

THE MANUFACTURE OF PARMESAN CHEESE.

According to an interesting paper on Parmesan cheese, written by Dr. Prato for the Italian *Annali dell' Agricoltura*, the process of manufacturing the popular dairy produce is as follows:—The cows are milked by women and girls at evening, and the milk carried in wooden or tin pails to the cheese-room, a sort of shed enclosed with walls on two or three sides, and having in the center a furnace with its copper. The milk is measured, strained through a cloth, and placed in flat, shallow dishes ranged round the wall of the cheese-room. There is another delivery of milk in the morning, which is measured in the same way. When all the cream has been removed, the milk is placed in the copper, and raised to a temperature of 89° Fahr., which is considered best. The fire is then drawn, and rennet added. Natural rennet from the calf is always used; it is stirred in and left for an hour. Next, the curds are reduced to a state of even and uniform comminution with the aid of a long stick provided with projecting points and a brush-like end of wire. This operation having been carefully performed, a small quantity of whey is added, and good saffron, in the proportion of half a drachm per 20 gallons of milk, is well stirred into the mass. The fire is again set going, the contents of the copper being now maintained at 113° Fahr., and kept well stirred until it is known by the feel that the cooking has proceeded far enough, when the copper is lifted off, and the contents are allowed to cool, so that the casein may be precipitated. To facilitate the process a little cold skim-milk is added, and at the end of a quarter of an hour precipitation is complete. The curds accumulate in the middle, and are removed with a cloth. The cheese is lifted out in a cloth and pressed under a thick wooden plate weighted with a heavy stone. When the whey is well squeezed out, the linen cloth is replaced by a hair cloth, fresh weights are added, and the cheese trimmed round from time to time. After this, it is carried to the salting-room where it is covered with salt. Here it remains three weeks, being constantly turned over and salted on each side in turn during that period. Lastly, it is carried to the drying-room, well scraped and brushed, and the surface oiled. The whey from the cheese is made into *ricotta*, which is eaten, salted or baked, by the peasants instead of cheese. It is heated to a temperature of 176° Fahr., stirring constantly. A little fresh milk or buttermilk, or, if the milk be not sour enough, a little sour milk, is sometimes added. In time, the *ricotta* or curds form on the surface and are collected and pressed in molds. The refuse is given to the pigs. The cream removed at the commencement of cheese-making is made into butter.

BISMARCK.—The Chancellor of the German empire is unquestionably the most astute politician of our time. But he differs in one important particular from the current type of the European diplomatist. The Metternichs, Gortchakoffs, Reusts, et al. *omne genus*, with all their imitators big and little, look on diplomacy as a sort of legerdemain, or, perhaps we should better say, as a game of cards, where the player must under no circumstances "show his hand." The diplomat must use language to conceal his thoughts, and he must never commit himself to anything. But Prince Bismarck has repeatedly proclaimed his purposes in advance with the greatest candor. As for his fellow diplomatists of other governments, they have never yet grown accustomed to the great Chancellor's frankness, and still persist in reading only between the lines of his manifestoes. The reader who is curious to obtain an inside view of Prince Bismarck's character as the genius of Statecraft, will find much to interest him in a paper contributed to the *North American Review* for July, by the great Chancellor's Boswell, Moritz Busch, entitled "Bismarck as a Friend of America and as a Statesman."

CARE OF THE HANDS.—A writer for an Eastern exchange says: It does not follow that hands which look the worst do the most work; but it may prove that the hands have been treated carelessly, and I might say, cruelly. For instance, when a woman plunges her hands into hot water till they look like boiled lobsters, or taking hold the handles of hot kettles, or flat-irons, causing them to become like some people's consciences, "heated as with a hot iron." How it looks to see a well-dressed lady, with hands all scratches, burns, or scars! I have wondered if they did not almost wish they could take them off and leave them at home whenever they went in company. Have plenty of soft, thick holders near the stove to take hold of the handles of kettles or pans. Keep a pair of gloves near your sun-bonnet to bring in wood, work in the garden, or to put on when you sweep, that your hands may not become callous. If they are liable to chaps, use plenty of glycerine, or wash them in vinegar, and when you sit down to your sewing, and your hands feel like a nutmeg grater, rub them with camphor, and it will make them feel so soft and pliable that you will be enabled to handle the finest of fabric without its adhering to your fingers. If you are troubled with salt rheum, use juniper tar soap, which is an almost infallible remedy. Keep a bottle with a few cents' worth of oxalic acid dissolved in it, and marked poison, somewhere handy, and when there are fruit stains, or you have been coloring carpet rags or old garments, use a few drops on the stained parts and they will soon disappear. If you are in the habit of scraping the pans or kettles with your finger nails, don't do it—never again; but keep an old knife for that purpose. Sisters, take good care of your hands for your husband's sake, for your own sake, for your comfort and your convenience.

