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NINTH ANNUAL MEETING

WISCONSIN BUTTERMAKERS' ASSOCIATION

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HELD AT

FOND DU LAC, WISCONSIN

FEBRUARY FIRST TO THIRD

NINETEEN HUNDRED AND TEN

PROCEEDINGS OF THE NINTH ANNUAL MEETING

OF THE

WISCONSIN BUTTERMAKERS' ASSOCIATION

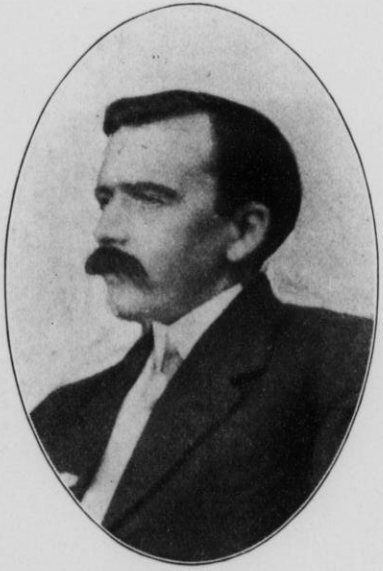
HELD AT

FOND DU LAC, WISCONSIN

FEBRUARY 1st, 2nd and 3d, 1910

Compiled by J. G. MOORE

P. B. HABER PRINTING COMPANY
Fond du Lac, Wisconsin



G. P. SAUER,
East Troy.
President.

A. G. PUERNER,
Gays Mills, Wis.
Vice President.

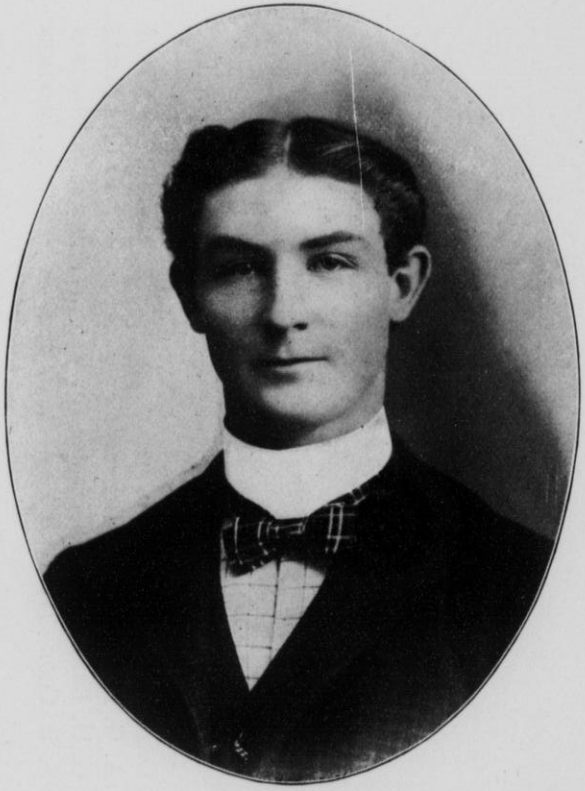
List of Officers

G. P. Sauer, *President* ..... East Troy
A. G. Puerner, *Vice President* ..... Gays Mills
G. H. Benkendorf, *Secretary* ..... Madison
S. B. Cook, *Treasurer* ..... Bloomer

Executive Committee

O. B. Cornish ..... Ft. Atkinson
F. W. Grell ..... Johnson Creek
J. G. Moore ..... Madison

G. H. BENKENDORF. Madison,
Secretary.



S. B. COOK, Bloomer,
Treasurer.

LETTER OF TRANSMITTAL.

Office of the Secretary Wisconsin Buttermakers' Association,
Madison, Wis., 1909.

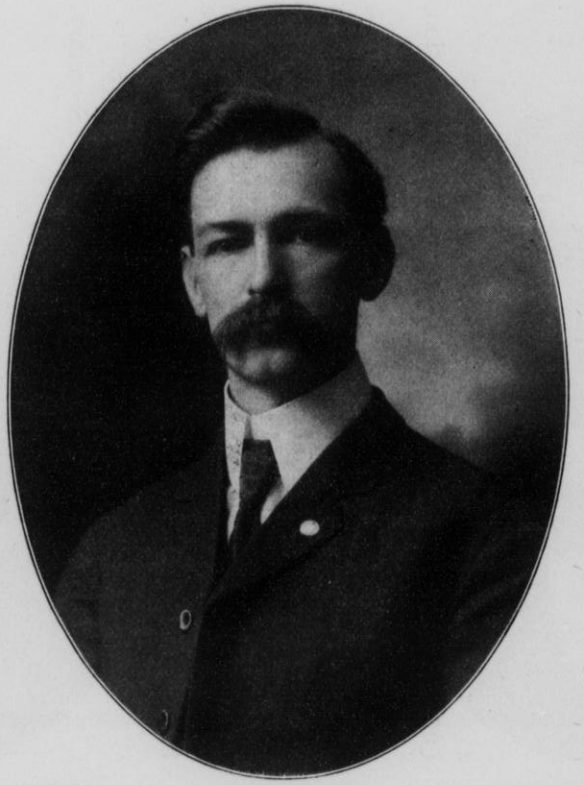
To the Officers and members of the Wisconsin Buttermakers' Association: I have the honor to herewith submit the report of the proceedings of the Ninth Annual Convention held in Fond du Lac Feb. 1-3, 1910.

I wish to take this opportunity to thank the members of the Association for their support during the five years I have had the pleasure of being your secretary.

Fraternally yours,

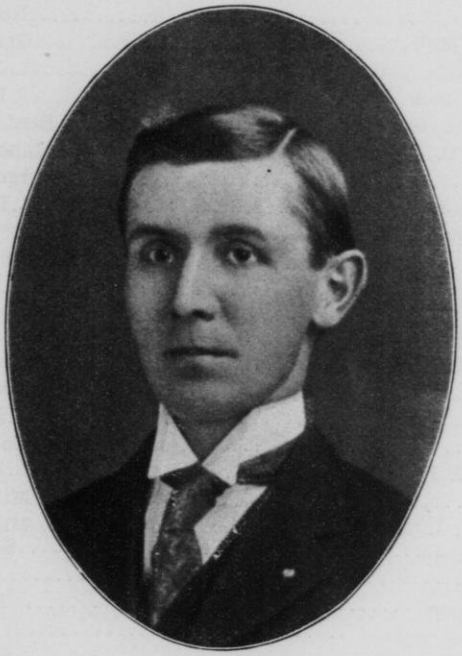
J. G. MOORE,
Secretary.

O. B. CORNISH,
Ft. Atkinson, Wis.
Member Executive Committee.



J. G. MOORE,
Madison.
Secretary, 1905-1910.
Member Executive Committee.

F. W. GRELL,
Johnson Creek.
Member Executive Committee.



J. F. McGILL,
Little Suamico, Wis.
Died April 21, 1910.

Names of Members of the Wisconsin Buttermakers' Association, 1910

Ahrens, J. F. ..... Rosendale, Wis.
Alexander, J. M. ..... Green Bay, Wis.
Aderhold, E. L. ..... Neenah, Wis.
Axlen, L. ..... De Soto, Wis.
Allen, F. J. ..... 215 Jackson Blvd., Chicago, Ill.
Alexander, C. B. ..... 4 Sherman St., Star Union Line, Chicago, Ill.
Ash, Thos. ..... R. 1, Sturgeon Bay, Wis.
Alexander, E. J. ..... Poysippi, Wis.
Andrea, Bert ..... Basco, Wis.
Allen, G. W. ..... Stevens Point, Wis.
Adrianson, L. ..... Ashland, Wis.

Brennan, T. W. ..... 167 S. Water St., Chicago, Ill.
Bolstead, L. L. ..... Nashotah, Wis.
Brummer, M. A. ..... Ft. Atkinson, Wis.
Blood, F. J. ..... Bloomer, Wis.
Brown, H. S. ..... c. o. Armour & Co., Chicago, Ill.
Benkendorf, G. H. ..... Madison, Wis.
Bilo, E. F. ..... 379 25th St., Milwaukee, Wis.
Baumbach, W. L. ..... Foot 12th St., Milwaukee, Wis.
Brown, F. M. ..... St. Paul, Minn.
Bockelman, F. ..... Chicago, Ill.
Bain ..... Madison, Wis.
Boldt, Wm. ..... Racine, Wis.
Brighton, F. ..... Shawano, Wis.
Berndt, F. J. ..... West De Pere, Wis.
Bornheimer, J. ..... Ft. Atkinson, Wis.
Brigham, R. J. ..... Troy Center, Wis.
Betz, J. H. ..... Ridgeland, Wis.
Benson, C. ..... Reeve, Wis.
Borchert, G. E. ..... Green Bay, Wis.
Brye, R. O. ..... Readstown, Wis.
Blumenstein, Geo. ..... Berlin, Wis.
Bauer, R. R. ..... Malone, Wis.
Bowar, F. ..... Cazenovia, Wis.
Bearay, J. E. ..... Omro, Wis
Becker, W. L. ..... Edgar, Wis.

Bradbury, J. H. ..... Evanston, Ill.

Creamery Journal ..... Waterloo, Ia.
Carswell, F. E. ..... Richland Center, Wis.
Cremp, J. S. ..... St. Paul, Minn.
Casperson, H. C. ..... Deer Park, Wis.
Carswell, A. ..... Clear Lake, Wis.
Cole, C. I. ..... B. & O. Ry., Minneapolis, Minn.
Cook, S. A. ..... Neenah, Wis.
Cannon, J. D. ..... New London, Wis.
Cannon, S. ..... Neenah, Wis.
Campbell, A. ..... Beaver Dam, Wis.
Chig, J. F. ..... 108 S. Water St., Chicago, Ill.
Corneliuson, T. ..... Madison, Wis.
Chapin, C. J. ..... Byron, Wis.
Cornish, O. B. ..... Ft. Atkinson, Wis.
Conway, W. F. ..... West Salem, Wis.
Coyne, D., Jr. ..... Chicago, Ill.
Carter, T. C. ..... Lake City, Minn.
Christensen, H. ..... Tomah, Wis.
Clark, W. J. ..... Lake Beulah, Wis.
Claflin, L. E. ..... LaValle, Wis.
Carswell, R. ..... Clear Lake, Wis.
Cook, S. B. ..... Bloomer, Wis.
Cross, M. R. ..... Mauston, Wis.
Chandoir, J. ..... Green Bay, Wis.
Carlson, C. D. ..... Cushing, Wis.
Conway, W. A. ..... Avalon, Wis.
Christensen, W. ..... Allen Grove, Wis.
Christiansen, R. P. ..... Milltown, Wis.
Chapman, J. F. ..... Whitewater, Wis.
Curt, H. A. ..... New Richmond, Wis.
Clafish, W. H. ..... Baraboo, Wis.

Davis, W. E. ..... Wild Rose, Wis.
Dibble, C. A. ..... Milwaukee, Wis.
Dufner, S. J. ..... 110 College Ave., Waukesha, Wis.
Dodge, E. C. ..... Lake Mills, Wis.
Dixon, E. J. ..... c. o. Ford & Howard Co., Chicago, Ill.
Dale, J. I. ..... Blair, Wis.
Davis, W. E. ..... Chicago, Ill.
Doolan, H. ..... Coloma, Wis.
Dunlap, C. R. ..... Elkhorn, Wis.
Dabareiner, L. ..... Hortonville, Wis.

Dabareiner, J. F. ..... Jefferson, Wis.
De Merritt, V. ..... Lake Mills, Wis.

Ericsson, E. ..... St. Paul, Minn.
Einfeldt, H. B. ..... Milwaukee, Wis.
Erickson, A. E. ..... c. o. Ford & Howard, Chicago, Ill.
Ebert, L. ..... Bonduel, Wis.
Eberhardt, H. ..... Brill, Wis.
Eichel, H. ..... Fond du Lac, Wis.
Else, R. J. ..... Johnson Creek, Wis.
Esker, Ole ..... Dallas, Wis.

Fox, M. E. ..... 192 S. Water St., Chicago, Ill.
Frank, H. J. ..... Neenah, Wis.
Fisler, H. C. ..... Milwaukee, Wis.
Friday, F. ..... Cambria, Wis.
Funk, C. W. ..... Philadelphia, Pa.
Farrington, Prof. E. H. ..... Madison, Wis.
Fulmer, F. B. ..... Muncie, Ind.
Ferm, Aug. ..... Cedarburg, Wis.
Flynn, F. A. ..... Neillsville, Wis.
Frank, J. L. ..... Black Earth, Wis.
Feind, W. J. ..... Jefferson, Wis.
Feiler, E. A. ..... Reedsburg, Wis.
Fallendorf, H A. ..... Sullivan, Wis.

Guse, P. W. ..... Madison, Wis.
Gallagher, T. F. ..... Chicago, Ill.
Gearon, C. ..... Chicago, Ill.
Garb, L. ..... Rosendale, Wis.
Grawin, F. A. ..... Mt. Tabor, Wis.
Gazely, L. J. ..... Grand Rapids, Wis.
Gilchrist, G. ..... Oconto, Wis.
Gibbons, T. ..... Elgin, Ill.
Galloway, G. S. ..... Elroy, Wis.
Guelzow, A. F. ..... Madison, Wis.
Grande, J. ..... Troy Center, Wis.
Goodrich, J. S. ..... Augusta, Wis.
Griffin, H. E. ..... Browntown, Wis.
Garlid, G. ..... Knapp, Wis.
Graack, C. C. ..... Arlington, Wis.
Goodrich, P. R. ..... Elkhorn, Wis.
Groth, O. J. ..... Cedarburg, Wis.
Gehrke, F. J., Jr. ..... Manawa, Wis.

Green, R. C. ..... Albion, Wis.
Gallup, H. W. ..... Johnson Creek, Wis.

Hayes, J. J. ..... Watertown, Wis.
Harless, W. A. ..... Stanley, Wis.
Halterman, R. K. ..... Fond du Lac, Wis.
Hilman, E. ..... Platteville, Wis.
Hansen, E. R. ..... 151 13th St., Milwaukee, Wis.
Hart, C. E. ..... 182 36th St., Milwaukee, Wis.
Hay, W. ..... R. 7, Manitowoc, Wis.
High, J. ..... Berlin, Wis.
Hondek, F. J. ..... Waupun, Wis.
Heller, O. E. ..... R. 2, Chilton, Wis.
Hulls, F. B. ..... Garden Prairie, Ill.
Henning, A. ..... Eldorado, Wis.
Hales, P. W. ..... Marshfield, Wis.
Howgland, A. C. ..... Madison, Wis.
Haven, D. ..... Chicago, Ill.
Hansen, G. ..... Oakfield, Wis.
Henderson, E. E. ..... Fond du Lac, Wis.
Herreman, H. J. ..... Pardeville, Wis.
Higgins, M. J. ..... Oconomowoc, Wis.
Hein, A. M. ..... Waukesha, Wis.
Holm, C. C. ..... Nashotah, Wis.
Hass, B. A. ..... McFarland, Wis.
Hathaway, W. E. ..... Jefferson, Wis.
Harms, F. H. ..... Loganville, Wis.
Haberstich, A. C. ..... Medford, Wis.
Heinz, A. ..... Burlington, Wis.
Hansen, N. P. ..... Almond, Wis.
Hoiberg, H. B. ..... Brooklyn, Wis.
Henthorn, E. E. ..... Sylvan, Wis.
Hickok, T. E. ..... Hope, Ind.
Helgerson, Theo. ..... Holmen, Wis.
Hackbarth ..... Ft. Atkinson, Wis.
Hobbs, W. J. ..... Ripon, Wis.
Hammond, A. J. ..... Lodi, Wis.
Hildeman, E. J. ..... Manchester, Wis.

Indermuehle, J. ..... Plainfield, Wis.
Ipsen, A. C. ..... Cobb, Wis.

Jahnke, W. J. ..... Luxemburg, Wis.
Jones, F. E. ..... c. o. Nelson House, Rockford, Ill.

Jones, E. D. ..... Fond du Lac, Wis.
Jenks, G. E. ..... 611 N. Trumbell Ave., Chicago, Ill.
Jones, F. O. ..... Poplar, Wis.
Johnson, O. ..... Disco, Wis.
Judkins, C. W. ..... Fond du Lac, Wis.
Jordan, G. E. ..... Amherst, Wis.
James, W. D. ..... Clinton, Wis.
Johnson, M. ..... Cedarburg, Wis.
Jacobs, F. I. ..... 185 S. Water St., Chicago, Ill.
Johnson, Frank ..... Prophetstown, Ill.

Klooster, A. H. ..... 129 S .Water St., Chicago, Ill.
King, H. ..... Chicago, Ill.
Korb, P. N. ..... Berlin, Wis.
Kaunzner, R. S. ..... Boyceville, Wis.
Kohlman, R. F. ..... Glenbeulah, Wis.
Krogstad, O. J. ..... Eau Claire, Wis.
Krohn, W. F. ..... Whitewater, Wis.
Kielsmeier, O. A. ..... Manitowoc, Wis.
Kinzler, G. A. ..... Cross Plains, Wis.
Kipp, H. T. ..... Albion, Wis.
Koenig, M. O. ..... Wausau, Wis.
Kohel, M. M. ..... Augusta, Wis.
Kresse, F. ..... Neenah, Wis.
Koepsell, R. J. ..... Abrams, Wis.
Kachel, J. C. ..... Whitewater, Wis.
Kubat, W. H. ..... Eagle, Wis.
Kinney, I. E. ..... Eland Junction, Wis.

Larson, P. A. ..... Onalaska, Wis.
Larsen, H. W. ..... Neenah, Wis.
Lindmeyer, J. B. ..... Green Bay, Wis.
Larson, L. P. ..... Armour & Co., Chicago, Ill.
Litzky, C. ..... 106 Wisconsin St., Milwaukee, Wis.
Lounsbury, J. M. ..... 329 6th St., Milwaukee, Wis.
Lerch, P. J. ..... Byron, Wis.
Linn, G. W. ..... Chicago, Ill.
Larson, H. C. ..... Madison, Wis.
Lee, C. E. ..... Madison, Wis.
Lehr, A. ..... S. Fond du Lac, Wis.
Longteau, E. ..... Green Bay, Wis.
Lee, S. ..... Modena, Wis.
Lundeberg, J. F. ..... Stoughton, Wis.
Lee, W. D. ..... Neillsville, Wis.

Lilke, Wm. ..... Genesee, Ill.

Maxten, C. F. ..... New London, Wis.
Marschall, A. J. ..... Madison, Wis.
Moore, J. G. ..... Madison, Wis.
Manley, A. R. ..... Montfort, Wis.
Moersch, A. ..... Fond du Lac, Wis.
Magrane, J. F. ..... Askeaton, Wis.
Marty, F. ..... Monroe, Wis.
Moersch, I. ..... Peebles, Wis.
Moore, W. S. ..... Chicago, Ill.
Michaelson, W. ..... Wrightstown, Wis.
Martin, P. ..... Genoa, Wis.
Montanye, C. T. ..... Glenwood, Wis.
McKelley, W. C. ..... 114 Wisconsin St., Milwaukee, Wis.
Mundt, H. A. ..... Manawa, Wis.
McLane, A. ..... Whitewater, Wis.
McCready, A. D. ..... Garden Plain, Ill.
Meyer, M. H. ..... Madison, Wis.
Meier, G. E. ..... Colby, Wis.
Mason, J. C. ..... Montford, Wis.
McCormick, O. R. ..... Bancroft, Wis.
Miller, J. ..... Baraboo, Wis.
Miller, J. C. ..... Augusta, Wis.
Moersch, Q. ..... Peebles, Wis.
Mollett, P. ..... Stiles, Wis.
McHugh, J. ..... Oconto Falls, Wis.
Merryfield, F. V. ..... Larsen, Wis.
McGill, J. F. ..... Little Suamico, Wis.
Mueller, A. A. ..... Ixonia, Wis.
Melindy, E. B. ..... Sheboygan Falls, Wis.

Netland, Thos. ..... 1822 Evergreen Ave., Madison, Wis.
Newgard, W. S. ..... St. Paul, Minn.
Nohr, F. C. ..... 36 La Salle St., Chicago, Ill.
Newell, B. L. ..... Sheridan, Wis.
Nichols, W. ..... Amery, Wis.
Nelson, S. B. ..... Kewaskum, Wis.
Nerhaugen, Eli ..... Gillfilan Blk., St. Paul, Minn.

O'Dell, C. ..... Wild Rose, Wis.
Olsen, L. ..... W. DePere, Wis.
Olsen, H. P. ..... Milwaukee, Wis.
O'Connor, J. M. ..... Eau Gallie, Wis.

O'Keefe, R. J. ..... De Pere, Wis.
Olson, O. ..... Mt. Horeb, Wis.

Penn, W. E. ..... Lake Mills, Wis.
Puerner, A. G. ..... Gays Mills, Wis.
Phipps, J. H. ..... 106 Wisconsin St., Milwaukee, Wis.
Pheatt, H. D. ..... 106 Wisconsin St., Milwaukee, Wis.
Prescott, A. G. ..... Tunnel City, Wis.
Purvis, J. T. ..... Berlin, Wis.
Parman, A. L. ..... Mazomanie, Wis.
Peschke, E. J. ..... Fairwater, Wis.
Paulson, W. G. ..... Richardson, Wis.
Peterson, L. ..... Rose Lawn, Wis.
Perschbacher, A. ..... West Bend, Wis.
Peterson, C. A. ..... Weyauwega, Wis.
Possley, N. E. ..... De Pere, Wis.
Prust, C. H. ..... Princeton, Wis.
Pratt, A. T. ..... Hyde Park Hotel, Chicago, Ill.
Peterson, B. ..... Tampico, Ill.
Peterson, L. ..... Spring Valley, Wis.

Ruland, F. H. ..... Oakfield, Wis.
Rosenberg, G. A. ..... Green Bay, Wis.
Risdon, R. R. ..... W. DePere, Wis.
Root, A. ..... Mondovi, Wis.
Root, H. W. ..... Mondovi, Wis.
Reinhard, F. L. ..... Neillsville, Wis.
Rohn & Kulas ..... Dodge, Wis.
Rasmussen, E. G. ..... Fall Creek, Wis.
Raven, H. C. ..... Bloomer, Wis.
Raven, F. E. ..... Bloomer, Wis.
Roou, B. ..... Sparta, Wis.
Roethle, M. F. ..... Sherry, Wis.
Rich, C. L. ..... Oshkosh, Wis.

Schroeder, L. H. ..... Chelsea, Wis.
Safford, O. P. ..... Oconto, Wis.
Seaman, Ed ..... Clinton, Wis.
Schoen, C. ..... Ft. Atkinson, Wis.
Schneider, Wm. ..... Johnson Creek, Wis.
Strehm, L. F. ..... Johnson Creek, Wis.
Schildt, C. ..... Horicon, Wis.
Schuknecht, E. J. ..... 22 5th Avenue, Chicago, Ill.
Schulz, R. A. ..... 176 Arundel St., St. Paul, Minn.

Southard, R. ..... Marshfield, Wis.
Schumway, C. P. ..... M. D. T. Co., Milwaukee, Wis.
Samis, Prof. J. L. ..... Madison, Wis.
Sundin, J. ..... Lake Beulah, Wis.
Steverson, M. ..... Westby, Wis.
Sinkler, E. F. ..... Black River Falls, Wis.
Skinner, D. ..... 412 Railway Exchange, Milwaukee, Wis.
Sorge, A. ..... Reedsburg, Wis.
Switz, G. H. ..... Rockford, Ill.
Sandholt, H. ..... St. Paul, Minn.
Staven, C. M. ..... Hanover, Wis.
Seyferth, G. S. ..... Oconto, Wis.
Shilling, S. B. ..... Chicago, Ill.
Smith, J. R. ..... Chicago, Ill.
Seifert, G. ..... Cambria, Wis.
Stewart, G. M. ..... Mazomanie, Wis.
Stryker, E. ..... Sharon, Wis.
Soltwedel, E. ..... Lime Ridge, Wis.
Stewart, W. A. ..... Eagle, Wis.
Sauer, G. P. ..... East Troy, Wis.
Speich, E. W. ..... White Creek, Wis.
Snyder, F. E. ..... Whitewater, Wis.
Schultz, F. ..... North Bloomfield, Wis.
Schulte, H. C. ..... St. Croix Falls, Wis.
Smith, H. ..... c. o. Racine R. & I. M. Co., Kenosha, Wis.
Spiers, G. ..... Eau Claire, Wis.

Truedell, S. F. ..... 87 Michigan St., Milwaukee, Wis.
Tullock, G. A. ..... R. 8, Rockford, Ill.
Tiplin, F. L. ..... Neenah, Wis.
Tyler, C. ..... W. DePere, Wis.
Titus, C. B. ..... Oakwood, Wis.
Tamblingson, R. E. ..... Cambridge, Wis.
Tolmen, G. B. ..... Pulcifer, Wis.
Tank, G. ..... Van Dyne, Wis.
Thelen, P. J. ..... Saukville, Wis.
Thompson, F. C. ..... Oregon, Wis.
Tucker, E. H. ..... Lodi, Wis.

Vansistine, S. N. ..... West DePere, Wis.
Voigt, W. A. ..... Eau Claire, Wis.
Van Duser, J. ..... Hebron, Wis.

West, M. E. ..... Fond du Lac, Wis.
Williams, C. H. ..... 315 Dearborn St., Chicago, Ill.

Whitmore, E. J. ..... Owatonna, Minn.
Wollensack, S. C. ..... Kewaskum, Wis.
Waggoner, C. H. ..... 4148 Allis Ave., Chicago, Ill
Wileman, A. ..... Milton Junction, Wis.
Williams, E. O. ..... 129 S. Water St., Chicago, Ill.
Witt, E. R. ..... White Creek, Wis.
Warnke, W. ..... Kingston, Wis.
Winter, L. H. ..... Eau Claire, Wis.
Weber, J. F. ..... Hartford, Wis.
Warnke, J. A. ..... Germania, Wis.
Wellcome, C. M. ..... Ripon, Wis.
Wigginton, W. W. ..... Viroqua, Wis.
Wittenberg Creamery Co. ..... Wittenberg, Wis.
Weber, G. ..... Columbus, Wis
Weber, J. C. ..... Fond du Lac, Wis
Warner, F. J. ..... Rosholt, Wis.
Williams, O. A. ..... Augusta, Wis.
Wilcox, A. H. ..... Elgin, Ill.
Wuethrich, F. ..... Doylestown, Wis.

Yockey, F. L. ..... West Salem, Wis.

Zastrow, F. W. ..... Cambria, Wis.
Zander, H. M. ..... Cross Plains, Wis.
Zimmerman, A. W. ..... Norwalk, Wis.

ARTICLES OF INCORPORATION AND BY-LAWS

of the

Wisconsin Buttermakers' Association

Articles of Incorporation.

Article First. The undersigned have associated, and do hereby associate themselves together for the purpose of forming a corporation under chapter 86 of the Revised Statutes of the State of Wisconsin, for the year 1898, and the acts amendatory thereof and supplementary thereto, the business, purposes and objects of which corporation shall be the education of its members for a better practical knowledge of creamery operation, promoting progress in the art of buttermaking, in the care and management of creameries, the sale, transportation and storage of butter, and in the weeding out of incompetency in the business of buttermaking; the further object of the incorporation is to demand a thorough revision and rigid enforcement of such laws as will protect the manufacture and sale of pure dairy products against fraudulent imitations, and to suggest and encourage the enactment of such laws in the future as experience may from time to time demonstrate to be necessary for the public good of the dairy industry.

Article Second. The name of said corporation shall be the "Wisconsin Buttermakers' Association," and its principal office and location at Madison, Wis.

Article Third. The association shall be a corporation without capital stock. Any person who is a practical creamery operator, and such other persons as are connected or interested in the manufacture and sale of pure butter may become members of this corporation by paying one dollar ($1.00) annually in advance and signing the roll of membership.

Article Fourth. The general officers of said association shall be a president, vice president, secretary and treasurer, and the board of directors shall consist of three members of the association. The term of the officers of the association shall be one year, or until their successors are elected at the next annual meeting following their election, and until such successors qualify. At the first meeting of the members of the association, there shall be elected a director for the term of one year, a director for the term of two years, and a director for the term of three years, and thereafter there shall be elected at each annual meeting a director for the term of three years, and each director shall hold his office until his successor is elected and qualifies.

Article Fifth. The principal duties of the president shall be to preside at all meetings of the board of directors and of the members of the association during his term of office. He shall appoint all necessary committees and sign all orders drawn on the treasurer, and perform such other duties as may pertain to his office.

The vice president shall discharge the duties of the president in the event of the absence or disability, for any cause whatever, of the latter.

The principal duties of the secretary of said association shall be to keep a complete and accurate record of all meetings of the association or of the board of directors, keep a correct account of all finances received, pay all moneys into the hands of the treasurer and receive his receipt therefor, and to countersign all orders for money drawn upon the treasurer. He shall safely and systematically keep all books, papers, records and documents belonging to the association, or in any wise pertaining to the business thereof. He shall keep a complete list of the membership, help formulate and publish the program for the annual convention, publish a full report of said convention after adjournment, assist in such other matters of business as may pertain to the convention, and such other duties as properly belong to his office.

The principal duties of the treasurer shall be to faithfully care for all moneys entrusted to his keeping, paying out same only on receipt of an order signed by the president and countersigned by the secretary. He shall file with the secretary of the association all bonds required by the articles of incorporation or the by-laws. He shall make at the annual meeting a detailed statement of the finances of the corporation. He must keep a regular book account, and his books shall be open for inspection at any time by any member of the association. He shall also perform such other duties as may properly belong to his office.

The board of directors shall be the executive committee and shall audit all accounts of the association or its officers, and present a report of the same at the annual meeting. The executive committee shall assist in the necessary preparations for the annual convention and shall have sole charge of all irregularities or questions of dispute that may come up during any annual meeting. They shall determine the compensation that may be connected with any of the various offices.

The board of directors with the other officers of the association shall constitute the executive board, which board shall decide upon the date and place of holding the annual convention, premiums to be offered at said convention, and such other regulations as may be necessary for the success of the annual meeting.

Article Sixth. The treasurer of the corporation shall give a bond in the sum of two thousand dollars ($2,000.00) for the faithful performance of his duties. The said bond to be approved by the board of directors before being accepted by the secretary. Whenever the corporation may so desire, the office of secretary and of treasurer may be held by one and the same person. This action can only be taken at a regular election of officers.

