

cumulations of infective dust is shown very markedly, for of all the houses examined, whether dirty or clean, those which gave negative results enjoyed far better means of ventilation and lighting than did those where the dust was very virulent.

At another meeting, Professor Brouardel also drew great attention to good ventilation of dwelling-houses as a prophylactic measure against disease. He stated that the decline in the death rate of mortality from phthisis in England was very largely due to the movement towards better ventilating the houses of the poor, and he quoted a series of legislative measures dealing with the subject. He also showed that not only are ventilation and light beneficial by destroying the dangerous bacillus, but in an unhealthy dwelling "the want of air and light acts on the nutrition of the inmates, children go off, pine away, the strongest men cannot withstand it, every human being living in these places is the destined prey of infectious diseases. . . . Dark and crowded as 'unventilated dwellings' are . . . they are not pleasant to pass the time in, and thus they drive the wretched workman who inhabits them into the public-house, where by excess his vitality is lowered and his constitution predisposed to phthisis."

In connection with the above Dr. Dineson's (Colorado) remarks may be quoted that he would like to criticise "the prevailing idea among medical men that the tuberculosis germ is the only real cause of phthisis, to the exclusion of as important predisposing causes. The question of soil is now even more important than that of seed."

In the very interesting discussions on climate as a curative agent in the treatment of phthisis, the advisability or otherwise of prescribing sea voyages for consumptives was thoroughly gone into. The majority of the speakers considered that the benefits to be obtained from life on deck in the day time and fine weather were more than counterbalanced by the harm done by ill-ventilated cabins. Under favourable conditions about eight hours out of every twenty-four would be spent in foul air, whilst the damage done in protracted bad weather, when the patient must remain below with closed port-holes, is incalculable.

Perfect ventilation is a most difficult problem, but one which has to be faced. Unfortunately there is no standard for our guidance. Dr. Symes Thompson laid down two laws. "Air must never be breathed a second time," and "A superabundance of good air is the most important element in treatment." There is at present a considerable difference of opinion as to the necessary cubic allowance of air per patient.

Mr. E. T. Hall showed that it varied considerably in different sanatoria. At Ruppertshain, in the night wards twenty to thirty metres for men

and thirty to forty for women was the allowance, the ventilation being by doors and windows; there are no fireplaces.

At Nürnberg Heilstatt, Engelthal, the cubic capacity of the dormitories per patient is 40 metres, and again the ventilation is by doors and windows only. At the Städtisches Sanatorium (more a hospital than a sanatorium as we understand the term) the allowance is 36.36 metres per head. Here, in addition to natural ventilation (doors and windows), ventilation is provided for by means of "warmed inlet and outlet shafts," but the air so introduced being heated by steam radiators was not found satisfactory, as it became too dry.

At the Volkshelstätte Krailing, in Bavaria, the cubic space per patient varied from thirty-three to fifty metres per patient, and at Nordrach fifty cubic metres are considered necessary by Dr. Walther; the ventilation being by doors and windows.

In English private sanatoria the cubic contents of the bedrooms are usually 1,100 feet, and more attention is paid to the means of ventilation than abroad. Thus at Crookesbury Ridges, in addition to the windows and doors, there are inlet tubes and shafts at the ceiling across the corridors to the N., whilst fanlights are provided over the doors of the latest built rooms.

The Brompton Hospital authorities are about to build a sanatorium on the most approved modern principles at Frimley, in Surrey, here "opposite every room door there will be a window in the corridors, and as all doors will have fanlights carried, like the windows, to the ceiling, we shall get thorough ventilation.

"Thorough ventilation brings us to the consideration of draught and wind. A prejudice has long existed against both, but several of the Congress members spoke strongly in favour of winds as "sweeping away noxious emanations and supplying fresh air as nothing else does," although condemning draughts through narrow chinks as dangerous. According to Dr. R. Walters, "in this country for the greater part of the year ventilation will be insufficient for curative purposes without a large opening opposite to the open window. Dr. Walther, of Nordrach, says that from the time the patient comes to him until he leaves he is either out-of-doors or in a thorough draught. . . . With a brisk wind blowing sufficient air may enter by one large inlet; but in still weather, when there is little difference between the inside and outside temperature, purification is too slow to be satisfactory without a large outlet opposite the inlet." He does not advise the warming of the incoming air, as some of its ozone is thus destroyed, and he mentioned the stuffy condition of balconies on a still day if they are not provided with outlets at the back.

[previous page](#)

[next page](#)