the wealth of your state. What does it mean to this state? It means millions. What does it mean to the value of your real estate? It means millions. You add ten cents to one person’s pay and you at once add five or ten dollars to the value of land. You multiply five or ten dollars by the agricultural lands of this state and it means a $100,000,000, and you can ill afford to keep back appropriations.

So when you have men of intelligence and power, you must put up your hands and arms to strengthen them, when it has so much bearing on the results in this country.

Convention adjourned to 1:30 P. M.

SEVENTH (FINAL) SESSION.

Convention met pursuant to adjournment at 1:30 P. M. President Carswell in chair.

The President: We will now listen to Mr. Kasper’s paper on “The Ideal Cheese Factory.”

AN IDEAL CHEESE FACTORY.

P. H. Kasper, Nicholson, Wis.

I have not much of a paper prepared, because I did not know whether I could come or not; but I will touch on a few points that I think necessary to have in a cheese factory, and how a cheese factory ought to be.

A typical and up-to-date cheese factory should be so constructed that the proprietor should be able, if necessary, to make a first-class article three hundred and sixty-five days in the year. The building must have a neat and attractive appearance from the outside, as well as the interior of the factory, that will not only be a credit to the proprietor or maker, but also the pride and admiration of the patrons. The more the patrons talk and comment upon the neatness of things, the more business will come to the enterprise, and the goal which we are all desirous of is a successful business.

A majority of the factories in Wisconsin are too small, poorly constructed, and undesirable apparatus in the factory, such as
vats, presses, boilers, etc., and in many cases if the cheese is not
ruined in the process of making, it is spoiled in the curing
room.

In the ideal cheese factory of today, there is a receiving room,
make room, test room, curing room, and boiler room. The re-
ceiving room, which is a small room about 5x8 feet, has a floor
elevated about three feet above that of the make room. In
this room we find a good, accurate set of scales, weigh can, and
on one side of the room there are narrow shelves suitable for the
composite sample jars, arranged as neatly and evenly as a druggist’s show bottles.

The make room should be finished as neatly and tastily as an
ordinary dwelling,—the best of floors,—around the walls wains-
tocoting about three feet high, the balance of the walls and ceil-
ing lathed and plastered. The finishing of the room is excellent,
vats, press, curd knives, one horizontal and also one perpendicu-
lar knife, curd rack, curd mill, and, in fact, everything that is
necessary to manufacture a first class article.

In the test room, we find the indispensable and familiar Bab-
cock tester to determine the relative value of each patron’s milk;
curd tests, wash sink, with steam and water connections, water
tank and towels. The one object to keep in view is neatness.
The maker should also be neat in appearance, for we must re-
member that cheese is a diet consumed by the human race, and
the utmost cleanliness should prevail.

The boiler room is provided with a twelve or fifteen horse
power horizontal boiler set in brick. A great many makers may
say, “What is the need of such a large boiler?” but experience
has taught me that a twelve or fifteen horse power horizontal
boiler is the most economical. It requires less fuel and less atten-
tion, while you are busy at work in your make room. When
once heated up a large boiler will hold the heat far longer in
proportion to a smaller one.

The curing room is the most important factor in the manufac-
ture of good cheese. Thousands of pounds of good cheese are
ruined annually in ill-constructed and ill-ventilated curing
rooms. A well-constructed, above-ground curing room, provided
with a sub-earth duct will enable a maker to hold the tempera-
ture from 60 to 68 degrees, no matter what the temperature is
outside.

The great improvements that have been going on in the con-
struction of better factories, better curing rooms, and the finer
quality of Wisconsin cheese, is largely brought about through
the good work and superior instruction given by the Wisconsin
dairy school at Madison, and by our state cheese instructors, sent
out by the Wisconsin Dairymen’s Association, and our Wiscon-
Wisconsin Cheese Makers' Association; but don't let us rest now and depend on our reputation already gained, like the cheese manufactures of this state did several years ago, but let us keep on with our good work and further perfect our methods, and adopt the latest improved and practical methods for still further improving this product of the state of Wisconsin.

