

another season. The commencement of such jobs that have stared one in the face for years, probably, is more than half the undertaking. The old snake fence is an eyesore and a harbor for rubbish and weeds, while the new straight one will save land and give the farm a tidy, prosperous appearance.

#### Lightning Rods on Barns.

The subject of protecting farm buildings by the use of lightning rods was taken up fully in the *ADVOCATE* a few issues ago. Mr. John Haskett, of London Township, Ont., relates to us his experience, which was decidedly adverse to the use of rods, though the bulk of evidence is certainly in their favor, and "one swallow does not make a summer." His barn, which was a fine structure, some 66 feet long, was rodged at very considerable expense in 1885, and he states that the rods were maintained in good order. In May, 1894, the barn was burned. There were three points on the ridge of the roof, the two outer ones being a short distance from the ends. The rods were made of copper. After midnight, when in bed, he was aroused by a remarkable crash, accompanied by a tearing sound, which others in the locality heard. Though not raining at the time, a storm cloud had evidently passed over or near by. In a short time he got up and looked towards the barn, the roof of which was on fire; the whole upper part being ablaze, but none below, so they were able to get the stock out. His theory was that the rod had attracted a bolt of lightning, but was not sufficient to conduct it to the ground and that it exploded at the roof, igniting a considerable surface of the shingles. One of the points was afterwards found melted in the ruins. This circumstance had the effect of making Mr. Haskett unalterably opposed to rods as far as he was personally concerned, and he told the agent that he would not have them replaced for nothing; in fact, not if the lightning rod people paid him to allow them to do so.

#### Curing Pork and Hams.

A contributor writes: Side pork is easily handled and can be uniformly cured by cutting it into strips about six inches wide. These should be placed edgewise on the bottom of the pork-barrel, having a layer of coarse salt first spread over it. The skin of the pork should be placed against the outside. When the bottom is entirely covered with pork, cover it thickly with salt. Repeat in the same manner until the barrel is full or pork all in. Cover the top thickly with salt. Allow it to stand about three or four days, then put on a flat stone and pour in enough cold water to cover the pork. A quarter of a pound of best black pepper sprinkled over it at this stage is recommended.

Hams should be weighed and for every hundred pounds mix together four pounds of best fine salt, one pound of sugar, and four ounces of saltpetre; mix thoroughly and rub it into the flesh side of the ham and shank, place it on a board, and in five or six days rub in another application of same mixture, and again after another such space of time. A few days after the last rubbing they should be hung up and smoked, when a fine flavored product will be obtained, the large and small hams being cured alike.

### DAIRY.

#### A Reform Needed in Provincial Dairy Work.

With the advent of winter dairying in Ontario, cheese and butter making have become more closely allied; so much so that the Eastern and Western Dairymen's Associations and the Creamery Association now largely overlap each other. Probably 40 cheese factories, besides a large proportion of the 100 regular creameries, will be making butter this winter. Of the \$7,500 in Government grants received by these organizations too large a sum is eaten up in running expenses and too little comparatively devoted to the work of factory and creamery inspection and instruction, which ought to be their main business. In round numbers, the total receipts, including Government grants, of the three associations last year amounted to over \$12,000, about \$5,600 only of which was devoted to inspection and instruction. By a proper readjustment of the work \$1,500 or \$2,000 more might be devoted to that branch of the work. The liberal grants to affairs must be continued. The Western Association began the system of instruction at factories nearly twenty years ago, and that, coupled with the enterprise of the pioneers of co-operative dairying, laid the foundation of Canada's splendid cheese trade, which is to-day the envy of every other country engaged in dairying. We shall not outgrow this need of instructors. On the contrary, more will be required, possibly on the syndicate plan, so that these officials will have more compact groups of factories or creameries under their supervision. Quebec Province has made creditable strides both in co-operative cheese and butter making, and they have done so by a uniform system of factory oversight, with persistent attention to improvement. Ontario dairying is susceptible of improvement at this point also, and the sooner the work is

rearranged and systematized the better will Canada be able to hold its position of pre-eminence and make any advances demanded by popular taste.