Article Seventh. These articles may be altered or amended at any regular session of an annual meeting of the members, provided proposed alterations or amendments shall

have been read before the association at least twenty-four hours previously, and provided the proposed alterations or amendments shall receive a two-thirds vote of the members present.

Article Eighth. The first meeting of this corporation for the election of officers and directors shall be held on the 26th day of February, 1903, and such corporation shall hold a meeting of its members annually during each calendar year at such time and place as may be determined by the executive board.

By-Laws.

Article First. All elections shall be by ballot, except in the case of a single nominee, when election by acclamation may be substituted.

Article Second. This association may accept such special side premiums as in the judgement of the executive committee, may seem for the best interests of the members.

Article Third. Only one tub of butter may be entered from any one creamery for competition for any of the prizes or premiums; if more than one tub is so entered such entries shall be debarred from participation in all premiums.

The size of butter packages entered in competition at the association contest shall be no smaller than a twenty pound tub.

The butter so entered shall belong to the association. After the scoring contest has been completed the said butter is to be sold; the association will pay the express charges, the exhibitor's membership dues for the current year and such other expenses as may be connected with the butter exhibit, the balance remaining from the sale of the butter shall be deposited in the treasury and be devoted to the premium fund for the next annual convention.

Article Fourth. The privileges of the association butter

contests are open to exhibitors outside of Wisconsin, but such exhibitors must be present in person, or have a representative of the creamery present at the convention to entitle him to share in the pro rata premium fund or compete for any other prizes offered by the association, and must conform to all regulations required of state exhibitors.

Article Fifth. The Association shall give such prizes for the tubs of butter scoring first, second and third as may, in the judgement of the executive committee, best suit the times and be of greatest service to those who receive the same.

Article Sixth, Sec. 1. The score that shall entitle an exhibitor to a share in the pro rata shall be determined by the executive committee in advance of each yearly meeting.

Sec. 2. The scores of those exhibitors not participating in the pro rata shall not be published.

Article Seventh. All points of parliamentary practice not covered by the Articles of Incorporation or these By-Laws, shall be governed by "Robert's Rules of Order."

Article Eighth. These By-Laws may be altered or amended in the same manner as prescribed in the Articles of Incorporation.

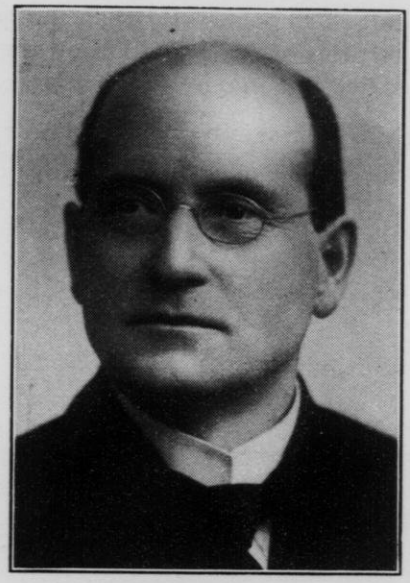
NINTH ANNUAL MEETING

—OF THE—

Wisconsin Buttermakers' Association

The ninth annual convention of the Wisconsin Buttermakers' Association was held at Fond du Lac, Wis., Feb. 1-3, 1910, the first meeting being called to order Tuesday evening, February 1, at 8 o'clock by President G. P. Sauer.

The Chairman: We will open our ninth annual convention this evening with prayer by the Rev. L. H. Keller, of this city.



REV. L. H. KELLER,
Fond du Lac.
Invocation.

Invocation.

Let us unite in prayer. Almighty God, our Heavenly Father, we thank Thee for Thy interest in human affairs. We are pleased to believe that the things that concern us and the great work of the world concern Thee, that Thou art forcing the affairs of men towards high issues.

We invoke Thy blessing on all the sessions of this convention. We thank Thee for the presence of these men in our city representing a great industry. We invoke Thy blessings on the agricultural interests of this country. We pray more and more that Thou may arouse the interest of people that we may recognize in this line they are feeding all our own people and the people of the world. Grant to all those interested in this enterprise Thy blessing; grant us more and more that we may work together in all ways for the advancement of men in the higher interests of life, in the ways of prosperity and industry. We ask it through Christ, our Lord. Amen.

The Chairman: We will now have the pleasure of listening to the address of welcome by the Hon. E. W. Clark, Mayor of this city.

Address of Welcome.

Hon. E. W. Clark, Mayor of Fond du Lac.

Mr. President, Ladies and Gentlemen of the Buttermakers' Association of the State of Wisconsin:

I have never yet been charged with the ability to make a speech, and I am not going to commence now because I am a little too old.

In looking over your program this evening it affords me considerable pleasure to notice that this is your second visit to Fond du Lac. Certainly your first visit must have impressed you that you liked to come to Fond du Lac, otherwise you would not have come here this time. I want to assure you on behalf of the citizens of the city of Fond du Lac that we are indeed glad that you are with us and we are going to try to make your stay so pleasant that when you are casting around a few years hence for your convention city you will

E. W. CLARK, MAYOR,
Fond du Lac, Wis.

remember that Fond du Lac is one bright spot, and we will be glad to see in your next program that that will be your third visit to Fond du Lac.

It is rather to be regretted that you visit us at a time when the snow covers the ground so we are not able to show you the beauty of the city; show you our miles and miles of nice clean pavements, parks, etc., etc., but nevertheless we have them and a number of you no doubt will have occasion to visit us sometime during the summer, and whenever you do we want you to make yourselves entirely at home.

A gentleman asked me this evening if I knew the amount

of money that there was represented in the dairy interests of the country, and I told him I would not even hazard a guess but, judging from the small amount that comes into our house and your house, I would not be surprised if a few years from now we had a few more John D. Rockefellers in the United States in the butter business.

Fond du Lac county is very well represented in the dairy interests of the state and we pride ourselves upon having some of the finest herds of cattle that are in the state or in fact in the United States. I am entirely out of the cow business, I graduated thirty-five years ago. I worked for a gentleman in Fond du Lac county who had me milk ten cows in the morning, just for an appetite, and ten cows at night before I went to bed, just for exercise, so I was not exactly in love with the job.

I want to say to you again to make yourselves entirely at home, we want you to enjoy yourselves because, as I said to you before, when you are again looking around for a meeting place and want a bright spot to come to, we want you to come to Fond du Lac because Fond du Lac will always meet you with open arms. Gentlemen, I thank you.

The Chairman: Mr. E. L. Aderhold, of Neenah, will respond to this cordial address of welcome.

Response.

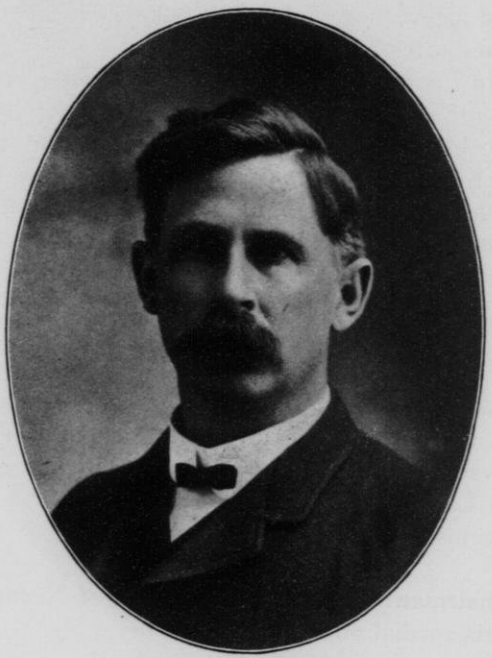
Mr. E. L. Aderhold, Neenah, Wisconsin.

Mr. Chairman, Mayor Clark, Members of the Wisconsin Buttermakers' Association, Ladies and Gentlemen:

There is a better man on the program for this response but he has not arrived as yet and I have therefore consented to speak in his place, so you must not expect any great flight of oratory here, because I am never guilty of indulging in such flights.

This association certainly appreciates hospitality and we feel thankful to the mayor of the city for the kindly greeting that we have received. We are glad that we are in Fond du

Lac county because we know that in this county there are dairymen and buttermakers who are smart enough to want to learn more, and know enough to be able to impart to us some valuable lessons.



E. L. ADERHOLD,
Neenah, Wis.

The dairy interests of Wisconsin create about sixty million dollars of wealth per year. I say they **create** that amount of wealth because there is no wealth created except that which grows out of the soil, and in creating these sixty million dollars of wealth in the dairy business there is nothing being robbed, there is nothing being side tracked. It does not crowd out any other branch of farming or industry,—it does not rob the soil, it rather improves the soil; so this sixty million dollars is created every year and it makes for a prosperous community, makes possible prosperous cities, of which this city is an example. The buttermakers turn out some-

thing over twenty million dollars worth of butter a year in Wisconsin, something like two million dollars worth a month that is distributed for butter at our one thousand creameries in Wisconsin. It shows the important function of the buttermaker, and those of you who know anything about the business know if a buttermaker is ignorant or reckless, or if his energies are misdirected that the result will be a big loss. So we are banded together and come together once a year for our annual convention, in order to brighten up and improve ourselves in the line of skill in handling this big product, and I do not believe it is exaggerating when we say that at these conventions we have the brightest minds and most progressive people with us, and at these conventions we blaze out the path that we are to travel and others are to travel in the future, to a considerable extent. So the buttermaker has a good deal of responsibility. His is not so hazardous an occupation as some others. I remember of hearing of a Mr. Smith who embarked in the poultry business. He happened to have an apartment in a big flat building and had a portion of the basement for his use, so he had two or three incubators down there and started two or three hundred little chicks. They were getting along nicely when one night the water pipes burst and drowned his chicks. He was somewhat wrathy when he got after the Irish janitor next day and told him what happened, but all the janitor said was "You old fool, raise ducks." A good buttermaker never has to lose all his stock in trade, so in that way his business is not so hazardous.

Fond du Lac County is one of the best dairy counties of the state. Fond du Lac county has a little more than one hundred creameries and cheese factories, and this city especially draws a very large farming trade. Probably considerable over a thousand prosperous dairymen do their trading in the city of Fond du Lac, and I wonder how many of your citizens really appreciate what it means to have a thousand or more prosperous dairymen trading constantly in this city. Some of the merchants probably realize what it means but I believe many of the citizens do not.

Now we are young as an association but we are pretty strong in numbers and in influence. We are not as big as some of the little fellows that are big for their age. We do not know whether your hotels will be able to feed us all or not but if not we are somewhat prepared. We are all fond of poultry and fancy birds to eat, so we have with us a Red Raven from the northwest corner of the state and we have a good Cook with us,—he is one of the officers; if one Red Raven is not enough we have Moore, he is always with us; if when he is through being cooked he is too sweet the president can furnish a Sauer, and if there are any other delicacies we would like we are never "broke" as long as we have Shilling with us, so you see that we will get through without starving in Fond du Lac, although I think that you are going to handle us all right.

I want to say to the mayor that this is the annual outing of these boys and they are a mighty frisky lot, some of them. Turn a lot of frisky people loose away from home and one cannot tell what will happen, so if any of us land in the jail we will appeal to the mayor and he will get us out. The boy I would most emphatically call the mayor's attention to is from Monroe.

In behalf of the association I want to thank the mayor again for the hospitality extended. I am sure we will all feel at home and have a good time. Thank you.

Music, solo by Mrs. Belle Porter Heath, accompanied by Miss Keller, which received a hearty encore, after which the ladies were presented with bouquets by little Miss Moore and Miss Sauer in behalf of the association.

The Chairman: The report of our treasurer, Mr. S. B. Cook, will now be in order.

To the members of the Wisconsin Buttermakers' Association:

I herewith submit to you my report:

On April 30th, I received from

Mr. Guy Speirs, former treasurer, a check for	$ 72.78
And a certificate of deposit for	600.00

Since that time I have received from the Secretary, Mr. J. G. Moore, the following sums to be applied to the General Fund:

1909

May 24, Edwin Prescot, Adv. 1909	$ 5.00
May 24, Eau Claire House, Adv. 1909	5.00
July 8, Memberships	250.00
July 8, State Treasurer	600.00
August 9, Interest on certificate of deposit	9.00
August 27, City of Eau Claire	175.00
Nov. 28, Lashaw Feerst Co., Adv.	5.00
Dec. 3, Fitch Cornell Co., Adv	10.00
Dec. 13, Colonial Salt Co.	10.00
Dec. 22, Northern Mfg. Co.	5.00
Jan. 25, Fox River Butter Co.	10.00
Jan. 25, Spangenberg & Co.	5.00
Jan. 25, H. J. Grell B. & E. Co	10.00
Jan. 25, Standard Oil Co.	10.00
Jan. 25, Wisconsin Dairy Supply Co.	10.00
Jan. 25, H. C. Christians Co.	5.00
Jan. 25, Collyer & Co.	10.00
Jan. 25, Dittmann & Co., Adv.	5.00
Jan. 25, Coyne Bros.	5.00
Jan. 25, E. Decker & Co.	5.00
Jan. 25, Cornish, Curtis & Green	10.00
Jan. 25, A. H. Barber & Co.	5.00
Jan. 25, Wisconsin Coal Co.	5.00
Jan. 26, Gleason & Lansing	5.00
Jan. 26, Racine Ref. & Ice Co.	10.00
Jan. 27, Gallagher Bros.	5.00
Jan. 27, S. S. Borden & Co.	5.00
Jan. 27, DeLaval Seperator Co.	10.00
Jan. 27, Worcester Salt Co.	10.00
Jan. 27, Edson Bros.	10.00
Jan. 29, J. G. Cherry Co.	10.00
Jan. 29, G. W. Linn & Sons	5.00
Feb. 1, Wells Richardson Co., Adv.	10.00
Total receipts	$1921.78

I have also received the following, to be applied to the premium fund:

1909

Dec. 13, Chr. Hansens Lab.	$ 12.00

1910

Jan. 10, Vermont Farm Mch. Co.	10.00
Jan. 25, Fox River Butter Co.	25.00
Jan. 27, De Laval Sep. Co.	10.00
Jan. 27, Diamond Crystal Salt Co.	10.00
Jan. 29, J. G. Cherry Co.	25.00
Total	$ 92.00

I have paid out on orders received from the Secretary and counter-signed by the President the following:

1909

July 12, Fred Nedvidick, Convention expenses	$ 7.96
July 12, W. H. Burwell, Convention expenses	12.60
July 12, J. G. Moore, salary	250.00
July 20, Williams Furniture Co., packing chairs	2.00
July 20, Wisconsin Protective Assn.	650.00
Sept. 24, J. G. Moore, postals	10.00
Sept. 24, W. Mayer, printing	1.50
Oct. 8, W. Mayer, report envelopes	6.00
Oct. 14, S. B. Cook, expenses	8.49
Oct. 14, J. G. Moore, postage and express	43.90
Oct. 25, Schwaab S. & S. Co., badges	25.00
Dec. 1, W. Mayer, printing	2.75
Dec. 27, J. G. Moore, postage and express	11.92
Total	$1032.12

RECAPITULATION.

Total Receipts	$1921.78
Total Expenditures	1032.12
Balance	$ 889.66

On motion, duly seconded and carried, the report of the treasurer was adopted as read.

The Chairman: Our secretary, Mr. J. G. Moore, will now present his report.

To the Members of the Wisconsin Buttermakers' Association:

The financial report of the association does not look as flourishing as it did a year ago.

There are reasons for this condition and good ones too. A year ago the Wisconsin Dairy Mfg. and Milk Producers' Protective Association was engaged in fighting the central-

izers on the question of rate for transportation of cream, and after a presentation of the facts by Mr. F. A. Seeber, President of the Association, the buttermakers unanimously voted to donate to the Protective Association the sum of $650.00.

Further in making arrangements with Mr. Rosholt, President of the Eau Claire Commercial Association we were promised free halls and $300 cash for our premium fund as has been the case in every city we have met in.

At the Eau Claire meeting Mr. Cook was elected treasurer in place of Mr. Speers; Mr. Speers declining to stand for re-election and being so busy with his own affairs at that time, left it to me to send out the premium fund and sent me a check for the full amount, thus leading me to believe that he had received the $300 promised us.

When we made the settlement with Mr. Speers, we found, however, that he had not collected the money from the city. After considerable correspondence we finally received a check from the Treasurer of the Eau Claire Association for $175.00, with a promise that the balance would be forthcoming in ten days. After waiting for some time, I made a special trip to Eau Claire and received a promise from Mr. Joyce, Vice President of the Association, that he would get the balance and send it in a day or so. A check for some $60 was received and which was returned, as the receipt was for balance in full. Up to the present time I have not heard from him nor has he answered several letters written him in regard to it.

I have no doubt but that finally this money will be paid.

Last February a fake commission dealer started in business in Madison and secured a large number of shipments of butter which he paid for in check, but had no funds back of them.

At the request of the Postal Authorities for assistance in obtaining evidence against this party, I sent out reply postals to all the creameries in the state, and it was largely through the evidence secured in this manner that the accused was caught and landed in jail. I was told Sunday by the Clerk of

the United States Court that he would plead guilty to the charge of using the mails to defraud and be sentenced to serve time in Leavenworth prison.

In this connection would advise the creamery men and others, when caught by rascals of this kind, to immediately get in touch with the postal inspector at Madison, as by so doing the postoffice machinery of the United States is turned loose to bring the offenders to justice, and that without cost to you, as would be the case were you to engage a lawyer first.

The price at which the last year's convention butter sold for left but a small sum comparatively for this year's premium fund, and so we felt constrained to again ask our friends of the trade to help out with donations.

We had, after the necessary expenses were paid, a balance in the premium fund of $458.50, added to which is $300 from the Business Men's Association of Fond du Lac and $142.00 from the trade, making a premium fund of $900.50.

At last year's convention the by-laws relating to prizes for highest scoring butter were changed, so that this year a variety of presents have been selected for prizes for first, second and third highest scoring butter, for the county association having the highest average score and also for the butter makers' judging contest.

These prizes are on exhibition in the lobby of the Palmer House, and you are invited to inspect them; they will be awarded at the banquet Thursday evening, which is an invitation that we hope will be acceptable.

At the last session of the legislature I made an effort to get a bill introduced to obtain our printing from the state, the same as a large number of other associations have been doing, but was advised by some of our good friends not to do so. In this connection I would say that the Wisconsin Cheese Makers' Association, which for years has had their reports printed, have been cut off from the state printing.

There is no doubt that the Cheese Makers' friends will

endeavor to have the bill re-enacted which gives them their printing, and we must be on the lookout, and when the time comes insist on having the same privilege.

The butter interests of the state bring in about twice as much revenue as the cheese interests.

We came very near losing our appropriation of $600; as it was, some of the State Associations did have their state aid withdrawn, and we would also have lost ours, except for the exertions of some of our good friends in the legislature. You as members of the Association should hold yourselves ready when called upon, to write to your representative in the legislature and help create a sentiment for the passage of such laws as will make for better dairying in all its phases.

This is also true in regard to the agitation in Congress looking to the repeal of the 10c tax law and while I have received a great many replies to the circular letter sent out, asking for a list of patrons' names, who would be willing to write senators and representatives in regard to this question, when called upon, there are still a large number of creamery men and buttermakers who are remiss in this matter.

While our county associations are still in existence, it seems to me there is considerable apathy on the part of some of the makers which does not help the associations. Our friends, the traveling men, upon receipt of a notice of a County Buttermakers' Meeting make plans to attend and do attend at considerable expense in time and money. The buttermaker members of their County Associations should realize the importance of having the traveling fraternity with us on such occasions and make an effort to attend themselves.

Following are the receipts:

1909

Balance reported last year's Convention	$ 844.17
Feb. 13, By cash from advertisers	95.00
Feb. 22, By cash from advertisers	35.00
Feb. 22, F. W. Grell, Supt., for space in Mach. Hall	78.50
Feb. 24, By cash from advertisers	15.00
March 1, By cash refund freight on chairs	2.16
March 8, By cash No. Boiler Works Appleton adv	10.00

March 11, By cash Wisconsin Coal Co. Milwaukee adv.....	10.00
April 10, By cash Twin City Sup. Co., Minneapolis, space Machinery Hall	10.00
April 10, By cash Coop Cry. Sup. Co., Milwaukee Adv.....	10.00
April 17, By cash No. Western Iron Wks., Eau Claire, space Machinery Hall	10.00
May 24, By cash E. Prescott, Boston Adv.	5.00
May 24, By cash Eau Claire House, Eau Claire Adv.....	5.00
May 24, By cash, memberships	250.00
May 24, By cash Memberships Butter Exhibition Transferred	135.00
July 8, By check State Treasurer	600.00
July 8, Interest, Certificate of Deposit	9.00
Aug. 24, Recd. from Eau Claire Commercial Assn' on ac-.....	175.00
Nov. 24, Latstraw Feerst Co., Pittsburg, one-half page adv...	5.00
Dec. 2, Fitch, Cornell & Co., New York, one page adv.....	10.00
Dec. 13, Colonial Salt Co., Akron, O.	10.00
Dec. 27, Northern Mfg. Co., Waterloo, Ia., one-half page adv..	5.00
Jan. 25, Spangenberg & Co., Chicago, one-half page adv.....	5.00
Jan. 25, H. J. Grell B. & E. Co., Johnson Creek, one page adv.	10.00
Jan. 25, Standard Oil Co., Milwaukee, one page adv.....	10.00
Jan. 25, Wisconsin Dairy Sup. Co., Whitewater, one page adv.	10.00
Jan. 25, H. C. Christians, Johnson Creek, one-half page adv...	5.00
Jan. 25, Collyer & Co., Chicago, one page adv.....	10.00
Jan. 25, Dittmar & Co., Chicago, one-half page adv.....	5.00
Jan. 25, Coyne Bros., Chicago, one-half page adv.....	5.00
Jan. 25, E. Decker & Co., Chicago, one-half page adv.....	5.00
Jan. 25, Cornish, Curtis & Green, Ft. Atkinson, 1 page adv...	10.00
Jan. 25, A. H. Barber & Co., Chicago, one-half page adv.....	5.00
Jan. 25, Wisconsin Coal Co., Milwaukee, one-half page adv...	5.00
Jan. 25, Fox River Butter Co., Aurora, one page adv.....	10.00
Jan. 25, Racine Refrigerator Co., Kenosha, one page adv.....	10.00
Jan. 26, Gleason & Lansing, Buffalo, one-half page adv.....	5.00
Jan. 27, S. S. Borden Co., Chicago, one-half page adv.....	5.00
Jan. 27, De Laval Sep. Co., Chicago, one page adv.....	10.00
Jan. 27, Gallagher Bros., Chicago, one-half page adv.....	5.00
Jan. 27, Worcester Salt Co., New York, one page adv.....	10.00
Jan. 27, Edson Bros., Philadelphia, one page adv.....	10.00
Jan. 28, J. G. Cherry Co., Cedar Rapids, one page adv.....	10.00
Jan. 28, G. W. Linn & Son, Chicago, one-half page adv.....	5.00
Jan. 28, Wells, Richardson Co., Burlington, Vt., one page adv.	10.00
Total Receipts	$2503.83

EXPENDITURES.

Feb. 12, W. L. Baumback, banquet deficiency	148	$ 27.00
Feb. 12, Eau Claire Club, Banquet Hall	149	50.00
Feb. 12, M. Fournier, Machinery hall	150	25.00
Feb. 12, J. A. Grinsell, livery	151	3.00
Feb. 12, A. F. Lauritsen, flowers	152	7.50
Feb. 15, T. H. Hart Symco, Convention expenses	153	13.50
Feb. 15, W. Mayer, printing program, etc	154	222.89
Feb. 15, F. A. Leeber, Convention expenses	155	15.64
Feb. 15, E. M. Henwood, Convention expenses	156	11.23
Feb. 16, F. W. Woll, Convention expenses	157	8.59
Feb. 16, E. C. Dodge, Convention expenses	158	16.61
Feb. 16, F. B. Fulmer, Convention expenses	159	11.65
Feb. 16, J. G. Moore, Convention expenses	160	90.59
Feb. 17, L. H. Schroeder, Convention expenses	161	8.46
Feb. 22, F. A. Averbeck & Co., medals and cups	162	42.00
Feb. 24, Hoepner Bartlett Co., lumber and labor (Mch. Hall)	164	52.25
Feb. 24, F. W. Grell, Convention expenses	163	22.20
March 1, W. Mayer, printing and stationary (For Officers)	165	16.75
March 1, J. Boning, stenographer	166	18.10
March 8, C. B. Cornish, Convention expenses	167	15.83
March 15, J. F. McGill, Convention expenses	168	15.34
March 15, Cornish, Curtis & Greene, silver plated butter triers	169	9.71
March 15, M. M. Carpenter, reporter	170	75.00
March 23, F. Nedvideck, Convention expenses	171	7.96
March 23, W. H. Burwell, Convention expenses	172	12.60
March 29, J. G. Moore, secretary's salary	173	250.00
July 20, Williams Furniture Co., packing chairs	175	2.00
July 20, Wisconsin Protective Assn., donation	176	650.00
Sept. 11, J. G. Moore, secretary, postals	177	10.00
Sept. 11, W. Mayer, printing postals	178	1.50
Oct. 8, W. Mayer, 500 report envelopes	179	6.00
Oct. 10, S. B. Cook, treasurer, expenses	180	8.49
Oct. 13, J. G. Moore, secretary, postage and express	181	43.90
Oct. 23, Schwaab S. & S. Co., N. C. B. A. badges	182	25.00
Nov. 27, W. Mayer, adv. letters	183	2.75
Dec. 27, J. G. Moore, postage and express	184	11.92
Total expenditures		$1810.96

On motion, duly seconded, report of secretary was adopted as read.

Vice President Puerner takes the Chair.

The Chairman: We will now have the address of the president, Mr. G. P. Sauer of East Troy.

Ladies and Gentlemen, Members of this Association:

I would rather some one else would be in my boots just now, I don't wish you anything bad, but hope that each one of the boys will have this job on their hands some day.

This makes the ninth year this association has its annual convention. Looking back over the successful years this association has gone through, and how much good it has done for its members, I can't help but wonder why many more of our buttermakers are not present at these conventions. I suppose that we have as many and more than in other states, but still there are many of the boys missing.

This is certainly a great industry in which we all should be interested, especially when you consider the millions of dollars that are involved in the dairy business of this state. If all the buttermakers would realize how much they are loosing by not attending these conventions there would be a great many more present. Think of the hundreds, yes thousands of dollars that have been saved through the knowledge received at our meetings, dollars that have gone, not to swell the pockets of our millionaires, but to the patrons of our creameries, and in some cases to the buttermakers, (although I'm sorry to say not many.)

We may find one good reason why not more buttermakers are taking advantage of these meetings in the fact that some of the owners of creameries and quite many of the farmers' co-operative creameries in this state do not urge their buttermakers to take part in this good work. If they only would encourage them a little I am sure there would be many more interested. I worked 14 years for one firm in the creamery business and never received one request to join any state or other association or even to take a dairy paper. Of course I

should have done that anyway without anyone urging me, but we go along with our every day work and think we know all that is necessary, not paying much attention to what is going on until some one comes along and gives us a good shaking up and thus awake and often find that we don't know half as much as we thought we did.

Some time ago I hired out to a farmers' co-operative creamery and the manager told me that I should subscribe for a dairy paper and also send butter to all the conventions, state fairs and scoring contests. Now this manager saw the great advantage he would gain if his buttermaker would keep abreast of the times and I will say that if all managers of creameries knew how much good they would gain in dollars and cents for their respective creameries they would do the same thing with their buttermakers. Some of them think this association is only for the graduates of the dairy school and anyone else doesn't stand any show, but this is a great mistake which I can prove from my own experience. When I started to send butter some one told me I never would get a good score because they never give the high scores to any but the graduates of the dairy school. This is very untrue and all will find out the contrary if they will only investigate. The scoring exhibition as conducted by our dairy school at Madison is a great help to the buttermakers and should be patronized by all the buttermakers of this state. It is not alone the educational benefit anyone receives from those scoring exhibits, but also the desire to try and do better all the time in our every day work. The buttermakers' judging contest conducted by this association is a great help to us boys to find out just what kind of butter the trade is looking for and should have the support of all the members. A good way to keep in practice the year around is to have the county association conduct judging contests at their monthly meetings.

Cow test associations should be started by every buttermaker among his patrons. This year's high prices of butter have brought out the fact that the people will not consume

much butter if the wholesale price goes much over 30c per pound, but will buy oleomargarine and in such quantities that the daily output of oleomargarine exceeds 250,000 pounds. This alone should urge us to do something to increase the yield from each patron's herd so that he may be able to produce two pounds of butter fat from the same feed it takes to produce one, and in what way can it be done better than through the Cow Test Association in weeding out the poor cows and replacing them with better ones?

The oleomargarine manufacturers are again fighting the dairy industry of this country by trying to repeal the 10c per pound tax on colored oleomargarine and every dairy man and also every consumer should do all in their power to prevent the repeal of this law, because the tax on colored oleomargarine protects the consumer by making it impossible to sell it as butter and this protects the dairy industry as well.

Now I don't want to take any more of your time, this being the first address I ever made you will pardon me for not doing better. I thank you.

G. P. SAUER.

The Chairman: Next on the program is an illustrated lecture by Prof. E. H. Farrington, of Madison.

Address.

Prof. E. H. Farrington, Dairy School, Madison.

Mr. President, Ladies and Gentlemen:

I was reading something in a paper recently that interested me somewhat in connection with these pictures that I am going to show you. The title of the article was "Ways of Tiresome People" and the man who wrote it mentioned all kinds of tiresome people. The first was the man who talked too much, then the man who talked too little, but the one that interested me more than anything else was the man who had been to Europe, and the writer said that of all the tiresome

PROF. E. H. HARRINGTON,
Madison.
Speaker.

people yet was the man who had been to Europe and if ever you meet any of your friends who say they have been to Europe, the proper answer is good-bye."

The American as he travels in Europe has quite a reputation. It can perhaps be illustrated as well by an experience I had in the city of Oxford, at the University of Oxford. The University of Oxford is composed of twenty-one colleges; these colleges are arranged in the city, the buildings are around the city square. Everything in Europe is built on the hollow square order. I suppose it is a relic of ancient times when they got inside of their forts to protect themselves. There is one building used exclusively for conferring degrees, and the degrees are conferred at various times during the year. About two years ago, I presume you will remember, Mark Twain was given a degree by the University of Oxford. Well I happened to be in this building, and the caretaker (the caretakers there, as a rule, in different building's take a great

deal of pleasure in showing the visitors around) was showing me through. While I was in this room a man poked his head in the door and said "Is this the place where Mark Twain was given his degree?" He looked at his watch, said he had ten minutes to get his train, and left. After he went out the caretaker said he knew that was an American because that was the way an American saw Europe, and I think the Americans have that reputation of going to a great many places and not staying very long in a place, so as we are good Americans this evening we will have to go on our journey in some such way. Without further preliminary remarks I will begin to show you some pictures.

