We obtained a set of these at a late date for our Dairy School and those who used them were very much pleased with them.

I would recommend their use to all cheesemakers and hope to see them come into general favor as I feel sure they will.

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DISCUSSION.

Ex-Gov. Hoard: Mr. Aderhold spoke about the excellent prospect of cheese in the future and enumerated some of the causes that he thought would lead to that condition, and among them one of the chief causes I wish to speak of, and that is the remarkable increase in the consumption of milk in cities and towns. Our people have no adequate idea of this. The cheese making districts in New York today are almost entirely given over to the shipping of milk to the city. This invasion of the old cheese district by the milk shipment to the cities is constantly working to decrease the supply of cheese. Milk is now shipped to New York from a distance of three to four hundred miles, and the cities are calling for milk constantly. In Wisconsin, many of our districts, where they used to make cheese and have since been making butter are invaded by this same influence, whereas the growth of the number of cows is not anywhere near adequate to the growth of the people who consume dairy products. From 1860 to 1890 the growth of the number of cows in Wisconsin was only 51/2 per cent. The census reports give us about 12 to 15 per cent. increase of people. Now, you know, these facts, if they are rightly understood, are clearly in favor of the farmer as to whether he shall embark in this business, and they are clearly in favor of another fact, that he should embark in it with capital fitted to the business, and not be led off by the siren cry of more beef. The dairyman who sticks to his business is going to be the surest man in the agricultural field for the next ten years to come.

Prof. Henry: Governor Hoard has called attention to a very important point, and he might have gone a little further; he might have told you that in 1883 the United States exported $10,000,000 worth of cheese. He might have told you that at
that time Canada exported $4,000,000 worth of cheese. He might have told you that now Canada exports $25,000,000 worth of cheese, and that the exports of the United States have fallen to a little over $2,000,000. They have gone up in Canada from $4,000,000 to $25,000,000 of exports and we have dropped from $10,000,000 to about $2,000,000. The decrease is so rapid that if it keeps on in the same ratio in three or four more years the United States will not export a pound of cheese, but will be in the anomalous condition of having a greater demand for home produced cheese than we have cheese to fill it, or we will have to import cheese from Canada.

At our Farmers' Institutes and other meetings, a few years since we told the farmers that the condition of the horse business was such at that time that the man who carefully and wisely went into the breeding business, was in a safe business, and we have reached already a condition which proves we were right—horses are bringing good prices. The beef cattle industry has been remarkably profitable and many a Wisconsin dairymen was carried off his feet by that fact, unfortunately for him. Wisconsin is not a beef-producing state. If you will go to some of the beef-ranges of the United States I will show you things that will shake you through and through. I have seen corn costing 19, 20 and 22 cents going into steers coming off ranges and being fed. What is the use of a Wisconsin farmer trying to compete with those men under their conditions. There is no danger of those people competing with you in making butter or cheese.

Now is the time to go into the cheese business in Wisconsin; now is the time to get your cows right, to get good cheesemakers, to stand by this Association in its dairy work, and push the cheese business as hard and as wisely as it can be pushed. Now is the time for some of you men with capital to look toward Northern Wisconsin and find profitable investment for your money in cheese factories. Don't get into the wrong end of the wave of prosperity. The same applies to the dairy business. Now is the time, with our exports steadily decreasing, to start new factories, Wisconsin could start five hundred next year and five hundred every year for the next ten years with great advantage to the people, and to the commonwealth as a whole.
If I am worth anything to this state, as the head of the Agricultural College, I ought to look ahead and see these things, and help you realize them. If I don't see correctly, then I ought to be put out, or if I make any statements that lead you to believe wrong. I hope the business men here will think of these things. I hope that the young men who are thinking of some outlet for their little capital and their energies will think of these things and take them seriously. Today at our Dairy School at Madison we have three calls for cheesemakers to one we can supply. I wish we had more young men down there, taking the training to be sent out to the factories and I wish there were more factories calling for such men. Remember, again, that inside of three or four years the United States will actually not be producing enough cheese to supply its own demands, and we will have to import cheese from Canada to supply the demand, unless Wisconsin takes it to heart and takes advantage of it, as she ought to.

