitary district to another, at the discretion of the Medical Officer of Health. He also would be the paymaster of the sweepers, which would include the right to fine or dismiss them. In this way the vast amount of correspondence at present necessary before a sweeper can be touched would be avoided. There should also be at the disposal of the

1 If this latter course were made to correspond with the course for Sanitary Inspectors at home, recognition might be obtained for it, and so another career opened to old soldiers.
Medical Officer of Health a fixed allotment of money. Out of this would come the cost of all sanitary appliances and the pay of the sweepers, with a small margin for emergencies. It would probably also be convenient for the extra duty pay of the Sanitary Inspectors to be drawn through this channel. The duties of the Sanitary Staff should then be apportioned somewhat as follows:

(1) **Sanitary Inspector.**—Placed in charge of a district he would be responsible to the Medical Officer of Health and not to the regimental authorities, for its cleanliness. He would have all nuisances removed by his sweepers. This would involve entire charge of all latrines and urinals, and general drainage and cleanliness of the lines, with special reference to cook-house refuse and wash-house waste water. He would have the right to inspect dairies and bakeries, and supervise the boiling of drinking water. Any sweeper neglecting his duty, he would bring before the Medical Officer of Health within twenty-four hours. He would keep a sanitary diary and send it daily for inspection to the office of the Medical Officer of Health.

(2) **Medical Officer of Health.**—This officer would by frequent visits satisfy himself as to the efficiency of his inspectors, inspecting at the same time officers’ messes, barrack-rooms, interior of cook-houses, and regimental institutes. Any matter connected with the Sanitary Inspector’s department which required improvement, the Medical Officer of Health would himself see to, about others he would communicate direct with the Commanding Officer of the unit concerned. He would be responsible for the precautionary measures on any outbreak of infectious disease. The Senior Medical Officer should therefore be required to notify every case occurring in hospital. The Medical Officer of Health would further medically inspect all drafts arriving at the station, carry out the medical arrangements for their isolation, and discharge them from quarantine. For this purpose every Commanding Officer should be required to give ample notice when a draft was expected. All anti-malarial measures would be under the supervision of the Medical Officer of Health. He would be the technical adviser of the Senior Medical Officer on all sanitary matters, but also be a member of the Cantonment Committee, in order to be able personally to explain his views. He would be required to keep accounts as to the disbursement of the allotment at his disposal and to keep a sanitary diary for inspection by the Senior Medical Officer. Should a laboratory be available, he might also be required to make such chemical and bacteriological investigations as concerned the public health.
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In order that these duties may be performed efficiently it should be distinctly laid down that the Medical Officer of Health should not be available for hospital duty, or orderly duty, unless under exceptional circumstances, and then only with the sanction of the Principal Medical Officer (this rule would, of course, be modified in small stations where the number of medical officers did not exceed four. But even here it should be recognised that he was primarily a sanitary officer, and his hospital duties reduced to a minimum). To ensure continuity of administration, he should further be exempted from all out-station duty. In the hot weather he should be required to take leave, and not a hill station. Finally, as in the performance of his duties he has to cover much ground, he should draw horse allowance.

It will be noted that in the above scheme I have excluded barrack-rooms, regimental institutes, and the interior of cook-houses from the purview of the Sanitary Inspector. It is obvious that any attempt of a soldier of one regiment to exercise authority in the barrack-room of another corps would be failure. Cook-houses, which would require to be under the charge of regimental cooks, come under the same heading. As regards regimental institutes, including mineral water factories, regimental authorities might claim, with some justice, that those institutions which are run by regimental money should be under regimental control. If the right of inspection by the Medical Officer of Health were safeguarded, and, moreover, it were laid down that only those soldiers who had been through a sanitary course were to be placed in charge of institutes, mineral water factories, or cook-houses, this privilege might, I think, be safely conceded.

Were this scheme carried out the regiment would be somewhat in the position of a householder who has his streets swept and his nuisances removed by public authority, while guarding the privacy of his house. I do not think that, under these circumstances, there would be so much opposition as might be expected from regimental authorities. Many Commanding Officers would doubtless welcome the freedom from worry about the sanitary condition of their lines. To them the work is as uncongenial as it naturally falls in our sphere. Some malcontents there would, no doubt, be; but of what measure is it to be expected that it will content everybody?

I have so far only included regimental lines and matters usually left to the medical officers of each regiment, in my scheme. The sanitation of the residential part of the station and of the
bazaars has been usually in the hands of the Officer in Charge of the Cantonment Hospital. This arrangement might be left undisturbed, or these duties might also be transferred to the Medical Officer of Health. Unity of administration would be gained if this last course were adopted. Were Sanitary Inspectors placed in charge of this part of the station also, of course their duties would be considerably modified. The task of the Medical Officer of Health would be so much greater, and the duties of the Officer Commanding Cantonment Hospital so much lightened, that, in justice, a portion of the Staff pay of the latter should be transferred to the former.

There remains to be considered how this scheme of administration would adapt itself to active service conditions. The regimental Medical Officer would necessarily again take on the duties of Sanitary Officer for his unit. There would, however, be this important difference. With each regiment there would be one or more Non-commissioned Officers trained as Sanitary Inspectors, and a large number of men who had attended a sanitary class. While the former could look after the regiment's latrines and urinals, one or two of the latter in each company could be entrusted with the provision of drinking water for their company. That under these conditions the work of the sanitarian would be considerably lightened is evident, that disease might be diminished is, perhaps, not too sanguine a hope.

I am conscious that my scheme possesses many crudities, still, I have ventured to put it forward, as I believe that in the direction advocated there lies the true hope of sanitary progress.