(Professor Farrington showed some very interesting pictures of rural life in Europe, especially in Holland, and scenes in Europe.)

This closed the first session and the convention adjourned until 11 A. M. Wednesday.

WEDNESDAY MORNING SESSION.

Meeting called to order at 11:30 A. M. by Mr. J. G. Moore.

The Chairman: Now, gentlemen, we will have election of officers. The first thing to do is to appoint tellers. Do you wish to have the chair appoint tellers?

On motion, duly seconded, it was moved that the Chair appoint tellers to count the ballots, and the chairman appointed as tellers Messrs. H. Gallup, Herman Raven and R. C. Green.

The Chairman: Nominations are now in order for president.

There being only one nominee for president, Mr. G. P. Sauer of East Troy, to succeed himself, on motion duly seconded and carried, the rules were suspended and the secretary was instructed to cast the ballot of the convention for Mr.

Sauer, which was done and that gentleman was declared elected to serve as president of the association for the ensuing year.

The Chairman: The next office to be filled will be that of vice president. Who will you have for vice president?

Mr. Raven: I nominate Mr. Puerner, of Gays Mills to succeed himself as vice president.

Nomination seconded, and there being no other nominations, on motion, duly seconded and carried, the rules were suspended and the secretary cast the ballot of the convention for Mr. Puerner, who was declared elected vice president of the association for the ensuing year.

The Chairman: The next officer to be elected is the secretary.

Member: I have been requested, in behalf of a great many people here, to place in nomination the name of Alvin Demerit, of Lake Mills. Mr. DeMerit has been a buttermaker and connected with the E. C. Dodge Company for over twenty years. He has signified his willingness to become your secretary if the members of this association would like to have him. He would make a good secretary and I therefore place in nomination the name of Mr. Demerit.

Mr. Raven: I nominate Mr. G. H. Benkendorf, of the Dairy School. He has been around the state, and knows the needs and wants of the boys.

Nomination seconded.

Mr. Bradbury: I have been requested to place in nomination here the name of a man who, I believe, is known to every man present. He has been a buttermaker for several years, is a man who knows the wants and needs of the buttermakers of the state of Wisconsin. He is a man who if elected to office will give you service such as this association has never had before. I nominate Mr. James F McGill of Little Suamico.

Member: I nominate Mr. J. G. Moore, of Madison. As

the success of our association depends on the secretary, I would like to nominate Mr. Moore to succeed himself.

Mr. Moore: I beg to say that Mr. Moore is not a candidate, but I thank you for your expression of good will.

The ballots having been cast and counted, the result was as follows:

Mr. Demertit 16 votes, Mr. Benkendorf 89, Mr. McGill 27, and Mr. G. H. Benkendorf was declared elected.

Mr. Bradbury: I move that Mr. Benkendorf's election be made unanimous, hoping that Mr. Benkendorf may fill the position as well as the retiring secretary.

Mr. West: On behalf of Mr. Demerit, I also move that the election be made unanimous.

Motion seconded and carried.

Mr. Green: The office of secretary of this association, gentlemen, is not all sunshine. The secretary goes up against a bump occasionally and, do the best he may, he will probably make some enemies, but I really believe that Jim Moore has done a great deal for this association. He has gone to a great deal of expense, I do not mean the association expenses, but he has paid his own expenses; he has done good, faithful, honest work for the association. He has made his mistakes, the same as the rest of us, but after all, boys, he has been a pretty good fellow for the interests of the Wisconsin Buttermakers' Association, and I believe at this time we ought to give him a vote of thanks for what he has done for the association.

Mr. Bradbury: I second the motion as Mr. Green put it.

Mr. Green acting as chairman, the motion was unanimously carried.

Mr. Moore: Gentlemen of the convention, it does me good, it makes me feel good to have you give me this vote of thanks. I want to say that my heart has been wrapped up in the Wisconsin Buttermakers' Association. I have worked for it. I have been connected with it ever since it was born, almost,—two years as president and five years as secretary. I

know there has been a lot of sentiment against me, arising no doubt from personal differences, some from the business I happen to be engaged in, but I did not expect to have a life lease on this job and I think I can live without it, and I told Mr. McGill last year if he wanted to run for secretary of the Wisconsin Buttermakers' Association that the good friendship existing between Jim McGill and Jim Moore would not be broken by that.

I thank my friends here who have helped me with what little success I have had for this association. I thank you very much, gentlemen, for your action today.

The Chairman: The next officer to be elected is a treasurer to succeed Mr. S. B. Cook, of Bloomer.

Mr. Carswell: I nominate Mr. S. B. Cook to succeed himself.

Nomination seconded and there being no other nominations, on motion duly seconded and carried, the rules were suspended and the ballot of the convention was cast for Mr. Cook who was declared elected unanimously as treasurer of the Wisconsin Buttermakers' Association for the ensuing year.

The Chairman: The next is a member of the Executive Committee to succeed Mr. O. B. Cornish. In connection with that I would say that last year Mr. Parman's three year term had expired and Mr. Holgerson was elected to succeed Mr. Parman; but moving out of the state took Mr. Holgerson out of the executive committee and Mr. Parman has been acting in that capacity since; therefore, there will be two members to be elected this time, one to succeed Mr. Cornish three years and one to succeed Mr. Holgerson for two years. The first to be elected will be a member of the committee to succeed Mr. Cornish, of Fort Atkinson.

Mr. Galloway: I nominate Mr. Cornish to succeed himself.

Mr. Carswell: In behalf of the buttermakers in the northern half of this state, I believe we should figure along

the same lines in the executive committee as a good many wanted for secretary, that is elect a practical buttermaker. I wish, therefore, to nominate Mr. H. C. Casperson of Deer Park.

The ballots being cast and counted the result was announced by the Chair as follows:

Mr. O. B. Cornish, 59; H. C. Casperson, 35, necessary to a choice 47, therefore Mr. Cornish was declared elected to succeed himself for three years.

The Chairman: We will now elect a man to succeed Mr. L. P. Holgerson for two years.

Member: I feel that we cannot afford to lose Mr. Moore as an officer of the association and therefore nominate Mr. J. G. Moore as a member of the executive committee to succeed Mr. L. P. Holgerson.

There being no other nominations, on motion, duly seconded and carried, the rules were suspended and Mr. Moore was elected by unanimous vote as director to succeed Mr. Holgerson for two years.

President G. P. Sauer then announced committees as follows:

Resolution: F. E. Carswell, H. C. Raven, R. E. Tamblingson.

Legislative: J. G. Moore, G. H. Benkendorf.

Meeting then adjourned until 2 P. M.

WEDNESDAY AFTERNOON SESSION.

Meeting called to order at 2:30 o'clock by President Sauer.

The Chairman: The first on the program is "Difficulties in Controlling Moisture" by Mr. J. L. Frank, of Black Earth, but as Prof. Farrington is obliged to get away we will have him talk to us on Creamery Overrun.

The Creamery Overrun.

E. H. Farrington.

Among the many questions sent to the dairy department of the University of Wisconsin from farmers and creamery buttermakers no one is received more frequently than the request for an explanation in regard to the overrun that should be obtained in buttermaking. The following abstracts from two letters illustrate some of the points which are not clear in the minds of creamery buttermakers.

Letter No. 1.

"We started a creamery in June and have been in trouble ever since. Our overrun in June was 10 per cent but we laid it to the new machinery as it was only a few days' run and did not amount to very much. The overrun for July was 13 per cent and we begun to think that something was wrong. We got a test bottle tester and found a few of our test bottles were not correct. We also found our buttermaker had been discharged before on account of low overrun. The August overrun was 16.8 per cent and we were still complaining. The September overrun was 15.6 and we began to think the buttermaker was robbing us and told him that unless we could have a better overrun we would either have to go out of the business or get another buttermaker. He then cut the test way below what it should have been and the patrons were quitting us. In order to get the patrons back we gave the buttermaker two weeks' notice to look for another job. We got a new buttermaker November 5th. Have been testing every batch of cream as it comes in and are satisfied the buttermaker is honest and doing the very best he knows but our overrun for November will be about 10 per cent. The cream is all gathered and the haulers seem to be very particular about getting a fair sample. We know there is something wrong but we are not able to find what it is. We churn Wednesdays and Thursdays and if it is possible for you to send us a man who can put us on the right track we will be greatly obliged to

you. I will gather the cream myself this week and will try to get a fair sample.

Letter No. 2.

"Will you kindly by return mail answer the following questions: Is there any law fixing the limit of overrun in making butter? Is it possible that 25 to 26 per cent overrun can be made when the test is read correct and the water near to the limit 16 per cent? I figure that butter containing 16 per cent moisture will give us an overrun of 19 per cent on the moisture alone. Is this correct? What is the highest amount of each of the ingredients contained in butter that aids in making the overrun? If the law provides that butter should contain 82.5 per cent fat will this allow an overrun of 22.21 per cent? The overrun at our creamery has at times been 22.00 to 23.00 per cent and in November 24.67 per cent. Our buttermaker so far as I know reads the tests correctly and knows how to control the moisture, holding it at 15.00 to 15.5 or as near 16 as he dares. He claims to have taken butter from the churn which has given him an overrun of 25 per cent. Now we must be violating the law somewhere because butter containing 82.5 per cent fat cannot give that large overrun. According to my figures butter cannot contain more than 80 per cent fat to allow an overrun of 25 per cent. Will you kindly assist us by giving your advice; if possible would like to have a man call at our creamery at the earliest possible date."

In order to get a clear understanding of the overrun as it is understood by buttermakers it is well, first to find out how large an overrun can be obtained and still make legal butter.

The only law which has any bearing on the overrun at the present time is the one which requires that butter shall not contain over 16 per cent water. When butter is made with 16 per cent water it probably will not contain less than 80 per cent fat, and if butter contains 80 per cent fat the overrun cannot possibly be more than 25 per cent because there is inevitably a loss of some butter fat in the various processes of

buttermaking. It can therefore be assumed that an overrun of 25 per cent or more is an indication of excessive moisture in the butter, so that the highest limit of the overrun is somewhat less than 25 per cent.

In one of the letters given above the question is asked if a 16 per cent moisture will give an overrun of 19 per cent. If the moisture was 16 per cent, the salt 2 per cent and the curd 1 per cent, this would make a total of 19 per cent which subtracted from 100 leaves 81 per cent as the butter fat in the butter. The overrun from such butter as this can be calculated by dividing 19 by 81 and multiplying the quotient by 100, which gives 23.4 per cent.

The same buttermaker also asks what the overrun would be if the butter contains 82.5 per cent fat. This may be calculated in the same way by subtracting 82.5 from 100 which gives 17.5; dividing 17.5 by 82.5 and multiplying by 100 gives 22.2 per cent overrun. These are about as high figures as it is possible to obtain in the every day work of the creamery.

Anyone may easily calculate the overrun from each churning made by first subtracting the pounds of butter fat in the milk or cream from the pounds of butter then divide the difference by the pounds of butter fat and multiply the quotient by 100. This rule has been given many times and is contained in nearly all text books on dairying. It seems hardly necessary therefore to discuss the mathematical calculation of the overrun any further but simply give an illustration to show the highest overrun that it is possible to get and still make legal butter. Before leaving this part of the discussion it may be well to state, however, that it is hardly safe to attempt to make a large churning of butter and have the water content of the butter above 15.5 per cent. We have found at the dairy school creamery and it has been noticed by others that the water content of a churning of butter may vary in different parts of the same churning from one-half to one per cent so that a moisture content of 15 per cent is a much safer standard than the higher figure. In a small churning,

say one of 600 pounds, we have noticed that the moisture content of the ten 60 pound tubs filled from this churning is not the same figure. It may vary as stated before from .5 to 1. per cent. On this account it is safer for a buttermaker to regulate the buttermaking operations so that a sample of the butter taken from the churn does not contain much over 15 per cent water at the time he wishes to pack this butter into tubs.

We have now discussed somewhat the overrun question from the standpoint of the highest overrun that can be obtained. A great many buttermakers are troubled by not being able to get so high an overrun as desired. It may, therefore, be of interest to discuss somewhat the factors which influence the overrun and cause it to be unnecessarily low.

This part of the question I think can be fairly well understood by taking a certain amount of milk and tracing the fat it contains through the various manufacturing processes until it reaches the finished product or butter tub, and notice the losses of fat which occur during these various manufacturing processes.

Suppose we take 10,000 pounds of milk testing 4.0 per cent fat and try to account for this fat in the butter and the various other products that are obtained during the buttermaking process.

We have now 400 pounds of fat in the 10,000 pounds of milk. When this milk is separated it may be divided into

1200 pounds of cream
8700 pounds of skim milk
100 pounds of mechanical losses.

Tracing now the 400 pounds of fat through these various products we find that

8700 pounds skim milk testing	.05—	4.5 lbs. fat
Mechanical losses of 1.0 per cent	—4.0	lbs. fat
Making a total of	8.5	lbs. fat

lost during the skimming. From these figures now we can obtain the amount of fat left in the cream. If 1200 pounds of cream contain 400 pounds fat minus 8.5, there would be left

in the cream 391.5 pounds of fat. The test of the cream can now be calculated by finding what per centage this 391.5 lbs. of fat is of 1200. This is shown in the following proportion:

1200:391.5::100:x which equals 32.6 per cent, the test of the cream. The next calculation necessary is to find the amount of buttermilk. Assuming this to be the cream minus the fat we will have 1200—391.5—808.5 pounds of buttermilk. Now, assuming the test of the buttermilk as .2 the amount of fat lost in the buttermilk is 808.5x.2 per cent which gives 1.61 pounds. Assuming further that the mechanical losses of fat during the churning process are 2 per cent, then 2 per cent of 391.5 is 7.83. The total losses of fat during the churning process are therefore:

Loss in buttermilk	1.6 lbs.
Mechanical losses	7.8 lbs.
	9.4 lbs.

Subtracting this from the fat in the cream we have

391.5—9.4—382.1 lbs. fat in the butter.

Assuming next that the finished butter will contain 32 per cent fat, we can easily calculate the number of pounds of butter containing 82 per cent fat that can be made from 382.1 pounds of fat, 82:100::382.1:x—466. pounds of butter.

From the above calculations we can easily see that from 10,000 pounds of milk testing 4.0 per cent fat we have made 466 pounds of butter containing 82 per cent fat. Collecting the figures from the different calculations we have the following summary:

Fat in the skim milk	4.50 lbs.
Mechanical losses in skimming	4.00 lbs.
Fat in buttermilk	1.60 lbs.
Fat in the butter	382.10 lbs.
	400.00 lbs.

From these figures we can calculate what the overrun will be. If 466 lbs. of butter were made from 400 lbs of fat

in the milk there was an increase of 66 pounds of butter; this is the overrun in pounds. The percentage which this is of 400 can be found as follows:

400:66::100:x or 16.5 per cent, showing that an overrun of 16.5 per cent can be obtained from whole milk and the butter contain 82 per cent fat, the skim milk test .05, the buttermilk .2 per cent fat and the mechanical losses in skimming and churning amounted to 11.8 pounds which is 2.9 per cent of the original 400 pounds of butter fat in the milk. One can easily see, therefore, that butter containing a standard amount of fat, 82 per cent, can be obtained from whole milk and a overrun of 16.5 per cent obtained. This overrun can be considerably increased by reducing the mechanical losses which many buttermakers will observe are high in the calculations made. In fact the mechanical losses in this calculation amount to more than the losses in both the skim milk and buttermilk and in everyday practice they should be much less than here given.

We can readily see from the above calculation that if an overrun of 16 per cent is not obtained when butter is made from whole milk there are excessively large mechanical losses of fat and that by carefully rinsing the vats, separator and other tinware through which the milk and cream passes and saving all the fat possible in the handling of the butter from the churn to the tub, the mechanical losses can be very much reduced and the overrun thereby increased.

Similar calculations to those given above can be made when butter is made from cream and it will be found that legal butter containing at least 82 per cent fat can be made and an overrun above 20 per cent obtained, although never so high as 25 per cent by careful work.

The factors which have an influence on the overrun are:

1. Accurate weighing of the milk and cream received.
2. Accurate sampling.
3. Accurate reading of the tests.
4. Losses in skim milk.

5. Losses in buttermilk.
6. Mechanical losses.
7. Per cent of moisture in butter.

If a buttermaker is obtaining too low or too high an overrun he should do some investigating in his factory and find out which one of the seven factors mentioned are responsible for the unsatisfactory overrun in his factory.

Discussion.

Mr. Larson: I would like to ask the speaker what percentage of butter fat a sample of butter would have that contained 15½ per cent moisture?

Prof. Farrington: That is 15½ per cent moisture; how much salt do you want there? We will say 2 per cent salt, that makes 17½ per cent; one-half per cent curd would make 18 per cent, and 18 per cent from 100 leaves 82 per cent. You can make it that way or make it a little higher than that by cutting down the salt, and you can make it less than that by increasing the salt content, so it is possible to get butter containing 82½ per cent butter fat if the moisture is 15½ per cent.

Mr. Larson: The point I was going to bring out was the matter of fat standard both of the United States department and the state department as the 82½ per cent. I think 15½ per cent is too near the danger line, I would prefer 14½ per cent moisture and have some of the other ingredients increased.

Prof. Farrington: I think 14½ per cent is safer than 15½ per cent, and then we want to distinguish between legal butter and standard butter. The only thing that influences legal butter is the per cent of butter fat, and butter containing over 16 per cent water is not legal butter and has to be taxed the same as oleomargarine; but I do not know that there is any law that would have any influflence on standard butter, but standard butter contains 82½ per cent butter fat.

and that has been suggested by Secretary of the Agriculture Wilson, and also the authorities in this state.

Mr. Larson: The Secretary of Agriculture has promulgated those standards and the state department has included it in the laws of 1910 so it is legal butter.

Mr. Aderhold: In reading the test of cream samples how close up to the upper edge should they be read?

Prof. Farrington: Of course that varies with the kind of bottle that is used. If the narrow long neck bottles are used it will probably be necessary to read the upper top of the fat column in the same way as the whole milk bottle is read; but if the short neck, wide cream bottle is used I think the safest way is to use what we have called the fat saturated alcohol and get a straight line at the top as well as the bottom of the fat. A calculation has been made by the U. S. Department of Agriculture in which their suggestion, I think, is to take four fifths of the miniscus and subtract that from the reading and then add two-tenths. Is that right Mr. Corneliuson? I do not know whether you buttermakers can remember those figures. I think you ought to use the narrow neck bottles or use this fat saturated alcohol that gives you the straight line at the top of the fat column and a definite point at which you can read.

Mr. Aderhold: Would it not be better to have the right bottle?

Prof. Farrington: If you use those nine inch bottles the objection is that you get a very long fat column and if you have cream that tests 30 per cent fat and get that into a nine inch bottle and the influence of the temperature in reading that long fat column is considerable, and you have to have a tank in which to set the bottle and have the water deep enough in that tank and have it tempered up to 120 degrees, and get that fat to a temperature of 120 when read. If you go to that trouble it is more convenient to use the long neck bottles than the wide neck bottles.

Mr. Aderhold: Cannot that be avoided by using 9 gram samples in nine inch bottles?

Prof. Farrington: That would help a great deal but, of course, most of the creameries are fitted up with testers too small to take in the nine inch bottles.

Mr. Aderhold: Do any of them use the fat saturated alcohol?

Prof. Farrington: I do not know, but on account of the fact that so many creameries are supplied with these testers in which the six inch bottles fit I think you would hardly expect that they would all change over and buy new testers to fit a nine inch bottle, although that is a more accurate way of getting the test.

Mr. Larson: Is there not a six inch, 50 per cent 9 gram bottle that could be used in those testers with the same degree of accuracy that the nine inch bottles could be used?

Mr. Moore: There is such a bottle.

Mr. Carswell: I believe this agitation of using different bottles is wrong. I believe the government bulletin calls for a standard weight, 18 grams of cream. Everybody should use the 18 gram sample of cream and the 10 per cent bottle and thus save a great deal of confusion. For instance, in one town a buyer uses a nine gram sample while the man in the next town uses an 18 gram sample, and we have a great deal of explaining to do to make the farmer understand the difference in using a nine gram sample and an eighteen gram sample.

I believe where a great many get their difference in overrun is in reading the miniscus, but I do not believe we ought to advise using the nine gram sample. We should use the 18 gram sample, it is plenty small enough with which to test cream. I believe we should stick to the 18 gram sample, nine inch bottle, 40 per cent or 50 per cent. I think you will not find any cream that runs over 40 per cent unless through accident. I never encourage my patrons to bring cream testing

over 30 per cent to 35 per cent. I believe we can make better butter from cream testing 30 per cent to 35 per cent.

Mr. Corneliuson: How long does it take to make the test with saturated alcohol?

Mr. Carswell: I do not make a practice of using the alcohol. We test every day and we use the 40 per cent bottle, with the miniscus the same on every bottle. There is nothing on the top of the fat column and it is clear and distinct.

Mr. Larson: You spoke of the 40 per cent bottle, you have reference to the Mann's bottle, have you not? What do you think of the 6 inch bottle?

Mr. Carswell: I do not use the six inch bottles at all. I think the nine inch bottle is more convenient to use.

The Chairman: Any other questions on this subject? If not your secretary, Mr. Moore, has some announcements to make.

Sec. Moore: I have a letter from Hon. S. A. Cook enclosing check for $25.00 to the association with his good wishes. This is in addition to the three chairs, which are on exhibition over at the Palmer House, also a donation from Mr. Cook. Mr. Cook will be here this afternoon and I am sure we are all indebted to him for the kindness he has displayed to the association.

The laws provide that any change in the by-laws must lay over one day. I want to propose a change in Article 4. Last year Mr. Speir was treasurer and Mr. Cook took charge, and there was an interval when the treasurer was not represented. Article 4 reads as follows:

"The general officers of said association shall be president, vice president, secretary and treasurer and the board of directors shall consist of three members of the association. The term of the officers of the association shall be one year, or until their successors are elected at the next annual meeting following the election, etc., etc."

I propose inserting after "the term of the officers of the association shall be one year" until July 1st. That will give

the old officers of the association a chance to get their report printed and have everything turned over to the new officers in good shape. I shall offer this tomorrow for your action.

I also have received the following letter:

Chicago, Ill., Jan. 28, 1910.

Mr. J. G. Moore, Madison, Wisconsin.

Dear Sir:

I note that you are secretary of the Wisconsin Buttermakers' Association and in this connection our association would be pleased to have your association and all its members join with us as auxiliary members for which there will be no charges of any kind now or in the future. Our object in taking in all other associations is to get a large, strong organization. We have ninety associations that have joined up to date. We obtain our revenue to carry on our work by obtaining advertising in our various publications.

We are conducting an educational campaign to prevent and eradicate animal diseases.

We are also opposing the repeal of the present 10 cent tax on colored oleomargarine.

Would be pleased to hear from you by return mail,

Yours very truly,
National Ass'n Live Stock Breeders,
Raisers and Shippers,
C. M. Fleischer, Secretary.

Jan. 29, 1910.

C. M. Fleischer, Secretary,
National Ass'n Live Stock Breeders, Raisers and Shippers,
Chicago, Ill.

Dear Sir:

I am in receipt of yours of January 28th and would say that I am very glad to know that you are opposing the repeal of the ten cent tax on colored oleomargarine, and that is something the buttermakers certainly are in favor of. I will take this matter up with our association next week at its convention in Fond du Lac and see if we cannot get a resolution

through to have our association join with yours. Will let you know further after that.

With best wishes, I remain,

Yours truly,

I answered this letter stating this matter would be brought up at this convention and I think it would be in order for the members to say whether they want to join this association.

The Chairman: I will entertain a motion to join this association.

Mr. Corneliuson: I would like to know the names of some of the men that represent that association.

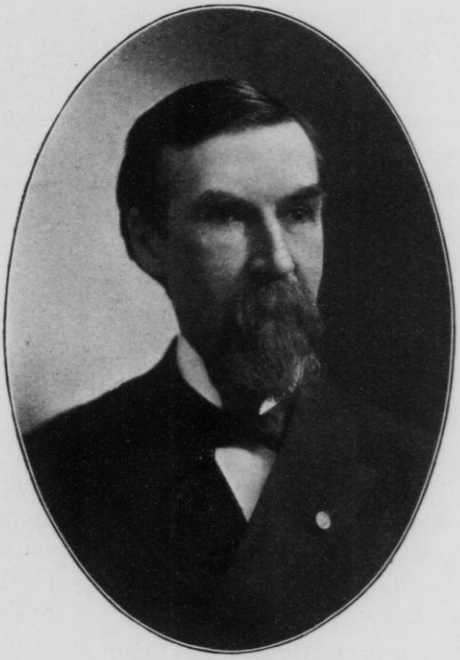
Sec. Moore: The executive committee is made up as follows:

F. W. Harding, beef breed cattle, Waukesha, Wis.
F. C. Giltner, beef breed cattle, Eminence, Ky.
George Crouch, heavy horses, LaFayette, Ind.
Robert Burgess, heavy horses, Wenona, Ill.
A. S. Burr, light horses, Bement, Ill.
J. F. Cook, jacks and swine, Lexington, Ky.
Chas. L. Hill, dairy cattle, Rosendale, Wis.
F. R. Sanders, dairy cattle, Bristol, N. H.
W. B. Barney, dairy cattle, Hampton, Iowa.
Geo. McKerrow, sheep, Pewaukee, Wis.
J. W. Garvey, swine, Auburn, Ill.
E. J. Barker, swine, Throntown, Ind.
Chas. E. Bunn, ponies, Peoria, Ill.
Ernest Kellarstrass, poultry, Kansas City, Mo.

Mr. Corneliuson: I believe it would be a good idea for the members of the Wisconsin Buttermakers' Association to join with the National Association of Live Stock Breeders, Raisers and Shippers, and I therefore move that we do so.

Motion seconded and carried.

The Chairman: Hon. Mr. Cook is with us now and I am sure the members would all like to hear from him.



HON. S. A. COOK,
Neenah, Wisconsin.

Address.

Hon. S. A. Cook, Neenah, Wisconsin.

Mr. President, Ladies and Gentlemen of Wisconsin Buttermakers' Association:

For several years you have permitted me to be a member of your organization and meet with you in your annual conventions. You have extended me the courtesy of being heard, using time that, perhaps, could have been better occupied listening to those who, no doubt, are better qualified to speak from a more practical standpoint on conditions of vital interest to the great industry in which you are engaged.

My efforts, though of a minor nature, have been on lines to encourage making a better article and more of it. Others may know more about how to accomplish that, but none is

more earnest than I to see it worked out. A good article will always find a ready market, and if the present product was doubled I feel confident it would find a good demand.

With the words "Better Article and More of It" for a text, I will endeavor to give briefly some of my reasons why better butter and more of it should and can be produced. Reflection on the large amount of good butter now being made in Wisconsin is not intended. Wisconsin butter will average as good as or better than the produce of any other place in the world, but there is room for much more.

If it is your opinion that I err in my statement, I want you to understand that my mistake is of the head only, and that it is my desire to be a helper for the common good, as far as I am able.

Prices of food products to the consumer are high, and under existing conditions the end is not yet. Reaction has begun; not because of over production, but because of under consumption induced by the fact that many of the consumers are not able to buy. The working men of cities and their families are the large consumers by reason of their great numbers. From many localities they are appealing to the government to find the cause of the high prices and to provide relief.

Disturbers of progress and development in our state are shouting in answer, from the platform and through the newspapers, that trusts and combinations are at the bottom of it all.

Therefore, I ask you as producers of butter, are you members of a combination or trust that has caused butter to sell from 36 to 40 cents a pound to the consumer?

I have asked the producers of cheese if they are in a trust that makes cheese cost from 16 to 20 cents a pound.

Are producers of hogs in a trust that causes hogs to sell from 8½ to 9 cents per pound live weight?

Are the producers of eggs in a trust that causes eggs to be 35 cents per dozen?

If there are trusts or combinations among the producers of the farm products I have named, or the dealers in same, to get an unwarranted profit, they should be carefully looked into and checked up, for the longer they run the more serious will be the reaction which must necessarily be the outcome of any organization that raises the price of its product to an unwarranted profit.

After all my questioning I have been unable to find among such producers trusts or combinations against which can be lodged the charge that they are the cause of the high prices to the consumers of food products.

I am interested directly as a producer of hogs, and indirectly in butter and cheese. I am a direct consumer in my own home at retail prices, and indirectly connected with a large number of daily laboring people who are consumers at retail prices, so that I trust I am able to see and consider both sides. The situation has become serious. There is, no doubt, a combination of causes. It is possible that the high price of corn and low price of pork during the past few years, causing many to quit raising hogs, had something to do with the scarcity of hogs and the high price of pork at this time. I believe careful investigation will show 400,000,000 pounds less pork raised in 1909 than in 1908 and the consumers of food products increasing in numbers at least one million a year. It was not and is not practical to produce cheap pork with corn selling from 70 to 75 cents per bushel, and other cereals that might have been used to fatten hogs selling at an equally high price. In most instances such cereals, as well as corn, are at this time worth about as much sold on a direct market as food products for man, as could be realized from sale of the fattened animal or the product of the cow. A difference in favor of the latter might be brought about by practical judgment in selection of the cow and care of same.

Many of the great cattle ranges of the west, where the cost of raising cattle was very small, at least up to the time for stall feeding, have been bought and fenced by settlers,

(and the same condition applies to sheep and horse raising), a fact that contributes to the advance in consumers' cost.

But, in my judgment, the most serious cause is contributed by the people themselves through their desire to live in the city or village under the delusion that to exist there is preferable to country life, and thus becoming consumers instead of producers of food products. They are letting the great opportunity of their lives pass from them. There is land enough in the United States to raise food products sufficient to feed the world if the land was all properly farmed; and there is no better business, no higher or more important branch of industry calling for exercise of the ability of high class men and women, than farming.

A farmer may have five or ten children. One or two remain on the farm, the others are given what education can be obtained at short terms in the district schools, and then sent or permitted to go to the cities to find or take such jobs as may be open to them; or, some may study to enter a profession that earlier development gave evidence they were intended for. They all become consumers of farm products and not producers. This, with the influx from other sources, and the natural increase, is causing the population in cities to grow so much faster than farm products increase in volume, that the condition is becoming a menace to the continued prosperity of the nation.