The *ADVOCATE* is therefore pleased to note that Hon. Mr. Dryden, the Provincial Minister of Agriculture, has addressed a letter to the officers and directors of the three associations urging a concentration of their forces in order to lessen management expenses and increase the amount available for inspection and instruction. We doubt the advisability at the present time of attempting to unite the three bodies into one association. The main dairy sections of Ontario lie respectively east and west, and their interests will be better served by organizations more closely in touch with them. The Creamery Association has a membership of 100 odd, chiefly in the East, and the Eastern Dairymen's Association something over 175; while the Western organization has about 450. Here, then, we have material for two good, live organizations, which, as the Minister suggests as an alternative plan, might continue as at present. Each would choose their boards of directors to control the general local work, and through an executive of, say, four of their members—two interested in cheese and two in butter—a joint central board would be constituted to deal with matters affecting the general dairy interests of the Province, such as transportation, export, Government inspection, branding, cold storage plans, etc. Such a board could institute uniform methods of inspection and check any overlapping or clashing in the work of Federal and Provincial authorities, to which reference was made in an article published in our last issue, entitled "Federal and Provincial Relations with the Dairy Industry."

As to the large conventions, two will be better than three, as they must now of necessity deal with both butter and cheese making. Makers are now compelled to be posted on both branches, and instructors and inspectors should be qualified accordingly.

One efficient dairy secretary might very well serve the two organizations and the joint board to the advantage of the whole Province, and at the same time effect a very considerable saving to the people, for it is their money that is being spent, and we want proper results to show for every dollar of it.

#### Western Ontario Dairy School.

The Western Dairy School, which made a commencement last year at Strathroy, Ont., too late in the season to expect a very large class, has issued its 1896-7 announcement, which indicates that a great opportunity is now given dairymen in that portion of the Province to obtain a thorough scientific training in the art of milk production and its manufacture into cheese or butter. When we notice that ten weeks of training under the experts that have been engaged to take charge of the various departments can be had free by simply paying a registration fee of one dollar, we are inclined to wonder if the institution will accommodate all who come up for instruction. If we were conscious that every dairymen already knew one half of what there is to know about dairying we could understand that the opportunity would not be so great, but when we are constantly hearing of poor butter coming to market and people keeping poor cows and not half caring for them we are led to believe that the deplorable condition of self-satisfaction must have a great hold upon many who can surely leave home for a month in winter. The Strathroy Dairy School should be crowded this year from the opening till the close.

The first course will begin on Nov. 25th; the second on Jan. 6th, the third on Feb. 3rd, the fourth on March 3rd, and the fifth and last on April 7th, 1897. The number of students is limited to fifteen in each course; that is, fifteen in the butter department and fifteen in the cheese department.

The school, which is under the control of the Ontario Government, has for director, President Mills, M. A., LL. D., of the Ontario Agricultural College, and for resident superintendent, F. J. Sleight, B. S. A., while the remainder of the staff is also the same as that of last year, being, for buttermaking, Henry Smith, assisted by J. E. Crealey, B. S. A., and in cheesemaking, Wm. Waddell. In addition to the practical work, lectures will be given on the following subjects: "Business Management," "The Composition of Milk," "The Care of Milk for Home and Factory Use," "The Separation of Cream from Milk," "Milk Testing," "Buttermaking," "The Principles of Cheesemaking," "Feeding and Management of Dairy Cows," and other subjects. Mr. Sleight, though somewhat handicapped last season through the building being finished so late, gave the school a splendid start. He is well and most favorably known over the Province by reason of the ability with which for several seasons he carried on the traveling dairy.

Some time ago permission was given by the U. S. authorities allowing the shipment of Canadian cattle, in bond, to England via Boston (in addition to Portland), but in a very short time after this order was suspended.

Procrastination is the thief of time, money, and knowledge. Moral: Renew your subscription to the *FARMER'S ADVOCATE* to-day.

#### The Common Faults of Butter.

The undesirable properties which are observed in butter are due far more to mistakes in the preparation of it than to the use of unsuitable foods, says W. Fleischmann, Ph. D., in his Book on the Dairy.

**Faults in Appearance.**—It may contain milky brine, and be therefore dull and cheesy; if too much worked, opaque and thick; or it may be flecky, streaked or cloudy, results of unskillful coloring or salting, or working in a cold room.

