PRESSING AND BANDAGING CHEESE.

F. N. Sargeant, New Lisbon, Wis.

Gentlemen of the Association:

It is with a feeling of pride and of certain dignity to know that I am called upon to address the members of an association representing one of the greatest industries of today. We are assembled here for one common purpose, and that is to improve the cheese industry by reading our papers and mingling here together. Another good the meeting does is the tendency it develops in us to put forth and produce good cheese, and at this particular time it is the good work done by our grand institutions, the Wisconsin Dairy School. I firmly believe that every maker should be required to pass an examination before starting a factory. (Applause.) If so, it would be a benefit to the maker who has an ambition to improve. We are living in an age of progress, and things which but a few years ago seemed impossible have proved a success, and the close of the nineteenth century will be remembered as one of great triumph in scientific research.

The subject given to me is most important.

To begin with, observe cleanliness, ever aiming to have your factory present a neat and attractive appearance. Discard all hoops that are rusty or defective, as the outward appearance of a cheese is a big factor toward its selling qualities.

Thoroughly cleanse with hot water all utensils used, and if possible sterilize them with steam, thus destroying all bacterial life. Avoid rough, patched-up tinware, where foul, decomposing matter is liable to collect, as this is a favorite seeding ground for bacteria. Cloth strainers should receive especial attention, as the moisture retained between the meshes of the cloth form an excellent ground for bacteria to germinate. I simply mention these few facts as the trouble in cheese making is oft times traced to these causes alone.
Hoops should be properly bandaged before the curd is sufficiently matured. Aim to keep ahead of your work, thus being prepared for an unexpected emergency. If the bandage is a little small this defect can be easily remedied by dampening same after the bandage has been properly placed around the bandage. There are two kinds of bandage now in use, the starched and seamless. I prefer the latter as it presents a more open surface for the waste material to escape, the starch having a tendency to hold the fat between the particles of curd and bandage, and the cheese does not close properly. There is also on the market the ready made unstarched bandage, which is fast gaining favor as it is labor saving.

I firmly advocate the use of cheese cloth circles instead of grease as they form a greater protection to the face of a cheese the circle acting as an outer guard against the rind proper. Cheese thus protected are less liable to dry out and crack when exposed to direct currents of air and present a much neater appearance upon the shelf. The dressing of hoops is so simple I will cut this part out to save time, however the heavy cap cloths should be made of material that presents a smooth surface to the face of a cheese.

Milk as it comes to the average Wisconsin factory is about fifteen hours old, consequently is well seeded with bacteria good, bad and indifferent, the lactic acid bacteria as a rule predominating. It is not infrequent, however, where organisms capable of producing bad taints and flavors gain the ascendancy which later develop in the curd and cause serious trouble to the maker. One great source of trouble in the section of the state where I am employed is too rapid cooling of the milk without proper or no aeration. Cooling the milk so rapidly in the cold springs that abound here the animal heat is retained which later develops in the curd in the form of very fine pin holes. Press a cheese before working out these gaseous ferments, detrimental results follow. As these gaseous ferments advance the cheese start to huff and where considerable moisture has been incorporated in the curd these obnoxious ferments advance so rapidly as to cause the cheese to
swell to such an extent as to crack open, also injuring the texture and flavor. Pin-holey curds should be held on the racks until the little gas holes are flattened out and after milling wash the curd in water at a temperature of about 120 degrees Fahrenheit. I advocate the rinsing of all curds as it washes out all waste material, that would otherwise be expelled by pressing and also gives life to the curd.

The curd should be cooled to about 85 degrees Fahrenheit before milling, after which it should be handled as little as possible as all extra handling or stirring of the curd tends to liberate the butter fat and where too much fat is expelled the cheese do not close properly and are apt to contain little sacks of butter fat between the particles of curd.

We grind a curd to get it in a condition for an even distribution of salt, and should be done with a mill that cuts instead of chews or tears the curd as this rough chewing of the curd liberates the butter fat.

