

VALUABLE RECEIPTS.

BROWNING IRON AND STEEL OBJECTS.—Gun-barrels and other objects in iron and steel are browned, either to improve their appearance or to preserve them from rust, by giving them at first a thin but entire coating of oxide of iron. The following process is successfully employed in Prussia for browning steel barrels:—Dissolve two parts of crystallized ferric chloride, two parts of butter of antimony, and one part of gallic acid, in the smallest possible quantity of water (about four or five parts); with this moisten a sponge or cloth, and rub the object to be browned. Leave it to dry in the air, and repeat the operation several times. Then wash with water, dry, and rub with boiled linseed oil. Objects browned in this way have a very agreeable dead grey appearance, and the shade deepens according to the number of times the operation is repeated. It is essential to the success of the operation that solid butter of antimony should be used—that is to say, a chloride of antimony containing as little free hydrochloric acid as possible.

COVERING ZINC WITH BRASS OR COPPER.—To give zinc a coat of copper brass for the purpose of subsequent silvering or gilding, the following solutions are used:—For copper alone, a solution of sulphate of copper, saturated at the common temperature, is mixed with a solution of cyanide of potassium, adding as much of the latter as is necessary to dissolve the precipitate thrown down at first. The hydrocyanic acid disengaged during this operation must be carried off by a draft or flue. When the mixture is clear, one-tenth or one-fifth of its volume of liquor ammonia is added, and diluted with water to a density of 8° Béaume. For brass, blue and white vitriol are used in equal proportions, and prepared as before. Two parts of sulphate of zinc and one of sulphate of copper give a bright brass coating. Previous to their dipping, the articles of zinc are rubbed thoroughly with finely-powdered pumice-stone and rinsed with water, after which manipulation they are placed in the bath, and remain there for 24 hours. After that time they are again rinsed in water and wiped off. The copper or brass coating has a very bright look, as if polished, and adheres perfectly. The thickness of the coat may be increased afterward by the aid of a battery.

GUTTA-PERCHA CEMENT.—Melt together in an iron vessel, two parts (by weight) of common pitch, with one part of gutta-percha. It forms a homogeneous mass, which is much more manageable for many useful purposes than gutta-percha alone, and which, after being poured into cold water, may be easily wiped dry, and kept for use. This cement adheres with the greatest tenacity to wood, stone, glass, porcelain, ivory, leather, parchment, paper, hair, feathers, silk, woolen, cotton, &c.

Start the Tomatoes Early.

Those using hot-beds will have their plants up by this time. Those who have no hot-beds can yet gain some weeks by starting them in pots or boxes in the house. After the plants are up and have made two or three rough leaves, transplant them into small pots, and give them plenty of light and air. The small thumb-pots may be used for the first potting, and as they are so small that they readily dry out, a number of them may be placed in a box and surrounded by moss, saw-dust, sand, or anything that will retain moisture. When it is found by turning out the ball of earth that the roots have filled the pot, they may be shifted to those holding about a pint, taking care all the time that the plants have abundance of air and light, and grow stocky. They may be kept in their pots until all danger of frost is past, when they are to be planted out by turning out the ball of earth from the pot. The directions for after-culture will be given at the proper season. Earlier and better fruit is obtained upon light and sandy soil than from a wet and heavy one. The small pear-shaped and the smooth red varieties are the earliest. The Fejee is a few days later, but is so much more prolific and finer every way, that were we confined to one sort we should choose that. From a single year's experience with the French upright, or tree tomato, we think well of it. It is a very compact and dwarfish variety, bearing its fruit close to the main stem. It needs but a single stake

to keep it from being blown over, and as it can be planted as near as 15 or 18 inches, probably as much fruit can be got off the same space as from any other variety. It must be started very early, as the fruit is a little late, but it is very solid, and according to our experience thus far, every way desirable. Those who have no gardens, but have room in the yard to set a barrel or two, can obtain a supply of tomatoes with a little trouble. John A. Briggs, of Franklin county, Mass., writes:—"Take a flour-barrel, knock out both heads, saw it in two in the middle, place the halves in any vacant place, fill about two-thirds full of earth, and manure and set your plants in them, and you will find your plants, if attended to, will do as well as in any other place. The writer of this has practiced this method for the last three years with perfect success. None need want for this delicious and healthful fruit unless they are too indolent to try the experiment." The plants grown in this way may be watered with waste water from the kitchen.—*American Agriculturist.*

About Cloves and Allspice.

Cloves are produced by a tree which is a native of the Molucca islands, and were like nutmegs a long time under the exclusive control of the Dutch Government, who for many years would not allow the trees to grow upon any except the island of Amboyna, from whence the highest-priced cloves still come. The tree is from 15 to 30 feet high, with large aromatic leaves and bunches of very fragrant flowers. The spice is the unopened flower-buds, which are beaten off by means of rods and then dried. The little ball at the top of the clove is the unexpanded petals; by softening the clove in hot water these can be carefully laid open by means of a pin. The main portion of the clove is what would be the fruit if it was allowed to go on and ripen. Our word "clove," comes from the French *clou*, a nail. That being the name by which the French call them on account of their resemblance to a little nail. They contain a good deal of volatile oil, upon which their value depends. This oil is sometimes extracted in part and the cloves afterwards sold. These can be told by their lighter color and by having the buttons or rounded portion broken off. Cloves readily absorb a considerable amount of moisture, and it is the custom of large dealers to keep them in a rather damp place in order to make them weigh heavily and look fresh and plump. It is bad economy to buy cloves or any other spice in the ground state as, aside from the risk of adulteration, the oil is absorbed by the paper in which they are put up.

