

SANITARY NOTES.

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Introduction.—Under the provisional scheme of Sanitary Organisation, outlined in War Office Memorandum 4840/1146 (A.M.D. 1) dated March 29th, 1906, on the "Prevention of Disease in War," eight men from each battalion at every brigade camp last summer, in the Aldershot Army Corps Command, were detailed to be trained in sanitary duties by the medical officers in charge of brigades. These notes represent the work done by the sanitary class of the 2nd Infantry Brigade at Bourley Camp, which lasted six days. At the end of these notes, it will be seen that the new field service filter cart plays an important part, for the care and working of which certain specially trained men of the Corps are exclusively detailed. These men are now trained at the new School of Army Hygiene at Aldershot, under the direction of Lieutenant-Colonel R. H. Firth, R.A.M.C. A good description of this water cart with photographs can be found in "Notes on Military Sanitation," by Lieutenant-Colonel H. P. G. Elkington, R.A.M.C., published by the St. John's Ambulance Association, London (price 1s.), and also in a short article in the Corps Journal for April, 1906, by Major T. McCulloch, R.A.M.C.

REPORT OF THE WORK CARRIED OUT BY THE SANITARY CLASS AT
BOURLEY CAMP OF 2ND INFANTRY BRIGADE, JULY, 1906.

(Fig. 1.) A refuse destructor was built, after the pattern (slightly modified) suggested in Lieutenant-Colonel Elkington's "Notes on Military Sanitation." Every kind of rubbish, except liquid slops (which were deposited in tubs for the contractor) were collected and sorted. All tins and bottles were buried and the remainder burnt in the destructor. The heat generated was so intense, as to melt bottles accidentally dropped in. On arriving in camp, which had been previously occupied by mounted infantry, owing to the several horse lines, long grass and small bushes, in a wood in the centre of the camp, it was thought probable that flies would become very prevalent. But the actual result was, that there were less and less flies each day owing to this daily and constant system of conservancy. When the camp broke up, only half an hour's work was necessary to leave the camping ground cleaner than it was when the brigade marched in.

This destructor was stoked from the top and the ashes raked out from the flues underneath and buried with the tins and bottles. In order to secure the best results, one small addition appears to be necessary to this form of destructor. A hoop of iron (fig. 2) to rest on the corners of the four trenches inside, at the base of the chimney; with a couple or three pieces placed either radically or sectionally to the circle of the hoop. This, by keeping the burning material from the floor of the chimney, keeps the flues free and

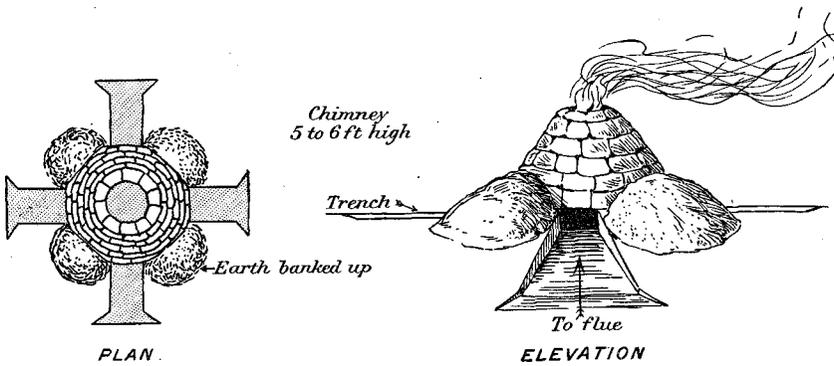


FIG. 1.—Measurements : Trenches, 6 feet long, 1 foot 6 inches deep, 12 to 15 inches wide, with splay mouths; bore of chimney, 12 to 15 inches square; four flues.

