

# 3. War and Cheese: A Play

## *A Marshall Rennet Testing Kit*

ALYSSA ZAJAN



*Bucket containing a rennet testing kit. Item from the Little Falls Historical Society collection. Photo by the author.*

### **Characters:**

*Joseph Hawkins – a put together man in his 50s, recruited by the US Food Administration to give public talks and demonstrations*

*Miss Frances Grace – a young working woman, 17-25*

*Mrs. Dorothy Miller – eager to help the war front, mother and housewife in her 30s-40s*

*Officer Frank Crabtree – a veteran police officer*

*Newsboy – a young boy, dirty but charming*

*Heckler 1*

*Heckler 2*

*Pedestrians and onlookers*

### **Time:**

*Some day in May 1918 (During World War I)*

## Setting:

*A park alongside bustling street. A small platform is set up with a podium and small table. A step or small set of steps allows access up onto the platform. The table contains a pile of pamphlets, flyers, various bottles filled with liquids and tablets, a Marshall Rennet Testing Kit and large tin container. Underneath the table is a metal chest. Posters saying, "Meatless Mondays," "Wheatless Wednesdays," "Buy Local," "When in doubt, eat Potatoes" and "Observe the Gospel of the clean plate" line the back of the small platform. At the front of the platform a sign reads "Live Demonstration at 10:00"*

## The Play

*Pedestrians and onlookers stroll across the stage in front of the platform, enjoying the sunny day. Some stop to look at the signs across the back of the platform or gather into small groups awaiting the presentation. OFFICER CRABTREE slowly makes his way across the stage, occasionally stopping at various groups of onlookers.*

*NEWSBOY enters holding a paper aloft and plying his trade.*

NEWSBOY German's "flying tank" deflects bullets, read all about it, flying tank escapes six attackers.<sup>1</sup>  
(Continuing to shout and sell papers runs into OFFICER CRABTREE.)

*During the following exchange JOSEPH HAWKINS enters and makes his way to the platform carrying a large jug of milk. On his way HAWKINS greets all groups as he passes on the way to the platform. Once at the platform, HAWKINS climbs up and looks over the table.*

CRABTREE Whoa there son, watch where you are going.

NEWSBOY Sorry, sir.

CRABTREE What is the Kaiser up to today?

NEWSBOY (Holding up paper) Only two cents to find out, sir.

CRABTREE (laughs) Alright, here you are. (Hands NEWSBOY money and takes a paper) Now get along lad.

*NEWSBOY runs away from OFFICER CRABTREE and rejoins the crowd. HAWKINS steps to the front of the platform to address the onlookers and pedestrians walking by.*

HAWKINS Hello everyone, ladies and gentlemen, thank you for joining me today to learn how you can help our boys on the warfront from the comforts of your own home. By each making small sacrifices, we can provide everything they need overseas. For instance, refraining from eating meat one day a week means our entire army will-

HECKLER 1 Who are you to tell me how I should eat? My eating a little meat is not going to change anything about this war.

HAWKINS Now good sir/ma'am, I am here as a representative of the United States Food Administration. I assure you that if we, as a population, make these small changes to our diet we can ensure that not only our soldiers, but those of our allies, have what they need to win this war. Mr. Herbert Hoover says that the US must ensure hope and food for all the allied powers throughout the war.<sup>2</sup>

*A round of "Hear! Hear!" and other noises of agreement ripple through members of the crowd. Not all onlookers are convinced but many feel moved by patriotism.*

HAWKINS I have previously presented on the benefits of starting your own vegetable garden, caring for

1. This comes from a New York Times headline story published May 21st, 1918, describing an armored plane used by the Germans to attack US troops. Full article at <https://nyti.ms/38QvEHy>.

2. In a speech at the National Milk and Dairy Farm Exposition, Herbert Hoover stated that the US had the duty to build up a reserve of food to get the allies through the war and recovery-post war. Full article at <https://nyti.ms/2IGXtHU>

chickens in your yard and proper canning techniques. Preserving our excess food allows us to save it for when there may not be as much fresh food about.

MILLER What will you be showing us today Mr. Hawkins?

HAWKINS Ah, Mrs. Miller, always the eager one! Today we are here to talk about how easy it is to turn excess milk into cheese. Neighbors and community groups can join to turn their ripening milk into a long-lasting cheese.

MILLER Sir, we already have so much to do in a day. With all due respect, I don't believe any of us have the time required to make cheese.

HAWKINS Not how your grandmother used to make it perhaps, but in this modern age farmers and housewives everywhere can safely and easily make cheese. The rennet and Junket tablets produced by our own Charles Hansen's Laboratory in Little Falls, New York revolutionized the cheese making process. No longer do you need to use the stomach of a calf to get the rennet for making cheese. These tablets dissolve right in water that can be added to milk to safely start curdling it. One tablet of Hansen's Junket is strong enough to turn 10lbs of milk into cheese. Now, for my demonstration I would appreciate the assistance of one of you from the crowd. *(gestures to a woman in the crowd)* How about you, miss?

