

the present system of drainage a single intercepting pipe, with injectors on the "Shone system," if carried in a direct line from near the Botanic Gardens to deep water at the north end of the Ocean Beach, would be sufficient to obviate to a large extent the present dangerous condition of the foreshore. The other witnesses who referred to the site approved of it chiefly on account of its undoubtedly convenient position for the students attending the Medical School of the University, and its accessibility from all parts of the city.

The Commissioners are of opinion that, although the defects alleged are all capable of rectification, there is an inherent objection to the present site in the fact of its being situated on a low ground; and if at any time it is decided to erect a new Hospital an effort to secure a more perfect site should certainly be made.

(b.) *Faulty Plan of Construction.*—The building was originally erected in 1864, as the first part of a large group of Governmental and parliamentary buildings, at the time when the question of the removal of the seat of Government from Auckland was under discussion. In 1865 it was used for the first New Zealand Exhibition, and in the following year it was devoted to its present use; so that it has served as an hospital during the last twenty-four years. The Commissioners considered it important, seeing that the building was somewhat hastily constructed, and had been so long in use, to get a professional report on the present condition of the structure. That report states that the woodwork of the building generally is quite sound and in good order so far as flooring-joists, and beams, and main roof-timbers are concerned; but some of the woodwork in the skylights in the roof is defective, and that the cement covering the chimneys, parapets, towers, and turrets has become loose, and has given way in several places, exposing the brickwork to the disintegrating effects of the atmosphere, which is dangerous to the stability of the building. A large number of slates are broken, and the eaves, troughs, and ridgings are very much corroded. From the report and evidence of Mr. Wales, architect, it is apparent that repairs to some extent are required.

The building as at present adapted is nearest to the form of what is called the "block system" of hospital construction, which is universally condemned as a dangerous and expensive style of building for the purpose. The chief objection to it is that the ventilation is largely influenced by the great central hall, so that a mixing of the air takes place, and contamination is apt to spread from one ward to another, thus defeating that perfect isolation of different classes of diseases which is regarded as so essential a provision in all modern hospitals. The evidence, especially that of Dr. Maunsell, shows that this provision can only be made by what is termed the "pavilion system" of hospital construction, in which each ward forms a detached building, well lighted and ventilated from three sides, and only connected with the other buildings by open corridors. The arrangements adopted in the Christchurch Hospital appear to be very satisfactory in this respect, as will appear from reference to the evidence of Dr. De Renzi. The wards in the Dunedin Hospital are also too short for their economical administration, for, as pointed out by Dr. Truby King, the number of nurses required would be out of proportion to the number of patients for which the wards are really suitable. The basement story of the building is considerably below the level of the surrounding ground, and, although every care is taken to maintain it in as dry and wholesome a condition as possible, still, as the air from it ascends freely through the building, it must always constitute a source of danger to the patients from what may be termed "cellar air."

(c.) *Imperfect System of Ventilation, Lighting, and Heating.*—The defects in the ventilation and lighting of the wards are, as already indicated, to some extent a consequence of the form of the building. There does not appear to be any definite plan of ventilation, the wards receiving their supply of air merely from openings in the windows along one side and one end of the wards, and from the doorways. The escape for the foul air takes place by the fireplaces, and also, in the lower wards, by apertures into the main hall, and in the upper wards by special ventilators. The evidence in detail, especially that of Mr. Wales, gives the full particulars of the volume of air which can thus be supplied to the wards; but, as it has been shown by other evidence that it is impossible to keep the windows sufficiently open in all weathers, this arrangement for ventilation necessarily fails, and in consequence the wards in cold and stormy weather become quite unwholesome for the patients, Dr. Truby King indeed stating that under such circumstances wards at present containing fifteen patients would not have sufficient pure air for more than one patient. The defective ventilation was affirmed by nearly all the witnesses; and, as having an important bearing especially upon the hygiene of the surgical wards, it was shown that this defective ventilation must cause such a concentration of septic germs as greatly to increase the risk of the outbreak and propagation of infectious diseases within the Hospital. The existence of these pathogenic germs in a hospital is a necessary evil, and their injurious effects are only to be avoided by thorough dilution and continual replacement of the contaminated air. Moreover, it is impossible by this defective mode of ventilation to keep the air in the wards at all pure without causing draughts, which it was shown have in many cases produced injurious effects upon the patients.

The amount of light supplied to the wards from the windows was shown to be insufficient according to the best authorities, the upper wards having less than half the proper quantity. The distribution and form of the windows is also a defect, as they are arranged along one wall, leaving the other as a dead-wall, whereas they should be so distributed round all sides of the ward as to admit of a bed being placed between each.

The heating of the Hospital is closely connected with its proper ventilation. The only provision made at the present time for heating the wards is by open fireplaces, while the central hall is heated by low-pressure steampipe radiators, supplied from a large boiler in the basement. As no provision is anywhere made for the introduction of pure warm air, or for the maintenance of an equable temperature, in our opinion this is a system of warming which is neither satisfactory for the comfort of the patients nor an economical method of administration. Exhibit No. lxxiii., which is a return of the consumption of fuel during the five winter months of this year, shows that