There is no shortage of professional men in the cities. There may be a lack of all around honest, practical men. There is, however, a great shortage of practical farmers to push and demonstrate by their work their high calling, and the good results to be obtained from practical farming, together with butter and cheese making.

I personally know that on the capital invested, for the past ten years, farming and dairying has paid a better percentage than manufacturing. I am engaged in both, and have endeavored to have both handled practically, with a view of obtaining best results from each.

You buttermakers can help solve the high price problem that now confronts the consumer and purchaser by joining with the farmers who furnish you cream, to study and plan to fully utilize every acre of their land, and by careful management produce more from each acre and each cow, thereby lessening the cost and enabling them to put the product on the market at a less price to the consumer, and at the same time return as much profit as they get under present conditions, which demand a high price for the smaller product per acre and per cow. More and better produce from each acre of land and each cow means more profit for the producer and cheaper prices for the consumer. That would mean continued prosperity. For, what is true of one legitimate industry is, to a great extent, true of all. When the cost of an article to the consumer becomes so high that he can not use it, he must, of necessity, turn to some coarser and cheaper article. In many instances he does that without thought of quality, or consideration of the fact that by so doing he is helping build up industries that produce material in imitation of the genuine article. Such conditions are with us now. The farmer, the manufacturer, the working man, and the whole field of commercial industries are confronted with a condition that calls for not only prompt, but very careful consideration by practical men and women.

It is true that our state agricultural college, farm and dairy schools are now doing a great and good work; but there is room for ten times as much in that line for the development of young men and women for farm and dairy life. There is no nobler calling—no life more healthful and independent.

Farmers and buttermakers are you making the best of the situation, are you making your homes so pleasant that your sons and daughters will stay with you and cheerfully adopt your calling until they can step into a nome of their own on a good farm?

Are you, while they are under the father and mother care, taking advantage of the opportunity afforded by the daily

mails and furnishing papers, magazines, etc., by means of which they can keep up with the times, and learn to be sound and sensible thinkers, a possession which is beyond money value?

Are you giving your children the opportunity to secure sufficient education to grace the home of any with whom they may become mated for life? And if necessary, carry on the good work you are engaged in?

If you are not doing this, why not?

Nearly all of you can, if you will, practically farm all the land you have. It is not now a question of the great number of acres you possess, but whether you produce the maximum from each acre. You need have no fear of over-crowding the market; for, with high grade goods at a reasonable price the markets of the world will take all, if many times as much as is now produced. If, by your encouragement, you are successful in keeping the boy and girl at the farm home, you will draw largely from the population of the over-crowded cities, and give those who must live in the cities, and who are less fortunate, a better chance to work and earn money with which to buy your products.

The spirit of progress, in conjunction with good ideas, is the best asset an individual or community can have. You have done great good by your wonderful development of the butter industry. Because you have been progressive and developed good ideas, Wisconsin's butter is sought for in all the markets of the world. Go on with your good work. Help keep as many of the boys and girls of the farm on the farm as you possibly can. Ask for and insist on the passage of just and fair laws relating to your industry, not forgetting what is due to others because lasting success of any one branch of industry depends largely on the success of others.

Mr. Magrane: I have been listening to Mr. Cook's speech and I think it is one of the best addresses that has been delivered before the Buttermakers' Association and I move

that this address be printed in the dairy papers so we may all receive a copy of it.

The Chairman: I agree with the gentleman and would like to see the motion receive a second.

Motion seconded and unanimously carried.

The Chairman: Difficulty in Controlling Moisture by Mr. J. L. Frank, of Black Earth, will be the next on the program.

Difficulties in Controlling Moisture.

Mr. J. L. Frank, Black Earth, Wis.

The moisture proposition has been dealt with now for a few years, a number of years ago experiments were made in various dairy schools and results that were published were such that the moisture contents of butter could be controlled where conditions were normal. This question, of where conditions in the manufacturing of butter are normal, I shall discuss later on during my talk. Now then, in the last year more creameries have paid the ten cent (10 ct.) stamp tax fine, than in any previous year before. What has been the cause of this? Have the revenue officers just began to enforce the law, or is the buttermaker and creamery manager trying to dispose of adulterated butter, which he did not have or try in previous years. It seems to me like this, Uncle Sam is just beginning to enforce the law or this proposition of how to control moisture in butter is beginning to be more of a serious question than ever before. Now why should the latter be, that is the question that is puzzling a lot of us, and I shall take it up later.

Starting again at the beginning of this question, where was the first idea taken from as how to work moisture into butter? Let me tell you, gentlemen, history tells us this: One day while one of our buttermakers, who has made a fortune in the creamery business and is now retired, was sitting on a butter tub working oil into putty to putty some of his win-

dows, discovered the secret. If oil can be worked into putty, why cannot water be worked into butter in this same manner,—by squashing and squeezing it in water, by passing through the roller in water. Now then this method looks very simple to me, and was taken up by a good many of our best experts in creamery work. It was not long afterwards until a few men were traveling up and down this country trying to sell this secret and explain to the creamery men how they could get a 30 to 40 per cent overrun by applying their method in the manufacture of butter. Men who were convinced by these people that their secret was a good thing could be employed in securing this large overrun, were willing to pay the price. Some of our men got ahold of it through gossip and then began to experiment. Now then, a few got so that they could incorporate enough moisture so a 30 per cent overrun could be had. Remember, those days we had no moisture tests, everything went by the yield, and coming down to business these men did not know whether they were incorporating 14 per cent of water or 20 per cent, how to control it was not experimented with at all. It was simply how to get a large yield. Even our dairy schools, which had taken up this question, very little could be learned from them in regard to the controlling of this water in butter. Why? Because this question of how to control moisture was not thought of by anyone at the time.

Our markets became overloaded with butter which had weak body caused by being soaked to its fullest extent with moisture. Matters became fierce and Uncle Sam had to pass a law, which he did, and in that named all butter containing 16 per cent and over, of moisture, adulterated butter and placed a fine upon all such goods. Now then this started the ball rolling.

The dairy schools, the dairy papers took up the matter and everyone who was in the creamery business became more or less interested, but for a long time very little could be learned, as to how to control moisture. Later on bulletins

were gotten out by the various universities, but when we come right down to business we find that their examples which they demonstrated to us, could not be employed in most of our creameries. Why? Because we did not have the machinery that the Dairy Schools had to do this with, some of them had, and they as usual when a new thing comes up were successful in trying it out. But nevertheless the pointers that were given out by the Dairy Schools were good ones, and by a little hard work on our part, we were somewhat successful.

Gentlemen, how many buttermakers ever knew or tried to incorporate moisture before this law was passed, and before this gossip became the leading subject with all our people who were interested in the manufacture of dairy products. The whole secret was concealed up in the sleeves of a few men and these men were flooding the market with butter containing such enormous amounts of water that something had to be done and the law was passed. Now then, at this point the subject became widely known—everyone of us went into the harness, but when we came to the point of controlling the moisture, at a point near 16 per cent, we found that we were up against it and a good many slips were made. Butter passed through the market O. K., and, of course, we thought we were controlling the moisture, as long as the revenue officers were not so strict in enforcing the law. Men it is an easy matter to make your own moisture tests from every churning and put it down on the daily record 15 per cent, always making a good fellow out of ourselves, but if one of our board of directors were to make the moisture tests, they would probably not look so nice to us, and if the revenue officers had not been so lenient with us in previous years, some of us today would be in a better position to control moisture than what we are, but it seems Uncle Sam was easy at first in enforcing this law. We got one leave and took another. To make the foregoing statement more strong, why is it that in the last year more money has been collected by the revenue officers for trying to sell adulterated butter on the market than any previous year be-

fore? I honestly believe that if the public today knew how much of it has been held up in the last year, some of us would be a little surprised, and sit down and do a little more thinking and not put so many nice figures in dairy records which certainly has done us a great deal of harm in a way which I will try to explain later on.

The revenue officers soon seized some of this butter and when the notifications were served upon these creameries that their butter was seized, it still came as a great surprise to a good many of them. The question now arises, who is really to blame for having this butter with excess moisture? Now then, gentlemen, at this point allow me to ask this question referring mostly to co-operative creameries. We need not fear the centralizer, for he generally sees his weak spots before anyone has a chance to tell him, for his management is the best that can be had, that is why they are successful.

How many of you board of directors or creamery managers would really get up and say that the buttermaker in every case has been to blame for this butter containing the excess of moisture? Don't you think that in a good many cases, you, board of directors, have been somewhat to blame? How many of you, creamery officers, are today furnishing a class of help in creameries that you would not enjoy to employ. But this man in your creamery who is to put out a A No. 1 article, and who ought to have nothing else, but the best of help, has to put up with a class of help that you, creamery officers could yourselves not in any manner or form use. If you cannot depend upon a man wherever you place him to work what is the object of having him then? How will a business ever be successful with such employees? This has been one of our great evils in the co-operative creamery management. Trying to run the business on nothing, and this is one reason why so many of our co-operative creameries have had to close their doors in the last few years, but the strong competition and good management of the centralizer has caused our co-operative creamery man to wake up and their

management is getting better. It also may be laid to the fault that we may not have a class of machinery that we ought to have, this part I shall take up later. Let me tell you, creamery officers, if there ever was a time in the history of the creamery business that the management required such broad minded men, men of experience, who are capable at all times of judging any style of trouble that may arise in the business and place the blame where it belongs. Competition never was as strong as it is today and for that, if not anything else, we need at the head of these co-operations men who have a thorough knowledge of the business and, if not that, you ought to be willing to be guided by a man in whom you have taken confidence to operate your business, who is supposed to know, and at all times support him with the greatest of strength, but if your knowledge tells you that he is not the right man in the right place and your confidence can no longer be placed in him, the sooner you get rid of such a man the better for the business. Right here I wish to bring out another point and that is this: many of you buttermakers of whom in many cases have had this trouble and in every way knew its real cause and were not to blame have been afraid to explain yourselves and simply sit down and take all the curse hammered upon you good naturedly. What benefits have you derived from such actions? Men, let's not be afraid to stand by it, and upon your employer of it, if he does not take your advice now, he will some day wish he had.

You know there was never a time in the creamery business when there was such a demand for men who were at all times ready to take up a propositon that came their way, than the present time. I do certainly believe that, if the buttermaker in a good many of these cases would speak right out and not be afraid to let himself be heard to his officers, it would be a benefit to the creamery, as I know a good many of our creamery officers, who are not as well educated along the creamery lines as they themselves would like to be, would be perfectly willing to receive advice from their men. There is

nothing better for any creamery and its officers than to get their heads together and always pull one way and not try to slight one or the other as not being capable of handling his position. If this is the opinion of some, it would be well to dismiss that party.

Now then, to again get right back to the real question of moisture. You are shipping your butter to the market—everything runs so nicely. Some of us knowing what we are doing but it has been done so for years and nothing found out, we get just a little bit careless, but when the letter of notification comes from the revenue officers, we find we are up against it. Now then, it might have been that this excess of moisture was put in intentionally, then it also might have been the case that all means were being tried to hold it down, but failure was the result, and do you think such creamery had ought to be fined, we have had cases of this kind, and will have some more. Now then, I know that this is the fact that in a good many cases it has been impossible to hold the moisture in the limit of the law, and I am here to endorse the statement which Prof. McKay made in one of his articles to the Creamery Journal, where he knew of a creamery where trouble was being had in keeping the moisture below 6 per cent. In fact, it could not be done and I positively know that this has been true in a good many other cases and still we have a law passed which makes it criminal offense to have 6 per cent and over that amount of moisture in butter. Of course, these cases we find are very few and you may consider yourself lucky, if you have never met with a proposition of this kind before, but remember that conditions are not the same in all localities and you never will know how soon you will be run into a locality where trouble of this kind exists and still some of us, because we have had the best of success, never realize that the day may come when we will run up against a proposition of this kind. Now then, how are we going to control the moisture contents of our butter at the churn. In taking this question I can only speak from my

own personal experience and shall try to outline to you the difficulties I have met with and how I have overcome them. First of all in the secretion of butter fat lies a secret of controlling moisture. In the month of June when grass contains the most moisture, butter seems to take up moisture very readily during the churning process and for this reason I will try and demonstrate to you that churning, when we were making butter from nothing but whole milk, and see how this compares with conditions today. We in those days received all our butter fat in whole milk which was separated at the factory skimmed as thick as we wished. We ripened the cream in the forenoon and practically was all cooled down to its churning temperature by noon the same day it was received, then the next morning it was churned at a temperature to which it had been cooled—it was somewhere around fifty degrees. The churning took from one-half hour to one hour butter was churned, grained from the size of wheat kernels, buttermilk was drawn and washed at the temperature of fifty degrees about 10 revolutions, then we drained all the water off, leaving sufficient in the churn to dissolve the salt which was then added. For instance taking we were using a Victor churn we worked it about 14 revolutions. This butter when finished working was firm and in good packing condition—contained about 14 per cent of moisture which ought to be sufficient for anyone. Now then, our conditions are such today that we can always put our cream through a manufacturing process of that kind from the time the cream is received at the creamery until the butter is packed in the tubs. If it were, we wouldn't have quite so much adulterated butter put on the market today, but places where such an outline manufacturing process can be had are very few. In our most up to date creameries where the machinery is the best that can be had I find that the old whole milk days are gone by and a buttermaker in those days who was capable of filling his position in such a creamery had to change his ideas while we were at our changing from whole milk to hand separated cream and it really means to me that in those days the few

that knew something about moisture had to employ some method, as I have told you before, to incorporate this moisture when today a method has to be employed to keep it down. That conditions are not the same today while we are manufacturing butter under the hand separated system and management as it were in the whole milk days, and still we have creamery managers and officers who still believe that there is no more difference in the moisture proposition today than there was in the whole milk days, but before I finish, I shall try and prove to you that there is, and while no doubt the majority of you buttermakers will agree with me and approve of what I am going to say, I trust I will touch upon someone who is interested in the management of creameries.

Now then, I told you when we were in a position to hold our cream over night at churning temperature, moisture could be controlled. This seems to be the difficulty, to hold cream any length of time at churning temperature at the present time. It can be done with very good success with an up-to-date cream ripener, but how about the old open style vat? Some of you will say it can be done, others say not. How about it, men? You, who have to handle from 2500 to 3000 pounds of cream in them. Very near an all night's job to cool it down from ripening temperature 68 to 48 churning temperature. How many of you here are doing this, or have the time during the grass season, when it is most necessary to cool your cream in the afternoon to such a temperature. You would have to agitate your cream all the afternoon and part of the night by hand, and any buttermaker who has to get up in the morning at 3 o'clock during the rush does not feel like agitating cream all afternoon by hand. He wants a machine to do these things with in a hurry, or his firm will sooner or later stand the loss for overworking their man. No firm has ever made a profit from such a doing. Men, why can we not get our creamery officers to see this point? We men, who are in these combined whole milk and hand separated creameries who have to get up at 3 o'clock in the morning and work as late as six and even later sometimes. How long is your work

for that firm going to be the best you can produce? No matter how good a man you are, sooner or later you will drop.

Now then, I have found that if we can hold our cream—will say, six hours at churning temperature, 50 degrees, or such temperature that when butter is churned from this cream it is firm. Moisture can be controlled, I have found it to run for a month at a time from 14 to 15 per cent. Now then, during this very same period I have held cream all night at a temperature of 64. Put in churn in the morning and cooled with ice to 48. This butter when it came was very slushy, buttermilk was drawn off, washed at a temperature of 48, ice used in wash water to make it cool, gave churn 10 revolutions, water drained off good, added salt, worked butter long enough so as not to ruin the quality of butter, and this butter was found to contain excess moisture. And in order to expell the moisture out of this butter it had to be overworked, and the consequences were that the quality of the butter was affected. Now then, men, could this trouble not have been prevented with just a little better management? Suppose in this case there would have been the cream ripener to do this work with, would it have been necessary to hold this cream overnight at a temperature of 64? Now then, this cream could have been ripened in the afternoon at higher temperature and cooled at night to its churning temperature, instead of cooling the next morning just before churning if a cream ripener could have been had in this case to do the work with. But, what can you do with an open vat and have about 3000 pounds to take care of? And if you tried to ripen this cream at 68 degrees, which is the proper temperature, when would you get an amount of cream like this cooled down? Come to your creamery in the morning, find the cream temperature 60, ought to be churned at 50 degrees. Well, it is time to churn, so you simply put the cream in the churn and add enough ice to make its temperature 50 or even cooler, and for instance, take a churning from 2000 to 3000 pounds of cream at that temperature, it is very near impossible to get it cooled to 50 or lower before it churns for you. This butter as a rule, when it comes, is not

as firm as cream that has stood for a length of time at churning temperature, and you quite often will find a churning of this kind contains too much moisture. How can it be helped when the fat during such a churning process is in the best of condition to take up moisture during its working process to get within the limit of the law.

Now then, there are only two ways I know of to expell moisture of such butter. One is to pack the butter in tubs and place in an ice box for a few days, and after it has hardened you work it. And, another is this: Run your churn full of water, add ice to water to make water very cool, which will harden the butter in a short time, and then rework. But to apply a method of reworking the butter, you will nine times out of ten ruin its quality, and this is realized by a good many of us. Or another case: We are afraid someone is going to catch us at reworking this butter and squeal on us among the public and hurt our reputation, because we have had a churning of butter with too much moisture. Then, to prevent all of this, the butter is put on the market. It may pass all right, but it may be detected and is snapped up by the revenue officers. Now then you are caught, and what shall be done? You simply will have to wait and see what Uncle Sam has to say, and when his officers come to make their collection and you find that their bill looks something like this, a stamped tax of 10c a pound for every pound you have tried to dispose of, a license of $600, a fine from $1000 to $500, whichever they may see fit to place upon you, the total of all which may run anywhere between $2000 to $5000—enough to burst half of the co-operative creameries in the State of Wisconsin.

Now, gentlemen, a law of this kind does not look quite right to me, and my idea is this in this case: We ought to have a state law something like this, which would give the State Dairy and Food Commissioner power to investigate a creamery where such trouble is being experienced, and if they found that it was due to some mismanagement on the part of the creamery officers, they should have the blame; and if they

found that the buttermaker did not attend to his duties, let him take what is coming to him, but if he found upon investigation that the case was such that it could not be prevented under present conditions, whether on the part of the buttermaker or management, instructions of improvement should be given, and if then they find it cannot be prevented that law should be repealed and placed at a higher per cent.

Discussion.

Mr. Larson: I would like to ask the speaker what he meant by speaking of the great harm that came to a buttermaker by keeping daily records.

Mr. Frank: I do not remember making that statement.

Member: I think Mr. Larson refers to the statement Mr. Frank made about the buttermaker having a test of 15 per cent every day. I believe he meant it was done mostly with a lead pencil.

Mr. Frank: That is what I meant, that it was mostly done with a lead pencil.

Mr. Larson: I presume I did not get your statement right. I can see what harm would come to a man by doing that kind of work.

Mr. Frank: That is what I had reference to.

The Chairman: This ought to be quite an interesting subject and I would like to hear further discussion of it.

Mr. Corneliuson: I would like to ask Mr. Frank if the trouble he referred to with the churning at warm temperature and washing with cold water, could not be overcome by letting the butter cool, hardening up somewhat and then begin working, repeating that operation until the surplus moisture was expelled?

Mr. Frank: Do you remember whether in letting that butter harden was ice water used?

Mr. Corneliuson: I do not remember.

Mr. Frank: We run the churn half full of water and add ice to it, letting the water cool and hardening the butter.

Mr. Corneliuson: Then you had too much moisture, didn't you?

Mr. Frank: I had too much moisture before the butter was finished working under good normal conditions.

Mr. Corneliuson: When you cooled the butter in wash-water did you overcome the trouble?

Mr. Frank: Yes in that way we overcame the trouble, but the quality of the butter was ruined by doing it. The grain was so badly broken that the butter did not stand up.

The Chairman: As I understand it, the butter was churned too quickly after it was cooled down, the fat globules did not get time to harden up. I think few buttermakers do that at the present time.

Mr. Frank: This system was used with an old style open vat. A good many have to work under those conditions to-day.

Mr. Larson: Do you think with cream properly handled, as you handle it now, and with proper temperatures, you would have any trouble in controlling the moisture in your butter?

Mr. Frank: Yes I do believe in some creameries there is trouble, and the reason a whole lot more creameries have not been found out is simply because the law has not been enforced. I was talking with a gentleman today who informed me that last year in the month of June he tried in every possible way to hold the moisture down but without success, and yet his butter went on the market without question.

Prof. Lee: A year ago this last summer a man came from St. Louis to a place where I was located to get some assistance on this subject. His creamery was putting all the butter in the refrigerator and were getting a moisture content varying from 18 to 20 per cent. I arrived at the creamery at 3 o'clock in the afternoon. The man had just filled the churn. He said he did not want to stay too late that day. I told him there was not any need of staying late, that we would finish the churning he had, and the butter taken from that churn contained less than 14 per cent water, while the man, under

the method he was following, could not under any conditions have gotten the moisture content less than 18 per cent. There is no excuse for a man making butter containing over 16 per cent moisture. That may seem like a broad statement. The gentleman made the remark that a certain man made the statement in a creamery journal a year ago that it was difficult to hold the moisture content low during certain seasons of the year. He was referring to a certain factory. After that statement I made a special trip to that factory to investigate conditions! I made various trips to locate if possible the cause. The cause at this place was they were churning the cream in the month of June at a temperature four per cent higher than any man should attempt to churn. The main thing is to know what you are doing with temperature to control the moisture of the butter.

Mr. Larson: I have made a great many investigations where buttermakers have been having trouble with the moisture content of the butter and I have been frank to confess that I have not found one thing yet, where if business had been strictly attended to, they would have had any trouble. I could cite specific cases but I do not desire at this time to do so.

Mr. Frank: May I ask Mr. Larson a question? In these cases did you find the trouble in every instance with the buttermaker?

Mr. Larson: Coming down to a proposition of that kind in some cases the buttermaker did not have the apparatus to use; in other cases he had it and did not use it; in most cases he has it and did not use it, then I should say it was his fault absolutely. Then coming down to another proposition that a buttermaker is responsible for whatever he does, if he knows a certain thing is right to do and does not do it; or if he knows a certain thing is right and he has not the apparatus to do it with he is responsible.

Mr. Frank: Suppose he could not get the apparatus?

Member: Have they ever found any trouble in getting

thermometers that did not give right temperatures? Is there not as much variation in thermometers as in test bottles?

Mr. Larson: That is true but you can test your own thermometers by either taking ice from your ice house or snow in the winter time, adding a little water to it and making a little slush, which gives practically a freezing temperature. If your thermometer turns at 31 or 32 degrees it is true and you will have no trouble with that method.

Mr. Aderhold: It might not be right at 50 degrees.

Mr. Corneliuson: It may be that occasionally the thermometers in the factories are wrong but it seems to me that need not cause any trouble for any great length of time, because if the buttermaker churns too warm (and that is the way it usually goes), when he has trouble that way the churning will be finished too soon and he will be at once put on his guard. The churning should take thirty minutes, and I prefer forty-five. If a man follows that rule and uses not less than thirty minutes and possibly not more than one hour, I think as a rule he will not have any trouble with moisture, either by a lack of it or too much.

Member: I would like to ask some of these gentlemen how they would handle cream that came into the factory at six or seven o'clock at night, say with a temperature all the way from seventy to eighty degrees, and it had to be churned the next morning? That is the proposition with which I am confronted.

Mr. Corneliuson: If there is only one man employed in such a factory so that he is obliged to work all day and has not time to cool it down with the cooler, has not the facilities for cooling in a reasonable length of time, I think the only way is to have pure ice and cool it with ice put directly into the cream. If there is a double force of men employed, if there is a night man let him stay and do the work and then it will not be necessary to put the ice in the cream.

Member: That is all right, that is the way I do. We have to cool that cream down in the evening after it comes in

to a temperature of 50 or 52 degrees, put your starter into that and what good does your starter do?

Professor Lee: What does your starter do in the separator cream now? I agree with you there. The good starter does in the hand separator cream is the same as mixing a cup of poor milk with a cup of good milk. There is no difficulty in getting cream cooled down—just cool it.

Mr. Corneliuson: I might add one word more in reference to cooling,—the best way of course would be to get a good ripener, a modern machine that can do the work in a reasonable length of time; but if you cannot get that, use the method I have suggested.

Mr. Frank: Suppose, as the gentleman said, our cream came in at six or seven o'clock in the evening and the temperature was 70 or higher. We will say this cream was sweet. We add starter to the cream, cool it down and the cream would not be sour or ripened, so where would we get our flavor for the butter if we did not ripen the cream?

Mr. Corneliuson: I believe that is straining the point a little. If you receive cream in the summer at the temperature you name I doubt if it will come in sweet, at least I never saw it; but if it should come in sweet you can still handle it by using a liberal percentage of starter and cool it down to a temperature of 58 or possibly 56, add your starter and let it ripen until the next morning.

Mr. Frank: For instance, at this time of year two or three days' cream will come in sweet and be received at six or seven o'clock at night, and this has to be held at 68 or 70 degrees to ripen, has to stand all night at that temperature in order to ripen. The next morning I add ice to it. A churning of that kind will take up moisture more readily than if the cream had stood at churning temperature all night.

Mr. Corneliuson: You mean in case your butter fat has not had time to harden properly. There is no doubt about that.

Mr. Frank: I have seen cases of this kind where the butter has come hard. We have put enough ice in the churn to

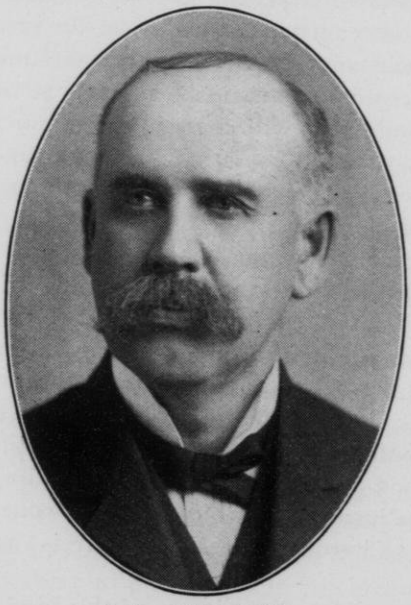
make the butter come out nice and firm, and it had a tendency to take in moisture more readily than cream held at a churning temperature four to six hours.

Mr. Corneliuson: If it comes reasonably hard it is easy to reduce the moisture by working.

Mr. Frank: Is that not liable to break the grain of the butter?

Mr. Corneliuson: Not if you work it several times at intervals. Give it time enough to regain its natural firmness between two workings and then there is practically no limit to the amount of working you can give it without injuring the body, providing you have not got it too hard. Butter that is too hard is as objectionable as butter that is too soft.

The Chairman: I think we have devoted all the time we can spare to this subject. The next is an address by Mr. S. B. Shilling, of Chicago, on the Oleomargarine Situation.



S. B. SCHILLING,
Chicago, Ill.
Acting Secretary National Dairy Union.

Oleomargarine Situation.

Mr. S. B. Shilling, Chicago.

Mr. Chairman, Ladies and Gentlemen:

I assure you that I appreciate the opportunity of standing before you to address you again, but at the same time I always feel when I break in on a subject of this nature, such as you have had at this session and in fact at the different sessions, that I am wasting a lot of valuable time, especially when I talk to you on a subject that is worn as threadbare as is oleomargarine about which I have talked to you so many times, but distasteful probably as it may be it is a question that demands your attention whether it is agreeable and interesting or not. I promise you, however, as it is now 4:30 o'clock and there are two speakers to follow me, that I will only take a few minutes of your time.

I want to refer briefly to a statement made by the last speaker when he spoke with surprise as the activity of the government in the prosecution of the moisture content of butter violators. Without any intent to cast reflection on any department of our government, I want to say to that gentleman that with the Internal Revenue department in the mood that it has always been towards the dairy interests that there is no reason for asking the question why they have been prosecuting the creameries for having too much moisture in their butter. I want to say to you today that probably that Department has stood more in the way of the enforcement of our present law, notwithstanding the fact that it is their duty to enforce it, than any other department of the government. I also want to say that undoubtedly you have noticed within the last two months increased activity on the part of that department in enforcing our present national law. This is a result of a visit of the officers and executive committee of the National Dairy Union to headquarters at Washington, at which time the Commissioner of Internal Revenue was interviewed and asked to explain the attitude of his department towards our present law. When the law went into effect they

condemned it, said it was utterly impossible to enforce it and have almost entirely carried out that idea ever since.

The subject assigned me is the Oleomargarine Situation, and it is rather hard for me to tell you what it is this afternoon. It is complicated. I want to say this, that it is just like two armies standing together, each knowing the workings of the other, each being afraid to make a move. I do not know how else to explain the situation to you. In the House a bill has been introduced.

I talked over the situation a year ago and I will not this afternoon refer to anything before that time. Since I last stood before you, you do not realize now and never will realize how near we came to losing even the law we have, that was in the Fall session of Congress when the tariff measure was under consideration, when a bill was drafted by no less a person than Secretary of the Treasury McVeagh and was all ready to be offered in Congress; had it been offered at that time, with the feeling that existed and the deficit in the treasury, it would have been stricken from the docket and our law stricken from the laws of this country. Not that I wish to take any credit whatever for any part in it, I want to say to you that it was through my being notified as president of the association, and by a trip to Washington and interesting our men that were in favor of the law, especially James A. Tawney, of Minnesota and his appeal directly to the president, that the bill was never offered. It was already drawn. The telegram that took me to Washington was from the secretary, the telegram being as follows: "Can you come to Washington? We wish to confer with you about framing the bill relative to the oleomargarine matter." Imagine my surprise, when I arrived there, to be informed that the bill was already drawn and would be offered the next Monday morning (this was Friday afternoon.) On Saturday Mr. Tawney protested to the president on the offering of that measure and the president called up the secretary and instructed him not to present the bill. Had that bill been offered it would have been absolutely impossible to have stopped it at that time.

The present situation is that Mr. Burleson, of Texas, has again introduced the measure, which has been referred to the agricultural committee of the House, this committee being composed of sixteen men, and we cannot see what chance they have of getting the bill through that committee. Mr. Burleson has already been before the committee getting testimony and requested that the measure be taken up; but with the pressure of other business of still greater importance, which is engaging the attention of Congress at this time, they stand but very little chance of ever having the bill reported out. If it ever is reported out we can understand this, that there were eleven men in favor of the dairy interests out of sixteen, so there is very little show of having it favorably reported.