DISCUSSION.

Mr. Mason: I would like to ask Mr. Kasper if he does not think an ideal cheese factory should have sealed walls and sides?

Mr. Kasper: It depends on how it is constructed on the outside. It should be lathed and plastered. We have four thicknesses of paper and four thicknesses of boards on the outside, and the inside is lathed and plastered.

Mr. Baer: Then you can whitewash it?

Mr. Kasper: Yes.

Mr. Mason: In the making room?

Mr. Kasper: Nothing is nicer than a nice lathed and plastered room. You can whitewash it once or twice a year.

Mr. Mason: All the factories I ever saw that were lathed and plastered overhead, the plastering would commence to crack and tumble into the milk vat.

Mr. Kasper: They are poorly constructed when they do that. Mine has been plastered for seven or eight years, and no plaster has broken off.

Mr. Powell: I would like to ask Mr. Baer if it is his idea to whitewash the whole factory?

Mr. Baer: Yes, if the walls and ceiling are lathed and plastered, I would certainly whitewash it. I do not think I would use it in the whey tanks or down on the floors.

Mr. Schoenman: Do you think, Mr. Kasper, if a curing room is whitewashed and plastered, that in getting the cool air in the night, it has a better effect upon the curing room in the day? That the plaster draws more cool air than wood-work? In having a curing room like Prof. King was telling us about, you have to get the cool air of the night.

Mr. Kasper: I know that a lathed and plastered room is cooler. If you want to make it tight, you can seal that lath and plaster and make it all the better.

Mr. Schoenman: I have a sealed room, and I thought I would like to plaster it on that account and keep it clean and cool.
Mr. Kasper: There is one thing about a factory that is lathed and plastered, you can keep it nice and clean, and you cannot purify any better than by whitewashing.

The President: Any more questions? Keep them coming. This is an important matter. Good curing rooms are half the battle.

Mr. Schoenman: How have you got the shelves arranged?

Mr. Kasper: The shelves of my curing room are 2x4. I have it the same as you have on board shelves, but instead of shelves it is 2x4. They lay about 12 inches apart. I use a cover to set the cheese on. I put the cover on the box and so always have clean shelves, and the cheese are not ruined in turning.

Mr. Van Leeuwin: Do you prefer an upper curing room with a sub-earth duct to a cellar curing room?

Mr. Kasper: I never had a basement curing room. My curing room is above ground. I do not know anything about a cellar or basement.

Mr. Schoenman: Have you any trouble with cheese moulding?

Mr. Kasper: Sometimes when I keep it open in the night, because there is nothing to absorb the moisture.

Mr. Schoenman: At what temperature do you keep it in the summer?

Mr. Kasper: Last summer about 68, when we had hot weather.

Mr. Waterstreet: What lumber do you prefer for curing shelves?

Mr. Kasper: 2x4.

Mr. Schoenman: Isn’t it very unhandy to turn your cheese?

Mr. Kasper: No, we lay a cover on top and have an extra cover.

Mr. Waterstreet: You have two covers for every cheese?

Mr. Kasper: No.

Mr. Van Leeuwin: You have the smooth side of your cover in, and you lay the cheese on the smooth side of the board?

Mr. Kasper: Inside of the cover.

Mr. Van Leeuwin: Do you keep covers for that use?

Mr. Kasper: No, I use the same cover for the box.

Mr. Van Leeuwin: Then you have a clean cover every time for the cheese without the necessity of cleaning the shelves?

Mr. Kasper: Yes.

Mr. Van Leeuwin: Then you take the new covers and use the covers as fast as you ship the cheese?

Mr. Kasper: Yes.

Mr. Baer: I would like to ask Mr. Kasper where he gets his boxes made?
Mr. Kasper: Down at Black Creek.

Mr. Baer: The boxes that are being made in southwestern Wisconsin would not stand the racket. They hardly stand it long enough to get the goods on the market. One trouble with the cheese that is being put up in the southwestern counties is the poor packages and poor boxes they have to ship the cheese in.

