Miscellaneous.

Ice Houses above Ground.

Knowing as I do from long and extensive experience how common procrastination is, I infer that there are many in various parts of the country who intend to build an ice house to be filled the coming winter, and have not even provided the material for it up to the present late day. For the benefit of this unfortunate class, I would say that I have more than once been obliged to fill an ice house and build it afterwards. I will explain this seemingly paradoxical expression. I have prepared a foundation, supplying proper drainage; built up a bulk of ice of the required dimensions, and subsequently enclosed it with the material forming the house. The style of house to which I refer is built entirely above ground. This class of houses may be made to preserve ice as well as those in the ground. The commercial houses of the country are all built above ground.

All that is necessary is to build of liberal dimensions; provide drainage, so that no water can stand under the ice, in contact with it; be sure and trap the drain; enclose the ice with double walls of studs and board partitions, leaving at least 30 inches between the boards; fill the space with dry sawdust or dry tanbark (the former is preferable), and pack it closely; build the walls at least one foot above the top of the ice; leave openings so that air may circulate freely through the house over the ice; roof so as to exclude rain, and bank around the building with earth, so as to prevent air from escaping from the house, under or through the foundations; and cover the ice with not more than 10 or 12 inches of dry sawdust. No straw, tan, sawdust, or other material is required under or between the layers of the ice. I usually make the floor, on which the ice rests, of any rough wood laid closely on the earth. Neither stone nor brick foundations are necessary. Blocks on which to rest the sills, laid on the ground properly levelled, are a good foundation. Three by four-inch scantling are heavy enough for the sills, studding and plates. The boards forming the double walls of siding, enclosing the sawdust filling, should be placed on the outside of the inner row of studding, and on the inner side of the outer row. When sided thus very little nailing is required, as the pressure of the dust on either side keeps the board walls against the studding. The dust should rest on a board floor a few inches from the earth, that it may not absorb moisture from it. Half-inch bolts should be used to bolt the inner and outer rows of studding together, to prevent the dust or other filling from spreading them apart; one every four feet in the height of the studs is all that is required.

The earth embankment all around the building should be closely packed against the outer boards, and if it can be conveniently obtained without excavating a trench around the building, it is better to avoid making a trench; but the water from the roof, and that which falls or flows around the building, should be conveyed from it by good surface drainage. It is better to project the eaves of the roof well, unless gutters are provided, so that the roof water may not wash the embanked earth from the building. Gutters are preferable. If the ice house is conspicuously located, so that it is essential to give it more beauty of exterior than that produced by exposing to view the exterior studding, it may be sided on the outer side of the outer line of studding; but there is no economy in depending on siding on the exterior of the studding to support the dust, for as soon as the boards are weakened by decay they burst off, and it is impossible to repair on account of the falling dust; but boards on the side of the studding towards the dust will sustain it until they are utterly decayed.

The door for filling should extend from sill to eaves plate. No hinges are required for the doors. There should be double rows of cleats on each of the wide door jambs; between each double row bin-boards should be loosely inserted as the filling of the house advances, and the space between them should be finally filled with dust the same as the remainder of the walls. The ice may be removed through the same door by removing the loose boards, and the sawdust in the doorway should be thrown in around the ice. As the ice melts next to the walls the space should be kept filled with dry dust. The filling in the doorway should always be maintained one foot higher than the bulk of ice. When the house is filled, the ice should be so placed as to be highest in the centre, and should be so kept throughout the season in which it is used, that the melted drainings from its upper surface may flow off towards the wall and thence to the floor, instead of filtering through the main body of the mass of ice. This precaution alone, when I have recommended its strict observance, has secured the keeping of ice throughout the season in houses before considered worthless. Too much covering material on the ice in the house, particularly if it is allowed to ferment, is worse than too little. A dairy house may be constructed by the side of an ice house arranged as I have recommended, and the floor of the dairy house need not be more than two feet below the surface of the surrounding ground, and the cold air from the ice house can be utilized. —*Cor. Country Gentleman.*

Old Boot Jelly—Shirt Coffee and Sugar.

