The Ice House.

Many of our subscribers have asked us to give them a plan of an ice house—some recently and others some time ago; in fact, there are many enquiries for information about buildings, etc., that we have not yet answered. It is not from disrespect that they have not been replied to; but many questions involve considerable more expense to properly reply to them than the querists may imagine. Special articles on special subjects have to be paid for, or require a long time to examine into. Perhaps they require the aid of the artist. When we feel sure that any subject is of sufficient importance to justify the expenditure, we go to the expense and trouble of taking long journies and engage an artist to draw and have engraved such representations.

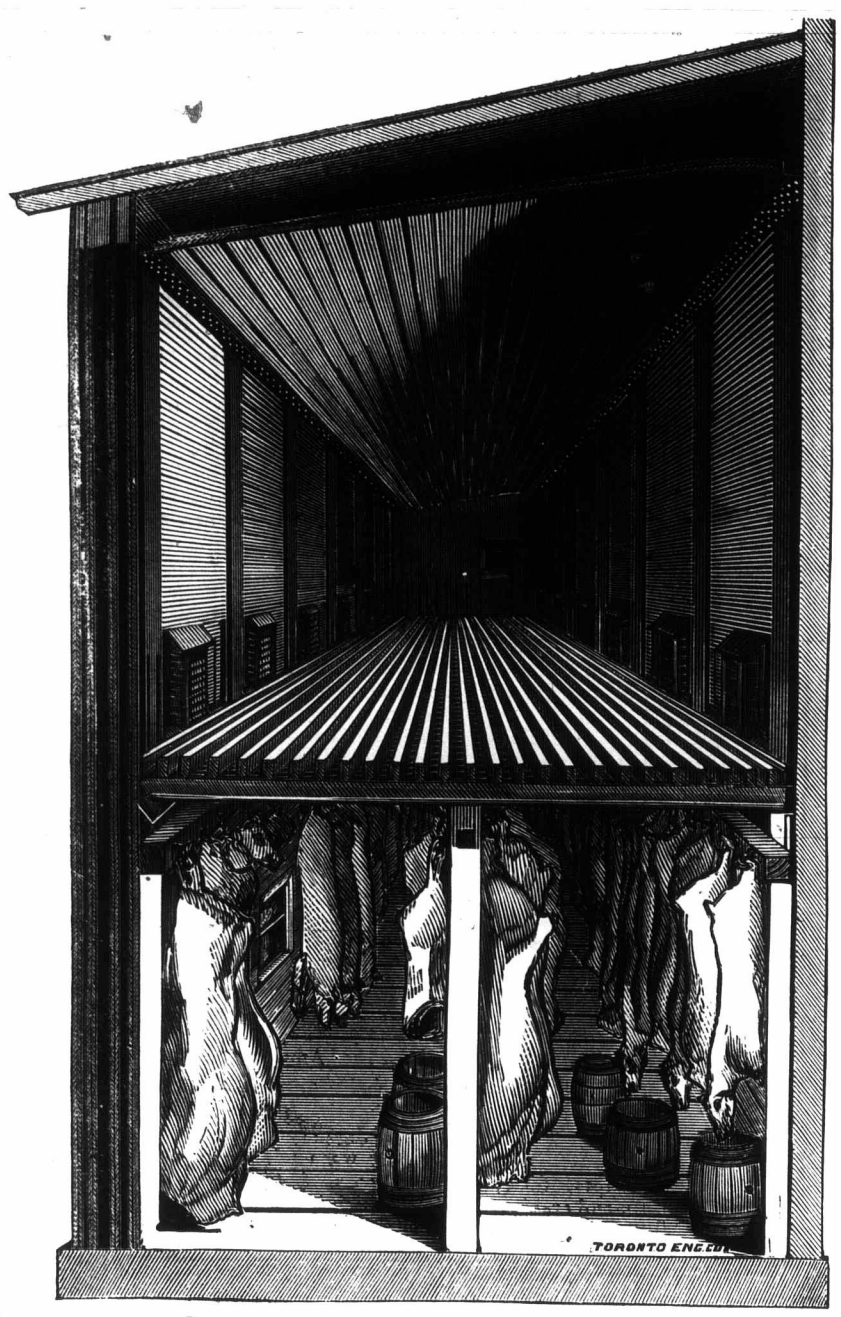
As ice is of much more value to farmers than most of them are aware of, and must come into more general use than it is at present, we have made enquiries and find that a person in Canada has succeeded in constructing an ice house that is far superior to any that we have ever seen or heard of. To give the best idea we took an artist to draw the interior of one and have had it engraved. This will enable you to see the plans and principles, and give you a much better idea than we could impart in any other way.

