front must be capable of making fine pasteurized cream butter. Wisconsin cannot afford to be behind the other states in this matter.

I would urge all buttermakers who are not already competent, to prepare themselves for this line of work by learning all you possibly can about pasteurization and starters. When the time comes, as it surely will, you can go ahead with the confidence which comes from thorough preparation. Your reward will be increased usefulness to your employer, honor to your calling and profit to yourselves.

PASTEURIZED CREAM BUTTER.

BY J. E. AMEND.

Mr. Chairman, Ladies and Gentlemen:

For the great and undeserved honor which has been extended to me to read this paper before such intelligent members and representatives of the Wisconsin Buttermaker's Association I beg to express my heartfelt appreciation.

As I understand it, these conventions and gatherings are for the sole purpose of educating ourselves, in exchanging ideas and experience with one another of the different methods we apply in our vocation as buttermakers, therefore I have prepared my paper on Pasteurizing Cream for buttermaking and will in brief give you my experience and ideas about the method.

When first approached on the subject, and being assured that by this method a buttermaker could absolutely control the bacteria in the cream, in fact, when properly applied could destroy all bacteria present, the good or desirable as well as the bad or undesirable and then by means of a pure culture seed a new and desirable bacteria which would produce the required flavor, I made up my mind to give it a trial and as soon as I could obtain the necessary appliances I commenced to make butter from pasteurized cream.
At first, of course, we found it up-hill work, but I knew there was no satisfaction in making the normal article for one day my butter was alright and a few days hence my butter was all wrong, and after applying pasteurization for a short time I noticed quite an improvement, especially on butter made from poor and tainted cream, so we experimented along and took advantage of the bulletins sent out from the Experiment Station at Madison, and with the information I could gather from others together with my own experience we soon noticed an improvement on our butter on points where at first we had been lacking, and after the first year we had but an occasional complaint on our butter, and now we are getting a premium; now I don't mean to say that we are the only ones that get a premium for butter and this because we pasteurize, there may be some of you present here that get more for their butter than we do, there may be some of you that have the co-operation of the patrons where the patrons have the success of the factory at heart, (which, of course, means their own individual success as well) who will cure their milk in best possible manner and to the best of their ability, such milk can be made into good butter and of good keeping quality; but what I mean is in such cases as ours where competition is strong, and which I think it is with most every buttermaker, and you have to take milk and cream of all description, cream from hand-separators, water-separators, skimming stations, and in fact all kind of cream, some tainted and partly acidy when it arrives at the factory, and can then demand and receive a premium on the butter made from such cream it must be the right method to develop, and it must even render an improvement on butter made from good cream, for we find that Denmark pasteurizes 95 per cent. of cream and milk made into butter, and while dairying is their main industry, the producer certainly tries to deliver his milk as near perfect as possible, and still they find it an improvement to pasteurize. Now let us consider the relation between factory and consumer (what I mean is the keeping quality and flavor)
is it not a fact that the greatest difficulty we have to overcome on normal butter is its keeping quality? Don't we frequently have complaints from our local customers about the last of the jar of butter being strong? In regard to this let me say that we ship butter to private customers into a good many states in the Union and among them one particular one who gets 30 pounds to a shipment and lasts him six weeks, and he says the last is as good as the first. Now in regard to the high flavor generally demanded by the trade let me ask you, what produces flavor? Is it not Bacteria? and is it not true (now I appeal to your sound intelligence and experience) is it not true I say, that when you receive milk which you often think and know you ought to reject, on account of being tainted and off in flavor, but when your butter is made from such milk is it not of a very high flavor? in fact of a higher flavor than when your milk is delivered in good shape, don't this prove that Bacteria produces flavor? it further proves that the bad and undesirable Bacteria which has gained access and developed in the milk before you received it, plays just as important a roll in producing the high flavor as the good bacteria; another proof is, butter made from poor milk with this high flavor is of very poor keeping quality. Now let us consider the effect of Pasteurizing cream from poor milk, we will by Pasteurizing, destroy all Bacteria and you have a sterile cream to work on, consequently your butter must come with a clean sweet flavor, when all other conditions necessary are fulfilled after Pasteurizing the cream, I will admit that butter made from poor cream, although pasteurized, has not so delicate a flavor as from good cream, but it is nevertheless sweet and clean in flavor and of good keeping quality. The greatest objection we had when we first commenced to pasteurize was the so-called cooked flavor, now, this is something of the past, about the only objection raised on our butter now is the mild flavor; but let us consider this; from the consumer's standpoint why did oleo gain such fame throughout the country? is it on account of its high flavor? Indeed not,
but I have heard people, and well-read people, say they would sooner eat oleo than butter simply because it was made cleaner, tasted cleaner and sweeter, and was more uniform and of better keeping quality. Now it appears to me if our country at large would adopt pasteurization which enables us to make just as clean and sweet flavored butter as oleo has, together with a higher flavor, and of uniformity and keeping quality equal to oleo, it would not be but a very short time before people would get over this faint idea of demanding a high flavored butter, which we know wont keep for any length of time, nor is it uniform on account of the different kinds and amounts of bacteria present; and we ought to educate ourselves thoroughly to the effect which bacteria has on butter so we could approach the consumer and explain to him and convince him that bacteria produces the flavor, and the more bacteria butter contained the higher the flavor, and the less bacteria it contained the milder the flavor. Many of you remember that only a few years ago you heard people say, I don’t like creamery butter, but while they used it right along they got used to it; just the same applies to pasteurized butter, if the public is educated to what it is, and what it means it won’t be long and they will demand pasteurized butter. To illustrate.

If the consumer knew he could go to any store and always get a pound of butter which had a clean sweet flavor and was of such keeping quality that they could use it up even in hot weather, same as oleo, without ice (which a good many in cities cannot afford) then the public at large would demand butter instead of oleo, and if the grocer they are trading with would sell them oleo for butter, because he can make more margin on it, the customer would soon turn down this shark and look up an honest grocer who would sell him butter when he demanded it, but when on the other hand, the shark sells him oleo for butter and he finds that it is of a more uniform grade, sweeter and cleaner in flavor, and of a better keeping quality, why should he not use it? It is my candid opinion from what experience
we had along this line if the buttermakers of this association would adopt pasteurization and develop it, it would open a new market for our butter in foreign countries, as well as increase the demand in our home markets.

Mr. Fulmer: I know of some experiments having been made about five years ago, they experimented on quite a large scale, they using cream from perhaps 16 to 18 thousand pounds of milk a day and the conclusions that they arrived at were that it cost perhaps one cent a pound to pasteurize; but under the same conditions they received three cents per pound more for the pasteurized butter than for the raw butter.

Mr. Godfrey: I know that in our case it did not amount to one cent a pound. Our power is electric power and the wood that we consumed was used for heating purposes. The wood consumed was not over perhaps one-eighth of a cord per day; that is the only additional costs or expense except washing and the time spent to clean the pasteurizer. There is no other expense except in heating the cream. In making pasteurized butter it does not cost very much more. If you are heating the milk it might be a little more expensive operation.

The President: As this completes our program for this afternoon I will now announce the committees:

Committee on Resolutions: James Q. Emery, H. B. J. Andrus, W. A. Stewart.


The following resolution was offered by Mr. Moore.

WHEREAS, we learn with deep regret of the illness of his Honor, the Mayor of Waukesha, Mr. George Harding, therefore be it

Resolved, That this association extend to him our sincere sympathy and hope for his speedy recovery, and further be it

Resolved, That the secretary send a copy of this resolution to Mayor Harding.

The President: If there is no further business an adjournment will be taken until 8 o'clock this evening.