MORNING SESSION.

Convention met at 9 o'clock, February 13, 1903.
The President in the chair.

REPORT OF CREAMERY INSTRUCTOR.

James G. Moore, Albion.

Your association has had, for a number of years, two cheese instructors in the field, doing a grand good work which has become so well established in the good opinion of factorymen and patrons that it has become indispensable and the withdrawal of which would be a great loss to the business. As to instructors in the creamery line of dairy work nothing had been attempted until about two years ago, no doubt on account of the smallness of the appropriation received from the state for such purposes. Just as soon as money could be obtained, however, it was applied to filling this long felt want of having an instructor for the purpose of helping the butter maker who, from his isolated position, is so apt to get into a rut without realizing it.

The first instructor appointed, Mr. Goodrich, had of necessity to blaze out a new path and it was thought to follow the cheese instructors' methods and wait for calls, but as this was a new idea to creamery men it did not take very well and the consequence was that new methods had to be adopted in dealing with this work. It was finally decided to have your instructor go from creamery to creamery, stopping a day with each; and if found necessary to stop longer, a charge of at least half of the expense was to be made.

By the reports of the cheese instructors you can see that they have a goodly number of visits paid for and no doubt when the creamery men wake up to the importance to them of having
an official instructor, they too will be calling for visits and willing to pay for them. In fact at a good many places where I have called I have been requested to come again but when told that the second visit would have to be paid for that put a different phase on the subject. Your instructor has the satisfaction of saying that at almost every creamery visited, after explaining the purpose of the association in making this visit, he was treated with the greatest of courtesy. In many cases the butter makers are working against odds, the small amount of milk received making it almost impossible for needed improvements to be obtained, the owners, individual or co-operative, feeling that the patronage accorded to the factory does not warrant the expense of keeping up to date. At a good many places the answer to the plea for better methods would be met with "it don't pay" or "our butter goes all right and we don't hear any kicks about it" and it is surprising to me to see how much butter of an inferior quality is disposed of at the prices said to be obtained for it. Even where they have the appliances for bettering their work, they do not always use them, claiming that it does not pay or they haven't the time or some other excuse equally as good.

The use of an acid test for determining the ripeness of the cream and the use of pure culture starters are considered at too many places as fads that are all well enough for the dairy school but not necessary under the conditions they are working in.

The methods of making butter are by no means uniform. Some butter makers have success with high temperature in ripening; others with low temperature. The conditions at each creamery have to determine for the butter maker what plan he will pursue to get the best results, as it is manifestly impossible for a maker to practice high ripening temperature unless he has ice or some other means at his command, to control the temperature at will. However, more important than methods of making, to my mind, is the factor of cleanliness both in the handling of the machinery in the factory and in the care of the milk by patrons. The pumps and pipes through which the milk passes should be cleaned much oftener than they are and to this one cause a great deal of off flavored butter can be traced. The
gates to the milk and cream vats too, are liable to become contaminated and prove a lively source of bad flavors. Churns are usually kept clean, although not always, as I have had frequently to clean churns this last summer. The reason for this is in a good many cases due more to ignorance than a deliberate desire to be dirty. There is more of a chance, however, to reach the slovenly maker than there is to impress the average patron with his short comings. In looking over the cans brought to a factory it is rather a delicate task for the maker to tell a man that his cans are dirty and his milk impure. Not only from the fact that he will incur his enmity, but that he will no doubt be told, that if he does not want to take his milk in, there are other creameries where they will be glad to take it, and this is too much the case and where a creamery is getting hardly enough milk to pay expenses the loss of a patron or two is keenly felt.

The instructor should be able to cope with cases of this kind by being clothed with powers similar to that of the Minnesota State Dairy and Food Commissioner's inspectors. In my opinion, the time has now arrived when if Wisconsin is going to regain the lead in the dairy business lost to states like Minnesota and Iowa, the forces now at the disposal of this association should be clothed with the authority of the State Dairy & Food Commissioner, and working in connection with the other forces at his command, be better able to cope with the situation by having a legal standing, and not as now, have to approach the creamery at the pleasure of the creamery owner or maker. The instructor would then be able to back up such directions as are necessary to improve the quality of the milk and butter by having the authority to issue such directions.

The State Dairy & Food Commissioner's assistant's time is taken up largely by requests to test the milk and it would seem as though much ground is now being covered by the two sets of instructors and inspectors that could be in some measure avoided by being under the direction of one official head.

The laws of Minnesota are such that men bringing unclean milk or milk in an unclean can can be fined, and the butter maker also, if the factory, pumps, pipes, etc., are not clean. And so you see the law works both ways and I was told by Mr. Haug-
dahl, one of the inspectors, that on the first visit they would merely admonish and call the maker's attention to anything out of the way or the patron's to the fact that his cans were dirty. On the second visit, however, unless there was an improvement or a tendency towards improvement, compatible with the things to work with, they could administer fines which usually have the desired effect, as no better reminder could be desired than when you touch a man pocket book. I was told by a creamery man who owns factories in both Wisconsin and Minnesota that, he would rather operate in Minnesota than Wisconsin on account of these laws, the milk brought to the factory being much better in quality; and the success of the Minnesota butter makers at the national conventions would seem to indicate that there is something in it.

A law similar to Massachusetts or Iowa regarding the testing of glassware should be enacted as there is a wide difference in the size of some of the pipettes used, and the bottles themselves are not always correct, although better glass now is being sold than was the case some few years ago.

