set up pneumonia, and so cause the death of the patient. The milk may be thickened with arrowroot or cornflour, or a little Benger's Food may be taken, and this may relieve the condition, but very often nasal feeding has to be resorted to. A nurse must never for one moment relax her vigilance concerning the patient, for children are very apt to pull the tube out, however securely it may be tied in. The patient being unable to speak, she must always be on the alert and endeavour to anticipate all his wants. The pulse and respiration should be frequently taken and charted, so that the doctor may have early indication of any threatening of bronchitis or pneumonia. The secret of success in the after-nursing of tracheotomy is to interfere with the patient as little as possible; and in removing the tube and in the dressing of the wound to observe strict After use, instruments should be asepsis. washed in some antiseptic lotion, and then sterilized by boiling, and again placed in lotion, such as carbolic 1-40, or lysol. They must never be placed in mercurial solution, as it discolours them. They should always be kept at hand, but out of sight of the patient, in antiseptic lotion ready for use, and should consist of a spare tube, dilators, scissors, retractors, and probe, and a few sterilized feathers; but feathering the tube is not advocated by many doctors, and should never be used as a substitute for removing the inner tube. Indiscriminate feathering of the trachea does a great deal of harm.

## HONOURABLE MENTION.

The following competitors receive honourable mention: Miss Elizabeth Martin, Miss Ada. Jenkins, Miss Lucy Walker, Miss Amy Robinson, Miss Jessie Macfarlane, Miss Emmie James.

In connection with the care of the tube, Miss Martin points out that "the nurse in charge must be familiar with the ordinary form of tracheotomy tube in use (the silver double tube). The outer tube is provided with a slit on each side of the guard through which the tube is passed, and when it is in position in the trachea the tapes are securely tied round the patient's neck. This process fixes the outer tube. . . After a time the inner tube may become plugged with dry mucus, so that the airway is almost blocked, when this inner tube must be removed, thoroughly cleansed with alkaline lotion, and replaced, and this must be repeated as often as necessary.

## QUESTION FOR NEXT WEEK,

Describe the daily and general care you would give to the mouth and hair of a helpless patient.

## "HOW LIVING GERMS ATTACK AND DEFEND US."

In the spacious and comfortable Grand Hall of the Hotel Cocil a lecture was given upon the above subject by Dr. Herbert W. G. Macleod, B.Se. The meeting, which took place on February 3rd, was convened by Queen Victoria's Jubilee Institute, when nurses comprised the greater part of the large and appreciative audience. The Chairman-Viscount Goschen-paid the well-known scientist the compliment of a brief introduction.

It goes without saying that a lecture delivered by an expert and illustrated throughout by the Electric Lantern, the Epidiascope, Microscopes and Cinematograph, must be an intellectual treat of the finest order. The interest that it excited was punctuated by occasional half audible gasps of surprise; but the surprises came so thick and fast, that had the lights been on, open mouths as well as open eyes *might* have been observed !

Dr. Macleod made a clear division of his subject into the germs that *attack* and those that *defend*; in other words, germs of infection and protection. He explained them in their order.

The germs of infection which are of vegetable nature have "peculiar ways," one of the most striking of which appears to be their very rapid growth. Under favourable conditions one bacillus will in twenty-four hours become 18 million. Nature, however, sets up defence, and the enemy receives a check. The different bacteria were separately shown and explained, also how infection in each case was carried. That 30 per cent. of cows in large dairies are infected by the germ of consumption was a staggering revelation. The germs of tetanus, plague, cholera, consumption, diphtheria, &c., were successively shown and explained.

The Epidiascope also showed upon the sheet most beautiful and highly magnified specimens of the mosquitos or flies which convey malarial fever, yellow fever, sleeping sickness and a certain form of paralysis from which men who work in stables suffer—the inference being that it is caused by a fly whose haunt is the stable. This is a new discovery. The facts about the functions of the white corpuscles, as the police of the body, surrounding, devouring, and absorbing the mischievous bacteria, are probably well known to all nurses, but the wonder of it is always fresh and interesting, consequently iteration had no tedium.

When the Cinematograph was set in motion then the real magic began, and had Dr. Macleod lived in the dark ages, he would certainly have been burnt as a wizard. The blood circulating through the arteries and veins of a living frog was the first picture shown. The lecturer was careful to assure his audience that there had been no cruelty practised to obtain it.

Then one saw a portion of the lung being bathed with oxygen by the action of its carriers,



