opposite. I keep the fruit from being warmed up in one case, and in the other case I keep the fruit from being cooled down. That brings me to say this next, that the packing should be so as to hold the fruit firm with as little packing material as can be used, and with an entire absence of all covering paper except the wrapper that goes around each single fruit. Every extra layer of paper you put around any kind of fruit keeps the cold air from getting at the case, and so far is a disadvantage. If any of you from what I have said will feel disposed to put up a cold storage building, I have brought a lot of very simple plans for building in the very best way and at the least possible cost, and a cold storage building can be erected at about this rate. If you will count the whole of the inside contents of the ice-house and cold storage room it would cost about ten cents a cubic foot for the full cost of material and insultation. If you want a big one it will cost you so much more.

The SECRETARY: This is for the whole space?

Prof. ROBERTSON: That is where you cool by leaving the ice in position. If the room be cooled by taking the ice out and putting in galvanized iron cylinders, your ice house would cost you very much less. That brings me to say a few things about the general plan of cold storage and how it can be applied this year to keep very many other Canadian fruits along those lines I have spoken of Its main use is by preserving the fruit. I repeat that,—to preserve the fruit, and not to give a man a chance to speculate in fruit. There is a great danger that the cold storage service of the Government may be diverted from its proper and intended use, so that people will buy all kinds of products of a perishable kind and put them in cold storage and hold them until they are out of their season. Now, I think only disaster can follow a course like that; that every kind of product will do its best when marketed in its season. There may be a little amount of exception here and there, but every kind of product will do better in its own season, and make room for what is to follow after that. Then it gives a rather long marketing period; you can spread the period out perhaps two weeks longer in the case of each fruit; and then it gives a man a little better chance to choose his time of selling within those limits; and then most of all it should be used to protect fruit while waiting shipment and on the way to the steamer. The latter is the main thing. Now, of all the different agents used for preservation let me mention just two things to make this cold storage matter perhaps clearer than it otherwise would be. In preserving anything like fruit there are two causes of decay. One of these is the attack on the outside of the fruit by all kinds of fermenting germs, and the other is the change in fruit itself—the change in its vitality. Instead of trying to reason at any length with you at all, we will be glad to send enough printed matter to make clear to any one who wants to read it, the theory and the principles of cold storage; and let me make these two things clear—that in every change that occurs one has to take notice of two things: One is the agent and the other are the conditions. For want of clearness in these two things, cold storage methods are found defective. You have an agent that is active toward decay, and you have the conditions under which that agent will work well or will work badly. Now, you have, first of all in the agents that destroy fruit, the life of the fruit itself—the life in the cells of the fruit—bringing about changes that mean decay from the inside. Then you have changes from all kinds of molds and germs of these things that attack the fruit trees, often only in a very minute form. Now, packing in paper will protect from attacks from the outside, but wrapping in paper will never prevent the attacks that start from the inside. Therefore fruit needs protection by paper wrapping to protect it from one of these, and needs a cold condition to prevent other agents from doing their rapid work. Then I might note that one condition that makes for the rapid decay of all kinds of perishable products is the condition where the product is very wet, because all kinds of changes and fermentation go on more rapidly in a very moist product than a dry one. That is why grapes, when put in the form of raisins, will keep indefinitely. You dry the water off and they remain unchanged. Canadian fruits, such as pears and peaches, seem to be specially liable to decay because they are full of juice, more so than other fruits. It is needful that the temperature should be still lower for them than for other fruits of the same name. California fruit goes to England at a temperature of 40° to 48°, and this temperature they recommend for all fruits that go from California to Covent Garden. I think our Canadian peaches and