GRACE Oh, I am sure there are those better suited than I.

HAWKINS You will do splendidly, now just make your way up on the stage here. *(Gestures to the side of the platform)*

GRACE Alright then, I suppose I could. *(She makes her way to the platform and up the steps to join HAWKINS at the center of the platform.)*

HAWKINS Thank you, miss...

GRACE Grace. What would you like me to do Mr. Hawkins?

HAWKINS *(Still speaking in presenter voice)* Miss Grace if you could take one of these Hansen's Junket tablets and dissolve it in the water in this bottle. *(As HAWKINS continues he sets up a tin basin on the floor of the platform and fills the rennet testing kit graduated cup with milk.)* To begin we will test our milk to find out how ripe it is. The riper our milk, the faster it will begin to curdle once we introduce the Junket. The ripeness of the milk will change the taste of our resulting cheese. To produce a consistent flavor of cheese, test your milk to ensure the same ripeness. Charles Hansen Laboratory has developed a handy kit for testing our milk.

Alright now Miss Grace, you are going to slowly pour your Junket dilution into my milk cup here as I release the plug at the bottom of the cup.

HAWKINS *unstoppers the bottom of the cup as GRACE begins pouring the diluted Junket into the milk. HAWKINS stirs the mixture as milk pours out of the bottom of the cup into the tin dish.*

HAWKINS Now that Miss Grace has added the Junket, our milk is starting to curdle and solidify. As it comes together the milk will stop streaming out the bottom of the cup. *(The liquid coming from the cup tapers off and HAWKINS tilts the cup to show the audience the curds filling the cup.)* Miss Grace, by looking at the level of our curds you can tell us the degree of ripeness of our milk.

GRACE Oh hmmm, *(inspects the cup closely)* I believe it is at about 2 and one half. What does that mean?

HAWKINS My dear, that means our milk is at a perfect ripeness to begin making our cheese. Thank you Miss Grace for your aid, now you may return to your friends. How about a round of applause for the young lady? *(Onlookers clap lightly)*

GRACE Thank you, sir *(GRACE makes her way off the platform, back into the crowd).*

HAWKINS While not necessary, maintaining a consistent ripeness of milk for cheese making ensures that the cheese produced has a consistent taste and is safe for consumption. I have found 2-and-a-half degrees to be an excellent degree of ripeness On the note of taste, be aware that your cheese will take on the flavor of whatever is in the air as it is being made so ensure a clean place to make your cheese.

The easiest type of cheese for you to make at home is a soft Neufchâtel

Cheese. All it requires is milk, rennet, a cheese cloth and some string. Once you have heated the milk to about

80° simply add diluted Junket and the milk will begin coagulating. (*As he speaks, HAWKINS reaches into the metal container and pulls out a small tin dish of curds and whey*) After around 30 minutes, the milk will finish curdling and look like so (*holds up the premade example to show the crowd, as HAWKINS continues to speak he demonstrates hanging the curds in a cloth bag*). Mix salt into the curds as you see fit. Then you can tie the curds up in a cheese cloth or cotton bag and hang it over a bowl to let the whey drain out over a few hours. Once drained, simply take down the cheese and store it in your ice box.

HECKLER 2 Yeah but is it even any good?

HECKLER 1 What's gonna make me want to have any of that when there is real cheese out there?

MILLER Isn't saving food to send to our brave soldiers enough? They are risking their lives for-

HECKLER 1 Now listen here lady-

CRABTREE (*Stepping up to HECKLER 1*) Now, now sir, lets calm down, or do I need to show you the way out of the park?

HECKLER 1 I don't want to stand here listening to this anyways. (*exits*)

HAWKINS Mrs. Miller you have made an excellent point. The little changes and sacrifices we make can help provide our soldiers and allies with plenty of food to get us through the war. While the cheese you make at home may not be the best cheese on the market, it will taste even better knowing the good you are doing for your country.

*The Onlookers release another round of "Hear, hear!" and patriotic agreements at HAWKINS statement.*

HAWKINS I have pamphlets here if you would like to learn more about the Food Conservation campaign and how you can help us win this war. Now, thank you all for learning how to make cheese at home with me today. Next week I will be back with more tips on how to make your Victory Garden flourish. Remember our nation needs your dedication and resourcefulness to get us through these rough days.

*The onlookers begin to scatter, group conversations resume, and the newsboy can be heard calling again as the lights fade to black.*

THE END

## Notes

### The United States Food Administration

The United States established the Food Administration on August 10<sup>th</sup>, 1917. Herbert Hoover acted as director of the administration until its abolishment in November 1918. The Food Administration worked to regulate the price of wheat, prevent food monopolies and manage food resources for the country. No official rationing went into effect during World War I, however, large campaigns by the Food Administration encouraged the US population to limit their eating and grow their own food.