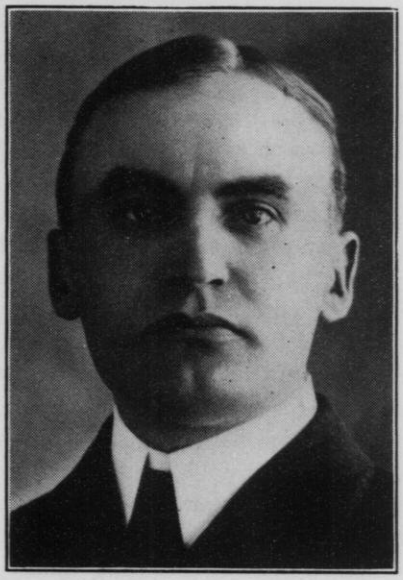
But here is the probable question with us again. Our law has been declared defective in several instances. For instance, in Pennsylvania the Supreme Court has declared its enforcement impossible because of the word "knowingly," as it is necessary to prove that the illegal product was sold **knowingly.** Another thing that we find has been wrong is the use of the word "artificial," so it devolves upon us to form a law that will amend our present law, and have that bill introduced. Last week a bill was introduced by Senator Penrose which purports to embody the ideas of the dairymen, but the bill was presented to the officers of the National Union and in their opinion it did not seem to cover the weak points of our present law, so we notified Senator Penrose that we could not stand for that bill. If we are going to present a bill of any kind, we want one that covers the situation and protects the dairymen in every way. We are today drafting a measure, but whether it will be introduced or not I do not know. It being a revenue measure, it must originate in the House and with the Agricultural Committee standing as it does, we feel that there will be no repeal of the ten cent tax; but with the present temper of the Committee on Agriculure in the Senate we do not like to prepare a bill or even offer an amendment to our present law and allow the oleomargarine people to amend that.

That is the situation. It is a delicate one. We are alive to it. What we are trying today to do is to create sentiment; our aim is to educate the people and from our office in Chicago goes to the agricultural press throughout the country (and we are now working to take in many of the local county papers) matter relating to this subject. Our greatest need is to educate the people and we are working along this line. A short time ago we sent out a letter, many of you undoubtedly received a copy, asking for a list of anywhere from twenty-five to fifty of your patrons. We want this list, want it badly; we are compiling a list of the intelligent and prominent dairymen throughout the country, men we can depend on at a time when we are up against this fight, that we may appeal to them and have them appeal to their legislators. We know the people who represent you are all right, we know your senators and representatives are in favor of the dairymen, but will they use all the influence in their power, will they work with those who are not in favor of the bill to the extent they would if they knew that you, as their constituents, were urging them to do so? That is what we want those names for. We want a list of names of anywhere from fifty thousand to one hundred thousand, and we now have a list of nearly fifty thousand names.

All I can say is we believe we are in position with you back of us, understand that is always something that must be considered that you are back of us, where we can do anything. The officers of the National Dairy Union are doing everything they can to control the situation. They are devoting their time to the work free of charge, but we want your support in a financial and moral way; we want you back of us to enable us to do this.

That is all the time I am going to take. There are a great many things I would like to say to you but owing to the lateness of the hour I feel it would be imposing upon your good nature to take any more of your time. I thank you.

The Chairman: The next on the program is "Paying for Quality" by Mr. Elov Ericsson, of St. Paul, Minn.



ELOV ERICSSON,
St. Paul, Minn.
Speaker.

Paying for Quality.

Elov Ericsson, St. Paul, Minn.

I have as my subject paying for quality in milk and cream. This must also, according to my opinion, include selling the quality, for if quality requires a special high price when bought, it must bring in at least an equal amount when sold. Otherwise there would of course be a loss on account of the quality proposition, which would then prove a failure.

We have so close competition in the creameries that we must figure carefully how to sell to advantage, everything we buy, and if we discuss only the buying end, some people may think either that quality in cream can be bought at the same price as common grade cream, or otherwise that the selling

end will take care of itself, which is not a fact. I mean to say that it is necessary before entering into this kind of a scheme that a creamery man knows what he is going to do both in regard to buying the quality, making the quality and selling the quality.

It is proper to take up buying the quality first, of course. I presume that you are all acquainted with how to make the quality in the butter so I will not discuss that, but will towards the last say a few words regarding selling the quality, although I have not yet much experience along that line, but I will give you my plans and theories which I have found good as far as I have had time to put them into practice.

This quality proposition is intensely interesting to us creamerymen today for I think that at least the majority of us believe that quality in butter is at present constantly decreasing. If we only will consider this fact important enough to stop to look for the cause of it, I am satisfied that we will not only find the cause, but we will also be convinced that it will continue to decrease, and that it is up to the buttermakers to put a stop to it.

The farmers have been considering quality in milk and cream something that belonged to the buttermaker whether he paid for it or not. I find that the patrons of most co-operative whole milk creameries are still taking this view of the matter, and in the dairy countries of Europe the farmer would not think of bringing anything to the creamery not as good as he could possibly produce. The buttermakers have there taken the stand that if the milk was not brought to the creamery in the condition it is delivered by the cow, unspoiled, any butter worth eating could not be made. As it is the natural thing to think, it is really easy to make the farmers believe that the quality in cream belongs to the buttermaker without any special price added. But now they are beginning to find out different by actual experience, for the farmers are finding a ready market for cream without quality, if I am allowed to use that expression.

Now we buttermakers here in Ameirca are up against a

peculiar situation. Something that is well worth studying in order to find a remedy for. It is that of the American business man being such a good business man as he is. He is all full of business, hardly anything else, and he can take an article like butter, which only one person out of 100 can tell whether it is good and clean or not, and sell it to some unsuspecting person for good butter even if it is not very good. He is so insistent in pleading through advertising and otherwise that his article is as good as can be found, that he very often succeeds in finding some person who believes that the butter is better than it is and pays a too high price for it. That is just what the American buttermaker will have to put a stop to if he does not want to be paid a premium on ignorance and carelessness to such an extent that he will finally forget how to make good butter. How this can be done I will discuss later.

Now then, when the business man is pleading to his customer that his butter is good, as anyone who has something to sell would plead, it is evident that it pays him much better if he has a large quantity than a small one to sell. The fact that it pays to try harder to sell a large quantity than a small one to good advantage on account of the larger sum of money it involves, is to a great extent responsible for the success of the centralizers, especially as the centralizers as a rule make the poor butter on account of being obliged to make it from sour cream. Good butter only comes in lots of 30 to 40 tubs at a time from small creameries, and it does not pay the jobber to make any special effort to sell such a line, while if he has a line including a whole train load, he is going to hunt all over the country to find a special outlet for it, and force the price up to the limit. One more reason for the fact that the aim of the buttermaker is quantity, and not enough attention is paid to quality, is that on account of the overrun the increase in profit of a creamery business is very large in proportion to the increase in business.

This reason, that the poor butter is forced onto the buyer at too high a price and the consumer does not know enough

about butter to refuse to pay the high price, and then the fact that a large creamery can be run more economically than a small one on account of the overrun, these two reasons are responsible for the fact that the farmer is now offered about as much for cream that he has made no effort whatever towards making good, as for cream that he has taken all kinds of pains with in order to deliver to the creamery in the very best condition.

Now if this is a fact, the farmers are going to take less and less care of their cream, in spite of anything that the dairy authorities tell them to the contrary.

The remedy must be the same as in any other case where it is found that an article is not to be had for nothing, and that is that the buttermakers must pay the farmers for the quality in the cream. For there is no help for it, we will more and more realize that quality in cream is as much a commercial article as for instance, quality in clothes.

I consider that in beginning to pay cream according to quality the price should be set at about what the quality is worth, for if you once let the patrons take the view that quality is something that should be paid for, they may not bring it to you if they do not get about what it costs them to produce it.

At our Eden Valley Creamery we have made a difference of 3 cents per pound of butter fat between the best cream and the sour cream. We find that this difference is not too much for a few patrons are bringing the lowest grade and accept the low price rather than do the extra work for producing the high grade and haul every day the creamery is running.

We divide the milk and cream into three grades. In the third or lowest grade is placed all cream that the buttermaker is confident is sour, even if very slightly so. All tainted milk or cream is also placed in this grade. We pay the third grade on a level with the centralizers and surrounding creameries buying such cream.

In the second grade we place all milk or cream that is sweet and free from taint, but which is not hauled every day

the creamery is running. For this grade we pay two cents above third grade.

First grade is milk or cream perfectly sweet and without any perceptible taint hauled every day the creamery is running. The price is three cents above third grade.

We have a salesman's book with our rules for grading and the conditions for producing the first grade printed on top of every leaf and a space for the date, patron's number, pounds of milk and grade, is provided below. This leaf is handed to the patron after the spaces are filled out, and the buttermaker retains the carbon copy.

The first and second grades are churned together into one grade of butter, and the third grade is churned by itself. The system seems to be well liked by our patrons, and we have increased our run quite much since we began grading a year ago.

But we have to pay the three cents for the first grade and the two cents for the second grade above what our patrons can get from other creameries, otherwise I am afraid that we would not get much in any grade. That means that we must get more for our butter in order that the ends meet. Our run is not very large and our expenses are rather heavy, so we need almost all of the overrun to pay our expenses. We have at least lately been fortunate in selling the butter at a high price, and I am satisfied that we are making a little more money at our creamery already than we would if we did not grade. The first four months we were losing money, but the patrons try hard to bring us the best milk possible, and it seems that they are constantly educating themselves to take better care of it. The quality of our butter is quite good and uniform, simply the best we can make every day, and for this reason we are getting a good price for it, which is our only chance for making a success of our cream grading scheme.

I find that we must be careful and just in our grading, and uphold the rights of the creamery as well as the rights of the patrons, for otherwise the patrons would soon lose confidence in the system. They would soon know something was

wrong if they were not asked for something in return for the three cents premium. Therefore, we make it a point to rigidly enforce the rules for grading and every time there is an off flavor in the milk or cream, this is placed in the lower grade. We are naturally careful not to favor anybody.

When we began this system a year ago my aim was to find out if some consumers were not willing to pay a little extra money for butter that they knew to be extra good. It is really unnecessary to question at all if they would do so, for we find that a good many grades are found at different prices in the cities, and most people buy the highest standard grade. It is just as certain that some people who are still more careful about what they eat would buy a standard grade above the highest standard that now exists, for instance in St. Paul, if such grade was to be found. I had heard a good many good butter dealers say that people would not buy any special high grade, so I set about to prove it with our Eden Valley Butter. I have already proved to my own satisfaction that some people are willing to pay more for butter that they know to be worth the money. I find that some of our customers who have become accustomed to our butter will absolutely not take anything else in spite of that it costs three cents more a pound than other good butter sold in St. Paul. Our trade in St. Paul is yet too small however, to prove to anybody else but myself that the enterprise is a success, but I hope that at least two years from now if not next year, I will be able to stand before you and inform you that our butter is sold in every good grocery store in St. Paul. We know that our butter, which is put up in one pound prints and branded with our own brand, is watched carefully in St. Paul, so that prevents us from being careless with our butter during any one day, and butter sold at wholesale is also paid well on that account.

I feel that this part of the subject, I mean the selling end of the quality proposition, should be of more interest to you than the buying end, for if you have the money it is always easier to buy an article than to sell it, and as I said before, you must not think of starting in to pay for quality without

having the purpose in view of selling the butter to so much higher price, for otherwise where should you get the money to pay for the quality.

Now then, how can we buttermakers prevent the dealers from selling the poor butter at a too high price under the claim that it is good, the consumer not often knowing much about butter. This is the problem that we have before us, and the problem that it is more evident every day that we must solve. I am willing to work harder than anyone of you in this matter. I have the business of making the preparation that will have no market at all if good butter is not sold for more than the poor butter, so I am willing to do my full duty in the matter.

Preventing the dealers from making the consumers believe that the poor butter is better than it is, is accomplished by marking, or branding, good butter right where it is made, that is, where the quality is decided, so as to give the consumer a chance to become acquainted with the make and let him set his own valuation on it. Any constant raising up of the poor butter into the class of the good would then not be possible. Under the present system a consumer in the large cities is not able to buy the make of the same creamery twice unless he wants to buy the centralizer's butter. Don't you think it is a deplorable condition when a consumer is entirely unable to find a make of butter a second time at any price in case he should happen to really fall in love with it? Still you complain that it does not pay to make good butter although you have not yet sold it so as to give the consumer a chance to pay you more money for it in case he agrees with you that it is good. The consumer buys the butter to eat it. He wants it good. The dealer buys the butter to make money on it, and he makes as much money on poor butter as on good, so the dealer does not care much about quality. Now the dealers brand the butter, but the great majority of them do this in the same way as the centralizers grade the cream. They buy all kinds of butter at very much the same price and pick out the butter that happens to be good for the best trade. In this

way quality costs them nothing, and although quality will be constantly scarcer, the dealer does not need to care, because it is just as scarce all over, and the dealer can buy a farm and make butter enough for his own use.

Now let us look at the manufacturers' branding of the butter from the standpoint of the dealer, for if the buttermakers will meet very much opposition from the dealers, it is going to be so much the harder for the buttermakers to brand.

How much reputation have the dealers succeeded in gaining for the brands and how much are their respective brands worth to them at present is the first question. We find then that the reputation of the dealers' brands are so closely connected with the reputation of the dealers themselves, that if the dealer loses his reputation, the brand he is selling is no good either.

We may then conclude that the consumers are aware of the fact that the quality of the dealer's brand depends on how successful the dealer is to select the good butter each day, while if it was a brand put up by the manufacturer, the consumer would know that the knowledge of making the butter, the machinery, the raw material and other facilities for making it, counted one day as much as the other.

I tried hard to induce one of the best grocery men of St. Paul to handle Eden Valley Butter. He refused and gave as his reason that he had his own brand which he had tried to obtain a higher price for than the rest of the good butter sold in St. Paul, but had failed. As he was confident that he had as good butter as ours he could not see any reason why we should succeed when he failed. Now what is the reason that this groceryman, who is very well known in St. Paul for quality, could not get any higher price for his butter, which he buys from one of the best whole milk creameries in Minnesota than the centralizers were getting for their hand separator cream butter, while we who were not known in St. Paul, seem to succeed. The reason is very apparent. The grocery man was not able to convince his customers that his butter

was worth more money because as long as he did not own the creamery, he could not show why the butter was better, where it was made, how it was made, and what it was made from, without spending his time advertising the property of someone else, which of course a business man will not do. This man had been selling his brand for about 15 years, advertising it to some extent as the best to be had, and he did not want to now place somebody elses butter above his. It was a matter of pride with him, but I believe that this pride costs him money because I am quite certain that he is unable to make more than about three cents a pound on the butter he is handling, while if he had handled our butter he would have made five cents, which is the regular amount made by grocery men in St. Paul.

Thus we find how the pride and self love of a person is in the way of his own progress, and we find it everywhere.

Most of the butter dealers will hang on to their own brands as long as possible even if they would make as much money, or more, if they handled the brands of the manufacturers, for each dealer has cherished the hope that some day the reputation of his brand would be supreme for quality in that locality, and he does not want to admit that he is mistaken, unless he can be made to see plainly that people will never believe that he can buy better butter than anybody else can buy. This tells the whole story of the difference between a dealer's brand and a manufacturer's brand. The consumers know that the dealer cannot buy any better butter than anybody else can buy, while everybody knows as well that one creamery can make much better butter than another creamery. This allows wide variation in the reputation of the brands of manufacturers, while it allows no variation at all in the reputation of the brands of the dealers, and the price of a brand is decided by its reputation. That is the reason that there is not one dealer anywhere in the country at least to my knowledge, who has succeeded in obtaining more for his brand from the consumer than what other butter with some pretense that it is good is sold for in the same locality.

On the other hand we find that the brands of the manufacturers reach very high prices indeed when they have a good reputation. Sharpless and Darlington brands in the east are now selling for from 70 to 75 cents a pound, and in St. Louis the brand of one creamery is selling for $1.00 a pound. These high prices are always reached by the brand of some creamery, never in one single instance by that of a dealer. The dealer may select his butter as carefully as he might, and he may buy the best butter in the country, but as long as he cannot tell the origin of it, he will never get any more money for it worth speaking of, and then he cannot afford to pay the good creameries much more than the poor ones. Who is suffering from this condition? The good creamery of course, the good buttermakers, the good farmers suffer, because they are now working hard to keep up the quality of the butter as a whole, while the careless and the ignorant get as much money. I am satisfied that if they all dropped down at once, if all the farmers took no care of their cream and brought it in only every 10 days, and if all buttermakers were as careless as some of them are, the butter the country is producing would be too poor to eat.

The dealers have no reason to hinder the creameries from branding, and I am satisfied that the majority of the dealers are good enough business men to figure out that they would not make less money than they do now, for the competition among them would not be any sharper than it is now. But the butter business would be better regulated. The brands would go right through the dealers' hands from the manufacturers' to the consumers' at well regulated prices, and there would be no loss from the dealers' standpoint on account of poor quality.

Perhaps the dealers are afraid that the creameries would sell their own butter direct to the consumer and eliminate the dealer. I do not think that many of them are afraid of this. The creameries would not sell their own brands as long as they would find some dealers that would be willing to handle them.

The talk of eliminating the middle man is worth nothing as long as there is competition among the middle men, for if the farmer eliminated the middle man, the farmer would have to do the middle man's work, and the chances are that he would not be as competent to do this as the middle man himself and the expenses would be higher instead of lower. It does not take much reasoning to figure this out, so I do not think that the dealers are afraid.

The branding by the creameries is entirely feasible. Several individual concerns owning one or more creameries that are making good butter, are now branding and are selling at a high price. They are having good success and are pointing the way for the co-operative creameries who should form associations for establishing brands, and they should do this the sooner the better. Here in this country a meal of ordinary butter carries more impure germs with it into the human system than does a glass of milk. The best authorities have given the germ content of butter as from 10 to 30 times more per c. c. than that of ordinary milk, and from numerous analysis I find that milk averages about 90 per cent of pure lactic germs and only 10 per cent impure germs while ordinary butter averages 40 to 50 per cent impure germs. Some of the health authorities know this fact already, and it is only a question of time before they will pay some attention to the subject. Then there ought to be some brands of butter that could be pointed to as being good, so that all butter could not be condemned.

I am confident that nature has as little made a mistake in regard to butter as in regard to any of her other products, but that it pays extremely well to strive for quality, only we buttermakers do our duty in the matter and make as much money as we possibly can, thus regulating the trade along natural courses. It seems that it is the peculiar duty of every person to look out for his own interests, and the worst crime that can be committed, at least the one with the most retarding effect on the community, is idleness.

The Chairman: The butter will be sold tomorrow morning at nine o'clock in the butter room, by Mr. Parman.

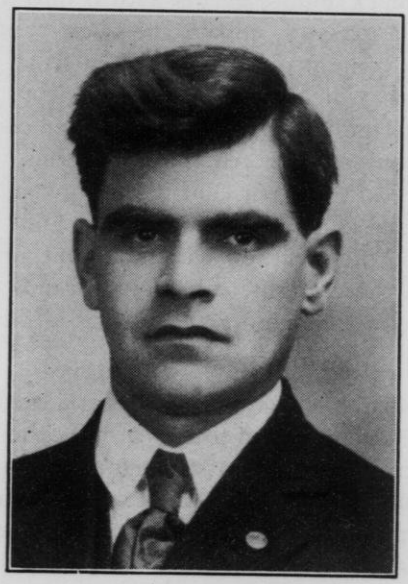
We will now adjourn until tomorrow morning at 9:30.

Wednesday evening the members attended in a body a performance at the opera house.

THURSDAY MORNING SESSION.

Meeting called to order at 10 o'clock by President Sauer.

The Chairman: The first subject on the program this morning is "Operating a Creamery" by Mr. A. D. McCready, of Spring Grove.



A. D. McCREADY,
Melvina, Wis.
Speaker.

Factors Which Make for Success in Operating Creamery.

Mr. A. D. McCready, Spring Grove, Wis.

The first thing to be considered in the successful operation of a creamery is honesty on the part of all men concerned in the operation or running of the creamery.

A dishonest buttermaker will do more damage in a creamery in a month than can be repaired in a year or sometimes more by an honest man. Take for example: The testing, if a buttermaker is in the habit of under-reading or padding tests and is not found out until his successor takes charge and he is an honest man, what is the result? The new man is a crook in the eyes of the patron whose test was padded and a good fellow to the other patron and it will cause the new man many sleepless nights and many more arguments to convince the different patrons and the directors that he is the honest man the other fellow the crook. It does not pay to under-read the test. It may do for a while and your manager may think you are getting a nice over-run, but once let him get hold of a moisture and salt test and he will soon find out where the overrun is coming from. Another thing: If a patron comes in and says his wife churned so many pounds of butter from so many pounds of cream and wants to know why his test does not agree with the pounds of butter churned do not raise his test to that point to keep him still, but get busy with pencil and paper and show him why the two tests do not agree.

Next to the honesty of the buttermaker comes the handling of the patrons. When you meet the patron at the weigh-room door in the morning, have a good word for him even if he is a little late and always have that famous smile, the one that will not come off. You need not have a fifteen minute talk with him then, but ask how things are going with him and give a few suggestions as to how to take care of his cows and his milk or cream and do not forget to remind him of that silo he was talking of building. In handling patrons you must know the man you are dealing with. One man may

stand for a pretty sharp talking to once in a while when he needs it, while his neighbor would quit and go to the other factory if you talked to him in the same way.

Whatever else you do, always work for a better raw material as it is becoming more and more necessary to make a better grade of butter, as a glance at the market quotations will show you that for the past year there has been an average of from two to four cents difference in the quotation for extras and that of firsts and seconds. It is easy to see where a creamery would land in a short time if even a fourth of their butter graded first or seconds, the centralizer would have them or the neighboring co-operative factory, perhaps.

Another way to help the patron along would be to hitch up a horse in the afternoon, if you have a horse and the time, and go out among the patrons. In one place you will find a patron trying to build a milk-house perhaps and you can stop and help the good work along by timely advice or better still, pick up a hammer or another tool and help, you will never regret it.

At one of our lectures at the Dairy School this winter we were shown by means of a lantern slide thrown on a screen, several views of a cement milk-house, which is a very good one and is being put up by one of our large creameries for the patrons. The owner of this creamery goes out with his concrete forms and builds the patrons a concrete milk-house and then takes his pay out of the patron's milk check, a little each payment until it has been paid for. The result of this, is that you will get a better raw material from that patron and the patron has a milk-house, which is paid for, a small amount at a time and he does not miss the money.

I can not say too much on the question of the quality of the raw material, as it affects the creamery taking it as well as the patron delivering it. If it is not up to the standard, it will lower the quality of your butter, also the price paid the patrons for fat. In telling the patron that you would like to have a better grade of cream from him, you need not insult him, but show him where he will benefit by doing as you ask,

then when he does improve the quality of his cream or milk, tell him about it and show that you appreciate what he is doing for you.

To show how the quality of the raw material affects the creamery and the maker, I will give an example of what came to my notice not long ago.

A certain buttermaker had been running a creamery for a number of years and was making a good grade of butter, but was getting all whole milk. The separator agent got busy after a while and sold about half the patrons hand separators. Here is where the buttermaker fell down, instead of seeing to it that the cream from these patrons was brought to the creamery in good shape and that the patrons took care of the cream at home as they should and washed their separators after each skimming, he let them do as they pleased. The result was that the quality of his butter began to fall and he finally lost his place after costing his employers considerable more money than his wages amounted to. It would have been a simple matter for this man to have kept the quality of his butter up to where it should have been by simply talking to his patrons as they delivered their cream at the factory.

We must consider the creamery records as kept by the buttermaker, as one of the factors in the successful operation of a creamery. By all means, keep a complete record of your work in the factory, check up your haulers and know where you are at when you are done with the day's work.

By doing this, you are able to check all leaks as soon as started and the patrons will have more confidence in you if they know you are running the factory on business principles. The neatness and cleanliness of the buttermaker, also his weigh-room and the creamery in general are great factors in the successful operation of a factory. You can not expect a patron to bring in a good grade of milk or cream or pay much attention to your requests for a better grade of cream when you come to the weigh-can with a pair of overalls on that look as if they might stand up alone if given a chance. You must be dressed neat and have your clothes clean and have a

general appearance of having just come from the wash-tub and ironing board. Have your weigh-can, scales and weigh-room clean and if a little cream is spilled on the floor, do not leave it there, but get a pail of water and rinse it off and mop up dry again.

Another factor is the economical operation of a creamery. Now by this, I do not mean to be stingy in buying supplies or to buy the cheapest supplies you can get, for a cheap tub or liner or any article whether machine or fuel is the highest priced in the end. Buy your supplies from a good supply-house and if possible, buy in large quantities, as you will get the article cheaper and will save freight. Where there are two or more small creameries near together, buy your tubs and salt in car-load lots and divide up; you will save a good many dollars for your creamery by doing this. Where coal is used for fuel, a man who does not know how to fire will burn up his day's wages every day he fires the boiler by simply firing too heavy or too often.

Another thing is the operation of the creamery. One man may run his wages down the drain with the buttermilk, while another will run his into the skim milk tank simply because neither one of them knows what he is doing, as another speaker will tell you later, it is simply a case of "Know what you are doing." The man who knows the composition of his butter from day to day is the man who is going to hold down the good job and the good pay. Of course to know the composition of your butter, you must have a moisture test and you could have a salt test also, but you would not have to have it. By testing for moisture, each churning you can get at the temperature and conditions that will give the best results and when once found it is a simple matter to stick to these conditions to get a uniform overrun from day to day. In the handling of cream or milk from the intake to the churn, a man can lose a lot of butter fat if he is not careful. In opening the weigh-can gate, do it easy and save a spill, which costs money. See that all milk is rinsed out of can, conductor, spout and receiving vat before you stop separating

as the milk left in these utensils all means that much money wasted. Watch all of these little things from the weigh-can to the churn and save milk and cream when you can and see the difference in your overrun. When you unload the churn, see that you get all of the butter out of the churn as an ounce or two here and there soon runs to pounds and that means money lost as well as overrun. If you are secretary of your creamery as well as buttermaker, watch your commission house, see that you get your honest weights. Now by this I don't mean to say that the commission man in general is dishonest, but some of them will bear watching. The best way to keep a check on him is to weigh your empty tub, then weigh in a certain amount of butter, say 62½ and allow a half pound for shrinkage and you should have no trouble with your commission house.

In closing I will give you the closing words of Dean Russell's recent address to us at our Literary Meeting at the Dairy School. "Always do what you are paid for doing and then some. The 'then some' is what will get you a better job and that raise of wages you are looking for."

I thank you.

The Chairman: Any questions on this subject? If not, the next on the program is Cause and Prevention of Mould on Butter, by Professor E. G. Hastings, of Madison.

Cause and Prevention of Mold on Butter.

Prof. E. G. Hastings, Madison, Wis.

Mr. Chairman, Ladies and Gentlemen:

There are many people here who know a great deal more about the prevalence of mold on butter than I do, I am sure. Many of the men who are handling butter, the commission men; but from the letters which we recieved during the past year and from what we read in the dairy papers, it seems to me that moldy butter really merits more attention than it receives from the standpoint of prevention of this trouble. For

instance, just last night in the new journal or in the Butter, Cheese and Egg Journal I found this clipping that the buyer who bought the butter at the National Buttermakers' convention and the Minnesota convention found that when that butter reached his warehouse one-half the tubs were moldy, so you see that in butter prepared especially for those conventions we have a large amount of this trouble.

The only reason I have for appearing here this morning is simply because I believe a great many of the buttermakers have incorrect ideas as to the source of a large amount of moldy butter. If we are going to prevent mold we must pay more attention not only to one source but to all the sources from which the trouble comes. We have in the past paid attention to one particular source and that is to the tub. We have our methods of treating the tub so as to destroy the mold spores that happen to be in that tub. You all know these methods, they are in common use; some of them are successful, others less successful. For instance, the soaking of the tub in ordinary brine has a certain effect upon the mold spores to destroy them and that has prevented to some extent the trouble of mold appearing on the butter. There are other methods which are more successful than that, for instance the use of steam on the tub to destroy mold spores and perhaps the most successful is the use of paraffine, paraffining the inside of the tub. In that way we place this impervious layer of material over the mold spores and they cannot grow because they are shut away from the moisture.

One of the incorrect ideas which many have as to the cause of moldy butter is with reference to the refrigerator in which the butter may be kept. For instance, last summer we received a great many letters. I remember one letter we received from a creamery concern saying that the year previous they had a large amount of trouble with moldy butter but they thought it was due to their refrigerator, which was unsatisfactory, was damp and more or less mold was in the refrigerator, itself, but they took out that refrigerator last spring and put in a first class refrigerator, yet last summer

they still had trouble with moldy butter and could not understand why it was. The refrigerator itself or refrigerator car is not going to cause moldy butter. You may have a refrigerator that is unsatisfactory, that is so damp that the mold will grow on the walls of the refrigerator itself so you have a moldy refrigerator, but simply storage of butter in that sort of refrigerator is not likely to produce mold on the butter itself, especially butter in tubs, because we get our mold on butter from these mold spores, the seeds of the mold. After butter is packed and placed in the tub those spores are not going to get between the butter and the tub and produce trouble, and in the refrigerator damp enough to allow mold to grow it is always so damp those spores will grow off walls of refrigerator and not develop to any extent on open butter and print butter. I am not advocating a damp refrigerator, because a dry refrigerator is the thing, but I am certain a damp refrigerator is very rarely the cause of mold on butter.

For instance, one source to which the buttermaker does not devote his attention at the present time is to the paper which is used for liners and wrappers. I picked up the two books the other day on buttermaking, books which are in common use in this country, McKay & Larson and Michael's Creamery Buttermaking. Neither of these books mentioned the treatment of paper so far as mold is concerned. They made some statement in regard to tubs and treatment of tubs, and yet I am satisfied the paper may be the source of trouble as much as the tub unless the paper is in good condition when used, or treated in some way to destroy the mold which happens to be on that paper.

