

California Butter.

(From the Pacific Rural Press.)

The complimentary notices which are received from the East, concerning the good keeping qualities of California butter, do not fully satisfy us. They imply that we have merely made a lucky hit in the mode which we have adopted for preparing our butter for market; and it seems to be expected that we should accept them as a liberal concession on the part of those who could not conscientiously admit the product itself, aside from its style of going to market, among the first-class dairy products of the land. We are not, however, disposed to complain of any slight, or even want of appreciation, on the part of our distant customers; for we are aware that it would be casting a worse slight upon them to suppose that they did not know that butter could not be kept good, that was not good when it was taken out of the churn.

It is not to complain of the want of our full complement of praise, but rather to inspire confidence on the part of the producers of California butter, that we have taken the subject in hand. This is one of the very few products in regard to which our people are willing to admit that other portions of the country possess superior advantages; but if they had conceded certain other claims to their Eastern neighbors, and withheld this, they would have arrived at a fairer and more judicious distribution of agricultural honors. They have evidently been led into this mistake by the pratings of Science. This lady has condescended to make frequent visits to the dairy, of late. Possibly these visits have been a little too frequent; for though some of her hints have been of practical benefit, many of her conclusions have been unsound, and have misled her too confiding votaries. It has been remarked that when a lady takes out her gold watch in a crowded street car to inform herself of the time of day, her fellow passengers are justified in the conclusion that she has not carried a watch a very long period of time; and by the same rule we may suppose that those who display among the masses an elaborately and highly burnished case of science, from which dangles a long chain of sounding epithets, have not long been in possession of the same.

Science has condescendingly called on her poor relation, Agriculture, and has seemed to take a particular fancy to the dairy department. She has furnished dairymen with an analysis of grasses and soils, and told them in what localities the component parts of butter are to be found in their greatest purity and abundance; and in this connection we have been assured that California is not among the few favored spots where first-class butter can be made.

We are willing to admit that we have not yet seen anything of the California make that is quite up to the once famous "Orange county butter," of New York, or that equals the now celebrated Philadelphia butter; and among the many dairying districts of the East there are probably other favored spots where, during a brief season of each year, a grade of butter may be made which we cannot equal. But we are not disposed to accept any classification which places California butter in the "ordinary," or even in the "good grades;" for we assert that, with the exception of the strictly "fancy" article, our butter is superior to that of Eastern manufacture.

From our observations of the effects of climate on milk, we cannot see how that of California can be otherwise than favorable to butter making. Where the condition of the atmosphere is such that the milk sours before the cream rises, and where the cream becomes tainted and moulds a few hours after skimming, we cannot expect as much butter from the same amount of milk, or as good an article as in situations which allow the cream ample time to rise, and do not render it liable to the slightest taint during the butter-making processes. It will, perhaps, be remembered by the readers of the Press that Harris Lewis, of Herkimer county, N. Y., recently gave, through the columns of our paper, his opinion of the probable effects of our remarkably pure atmosphere on cheese-making; stating that among other advantages which we might expect to derive from our climate in this product, cheese made and cured under such circumstances would possess long-keeping qualities. Mr. Lewis, in his letter to the Press, limited his observations to cheese-making; but we are confident that he and every other experienced dairymen will agree with us that these climatic advantages are equally available in butter-making.

The uniform temperature of the climate of California undoubtedly gives uniformity to California butter, and it is this quality, which is imparted to it even by the food of which the cow partakes, which gives it much of the remarkable keeping quality for which our system of packing is especially credited. "Fancy butter" is pleasant to read about, and it is really delicious eating; especially where the consumer brings to the feast a bit of his own fancy; but uniformity in butter is a quality far more desirable than fancy; especially where it is uniformly good, or even better than good, as is the standard butter of California. If people do not go into ecstasies over California butter, on the other hand their senses are never shocked by it as they are by a large portion—perhaps three quarters—of that which is made in the East. It is interesting to observe the almost timid manner with which the retail purchaser of eastern butter makes his acquaintance with the article. His sense of smell has received so many gross affronts of this character that he does not bring it in close proximity to his nose, but "scent" it from afar at first. When the nose, as a partner in the purchase, assents to the bargain the taste is consulted; and after some deliberation, accompanied by an ominous scowl and a suspicious smacking of the lips, the purchase is perhaps completed. Similar scenes are enacted over the butter-plate at the table. It is scarcely considered a breach of hospitality or of table etiquette for the guest to lift the butter to his nose before spreading it on his bread. But we see little of this in California. As it is safe to eat a California apple in the dark, so can we spread, as well as eat, our bread in peace, with no noisome stench or flavor to molest or make us afraid.