Mr. Kasper: We are getting very good boxes up there. I always order the boxes planed, inside and outside.

Mr. Baer: How much do you pay for your boxes?

Mr. Kasper: Nine cents at the factory.

Mr. Monrad: What size?

Mr. Kasper: 14 1-2 x 10—12 inches.

Mr. Schoenman: Do you use those for daisies?

Mr. Kasper: No, I use a small daisy box.

Mr. Schoenman: The boxes we have here are not planed on the inside.

Mr. Kasper: They do not plane them unless you give special orders. They do not cost any more. They will do all they can at a good factory for you.

Mr. Baer: Do you have an elevated whey tank?

Mr. Kasper: Not elevated, but it stands above the ground so I can drain the whey off.

Mr. Baer: How often do you clean it?

Mr. Kasper: Every day in the week, unless we do not have the time.

Mr. Baer: That is you scald it with hot water?

Mr. Kasper: We used to. If I had an elevated hot water tank, I should prefer to scald it. The way we have to do now is take water from the pump.

Mr. Decker: He gets it clean though. Every time I have dropped in on him, I found it clean.

Mr. Aderhold: I think there is room for a good deal of improvement in the way that whey tanks are kept. Whey tanks are sometimes in a filthy condition. This can best be illustrated by telling a story of two Jews, who decided to take a bath. I can not state how they came to make this agreement, but they did. They got a room together with separate tubs standing side by side, and bathed themselves. After they got through one of them looked down at the water in the other tub and said, “Jakey, how is it that the water you have bathed in is so much dirtier than mine?” Jakey answered: “I think that is a simple question. Aint I five years older than you are?”

Mr. Van Leeuwin: I would like to know if any one has ever tried scalding the whey for their patrons by heating it to a temp-
Mr. Kasper: Four years ago I scalded it in that way at my factory, and told my patrons to bring me a cord of wood each for so doing. They liked it too, but most of them forgot to bring the wood.

Mr. Aderhold: I would like to try to get some expression from the convention here as to the value of clean-scalded whey over the common whey we get. I know that in most of our whey tanks great big starters are left there. The whey comes in warm and fermentation is very rapid. I found a man in Wood county who had a hundred barrel whey-tank that was cleaned every day. He took out every bit of the whey and cooked it, and turned the steam on and heated it to 150 degrees. You cannot go higher or there will be a separation. There was no fat on the whey—just a trace—and it was nice and clean and sweet. I believe that that whey was worth enough more than the ordinary whey to make about three cents for each hundred pounds of milk.

Mr. Van Leeuwin: I would like to ask Mr. Aderhold—do you know whether any patrons used it for feeding cattle?

Mr. Aderhold: Most of them did, and liked it.

Mr. Van Leeuwin: I would like to hear from others about feeding whey to cows.

Mr. Aderhold: Most patrons use it to feed calves with, and they all have good calves, better than the ordinary.

Mr. Kasper: I would like to ask whether we should use live steam or exhaust steam?

Mr. Aderhold: Live steam.

Mr. Kasper: It is a great benefit to the patrons when the cheese makers scald the whey, but he will find it takes more wood to scald the whey than to do all the work of the factory. If the patrons will not furnish the wood, I think it is money out of his pocket to do it.

Mr. Aderhold: I want to make a suggestion. Would it not be a good stroke of business for the patrons to say to the cheese makers, "Here, I will give you one eighth of a cent more for making cheese if you will clean the whey tank every day and scald the whey." Wouldn't he be making money by it?

Mr. Johnson: I think Mr. Aderhold has been in the cheese business long enough to know that such offers are not made. I scalded the whey in my factory, and as Mr. Kasper says, it cost lots of money. I talked to my patrons about it and some thought it the best thing to do, and others thought it was not a bit better than the other.
Mr. Aderhold: You didn’t show them how much money they were losing?

