

## Medical Matters.

### THE STUDY OF THE TECHNIQUE OF FUMIGATIONS.

Dr. Gabriel Custodio, Chief of the Service of Disinfection in Havana, contributes to *Sanidad y Beneficencia* an interesting article on the Technique of Fumigations. Dr. Custodio advocates the use of an air-tight covering of canvas placed externally over the building to be fumigated, a method suggested to him by an important paper read by Dr. Eduardo Licéaga on yellow fever in Mexico. He writes:—I was appointed in 1907 by the sanitary authorities of Cuba to take charge in the campaign of the work of prevention and destruction of mosquitoes, and, as I was fully aware of the defects of the system in use, I became keenly interested in the trial of the new proceeding, because, if it proved practicable, it would solve the great problem in the technique of fumigation, which consisted in preventing the mosquitoes from being chased out during the preparation of the building, either by the inhabitants of the house on moving the furniture and other objects, such as pictures, tapestry, clothes, etc., or by the fumigators while carrying on the work of covering the openings or crevices in the walls and roof.

Experience has shown the necessity of certain details to make the management of the canvas easy and to give the best results which the method is capable of producing.

The details to which I refer are the following:—

1. Selection of the class of canvas for the construction of the air-tight coverings.
2. Accessories with which canvas coverings of this kind should be provided.
3. Size of the canvas.
4. Mechanism for setting up the canvas.

The quality of the canvas is very important on account of its relation to the efficacy of the fumigation. The consistency of the canvas for resisting the manipulations to which it must be subjected is also to be taken into account.

It is necessary to insist on the quality of the canvas, because if it is not compactly woven there is the likelihood that the sulphurous vapours or the smoke of the pyrethrum may escape through it, thus diminishing to a considerable extent the quantity of material which has been calculated for filling the cubic space of the building, in addition to the danger that some mosquitoes may escape the effects of the insecticide.

Of the distinct classes of canvas which we have employed since the system was introduced, the best result has been obtained from

that known in the market as 12 ounce canvas.

As accessories, the canvas should be provided with eyelets, cover eyelets, cross pieces and end pieces.

The mechanism employed in arranging the canvas is as follows:—

The canvas rolled up in the form of a chain is placed at the most suitable point for raising it; two or more men (generally two) place themselves on the roof in order to raise the canvas by its upper extremity, while two others from the ground assist in unrolling it, and preventing the wind from opening it before it completely reaches the roof. Arranged in this manner on the roof, it is unfolded and extended over the roof until it covers it totally.

This operation may be performed with only four men, in the short space of half an hour, without danger that the projecting eaves, in the case of houses with tile roofs, or the railing, in the case of houses with terrace, or the canvas itself, may break on account of the rubbing.

If it has been necessary to employ several canvases to cover the house, after these have been extended over the roof, they are united by means of the ropes which pass through the eyelets, and strips of paper are pasted over the latter in order to secure the desired impermeability.

In summary, its advantages are the following: The work is carried on externally with considerable economy in men, material, and time. The last is a very important consideration when dealing with yellow fever, in which it is necessary to intervene before the lapse of a limited period of time (12 days) for the total destruction of the mosquitoes before they are in a condition to transmit the disease. The closure of large open spaces, such as yards and porches, is achieved with the absolute certainty that the work done will resist intense atmospheric changes, such as rain and wind, without the disinfection being affected at all.

The new system diminishes considerably the injury which this class of work always causes the families who occupy the houses as well as the merchants or manufacturers on account of the interruption which they suffer in their occupation and business.

It is a problem already settled that each person is left in possession of his home, office, establishment, etc., a few hours after the work of fumigation has begun.

The new method does not produce filthiness, as does the pasting of paper in the interior of the houses, which has always been a nuisance giving rise to constant complaints and protests on the part of owners or tenants.

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