Now you all know conditions that favor mold growth, if you stop to think a moment. One is too much moisture. Whenever we have a damp spell in summer things get moldy. On various things mold shows, large moldplaces form, due because moisture enough condenses on these various things during the damp spell to allow mold to grow. Another thing we have to have is air, mold cannot grow away from the air; and another thing is, of course, some food material. Mold

will grow on almost anything, some types of mold, but the kind that we will find on any particular thing depends on the material itself. For instance, you all know the kind of mold we get on food, that bluish gray colored mold; on paper we very rarely can distinguish the mold, especially on our butter paper; instead of having mold that is greenish we have one that is black in color. You see this paper here is some that was sent in to us from one of the creameries in the state last year. When that paper reached us it was perfectly white, it showed absolutely no mold at all; it was simply placed under conditions favoring the mold growth and we have it covered with this particular mold we get on paper and get on butter. You see how very black that mold is. Now the mold which we get on ordinary materials, for instance on bread, the plant itself is colorless, and the one we get on paper and butter is black. It grows on the paper, penetrates into the surface of the butter and of course causes discoloration of butter. When we have this mold on a jar of butter by removing the outer layer we can get it under suitable condition without great loss; but now more print butter is sold than formerly and when you have mold on print butter the butter itself is practically a loss because if you remove the surface from the print you take off a large part of the butter.

On our butter paper as we get it, on our wrappers and liners, there is probably always more or less of these mold spores. Whether we get into trouble with that paper or not depends very largely on how we store the paper after it comes to us. There are usually some mold spores on it. If we take any sample of paper and put it under favorable conditions for mold growth we will get a small amount of these spots that appear on this paper I have in my hands. But where it is not abundant, stocks are not held for a long period of time and held at quite a low temperature, that is about freezing point, you will have no trouble; but as soon as the paper is kept under conditions that will allow mold to grow and then the stock is held any length of time under ordinary conditions, we are likely to get moldy butter.

I have some paper here which if any of you would examine casually you would think was perfectly white and would cause no trouble, and yet that paper was the cause of trouble in one creamery last summer. Butter which was stored any length of time with this paper became moldy indeed, yet you will see there are no visible signs of mold on the paper itself.

Now when we store paper in a clean place and in a dry place the mold that is already on that cannot grow and when we use that paper we are not likely to have any trouble, but as soon as we put that paper in a damp place so it gathers moisture enough to permit a growth of mold, then we will have trouble when we use it. This particular piece has no visible signs of mold and yet mold has grown enough there so it will start to grow rapidly as soon as the paper is brought in contact with the butter itself. So far as I know, the cause of that is simply because the paper in that particular creamery was stored in a place where it gathered dampness enough to enable the mold to get headway to some extent before it was used. The mold that we get on our butter does not grow on the butter itself, it grows very largely on the paper. It is very difficult indeed to get any sign of mold to grow on butter, that is it will not grow rapidly. Butter is not good food material for our ordinary mold, but when we bring that paper in contact with the butter the mold grows on the paper and gradually penetrates into the butter to a slight extent.

The same thing is true of tubs. The mold grows on the wood rather than on the butter itself, penetrates into the liners and gets into the butter. When we place butter in the tubs, especially in unparaffined tubs, the moisture is taken up by the tub itself and the butter shrinks away from the wall of the tub so as to leave an air space there, and we have favorable conditions for mold growth. We have good food material, abundant moisture and abundant air supply, hence if that butter is kept at a temperature above the freezing point that mold will grow, for this particular mold grows well at these low temperatures.

The fact that the refrigerator or refrigerator car is not at fault was shown last summer in some instances that we came across. For instance, one creamery in this state shipped butter to St. Louis from several of their factories; the tubs shipped from one factory reached there in bad condition, the tubs shipped from another factory, shipped in the same refrigerator car, reached the destination in excellent condition. Here is some of the paper sent to us from St. Louis from the commission house, which was shipped in this particular car that I have referred to. You see this paper has been in contact with the butter, is full of oil, but still shows the same mold which was present on the wrapper which I have passed about for your examination. Again we have samples of paper which were sent out from the general supply house, sent out to various creameries, possibly the same package of paper was distributed to different creameries. One of those creameries had a large amount of trouble with their butter and we found, on investigation, it was due to the fact that they did not have a satisfactory place for the storage of their paper. During damp weather it gathered moisture and permitted the mold to grow.

I think the points I have already mentioned are the most important from the standpoint of buttermaking. First, the storage of paper. If that can be stored in a clean place, in a dry place, you are not liable to have trouble with moldy butter unless the stock is held for a considerable period at ordinary refrigerator temperature. Where the stock is held below freezing point that stops the growth of mold. That is the thing the buttermaker should pay attention to.

When it comes to treating the paper, that seems of less importance. The thing to do is to store the paper under right conditions. In a creamery last summer we knew they had to use the paper they had until they could get a supply of good paper, so the only thing to do was to treat the paper in some way to destroy the mold spores on it. That can be done in a number of ways. A great many things will kill mold spores. Of course we have to use something that will not in-

jure the quality of the butter with which that paper is brought in contact. For instance, if we soak those wrappers in brine for a considerable period of time possibly that would not have any effect, but brine is not a sufficiently strong agent to kill these spores. If we take paper and treat it with some other agent that has a stronger effect than brine on mold spores we are likely to prevent all trouble. For instance, I have some paper here which has been treated in various ways and as you will see those treatments have prevented very largely the growth of the mold spores on the paper. Here is a paper which, as you can see, has a large amount of this black mold on its surface. When we put that paper in lime water for a short period of time, say four or five hours, we practically destroy the mold spores that are on it. Here is a piece of the same paper that we passed about, on which there is only a small amount of mold up here in one corner. That paper if put in practical use I am sure would not cause any trouble at all. Lime water is harmless so far as butter is concerned, but if you do use lime water it is necessary to use perfectly fresh lime in making up the lime water. Air slacked lime will have no effect on the spores, but when you use water slacked lime it will have the proper effect, and by soaking the paper in that you will destroy very largely the mold spores.

Here is another piece that has been soaked for a longer period of time and there is less mold on it. Another great advantage of lime is that it is cheap. If you use poor lime water it will do no good, it is necessary to use good lime water, lime water that when you put it in your mouth you can taste the alkali in it. If you put a piece of quick lime on your tongue you will spit it out very quickly.

Another thing which can be used and which has a stronger action than lime itself, and will have no effect on the butter, is peroxide of hydrogen. It is sold in every drug store in the United States. It is antiseptic, the doctors use it for wounds, and it will kill mold spores off very quickly. This particular paper, of the same lot as that we passed around, was placed in a 10 per cent solution of peroxide of hydrogen

for a short time. Peroxide costs about 25 cents a pound and yet if a man has paper he knows will produce trouble he must use it and it is up to him to do something, and peroxide at 25 cents a pound is cheaper than to spoil butter at 25 cents a pound.

Another way can be used, and that is simply the treatment of the paper by hot water. For instance, here is another of the same set of papers that we had before and you will see this same black mold scattered over the surface of it, and here is the same paper placed in the boiling water for a few moments. The paper is placed in a pan of water and the water is brought to a boil, or steam turned on it, anything to get the water to a boiling point, and the papers will come out as strong from that hot water as from cold water and in good condition for use on the butter, etc.

Those briefly are some of the ways in which paper can be treated, but I think the most important thing for the buttermaker to pay attention to is the storage of the paper. If he will store under good conditions very rarely will he have trouble unless his stock is held a long time, but if he stores it under conditions that encourage growth of mold he will get into trouble with his customers, and then he must treat the paper in some way until he can get a supply that is beyond reproach.

If any of you have any questions on this subject I shall be glad to answer them, or if you have any suggestions as to other methods of treating paper I should like to hear them. I have simply tried to give you a practical talk.

Discussion.

Member: Have you any practical way of testing mold on paper?

Prof. Hastings: We have papers sent to us from creameries that look practically clean and white. We test the paper by putting it under conditions favorable for growth of mold, that is put it in a dish where there is a little water so

the moisture will be absorbed. We put it in a pan and cover it over with another pan to keep the dust off it and see whether it develops a large amount of mold or not. This piece of paper I have in my hand when it reached us was apparently clean, no mold on it whatever as far as could be seen, but put under the conditions favorable to the growth of mold for a few days and we got something like this paper (showing a paper covered with spots) showing there was an immense amount of mold on it, while another paper under the same conditions will develop only two or three spots of mold. That is the way in which we test and it is perfectly practical from the standpoint of the buttermaker.

Mr. McCready: Do you have the water and the dish steril before you test?

Prof. Hastings: Yes, I neglected to state that, of course the pan in which the paper is to be placed should be heated so as to destroy any mold that might be on the pan itself; so if the pans are boiled in water and boiled water is used there will be no trouble in that way.

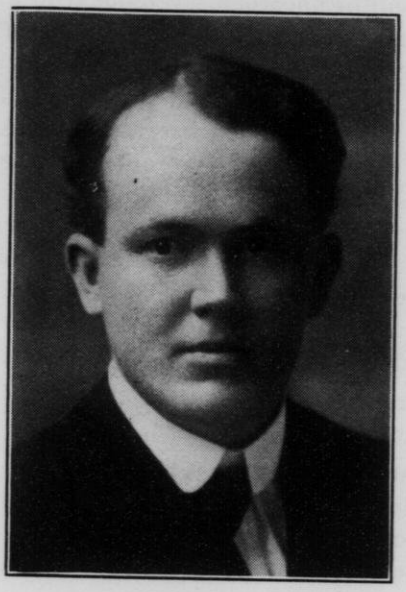
The Chairman: How can the butter be wrapped after the wrappers are soaked in water?

Prof. Hastings: Do you wrap in dry paper?

The Chairman: I never wrap in dry paper.

Prof. Hastings: I do not know whether that is the general custom. I know a great many creameries wrap in moist paper. I was in a centralizing factory the other day, where as high as sixty-five thousand pounds of butter is wrapped, and it is all wrapped in moist paper. The paper soaked in hot water will dry out quickly so it can be used for wrapping. Of course it does entail additional work but the thing to do is to prevent mold in storing the paper rather than go to this extra work in treating the paper.

The Chairman: Any other questions on this subject? If not, we will continue the program and take up the next paper by Mr. Herman Raven, Making Butter From Unripened Cream.



H. C. RAVEN,
Bloomer, Wis.
Speaker.

Making Butter From Unripened Cream.

Mr. Herman Raven, Bloomer, Wis.

Mr. President, Ladies and Gentlemen:

When I was asked to take part on the program today I fell to wondering if I could say anything "worth while" when there would be so many others here that were better able then I to talk to you, but decided to do what little I could.

Many buttermakers believe it is necessary to make butter from ripened cream in order to get a good flavor. When I first heard of making butter from unripened cream I thought it impossible to make a good article of butter. But as I heard more of the subject I became interested and decided to try it myself, after reading what I could find on the subject.

I had no pasteurizer and used crushed ice in the cream

to cool it down to churning temperature. I had fairly good results while the ice was good. But the ice we put up last winter was impure and I did not have good results with any method when I used this ice in the cream.

We got a cream ripener in May, 1909, and use the ripener as a pasteurizer. We pasteurize the cream to 148 to 156 degree Fahrenheit and hold at that temperature for 8 to 15 minutes; then cool down to churning temperature—45 to 50 degrees Fahrenheit depending upon the thickness of the cream and season of the year. It should be churned some cooler than ripened cream.

I add 40 to 50 gallons of starter while cream is cooling, when about the temperature of starter. I use from 20 to 30 per cent of starter. A large amount of starter is necessary as the starter is what gives the butter its fine creamery flavor, unless the butter is made for storage when good results have been obtained by using no starter. But I have never tried this method without starter.

After the cream has cooled to churning temperature it is held at that temperature for two hours to give it a good body, churn at a temperature so the butter will come in one hour to one hour and fifteen minutes, as it takes that long to get an exhaustive churning. I find the temperature of the buttermilk is about six degrees warmer than the cream was when I commenced to churn.

We started in the June, '09 contest to send two tubs of butter. One made from unripened cream and one from ripened cream, to see which gave the best results by using the same grade of raw material. The quality of the butter made from unripened cream has averaged the most even in score, with one exception when I believe the butter was melted in transit. The score has been from 94.50 to 95.33 in the Dairy School Exhibitions.

The United States government bought 800,000 pounds of butter for the navy which was supplied last summer from a number of creameries in different states. I understand this

butter was made from unripened cream. Some was made from sweet, pasteurized cream without any starter being added. Another portion was made the same way but after the cream was pasteurized and cooled a starter was added, and some was made from unripened and unpasteurized cream.

A sample can of three pounds of each churning was kept and placed in cold storage and was to be scored this winter in January and March. Before another storage season is here we will likely know with a certainty the keeping qualities of butter made by this method.

Butter from unripened cream must be all right or the United States government would not have demanded butter made in that way. I am informed butter made from unripened cream when scored after being held in cold storage a year or more was so fresh that it would not have been taken for butter stored any length of time.

I find in Circular No. 146, issued by the United States bureau of Animal Industry, Mr. Rogers says,—"Fishy flavor may be prevented with certainty by making butter from pasteurized cream, without ripening. The addition of a starter to pasteurized sweet cream without subsequent ripening improves the flavor of the fresh butter without adding enough acid to cause fishiness."

I believe if this method were to be used by the buttermakers a more uniform grade of butter would go to the market.

Discussion.

The Chairman: This is a very interesting subject and it ought to bring out some lively discussion.

Member: How close can you churn, what does the buttermilk test?

Mr. Raven: About 5.100 per cent.

Member: How about the body of the butter, with that method is it as good?

Mr. Raven: The body always seems to be very firm and

holds up very well. I have never had any criticisms on body.

The Chairman: Of course the temperature has quite a good deal to do with that. If the temperature is not low enough so as to churn quickly the body would not be as good.

Mr. Raven: It requires long churning.

The Chairman: If you churn over an hour and a quarter the body will not be good either.

Mr. Raven: I have churned an hour and a half and the butter seemed as good. I could see no difference.

The Chairman: In my experience if the churning is too slow the result is liable to be an unsatisfactory piece of butter.

Member: What per cent of cream do you churn?

Mr. Raven: From 33 to 35 per cent according to the amount of starter used and season of the year.

Member: Hand separator cream?

Mr. Raven: Both.

Mr. Seeman: Is this cream sour when it comes in?

Mr. Raven: It is delivered every other day in the summer, some of it every day, and twice a week in the winter. It is all sweet.

Mr. Seaman: When you pasteurize cream can you churn as close as you can with unpasteurized cream?

Mr. Raven: I think it is possible to churn as clean with pasteurized cream as unpasteurized cream if the churning temperature is sufficiently low.

The Chairman: Any more questions? If not we will proceed with the program. Mr. Martin Meyer, of Madison, regrets that he cannot be with us on account of having to attend the Michigan meeting. He sent a check for $10 for the banquet fund and writes that even though he is not here he sends his best wishes to the boys.

The next on the program is an address by Professor Carl E. Lee of Madison.

PROF. CARL E. LEE,
Madison.

The Control of the Composition of Butter.

Carl E. Lee.

A knowledge of the factors that influence the composition of butter is of importance to every creamery operator for it bears a relation to the quality of the product and to the net returns.

The question of the water content in butter has been considered at length at several of our meetings, not so much has been said of the salt.

The average composition of Wisconsin butter is no different than that which is made in our sister states. This was demonstrated by collecting samples of butter, as it arrived in the markets. The average composition of all samples collected representing various states was: water, 13.54 per cent; fat, 83.20 per cent; salt, 2.25 per cent and casein and ash, 0.9

per cent. The average composition of the 103 samples representing the butter shipped to one firm by 47 Wisconsin creameries was: water, 13.28 per cent; fat, 83.49 per cent; salt, 2.29 per cent and casein and ash 0.96 per cent. This when compared with the result of analysing 131 samples representing 70 Minnesota creameries gave for that state an average of 0.23 per cent less water, 0.29 per cent higher fat and only 0.06 per cent less salt content.

It was also found that the general variation in composition of butter representing various creameries, located sometimes in remote sections of the state, was no greater than the variation in composition of butter made in one factory. This being the case there is little foundation for the argument of the creamery man who says he is salting the butter to suit the buyer, when it has been found that in several instances there is a wide variation in the per cent of salt in the butter from one creamery. As an example: In one shipment representing a week's make, one churning of butter contained 3.64 per cent salt, while another only 1.81 per cent. What is true of salt content is equally true of the per cent of water and fat.

Obtaining the Sample.

It is necessary to consider the sampling and preparation of the sample, which is to represent a churning of butter in order that we may more fully understand the limits of variation in composition due to sampling and which should not be attributed to actual variation. Taking the sample of the butter in the churn when the working is completed should be done as follows: First: Remove by means of a ladle a portion of the surface of the butter extending the full length of the roll in the churn. By means of a case knife or spatula take out several small pieces, about 10 to 15 grams each, from various portions of the churn and place them in a glass stoppered jar, avoiding water pockets.

The sample obtained from the packed butter in the tubs should be taken by means of a trier extending the full depth of the tub, the top two or three inches of the plug removed

should be replaced. All of the free water appearing on the surface of the butter removed must be collected with the butter in the sample jar. This method of sampling packed butter will give results that can be relied upon.

In sampling print butter, cut the print by means of a string into halves. From one of the ends thus exposed, cut as before a slice about one-half inch in thickness and place in a sample jar. The sample to be tested for moisture should be melted by placing the jar in warm water at as low temperature as possible. When completely melted, cool until solid in cold water, shaking often to insure a homogeneous mixture.

Samples obtained, as above stated, are only approximate representatives of the churning of butter. If more than one sample is taken to represent the same lot of butter, there will be a variation within one per cent, with an average variation of one-half per cent. Samples taken from the churn will, as a rule, contain one per cent more moisture than the samples taken from the tub by means of a trier. And the trier sample will show nearly one-half per cent less water than actually present in the butter. There are cases known when this variation is greater and in others less. In a series of twelve churnings one sample was taken from each churning and from each of the five tubs packed to represent each churning of butter, making a total of 60 tubs sampled. One tub representing each churning was melted and then sampled. The average water content of the 12 melted tubs was 0.36 per cent higher than that of the average of the trier samples, taken from 60 tubs and 0.36 of one per cent lower than the average of the 12 samples taken from the 12 churns. In another case where the butter in the tubs was frozen when the trier samples were taken, there was a difference of only 0.13 per cent in favor of the 12 melted tubs.

Further proof that samples taken from the churn will show too high a water content and consequently a lower fat content was brought out by a series of churnings to determine the fat recovered in the butter based upon fat content of the

butter. These facts, understood, it becomes evident that a natural variation due to sampling must be considered and have a reckoning as a factor in the composition control.

Desired Composition.

The control of a desired composition of the butter made in a certain factory is very important. First on account of the dealer's demand for a grade of butter safe within legal limits, as to water content. With a sufficient amount of dissolved salt uniformly incorporated. Second: On account of the financial problems involved in a factory not making butter of uniform composition.

The limit for water in packed butter should not exceed 15 per cent, salt content 3 to 3½ per cent and fat content 83 per cent. An ideal commercial butter can be represented by the following composition: Water 14 to 15 per cent, salt 2.5 to 3 per cent, casein and ash 1 per cent and the fat close to 82. per cent. A buttermaker with this standard in view can make butter from day to day regardless of locality, seasonal and other changes, that need not vary more from this than the variations due to sampling.

Water Control Possible.

The control of the water content in butter is made possible by a uniform system of operations, which are changed only as the condition of the butter fat demands it. The one great factor to be reckoned with is the temperature of the butter fat throughout. When cream has been held for only a short while as compared with a longer period, it can not in both cases be churned at the same temperature. Always churn cream at a temperature sufficiently low to bring butter granules of a proper degree of firmness and the least loss in the buttermilk. The granules of butter should not be so soft that they can not be kept in their natural form, nor so firm that they must be warmed a great deal by means of the temperature of the wash water.

In washing the butter there should be as much water

added as there was buttermilk removed. The temperature of this water should be regulated according to seasons and other changes. There should be little, if any, variation in size of granules. It is not advisable to over-churn or in anyway mass the butter prior to the addition of the salt.

There are a few minor factors that must be taken into consideration with reference to moisture control. The temperature of wash water that will give butter containing 14 to 15 per cent moisture in one make of churn will in another churn give on an average of one per cent higher water content while in the third churn it may be lower. This difference in the make of churn seems to be due to the position of the butter during working. This makes it difficult and uncertain to give general instruction. For example: at this season of the year the temperature of the water need not vary a great deal from 60 degrees Fahrenheit. The location of the butter in the churn whether in either end or middle bears no relation to the moisture content.

Cream once cooled to churning temperature and held until the butter fat is thoroughly adjusted to it, need not be held any longer in order to control the composition of the butter made from that cream. If cream is churned too soon after it is cooled, it will naturally produce butter with a less degree of firmness unless that churning temperature was lowered.

Pasteurized or unpasteurized cream need not be handled at different temperatures because it has been found that butter having the same water content can be made from either lot providing the heated cream is held until the butter fat is cooled. The natural change of the per cent of fat in the cream from day to day is not a factor worthy of any consideration, because butter having the same composition can be made regardless of whether the cream contains 20 or 30 per cent butter fat.

Next in importance to temperature as a factor in moisture control is the working of the butter; how and when it is done. Butter will never be in a better condition for working

than immediately after the wash water has been removed. It seems best to always have the butter in a granular condition at the time of adding the salt and that the working be continuous. Working the butter at two different periods seems to have a tendency to reduce water content. This is best illustrated by the method in use for reducing excessive moisture in the butter, namely: allow the butter to harden, then work to reduce the moisture.

Uniform Salt Content Necessary.

A comparatively uniform salt content can be maintained in various churnings of butter, regardless of the conditions that might alter its moisture. A definite per cent of salt can be incorporated in butter regardless of its water content. In other words a creamery may be making butter containing one per cent of salt and 14 per cent water. If they should decide to make butter containing 3.5 per cent of salt, there need not be a reduction in water content.

To a certain extent the quality of the butter fat should decide the degree of saltiness desired in that butter. In one case rather light salting would be beneficial, while in another heavier salting would hold true. The Commission firm will inform the creamery company as to the salt content they desire in the butter. This being known, it should be maintained. First: Because the buyer should be pleased. Second: If the desired amount of salt is 3 per cent and there is a reduction from this to 1½ per cent, it is a financial loss, because the salt is replaced by fat and makes itself known in the overrun, the same as a similar reduction in water content.

Butter containing no gritty or undissolved salt will permit a higher salt content. The object is more on account of this defect than too high a per cent of salt. Naturally there is a limit to the amount of salt, that market butter will permit and in no case should it be crowded at the expense of quality nor should it be reduced when quality can be benefited by its more liberal use.

How Salt May Be Uniformly Maintained.

The relation between pounds of salt, butter and water in the churn is what regulates the condition and per cent of salt in the finished product. The standard amount of salt that a buttermaker uses may be anywhere from three-fourths to one and a half ounce per pound of butter and yet the per cent of salt in the butter remain constant. In this case the per cent of free water in the churn, while the butter is being worked regulates the salt. The great varying factor is the unknown quantity of wash water not drained out after washing.

A few days ago two churns were operated at the same time by a class of students. The same proportion of salt and water were added, in one of these churns, the butter contained a very high salt content and in the other, it was rather light. This was due to a large quantity of water being retained in one of the churns. In a creamery where the same churn or two churns of the same make are in use and the buttermaker has a uniform system of operating the churns, prior to the salting, he can make the necessary allowances for the water naturally retained.

It is evident that the number of pounds of butter in the churn bears a relation to salt content. The rate of salt used in a churn with 700 pounds working capacity is ten pounds per hundred pounds of butter fat. If in this same churn, only two hundred pounds of butter is to be worked, a higher rate of salt must be used or the pounds of water added must be reduced, in order that the results be uniform. All of the salt in the butter must be dissolved because salt in this condition is objectionable to both buyer and consumer. If the quantity of butter in the churn is known and the desired water content is fixed and all free water drained, it is then comparatively easy to add the rate of salt and water desired.

The object is not that a moisture determination should be made, alone for the purpose of making sure that it is legally safe, but rather as a matter of record.

As already stated, butter made by a known standard will

have a uniform water content from day to day. The variation found by the determination is due more to a sampling error. If butter contains 12 per cent water one day and 16 per cent the following day, the operator lacks system. What has been said regarding testing for water holds equally true of the salt. Extremes of salt content can be detected by taste, but furnishes no definite data.

The average casein content of butter found in the markets is a trifle less than one per cent. Very little butter contained over one per cent and no attempt should be made to increase it. Where the water, salt and casein content in the butter are known, the per cent of fat can be obtained by difference, although this is not necessary because the fat determination in butter can be accurately done by the Babcock Test. Take the regular sample prepared for water and salt determinations, place the jar in warm water as before, when liquid, cool until it has a consistency of cream. Before reading, place the bottle in water having a temperature of 120 to 130. The reading thus obtained, can be used as a basis for determining the butter fat recovered in the butter. For an example if 1063 pounds of fat was churned and this made 1278 pounds of butter, which contained 83 per cent of fat or a total of 1060 pounds of the fat recovered.

Summary.

The average composition of Wisconsin Creamery butter is the same as the composition of the butter made in other states. There is a lack of uniformity in composition of butter made in one factory.

Several samples representing one churning of butter may vary as much as one per cent in water content.

Samples taken from packed butter will show a trifle less water than actually present in the butter. The opposite is true if the samples are taken of the butter before it is packed.

If the buttermaker follows a definite method to suit his conditions the butter will not vary a great deal in composition.

The governing factor in water control is temperature. The salt content in butter can be kept uniform by knowing the exact number of pounds of butter fat in the churn, then adding a definite amount of salt and water.

Discussion.

The Chairman: We would like to have some questions on this subject as it is very interesting and very instructive.

Mr. Magrane: Don't you believe the number of revolutions has more to do with it than the handling of butter?

Prof. Lee: If a man revolves the churn thirty times one day and five the next day the condition will not be the same.

Mr. Magrane: I have found quite a difference. I have found a difference in washing the butter of a large churning with an ordinary temperature, that ten revolutions left an excess of moisture of about one per cent. By cutting that down to five or six revolutions I had moisture content of 15½ per cent under the same conditions.

Prof. Lee: How much water do you figure to use in washing your butter?

Mr. Magrane: About the same amount as I have buttermilk.

Prof. Lee: Was your butter fairly soft?

Mr. Magrane: No it was about the size of kernels of corn. It was churned in the Fall at 58 degrees and washed at 56.

Prof. Lee: That was the difficulty. Your butter was warmer than the wash water. 58 degrees was rather soft and coming in contact with the cold water massed the butter a little. You say it varied about 1½ per cent?

Mr. Magrane: Sometimes two per cent. We took three samples, one out of each end and one from the center.

Prof. Lee: That was one thing which I omitted which has just been brought out, the position of the butter in the churn bears no relation to composition.

Member: I always found the lower end of the churn has

a higher moisture content than the upper end or center of the churn. I have taken hundreds and hundreds of samples, and on one occasion I nearly deceived myself. The churn was lower than I thought it was and there was more moisture in the lower end of the churn that I figured on and I found there was excess moisture of one per cent in the lower end of the churn, and it went on that way for sometime until I discovered the trouble.

Prof. Lee: Did you work the butter by having the drain plug open?

Member: No, I work it with the plug in. I leave the strainer there at an angle of four or five degrees.

Prof. Lee: Wouldn't it have been better to have allowed all the water to always run off? If you have 500 pounds of butter put in fifty pounds of water and if you have 200 pounds of butter put in twenty pounds.

Member: That is practically the system I use.

Prof. Lee: How can you regulate it by the strainer?

Member: We can regulate the strainer.

Prof. Lee: How many can regulate the strainer to know exactly what they have? That is a good plan if you can guess right. I cannot. That is the reason why there are a number of boys in Wisconsin that in washing the butter allow all of the water to run off regardless of the amount of butter in the churn, then they measure out the amount of water they use.

Mr. H. P. Olson: Would you use the same churning temperature in a small churn as you would on a full churn, providing the cream contained the same per cent of butter fat?

Prof. Lee: No, the temperature must be varied.

Mr. Olson: Which would give the better overrun, the small or large churning?

Prof. Lee: Whether you have a small churning or large churning has nothing to do with the overrun from the standpoint of water content. The idea had gone forth that you

cannot get as much water in the butter with the small churning as with the large churning but that is not true.

Mr. Hodge: Is there any difference between the top and bottom of a package of butter as to the amount of moisture? I notice the government always takes samples from the bottom of the tub.

Prof. Lee: I have never found after the butter is once made and packed that there is any sinking of the water content. There is no difference in the water content between the top and bottom of the tub.

Mr. Olson: At what temperature do you have the water you put in the churn?

Prof. Lee: The same as the wash water.

Mr. Olson: What would be the result of cooling the cream down two points lower than you would to churn one-half hour after you cool it. Would there be any loss in the buttermilk?

Prof. Lee: No, not if you are careful.

Mr. Seifert: Does moisture freeze out in cold storage?

Prof. Lee: A year ago we placed 160 tubs of butter in cold storage in Chicago and 160 tubs of butter from the same churning in cold storage in New York City. The 320 tubs were all sampled before being placed in storage. The 160 tubs in Chicago, after having been held in storage for six or seven months (that is the first had been in six months and the last seven months) the average decrease in water content was one per cent. That butter represented 80 churnings, four tubs packed from each churning or a total of 320 tubs. When the butter came out of storage the butter was frozen and consequently in pulling the trier full of butter out of those tubs, there was no appearance of water at all because the water was frozen and there was no changing of position, therefore, the removing of the plug out of the frozen tub came near to getting an average composition of that butter. To prove whether there was any difference or not, we took twelve tubs of butter from twelve different churnings and marked them,

made a moisture determination. Out of the same churnings we took another lot of twelve tubs, after being in cold storage seven months and marked them. We found the decrease was not quite one per cent but there was a decrease in the moisture content during storage. All these questions that have been brought up are discussed in bulletin 137 of the Illinois Experiment Station. I am sure if any of the buttermakers in Wisconsin want to write to Illinois for bulletin 137 they will receive it.

Mr. Olson: Would it not be possible for a slushy bodied butter to decrease more in moisture in cold storage than a good bodied butter?

Prof. Lee: I do not know. I cannot answer that. Can anyone answer that question?

Mr. Jordan: Don't you think you get a larger overrun by churning in coarse granules than fine granules? Is there not more casein in the larger granules?

Prof. Lee: Is not this the point, that you should always aim to get all the casein out of your butter?

Mr. Jordan: The more you get out the smaller your yield.