Mr. Clark: It seems to me Governor Hoard has hit pretty near the mark in regard to our cheese making industry. The use of milk in our cities has crowded the creameries from many sections further back into the cheese making country of Wisconsin. Take Fond du Lac county, for instance; take the line of road running from Fond du Lac to Milwaukee and to Brandon southwest. In 1883 we had thirty cheese factories reporting to our Dairy Board of Trade, and handling all the way from 200 boxes, big 50-pound boxes. During the past year not one single box of cheese came from that section to our Dairy Board. The whole section has been covered by milkers and the result of the increased demand for butter has pushed the work further along into the cheese making section of Wisconsin. I am sure that there is a very bright outlook for cheese making in Wisconsin, because we have a better cheese making territory for full cream cheese than there is in the United States west of New York.

Mr. Aderhold: What is the reason, Mr. Clark, that so many cheese factories changed over into creameries.

Mr. Clark: I don't know that I can fully answer that question, but it seems to me that it is just here. We were contiguous to the district that was drained for milk for the cities, and be-
cause of that the butter factories came into our territory for location. Perhaps another and stronger reason is that it is easier to get ten good butter makers than to get one good cheese maker—mind you that word "good" is very emphatic in that statement. Another reason is this, and I suppose if I was the owner of a factory handling milk it would weigh considerable with me—that after the plant is first put in, the cost of running a cheese factory and a butter factory is pretty nearly the same, while the results to the owner of the factory making butter are from 30 to 40 per cent. more than in making cheese, and at a factory getting from 16,000 to 18,000 of milk a day, I think I would make butter if I could get 30 or 40 per cent. more for it, than to make cheese, wouldn't you?

There is another great thing with this industry, that our cheese makers are not paid enough for the skill and labor and good sense that they put into their work. Our farmers ought to see that our cheese makers are paid more money for their work and then there would be less temptation to make a change.

Ex-Gov. Hoard: One other fact. Our cheese making industry is not economically organized, and the farmer feels that. It doesn't take very long for a farmer to see that his cows could easily give milk ten months, and the factories, as a rule, do not run over six or seven. How many months do they run in your district, Mr. Clark?

Mr. Clark: We have quite a number that run twelve months in the year. As a rule, about eight months.

Ex-Gov. Hoard: You see the creamery is continuously at work through the year. Now, in Canada and particularly in the eastern townships of Quebec, where I expect to be next month, they are organizing rapidly to combine cheese and butter factories to accommodate the cows that come fresh in the fall. A cow coming fresh in the fall will, as a rule, give you from 1,000 to 1,500 pounds more milk than she will if she comes fresh in the spring,—if she is properly fed, of course,—because after the cow comes fresh in the spring, at the end of six months she strikes a shrinking period, cold weather and dry feed. But, if the cow comes fresh in the fall, at the end of six months she strikes an enlarged field, warm weather and fresh feed.
Another thing, the farmer in cheese making finds himself confronted with the fact that he cannot raise his calves as he wants to, or other young stock. If the cows come fresh in the fall and butter was made, these factories would be able to make butter from the first day of November to the first day of May, and then go right on with cheese making, and the farmer would raise his calves from November to May in the winter as he ought to do; there would be all those months the little fellows would be without botheration from the flies, and there would be a whole lot of advantage to it. He would build his silos and put himself on an economical ground and he would have a ten-months continuous milk season and his cows would bring him 25 to 30 per cent more if handled that way. Gentlemen, we are like a long reached wagon, it takes about an acre of ground to turn around in; we haven't kept abreast of ourselves in these matters of economical organization, but we are going along and we are punishing ourselves, and we may talk as much as we please, the law of economy gets in its work—it punishes the farmer when he is not wise economically, and it punishes the factory.

