

be opened at once; but the one should always be shut before the other is opened.

Dry snow well rammed keeps equally well with hard ice, if care be taken to leave no cavities in the mass, and to secure its compactness by sprinkling a little water upon the successive charges.

To facilitate the extraction of the ice, a ladder is set up against its sloping wall at one side of the door, and left there during the season. (*Ure's Dict.*)

The time preferred for filling an ice-house, should, when practicable, be during the prevalence of extreme cold, or as soon after as possible, since the colder the ice when packed away, and the thicker the blocks, the longer it will last. Ice and snow can often be laid by, even in the Middle States, many degrees below 32° or the common freezing point of water. The larger the quantity of ice accumulated in one place, the slower will be the rate at which it will melt.

One of the principal objects to be kept in view in the construction of an ice-house is, to have it so that the water will pass off directly, as fast as the ice thaws. If the situation is sandy, or if you come to a layer of sand or gravel about the proper depth, no further care will be necessary; but if you find a stiff clay, rock, or earth of any kind impervious to water, you must contrive an outlet or abandon the place. This outlet may be constructed in several ways. If on the side of a hill, dig a drain and make it air-tight by means of a water-trap or inverted syphon; or the water may be drained into a well and pumped out; or you may sink a well in the bottom until you come to sand or gravel, and fill it up with stone. The cellar walls may be laid with stone, brick, or even lined with wood, as is most convenient or economical. A space of 8 or 10 inches is generally left between the wall and surrounding earth, which is filled in with tan, charcoal, straw, corn-stalks, or any other non-conductor of heat, the first-named article being generally preferred. A house 9 feet square in the clear, and 9 feet deep, will hold about 25 cart-loads of ice, which will be enough for a large family.

A cheap ice-house may be made thus;—Dig a cellar, say 10 feet square, and 10 feet deep. Then cut small timber from the woods the proper length, and build up in the cellar after the plan of building log-cabins, leaving a space between the logs and earth to be filled in with straw, tan, or other suitable material. Raise the wooden walls 2 or 3 feet above the surrounding ground, and heap up a bank so as to turn off the rain-water. A thatched roof is generally recommended, as the best to keep out heat, but some object to such covering as affording harbour to rats and other vermin.

The importance of keeping ice well surrounded with a non-conductor, and having the water absorbed as fast as melting takes place, is shown in the following extract from the *Kentucky Farmer*:—

"We take at sunrise from the ice-house, as much as will be probably wanted through the day, and cover it up in some saw-dust placed in a barrel in the dairy-house. At night, the size of any given piece is scarcely perceptibly diminished. It is a perfect charm."

In some parts of the United States, where thick ice is rare, some persons pack away large quantities of snow, which, if the mass be large, and the snow dry or previously well drained, will often keep

through the whole summer. In most seasons ice may be collected in sufficient quantities to fill ice houses in every latitude of the Middle States. If no pond or stream of water of sufficient size be at hand, advantage may be taken of any little rill, which, by the erection of a small dam, may be made to overflow a considerable space. If the water be not more than 6 or 8 inches deep it will answer every purpose.

In stowing away ice the pieces should be as square as possible, and as large as they can be got or handled. They should be placed closely together like stone in a wall, and the crevices well filled with smaller fragments. The plan sometimes recommended of pounding or crushing the large pieces is reprehensible.

¶ We had intended to continue our remarks on the *Plough* in this number, but the cuts which were to have been used to illustrate them, not being ready in time, we must defer the article till our next issue.

RELATION BETWEEN ANIMALS AND THE COUNTRIES THEY INHABIT.—In whatever way we view it, the relation between the domesticated animals and the wealth and beauty of any and every land, is almost equally conspicuous. There is no doubt that these animals were the more immediate preparers of the land for civilised man; and this is the chief reason why civilisation has never made any advance worth mentioning, except in countries where these animals are found. Indeed, be the geographical position and climate what they may, we know not how any number of human beings, adequate to the originating of a localised and civil society, could exist, without the assistance, if not of the absolutely domesticated species, at least of the wild races of these animals. It is true that there are some farinaceous roots which offer a substitute, but only a poor substitute, for bread; and reptiles, insects, and mollusca, are still more humble apologies for beef and mutton; but these are sorry food for a nation. In the case of fruits it is not much better; for although there are some delightful wild fruits in the Oriental isles, and some passable ones in inter-tropical America; yet they are by no means general, and they are as unsatisfying for hunger in their qualities, as they are limited in quantity, and partial in their distribution. The surface of Australia is equal to that of all Europe; and, with the solitary exception of fern root, and some plants that answer as a sort of spinach—both of which are confined to particular spots, there is not one native esculent vegetable in the whole of its ample extent. Of the number of its native population, we have no means of judging; but they certainly do not amount to a single individual to every hundred square miles of surface.

Now, from its position on the globe, the climate of the whole of Australia ought to be one of the best in the world,—a sort of triple compound of spring, summer, and autumn, with very little winter; and we have at least one evidence of this in the mild uniformity of temperature in Van Dieman's island. But although the atmosphere which the surrounding ocean brings to Australia, would be mild, uniform, and eminently favourable to vegetation, if it met with a corresponding surface—a surface capable of receiving the benefit which it is calculated to bring; yet the greater part of the surface seems to be of the most wretched character—covered with saline efflorescence at one season, and seamed with brine-contaminated streams at another.