Prof. Lee: That does not make any difference, we are making butter for quality. A year ago I saw a statement in a paper that a man said "If you will send me a certain amount of money I will show you how to put four per cent of casein in your butter." I am sure the boys in Wisconsin do not want that kind of butter. We should get all the casein out of the butter that is possible.

Mr. Jordan: Suppose you had very hard competition as we do. We have to have quantity as well as quality.

Prof. Lee: Here is the point in connection with that, wouldn't it be better to increase the salt content of your butter one per cent?

Mr. Jordan: We do that also.

Prof. Lee: The point I wish to bring out is this, that the boys today making butter on Monday may have butter con-

taining four per cent salt and on Tuesday one and one-half per cent salt, and then say "Where is my overrun?" There is a creamery in the state of Iowa making butter so close to 16 per cent water that over half the samples when taken contained over 16 per cent moisture, and yet their maker varied 3 per cent in the salt content of his butter from day to day. If you make butter containing 15 per cent water, you have 15 per cent water whether you are putting in 5 per cent salt or 1 per cent, and when you put in 5 per cent you have 4 per cent more overrun. However, it is not the object that we should over load our butter with salt. Let us make butter with a uniform salt content. Our commission merchants do not say a great deal as to whether your butter contains high salt content up to a certain limit. They know a certain trade demands high salt and another trade demands low salt, but the trouble arises from the fact that the buttermakers are making butter one day with a high salt and the next day making butter with a low salt content?

The Chairman: How much salt can you put in butter without making it too salty?

Prof. Lee: If the man to whom you sell your butter says "I want butter with a certain amount of salt in" you should attempt to make butter containing that amount. I have made butter containing 5 per cent salt without receiving any complaint whatever. When Keiffer and Smarzo, in the New York market, were asked in regard to the salt content of the butter used in that market they said that New York used between 2½ and 3 per cent salt.

The Chairman: Is it not a fact that at times butter can contain twice as much salt as at other times, and yet not show it in the taste?

Prof. Lee: No, the presence of a small amount of salt or a large amount can always be detected by the taste. If there is an objection raised against the salt in butter it is generally made when all of the salt is not dissolved.

Mr. Jordan: Would not the same thing be true of casein?

Prof. Lee: No one can tell the casein content by looking at butter. We cannot increase the casein content of butter very materially. If I attempt to make butter one per cent casein I cannot make butter with two per cent casein by the same methods.

Mr. Magrane: I would like to ask Mr. Jordan in making his casein content 4 per cent, 15½ per cent moisture and 4 per cent salt, how he can come within the legal fat standard for butter? He would have to cut down somewhere in order to have legal butter.

The Chairman: Is not the legal standard 82½ per cent fat?

Prof. Lee: That is the standard of our federal government and also of Wisconsin.

The Chairman: Is it legal?

Mr. Larson: It is on the statute books of the state of the last legislature. It has not got to the Supreme Court yet but it may, where a creamery has been attempting to incorporate all the casein possible, have a high limit of water, also salt reducing the butter fat content below 82½ per cent.

Mr. Magrane: That is the condition Mr. Jordan had reference to. I know creameries trying to get all the casein possible in their butter, also trying to get in all the salt they can and making all the butter they can out of a given amount of cream. They are trying to get everything they can in the butter, as buttermakers did with moisture before the question of moisture content was brought to light. I think it is a very good thing to have this law enforced, to have a standard of fat.

Prof. Lee: Would it not be better for the creamery interests of Wisconsin to put a fat standard on our butter and say nothing about water, salt and casein? Here is a point that was raised in connection with this. The casein content of

milk is 2½ per cent and in skimming the milk, taking out 10 per cent of it as cream and churning that material, how much casein can you put in butter?

Mr. Larson: A short time ago a buttermaker in Wisconsin tried to do that. I think he got his instructions from this man that went up and down the state telling how to do that. He paid something like $500 on the amount of butter he made that way because it went off sour.

Prof. Lee: There is much butter going on the market containing that sour gritty flavor and it is due to the fact that we get over-ripe conditions in our farm skim cream, therefore this must be removed from the butter to favor quality.

Member: Do you consider one washing of butter sufficient to get all the casein out?

Prof. Lee: Wash twice if necessary.

Mr. Magrane: Has the Dairy School any device for testing the amount of salt or casein in butter?

Prof. Lee: There is one on the market, one that was introduced recently by Yoeman of Minnesota.

Mr. Magrane: That is something few buttermakers have and they are only guessing on the salt content.

Prof. Lee: That is not safe. This question was raised with me a short time ago. It is as important to control the salt content of our butter as it is the water content.

Mr. Cook: Do you use one or two workings?

Prof. Lee: The butter is never in better condition for working than immediately after wash water is off, working the butter continually with cover and plug closed tight. The old idea of working butter and stopping the churn at every revolution with cover open so as to allow the water to run out is a thing of the past and I hope the time will come when every buttermaker in Wisconsin will discontinue that system.

The Chairman: We will now listen to the result of the judging contest, the scores of which will be read by Secretary Moore.

JUDGES SCORES

Name	Address	Corneliuson	Larson	Lee	Average	Pro rata
Geo. Allen,	Stevens Point	93	93.5	93	93.16	6.90
E. J. Alexander,	Poy Sippi	90	92.5	91	91.16	3.58
F. J. Burndt,	W. DePere	96	96	95	95.66	11.05
G. E. Borchert,	Green Bay	90	90	92	90.66	2.75
R. O. Brye,	Readstown	90.5	90	91	90.5	2.49
G. Blumenstein,	Berlin	93	93	92.5	92.83	6:35
Frank Brighton,	Shawano	93	91	92	92	4.98
Wm. Boldt,	Racine	94	95	95.5	94.83	9.67
J. Bornheimer,	Ft. Atkinson	93	94	94	93.66	7.73
F. Bowar,	Cazenovia	95	94.5	94.5	94.66	9.39
R. J. Brigham,	Troy Center	93	93.5	94	93.50	8.47
J. H. Betz,	Ridgeland	95	94	95	94.66	9.39
R. Carswell,	Clear Lake	92	93	92	92.33	5.52
H. A. Curt,	New Richmond	91	92	92	91.66	3.41
J. Chandoir,	Green Bay	94	94.5	94.5	94.33	8.84
S. B. Cook,	Bloomer	94	94.5	94	94.16	8.56
M. R. Cross,	Mauston	90.5	92	90	90.83	2.86
H. Christianson,	Tomah	94.5	92.5	93	93.33	7.18
L. E. Claflin,	LaValle	89	89	92	90	1.66
W. J. Clark,	Lake Beulah	94.5	95.5	95	95	9.96
C. D. Carlson,	Cushing	93	93	93	93	6.64
W. A. Conry,	Avalon	94	95	95.5	94.83	9.67
W. Christiansen,	Allen Grove	96	96	94.5	95.5	10.79
J. F. Chapman,	Whitewater	93	91.5	92.5	92.33	5.52
R. P. Christiansen,	Milltown	94	94	93.5	93.83	8.01
J. F. Dabareiner,	Jefferson	94.5	93.5	94	94	8.30
C. K. Dunlap,	Elkhorn	93	94	92	93	6.64
L. Dabareiner,	Hortonville	90.5	91.5	91	91	3.32
Eichel,	Fond du Lac	91	91	90	90.66	2.75
L. Ebert,	Bonduel	91	93.5	94	92.83	6.35
O. Esker,	Dallas	95.5	95	94.5	95	9.96
R. J. Else,	Johnson Creek	94	95	94.5	94.50	9.13
H. Eberhardt,	Brill	91	91.5	92	91.50	4.15
J. L. Frank,	Black Earth	96	94.5	95	95.16	10.22
E. A. Filer,	Reedsburg	92	92	90.5	91.5	4.15
W. J. Feind,	Jefferson	94	93.5	92.5	93.33	7.18
A. Ferns,	Cedarburg	90	92	90	90.66	2.75
F. A. Flynn,	Neillsville	93	93	93	93	6.64
J. Grande,	Troy Center	94	93.5	94	93.83	8.01

Name	Address	Corneliuson	Larson	Lee	Average	Pro rata
O. J. Groth, Cedarburg		94	94.5	94.5	94.33	8.84
J. S. Goodrich, Augusta		92	91	90	91	3.32
H. E. Griffin, Browntown		93	91.5	93.5	92.66	6.17
Geo. Garlid, Knapp		93.5	94	93.5	93.66	7.74
C. C. Graack, Arlington		91	91	91	91	3.32
F. J. Gehrke, Wausau		91	92.5	92	91.83	4.69
P. R. Goodrich, Elkhorn		95	95.5	96.5	95.66	11.05
F. H. Harms, Loganville		91	92	93	92	4.98
B. A. Hass, McFarland		94	94.5	94	94.16	8.56
Aug. Hein, Waukesha		94.5	94	94	94.16	8.56
Hachbarth, Ft. Atkinson		95	94.5	94	94.5	9.13
C. C. Holm, Nashotah		91	91.5	92.5	91.66	3.41
W. E. Hathaway, Jefferson		94	93 5	94.5	94	8.30
M. J. Higgins, Oconomowoc		94	93.5	94	93.83	8.01
A. C. Haberstich, Medford		91.5	92	93.5	92.33	5.52
H. B. Hoiberg, Brooklyn		96	95	96	95.66	10.50
A. Heinz, Burlington		95	93.5	94.5	94.33	8.84
E .E. Henthorne, Sylvan		91	90	91	90.66	2.75
T. E. Hickok, Hope, Ind.		94	93.5	94.5	94	8.30
Theo. Helgerson, Holmen		90	91.5	92	91.16	3.58
N. P. Hansen, Almond		95	95	95.5	95.16	10.22
C. W. Judkins, Fond du Lac		96	96.16	96	96.16	11.88
G. E. Jordan, Amherst		93.5	93	93	93.16	6.90
W. James, Clinton Junction		95	95	95	95	9.96
M. Johnson, Cedarburg		94	94.5	94.5	94.33	8.84
O. Johnson, Disco		90	90.5	91.5	90.66	2.75
G. A. Kinzler, Cross Plains		95	95.5	95	95.16	10.22
R. S. Kaunzner, Boyceville		92.5	92	92	92.16	5.24
O. J. Krogstad, Eau Claire		93	93.5	92	92.83	6.35
O. E. Kielsmeier, Manitowoc		93	91	92.5	92.16	5.24
W. F. Krohn, Whitewater		94	94	94.5	94.16	8.56
H. T. Kipp, Albion		94	94.5	95	94.5	9.13
M. O. Koenig, Wausau		93	94.5	93.5	93.66	7.73
L. M. Kohel, Augusta		93	93.5	93	93.16	6.90
F. Kiesse, Neenah		95	95	95	95	9.96
R. J. Koepsell, Abrams		91	92	92	91.66	3.41
R. F. Kohlman, Glenbeulah		92	91	90	91	3.32
E. Longteau, Green Bay		93	93	93.5	93.16	6.90
J. F. Lundeberg, Stoughton		93	92	93	92.66	6.17
W. D. Lee, Neillsville		92	93	92.5	92.5	5.81
S. Lee, Modena		95	96	95	95.33	10.50
I. Moersch, Peebles		95	95.5	95.5	95.33	10.59

Name	Address	Corneliuson	Larson	Lee	Average	Pro rata
P. Mollet,	Stiles	92	92	91	91.66	3.41
J. Miller,	Baraboo	89.5	90	91.5	90.33	2.10
J. C. Mason,	Montfort	94.5	94.5	94	94.33	8.84
A. A. Mueller,	Ixonia	95	95	95.5	95.16	10.22
J. C. Miller,	Augusta	96	96	96	96	11.62
F. V. Merryfield,	Larson	91.5	93	91	91.83	4.69
O. R. McCormick,	Bancroft	90	93	91.5	91.5	4.15
J. F. McGill,	Little Suamico	93	93	92	92.66	6.17
B. L. Newell,	Sheridan	93	92	93	92.66	6.17
S. B. Nelson,	Kewaskum	95	94.5	95	94.83	9.67
W. Nichols,	Amery	94	93.5	93.5	93.66	7.73
J. M. O'Connor,	Eau Gallie	93	92.5	93.5	93	6.64
R. J. O'Keefe,	De Pere	94	94	93	93.66	7.73
E. J. Peschke,	Fairwater	91	92	92	91.66	3.41
N. E. Possley,	De Pere	90	91.5	91	90.83	2.86
H. Prust,	Princeton	95.5	95	94	94.83	9.67
W. G. Paulson,	Richardson	92	92	92.5	92.16	5.24
O. Perschbacher,	West Bend	93	93.5	93.5	93.33	7.18
L. Peterson,	Rose Lawn	92	93	93	92.66	6.17
E. G. Rasmussen,	Fall Creek	91	91	92.5	91.50	4.15
H. C. Raven,	Bloomer	96	96.25	96.5	96.25	12.03
B. Roon,	Sparta	93	93.5	93	93.16	6.90
C. L. Rich,	Oshkosh	90	91	92	91	3.32
M. J. Roethle,	Sherry	93	92	91	92	4.98
C. G. Seifert,	Cambria	92	90	91.5	91.16	3.58
G. P. Sauer,	East Troy	94	95.5	95	94.83	9.67
G. M. Stewart,	Mazomanie	93	93.5	94.5	93.66	7.73
H. C. Schulte,	St. Croix Falls	91	91	90	90.66	2.75
E. W. Speich,	White Creek	92	91 5	91.5	91.66	3.41
E. Stryker,	Sharon	95	95	95	95	9.96
E. Soltwedel,	Lime Ridge	94	93.5	94	93.83	8.01
W. A. Stewart,	Eagle	96	95.5	96	95.83	11.33
W. Schulz,	No. Bloomfield	94	93.5	94	93.83	8.01
F. C. Thompson,	Oregon	93	93.5	93.5	93.33	7.18
P. J. Theland,	Saukville	94.5	94.5	93.5	94.16	8.56
C. Tyler,	DePere	92	93	93	92.66	6.17
Chas. B. Titus,	Oakwood	94	94.5	95	94.5	9.13
R. Tamblingson,	Cambridge	96	95.5	96	95.83	11.33
Geo. Tank,	Van Dyne	93	94.5	94.5	94	8.30
T. J. Warner,	Rosholt	92.5	92	92.5	92.33	5.52
L. H. Winter,	Eau Claire	93	93.5	92	92.83	6.35
J. C. Weber,	Fond du Lac	93	94	95	94	8.30

Name	Address	Corneliuson	Larson	Lee	Average	Pro rata
W. Warnke,	Kingston	90	92	92	91.33	3.86
J. A. Warnke,	Germania	93.5	94.5	93.5	93.83	8.01
C. M. Welcome,	Ripon	94	93.5	92.5	93.33	7.18
J. F. Weber,	Hartford	94	94.5	95.5	95	9.96
F. L. Yockey,	West Salem	91	91	92.5	91.83	4.69
H. M. Zander,	Cross Plains	91	91.5	90	90.83	2.86
A. W. Zimmerman,	Norwalk	92	92.5	93	92.5	5.81

	Aver. Score	Dif. in own Scr.	Judges Score	Dif. btw. Compe. Jg.	Total Dif.
G. S. Seifert	92.975	1.5	92.814	.161	2.161
Earl Longteau	92.675	1.5	92.814	1.39	2.89
R. E. Tamblingson	92.325	2.5	92.814	.489	2.989
J. D. McCready	92.7	4.	92.814	.1114	4.114
S. B. Cook	92.7	5.	92.814	.114	5.114
G. Wallan	92.475	5.5	92.814	.339	5.839
W. Christiansen	91.3	6.	92.814	.514	6.514
H. B. Hoiberg	91.725	7.5	92.814	1.89	7.589
G. S. Speich	92.575	7.5	92.814	.239	7.739
R. T. Kaunzner	92.225	7.5	92.814	.589	8.089
H. J. Gallup	91.15	7.	92.814	1.664	8.665
H. C. Raven	92.475	8.5	92.814	.339	8.839
G. P. Sauer	92.5	10.	92.814	.314	10.314
H. Doolan	92.25	11.	92.814	.564	11.564
I. Moersch	91.5	11.	92.814	1.314	12.314
F. Brighton	91.125	11.5	92.814	1.689	13.183
O. E. Kielsmeier	91.7	14.	92.814	1.114	15.114

Mr. G. S. Seifert, with the highest score, received as a prize a silver water pitcher, Earl Longteau second prize, a silver cake basket, and Mr. R. E. Tamblingson, third highest score, received a silver bread tray.

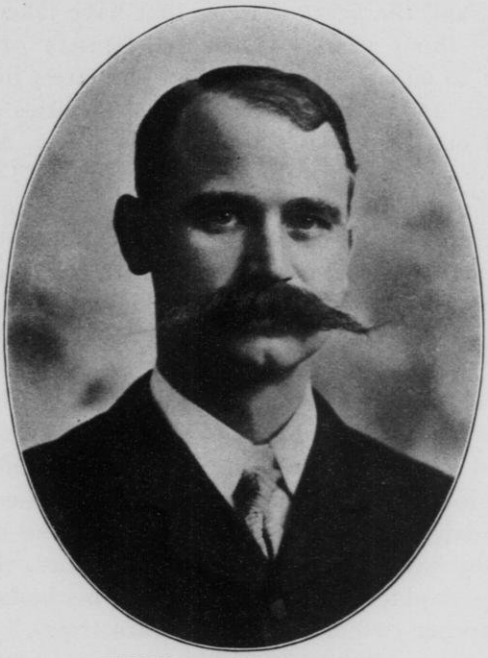
The Chairman: As I am unable to be present, Vice President Puerner will preside this afternoon, and we will now stand adjourned until 1:30 o'clock.

Before the opening session the butter was sold by Mr. Parman to the P. F. Brown Co., of Philadelphia, for 29 cts.

THURSDAY AFTERNOON SESSION.

Meeting called to order at 2 o'clock with Vice President Puerner in the Chair.

The Chairman: The first topic on the program this afternoon will be Creamery Inspection and its relation to the Dairy Industry, by Mr. Thos. Corneliuson, of Madison.



THOMAS CORNELIUSON,
Madison.

Creamery Inspection and Its Relation to the Dairy Industry.

Thomas Corneliuson.

Ladies and Gentlemen:

In a discussion of the subject, "Creamery Inspection and Its Relation to the Dairy Industry," it may not be out of place to consider briefly the development of dairying in Wis-

consin, because creamery inspection and dairy development have been so closely connected, especially during later years, that it is difficult to discuss one without also discussing the other.

For those of us who know of early dairy conditions, only through history, written and oral, it is somewhat difficult to understand fully the difficulties that confronted the pioneer dairy man, and the great changes that have taken place during the last thirty years. When the farmers of Wisconsin first began to engage in dairying all industries here were, of course, more or less undeveloped. The facilities of manufacturing and marketing dairy products were few, and dairying was carried on chiefly during the summer. The farmers made their own butter and cheese and disposed of these products generally in the autumn. A good illustration of the condition of that period is found in a little incident which has been recorded (C. P. Goodrich, 31st Annual Rept. W. D. A., p. 21) and which I shall mention here. During the winter of 1847 a boy in Jefferson County started to market with a load of dairy products. He or his folk had heard that far away to the north was a town called Fond du Lac, and that there was to be found a market for butter and cheese; hence he drove northward for two days and then finally reached Fond du Lac—thus dairy men began early to go to Fond du Lac, and it seems they have been coming here ever since. Having disposed of his produce, the boy returned to his home, and used, perhaps, another two days for the return trip.

Contrasting these conditions with those of the present day, it is clearly seen that a great change has taken place in the dairy industry. Now the dairyman has products to sell every day in the year; he no longer makes his own butter and cheese; he no longer is obliged to travel eighty miles by team in order to find a market for his products, but sells them at his own door. The industry that began in the log houses of the pioneer dairymen, is now served by three thousand butter and cheese factories, and produces annually dairy pro-

ducts to the value of more than sixty-eight millions of dollars

This development has come through the agency of numerous forces, one of which is creamery inspection. Dairying had not progressed very far when it was realized that it was necessary to take instructions direct to the cheese factories and creameries. After a while such instruction was authorized and provided for. It soon became evident, however, that only those men who were willing to learn could be instructed that the persons most in need of instruction did not, in many instances, want it; that such persons were an obstacle to progress; and that they should be made to feel the necessity of improvements. It was also evident that the consumers of dairy products were entitled to protection from unwholesome goods. Hence, dairy laws, intended to cover these and other points were enacted and creamery inspection established.

The object of creamery inspection is, therefore, somewhat complex. Yet, if it is reduced to simple statements, it will be found to be: First, the enforcement of the dairy laws; second, the further advancement of the dairy or creamery industry. The latter will be secured, in a measure at least, through the first, provided the laws are clear, complete, and comprehensive.

In view of the foregoing considerations, it is clear that the relation of creamery inspection to the dairy industry is one of great responsibility. And a clear understanding of the aims and principles envolved is necessary upon the part of all concerned, if the desired end is to be attained. It has been said that there can be no more enforcement of law than public opinion demands or at least countenance. This is no doubt generally true. It is, therefore, incumbent upon every one interested in dairying to adopt the right attitude to this question—namely, an attitude of co-operation. In the past, this attitude has been found generally in Wisconsin among creamery men and others, and to this fact much of our success in dairying is, no doubt, attributable.

On the other hand there are men who choose a different

attitude. They seem to think that the dairy laws are very excellent, so long as they are applied only to "the other fellow." For themselves they claim the privilege of doing as they please. If, perchance, they are held accountable, they at once become innocent as babies. And whether they win or lose in the contest—if contest there be—they ever afterwards become enemies of inspection and everything connected therewith. Moreover they not infrequently seek revenge on the inspector. And why? Simply because the inspector did his duty as he saw it and as he was sworn to do. Such people remind me of an old rhyme:

"When the devil was sick, the devil a monk would be.
When the devil was well, the devil of a monk was he."

Happily, this class of men is not very large, and the influence upon the destinies of dairying which come from it is not very great. Therefore no one needs to fear it.

The Chairman: The next topic will be Dairy Records by Mr. E. K. Sinkler of Black River Falls. As Mr. Sinkler is not present we will have a discussion of the Postal Dairy Library by Prof. Benkendorf, of Madison.

Postal Dairy Library.

Prof. G. H. Benkendorf, Madison, Wisconsin.

Mr. Chairman, Ladies and Gentlemen:

Before proceeding with the paper I want to express to the members of the convention my thanks for the honor and confidence they have bestowed on me. I shall endeavor to do what I can to further the aims of the buttermakers' association in every way possible.

During the past few years while connected with the Dairy Department of the University of Wisconsin, it has often occurred to me that a postal circulating library or, to make it more specific, a Postal Dairy Library, would be a very efficient means of disseminating information on dairying.

Therefore when our worthy secretary, Mr. J. G. Moore, asked me to appear before you and generously allowed me to choose my own subject, I selected the one mentioned in the program because I felt that a good many here may be interested in this new plan of extension work.

That dairying is the foremost industry in Wisconsin at the present time is conceded by all. With its 1,000 creameries and 1,800 cheese factories dotting the hills and valleys it easily ranks among the leading dairy states in the union. When we stop to consider that the value of the dairy products of this state, as conservatively estimated by Hon. J. Q. Emery, Dairy and Food Commissioner, amounts to 68 million dollars annually at the present time, one can hardly overestimate the importance of the industry to this Commonwealth. When we take into consideration the fact that this 68 million is greater than the combined values of all the corn, wheat, barley, rye, potatoes, sugar beets and tobacco produced in Wisconsin, we easily conclude that there must be a vital reason for its pre-eminence.

Wisconsin is particularly adapted for dairying on account of her climate, soil and water. She also has residing within her borders people who long ago learned the importance of dairying. They discovered that their lands were getting less fertile owing to the continual raising of wheat and other grains, and were willing if not forced, to take the advice of such men as Ex-Governor Hoard and others, to conserve the fertility of the soil by devoting their energies to dairying, and at the same time restore the fertility of the worn out fields.

There can be no question but that successful dairying depends upon the intelligence of the people engaged in this occupation. The Experiment Station and the University at Madison have for years been very friendly toward the dairy industry of the state, and are doing everything they can to help this great industry. The press of the state headed by "Hoard's Dairyman," has left no stone unturned that would

raise the standard of the men engaged in this line of work. They have done a very noble work.

In view of the fact that successful dairying depends upon the intelligence of the dairymen in general, we feel that the organization of a Postal Dairy Library is justified. The several thousand men directly concerned in the manufacture of butter, cheese, etc., in this state alone is a sufficient number to warrant its establishment.

Among these are many who are ambitious to improve their products and to better their methods, but for many reasons are not able to attend conventions, dairy schools or dairy meetings. It is to these that we ought to give a helping hand and extend to them opportunities that I believe will be appreciated.

It may be well to briefly spend a few moments on the development of the library idea. When and where libraries originated no one knows. They are spoken of in the records as far back as the days of Ninevah. One of those ancient libraries was unearthed within the past 60 years in that old city which must have contained as many as 10,000 distinct works, all on tablets of clay varying in size from one inch to a foot square. The cuneiform writing on some is so small as to almost require a microscope. In Egypt libraries existed as far back as 2,000 B. C. The works were written on papyrus stored in temples and tombs of kings. In times of strife these collections of rolls and manuscripts were often regarded as "spoils of war" and were moved from one country to another thus furnishing us with probably the first example of "travelling libraries." As the fortunes of war wavered, these "storehouses of learning" were transferred from one country to another, from Greece to Rome or from Persia to Alexandria. In the long centuries of the history of mankind we read of the libraries that have existed in the various cities of the world and are apt to forget the fact that they were available to a comparatively few privileged classes; scholars, clergymen, students and a few others had the opportunity of delv-

ing among the books. This was even true among the libraries first founded in this country, at Harvard, Yale and other institutions.

The present library movement in the United States may be said to have begun in 1876 when the American Librarians' Association was formed. We had then about 2,000 libraries in the United States containing more than 1,000 volumes each. Since then the number has rapidly grown so that we can safely say that we now have 8,000 or 9,000.

The early libraries in this country were founded by donation, as in one case where several ministers met and each gave one or more volumes for the foundation of the one at Yale. Later on proprietary libraries were formed by subscription, subscribers only being entitled to their use, thus limiting their scope. After a while certain states realizing the value of these silent institutions of learning granted villages and cities permission to levy a tax for their support. Some states now make such taxation compusory.

But cold figures alone do not tell the true development A library used to be regarded as a sort of "cold storage room" for the preservation of knowledge. Here the scholar or bookworm would delve among the books growing moldy with disuse.

But this "cold storage" idea is rapidly disappearing. It is now generally conceded that library facilities are a matter of right and not of favor. Libraries are regarded as essential, even as essential as schools. Not alone during school life are they of immense value, but when the student has finished his course the real use of the working library begins. These silent forces are a host to reckon with. For these reasons libraries and library facilities are on the increase.

It was not uncommon, even a comparatively few years ago, to see such signs in libraries as "Dogs and children forbidden." Now children are induced to attend and even to borrow books. In larger cities where funds are available specially trained librarians are employed to look after their

needs. Branch libraries are often established in different centers of large cities to better serve the public. Formerly a librarian was happy when he had his shelves crowded with books. He would collect them and keep them each in its appointed place in the shelf. He would hoard books as a miser hoards money. A true librarian, however, is happy only when his shelves are empty and when his books are wearing out with legitimate use rather than accumulating mold on the shelf.

It is this idea that is making the modern library such a great factor in the civilization of this country and, while it is true that we have many libraries in the cities and some of the smaller towns, the rural communities are not reached as they should be. When we take into consideration that about two-thirds to three-fourths of the people of Wisconsin live in the country, we can easily realize that some arrangement ought to exist whereby those desirous of library facilities may be given this privilege of self-improvement, for this is what it really means.

We have in Wisconsin a splendid effort on the part of the Wisconsin Library Commission to solve this problem. This Commission is doing a great work in sending out books in the shape of traveling libraries, but I believe the work is too limited, and I hope for the day when the scope may be enlarged and every buttermaker, cheesemaker, patron or manager, no matter where he may be located within the state may have the opportunity that a large library affords.

As now organized the scope of libraries in general are necessarily confined to books of travel, history, fiction, etc. They are of little practical use to a buttermaker or cheesemaker in helping him solve his technical problems at his factory. This in spite of the fact that much has been published by scientists and practical men along their chosen lines.

We have in Madison at the Experiment Station one of the finest Agricultural Libraries in the west, yet it is neces-

sarily only available to the limited few who live at Madison or have the good fortune to be able to go there.

For example, take the case of a buttermaker living in Fond du Lac County who is particularly interested in some subject, such as pasteurizing. He is seriously considering whether or not to install such a line of machinery in his creamery and desires to obtain all the available information on the subject. Of what use to him are the bulletins and reports on file in the library at Madison? It is true he may write to the Station for some bulletins on the subject but only those published by the Wisconsin Station will be sent him and many of these may not be available, or may not satisfy his particular need.

To meet the needs of such occasions the idea of a Postal Dairy Library was conceived. For the past few months I have collected material on dairying and kindred subjects. This material was obtained from the various Agricultural Experiment Stations in the United States and Canada. Reports of butter and cheese makers' organizations, farmers' institutes, etc., were also drawn upon until I have obtained more than a thousand articles, addresses, etc. Our Chief of the Dairy Division at Washington, Mr. B. H. Rawl, generously contributed a good supply of very valuable matter. This library has already been in use in a limited way during the past two or three months among the members of the Dairy School Alumni Association and others. Bulletins have been requested, mailed, read and returned to me in good order and are now ready to go out again. In order to extend its serviceability I have now arranged to print an edition of 5,000 copies of a catalog in which the material has been classified according to the subject matter for the convenience of its readers. It may be of interest for me to read the Table of Contents giving the amount of material on each subject.