The two potent factors to be considered in pressing a cheese are temperature and maturity of the curd. Experience has taught me to put a normal working curd to press at a temperature of 80 deg. Fahrenheit, but if the curd during its process of manufacture has taken on gaseous products it is best to cool down to 78 degrees or as low as possible thereby retaining an extra amount of fat that would otherwise be lost if put to press at a higher temperature. This extra amount of fat lost in an unhealthy curd is due to holding it on the racks beyond a certain stage of maturity. It is the advancement of lactic acid that causes the fat to run from a curd due to its liquifying influence. Check fermentation and you check the loss of butter fat which can be accomplished without injury to a curd by a dash of cold water. This method cools the surface of the curd closing the pores and checks fermentation. Lactic acid is first found in the milk by the milk sugar decomposing, each molecule of sugar breaking up into four molecules of lactic acid propagation being checked or retarded according to temperature. It is this lactic ferment that is so essential in cheddar cheese making. Press a
curd without a sufficient amount of acid and its texture is open, weak-bodied and takes on gaseous products, thus injuring its flavor. Lactic acid properly developed in a cheese not only enhances its keeping qualities but improves the flavor, in fact its whole character. The object for pressing a cheese is to get it in a form suitable for transportation and consumption. We do not press a cheese to remove moisture. If a curd is wet and soggy at this stage it is an indication of an improper cook and pressing will not help you out. The curd should be weighed in the hoops so the cheese will present an even appearance upon the shelf. The pressure should be gradual and continuous, the full extent of which should not have been reached for at least one hour. After the lapse of a couple hours the cheese are ready to dress. This is better accomplished by taking them out of the hoops, the bandage carefully pulled up and the whole surface of the cheese washed in hot water. "A great many makers are prejudiced against this method but I find it benefits in removing all waste material held between the curd and bandage, gives it a more transparent rind, warming the surface causes the bandage and circles to adhere more firmly to the cheese.

Should the cheese stick in the hoops don’t resort to pounding but pour a little hot water over the hoops when the cheese can be easily removed. The gang press is the best and most extensively used.

DISCUSSION.

The President: Fire the questions at Mr. Sargeant good and fast, and give him plenty of them:

Mr. Waterstreet: Would you advise turning the cheese in the press the next morning before putting them in the curing room?

Mr. Sargeant: I don’t think it is necessary if they have a uniform surface on each side when you take them out.

Mr. Waterstreet: Don’t you think it improves the looks a good deal?
Mr. Sargeant: I leave the cheese in the press one hour before turning the bandage. Of course, it will probably improve the looks if they are taken out and re-pressed the next morning.

Mr. Glover: How would it be to press at night before going to bed?

Mr. Sargeant: In taking them out?

Mr. Glover: Yes.

Mr. Sargeant: I have no objection.

Mr. Noyes: You think they get pressing enough?

Mr. Sargeant: I think cheese should be pressed fifteen hours, gradual pressure.

Mr. Glover: The reason I ask this question is that you find some cheese coming from Wisconsin, and they are a very close cheese, made the day it is removed, and pressed the same night. You can get it at any of the stores in this city, and if you ask them what kind of cheese they handle you will find out where it is made, and I know it is removed from the press at ten o'clock at night. This cheese you will find in every store at Madison, except one, and I visited Janesville, Stoughton, and Brooklyn, and they all used this cheese, and it is removed from the press before going to bed.

The President: I would say to Mr. Glover that a cheese to be used for home consumption, that it is not so particular about the texture. It is all right to take it out earlier, but forty-eight hours is not too long to press cheese that you want to come down firm, and close, nice and meaty in texture. I think makers all over the country make a mistake by not pressing cheese long enough. If I should go into the factory business again, I would put in two presses, and not take the cheese out of the hoops within forty-eight hours.

Mr. Glover: It improves the texture?

The President: Yes, I think it improves the texture,—long careful pressure improves the texture in my opinion, and in my experiments along that line I have proven that this is true.

Mr. McCready: Mr. Sargeant says he would weigh before putting in the press. Do you think it practical?
Mr. Sargeant: I always make it a point to weigh all my curds. In doing that you get a more uniform cheese on the shelf. That is why I weigh curds, to get cheese uniform in size.

Mr. McCready: You could not measure the curd with a pail?

Mr. Sargeant: Yes.

Mr. Monrad: How do you weigh?

Mr. Sargeant: I place a scale right in the vat and generally for a good sized flat put in forty-six pounds.

Mr. Baer: Do you put the hoop on the scale?

Mr. Sargeant: Yes, sir.

Mr. Berg: How much would the cheese weigh from a forty-six pound curd?

Mr. Sargeant: Thirty-one pounds.

Mr. Baer: What does the hoop weigh?

Mr. Sargeant: Where I was there were different sizes.

Mr. Baer: Some of the flat hoops weigh from eleven to thirteen pounds.

The President: I would like to ask a question. Do I understand that it is forty-six pounds, hoops and all?

Mr. Sargeant: Yes, sir.

The President: The hoop is deducted from that?

Mr. Sargeant: Yes, it is not forty-six pounds of curd to make thirty-one pounds of green cheese.

The President: The next paper will be a paper by A. C. Werth of Neenah, Wisconsin. I understand that Mr. Werth is not with us, but secretary Baer will read his paper.

CURING OF CHEESE.

A. C. Werth, Neenah, Wisconsin.

Mr. Chairman and Gentlemen of the Wisconsin Cheese Makers Association:

In the first place I wish to thank the promoters of this meeting for the honor shown me in a request for a short paper on the