How the ancient Hebrews looked upon this matter may be judged from the following: "Thou shalt have a place also without the camp, whither thou shalt go forth abroad: And thou shalt have a paddle upon thy weapon; and it shall be, when thou wilt ease thyself abroad, thou shalt dig therewith, and shalt turn back and cover that which cometh from thee" (Deut. 23: 13).

New Railroad Device

Perhaps it may be not generally known that a device has been under trial by one or more railroads whereby a certain speed has to be attained by the car before the toilet pans can be dumped. While the train is standing at stations or while it is slowly approaching or leaving them the pans are automatically locked. The advantage, so far as cleanliness of the stations is concerned, is apparent, but benefit reaches further than that, for the reason that the material discharged at a high rate of train speed is spread over much ground, which increases the opportunity for natural purifying agencies to do their work.

A simple, old-fashioned privy system is often the only one which will fit camp conditions, but deep pits are then usually a necessity. Flies must be absolutely excluded from the possibility of reaching the excreta, seat-covers must always be provided, and must be so constructed as to be self-closing when the seat is vacated, and the ventilating window must be screened. The seat-box should be movable to allow of the pit being burned out with straw and oil three times a week, if not oftener.

As camps grow in size, the labor of properly caring for them increases. Men have to be employed whose entire time is devoted to sanitary work. Proper water carriage of sewage, night-soil removal, and incineration of garbage are matters that fall under the care of such men.

A complete water-closet system contemplates sewers and also a disposal plant, unless there be available either some large body of water into which raw sewage can safely be discharged, or else an almost unlimited area of suitable sandy soil for disposal by irrigation. At one of our cantonments where some thousands of men are collected, the raw sewage, after coarse screening, is run into a blind ditch in the sand, which ditch is simply extended as its side slopes and bottom becomes clogged. Clogging is delayed by suitable use of a rake. Nothing could be simpler, but the character of the soil requisite for such a solution of the sewage problem is rarely found, and when found cannot be unduly overworked.

Artesian Wells to Scatter Sewage!

The most novel proposition, involving a serious overload, that the writer ever encountered had to do with sewage disposal in a town in the Far West where deep wells were available which delivered much water under heavy pressure. The proposition was to use this artesian water to shoot the sewage into the air and thereby so distribute it over the country as to render it unobjectionable. One can imagine the state of things that would have resulted had such an odd plan been adopted.

A sewage disposal layout of a municipal type cannot be considered for a camp except under circumstances of decided permanency, and when provision is to be made for a large body of men. At a number of our present military establishments we possess such systems of treatment, but labor camps are nearly always in quite another class.

Night-soil removal, or the can system, involves burying the can contents or else burning them, and the decision is sometimes in favor of employing both methods, although burying is the more common. There is an often-expressed objection to the burning of this sort of material because of a fancied unpleasant smell resulting, and yet it is really hard to detect any real difference between the odor so produced and that evolved by the combustion of almost any kind of organic material. Major Lelean quotes an interesting letter from a lady, who wrote as follows: "The odor of burning peat, so delightfully reminiscent of the cotter's hearth, becomes the intolerable effluvium of burning matter of an indescribably objectionable nature" when excreta are being burned. Inasmuch as the letter of objection was received when a wood fire was employed to try out the furnace, and before any excreta had been added, the Major was induced to seriously discount subsequent objections.

Use of Incinerators

Many types of incinerators are in use, some of which are decidedly complex and expensive. For a simple device, calculated to provide for a reasonable number of men, and especially suitable for garbage destruction, the Woodruff pit is worthy of attention. It is merely a circular hole in the ground, ten feet in diameter and about four feet deep, with the sides lined up with field stones. In the centre is a conical pile of the same stones to act as a sort of draft chimney. This pile can be advantageously supplemented by a couple of lengths of tile pipe, or even old stovepipe. A good fire of wood having been started in this pit, a very considerable amount of camp refuse can be disposed of by judicious firing. Liquids should be slowly poured down the hot side stones so as to encourage rapid evaporation. If liquids be added in too great bulk or thrown on too quickly they are likely to pass the fire zone and reach a lower level where they may start a nuisance.

One disadvantage of the Woodruff pit or of any other type of open fire is that when the wind is high, light materials will often be blown about the camp; this is especially objectionable if the said materials chance to be what are known as "camp butterflies," or toilet paper.

Urine can be well disposed of by the stone-filled soakage pits, adopted by the British Army, into which long funnels of wood or tin are extended. Fouling of the ground with consequent fly infection is thus avoided.

At one large New York camp a non-portable furnace was built which worked successfully. It consisted of three levels, of which the bottom one held the fire. The top level was a shelf extending from the front half-way or more toward the back wall, and upon this shelf was thrown the material to be destroyed. The middle level was also a shelf of about the size of the top one, but it extended from the back wall out toward the front. Thus the hot products of combustion followed a curved course under and over the materials on the two shelves. When the charge on the top shelf had become thoroughly dried it was pushed back so as to fall on the middle shelf, and when it had thoroughly charred in that position it was pulled forward and fell upon the fire.

The Plattsburg Furnace

A military furnace may be seen at Plattsburg which is operated without drying shelves. Its length is greater than its height, and the garbage charge is dumped directly upon the fire through a trap-door. The fuel is cordwood. Around the sides of the combustion chamber run iron water pipes that act like the water-back of a kitchen range and supply hot water with which to wash the cans in which the garbage is collected. The process