INCINERATION OF HUMAN EXCRETA: FURTHER OBSERVATIONS.

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The method of disposal of excreta by incineration is being extensively employed in India, and the system illustrated in the JOURNAL OF THE ROYAL ARMY MEDICAL CORPS (vol. xii., p. 443) in an article on the "Sialkot Incinerator" is the one which has afforded the cheapest and most satisfactory solution of the problem in this country.

As long as incineration is carried out accurately on the lines there sketched it effectually disposes of all the excreta, liquid and solid; but, like all processes involving care, rigid supervision over the Indian workmen is a sine qua non. Any relaxation of vigilance or neglect to punish a fault conduces to carelessness and bad results. India is not a country where one touches a button and the machine does the rest. It is a country without machinery, and dependent, in the execution of sanitary matters, upon a type of humanity which has not advanced within historic times.

Whether incineration be the accepted mode of disposal, or trenching, every detail of the scavenger's work must be watched, though in this respect supervision is easier with incineration, because the work is focused. One has not to watch for Crowly carts dropping filth along the roads while the sweeper sits on the cart singing, or empties a load of urine in a ditch in some secluded spot.

Whether incineration be employed or the dry-earth system, the first essential is to keep flies away from latrine pans. This can only be effected by removing ordure as soon as deposited, either into a covered receptacle or into a fire. Even when antiseptics are used in the pans flies swarm about them if this is not systematically done. The presence of flies in any large numbers discloses the fact that latrine sweepers do not remove the excreta promptly from the latrine pans. Antiseptics deluged over latrine walls, seats and pans, in anticipation of an inspector's visit, will not drive away flies which have settled in a locality where excreta are ordinarily available during the greater part of the day.

The first principle, then, in all latrine management is the prompt removal of the excreta into a receptacle or fire where flies cannot approach their pabulum and breeding-ground.
Incineration of Human Excreta

Where incineration is employed, the next point is to see that the fuel does not afford opportunity for flies to breed.

When litter supplied for incineration is in a damp, putrescent condition, it attracts flies, which deposit their eggs in it. And when such manure is heaped upon the ground the larvae of flies may have time to burrow into the earth below, and in due course may produce fresh crops of flies.

If such manure be placed on an iron grating raised about a foot above the ground, the fly larvae will be found dropping upon the ground. They should be swept up and burnt. An impervious floor should be made, or a sheet of iron or other material should be placed below, to prevent larvae getting access to the soil, wherever manure is stored, whether stored on a grating or not.

The following diagram represents a device which enables the larvae to be collected and the litter to be rapidly dried. It consists of a cage placed around seven-eights of the circumference of a mud incinerator, the gap being left for access to the fire by the sweeper. The bottom of the cage is 1 ft. from the ground. It has been found by following the above practice that litter supplied from cavalry lines does not conduce to fly-breeding, being usually too dry. That supplied from bazaar stables in a rotten condition acts as a breeding-ground, and, unless treated as above indicated, may lead to fly propagation.

As incineration of latrine stuff leads to the destruction by fire of all the available stable manure in a station, its final result must be the reduction of the fly pest to a minimum. But unless sweepers are careful and prompt to empty latrine pans, the presence of
exposed ordure will always attract flies to the site where it is least desirable they should be found, and this whatever system of conservancy, except the water-closet, is in vogue. The only fuel which should be stored against wet weather is dried leaves and grass.

For the information of those who have not been in India it may be added that a latrine consists essentially of a pan for the reception of excreta, over which the European sits and the Indian squats. For the former seats are provided; for the latter, stands. Each pan contains cresol solution. Although kerosine oil is not an antiseptic, it would be more valuable than cresol in pans because flies will not go near kerosine, whereas they will not avoid cresol if it contains fecal substance, more particularly when these float upon the cresol solution. As long as flies can get into fecal masses they are liable to spread disease.

For this reason kerosine oil is valuable for use in sputum-cups; also, it does not alter the appearance of the sputum.