What we have said in regard to the keeping qualities of California butter being more attributable to our climate than to our mode of packing, should not be considered as evidence of a want of faith on our part in this mode; for we think that our butter-makers achieved a fortunate hit when they adopted it. We want no butter-firkins in the State, though butter packed in them here would undoubtedly keep better than in those places where they are in general use; but our long, two-pound roll possesses many advantages. In convenience and neatness in marketing it cannot be surpassed; and a slice from one of them furnishes a convenient occupant for the butter plate. Enrolled in thin cloth, and pickled in large butter casks, it can be safely transported to any distance.

We hope that by improving our dairy stock, and by increased facilities for making and marketing butter, we shall be able to compete as successfully with Eastern dairymen in regard to prices, as we now do in the quality of the product; and that we shall soon export largely of this article. The exclusive exportation of

grain fortunately suits the emergencies of a new country; but all farmers are aware that if continued it will exhaust the vitality of the soil, and they do not need the croakings of assayers to stimulate them to an endeavor to substitute something of a different character as soon as practicable. For this purpose nothing is so well adapted as dairying. It enriches instead of impoverishing the soil, and whatever enriches the soil, enriches the owner of the soil.

Wheat, Fruit, Potato-bugs, etc., at the East.

(From the Pacific Rural Press.)

In Pennsylvania, New York and some other Eastern States, wheat growing is evidently being resuscitated, and the general report from this crop is at present exceedingly favorable. Fruit is also looking well; but the potato-bug is looking decidedly bad. In some portions of Pennsylvania this destructive and odious pest is greatly annoying the farmers. It is asserted that they travel by rail—not on the rail fence, as old-fashioned bugs have been in the habit of doing, but by the railroads of the country. The theory is quite plausible, for it is well known that the potato-bug, as a flying machine, is a failure; and no visible means of transit has yet been made known by which he reaches his destination. He has been caught "stealing a ride" on the axles and other parts of railroad cars, and though even a larger proportion of his, than of the human race, is crushed and dumped into eternity by the improved facilities for transportation, there will enough be left for purposes of propagation.

Among other current agricultural intelligence received from the East, Mr. J. B. Jones, of Rochester, N. Y., writes us as follows, under date of July 6th: "After a long, cold spring, we are having a fine growing summer. Wheat, that looked so brown and lifeless in April, has thickened up, and is fully an average in all the Eastern States. Corn looks well and all other spring crops. Grass is heavy. The fruit crop, which with us is an important one, promises well. Strawberries have been fine and cheap (10c.). Raspberries and cherries are now ripe, and are a fine crop, bringing good prices, or from 10c. to 15c. per qt. Grapes, apples, pears and peaches have all set well—peaches, the least; while peaches have not been for a long time as promising. The potato-bug has at last reached us, and, although as yet only a part of our fields have been attacked, the damage is quite serious, and another year we shall have a full crop of bugs. Well, we must fight them."

A Short Cut to Peach Culture.

It is to cut off any old branch of a peach tree, stick it into the ground—it may be used for a bean-pole while sticking there—and it will take root, bear splendid peaches—scorning the assistance of irrigation—performing all the functions of an old-style peach tree, and requiring none of the cares and labors which have hitherto been bestowed upon that class of trees. This, it seems, is the way they manage these things about Stockton. The occupation of the nurserymen in the vicinity of that celebrated city is evidently going, going, and will soon be gone. The grand patriarch of this new order of fruit trees, which now stands on the ranch of Mr. Learned, near that place, was originally a common garden stake. It is now pointed out to the effeminate, youthful occupants of our gardens and nurseries as an example of what a tree can do that is forced to rely on its own resources; a noble self-made peach tree. If surveyors could be induced to make their stakes of the wood of the peach tree and use them in their exploring expeditions, what a start it would give to the horticultural advantages of the country! and if the early settlers would use this wood for their fence posts, how tourists and excursion journalists would praise the country! For if this system was practiced, the passing tourists and "our reporters" would only have to climb to the top of a four-board fence and fill those dear little hats, then eat, drink and be merry. It is true that in doing this they might incur the risk of pressing out some of the studied dents and kinks that all editorial and touristic hats are expected to possess, and thereby render their wearers liable to be mistaken for ordinary mortals; but after all, what is fame!