In regard to the testing of milk I would say that something ought to be done toward setting a legal standard of over-run and a more uniform system of dividend statements. We have found statements where the overrun was from twenty to twenty-five per cent. and in some cases as high as thirty, and in a number of instances it would seem as though this was done in order to apparently pay more for butter fat than neighboring creameries, and thus draw patronage to themselves.

I have had some letters from creamery men asking if there was any law to compel their neighbors to show up their books as they knew by the way they were paying for butter fat that the test was being manipulated in order to hurt their patronage.

In performing my duties as your instructor I have traveled about 3,000 miles and visited 163 creameries, stopping in most cases but a day at each, sometimes two or three days and in one instance a week. The charge made by the association for the week was $12.50 but the creamery board was so well satisfied with the work done that they paid the full charge of $5.00 per day. In this particular creamery, while everything was clean
and neat, yet, through the butter maker's antipathy to the use of commercial starters and an alkali test, he allowed the quality of his butter to be dominated by the character of the feeds used to such an extent as to lose about $500 in a very short time. The butter maker was also careless about the granular butter being washed out of the churn onto the floor and down the drain which he made the management believe was unavoidable.

I was in a creamery not long ago where the boiler had on 40 pounds of steam and a good fire under it and not a bit of water either in the glass or to be obtained by opening the valves. It was a wonder to me that the boiler was not damaged as we found upon banking the fire and getting steam down that the boiler was indeed almost dry.

At one place that I called last summer the creamery had but four months before passed into the hands of the farmers. They had asked various creamerymen for advice and were told that the most important thing to do was to hire a first-class butter maker and not allow a few dollars in wages to stand in the way. They, however, were of the opinion that a good enough man could be obtained for $35 or $40 and got a young man for the latter figure. In four months they lost nearly $400 on the butter and the day I got there he had left them after washing up and when I got there about seven o'clock in the evening the cream was at a temperature of seventy and had five and a half degrees of acidity, plenty ripe enough to churn. There was no water in the glass on the boiler and no water in the tank and the pump was broken and the churn which was a new one was in a very bad condition. I got some ice and cooled the cream down and stayed two days breaking in a new man, who I am pleased to say has been having good success, some of the credit for which may be due to his wife, who works in the creamery with him.

The dirtiest creamery I was in, I believe, was presided over by a dairy school graduate who was also part owner, and he himself in his working clothes, at least, was in keeping with the rest of the outfit. The outside and the end of the churn looked as if they had never seen water, and the floor was so black and greasy that it was evident that very little elbow grease was
wasted on it. In fact, the appearance of the place was certainly not very prepossessing. I am glad to say that this class of creameries does not predominate by any manner of means. On the contrary there are some very fine, up to date creameries; and it would seem to be the desire of the large creamery owners, at least, to keep up with the times in replacing some of the old back numbered structures with buildings of brick, cement floors, and all of the modern conveniences. One firm in particular has recently built two new creameries that are models in neatness, easy to keep clean and fitted up as to machinery with a view of doing the greatest amount of work with the least amount of energy.

There are, however, between these two extremes a large number of creameries that could be vastly improved by the application of a coat of paint, both inside and outside; and a little energy expended in cleaning and tidying up the outside surroundings would not come amiss. Where creameries have taken some pains to grade up the driveways around the buildings, making some provision for the waste at the places where the skim milk is loaded, they have been amply repaid by the added neatness and absence of that characteristic smell that greets one at so many creameries, especially in hot weather.

There being in the state something like eleven hundred creameries, it would seem to me that the crying need of the times is to have more instructors so that it would be possible for them to get around to the creameries oftener, as it is manifestly impossible for one man to cover so much territory with justice to all. Such work as is being done by the state of Illinois in having a man go among the farmers, testing their herds and instructing them in the better care and production of milk might well be taken up in this state. It is part of the program for the instructor to call evening meetings of the patrons for the discussion of such subjects as would be helpful, but owing to the newness of the idea and the lack of information in regard to the work and the much larger scope of territory covered by the average creamery in comparison with the cheese factory, we have not done much along that line, but if it could be arranged to get over the terri-
tory oftener so that it could be arranged beforehand by the butter makers, it would be the means of doing a great deal of good.

DISCUSSION.

Mr. Goodrich: Haven't we got laws now on our statute books preventing a man delivering impure milk to creameries?

The Chairman: Yes; but impurity is defined by the law so that if you make complaint as to the furnishing of impure milk under the definition of the law, you must show that that milk is drawn from a cow that is diseased, or is within certain degree of parturition or otherwise. There is not a statute that applies against simply unclean milk. But a bill has been introduced into the legislature this winter taking the statutes where they are now, or defining impure, unwholesome milk coming from diseased cows, diseased conditions and so on, and trying to prevent milk being drawn from cows for sale or delivery to factories that are kept in unventilated, unlighted stables, or cows that have on them an accumulation of filth, or otherwise making it unlawful for them to deliver that to the factories. Another provision is that creameries and cheese factories shall keep their premises in a clean and sanitary condition, and it defines what unclean and unsanitary condition means. I believe it is a similar statute which has given Minnesota the lead of us in her butter products.

A Member: How much should be the overrun?

Mr. Moore: Professor Farrington assumes that it should run from ten to fifteen per cent, and the maker should be able to get within those limits.

Mr. Michels: What per cent, of acidity would you want in the average run of creameries throughout the state where they ship their butter to Chicago or New York?

Mr. Moore: The proper acidity of the cream to get the best results—for we might say exhibition purposes—would be from five and a half to six by the Farrington method; but if I was going to ship butter any distance I would prefer to have it, say,