A SANITARY BOX LATRINE.

By-LIEUTENANT-COLONEL E. J. WILLIAMS.
(Canadian Army Medical Corps).
Officer Commanding No. 1 Canadian Stationary Hospital, Salonica.

During the first week of the month of August, 1915, the Australian and British Forces made an advance on the Turkish position at Gallipoli capturing several trenches and killing large numbers of Turks. On account of the incessant gun fire it was impossible to remove or bury the dead, with the consequence that when the advance trenches were gained they were found to be filled with decomposing dead bodies, besides being in a most unsanitary condition in other particulars. This also applied to the areas around the trenches.

The temperature at this time was ranging between 80°F. and 90°F. and the flies very abundant. The difference in the prevalence of flies in the British and Turkish positions was remarked upon by many of the men who were in action and who were admitted to hospital a short time later.

About the middle of the month an epidemic of dysentery broke out on the Peninsula. These cases were transferred in large numbers to hospitals on Lemnos Island which were soon filled to overflowing. The situation here was most trying during the months of August and September, due, first to the large number and the nature of the cases treated, and second to the fact that fully thirty per cent of the hospital personnel were off duty through the same malady.

In order to prevent the spread of the infection it was found necessary to devise some scheme by which the excreta of dysentery and typhoid patients could be disposed of quickly and safely. The sanitary box was constructed and one placed at the end of each hut which accommodated forty-five patients. In this way it was necessary for the ward orderly to walk only a few yards to empty, cleanse, and sterilize the bedpan, and at the same time obtain a fresh bedpan which had already been sterilized.

For a time, the average number of dysentery patients in hospital was 400. Allowing a very low average of five stools in twenty-four hours for each patient, this means that the bedpans must be emptied 2,000 times during this period. Under ordinary conditions this cannot be carried out efficiently, but with a special receptacle placed a short distance from each hospital ward, such a number can be handled quickly and safely, with very much less effort on the part of the orderlies and with a greater degree of efficiency in the matter of sterilization of the bedpan.

The proof of the efficiency of this service lies in the fact that the number of patients in hospital for conditions other than dysentery and who contracted this malady while in hospital, markedly diminished in the month following the introduction of this system.
Clinical and other Notes

The sanitary box is practical in the extreme, being composed of boxes and tins which have served as containers for supplies from Ordnance and are available in all camps. The structure is quite simple and can be made by anyone who has the elementary knowledge of carpentry. The following extract explains the system.

The sanitary box (latrine) has been devised primarily with the object of disposing of the excreta of patients suffering from infectious enteric diseases, quickly and safely.

With a large percentage of all patients in hospital suffering from simple diarrhoea, or dysentery, it is impossible for the regular staff of orderlies to deal thoroughly and quickly with stools unless some provision be made for the disposal of the same at a place not far removed from the hospital lines.

Each box latrine will serve for seventy-five to 100 patients, the excreta pail being emptied as often as required. The frame of the box is made of lumber planed on the inside so that the surface can be scrubbed clean. The ordinary oil drum serves for the excreta pail, a wire having been added for a handle. This section is covered with a tin protecting top sloping on four sides towards the centre, which is provided with a three-inch square opening in the centre. This allows of the excreta being poured into the centre of the pail without any possibility of any being spilled about the box. On each side of the pail is placed a tin-
lined box, one containing water for the rinsing and the other cresol solution 2½ per cent for the sterilizing of the bedpans. The ordinary canned goods boxes are used for this purpose and can always be had in abundance in camps, while the tin lining is made from discarded biscuit tins. The space beneath these boxes is used for bedpan cupboards. The box should be kept clean at all times and thoroughly scrubbed with cresol solution each day. A bedpan mop with handle, also a small dipper, is provided, the latter being made from the ordinary milk tin.

The plan of operation is as follows:

(1) The bedpan is brought from the patient and emptied into excreta pail.

(2) Rinse the pan with water, using the dipper. Bedpan must not be placed in box containing water.

(3) Place the pan in cresol solution and mop it out thoroughly, leaving mop in the solution with handle raised. The pan is left resting in the cresol solution until the cleansing of the next pan is required, when it will be removed and placed in the compartment in the lower side of sanitary box. The ultimate disposal of excreta is carried out at the destructor.

With the latrines placed at the usual distance from the hospital wards it is impossible for the orderlies to deal with the excreta quickly and safely, and this can only be overcome by providing near at hand a means for immediate disposal of the infectious stools.

The destructor is composed of two half sections of the ordinary petrol drum which has an average capacity of 180 gallons. A firebox is
constructed on which rests each section. A hopper lined with tin is placed between these sections and receives the boiled excreta, carrying it down a four-inch drain to a series of pits, measuring 7 by 7 by 7 feet. Three of these pits in line, one communicating with the other, will effectually dispose of fluid stools of 400 patients. The boiled excreta is dipped out into the hopper with a large dipper made from a half section of a cresol tin, to which is attached a long strong handle.

From time to time the boiling process is continued, after the supernatent fluid has been dipped out, until the residue is sufficiently firm to be scraped out and burned in the incinerator destructor.

The following "Directions" are fastened on the inner side of the box cover:

![Image of a sanitary box]

**Directions for Use of Sanitary Box.**

1. Carefully empty bedpan into latrine bucket in middle compartment.
2. Take one dipper full of plain water from box on the left, hold pan over latrine bucket and carefully rinse it inside and out.
3. Place the pan in the cresol box on the right, thoroughly swabbing it out with mop and leave it in this solution.
4. When emptying afterwards, first remove the pan which has been left in cresol solution, rinse it off with plain water and place it in the bedpan cupboard in the lower part of the box, then follow instructions for second bedpan as above.