All the signs surrounding the platform are examples of actual slogans used by the United States Food Administration. These slogans encouraged citizens to reduce the amount of meat, wheat, sugar and other foodstuffs that were needed for soldiers on the warfront. The US sent preserved meat, wheat, sugar and salt across seas to the soldiers fighting in World War I. Meatless Mondays" and "Buy Local" have made their way into modern campaigns for smarter eating and reducing carbon footprints. The Food Administration encouraged shoppers purchase locally produced food to conserve fuel for the warfront.

Throughout World War I, the Committee on Public Information (CPI) developed and dispersed propaganda for the various war related efforts of the US government. The CPI produced posters, pamphlets and events to

inundate the population with information and calls for individual efforts that helped the war cause. The CPI created a group of volunteers that gave brief four-minute speeches in public spaces to encourage buying war bonds, volunteering, self-rationing food, etc. These public speeches inspired the talk and demonstration given in this play, though the CPI speeches were not as Joseph Hawkins demonstration.

## Rennet

While most often obtained from calves, the term rennet is used as the general term for enzymes that cause curdling in milk. All ruminating animals, animals with four stomachs (goat, sheep, deer, etc.), produce rennet enzymes in their fourth stomachs. Calf rennet consists of two specific enzymes, chymosin and pepsin. Only young animals, that still survive on their mothers' milk, produce rennet. Once an animal has weaned off milk the stomach no longer produces the rennet enzymes. Unfortunately, an animal must be slaughtered to access the rennet within its stomach.

In 1873 Christian Hansen was the first to begin chemically extracting rennet from the fourth stomach of calves and other ruminant animals. The next year he began producing and selling liquid animal rennet in Denmark. His rennet extraction became widely popular across Europe. In 1878, Chr. Hansen's Laboratory opened a new factory in Little Falls, New York to provide the American market with the company's renown rennet extraction.

## Hansen's Laboratory, Little Falls, New York

Little Falls has always been a hot spot for the cheese industry and an obvious choice for Chr. Hansen's new factory. Throughout the late 18<sup>th</sup> century and 19<sup>th</sup> century, Little Falls hosted one of the most important weekly cheese markets. The prices set at this market were the standard used across the nation and in the international market. Quickly outgrowing its initial factory, the Chr. Hansen bought what is now Hansen's Island. An island in the Mohawk river, Hansen Island is part of Little Falls, New York. Little Falls has always been a hot spot for the cheese industry and an obvious choice for Chr. Hansen's new factory. Throughout the late 18<sup>th</sup> century and 19<sup>th</sup> century, Little Falls hosted one of the most important weekly cheese markets. The prices set at this market were the standard used across the nation and in the international market.

Johan Frederiksen managed the New York factory and continued to increase the sales of Hansen's rennet in America. In 1886 the New York factory began producing "Junket" tablets for the American market. The name Junket originated from a dairy based dessert from England, these tablets were marketed to housewives to make a new and easily digestible dessert option. The Junket tablets consisted of a mix of rennet, salt and calcium additives. With a smaller concentration of rennet, Junket tablets were often used to make cheese in the home with smaller amounts of milk.

In 1918 Johan Frederiksen produced a pamphlet for the Food Conservation campaign "to meet the urgent demand for brief directions" on the cheese making process.<sup>3</sup> His pamphlet detailed methods for producing multiple types of cheese for farmers and adaptations for people making cheese at home. Frederiksen recommended that household cheese makers avoid making hard cheeses, such as cheddar, because of the more complicated process. Instead, Frederiksen recommended making Neufchâtel, cream or cottage cheeses. These soft cheeses do not go through the aging process and require less skill to produce. Neufchâtel is a soft cheese originating in France during the early middle ages.

3. Frederiksen included the text of this pamphlet as part of a larger book project after the conclusion of the war. See Frederiksen, Johan D., 1919, *The Story of Milk*, 1st ed. New York: The Macmillan Company. p 86.

## Marshall Rennet Testing Kit

As Hawkins explains in the play, cheese producers tested their milk to determine the ripeness of the milk. Having a consistent milk ripeness produced a more consistent flavor and quality of cheese. Most cheese makers aim to have their milk at the same ripeness for every batch. Two to four degrees ripeness was the most common levels desired. Riper milk curdles faster due to the increased acid levels in the milk. The Marshall test uses the decreasing level of milk as a marker of time taken to curdle.

The testing kit consisted of a graduated cup with a hole in the base, a small glass bottle and a glass stirring rod. A diluted rennet solution was added to the milk when it was level with the top line of the cup and the hole is released. The liquid milk poured out of the bottom until the coagulation caused by rennet clogged the hole. Using the graduated lines on the cup, cheese makers determined the level of the milk/curds in the cup. The level corresponded to a degree of ripeness.



*Glass instruments that are part of the rennet testing kit. Photos courtesy of the Little Falls Historical Society*