Mr. Johnson: No, but I could show them how much I was losing.

Mr. Berg: Prof. Dean of Canada has made some experiments in feeding sweet and sour whey to pigs. Sweet whey was taken and fed to the pigs, and a second lot was fed the next morning, under factory conditions, and he found there was practically no difference in sweet whey and sour whey, and I think Prof. Henry has made experiments along that line lately, and although he has not published it, he thinks, I believe, that there is no difference in feeding sweet and sour whey.

Mr. Aderhold: There is a difference between sour and rotten whey. This whey is taken home in the same cans the milk is hauled in. The farmers do not understand about germs. There is no doubt but that the milk is being injured from that source. I do not think we ought to overlook that thing.

Mr. Van Leeuwin: I think that is true in feeding whey to pigs. You get good results in feeding whey the second day. Some patrons will take enough interest in and care for such things enough to see what results they are getting. My patrons found that they could get good results by feeding clean sour whey the next day. But I think pasteurized whey should be fed to calves. If we could have two separate tanks, we could use one of them for pasteurized whey for those of our patrons who wanted it for calf feeding.

Mr. Berg: I would like to hear from Mr. MacPherson what they do with the whey in Canada.

Mr. MacPherson: I think the whole ground has been gone over. For pigs, sour whey is as good as sweet. Indeed, some experiments have demonstrated that sour whey gives more pork, but it is so small that it is not worth consideration. But for calves sweet whey is far superior. Sour whey is poison to calves, and they are of very little value. In all cases whey should be scalded for calves. In two years I raised over ninety calves on whey, forty odd each year, and I had the most excellent results. Never had better results than by feeding them whey. The way I did it was to mix a little linseed meal with shorts, boiled it and mixed it with the whey, which was fairly sweet and taken from the factory each day, and all of my calves were worth from fifteen to twenty dollars apiece in ten or twelve months. They grew well, and matured and developed in fine shape, and they were tied up the entire time.

Mr. Van Leeuwin: About what weight were they?

Mr. MacPherson: Between 600 and 700 pounds. They were as well attended to in the winter as in the summer. It was
a special test and it turned out first-class. You will have no trouble in raising calves on sweet milk with a little linseed meal and shorts, about half and half, boiled, and then a little green feed or dry hay. Clover hay is far superior when nicely dried. They can be made to grow about a pound and a half a day.

Mr. Williams: Isn't it good to give grass oats?

Mr. MacPherson: Very good; for a change it is excellent, but these are the general principles.

Mr. Bolechen: How much whey do you feed?

Mr. MacPherson: Probably three gallons a day, between two and three.

Mr. Van Leeuwin: Did you start them off on whey at once or gradually?

Mr. MacPherson: Gradually; the change from home milk to whey was gradual. It took from ten days to two weeks. I lost no calves. They did very well. I have some of the cows now, and they are doing excellent work.

Mr. Williams: Have you a clover pasture for the calves to run in?

Mr. MacPherson: No, I had them tied up by the neck the whole twelve months. I believe that with good care and management that a farmer can make from ten to fifteen cents a hundred out of whey, and fifteen to twenty-five cents out of milk by proper handling. You must have it balanced right. Have the proper constituents to promote the greatest growth, and the feeding of whey and milk should be supplemented with a heavy feed to balance the two. Take whey and shorts and you have an excellent balance. Skimmed milk with shorts is very excellent.

REMARKS BY HON. H. C. ADAMS.

Mr. President. When the present oleomargarine law was first presented to congress, it provided for a tax of ten cents, which tax was afterwards reduced to two cents, which is the present law. J. H. Davidson, who is a member of congress, has introduced a bill providing for a ten cent tax on oleomargarine throughout the United States. The law in the state prohibits the sale of oleomargarine when colored in imitation of yellow butter. The purpose of this legislation is to wipe out, if possible, the butterine industry of the state, when that industry is carried on in such a manner as to put upon the market a counterfeit product. The bill may not pass congress at all, but there is no