Mr. Clark: Just one more remark. Four per cent milk in the factory ought to produce 33 1-3 more cheese than 3 per cent milk, and it doesn't do it; there isn't a cheese maker anywhere that can get it out, and there has been a feeling under the surface that the man who makes four per cent milk is not getting some of the money that belongs to him and that the 3 per cent man is, and it has had an influence among our farmers to favor the creamery because it is an absolute fact that when you have a certain amount of butter fat in your milk, you get the product in the butter on an absolute basis; in other words, they are getting all they are entitled to, and the love of fair play is way down at the bottom in every American farmer.

Mr. Favill: I just want to emphasize one of the suggestions of Mr. Aderhold, and that was for a better equipment of factories, such as will produce an article that pleases the public taste. If we could get the right kind of cheese to eat, the demand would increase amazingly. They are improving—there was a time a few years ago that we were chasing after strange gods, and making filled and skimmed cheese, and we were pun-
ished by it by losing our foreign reputation. Perhaps it was a good thing for us, because we have switched back to better work, making a better article and eating it up ourselves. There is another thing in connection with this business. We have had exceptionally good prices the past year; now, why? It is because we were short the number of cows.

Another point. We have not got over the extreme drought of 1901 yet, and we will not for the next three years in southern Wisconsin. Many farmers sold off their cows and that left them short last spring. It will take at least three years to get over that drought, and in the meantime the population is steadily increasing and the demand will increase faster than the machines to make cheese with. So I don’t think there is any danger of this business ever being overdone. It has been preached to me for the last sixty years—yes, it is more—our folks commenced making cheese on the farm seventy-two years ago when I was eight years old, and I have heard it from that day to this, that we are just on the eve of overproduction—it is sure to come next year, or pretty soon. Well, it hasn’t come yet, and it isn’t going to come; I am not a bit afraid of it. It can’t come; our stock will not increase any faster than the demand, and they will not increase as fast if we make the right kind of an article.

Mr. Cobb: Down in Illinois I used to make filled cheese. I got that bad habit up here in Wisconsin. When I send to my commission man in Chicago for a cheese, if I don’t state what I want, he writes back and says, “I will furnish you a Wisconsin cheese for 12 cents, and I will furnish you a good cheese for 13 cents.” Now, why is it I have got to get my cheese from York state, because that is where it comes from.

Mr. Favill: Yes, but it doesn’t come from there. Your man takes the best Wisconsin cheese and marks it “York State,” and sells it to you. The name of Herkimer county has got a great charm and they know in Chicago how to use it.

Mr. Cobb: Speaking of getting over the severe drought, I do not feel at all as the gentleman has stated in that respect. We made more money with our herd a year ago last summer than we have made any other year in our experience in the dairy business, excepting one. This last summer our cows came into the
grass period in first class condition. I had one leading dairyman from Walworth county, Wisconsin, at my place last spring, and he looked my herd over and he said, it was in the finest condition that he ever saw cattle. A year ago last summer the shrinkage in our dairy yield never exceeded twenty-five pounds, while this past year, with plenty of blue grass, we had shrinkages of 40 to 60 pounds, with a herd that was thoroughly well wintered and in excellent condition in the spring. A year ago last summer our cows got ensilage from start to finish. This year, our silos were empty, and so were the cattle.

A Member: I suggest to the gentleman that he fences off part of his pasture the next time. Cattle do not do well on such fresh pastures. Two years ago we had rains enough, so we had good pasture all summer. It seems to me, gentlemen, that on account of some legislation in this state, butter is going to be better than cheese for the next two years.

A Member: I would like to ask the gentleman from Illinois how much his herd of cattle paid per head, net.

Mr. Cobb: A year ago last summer my income was $100 per head in round numbers, and the expense per cow was $35.

Mrs. Lehman: I think there is a point here that the gentlemen have forgotten. I come from the cheese portion of Wisconsin where there are cheese factories all around us and farmers equipped to keep from thirty to forty cows, and one of the greatest questions they have to solve is the question of help to milk those cows. I think there is only one remedy for it, and that is for every farmer in the state of Wisconsin to place upon his farm a tenant house and have a man with his whole family who can help milk. It is utterly impossible with us to get men who milk and milk well. I had men last winter to milk and they would dry up the cow every time unless I watched them, do it on purpose, when the cow was on good feed with plenty of ensilage. Without better help, it is almost impossible to carry more than twenty-two to twenty-five cows, on large farms, too, and I think there are men here from all parts of the state who will agree with me.