PROTECTING VARNISH.—A simple invention for the preservation of cards, photographs, and, in fact, of anything likely to be injured by moisture or dirt, has just been announced. It consists of a preparation of gutta-percha in solution. This liquid is thrown in a very fine spray over the article to be protected, by an atomizer. By this process a thin film is produced, and when the liquid part has evaporated, as is very speedily done, the object is coated with a translucent substance, impervious to water. Gutta-percha, in its pure state, is of a semi-transparent grayish color. But its transparency, as a covering for pictures, depends on the thickness of the film. The gum first needs to be purified, and then, if it has not been treated with alcohol, it is soluble in chloroform or ether. The process of dissolving it is in itself a purifying one. The ether, being highly volatile, very soon disappears when the spray is deposited on any object. A drawing or photograph thus protected can be washed, the gum not being permeable by water, and resisting any amount of heat so long as it is wet. It begins to soften, however, at a temperature of 150° Fahrenheit. But this is a temperature to which our climate naturally subjects nothing. This simple invention might come into very practical and general use; and if it did no more than to give additional security to the work of the camera, it would be a highly valuable invention.

NITRO-GLYCERINE.—Nitro-glycerine is an explosive oil, in many respects analogous to gun-cotton. It is produced by the action of nitric acid, mixed with oil of vitriol, upon glycerine, the sweet substance obtained when oils and fat are steamed. It is one of the most treacherous explosive substances known to chemists, and frightful accidents have been caused by incautiously using it in its crude state. In the course of many endeavors to counteract or reduce the sources of danger attending the use of nitro-glycerine, M. Nobel made the important observation that its explosive properties were not reduced; but, on the contrary, somewhat favored; by mixing the liquid with solid substances, in themselves thoroughly inert. This led to the production of dynamite, which constitutes one of the safest, most powerful, and most convenient explosive agents applicable to industrial purposes, although it is not, in our opinion, equally applicable to military purposes. Dynamite is made by mixing nitro-glycerine with a porous, infusorial earth, known in German as "Kieselguhr." The earth absorbs the oil, and the result is a plastic, putty-like substance of a brick-dust color, containing about 75 per cent. of nitro-glycerine and 25 of absorbent earth.—*Journal of Chemistry.*

NATIVE SILVER AMALGAMS.—Some researches, by M. Pisani, on the amalgams of silver occurring at Konigsberg, in Norway, show that two distinct amalgams are found.

Hints on Hop Growing—No. 7.

Drying Hops.

Our apology for allowing the present number of this series of articles to follow so closely upon the heels of its predecessor, which appeared in last week's issue, is, that the two processes of which they treat are still more closely connected and are also close at hand.

A good dry-house is not an expensive structure, and when not used for drying hops is available for various other purposes. A building covering a space of 18x36 feet, and having 16 feet posts, will be sufficiently large for a hop yard of ten acres. The lower story, divided into two apartments of equal size, will form the store-room and the press-room, where the baled hops can be stored. The upper story, divided in the same way, will form the kiln—over the store-room—and the store-room for unpressed hops. Let the building be as tight as a good outside boarding and inside ceiling will make it; for air and light should be pretty effectually excluded. About two feet may be taken from the height of the kiln and added to that of the stove-room. This will more effectually concentrate the heat in the kiln, and the floor being elevated above that of the store-room it will add to the convenience of shoving the dried hops from the former to the latter. In place of a floor between the stove and kiln-rooms, heavy wire cloth should be placed upon the joists; and over this baling cloth should be spread to prevent the hops from sifting through. No glass windows should be placed in any of the rooms, with the exception of that in which the hops are pressed, as the hops should be kept from the light as much as possible. One window with shutters that fit closely and that can be readily managed is all that is needed for the other three rooms; though the stove-room should have ventilators near the floor, which may be opened or closed as more or less heat is required. There should be no entrance to the stove-room except through the press-room; and the window through which the hops, when brought from the yard, are emptied into the kiln, is all the communication needed between this room and the outside world. A platform under this receiving window will be needed in placing the sacks of newly picked hops from the wagon into the kiln.

The dried, unbaled hops being extremely bulky, it is desirable to have as much space as possible in which to store them, as baling can not be well attended to during the drying season. To gain space for this storage, a foot—or even more—may be taken from the room beneath the press-room by placing the dividing floor thus much lower. The press-room should be well lighted, as it is here that the sewing of the bales is done; and when the drying season is past, this room furnishes a good shop for the farm. Near the center of the room a hole about two feet square should be left, under which the press is to be placed, and from which the hops are poured into the press through a cloth hopper. This can be done with a trap door, and opened as the press is to be filled.