In an article on the utilization of waste material, the *Scientific American* says: There are quite a number of patented processes for the utilization of waste leather, which convert it into leather board, valuable for a variety of employments. One way consists in grinding the material to a meal-like powder, mixing it with gums and cements, and applying steam. The compound is then kneaded and rolled into sheets. Another plan is to mix old leather, hemp fibre and sheepskin cuttings, and boil with soda ash. Sulphuric acid and coloring matter are subsequently added, and the substance, moulded into sheets, forms a good quality of leather board. Oerting's process makes a good waterproof article, which is useful for making buckets and similar objects. It consists in dissolving rubber in benzine, to which a quantity of ammonia is afterwards added. The leather in the form of pulp is next put in, and the whole worked into a plastic dough. Slaughter-house cuttings are worked up into glue, raw-hide whips and small fancy articles in immense variety.

We had almost forgotten one valuable employment of old boots—the manufacture of jelly. The reader may stare, but science smiles superior and asserts very emphatically that a toothsome delicacy can be made from a dilapidated foot-covering. Some time ago, Dr. Vander Weyde of this city, regaled some friends, not merely with boot jelly, but with shirt coffee, and the repast was pronounced by all partakers excellent. The doctor tells us that he made the jelly by first cleaning the boot, and subsequently boiling it with soda under a pressure of about two atmospheres. The tannic acid in the leather, combined with salt, made tannate of soda, and the gelatine rose to the top, whence it was removed and dried. From this last, with suitable flavoring material, the jelly was readily concocted. The shirt coffee, which we incidentally mentioned above, was sweetened with cuff and collar sugar, both coffee and sugar being produced in the same way. The linen (after, of course, washing) was treated with nitric acid, which, acting on the lignite contained in the fibre, produced glucose or grape sugar. This, roasted, made an excellent imitation coffee, which an addition of unroasted glucose readily sweetened.

By way of conclusion, let us "nail" a paragraph which still crops out occasionally among "scientific items" in country journals, and has reference to the synthesis of leather in tea, affirming that the addition of milk to the infusion of the herb acts upon the tannin therein to form the leather. The only difficulty about this statement is that milk does not contain a particle of gelatine, and hence cannot possibly form leather with tannin; so the neat calculation of the number of pairs of shoes which every human being drinks yearly is like the owners of the subject of this article—without substantial foundation.

A Great Farmer's Maxims.

The successful life of Mr. Jacob Straw, the prince of American farmers, is attributed to the close observance of the following maxims, originated by himself:—

When you wake up do not roll over but roll out. It will give you time to ditch your sleighs, break them, harrow them, and sow them.

Make your fencing high and strong and tight, so that it will keep the cattle and pigs out.

If you have brush make your lot secure, and keep your hogs from the corn; for if the corn is kept clean they will eat it better than if it is not.

Be sure to get your hands to bed by seven o'clock—they will rise early by force of circumstance. Pay a hand, if he is a poor hand, all you promise him; if he is a good hand, pay him a *little* more; it will encourage him to do still better.

Always feed your hands as well as you do yourself, for the laboring men are the bone and sinew of the land, and ought to be well treated.

I am satisfied that early rising, industry and regular habits, are the best medicine ever prescribed for health.

When rainy, bad weather comes, so that you can't work out of doors, cut, split and haul your wood.

Make your racks, fix your fence or gate that is off its hinges, or weatherboard your barn where the wind has blown the siding off, or patch the roof of your house.

Study your interests closely, and do not spend your time in electing Presidents, Senators and other small officers, or talking of hard times when spending your time whittling store-boxes, etc.

Take your time and make calculations. Don't do things in a hurry, but do them at the right time, and keep your mind as well as your body employed.

Gelatine.

