

Clinical and other Notes.

AN INCINERATOR AS USED AT THE STATION HOSPITAL, WELLINGTON, INDIA, FOR DEALING WITH KITCHEN REFUSE AND NIGHT-SOIL.

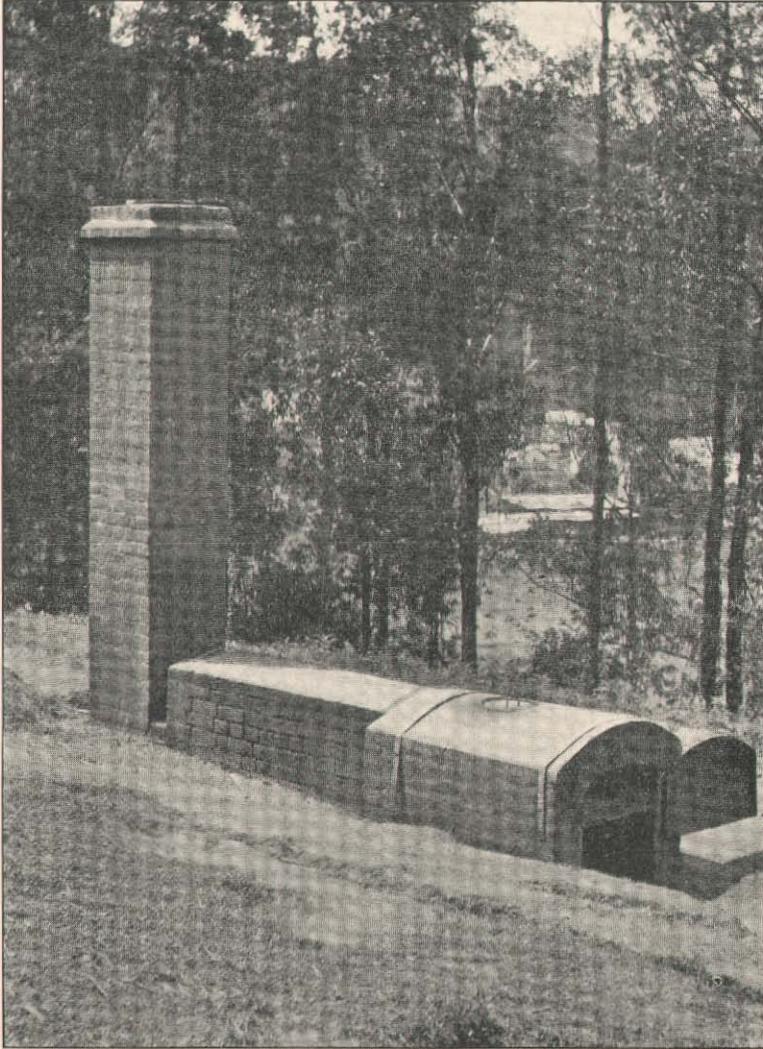
BY LIEUTENANT-COLONEL G. CREE.
Royal Army Medical Corps.

THIS incinerator is designed as follows: A grate, with the usual fire-bars and furnace door, which opens direct into the destruction chamber. This chamber is shaped as follows: In front it is the same width and height as the furnace, and the floor slopes from front to back to a depth of six inches, and the sides are gradually drawn together to the width of the flue at the back, and the roof is arched, so the whole chamber is roughly bottle-shaped. The floor is covered with an iron plate curved at the back to prevent a dead angle. In the front part of the roof is a circular opening covered in by an iron lid, through which the material for destruction is introduced. Just behind this is a baffle plate, the depth of which corresponds to the size of the flue opening. At the back of the destructor opening from its upper part is the flue. The flue leads at first in a horizontal direction for the greater part of its length and then makes a right angle bend downwards to the floor level, and again horizontally into the base of the chimney, this bend forming a combustion chamber for fumes and a trap for dust. The chimney is quite straight, with the exception of a small throat at the lower part.

The point aimed at in this apparatus is forced draught with its accompanying great heat, thereby ensuring a complete destruction of the materials, with also an absence of smell, smoke and dust.

The entire apparatus is, with the exception of the ironwork, built of masonry. In the one experimented with here it was built of ordinary unbaked bricks, but this material is not sufficiently strong to stand the great heat generated, and a permanent apparatus should be constructed of proper firebrick. The method of using it is as follows: The latrine pans and urine troughs are smeared with crude kerosine, and a small quantity of the same is poured over each motion by the sweeper. This has several advantages; it renders the soil more combustible, keeps flies away from it, and prevents the pans themselves from becoming soiled. The contents of the pan are, as usual, deposited in the usual iron receptacle till removed to the incinerator. The kitchen refuse is collected in the usual way, that is, the wet is separated from the dry, in separate utensils. In the morning the incinerator furnace is lit and in about half an hour, when the fire is burning freely and the apparatus is well heated, the rubbish and kitchen refuse is introduced, and when this is well dried

and beginning to burn the night-soil is introduced on the top of it. The contents of the incinerating chamber must be now occasionally turned over with the rake till the whole is destroyed.



AN INCINERATOR AT THE STATION HOSPITAL, WELLINGTON, INDIA.

There are several points to carefully observe, and upon the observation of them the success of the process depends :—

- (1) The stoking must be intelligently done, the fire must be burning

freely, and the apparatus well heated before the refuse is added; the fire must never be allowed to get low, the fuel being added in small quantities at short intervals, and not, as in the usual method, by the unintelligent, a large quantity of fuel at one time, so that the minimum of heat is produced and the maximum of smoke; the fire should always be burning freely and clearly, giving the maximum heat for the amount of fuel consumed. (2) The material for destruction must be added intelligently, that is, not too much at a time. (3) All openings, with the exception of the furnace door, must never be left open, as such a proceeding would abolish the forced draught on which the working of the apparatus depends. (4) The material in the destructor must be turned over at frequent intervals or it does not become dried as quickly as it should. When night-soil is being dealt with alone this is very marked.

The best fuel to use is, of course, coal, but wood works almost as well, if intelligently used. Here we have been using eucalyptus wood, which does not make a very hot flame, with complete success.

The cost of working has, so far, averaged 2 annas per hour for fuel, costing 4 annas the 100 lbs. If the cost of the crude oil is also added it comes to 11 annas an hour. Doubtless with more experience on the part of the sweepers in stoking a saving on this item could be effected, and also the greater number of hours the apparatus is being used would comparatively reduce the amount of fuel used each hour.

The apparatus designed here is considered large enough to deal with the refuse and excrement of half a battalion of infantry.

HYDROTHERAPY AS A FACTOR IN THE TREATMENT OF ACUTE CROUPOUS PNEUMONIA.

BY MAJOR C. W. R. HEALEY.
Royal Army Medical Corps.

IN laying stress on a special line of treatment for acute croupous pneumonia, the most widespread and fatal of all acute diseases, according to Osler "killing more than diphtheria, and outranking even consumption as a cause of death," I am conscious of the fact that this treatment is not a new one; it is referred to in all modern books on medicine and therapeutics, but to my mind they do not lay sufficient stress on it, and none go into detail sufficiently to enable a person unacquainted with this treatment to carry out the procedure in a manner which will act with most benefit to the patient, and if not properly carried out the treatment is practically useless.

In looking up the Army Medical Reports for the years 1899 to 1904, I find that the total admissions and deaths from pneumonia in the Army in the United Kingdom are as follows:—