One of the largest size box stoves will answer for hop-drying, through a regular hop stove is made for this purpose. Let the pipe run up to within about two feet of the floor above, then entering a "T," from each end of which a pipe runs around each side of the room entering the chimney on the side opposite that at which the stove is placed. An earthen floor for the stove-room is preferable.

In placing hops within the kiln for drying, be careful and not trample them. Have them lay up as loose as possible. Begin in the part of the room most distant from the receiving door, placing them about you, and crowding yourself out of the room, by the increasing surface of hops. Take a light rake, and make the surface smooth as you extend it. About sixteen inches is a good depth to spread the hops. When the supply is complete, close the receiving door or window, also that which leads into the stove-room, and the "batch" is ready to have the heat applied.

The dryer must not expect to remain a longer time in the stove-room than is necessary in making the fires. He should, however, give this duty his close attention, as a uniform heat is desirable. An experienced dryer will be able to catch a few minutes' sleep occasionally, between the fire-makings; but as a general rule the dryer should not trust himself in this respect. The stove should be kept at such a heat as will show spots of red on its surface nearly all the time. Have a stock of unpulverized sulphur near at hand, and occasionally, about every two hours, place two or three ounces on the stove, which will preserve the bright green color of the hops.

Under ordinary circumstances, ten hours' time is sufficient for drying a batch of hops. The dryer, commencing his fires at six o'clock in the evening, will be able to retire at four in the morning, leaving everything tightly closed. About nine o'clock the kiln should be visited, when they will be found to be partially cooled. They should now be thoroughly stirred, by walking through them, scraping the feet along the floor, instead of stepping, thus plowing them up and bringing the bottom hops to the surface. They can again be closed tightly, and left until such time in the afternoon as you wish to prepare for another drying; then they should be shoved into the stove-room. As we have before suggested, the hops should be kept from the air and sunlight as much as possible, from the time they are taken from the hop-picker's box to that of entering the press-room.

When hops are properly and thoroughly dried they should have a delicate green color, and be crisp and brittle, pulverizing readily by rubbing in the palm of the hand.—*Rural Press.*

A NATURAL HYGROMETER.—An instrument for measuring the humidity of the atmosphere, and one which, combined with the thermometer and barometer, might be of great use to farmers, in prognosticating the weather, may be made, according to M. H. De La Bouchere, as follows: The grain of the common oat of agriculture, and also of the wild oat, is surmounted by a barb, which is terminated by a right-angled elbow. Let one of these grains at maturity be cut in half, and the upper half be attached by means of glue to the center of a circle marked upon the plane surface on a piece of wood or metal. To the extremity of the barb may be attached a fine piece of straw which will serve as a needle, and will amplify the indications. To graduate this simple little instrument, place it in very hot air, and mark 0 at the point indicated by the needle; then place it in an atmosphere saturated with humidity by means of wet cloths, and mark the point indicated by the needle 100, and divide the interval between 0 and 100 into one hundred equal parts. The straw needle may be made of considerable length, so as to give its indications clearly. Such a hygrometer costs but little, and is always comparable with itself.

The American Chemist states that a waterproof paper, transparent and impervious to grease, is obtained by soaking good paper in an aqueous solution of shellac and borax. It resembles parchment paper in some respects; if the aqueous solution is colored with aniline colors, very handsome paper, of use for artificial flowers, is prepared.

Making Match Sticks.

(Concluded.)