Mr. Cobb: Hoard's Dairyman, in the issue of the 6th of this month, gives a good recipe, how to produce milk and get it milked on the farm.
Mr. Gurler: I want to say to this lady, I am not a Wisconsin man but I meet this trouble that she speaks of in a way that makes me sick. I have men who, with all my watching, and having a milk sheet for each milker, recording the yield of every cow at every milking, those little sheets come to me at the end of the week and the figures are transferred and carried to the end of the year. I have men that will deliberately dry up cows so it will be less labor to milk them. Now, what can we do?

Mr. Favill: Kill them.

Mr. Cobb: Milk yourself.

Mr. Gurler: I have milked thirty-five cows a day, but I can't milk two hundred.

Mr. Cobb: Sell off part of your cows.

Mr. Gurler: I can't supply the demand for my milk. It is the most discouraging question in this whole field, the lady is right about that.

Ex-Gov. Hoard: I will tell you what will remedy it,—another panic.

Mrs. Lehman: I went down to the village the other day to get some extra men and there were ten idle men in town, and they wouldn't come and pack ice. They had been waiting around all winter for the spring's work to open up, and they wouldn't take my offer at a dollar and a dollar and a half a day and their board to pack ice. That is the kind of people we have to contend with in southern Wisconsin.

Mr. Gurler: This trouble goes all over this country. I was reading a little article two or three days ago in the paper about what they were doing up here in the pineries to keep men there; they are getting up dances and offering all sorts of attractions. I never saw so much food piled up on a table, such a variety, as I saw in the camp last fall. We would go crazy, we farmers, if we thought we had to set such tables, as they do up there. I saw half a dozen kinds of pie on the table at one time. I simply mention this to show how the labor question is meeting us all over. My dear madam, I am fully in sympathy with you.

Mrs. Lehman: They don't seem to think they have got to use any judgment or earn their wages in any way after you get them. I went down into my barn day before yesterday and I said to the man, "What are you doing? You are feeding too much ensi-
lage.” “Well,” he says “this silo we got not half empty. I give one cow two baskets ensilage.” He knew better, but he had no notion of responsibility in the matter.

Mr. Gurler: O, they don’t care. But now there are two or three points I had thought of in looking into the future. In my location a great many cows have been dropped out and many of the farmers have gone to feeding steers; they go to Chicago, buy steers and ship them in by the carload. Well, they are beginning to unload those steers. I heard of one feeder the other day that sold his steers and he got half a cent a bushel for the corn he put into them. I was talking with an old comrade about two weeks ago that put in two carloads of steers and he said to me, “Mr. Gurler, I am going to lose my whole grain crop and good money with it.” Now, there are a few dairymen in our locality who were wise enough to see this condition. I know one young man, a Swede, who came to me and he was tickled clear through. He says, “Mr. Gurler, I have been putting my money into cows, and I got good money for it and some of the neighbors, too.” A good many of our people knew nothing about feeding, they were not trained for it at all, and they have had to pay for learning.

The Chairman: The next topic will be of interest to all of us who are interested in the care of the dairy herd. We have heard about the need of having clean, wholesome, sanitary milk. About two years ago, one morning in a snowstorm, I took an electric car and went out from Milwaukee to the Sunny Peak Farm. I went quite early in the morning, and I walked from the electric car and was met at the door by Mrs. Howie, and communicated my mission, that I wanted to see the herd, and I got there just in time to see the men taking care of the herd, and I was greatly impressed with the care that was given that herd. Over the door was the legend, “The Jewel Casket.” And I was impressed that every animal in the barn was being cared for as a rare jewel, and I want to bespeak now your careful attention to the discussion this morning of the care taking of a herd that is cared for in a cleanly manner. This young man who is to speak has had more experience in the care of the herd than in addressing audiences of this kind, but I am sure he will give you some valuable information.