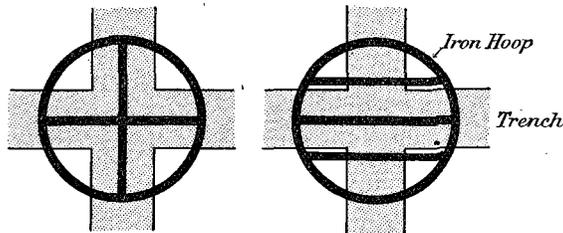


FIG. 2.

ensures draught, and further, acts as a necessary support to the first placed sods crossing the trench at the base of the chimney, without which, having to bear all the weight, they give way. When finished the draught is improved if the chimney be plastered with mud, inside and out.

These iron hoops could easily be knocked together by one of the pioneers, who is a smith. Of course it must be noted that where

turf or sods are not available and the ground is very sandy, this type of destructor is not so suitable.

Latrines.—As the dry-earth system with pails was used and the contractor was responsible, there was no scope for practical instruction, but “Instructional Latrines” were made, and when the brigade went to Frensham for divisional training they were used, and appeared very successful. The following plan was adopted, and for the old pattern long trench was substituted a row of small parallel trenches 2 feet 6 inches by 1 foot and 2 feet apart, depth 1 foot 6 inches. The points of improvement noted were:—(1) Position of squatting astride more comfortable than on the edge of a trench; (2) practically no fouling of the ground either by fæces or urine; (3) less digging; (4) easier to get dry earth used more effectively (of which men can scrape a little in with their foot, or a piece of wood). Each set of holes lasted about three days and were about 5 per cent. to 7 per cent. of the strength in number.

Urine.—At night empty pails were placed at the centre of each line of tents; with the exception of one regiment, who were not in favour of this method and were purposely allowed to use the urine tubs (as they said) in the latrines, a short distance away. The next morning each of the other regiments had filled ten to twelve pails, and this regiment only filled about three and a half pails. As they were by far the strongest unit in camp, they were unable to explain this extraordinary deficiency. After this was noted they adopted the same method as the other regiments. At Frensham no provision was made for night urine in the lines, and the latrines were in some instances nearly half a mile away. The deduction appears obvious.

Messing Systems with regard to Sanitation.—One regiment was messed all together on the regimental system, by a contractor, in a large marquee. This was most excellent from a sanitary point of view, there being no food in the lines or any of the tents. However, at Frensham, where they could not carry out this system, and there was no contractor to look after them, their messing was the worst in the brigade, and the waste considerably greater than any other unit.

Grease Pits.—These were dug and filled with furze and a layer of stones at the bottom. They were used for greasy washings from camp kettles, mess tins, &c. Every other day or so, the furze was taken out, burnt in the destructor, and fresh furze put in. This plan appeared to work admirably and saved fouling of the ground, besides supplying easily inflammable fuel for the destructor.

Washing Places.—The ablutionary arrangements at Bourley on arrival were somewhat unsatisfactory: a series of raised metal troughs in the wood, with no surface drainage, and the stand pipes some little distance away from each. This small wood was low-lying, in the centre of the camp and somewhat badly placed as regards surface drainage. At previous camps a large portion of it became a swamp. With a view to improving matters, the sanitary party dug suitable serviceable surface drains for each regimental washing place, leading into a series of pits, which were filled in with earth when done with. The result was that the ground was kept perfectly dry and wholesome. Sanitary sentries were posted at the principal washing times, to see that the men emptied the buckets down the troughs, and not on the adjacent ground.

Method of Training Adopted.—Nothing was attempted in the way of lectures. Practical instruction only was given, the reasons for everything being explained as the work was proceeding, simply, and often repeated, and only the most obvious and elementary things touched on. The class “fell in” at certain hours, at least three times a day, and did about two hours hard work each time. Each unit was kept to the work of its own regimental area, except in the case of the destructor and sorting ground, which represented a sort of miniature County Council works for the whole brigade. A roster was kept for this duty. A spirit of emulation was promoted amongst the units, and all worked hard and appeared to take a certain amount of interest, with the exception of a few “slackers,” who thought it was going to be a “soft thing” to be struck off all duties and sit and listen to lectures. But they were rather disappointed when they discovered they were doing as much, if not more, physical work than if they had been at regimental duty and out on field operations. The whole of this class was struck off all other duties and the medical officer never left camp, so as to give constant and unremitting supervision.

