"Physically she was a skeleton and the abdomen was enormous. The temperature was constantly high, respirations hurried, and there was oedema of the feet and hands. Albuminuria was present. There never was any doubt as to the nature of the illness, as worms were being constantly evacuated per anum and per oram. I was able to arouse some interest in this case in some of the other members of the family, and they counted the worms which were evacuated during the first four days of treatment, after which the familial interest seemed to wane and the count was dropped. The number enumerated was 800, and worms were passed in small numbers for at least a week after the enumeration ceased.

The interest in the case lay in watching the superadded symptoms, due to the toxæmia, gradually one by one disappear, and it is enough to say that within twelve months she had developed into a normal woman. Menstruation became established ten months after the 'great evacuation,' and the albuminuria disappeared about the same time."

NOTES ON THE USE OF OIL FUEL FOR COOKING PURPOSES AND THE SYSTEM IN USE IN THE INDIAN STATION HOSPITAL; DEOLALI.

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Oil fuel has been used in the hospital kitchen at Deolali since May, 1918, and during this time no firewood has been issued. The oil is that used for bunkering steamers and for railway and other engines; it is a heavy oil, and when lighted burns with a dead yellow flame and gives off a large quantity of thick, black smoke. It has many advantages over wood and these are enumerated later.

A plan of the kitchen (scale two inches to one foot) is shown on page 55.

There are two reservoirs (four-gallon petrol drums) with stopcocks, one contains oil and the other water. Both oil and water are run into a funnel in a small stream and so get mixed. This mixture is carried by the pipe to the ovens. The reservoirs are mounted side by side on a cemented pedestal at a height of one foot three inches from the floor. The idea of mixing water with the oil is to produce partial atomization of the oil and thus to lessen the smoke production, which is considerable if only the oil is used.

1 At Aldershot field kitchens modified to burn oil have been issued for trial to regiments without previous experience of the method. Very good results were obtained when the kitchens were stationary; but on the move the results were not satisfactory, owing to the jolting on the high roads and the excessive production of smoke. The M.G.A. considers that if an oil cooker is to be used it should burn paraffin and be made on the principle of an oil stove. There might also be possibilities in the Primus stove system, where oil is burnt under pressure.—Ed.
The ratio of oil to water has to be worked out and regulated (stopcocks on each reservoir) so that the minimum quantity of oil is used with very little smoke coming out of the chimney.

The design of the ranges in which cooking is done is indicated on the plan. Indian cookers (chulas or combustion chambers) are constructed of brick-work in lime mortar, the joints being filled in solid so as to be as airtight as possible. The chimney is of sheet iron or brickwork not less than twenty feet in height. It is found that degchais of nineteen inches to twenty inches in diameter are the most convenient, but those of other sizes may be used. The diameter of the opening should be three-quarters of an inch greater than the diameter of the degchai. To make these openings fit the pots accurately, and to prevent escape of smoke through them a mud plaster is used. The plaster is laid all round the top of the ovens so as to form an accurate casing round the pot. The casing requires renewal once every fourth or fifth day as a rule. The same applies to the baking iron used for making chapatties (unleavened bread). The degchais should be set three inches to four inches deep in the combustion chamber, at the bottom of which is an iron plate ten inches by ten inches, and about one-eighth of an inch thick, to receive the mixture of oil and water. The edges of this plate should be turned up half an inch all round to prevent the mixture running off the plate. Owing to the high viscosity of the oil, in spite of addition of water, a pipe of not less than half an inch in diameter should be used and the pedestal for drums of oil and water be placed at a distance of about four feet six inches from the cooker.

To light the fires the following method may be used:

A long piece of stout iron wire is taken, and at one end it is wrapped firmly with cotton waste, tied by means of ordinary string. This end is dipped in oil and lighted and is then placed inside the combustion chamber on the iron plate and kept there till the mixture of oil and water running through the pipe on to the plate gets lighted. To extinguish this mop, it is dipped quickly in the oil reservoir and kept submerged there for a few seconds.

To ensure steady working of the fire, the following directions should be carefully noted as they have been worked out by experience:

(1) The iron plate at the bottom of the chula (cooking place) should be as clean as possible.

(2) Before starting the fire wrap a piece of waste round a stout wire, soak in oil and ignite it. Place it inside the chula and heat the end of the oil pipe. Do not start running the oil till the pipe is well heated.

(3) Turn on the oil slowly at first, and as it passes over the heated end of the tube it will be warmed up and ignite readily as it falls on the burning stick. The burning oil will drip on to the iron plate.

When the burning oil has spread out on the plate, turn on the water slowly. The flame will become much more intense, and showers of sparks will be produced.
(4) Now adjust the oil and water supply. If the water is in excess, it will boil on the plate, cause frothing of the oil and tend to put out the fire. In such cases cut off the water and increase the oil; allow it to burn until equilibrium is restored. When the flame is burning with a hissing noise turn on the water again.

(5) If the chimney is giving off a heavy, black smoke, too much oil is being used. The smoke should be black but thin, with no “smuts” in it. This method is extremely easy to run, and there is nothing to get out of order. It is almost “fool-proof,” and with a little patience the cooks can be very easily trained to use it successfully.

**OIL COOKER INDIAN**

The use of oil fuel shows great advantages over firewood:

1. Owing to the structure of the cooking place no smoke escapes into the kitchen. The smoke from wood fires not only discolours the walls, but it is irritating to the eyes, even when dry wood is used. When the wood is wet chulas are well-nigh impossible to work.

2. There is less heat in the kitchen as the heat is carried towards the chimney, and is not radiated into the kitchen. This ensures greater comfort in working, and no one appreciates the advantages more than the cooks themselves.

3. The flame produced with oil is much steadier, and no stoking is necessary. The oil and water, once regulated, flow and burn steadily.
(4) The oil occupies much less space in storage. It saves labour and its transport is also easier.

(5) Oil is not affected by wet weather.

The results obtained with oil are uniformly satisfactory. The quality of the food is always good, and no complaints have ever been received that the oil in any way taints the food. The regular heat seems to ensure more even cooking, and charring or burning of chapatties does not occur, as is the case with the tawa (i.e., the flat iron plate on which chapatties are usually cooked).

The rate of cooking is highly satisfactory. With a set of three combustion chambers or chulas and one chapatti oven, two hundred rations can be cooked in three hours. It has been found that the expenditure of oil per ration varies inversely with the number of men cooked for.

Oil fuel, as used above, is well adapted for use in all military barracks, and especially in hospital kitchens. It has no disadvantages, is easily handled and stored and the saving in transport is considerable.

*Specification of oil used, etc.—*Oil fuel, first quality, is used for the stove. This can be obtained from the S. and T.

*Details as to the average amount of oil consumed.—*As the daily number of patients at the Indian Military Hospital is small, it is not possible to give any useful information about the quantity of oil required for a large number of diets.

It has been found that diets for five patients can be cooked on the stove with 112 ounces of oil (7 pounds). The same amount of oil will be required to cook diets for three patients.

*Comparative cost of oil fuel and wood.—*As compared with oil, 17 pounds 12 ounces of firewood are required to cook diets of three patients.

The cost of oil and firewood is as follows:—17 pounds 12 ounces of firewood, Rs. 0.4.6; 7 pounds of oil (112 ounces), Rs. 0.4.8.

The cost of oil appears to be slightly more than wood, when three diets only are cooked, but five diets can be cooked without increase of oil fuel, whereas an increase of wood fuel would be required.