Allspice is from a tree, nearly related to the clove tree; it grows in the West Indies, where it is largely cultivated for the spice, which in this instance is the fruit. The berries are gathered when green, for if allowed to remain on the tree until ripe they have an unpleasant flavor. It is also called Pimento and Jamaica pepper. The name allspice was given because it was thought to have the flavor of cloves, cinnamon, and nutmegs combined.

Northern Sugar.

Every person interested in the development of the resources of the country will rejoice to see enterprises of the kind spoken of below in a prosperous condition. The *Chicago Tribune* says:—

"A firm in this city are embarking quite extensively in the sugar-cane business. They have made arrangements to put up large manufacturing establishments at several points in Iroquois and Champagne counties. Their plan of business is to put up the mills, evaporators, and fixtures, and to contract with the farmers to plant a certain number of acres of cane, and to top and deliver it at the mill as it is wanted for manufacturing—binding themselves to pay 15 cents per gallon for the sirup made from the cane. One thousand acres have thus been guaranteed at Peru, 800 at Buckley, 600 at Onargo, 400 at Kankakee, and 600 at Clifton. Probably similar arrangements will be made at other points. It is intended, we understand, to boil the juice to from 21° to 25° Béaume, and ship it to the refinery at Chicago. The mills will be run by steam, using portable boilers, and steam and fire will be used in evaporating. The work will be carried on under open sheds. Each establishment will cost something in the neighborhood of \$3,000. It is supposed by competent judges that

should the season be favorable, the yield of sorghum in Illinois this year will reach 100,000 barrels."

Dieting.

Some persons eat themselves to death, others diet themselves to death. When a man is sick he is weak, and concludes that as when he was well he ate heartily and was strong, if he now eats heartily he will become strong again; well-meaning, but ignorant friends are of the same opinion, and their solicitations to eat become one of the greatest annoyances of a sensible invalid. Nature purposely takes away the appetite under such circumstances, and makes the very sight of food nauseating. A sick man is feeble; this feebleness extends to every muscle of the body, and the stomach being made up of a number of muscles has its share of debility. It requires several hours of labor for the stomach to "work up" an ordinary meal; and to give to it that amount of work to do, when it is already in an exhausted condition, is like giving a man, worn out by a hard day's work, a task which shall keep him laboring half the night. Mothers are often much afraid that their daughters will hurt themselves by a little work, if they complain of "not feeling very well;" and yet if such daughters were to sit down to dinner and shovel in enough provender for an elephant or a plowman, it would be considered a good omen and the harbinger of convalescence. A reverse of such procedure would restore multitudes of ailing persons to permanent good health; namely, to eat very little for a few days; eat nothing but coarse bread and ripe fruits, and work about the house industriously; or what is better, exercise in the open air for the greater part of each day on horseback, in the garden, or walking through the woodlands or over the hills, for hours at a time. Objectless walks and lazy lolling in carriages are little better than nothing.

Brazilian Forests.

When we look at the beautiful rosewoods, I think we have hardly begun to see the specimens of the Brazilian forests. Ere long the railroads into the interior, which have been chartered, will bring to the seacoast those giants of the forest. I have been surprised, again and again, in looking at those beautiful trees, which are of the "sensitive plant" character. When the sun goes down, they fold their leaves and slumber, and are not aroused until by the morning sun and singing birds. I observed in some portions of the interior that rosewood was used for very common purposes. In Christian ox-carts the spokes would be made of rosewood. And I use the term Christian ox-carts in distinction from Roman ox-carts, where the axle and wheel turned together. Rosewood is used in carts made like our own. The teeth of cog wheels are often made of it. A gentleman showed me in his sugar-house a beam nearly forty feet in length, and three or four in diameter, which he told me was a violet-colored rosewood. He took me then to his pig-pen, and—would you believe it, ladies?—his pig-pen was made out of rosewood! I would not have you understand that it looked like the legs of a piano-forte. Nothing of the kind; for when left rough and exposed to the weather, it becomes as plebeian in its appearance as our own aristocrat, the black walnut of the Mississippi. When I returned, I brought with me a box of mosaic, made up of perhaps a hundred pieces of Brazilian wood, from the purest white to ebony black.—*J. C. Fletcher.*

At a large drinking-house in Berlin, Prussia, the customers are waited upon by female skaters. The instant a customer takes his seat, one of the damsels darts from the end of the room, skims over the floor, describing graceful curves, and in a moment is at his side and requests to know his wishes. One of these female waiters will collect a number of orders in her round, or carry her beer vessels to her customers without ruffling their snowy froth. The motions performed resemble skating, and strangers are likely to be deceived, but the act is performed by employing small iron rollers, set in strong but neatly-fitting boots. This is all the mystery. It takes time and practice to execute the movements well, and the work is somewhat fatiguing. The floors over which they glide are made of very smooth, hard, polished wood.