Conclusions.—The question that must be settled definitely is: who are these men to be? One regiment furnished its pioneers, the others took men from the ranks. There is no question as to which men are the best for this work. The pioneers do the work far better and need but little instruction. They are always pioneers, they are used to this sort of work and have always done it, and by using them men are not taken from the ranks. In some brigade camps it appears that the sanitary class had a daily lecture only, and did all the other regimental duties, going on field days, &c., and the pioneers, under their quartermasters, just carried on as

usual, on their own lines, without any organised system. In this way this scheme would be a failure. The opinion of a number of units was taken, and the majority were of opinion that of the eight sanitary men, if not all, at any rate half of them should be pioneers. There are usually ten pioneers to a regiment. It was urged by some that pioneers are tradesmen, that although they have in the past done this work, yet it is not their proper work, and now that trades are to be taught in the Army, it would still less become their function; further, it might be thought derogatory to them.

Against this is the fact that in peace time, especially at home, there is practically no sanitary work to be done; it is only when in camp or in the field. Further, that on active service, for which the whole scheme is framed, these tradesmen have no shops or trades to carry on, except in a few limited instances. And prevention of disease should and must be placed on such a footing as not to become, or even be thought to be, derogatory to those carrying out the detail.

With regard to water supply, nothing could be done at Bourley, from a practical point of view, and it is regretted that a filter water cart of the new pattern was not available for instructional purposes.

A Memorandum was drawn up (appended) with a view to explaining the rough idea of the scheme to officers and others. This was based on the War Office letter on prevention of disease; and the leaflet on personal hygiene was issued for the information of the men.

Summary.—Without presuming to criticise, it may be said, as a result of our short experience, that there is no doubt that the scheme, as a whole, appears practical, practicable and successful, if worked on the right lines; and it should be highly valuable as an organisation for the prevention of disease. But it must not be forgotten that it nearly all depends on the initiative, unremitting interest, practical knowledge and experience of the medical officers concerned, and who themselves—in many cases, however great their theoretical knowledge may be, chiefly among the junior ranks—require practical instruction and experience, which can only be obtained in camp and in the field. It is suggested, therefore, that the junior medical officers be attached in each camp to a Royal Army Medical Corps officer having greater practical experience for instructional purposes; and also one or more non-commissioned officers and men of the Royal Army Medical Corps, who have been through the Hygiene School at Aldershot. Further, that the question of pioneers be definitely settled. That all the

smaller units, such as batteries of artillery or companies of Army Service Corps, &c., be in some way brought within the scope of this scheme. And finally, it is most important that regimental officers should be educated in, and brought to take an active and responsible interest in, this work, as without their whole-hearted co-operation this scheme will be most seriously handicapped and may prove a failure.

MEMORANDUM.

HYGIENE (OR PREVENTION OF DISEASE) IN WAR.

In order to attain any measure of success this, like all other military problems, must be carefully studied, practised and prepared for in time of peace.

It will simplify matters to take the question as a whole, under two distinct headings. Hygiene—(1) General; (2) Personal.

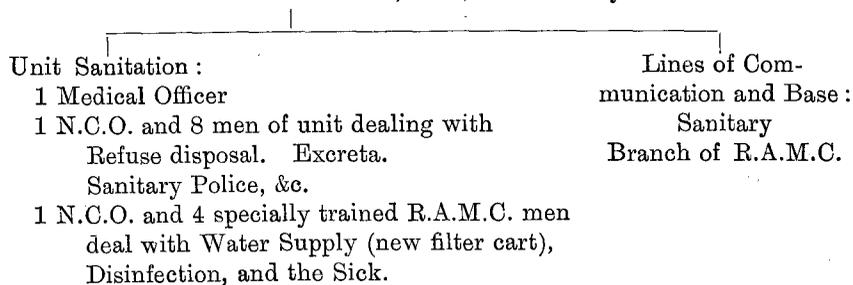
(1) GENERAL.

