

accordance with the percentage of salt. All the tins were made in the factory, and the greatest care is taken to secure the best quality of tin, and any that is scratched is rejected. The tin is bought in small sheets, and is packed with paper between the layers to avoid scratching. The usual tin-cutting machinery is used, and soldering is all done by hand, and not mechanically, as I have seen it done in Switzerland. All the solder is made on the premises, in order to avoid the risk of too much lead being intermixed with it. After completion, the tins are washed with hot water and soda, and then rinsed in cold water. They are not dried, but merely inverted and allowed to dry themselves by draining. This plan is adopted so as to avoid touching the inside of the cans with the hand. After they are filled with butter and closed the cans are painted over with quick-drying enamel paint, and labelled.

Previous to visiting Denmark I advertised in the Copenhagen newspapers for a practical butter-worker, and received ten applications. From these I selected C. N. Andersen, aged twenty-four, with good testimonials, of which I send you an interpretation. He is now managing a factory, and, I believe, is thoroughly intimate with his business. I received through private sources confirmation of his testimonials. He is engaged for one year at a salary of £100 per annum, and found in food and lodgings. We also pay his passage out, and allow half-wages during the voyage; copy of agreement sent herewith. He will sail from London in the "Doric" on the 10th July. Unfortunately he cannot speak English; but the Danes are excellent linguists, and by the time he reaches you he will know a little. He promises to act under the orders of the dairy manager, and to assist in making cheese when he is not required in the butter-room. He is, in fact, to be viewed in the light of a butter-foreman, and is not engaged as a manager. In order to avail yourself of his services from the first, it would be well for you to get a Danish workman who can speak English and can act as interpreter for a time, until you get the butter department into order. How you are to get him to work without the means of refrigeration remains to be seen, and he will be, I fear, rather lost, as his system necessitates it. However, I am getting him over to Leith before sending him on to you, so will hear what he says, and perhaps be able to send you a refrigerating-trough at least, worked by ammonia. As stated, I am sending you a Danish churn, and will also send some thermometers graded in the way he has been accustomed to, so as to give him every chance in a field where he will require to accommodate himself to new surroundings.

My next hope is to get Government to send out a qualified expert like Landsperg, who speaks and writes English; and, indeed, I am negotiating with that man now, and will recommend our board to offer him some inducement to go, on the chance of being made public dairy expert, to visit all factories and correct existing faults in butter manufacture. We could make good use of him at Edendale for six months, to get Andersen properly started in his department, and to help us to solve this rather difficult question of refrigeration. I am more than ever convinced that we cannot attempt butter-making without the best knowledge and appliances; more especially if we are some day to tin butter for general export. A few hundred pounds will be money well spent to secure success for the future, more especially as our dairy-farmers are even now complaining about their returns. Andersen's future will, of course, depend on his qualifications, and I leave Mr. Brydone to raise his salary as he proves himself worthy.

Now I come to the payment for milk at factories. In Denmark the chief factories only pay by results—that is, each farmer receives a price for his milk in proportion as it is found to contain butter-making cream. For long a satisfactory tester was wanting, but now an excellent one is discovered, which is simple enough to be used generally. A sample is taken from the milk sent by each farmer, and this is poured into a glass tube, which is placed in a frame capable of holding some 150 such sample tubes. This frame, with all the samples in the glass tubes, is then put into the centrifugal separator, which has been previously partly filled with water; the centrifugal is then set in motion, and the cream in each sample of milk is driven to the top of the tube. After removal from the centrifugal the quantity of cream is measured in each sample tube, and the farmer is credited if he can show more cream than the standard quantity required, and debited if his milk yields less than this standard. Unfortunately this tester is only constructed for use in the Danish centrifugal machines made by Burmeister and Wain, of Copenhagen. I am asking Laval's agents if they cannot apply the same system to their centrifugals; Burmeister and Wain say it is impossible, but this is an interested opinion.

I send you a great many drawings and pamphlets from which dairy information may be gathered. If we ever set up a special butter-factory the plans should be adopted. I retain duplicates, so if you want anything you can refer to the page and pamphlet. In the pamphlet I have also numbered a few of the articles, and you could cable the number if necessary, and we will understand.

The feeding of cows is very strictly attended to in Denmark, and where butter is made no turnips are allowed, but beetroot is used. The cows were all at grass when I visited the country; and the fields are despatched by tethering the cows in a line, and feeding the grass regularly before them. One man can watch, water, and shift the tethers of a great many cows, and by feeding them in this way they always get a "clean bite," and the whole of the pasture is thoroughly well fed. All the cows had blankets on them, as they had only lately left their warm winter stables, and were liable to catch cold. I was surprised to see the excellent farming prevailing; and the land seems very clean, and every inch available is worked. Excepting cocksfoot, the same grasses and clovers are used as we have, and about the same quantities per acre, so far as I could make out. The cows are fine big animals compared to Ayrshires, and look as if they would make good beef. They are, of course, selected for their milking qualities. I should like to send you a bull if the quarantine regulations permitted. The herd I saw had about three hundred cows in it, and they were wonderfully alike, their colour being a rich brown, running into black at the points.

Since writing the foregoing, Mr. Melvin has looked in, and, to meet the ice difficulties in our dairies, suggests that water-power be taken, if possible, from the Mataura River, at the falls,