The American trade in gelatine is said to employ several million of dollars annually, and in Europe to be of still greater value. The purest form of the article is known as isinglass, which is prepared from the oil-bladders and sounds of several species of fish, esp cially of the sturgeon. These tissues are cleansed and dried, forming what is termed leaf-isinglass; or they are twisted into various forms, called long and short staple; or they are folded into packages, called book-isinglass. The production of isinglass used to be limited to Russia; whereas now large quantities are produced in South America, the East Indies, the Hudson's Bay Territory, New York and Canada. The manufacture of the Russian isinglass, which is still esteemed the best in the market, is as follows:

The bladders are placed in hot water, carefully cleared from adhering blood, cut open longitudinally, and exposed to the air with the inner delicate silvery membrane upwards. When dried, this fine membrane is removed by beating and rubbing, and the bladder is then made into the forms desired.

Gelatine is prepared from a variety of animal substances, but chiefly from the softer parts of the hides of oxen and calves and the skins of sheep, and also from bones, etc. The method of treating skin-parings and hide-clippings is first to wash the pieces carefully, and then to cut them into small pieces, and put them into a weak, warm solution of caustic soda for a week or ten days. From this they are removed to an air-tight chamber, where they are kept for some time in a temperature of 70°. Then follows a cleansing process in cold water, a bleaching in the fumes of sulphur, and a final washing; after which they are steamed in pots until the gelatine is dissolved, which is strained off while hot, and poured out in thin layers that, when sufficiently cooled, are stretched out on nets to dry. Machinery is employed to cut the gelatine into the delicate strips in which it is usually sold.

An inferior gelatine is made in France from bones and other parts of animals. It is said that the enormous number of rats which are killed in the sewers and abattoirs of Paris, after their skins are taken off, are wholly consumed by the gelatine makers. The French manufacturers have a superior art of clarifying these inferior gelatines, and by coloring the thin, transparent plates, render them very attractive and fine-looking. Their cost is much less than that of the best qualities.

Tarring Fences and Shingles.

We note that the old controversy about tarring or painting shingles and fences is being revived again, on the principle we suppose that as an old generation passes away the new one wants to learn wholly for itself what it wants to know. It ought, however, to be generally known by this time that not moisture only, but heat and moisture, either or both, are the agents in the decay of woody matter. Most writers seem to think it is moisture alone, and hence all that is required is to coat the wood with some substance that will keep the water out. To be sure they know that heat, when it is up to what we know as the burning point, will destroy wood, but they seem to forget that even when not burning, heat is destructive only in a less degree. Any black substance, therefore, which attracts heat, though it may keep out the other destructive element, water, adds to the destructive agencies at work on the wood, and should be avoided wherever duration is an object.

It needs no understanding of these laws, however, to know that tar or any black substance tends to rot wood away much faster than wood that has had nothing at all done to it. A fence tarred and exposed to the full sun, as any observer knows, soon crumbles away. In a few years the wood is like an overdone pie-crust. And then all know how long a mere whitewashed fence lasts. Yet there is no preservative character of much account in lime. Every rain goes through it into the wood, but it is the white color, which rather turns away the heat than attracts it, which is in that case the great agent which preserves it so long.

In all discussions as to the preservation of wood by paints or coatings, therefore, we see that the color of the washes or paints is an important point in the argument. As for tar, it is the very worst thing that could be used where there is exposure to the sun. Under ground, or where there is no heat for it to attract of consequence, it is another matter, and does possess more or less preservative power. *Germantown Telegraph.*

PRESERVATION OF CLAY PAVING-BRICKS.—According to experiments made in Stuttgart, it was found that bricks that had been coated three times with linseed oil were less smeary from wear in wet weather, as well as more free from dust in summer, than those that had not been so treated. The cheaper petroleum residues were also employed instead of the linseed oil. Saturation of paving-bricks, sandstone, etc., about manufactories with hot tar is also highly recommended where the black color is not objectionable.