CAPT. EADS' SHIP CANAL.—A late Washington dispatch says: Capt. Eads arrived here this morning, and after a conference with his friends has decided to continue the perfection of his arrangements for carrying out his great project of connecting the two oceans. From conversation with the members of the committees of both houses, he is satisfied that next December they will be ready to take definite action respecting this great enterprise. In the meantime the government will be in possession of more satisfactory information from the United States of Colombia, and will have doubtless succeeded in completing negotiations which will enable the government to extend such aid as may be necessary to insure the completion of the work. Capt. Eads goes from here to New York, where he will confer with a number of prominent capitalists, who are entirely willing to embark in the project, being satisfied that Capt. Eads' experience and great engineering skill is a sufficient guaranty that the work can be accomplished at a cost less than that asked for by his bill.

ON THE USE OF PLASTER OF PARIS.—The plaster may be made to "set" very quickly by mixing it in warm water to which a little sulphate of potash has been added. Plaster of Paris casts, soaked in melted paraffine, may be readily cut or turned in a lathe. They may be rendered very hard and tough by soaking them in warm glue size until thoroughly saturated, and allowing them to dry. Plaster of Paris mixed with equal parts of pumice stone makes a fine mold for casting fusible metals; the same mixture is useful for encasing articles to be soldered or brazed. Casts of plaster of Paris may be made to imitate fine bronzes by giving them two or three coats of shellac varnish, and dusting on fine bronze powder when the mastic varnish becomes sticky. Rat holes may be effectually stopped with broken glass and plaster of Paris. A good method of mixing plaster of Paris is to sprinkle it into the water, using rather more water than is required; when the plaster settles, pour off the surplus water and stir carefully. Air bubbles are avoided in this way.

MAKE YOUR OWN TOOLS.

This ambition to individualize tools and to adapt them to their users is a characteristic of skillful workmen, and makes a broad line of distinction between the mechanic and the mere laborer. A kit of tools made by the mechanic himself is a recommendation of the mechanic. Few intelligent foremen sneer at this professional pride, or ridicule its visible products. And the possession of a kit of his own tools, made by himself, is not only an evidence of the honorable pride of the workman, but is frequently a guaranty of his ability. A workman who can make a good kit of tools, who can shape a cold-chisel, construct a gauge, hang a hammer, or fashion an elegant and handy scratch-awl, and do other good jobs, evidences a pride in his own handiwork that will not be satisfied with half-done jobs.

The desire of the mechanic to have his own tools made, or at least adapted, by himself, is perfectly natural. With the knowledge of the fact that individuals differ, comes the evidence that what suits the mass is not adapted to the one; that what is for all is not for this particular one. How many machinists are at home in handling a strange hammer? How often the workman drops a hammer he has picked up in haste, and delays an instant until he can reach for, or go for his own! This is not foolish fastidiousness; for those who most stick to their own tools are old, experienced workmen, who have outgrown the false pride which would make them insist on their way as the only right way. The fact is that the workman is the best judge of the adaptability of a tool for himself, and if he does not make and fashion his own, he at least chooses and modifies those produced by others.

This necessity, or the advantage of adaptability, received an illustration recently, when a smith, an expert forger of iron and steel, with 20 years' experience, showed the writer a hammer with a split handle, saying, "That is the best hammer in the shop to finish off a forging handsomely." The fact was that he had not dared to shave down the hickory small enough in the neck of the handle to give it the "feeling" spring to his hand, for fear of breaking it in use, when a foul blow in the hand of an apprentice split the handle, and made it the *handiest* one in the shop.—*Exchange.*

DUST FIRES.—A gentleman at Appleton, Wis., communicates to the *American Miller* his experience, which shows, as we all know, that other kinds of dust besides flour are explosive under certain conditions. He says: The loft of my spoke mill, in this city, was wholly used as a finishing room, where the spoke was finished, and polished by contact with rapidly revolving sanded belts. In it was a square or box stove, used for warming purposes. The light, fine dust would accumulate in every crack and crevice of the room, requiring cleaning off every day. One day some of this dust was seen to fall from a rafter upon some live coals that had accidentally got out upon the hearth of the stove. Instantly there was a flash that filled the whole loft, and it was on fire in a hundred different places. It was with the most active exertions that the fire was subdued, and not without a considerable damage to the building and stock. I believe the air was strongly impregnated with gas evolved by friction; and that the explosion and fire occurring in flour mills are precisely of the same nature and due to the same causes.

Bessemer steel is now produced of so good a quality, that competent judges assert that ere long it will supersede crucible steel, even in the cutlery manufactories of Sheffield. Already, as it appears, they are making the cheaper grades of cutlery, edge tools, etc., from this product, some 50% to 75% in value of goods produced being accredited to the use of the best quality of Bessemer.