

16. And what do you think of the proposal to put only thirty men in a hut instead of fifty?—Of course, it is better to have only thirty men than to put in fifty.

17. We now have a report from six medical men who have submitted certain recommendations, and you see that Dr. Frengley, who was a member of your Board, and who is also a member of this Board, has reported in favour of thirty men in a hut. We cannot very well lose sight of the fact that these six medical men have recommended certain alterations?—I would not oppose the opinions of medical men for one moment.

18. But there are also two or three specially qualified men who are members of the Board—a Bachelor of Science and Public Health?—Well, sir, a new condition of affairs has arisen. We have had an outbreak of an infectious disease which our Board never dreamed of when we suggested that there could be fifty men in a hut.

19. This is a question of precaution?—And I think it is a very wise precaution. I was going to remark *re* the lining of the huts: If the walls of these huts are lined I venture to predict that it will not be possible to raise the temperature one degree.

20. It will conserve the heat?—The huts will be as cold as ever if the outside air is coming in and you have no artificial warmth.

21. *Mr. Salmond.*] You cannot boil a kettle by tying it up in a blanket?—No, that is so.

22. *Mr. Ferguson.*] But would not the temperature change quicker in an unlined hut? The chill after the sunshine is off will more suddenly decrease the temperature of the outside air than the air inside the hut?—Yes, sir, but in winter at Trentham the sun disappears between 3 and 4 o'clock in the afternoon, and the iron is so thin that it immediately responds to the external temperature. The men do not go to bed until 9 and 10 o'clock, and long before that the internal heat of the hut will have been dissipated.

23. *The Chairman.*] And the changes of temperature are sudden: that is the trouble which Mr. Bates drew our attention to?—Yes, sir, the changes of temperature will affect the iron.

24. Did you hear Dr. Hector's evidence?—Yes.

25. He stated that he has a galvanized-iron place not constructed like these in which he does not feel the cold?—Yes, sir. Well, I have slept in galvanized-iron huts, lined and unlined, in New Zealand, in shepherds' huts, and tourists' huts at high altitudes. I have felt the cold, but I did not blame the iron: the iron was carelessly put on.

26. They have lined galvanized-iron huts at Mount Cook?—Possibly; but, as I say, I have slept in huts that have not been lined, and I think very few have the corrugations stopped, and the draught there is very intense, but they are put up in a very slipshod way.

27. Can you tell us whether, as a rule, stables and cowsheds in New Zealand when built of galvanized iron are lined, or is it customary to put the animals into unlined galvanized-iron sheds?—I have not had much experience in drawing plans for cattle-sheds, but I have been in unlined stables.

28. It has been stated that no farmer would put his animals into unlined sheds?—I cannot say. But glass transmits heat in very much the same way as galvanized iron.

29. *Mr. Ferguson.*] I can hardly agree with that. It does not radiate the heat again; it retains the heat?—My information is that glass is a great radiator of heat, but it is a bad conductor. As to the ventilation of the huts, it was stated that iron sets up all sorts of induction currents and radiates dangerous, cruel, and unhealthy draughts. Now, sir, I suggest that that is incorrect. Iron does not radiate currents at all. Radiation has to do with heat.

30. The point is that with these huts they are very cold and subject to sudden changes, and the only question is how that is to be got over. One suggestion is to stop up these openings, and another is to give the men stretchers?—Yes, sir.

31. We could recommend either without knowing anything about the properties of iron and so on?—But the evidence seems to have impressed many people with the idea that iron does give off draughts, and that it radiates cold. It is absolute nonsense to talk about receiving a draught from a sheet of galvanized iron. I could quote from Mr. Robb's evidence where he said that iron sets up all sorts of conduction currents and radiates dangerous, cruel, and unhealthy draughts. Mr. Bates referred to conduction draughts. I think I know what they meant. The air moves under the operation of gravity influenced by heat. I would suggest that you should get an opinion upon that matter from the professor of physics at the Victoria College, or Professor Scott, of Christchurch.

32. I think the best way would be to spend a night in the huts?—I am simply opposing statements which have been made and which are not correct. With regard to the ventilation it has been suggested that we ought to have had ridge ventilation, but in the present light of knowledge regarding ventilation ridge ventilation is largely disparaged. It used to be used a lot, and I suppose no man has used so many ridge ventilators in New Zealand as I have, but I have also had to remove them. I have had many complaints, and it is well known that they do occasion down draughts, very severe at times.

33. *Dr. Martin.*] Ridge ventilation is to be employed in the new huts?—So I understand. I never knew of ridge ventilation being used where it was possible to have cross-ventilation.

34. They are going to have both?—In my humble opinion it would be a great mistake to have both. I have here a view of a ward in the King's College Hospital, Denmark Hill.

35. This is practically the same as ridge ventilation, because the outlet is at the height of the roof?—No, there is cross-ventilation. The air ascends on account of its heat.

36. We have a huge draught above the cave, and it is to get rid of the air that goes up that I understand the ridge ventilator is to be put in?—Well, I am afraid that you will find there will be down-draughts, and the men will be in a worse position than they were in before.

37. *The Chairman.*] It would appear that opinions on ventilation vary like the winds?—They do.