

suers with zeal and enthusiasm, if there is the sympathy and co-operation of the public with them. But *we* must agitate too. We must ask the authorities about flies again and again ; we must implore, if necessary. Soon the thing will be done ; flies will be reduced and then we shall have little summer sickness, and the infants will live instead of dying. Every one can help. If every one will look upon a house-fly as a loathsome, dangerous pest, and will talk about it as such to his neighbours, the authorities concerned will soon bestir themselves.

Let the dictum go out that the presence of house-flies in a house is a sign of insanitation and their numbers a measure of that insanitation. In the towns of the Suez and Panama Canals, mosquito-breeding places are all dealt with regularly once a week by organized gangs of sanitary inspectors known as "mosquito brigades." House-fly breeding-places are as easy to deal with as the fever-carrying mosquitoes. Why cannot we have "fly brigades" here at home ? Flies carry disease ; therefore, let us prevent flies.

TYPHOID FEVER VACCINE.

Some statistics taken from a recent letter of Mr. Stephen Paget, Honorary Secretary of the Research Defence Society, to the *Nation*.

THE first use of the protective treatment was in July-August 1896, at Netley Hospital. Eighteen medical officers and candidates for medical officership offered themselves to be treated. In October, 1897, the treatment was given in the Kent County Lunatic Asylum during an outbreak of typhoid, to eighty-four persons—all the medical staff and a number of attendants—with very good results. Next come the eight sub-alterns on the Khartoum Expedition, of whom six were protected and two were not. The six escaped typhoid ; the two got it, and one died. During November, 1898, to March, 1899, the treatment was given to many of our soldiers in India (Bangalore, Rawal Pindi, Lucknow). The inoculations were optional, they were made at private cost, and they were made without official sanction, though the original proposal for them in 1897 had come from the Government of India. Pending official sanction, they were stopped. Then, on May 25th, 1899, the Government of India made application to the Secretary of State for India that they should be sanctioned, and should be made at the public cost. On August 1st, 1899, the Secretary of State for India announced in Parliament that the protective treatment, at the public expense, had been sanctioned.

The group under observation—regiments and other units of the British Army in India—was 30,353 persons, of whom 4,502 were protected, and 25,851 were not. The protected had 44 cases, with 9 deaths; the non-protected had 657 cases with 146 deaths. Later, in 1899, came the instance of the 15th Hussars at Meerut: 360 protected had 2 cases with 1 death; 179 non-protected had 11 cases with 6 deaths.

In 1900 came the very striking instances of the British garrison in Egypt and Cyprus, and of the patients in Richmond Asylum, Dublin.

In October, 1899, came the declaration of war in South Africa. For the facts about typhoid among our soldiers, we have Colonel Simpson's "Medical History of the South African War," and we have the Report—after the war—of the Committee on Field Sanitation. The protective treatment in 1899 was still an imperfect instrument; it was put to a most fearful test, under conditions of immeasurable hardship. We might fairly wonder not that it did not achieve more, but that it achieved so much. Sir William Leishman, after a critical commentary on the results obtained in the war, and on the factors unfavourable to the success of the treatment, says; "It is noteworthy that, in spite of all these factors, the general analysis of the results should show that typhoid was twice as common in the non-inoculated as in the inoculated; and, in my opinion, it is even more striking that in every corps, without exception, the ratio should have been in favor of inoculation."

In 1904 the Anti-Typhoid Committee of the Army Council recommended that the treatment, which had temporarily been in abeyance, should be re-introduced into the Army as a voluntary measure, and that investigations should be commenced with a view to the introduction of possible improvements in the treatment.

In 1912 the Committee published its final Report. It deals with no less than 19,314 cases—in India, Egypt, and elsewhere. Of these, 10,378 had been protected and 8,936 had not. The proportion of typhoid amongst the protected was 5.39 per 1,000; among the non-protected it was 30.4 per 1,000. The Committee recommend that every measure that may be considered practicable should be employed to extend the practice of anti-typhoid inoculation in the Army. "In the opinion of the committee, its universal application is desirable."

The treatment has been made compulsory throughout the Army and Navy of the United States.

A Bill has lately passed the French Senate making the treatment compulsory in the French Army.

In Avignon, in 1912, typhoid broke out in the barracks. Of 2,053 men, 1,366 were protected and 687 were not. The non-protected had 155 cases with 21 deaths; the protected had not one case.