It is acknowledged that enteric fever and dysentery are the two principal diseases, and which cause the greatest wastage in the field.

Three Factors are: (a) Contact with the affected; (b) imperfect disposal of excreta; (c) impure food and water.

Proposed Sanitary Organisation.

G.O.C. in C.—P.M.O., Staff, and Sanitary Officer.



(2) PERSONAL.

A few of the simplest and most obvious points are drawn up on the attached sheet, and it is suggested that company officers, on whose sympathy and active co-operation chiefly depend the success of these measures, should distribute copies to responsible N.C.O.'s with a view to

gradually educating the men. It is not suggested that these measures are, or have been in the past, neglected; but it is thought their full importance has not been realised. The recent wonderful success of the Japanese Army, who paid as much, if not more, attention to these details seemingly than to general hygiene, has emphasised this. It should be further noted that no money, equipment, organisation, or *personnel* are required, only patient co-operative education.

First aid and ambulance work are best left to the R.A.M.C. and those told off for that work, but every soldier should know the value and use of the first field dressing.

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Blackdown,
July 6th, 1906.

[Extracted from W.O. Memo. 29.3.06, P.M.O. A.A.C.2287/2.]

Leaflet.

BRIGADE TRAINING, 2ND INFANTRY BRIGADE.

HYGIENE (OR PREVENTION OF DISEASE) IN WAR.

Personal Hygiene must become a part of the soldier's daily life, and it should be a point of honour to take all possible means thereby to prevent sickness of any kind.

(1) *Care of Body*.—Trivial complaints such as boils, whitlow, toothache, &c. reduce the fighting power of an army. Therefore great care must be taken to thoroughly wash all parts of the body daily.

Note (a wet towel for the armpits and fork is better than nothing when water is scarce).

Hair.—Always to be kept short.

Teeth.—To be thoroughly cleansed night and morning with tooth brush, soaped, and then dipped in carbolic or other tooth powder. This to a very great extent prevents decay of the teeth and toothache.

Hands.—Dirt causes whitlows, and germs enter the blood through cuts, &c.; also food gets contaminated by handling it. Therefore, keep the hands as clean as possible and the nails short, as germs collect under them.

Feet.—Sweat condenses, decomposes and causes inflammation and blisters; always wash the feet carefully after a march and put on clean socks if possible.

Note.—Changing the socks from one foot to another, and turning them inside out, is better than nothing as a temporary expedient.

In the case of mounted men the fork and buttocks should be carefully washed and powdered with boracic powder, if showing any signs of redness or soreness.

(2) *Food and Drink*.—Avoid excess of any kind. Chew food well, eat slowly; rest after fatigue before eating. Avoid uncooked food and

never drink unauthorised water! Tea, coffee and tobacco are good. Alcohol, if taken, should be used with the greatest moderation.

(3) *Marching*.—Water bottles to be kept clean inside, and filled. Self-restraint on the march is a great point. At a halt, the mouth should only be rinsed out. Sunstroke is induced by fatigue, want of sleep, thirst, abuse of alcohol, excessive sexual indulgence and tight garments. Therefore lead a temperate life, have a midday halt, wear clothes loose and easy, keep the bowels regular, and the head well protected.

(4) *Infectious Diseases*.—The principal are enteric fever and dysentery, which are caused by swallowing small germs. More men are killed and invalided by them than by the enemy.

Therefore pay the greatest attention to paragraph 2. Not only does a man become a danger to himself, but he may imperil the whole field army, and it should be a point of honour to conform to the general sanitary orders that are issued in camp and on the line of march, and also to the above personal measures.

Aldershot,
July, 1906.

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