Committee on Agriculture and in the annual report of my department.

The next branch is what I call the cold storage division, which now involves two distinct branches. When we first discussed cold storage in this country and introduced it in its improved form of mechanical cold storage, we wanted to provide comparatively small cold chambers on the vessels for the purpose of carrying across the Atlantic certain perishable products which otherwise could not be carried at all and be kept in proper condition. This was chiefly necessary for butter, which up to that time had never been landed in the British market in the condition in which it had left the creamery or the producer in Canada. For some time past, practically all the butter that has gone from Canada—and the export of butter has increased from about $1,000,000 in 1896 to $5,000,000 in 1901—has gone in these cold storage chambers in a frozen condition, and is laid down in the English market in practically the same condition that it leaves the creamery in Canada. That is possible by reason, first of all, of the introduction of cold storage refrigerators at the creameries, which we have stimulated by giving a bonus.

Mr. CLANCY. The bonus, I understand, applies also to the cooling rooms for cheese making.

The MINISTER OF AGRICULTURE. No, it is only given to factories which make butter in the summer. We have not given any bonus for cooling chambers in cheese factories. There are a large number of factories in Canada which sometimes make butter in summer, as well as cheese, and if they do that we have allowed the bonus to them, the condition being that they must retain the refrigerator room at a certain temperature to become entitled to the bonus. At the present time I think over three-fourths of the factories in Canada fulfil these conditions. Then, cold storage is provided in iced refrigerator cars, numbers of which leave all parts of the country and converge at the ports. At the ports private enterprise has almost entirely fulfilled the necessity of providing cold storage accommodation, for the holding of those perishable products which the owners wish to be held. If they are to be transferred direct to the steamer from the cars, our officers watch that transference to see that no damage is done and that the goods are properly handled. If they are not properly handled, reports are immediately made, and complaints are sent to the transportation companies, and the owners are notified. On the steamers there has been for some years back full accommodation for all the product going forward which requires mechanical cold storage on the steamers. Occasionally instances may have arisen where a particular shipment was destined for some port to which there was no regular line of steamers. I believe that in one or two instances a particular steamer at a particular time was full, and the goods had to wait for a few days or a week for another steamer; but in a general way in the last year or two there has been sufficient of this mechanical refrigeration on the vessels going from Canada to meet the demands of trade.

Now, I want to allude to another kind of what I may call cold storage, although it is different in its essence from this; that is, the principle of cooling the ordinary holds of vessels where certain goods are stored for transport. As a general rule during the shipping season of apples and the big shipping season of cheese, the owners and shippers do not care to pay the extra charges for the cold storage chambers proper, and moreover there are such large quantities of apples going forward for a few months in the fall of the year that it would be practically impossible for the steamers to provide mechanical cold storage for all that freight. Many of the shippers also believe—and I am not prepared to deny it—that it is not at all necessary for cheese or apples to be carried in these cold storage insulated chambers which are cooled by mechanical refrigeration. Under these circumstances they send their cheese and apples forward in the ordinary holds of the vessels; and when the holds are battened down and shut up tight, without any complete system of ventilation, there is no doubt that there has been serious injury to our apples and our cheese going forward in days gone by. We have urged the steamship companies to obviate that difficulty. We have represented to them that it was necessary to put in not only the ordinary ventilating shafts, but fans, so that a mechanical generation of a current of air through the holds would be obtained; and furthermore we have in the last year believed and inculcated that for this purpose there ought to be a mechanical refrigerating plant on the vessels, with a chamber where the air could be artificially cooled down to a low temperature, and that air forced through the holds of the vessels where the cheese and apples are stored. The plan of putting in fans and simply ventilating with the air at the ordinary temperature has been pretty successfully initiated and carried out. The other plan of a refrigerating chamber where the air would be cooled to a very low temperature and forced through has only been begun in the past season. We were able to induce companies to put four ships under that arrangement last season, and we have received the most convincing evidence from the shippers, the receivers in the old land and the owners of those ships, that, for the carriage of our cheese and apples, that system is most eminently satisfactory. I may say that, with the single exception of the