

housing of the working classes still in the hands of another Government Department? Such a proposal could only come from a body recently admitted to the circle of State Medical Services, which had but a very imperfect grasp of what State medicine implies.

The first function of a Ministry of Health should be to deal with causes, and not symptoms, and bad housing is a chief cause of the symptom tuberculosis in the State. Surely whatever form the paramount central authority may eventually take it must be broadly based from its outset upon the principle of prevention rather than cure. The widest outlook must be possible from the beginning, or the whole of the future will be jeopardized.

And, beyond the question of prevention and treatment of disease, there must be the idea of the development to its fullest powers of the physique of the people, the provision of physical culture, the education of the young in hygienic habits, the study of the relations of fatigue, and the physiological nature of the mechanical processes of the factories, to productivity and the happiness of the workers.

Again, beyond all this it must envisage the improvement of the race; how to encourage breeding from the fit and discourage breeding from the unfit; for there is evidence that at present the unfit are multiplying at a more rapid rate than are the fit. In short, Eugenics. Hygiene in its widest and broadest sense, and the prevention of disease, must take precedence of the cure of disease, and I hope not only that these principles will be predominant from the outset with the paramount Public Health Authority, but, in the fulness of time, a greater and greater share of the activities and emoluments of the medical and nursing professions will be involved in, and derived from, measures for the improvement of physique, the prevention of disease, and the improvement of the race.

### OUR PRIZE COMPETITION.

**POINT OUT DANGERS TO CITIZENS FROM MILK, INSECTS, DRAINAGE, WATER, FOOD, AND GARBAGE.**

We have pleasure in awarding the prize this week to Miss O. M. Balderstone, City of Westminster Infirmary, Hendon, N.W.

#### PRIZE PAPER.

*Milk* is a common carrier of disease. Many epidemics of typhoid and scarlet fever, and some of diphtheria, have been traced to contaminated milk. The general method of con-

tamination is by the addition of contaminated water or through the milk cans being washed with contaminated water. It can be easily understood how this could happen if one of the "hands" in the dairy were suffering from scarlet fever or coming in contact with a case of scarlet fever; or the water obtained from a source infected by the excreta of a typhoid patient.

Milk also tends to undergo rapid fermentative changes, especially in hot weather or by contact with dirty milk cans or bottles. This is the cause of much of the diarrhoea in children. Some authorities hold that milk from tuberculous cows is responsible for a great deal of intestinal, glandular, and bone tuberculosis.

Milk should never be stored in ill-ventilated places, or next to anything with a strong odour or where drain effluvia may gain access, nor ought it to be kept in lead or zinc vessels. The danger can be realized of drinking milk that has not had the germs (that are most probably present in a town supply) killed by boiling or Pasteurization (keeping it at a temperature of 158° F. for twenty minutes).

*Insects.*—The common domestic fly is a great danger to the community. It breeds in refuse and manure heaps, uncovered dust-bins, &c., settles on excreta, the expectoration of consumptives, and then on uncovered food—transferring the germs on to the food.

Lice have been proved to be the carriers of typhus fever, and mosquitoes of malaria.

Anthrax, plague, cholera, and typhoid fever have been ascribed to the agency of flies, as has also tuberculosis by some authorities.

*Drainage.*—Dangers from drainage may be divided into those arising from defective drainage of the soil and of that for carrying off the sewage.

If the soil on which the house or town is built is not properly drained, the dampness predisposes to such diseases as rheumatism, catarrh, and tuberculosis.

The dangers arising from the "sewage" drainage are:—Badly ventilated sewers may transfer effluvia and the germs of disease (typhoid for instance), from one place to another; badly laid pipes becoming disjointed may contaminate the ground and the water supply; inefficient traps to water-closets lead to the entrance of sewer gases into the house. The water supply for flushing the water-closets must have no connection whatever with the water supply for drinking, or the latter will become contaminated.

*Water.*—Danger may arise from contamination with sewage or sewer gas. The drain pipe

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