

2306. You have a plan of a sample of an hospital, have you not? Will you show it to me?—There are several. One of the best is the Marine Hospital at Chicago. I think there is one in Buck's book; it is a very good one, and is erected at Swansea. Then the San Francisco Hospital is also built on the marine system, and is a good one. Another is the Lariboissiere Hospital of Paris. There is also the Herbert General Hospital at Netley. The best one that has been constructed is one mentioned by the *Lancet*—the Hanwell Ophthalmic District Schools. It has only been built within the last few months. It is a one-storied building, and it is built at a very reasonable cost—about £75 per bed.

2307. Now, in the Dunedin Hospital, how are the patients placed with regard to the windows?—I do not quite understand you.

2308. In the wards are they close to the windows?—Yes, on one side they are, and on the other side they are, of course, away from the windows.

2309. Is that wise do you think, in our climate?—I think you get better ventilation for the patients if you keep the beds about 1ft. away from the wall.

2310. *The Chairman.*] They are too close to the wall under the window?—Yes, they are too close; they should be away 1ft. really, and in the corners they should be 3ft. or 4ft. from the side walls.

2311. *Mr. Solomon.*] Now, what about ventilation in the wards in the Dunedin Hospital?—I think it is bad, for this reason: that when I went into a ward yesterday morning it was only ventilated by the windows and openings—ventilators they called them—and in cold weather these must be shut up. When I went there yesterday morning they had evidently not been open long, for when I went into the ward there was the old familiar "hospital" smell very strong. When I went in in the evening, the windows having been open all day, it smelt comparatively sweet. Going into another ward, in which the ventilators had been shut for some time, the smell was very offensive. The ward that smelt badly in the morning smelt sweetly in the evening, the ventilators having been open all day.

2312. *The Chairman.*] Which ward, do you remember, was bad in the evening?—No. 3 was bad in the evening? No. 1 I went into in the morning and evening.

2313. *Mr. Solomon.*] With fair ventilation, is there any necessity for that state of affairs?—It should not be ventilated in that sort of way. The air should come in at the top of the ward, and not low down, and should be warmed before it comes in.

2314. *The Chairman.*] Can you suggest any reason for No. 3 being offensive in the evening? Had it been sweet enough in the afternoon?—I had not seen it then. In the evening was my first visit to the ward. I think the ventilators must have been shut all day.

2315. Was there anything in the wind yesterday?—There was very little. In No. 1 ward the ventilators were, at the time I visited it, open, but in No. 3 the windows were closed.

2316. I thought you might say how long it would take for the air to become offensive with the ventilators closed?—I could not tell that.

2317. *Mr. Solomon.*] The method of ventilation here is by windows, is it not?—Yes.

2318. And is it practicable to keep these windows open in winter to have the wards sweet?—I think in stormy weather it would not. The tendency would be to make the wards cold, and when the patients complained the warders would shut the windows. You would need to get air at the rate of 20,000ft. or 30,000ft. per hour, and it must come through the floor. A big fireplace like that would take in about 50,000 cubic feet per hour.

2319. *The Chairman.*] What, the present chimneys?—In an ordinary room it will take 20,000 feet per hour easily, and it really requires it. When the windows and ventilators are closed and you cannot get fresh air from the outside you must get it from the inside, and in that case it might come either under the doors, through the gratings from the interior of the hospital, or up from the cellars below, or it might be sucked down from the ceilings above.

2320. And all these would be sources of impure air?—They are all possible sources of impure air.

2321. *Mr. Solomon.*] How often do you think the air should be renewed in those wards?—You ought to have a system of ventilators, such as Holmes and Bristoe recommend, which would enable the ventilation to be continuously going on, carrying out as fast as they were created any odours or impurities that arise. You do not want to have the ward shut up until the air becomes bad, and then open the windows to take the air away, for in that you would create draughts. You want to have a continuous system of ventilation to take the bad smells away.

2322. Is there any such system here?—No.

2323. The atmosphere you smelt in the hospital yesterday—was it healthy or unhealthy for the patients?—It was the familiar smell that is called "hospital" smell. We sometimes talk of "prison" smell, and the other word is used in the same way. Such smells ought not to exist.

2324. And ought this "hospital" smell to exist in a properly ventilated hospital?—No.

2325. *The Chairman.*] You say it is familiar and well-known. You mean it is only familiar and well-known in hospitals not in a proper condition?—Yes.

2326. You do not mean that it is a constant adjunct in a hospital?—Oh, no; the terms "hospital" smell and "prison" smell are terms of reproach.

2327. *Mr. Solomon.*] Have you a diagram of the pavilion system in that book?—Yes, plenty of them. There is the Herbert Hospital.

2328. Is this a well-recognised book?—Yes. This hospital I refer to is a round hospital, and is not so good.

2329. *The Chairman.*] Do you know the Liverpool Hospital?—No, but I see it has been criticized adversely because some of the wards do not get the sun at all.

2330. *Mr. Solomon.*] Have you gone into the proper space that patients ought to have in a hospital?—Yes.

2331. Now, can you tell me, as a result of your reading and of your experience, what is the