

2395. Is there a perfect water-seal when the traps are not ventilated?—No, because it is siphoned out. [At this stage the model was explained and worked.]

2396. Then, it may be fairly said that the results of your inspection and of your experiment show you that the drains are unsatisfactory?—Certainly. I might say that the model was made yesterday for me by Mr. Christie, plumber, of George Street.

2397. Have you, in other matters besides hospitals, seen the proper course adopted?—Yes.

2398. Have you seen it wanting in buildings that should have been provided with it?—Yes.

2399. I suppose there is hardly a house in which the drains are properly ventilated?—That is so.

2400. Are you aware that a great deal of the difficulty that has been experienced in producing dairy-produce that will keep is entirely due to the overlooking of this?—Yes; I think it is one of the most potent factors. The butter cannot be sent to England, just because the drains are not properly fitted with ventilating-traps. I used to think I knew everything about proper ventilation until the trouble of the Oamaru Hospital arose; but I have been studying the question, and this defect of the ventilating-traps has been somewhat remedied in that institution.

*Mr. Chapman* : I may say that Seacliff Asylum has been well ventilated on this principle.

2401. *The Chairman*.] You say the difficulty existed to some extent in the Oamaru Hospital?—Yes. My attention has been drawn to it on account of a friend who had been ill, and after a visit to the seaside recovered. While she was away a nuisance in the shape of sewer-gas was taken from her room, and ever since she has been all right.

2402. *Mr. Solomon*.] We have heard a deal about the presence of these pathogenic germs being a source of danger of septic poisoning: do you agree with that theory?—Yes, certainly.

2403. The concentrated or diffused state in which they exist: does that have any effect?—If you concentrate them there is a greater danger. If you get them well oxygenated they die.

2404. In surgical wards they are liable to be generated?—Yes, specially liable under special sources of focus, in the open wounds.

2405. Now, take No. 1 ward in the Dunedin Hospital in the condition in which you found it yesterday, what should you say about the existence of these germs? what would be their state of concentration?—I think everything is favourable for their accumulation and propagation, and that the only way to keep them out is by a great expenditure of antiseptics.

2406. And can you make that a certainty? You say the air is favourable to their propagation: can you always make a certainty of keeping them out?—I do not think so; but we try as far as we can to prevent them getting in. I believe pneumonia is very often a septic disease produced by breathing septic germs. Pneumonia patients do not recover so soon as we should like when they are unable to breathe proper air. And then, again, we know, in regard to bacillæ, that in such an overcrowded ward as that there must be great accumulations of the bacillæ. The plaster of the walls must have a bad effect.

2407. Patients suffering from chest and such complaints: have they a fair chance of recovery in wards as you found them?—I think recovery would be delayed, and the treatment prolonged, and more expensive, and I should expect to find the mortality high.

2408. In cases of surgical operations, special operations, or abdominal sections, do you agree that there is special danger of septic poisoning?—Well, in a healthy atmosphere there is a certain amount of danger. I do not mean septic danger.

2409. But these cases are specially liable to septic trouble?—Yes, certainly, to such cases as these.

2410. Will you tell us whether, in the conditions that obtain in the Dunedin Hospital at present, the risk of septic poisoning is materially increased?—Certainly.

2411. *The Chairman*.] I understand you to say there is a certain amount of risk even where circumstances are favourable?—Yes, even more than in simple operations. The reason is simply this: that in ordinary operations, as in the simple removal of tumours, in old days, before the days of Listerism, a large number of them recovered, but almost every case of abdominal section died; almost so much so that it was looked on as murder to perform operations for ovariectomy twenty or thirty years ago. Now it is almost like murder to leave them alone.

2412. Listerism has very nearly stamped out the danger of septic poisoning?—Yes. It has done a great deal, together with the assistance of advanced hygiene promoted by gynecologists.

2413. But can Listerism do away with the danger of septic infection when the surrounding atmosphere is of such a character as you find in the Dunedin Hospital?—Not entirely. You will find something go wrong and you cannot tell why, and you then get your septic poisoning.

2414. Then, under such circumstances as these, you would expect to find that cases would go wrong now and again unaccountably?—Yes, frequently, I should say, in a hospital such as this. In connection with this, I would like to say that great gynecologists—Tait, for instance—depend more on the hygienic conditions in the wards and houses they operate in, and use no antiseptics at all.

2415. There are two schools, are there not?—Well, there are to a certain extent, but Tait would decline to operate in the Dunedin Hospital. I do not think he would, seeing the condition of affairs, because, as he says, he goes in very strongly for good hygienic conditions. He had a discussion lately with Sir Spencer Wells. Both of them have about the same mortality, and Wells uses Listerism, but Tait says he uses water to wash out the parts affected, although the water, on analysis, has been proved to contain twenty-five sources of impurity.

2416. But do the disciples of the school of Lister pretend that their system is effective when the hygienic condition is unsatisfactory?—They simply say, "We make it a great deal better, and we have made improvements." I think the truth lies in a cross between the two, and that one has been assisting the other.

2417. You know Dr. Batchelor?—Yes.