since. You can do the same with your dealers, get the right man and sell to him.

Mr. Hoepner: The trouble is, nowadays you cannot find the right man. If there is a cheese firm worth $150,000 one week, they may not be worth a cent the next week. We had an instance of that kind this last summer.

MY EXPERIENCE WITH AUTOMATIC CURD AGITATORS.

H. M. Scott, Sheboygan Falls, Wis.

Mr. Scott: You cannot expect a paper from me, for within about an hour ago they asked me to take Mr. Alves’ place. It is his experience that you expected to hear, but I might tell you of my experience and give you a few cautions in regard to using the agitator and tell you what I regard as benefits.

I have had the agitators in my home factory for two years and I would not undertake to run a factory for any length of time without agitators, because I believe that just as good cheese if not better, can be made with the use of them and it saves work. Every minute of work of a cheesemaker saved is so much taken off, and when you save a man’s bodily work, you give him a chance to work with his head, he does not get tired, a tired man cannot do good business. There has been lots of bad cheese made by using agitators, some did not understand them and went to extremes, but I got my high score on cheese that was made with the agitators. This summer we used the engine and when we made in one vat I found it was too expensive to keep the large boiler going, so I worked by hand, but I got sick of stirring it, then I bought the gasoline engine, to run the agitator. We could set the agitator working and I could sit and read the paper, generally got a half hour’s reading time in that way. Well, the main thing affected by the agitator would be the texture and where the agitator has made bad cheese, it is simply because they did not get a thorough cook, did not get the curd thoroughly firmed down. Now, in operating the agitators, you can lessen the expense of running, it will only take half the wood to heat up a vat of curd with the agitators, you can get it heated up in
half the time. The way I work, I get up my heat, set it at 86 and get my heat to 100 or 104, as it runs at this time of the year, just as quick as I am getting the heat up, and it generally takes from twenty to thirty-five minutes. Then I stop the agitators and take them off and hang them up and keep the curd stirred loose with the rake and generally calculate to run so that I draw my whey from an hour and a half to an hour and three-quarters from the setting. I use about 4 ounces of rennet, it generally takes about twenty minutes to coagulate, I cut it once with the horizontal knife, then cut it with three-eighths cut it finer. The curd is not broken a particle, every piece of curd will remain in the same shape when it is cut, it is always floating and for some reason it gets thoroughly cooked through, but it does not firm up like curd does when it is stirred with a rake. I think the settling down, the weight of the curd on the top, has the tendency to press out the moisture and firm it up, for that reason I stop the agitator just as soon as I get the temperature up and by that time the heat has gone through it all, and all it needs is firming up, and the acid is not coming so fast but what it can be stirred up, it does not mat down much, as a rule, and I believe that with the agitator we can get a closer bodied cheese, we do not have these ragged holes in the cheese, or at least so many of them as we would have from stirring with the rake. If there is any question, I would rather that you would ask me questions.

Mr. Chaplin: About how many times do you stir? And how fast?

Mr. Scott: I run the agitator just fast enough to keep it from settling on the bottom. Now, mine have run,—I have the first set Mr. McKinnon put down, it is the old Canadian make with the scoop fan, and I like them the best, I believe they can be run slower and keep the circulation up better than the separate paddles, then I run in the summer time ten revolutions a minute. The vat in the Harmon factory holds 7,500 and there was a mistake made there in the vat, the paddles are not wide enough, they do not come within six inches of the side; it is a dry steam vat, and the steam will bake the curd right along next the edge where the steam pipe runs and those paddles should be spread two inches farther; then he would not have to run them so fast, he runs them fast and so he gets along all right and I do not interfere with the cheesemaker if he is satisfied, but I would have them changed if I were there myself.
Mr. Chaplin: Don't you think you can stir with the separate paddles to a greater depth?

Mr. Scott: I do not think it is policy, I think it needs that settling down weight of the curd on itself to firm it up, press the moisture out. I think that is better policy and then stir it up once or twice.

The Chairman: Even with a slow-working curd?

Mr. Scott: No, as I tell you, I am talking of my fast-working curd practice, as I do not work slowly, it might be possible that a man that sets his vat to work so that it goes from two to two and a half hours to dipping time, he might possibly get just as good results in running his agitators up to the time of dipping. Bro. McKinnon made the first agitator in that country. He was very much dissatisfied, had a gasoline engine, took that out, could not make that work, I believe Ed Coe was also dissatisfied and took his out, then I got Mr. McKinnon to put them in for me after these failures, and got them going O. K. and then Mr. Alves put them in. He came down to see how I ran them, and he went home and went to work at them at once and you could not get Mr. Alves to run his factory without them to-day. He has run them every day from the time he got them in and never lost one cent on his cheese, it is always fine. I will say in the Harmon factory the cheesemaker works 65,000 to 75,000 pounds of milk per day alone by having his agitator, and having his power to run the curd mill, and he did not complain about working too hard, he had plenty of time to go and see his girl after he got through with his work.

A Member: What would be the cost of one of these agitators?

Mr. Scott: The minimum cost is $45 for an agitator, and then the larger the vat the more fans have to be put on, that would increase the cost somewhat, perhaps five or ten dollars, according to what a man wanted, and the size of the vat you put them in.

A Member: I would like to ask Mr. Scott if the slot at the bottom is a moveable slot, so that it would fit into the bottom, or if there is a scoop of some sort that would tend to stir all the curd, not leaving it there at the bottom?

Mr. Scott: I told you I prefer the first kind that I put in with the scoop sheet paddle, I have no trouble with the curd settling on the bottom, the current is so strong. I have to go along and loosen it up the first thing, of course, curd naturally sticks to the side, you have to take your hands and loosen it,
after that we have no trouble. You want a sort of little plow-share that will take it up and loosen it from the bottom and throw it up toward the top.

The Member: Yes, but if you have a moveable slot at the bottom that you can set with a set screw and let it come, say, within a quarter of an inch of the bottom, or you can raise it as you choose, would not you be apt to get every particle in there so as not give it a chance to set?

Mr. Scott: I do not believe that would do any better than they do now, because this paddle would not take it off the bottom, you simply have to put your hands right into it to remove it.

The Member: Supposing that the agitator was kept going, and that gave the curd a chance to settle and taking it from the bottom all the time?

Mr. Scott: As long as the agitator is in motion it does not have a chance to settle.

The Member: But I think you stated that you had taken, after working your agitator some minutes, you then took your hands to stir it all up?

Mr. Scott: Yes, I do if the agitator is stopped long enough to let the curd settle, it settles down and gradually mats together, and usually the agitators, as they are built, they have to stand on a loop, the loop is about that high (indicating), higher if you want to have your beam overhead and these loops are not strong enough, they will spring and twist, so you will get all tangled up. If nearer the bottom, they will work so much better, if they are strong enough, but the curd is too heavy, it mats together and it would be too heavy for them to carry, we would have to have heavy iron frames to make them practical at all.

Mr. Moore: I think it can be made practical.

President Aderhold: Now, is there anything else to come before the convention? I do not know of anything. Now, members, I hope that this convention will prove as profitable to you and more so than you expected it would. Every time I come down here, I have not only a good time, but I learn a great deal. There is one thing, it makes the year's labor seem a great deal shorter than it would if we did not have these conventions, and I hope it will affect you the same way, that you will not forget it when our next convention time comes around, come down again and bring your neighbors with you, prepare to stay three days and bring some cheese. I think we have had a very good