We never have seen or heard of any plan at all to be compared to it. This method has been well tested for three years. A much less quantity of ice is used than in the old way, and much more good done by it. Instead of the old mode of digging a hole in the ground, or even placing the ice on the ground and packing it around with a wall of saw dust or tan-bark, the new plan of using paper, wood and zinc is found to be superior. Paper is a non-conductor and a vacuum is non-conducting. The paper may be scoffed at by ome, but you may depend that this is the best plan yet, and we hope you will call it the "ADVOCATE Ice House," as we have taken the pains and been at the expense of introducing it to you.

In this ice house meat and milk may be kept good for weeks in the hottest weather. We were informed that cherries, which are the most perishable fruit, have been kept in this kind of an ice house for six weeks. What a wonderful advantage such a building must be to all who raise or deal in fruit! What a benefit must this be to every farmer who tries to make good butter or keep it in summer! The superiority of this ice house over all others is that there is no dampness in it. Even matches keep and light as well if put in it as in any dry place. This is caused by a current of air constantly passing through it. The principle of this is that heat ascends and cold descends. The cold passes from the zinc bottom, from the air chamber and from the ice to the cooling room, and the warm air is conducted from the cooling room to the top of the building. The flow of air can be regulated at will.

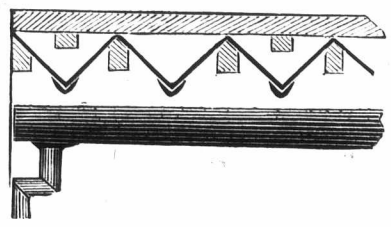
The drawing we give is of an old building turned into an ice house. The ice is placed in the upper chamber. This building is about 59 x 17.

The walls are constructed of scantling, boarded inside and out, having two separate vacum chambers made of extra pieces of scantling and covered with three courses of brown paper, leaving the two vacums of four inches each.



1.—OLD BUILDING TURNED INTO AN ICE HOUSE.

Cut 2 shows a portion of the corrugated zinc floor, through which the cold descends. There is



2.—CORRUGATED ZINC FLOOR.

a constant accumulation of dampness, which collects on the zinc. This is carried off by means of small wooden ducts placed below the zinc, and is then conducted into the discharge pipe. There is some patent about it, but as we have no information about it direct we cannot explain what it may cover. The main principle of erecting the ice house and the buildings is not patentable. The floor is made of 1½ inch plank, cut into slips 4 inches wide, leaving a space between each. No water stops in the zinc channels, as there is a slight slope given to them, so that all the water is carried into the discharge trough.

The plans shown may give you some idea, but the size and form may be altered to suit your requirements.

As you see, the building is composed of two stories—the upper story is the ice room, the lower is used to keep perishable articles, as meat, fruits, &c. The cut represents a good space betwcen the outer roof and the ceiling of the ice room; the holes in the ceiling show where the air is admitted to the ice room, while the low spaces at the sides allow the cold air to descend to the cooling room. The upright lines represent the air chambers, which carry the warm air from the cooling room to the roof.

Silos and Ensilage.

Professor Gœssman lectured on silos and ensilage before a large meeting of the Massachusetts Farmers' Club:

He gave a great many facts bearing on the preservation, use and value of ensilage. In the old country the silo had been adopted for preserving refuse material, as beet tops, beet pulp, damaged potatoes, the refuse from starch and other factories, and for preserving fodder crops when the weather was unfavorable to curing by drying. But ensilage is never unattended by loss. Sugar and starch, two valuable substances, are converted into acids and alcohol, and more or less of the soluble food is soaked out, and where the silos are not air and water tight, are lost by leaching. Other changes take place which in part pay for this loss. Woody fibre is rendered more digestible, and in some cases the nitrogeneous substance is in creased, but the heat-forming material is frequently diminished from 20 to 50 per cent. Corn fodder loses more by pitting than do fodders containing less sugar, as the sugar is very largely converted into vinegar and alcohol, and the sweeter the corn the greater the loss.

Clover and other hay loses nothing by drying, nor is it any less digestible than grass, but every form of fodder wastes by pitting. Canning fruit is not a parallel case, because in filling silos we neither heat to the boiling point to destroy germs, nor do we exclude all the air. Fermentation and destruction through germ agency is always present in ensilage. The system cannot be looked upon as a substitute for prevailing methods for preserving fodder, but it will increase our facilities for feeding, and in this age, when a more intense system of agriculture is demanded, the new system should receive all the attention its several merits deserve. Much indirect good will accrue from the introduction of the silo system, as it will draw public attention to feeding and to food rations, a subject that needs ventilation. All the discussions, all the debates in farmers' clubs, and through the agricultural papers, show that there is no standard feeding ration for the different classes of animals. Roots, fodder crops, all kinds of grain, are called good or poor materials for feeding, as their use accords with each man's experience, but that experience is seldom based on any clear understanding of the demands of the animal system. Next month we will give illustrations and the principles of this method of preserving fodder.

Wooden posts have been brought to premature decay by painting them before their moisture had evaporated.