The quantity seems enormous, and almost staggers belief, but such is the velocity with which the machines are driven, and the multiplication of the sticks so rapid, that there is no difficulty in producing the number stated. When the wheels are in motion, the sticks fall from the cutters in a regular shower, and are caught in a trough below, through which passes a belt or elevator, which carries them to a series of machines, called shakers, with small latticed bottoms, in which they are subjected to a violent shaking as they pass through. This operation is for the purpose of removing all imperfect sticks and pieces of shavings. As they pass through, they are deposited in large cases ready to be carried to the drying rooms. These rooms are three in number, each fourteen by fourteen feet, the floors of which are covered with a series of steam-pipes. The boxes containing the sticks have latticed bottoms, and are placed upon these pipes in tiers, one above the other, four or five deep, when the heat is forced through the entire mass. Here they are allowed to remain for a day and a night, subjected to a temperature of 120 degrees, which effectually dries the wood, rendering it almost as light as a feather. As great care must be used to guard against fire in these rooms, perforated pipes, with an independent connection, are liberally provided, through which a sufficiency of steam can be forced in a moment to extinguish fire in case of combustion. After going through the drying process, the sticks are carried to another series of shakers. Here, by an ingenious arrangement, the sticks, as they are shaken up by a lively motion, are straightened, when they are deposited in metal boxes at the lower end of each machine, with circular bottoms. These boxes are made to hold as many sticks as can be grasped by the hand, from whence they are taken, and packed in cases ready for shipment to the finishers, who apply the compound to the tips. After tipping, the matches are placed in boxes for sale. The plain match-stick may be looked upon as an insignificant item at first sight, but a moment's reflection will convince the reader that an enormous quantity is required to supply the daily consumption. The making of these match-sticks is a distinct manufacture, the match-makers in large cities purchasing the sticks for tipping. The American Match-Stick Company, at Williamsport, Pa., employ the process described above, and when fairly under way, expect to make and ship a full carload of match-sticks per day to their various customers. It is estimated that in Europe and the United States, the amount of wood annually consumed in the manufacture of match-sticks is, at the lowest calculation, four hundred thousand cubic yards. One of De Boven's machines, requiring three horse-power to drive it, will, it is claimed, cut in ten hours fifty-two millions of match-sticks. This machine is also claimed to consume less lumber by one half than that consumed for the same number of sticks by any other machine yet invented.—*Journal of Applied Science.*

An Architectural Infliction.

A few years ago the monotonous style of roof used in architecture was agreeably varied by the introduction of what is known as the Mansard roof, sometimes called the French attic. The splendid architectural piles in Paris received some of their best graces of expression from the handsome sky-lines the Mansard roof gave them, and almost every American traveling abroad wondered why so graceful a roof could not be adopted in our American cities, where the large buildings usually terminated with an abrupt, sharp, and unpicturesque sky-line. The Mansard roof after a time was introduced, and its peculiar beauty soon made it very popular. But, like all fashions which become the rage, and which are adopted by people imitatively, without perception of the principle that governs them, the French attic has become with us an architectural infliction. The Mansard roof was designed for tall buildings. Its special purpose is to break the monotony of a massive pile, and to reduce in appearance its real height. A structure that would seem awkwardly tall, with an unvaried succession of stories, has not only, by means of the Mansard roof, a more graceful caption, but attains more agreeable proportions. The specific purpose of this roof being recognized, the absurdity of its use in small buildings becomes at once apparent. Our builders, however, seem to lack all power of perception, and to have reduced the art of architecture to indiscriminate imitations. Everywhere now the Mansard roof confronts us. Every new cottage on the roadside, new cheap villas in those extemporized villages that line our metropolitan railways, new public buildings of every sort and degree, railroad station-houses all over the country—everything of the kind now, no matter if only a story high, must have its mansard roof. It is exasperating to see a good idea thus dragged into absurd and ignoble uses. As we at first hailed with pleasure the appearance of the Mansard roof, we shall now look with hope for the signs that will indicate the termination of its career. And yet whatever may follow will have to undergo the same experience. It is our natural way to try and appropriate every big thing for every little purpose.—*American Builder.*

INCOMBUSTIBLE WOOD.—Several attempts have been made at different times to render timber unflammable. A new and apparently successful method has recently been tested, of which, perhaps, the most convincing of the first series of experiments was that in which a large heap of the prepared timber, about two feet high and seven or eight feet in circumference, placed on large iron sheets, was saturated with paraffin and set on fire. As soon as the paraffin was consumed the fire spontaneously went out. The timber was then examined, and found to be scarcely injured. The pieces of wood were of various sizes, the majority being about eighteen inches long by two and three inches square. Not only does the process render timber unflammable, but it has the not less important property of making the softer kinds of timber (such as white and yellow pine) throughout, both in appearance and hardness, like teak or oak. What adds immensely to the value of the discovery is that the system can be applied by a simple method to ships already built, so as to render those containing incipient dry-rot almost as good as new, and absolutely arresting any further damage from these destructive fungi.

AN OYSTER PATENT.—One of the great troubles which oystermen have to contend with is the starfish. This rapacious enemy destroys thousands of bushels of oysters every year, and no device has heretofore proved effective as a protection. But the ingenuity of a Connecticut Yankee has at last triumphed. Mr. Oliver Cook, of Darien, Conn., has lately obtained a patent on the subject. His invention consists in exposing the net, under water, on the ground upon which the oysters are to be raised, and then extending his digits again. Being now upon the upper side of the net, he will be infallibly captured whenever the oysterman raises the net to the surface. This is to be frequently done until the enemy is cleared from the coast, when the oysters at once begin to laugh and grow fat.—*Scientific American.*

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