**Defects in Flavor and Smell** are as follows:—Ransid or bitter, dull or greasy. It is referred to as being lardy when it has a weak tallow flavor, or tallowy when there is a strong tallow flavor. The butter is inclined to develop this flavor if the cows eat much young fresh clover or if they be supplied with large quantities of tallowy-flavored oil cake. Furthermore, butter is apt to become tallowy if exposed for a long time to a bright light. Butter, also, which has been frozen and again thawed is occasionally tallowish. A woody flavor is often due to the boards of the kegs in which it is packed being young, damp wood inclined to be musty, and also by not compressing the butter firmly enough into the casks. Sometimes butter tastes of the food, generally bitter, caused by feeding cabbages, damaged beet roots, sour food, distillery refuse, etc. The flavor of the stable is common in bad butter and very disgusting. When dairy utensils are carelessly washed with soap or soda this flavor is apt to be left, or butter kept in damp, poorly-ventilated rooms is liable to become musty.

Other defects mentioned by Dr. Fleischmann as being recognized in the larger butter markets, such as Hamburg, Germany, are: Moldiness, or it is occasionally white, green or red, owing to bacterial growth; oversalting or defective salting, when the finished butter will contain grains of salt; and, lastly, dirty, containing threads, hairs of cows, dead flies, and other indications of dirty handling.

It goes without saying, that every one of these defects in butter can be avoided if reasonable care be given by the dairymen in the manipulation of his business. Had Dr. Fleischmann investigated butter as put upon the weekly and biweekly markets of many Canadian towns and cities, he would have met with perhaps quite as many evidences of carelessness as he found exemplified in German markets. We learn that the more particular class of city customers never think of buying butter upon the market, but invariably pay a reliable grocer a little extra price for what he will guarantee as being of good quality, or else have an agreement with some good buttermaker to supply them once or twice a week all through the year.

#### Churning, Salting, and Working Butter.

BY JOHN B. MUIR.

**Churning.**—We said in our last article that if the cream was cooled to 60 deg. or below the night before, and cold water or ice left around it, it would be down to about right churning temperature in the morning. The right temperature I consider to be from 50 to 53 deg. Some may think this a very low temperature, but there are many advantages in churning at a low temperature; it not only gives more exhaustive churning, but it gives better butter, with less foreign elements in it and with much better keeping-qualities. It is necessary to have rich cream or cream containing from 30 to 35 per cent. of butter-fat to enable us to churn at this low temperature, as thin cream cannot be churned below 60 deg. without exhausting a great deal of time and patience. Thin cream also develops acid much faster than rich cream. This is another point in favor of rich cream, as we are better able to control the flavor and ripening process by having cream with a small quantity of milk in it and introducing plenty of good, pure starter.

Cream ripened at a high temperature should be cooled to 52 or 54 deg. about two hours before churning, so that the practice I have recommended of ripening and cooling the night before will be found very convenient by both the creamery-man and private dairy-man, as the cream is ready for the churn first thing in the morning. Scald the churn with hot water, then rinse with cold water before putting in the cream. The cream should always be strained into the churn. The best strainer for this purpose is made of perforated tin; a convenient size for factory use is a round one, about 18 inches in diameter at the top and 16 inches at bottom, 8 inches deep, with 2½ inches of tin around the top. If butter color is to be added, do so after the cream is in and before starting the churn; about ½ oz. to the 1,000 lbs. of milk will give about the color suitable for our local markets. If the butter is intended for export, very little, if any, should be used. The churn should never be filled over half full, one-third is better, especially with thick cream at a low temperature, as it is liable to foam and fill the churn, so that concussion ceases. If you should get caught with a foamy churning, the quickest and easiest way out of the difficulty is to remove part of the cream and proceed with churning the balance. When the butter begins to come it is a good precaution then to take the temperature, and if found to be too high, to cool a little by adding some ice-cold water; if the temperature is not too high, sufficient cool water need only be added to keep the butter in granular form until the butter is gathered to about the size of wheat grains, or a little larger. The churning should never be done in less than 45 minutes; from that to an hour will be found about right. Let me here again urge every butter-