	No. articles on subject.
Dairying in General:	
Dairy Industry	40
Breeds and Breeding	32
Seeds in general	20
By-Products of the Dairy	10
Feeding and Milk Production	41
Silos and Silage	24
Milking and Milking Machines	18
Cow Testing and Cow Test Ass'ns	38
Soil Fertility	5
Barns, Ventilation and Cow-stalls	11
Miscellaneous subjects concerning dairying	21
Milk and Cream:	
Composition	15
Production and Care	30
Market Milk and Cream	17
Bacteria in Milk and Cream	11
Miscellaneous Subjects Concerning Milk and Cream	28
Butter:	
Butter and Buttermaking	31
Cream Separation and Separators	24
Moisture in Butter	7
Keeping Qualities of Butter	5
The Overrun	7
Marketing Butter	5
Miscellaneous Subjects	11
American Cheddar Cheese:	
Cheese and the Cheese Industry	33
Cheese Making	51
Cheese Curing	29
Marketing Cheese	13
Foreign Cheese	38

	No. articles on subject.
Cottage Cheese and Condensed Milk	7
Oleomargarine and Renovated Butter	5
Factory Organization and Management	35
The Factory Operator	28
Factory Buildings and Equipment	29
Factory Accounting	8
Tests and Testing:	
Sampling	6
Determinations for Fat	27
Determinations for Casein	5
Determinations for Acid	10
Determinations for Adulteration	4
Determinations for Moisture	4
Miscellaneous	6
Starters	21
Pasteurization	30
Defects in Butter and Cheese	10
Sanitation and Sewage Disposal	10
Animal Diseases:	
Tuberculosis	43
Milk Fever	4
Abortion	3
Miscellaneous Diseases	12
Disinfection and Disinfectants	4
Scoring Exhibitions and Contests	29
Cement	8
Educational Topics	16
Miscellaneous Subjects	43

My plan is to mail this catalog to all parties interested in dairying, particularly to the butter and cheese makers. It will give full instruction as to how the library may be of service to them. Each bulletin or address is given a distinct number by

which it may be ordered, the author, station, or report in which it is found, and the year the material was published. This is to aid the reader in his selection.

It may be well to state that this Postal Dairy Library is not officially connected with the Wisconsin Experiment Station and therefore it will be necessary for those using it to send at least five cents in stamps to defray mailing expenses. Some of these reports require eight to ten cents for the postage while others require only about three or four cents. It has therefore been deemed advisable to make a uniform rate of at last five cents. This in itself should not stand in the way of anyone making use of the library.

In closing let me say that the primary aim and purpose of this library is that of service to all interested in dairying. I desire to have it mean a dairy library at every man's door and believe that there is an unoccupied field for such an effort. I trust that every buttermaker and others interested in dairying will find occasion to make use of this library and co-operate with me in increasing its usefulness year by year.

Discussion.

Mr. Corneliuson: If a man takes a book from the library how long has he the right to keep it?

Mr. Benkendorf: In city libraries people are requested to return books in two weeks. As the farmers are busy I have requested that the books be returned in three weeks. This material is as free to everyone as if they were in Madison. I might say that while we have a fine library in Madison the people would have to come in and hunt up the material themselves, while all they would have to do in this case is write me and I will send them the material and they get it faster than if they had to come after it themselves. I have sent several reports to some members, perhaps they are in this room, who wanted to prepare articles. Some man wanted to prepare an article on unripened cream butter so I sent him several addresses on the subject. I have a request now from Canada from a man studying the subject of co-operation in Wisconsin

creameries. I have several works on that which I will send him. Many people dislike to make an address because they have no material with which to prepare themselves and in this way they are helped a great deal. A man in Nebraska was to address a farmers' meeting on the advantages of dairying and I sent him the address of commissioner Wright of Iowa, and he gave a very able address on the advantages of dairying to the farmers. In Iowa the farmers want to build silos and one of them wrote me that they were going to organize a club and all build silos and wanted all the information they could obtain on silos and silage. You remember there was a great movement along dairy lines in Iowa. I am pleased to say that all the bulletins have come back in the proper time. There are a few out yet but I am sure in the course of time they will be sent back to me.

The Chairman: Any other questions? If not we will take up the resolution offered by Secretary Moore yesterday.

Secretary Moore: According to the articles of incorporation no changes can take place unless a notice is posted twenty-four hours in advance. I brought this subject up yesterday and will again bring it up that we insert the words in the articles of incorporation, in Article 4, to read "that they shall hold office until July 1st." It now says they shall hold office until their successors are elected and qualified. The old officers do not want to throw burdens on the new officers so I offer this resolution to insert these words in Article 4 "until July 1st," making it read "The officers shall hold office until July 1 or until their successors are elected and qualified."

On motion, duly seconded and carried, the resolution was adopted as read.

The Chairman: The next topic on the program will be a paper by Mr. H. B. Hoiberg, of Brooklyn, Wis.

How Can the Co-operative Creamery Meet Competition?

Hans Hoiberg, Brooklyn, Wisconsin.

Mr. President, Members of the Wisconsin Buttermakers' Association, Ladies and Gentlemen:

When I was asked to address you on "How Can the Co-operative Creamery Meet Competition? I took it for granted that by co-operative creamery is meant the creamery which is either wholly or partly owned and controlled by the farmers and milk producers as a contrast to the larger stock companies or individual buttermaking concerns.

It would be preposterous for me to think for one moment that I could tell you the right and only way a co-operative creamery can meet competition. I can, however, give you my ideas and you can use whatever you want of it and throw the rest aside.

There are two kinds of competitors which we have to contend with—the fair and the unfair—the latter, as a rule, does not last long—if we are fair—and I have always found it a good business policy to let that class of competitors run the full length of the rope, they will hang themselves in due time; but the fair shrewd business man—the man who deals fair and above board and who keeps up to date and never forgets that there is no standstill in nature, but knows that it is either eternal progress or eternal decay—that is the fellow of whom the co-operative creamery man can learn so much, and fear as a competitor, for by keeping up to date in equipping his creamery and employing only the best of experienced and skilled help he is often able to pay from one to three cents per pound for butter fat more than the poorly managed co-operative creamery and still have a handsome profit left. We know well enough that our farmer friends will not stand for that very long, one after another will leave their own creamery and go over to the enemy, and we can't blame them for that. Four to twelve cents per hundred pounds of milk, more or less, means quite a few dollars every twelve months.

It is therefore that we must adopt the same methods as

are employed by our competitors, namely—run our creamery on business principles. First, a co-operative creamery should never be started unless milk or cream enough is assured to enable the management to run it without charging its patrons exorbitant prices for making butter. Next, the stockholders should always be careful in the selection of their Board of Directors. By all means select men who are above those petty little jealous persons who so often show themselves among a set of directors; for if jealousy is kept up for any length of time it is sure to give the competitor an opening wedge which sooner or later will prove disastrous to the creamery. If the right set of men are chosen they will see to it that the creamery is fitted up with first class and up-to-date machinery, and also employ a skilled and experienced manager—a man who can keep the good will of the patrons and superintend the manufacture of a gilt edge article and dispose of same at the highest market prices, and also keep a set of books so any stockholder upon request, can be shown exactly how much is being received for the sale of butter or other commodities in which the creamery company may be dealing, and how much is paid out monthly for milk, cream, coal, labor, loss on milk or cream routes, etc. In other words, as before said, run the creamery as any other business. Right here I will say that I have personal knowledge of a good many creameries which have gone to the wall through the lack of proper bookkeeping. Some years ago a co-operative creamery company was organized not very far from my present home. They went into operation, I think, in the early spring of that particular year, and if I remember right, by June first they were receiving twenty-five thousand pounds of whole milk daily, a pretty good run for the first year. But what did they do? I will tell you—the buildings and machinery being new and in good running order they set to work to pay out every cent for milk they received, less the actual monthly expenses. Instead of charging the patrons a fair price for making butter and putting the balance into a sinking or emergency fund, they made

butter for one-half cent per pound for two months while the neighboring creamery charged three to four cents. Naturally the farmers became wild and it looked to us at a distance that they would sweep the earth or at least us. In the meantime they had forgotten that creamery machinery will give out, and if carelessly handled it gives out mighty quick. So in the course of a few months the Board of Directors found several pieces of expensive machinery ruined and an empty treasury. They had to raise the price of making butter up to and above their competitors. That cost them about one-fourth of their patrons.

A co-operative creamery should not antagonize a competitor, but simply go ahead and pay all they can afford and try to keep a uniform price according to seasons, and not make a spurt like the one mentioned before and then have a setback.

If a farmers' creamery treats its patrons right and keeps up the creamery so it is the pride of the community, and by keeping in mind that if they do not progress they will go backward, they can meet competition of almost any kind and come out on top of the heap.

The Chairman: We ought to have a good discussion at this time. Mr. Hoiberg is secretary, treasurer and buttermaker of one of the best creameries in this state. He took this creamery when it was in a run-down condition and what he tells about this creamery is a fact. Are there any questions you would like to ask Mr. Hoiberg?

Discussion.

Mr. Benkendorf: How much sinking fund do you advocate?

Mr. Hoiberg: That depends on the kind of creamery you have. At present we keep $1600 over and above all debts. We figure that we can always be able, in case of fire, go to work with our insurance money and put up a creamery as quickly as possible, and having a loss in butter to have enough to pay the patrons right off without having to borrow.

The Chairman: I wish to say that our new secretary received a good many pointers and in fact a great deal of his start from Mr. Hoiberg.

The next on our program is a resolution in regard to accepting more than one tub from a single creamery. I believe someone has prepared a resolution in regard to this.

Secretary Moore: I do not know whether Mr. Carswell, chairman of the committee on resolutions is here, but I would like to say in this connection that while the program may not be so very explicit on the subject, it is the tacit understanding that there is to be no more than one tub of butter entered from any one creamery. Now we find there is one particular creamery in the state hires two buttermakers, pays each one the same wages, but one buttermaker is the butterman or boss. Now this creamery has entered two tubs of butter. It may have been the practice to enter two tubs to catch the judges perhaps, the two tubs being from the same churning. Unfortunately, two or three this year sent in two tubs from the same factory. One of the buttermakers who sent in two tubs, however, came to the butter superintendent when he arrived here and told him that one of those tubs, entered in his wife's name, was not for competition but for a complimentary score, but the others sent their tubs in the names of their helpers expecting to compete for prizes and premium fund. The executive committee met and decided it was not the proper thing to do and passed a resolution that it was their sense that not only should the tub sent in from the helper be barred from competing for the premium but also the tub from the buttermaker. There has been some discussion to the effect that this was an injustice, that the rules did not go far enough to say that there should not be more than one tub from a creamery. The words are "that there shall not be more than one tub from any exhibitor." We would like to have some expression of opinion on the part of those present in regard to this matter, whether they think the executive committee acted in the proper spirit or not and in that connection we have a resolu-

tion providing that not more than one tub of butter shall be entered from any creamery or from any buttermaker for competition for the prizes or premium fund, and if anyone is caught sending in more than one tub he shall be barred from exhibiting for three years. Now if you have anything to offer along that line we shall be glad to hear it.

Mr. Corneliuson: I think that resolution is a good one. I see no reason why two or three tubs should be sent from one creamery in competition for prizes. That would seem entirely unjust unless we invite that sort of practice from all creameries, so I believe that the idea expressed in that resolution is one that we ought to support, that only one tub can be entered from each creamery in competition for prizes. That seems reasonable and logical to me.

Mr. Tyler: Did I understand Mr. Moore to say that the executive committee decided to rule out both tubs where a creamery had sent two tubs. Each creamery ought to be entitled to send one tub.

Mr. Moore: I would say, for Mr. Tyler's benefit, that the executive committee considered that the buttermaker was just as guilty of conniving at the sending of the other tub from the creamery, even if sent in the name of his helper, as the helper himself, in fact more so because he is in charge of the creamery and could have stopped sending another tub if he wanted to.

Mr. Hoiberg: There is another side to that question as to why he should be kept out. Let a creamery send two tubs of butter from the same churn and they would not score alike, and that is giving the scoring division the "black eye." Now we want to have our butter scored and scored honestly but I dare say there is no human being that can score a piece of butter exactly the same every time. This thing has been going on for a number of years, that is two tubs have been sent from the same creamery and if there was any difference in the score the word was sent broadcast "What's the use?" That is the

reason I believe that a stringent resolution ought to be passed in regard to that.

Mr. Tamblingson: I consider this an injustice to the members of the association to allow anyone to send two tubs of butter. I think anyone doing that is working against the association and should be punished by ruling out his other tubs.

Mr. Corneliuson: I would like to say something in regard to sending two tubs in order to catch the judges, if possible. While I do not exactly encourage that practice, I do not believe any great harm could come from it. There can be no great injury done to anybody by sending two tubs for a score, if the sender explicitly states on the entry blank that one tub is to compete and the other to receive a complimentary score. I think that is reasonable and there should be no great variation in the two scores. Of course we know that differences will occur, sometimes a large difference, but mistakes will occur in all enterprises and all work and the man who is looking for an absolutely accurate score should not take part in an exposition, he should stay at home. That man ought to realize that the judging of butter is something that cannot be done with the same accuracy as we can weigh out a pound of coffee or pound of sugar. We have to use our sense and judgment in order to determine the quality of the butter, and our senses are not so accurate that they can be absolutely right.

Mr. Larson: Referring to getting two tubs from the same creamery, it seems to me the resolution is a good one because a man sending a tub of butter from his creamery and is charged in one case, I understand, with sending another tub from the same churning, it seems to me is conniving and doing the association an injustice as he certainly knew both tubs came to the same convention. One man had charge of the creamery, did his work, manufactured his tub of butter under his own management absolutely, whereas the other man might have put a different complexion on it, but even

then I would not be in favor of accepting two tubs of butter from the same creamery.

The Chairman: I think the members who took part in that scoring contest can see it is difficult for the judges to decide exactly.

Mr. Tyler: I mean to support the resolution but I do think it is a little harsh in leaving out both tubs as they had been entered.

Mr. Carswell: Mr. Tyler expressed my sentiments. I do not think it would be right, since the rules did not prohibit them expressly, to rule them out in taking part in the pro rata fund. I do not object to the resolution but I believe it would not be justice to cut a man out on both tubs.

The Chairman: The executive committee decided not to allow the two tubs.

Mr. Corneliuson: It seems to me that if one tub is legally entered the other is legally entered and I do not see how the executive committee could act any differently than it has. I do not see where it could have the power to say which tub was to compete. It seems to me they could do no better than rule out both tubs, which I believe is the only just way for all parties.

Mr. Larson: I am strongly in favor of debating this question, I think it is the proper thing to do at this time and I would like to suggest that no doubt a number may have something in their minds and be a little backward about speaking out. Now is the time to express our opinions and then abide by the decision of the majority.

The Chairman: One thing I want to say in behalf of the executive committee, this committee would not know who was the buttermaker in any creamery. The executive committee cannot tell which is the buttermaker.

Secretary Moore: Mr. President, I want to say that I heartily coincide with Mr. Larson in regard to threshing this matter out so as to get the sentiment of those present now. I am reminded of a little incident that happened at my home

when I was running a creamery and my wife wanted to get in with some of the patrons so she had a little party. I do not know whether she was trying to be a little matchmaker but one of my patrons was an unmarried man and he sat by me. We had some oranges and he said "Jim, I could handle this perfectly if I had it behind the barn but it bothers me now," and I know a lot of fellows sitting here when on the street can handle this in fine style and express their sentiments good and strong, but that will not do us any good. The time to discuss it is now, so I want to hear from some of the boys interested. Corneliuson, Larson and myself are not sending butter now and we want to know what you who are sending the butter think. It looks to me when two tubs are sent from one creamery, where one tub is not for complimentary score, the buttermakers are trying to get more than their share of the money.

Prof. Lee: I did not know until at the end of the scoring last month that those two parties were from the same factory. We stated in our letter of instructions regarding the February exhibition butter, and I suppose most of the buttermakers received the same letter, that the butter should be sent to Fond du Lac. We proposed, in connection with the scoring exhibition, to give them credit on our cards down there for the scores they got here but I hold if the second man is the one that sent the butter the association should know which tub he sent.

Secretary Moore: An incident came under my observation this morning. A buttermaker who last fall at the National Dairy Show received a very high score did not send butter to this convention. He was afraid he would fall down hard and it would look bad to see him get a high score in the fall and a low one in the winter, so he allowed the helper to send the butter in his name, but there was only one tub from that factory. I do not see that the executive committee cares whose name, although the rule states the butter shall be en-

tered in the buttermaker's name, but to send two tubs from the same factory is not the proper thing.

Mr. Tamblingson: I move that the association endorse the action of the executive committee on the subject.

Motion seconded and carried.

The Chairman: The resolution reads as follows:

Whereas, It is the sense of this association that but one tub of butter shall be considered in competition from a single creamery, in violation of this resolution the buttermaker will be barred from competition for a period of three years, and butter must be entered in the buttermaker's name.

This resolution was drafted by the executive committee.

Mr. Carswell: I think we ought to take a vote.

Mr. Seaman: "I hardly think it is using them right.

Mr. Hoiberg: Those fellows should have known it was wrong to do those things. They have been advised several times on that particular point.

The Chairman: Do you want to take a standing vote on this?

Mr. Hoiberg: Mr. Chairman, I do not believe it is necessary. What have we an executive board for?

Member: What is the authority of the executive board of this association? Is it supreme or subject to correction?

Mr. Carswell: I believe before any change is made in the rules of the association the members should be consulted and a vote taken. I believe the members should be consulted before making any radical changes or decisions.

Sec. Moore: I would like to say, for Mr. Carswell's information, that the executive committee has the power necessary to make arrangements regarding the holding of the conventions and anything in connection with them.

Mr. Carswell: I believe there is no necessity then of taking a vote on this unless we take it up to get the sentiment of the members.

Sec. Moore: I think the bringing it up at this time for the consideration of the members was to get their sense for

future times. The executive committee has decided what to do and has done it for the present time and we cannot undo it; but you may pass any resolution you desire to bind their hands in any future action they may want to take.

Mr. Seaman: I think the future time is all right but I believe the by-laws should have been in shape so this misunderstanding would not occur.

Sec. Moore: Do you consider the executive committee exceeded its authority, or that its action should be rescinded?

Mr. Seaman: I would not care to say in regard to that.

The Chairman: Do any of the members desire a standing vote on Mr. Tamblingson's resolution.

Question being put and votes taken, the resolution was adopted.

The Chairman: The resolution is now offered by the executive committee as follows:

Resolved, that it is the sense of this association that but one tub of butter will be considered in competition from a single creamery. In violation of this resolution, the buttermaker will be barred from competition for a period of three years.

On motion duly seconded, the resolution was adopted as read.

The Chairman: The next paper on the program is by Mr. Sinkler, who is not present, but his paper will be read by the secretary.

Creamery Records.

Mr. E. K. Sinkler, Black River Falls.

(Paper read by Secretary Moore.)

The subject given me by our secretary, "Creamery Records," is a broad and very important subject. It may be that I will leave out some things that may be said, but will endeavor to bring out the more important points. Keeping daily

records in the creameries has been greatly neglected in the past by the buttermakers, but fortunately is receiving more attention every day. I believe that the success of a creamery or any other business is largely dependent upon keeping careful and accurate records of every detail. For instance the banks, manufacturing plants, large corporations, etc., would not do business a single day without knowing at night exactly how the business stands. In fact they know that their success is largely dependent upon keeping a careful daily record of the work. And knowing as we do the many and various ways in which losses occur in a creamery, why should we not keep a careful record, and try to make losses as few as possible.

I have in mind a certain creamery making 1000 pounds butter daily, kept no records. They sent out haulers to gather, weigh, and sample the cream. It was taken in at the creamery, dumped into the vat, stined a few times in the afternoon, next morning churned, the butter packed, when shipping day came butter was sent out without even being weighed. They paid the patrons once a month on the 20th. When the accounts were made out this time to pay patrons for the month before, it was found that there was only a six per cent overrun. You can see how this would effect the price which they could pay for butter fat. They found that the haulers were not keeping accurate samples and weights. Had they kept a daily record they would have known much sooner that something was wrong. This shows the importance of weighing and testing each load of cream and checking up the haulers each trip.

It is surprising sometimes the difference there is between hauler's weights and factory's. Sometimes this is due to scales being off from one to three pounds, and many times to ignorance or carelessness.

As another instance, we sent out a man to gather cream, on his first trip he gave the farmers credit for 63 pounds more cream than he delivered to the creamery. I showed him this

difference and told him to be careful. His next trip he was 51 pounds short. When told of this he assured me that he was doing his very best to weigh accurately. On his third trip he was 50 pounds short, making a total of 164 pounds of cream, test 28 or 45.9 pounds of butterfat in three trips. Finally upon checking up his work I found that he was not subtracting the weight of the gathering pail part of the time.

Had I not kept a careful record this loss may have gone on for a long time affecting the overrun seriously.

This is only one of the many instances of this kind. A record should be kept of at least.

1. Total number pounds of milk or cream.
2. Average test of same.
3. Total number pounds butterfat.
4. Number pounds butter made.
5. Test of buttermilk.
6. Pounds of overrun.
7. Per cent of overrun.
8. Per cent of moisture.
9. Pounds of butter retailed.
10. Pounds of butter shipped.

Many go farther than this and keep a daily record of temperatures, amount of salt, condition of butter, etc., which is a very good thing.

Blanks may be had for keeping these records, or, I always have a book large enough so a month's records may be kept on each page. Rule this off vertically. Put name of month at top first column for date, second, number pounds cream, third, test, and so on. At end of the month these may be totalled.

If the secretary comes into the creamery and wants to know how much butter we are making, per cent of overrun or moisture or any part of the business it is always in order so he can see at a glance what we are doing.

I have had patrons come into the creamery and say "I cannot see how it is that this creamery can pay all the ex-

penses, which amount to several hundred dollars per month, and still pay the patrons one or two cents more for butter fat than is received for the butter on the market. Right here is where my records come handy again. I get my book, show the farmer my records and explain to him, as for instance on a certain day we make 1000 pounds of butter moisture 15 per cent, making 150 pounds water at 30 cents, makes $45.00, besides this there is three or four per cent salt and casein. I figure this for a month and show him how far this will go to pay expenses and add to the price of butter fat.

If these things are explained to the farmers in an intelligent way nine out of ten go away better satisfied with the creamery than ever before. An account should also be kept of all operating expenses.

The secretary is dependent upon the buttermakers for these things, and if they are recorded in a clean manner the secretary's work is greatly lessened and the buttermaker gets credit for being a competent man who understands his business.

If there are any of you here today who do not keep daily records I would urge that you begin at once and I am sure you will be amply repaid for what little extra time and work is required. I thank you.

Discussion.

The Chairman: Do you care to discuss this paper?

Mr. Moore: I had an experience along this line. I was called to a creamery to see what was their trouble. The buttermaker was afraid of losing his position; he was receiving all cream and could not get enough overrun. He had a vat of cream when I got there, which we stirred up thoroughly, saw him put the cream in the churn, take it out and weigh the butter into the tubs. I saw the samples the haulers brought in. When I figured it out with the weights he had and his tests there was only 10 per cent overrun but with my tests and the haulers' weights there was 20 per cent overrun.

Another time I was at a creamery where they did not

have any overrun. I saw the cream run from the weigh can right into the vat. I asked the buttermaker why he did not weigh the cream and he said the haulers weighed it. The next load that was brought in I weighed and he was 29 pounds short. Of course up in the northern part of the county, where there are nice streams of water, these discrepancies can be overcome by adding a few pails of nice clean water from a clear trout stream but they do not always go to that trouble.

Mr. Corneliuson: I endorse what Mr. Moore says in regard to checking up the weights; that is not all, they must be checked up, the butter fat must also be checked up occasionally if not every day, otherwise the trout stream would be too handy; but if you check up the butter fat you will have a check on points of the business, and I feel like saying that the time is gone when a creamery can be run in the old way, when a man would wait two weeks or perhaps a month before he knew what he was doing for the past two weeks or thirty days. If you stop to consider that if a bank kept no account for the money they received for a month, you will understand they would not be in business very long. The same will hold good in a creamery today; with the competition we have it is up to the management or buttermaker to see that he knows what he is doing every day.

Mr. Moore: I read the Saturday Evening Post every once in a while, my wife says I read it for the stories, but at any rate, among other things in the Post the other day was something about business to the effect that when a business gets sick these days a doctor is called in the same as when we are sick. I know well that a great many creameries in the state of Wisconsin are financially sick and the doctor in this case is the state inspector or government inspector, but the great trouble is the boys are too diffident about calling them in to find out the cause of the trouble. I think if the conditions are such, when they are in sickly condition there is a doctor provided free of charge if they would call on him it would be a great help.

Prof. Lee: The buttermaker knows that he is taking in a thousand pounds of butter fat. He gets that according to his individual tests of the patrons' cream or an average test of the milk taken in. A man taking the sample of butter which he makes, the overrun may be 10 per cent or 30 per cent. If the buttermaker will take this same sample of butter, to which I referred this morning, make the water determination, also take the Babcock bottle and weigh in a certain amount of butter, preferably 9 grams in a 40 per cent bottle, handling that bottle the same as he does the sample cream, the accuracy of that test will be as certain as the test of the buttermaker testing cream containing 50 per cent fat. The buttermaker must find the total number of pounds of fat in his butter, according to the Babcock test, then check back to see the total number of pounds of fat in his butter. I consider that one of the best lessons we can give on figuring out what overrun a buttermaker has. If a buttermaker is making butter containing 85 per cent fat (and there are some buttermakers making butter with 85 per cent fat and other buttermakers making butter with 80 per cent fat) are the two entitled to the same overrun? We blame low overrun to the fact that a man has not checked up on his test or tested too high. Whatever the cause may be he ought to have a basis on which to work and know what overrun he is entitled to. If a man is making butter containing 80 per cent fat, with small mechanical losses, his overrun ought to be in the neighborhood of 23 or 24 per cent. If a man is making butter containing five per cent more fat, his overrun will be lowered accordingly.

The Chairman: Last summer we received as high as seventy to one hundred cans of cream a day and tested every can. We have stations located at some of the country stores where the cream is bought for cash. These men deliver eight, ten or fifteen cans a day. We weigh our cream as milk is weighed in a whole milk factory. We take a composit test and weigh the cream and send the receiver of the cream a

statement of how he holds out on the fat. If he is short he gets it and if he is over six or seven pounds he knows what he is doing. We know exactly how much butter fat we are getting in every day and how much butter we are making from it. Any other questions?

Mr. J. G. Moore takes the Chair.

The Chairman: If there is no further discussion along this line, I have been handed a resolution which I will present at this time.

Whereas, it is the sense of this association to award prizes to the county association sending in the ten highest scoring tubs of butter.

Therefore, be it resolved that in the event of the disbanding of any county association holding such trophy it shall be returned to the state association.

The reason for a resolution of this kind is this, that there are now five or six county associations. Like everything else, unless there is somebody to guide them, to push them along, they will languish and die. We think the county associations are a valuable adjunct to this association and should be fostered. We find the traveling men anxious to come out and meet the boys at these different meetings, are always glad to help entertain the boys, but sometimes the boys do not come. It has been the experience before. The territory covered by the Southeastern Association was the first territory in the state to have a county buttermakers' association, but dissentions crept in and that association died a natural death. The S. E. Association has silver cups and in case of the disbanding of the association to whom do the cups belong? No one in particular. It seems, that being the case, they should be returned to the state association where they can be displayed somewhere, and that was the reason for offering a resolution of this kind at the present time.

On motion, duly seconded, the resolution was adopted as read.

Mr. Aderhold: I believe the paper read by Mr. Corneliuson was not submitted for discussion.

The Chairman: Any questions on Mr. Corneliuson's paper?

Mr. Moore: I think we can profitably spend the time discussing some phase of the creamery business as long as we are here. There is Mr. Baer over there, whose head is usually as full of ideas as an egg is full of meat. There are a lot of fellows over there that are rather bashful. Let us get them out here and have them tell us what they know.

Mr. Baer: I think this is a put up job. After putting in last week at Monroe, among the Swiss cheesemakers, I do not see how you can expect anything for the buttermakers at Fond du Lac. I have nothing to criticise in what Mr. Corneliuson said. All I want to say is good of it, it was an excellent paper. He certainly handled his subject in a masterly manner. Mr. Corneliuson is an expert inspector and I do not care to add anything to it or take away from it.

The Chairman: We would like to hear from Mr. Haven.

Mr. Davis Haven: The subject that has interested me the most is the subject of keeping records. For a number of years I made cheese and only a few days ago I ran across several of my monthly records among old papers. I have some of them that I intend at some future time to send to the dairy paper for publication. One occasion in particular where it was a great advantage to me to have a daily record was my report showing how many cheese I was making, and I shipped part of one day's make to a firm at Benton Harbor. I received returns at once with order for ten boxes more, and shipped the balance of the make. When I received returns on the last shipment I found they had cut me two cents a pound, stating that the cheese were inferior and were marked so and so. I had the pleasure of informing them that the cheese was all made on the same day, and the cheese were shipped only four days apart and they were either entitled to two cents a pound on the first shipment or I was entitled to

two cents a pound on the last shipment. They thought it advisable to give me the extra two cents rather than lose their place for getting cheese. I think it is very important and I do not see how a buttermaker or cheesemaker can know what he is doing unless he keeps a record. It must be more than checking up the cream haulers. He must know his temperatures, must have them accurate in order to have them valuable. Mr. Frank spoke yesterday of making test for moisture with lead pencil. A record is of no value unless it is accurate, any more than a record of pedigree stock is of any value unless accurate. So I would urge buttermakers to keep a sheet on the wall, or keep a book and have an accurate record every day.

Mr. Moore: A question confronts me every once in a while, Gentlemen, and that is the high prices of butter. How many of us here are acquainted with the facts relative to the high prices of butter as well as other food products? Are you in a position to explain to the public why our products are so much higher than they have been heretofore? I have noticed this year that the papers are full of the subject and the different states and national government are getting up commissions to investigate why different food products are high, and the people are saying "There is a butter trust at Elgin and that is why butter is high." It is inconceivable to me to think that there is such a thing as a butter trust when the places that butter come from are so widely scattered and there are so many of them. When you remember what our state has you will realize it would be a hard thing for any combination to get all of those into its grasp.

When I have been confronted with a question of that kind I have talked along this line. There are many factors which enter into the fact that butter is high at the present time. When I was a boy if my folks gave me ice cream the fourth of July or once or twice a year I was satisfied; now our children ask for ice cream every day because the ice cream cone man comes around and they want the pennies and

nickles to get ice cream, and you would be surprised at the great amount of cream that is used in this way that formerly went into the production of butter. We have breakfast food all the year round and of course we must have milk or cream to go with it as well as sugar. Since the war there has been a change in the use of milk in condensed form. I do not know much about it but I think along about war times the production of condensed milk took no great amount of milk; now we export millions and millions of dollars worth of condensed milk to foreign countries and the navy has to have its milk condensed, so you can see where a lot of milk is going that formerly went into butter and cheese. The cities are reaching out farther and farther all the time for milk to be used in its raw state. New York sends its trains out five hundred miles and Chicago is sending out to Fond du Lac, Oshkosh and Madison for milk and cream for city consumption. So how can we wonder that the amount of butter made can hardly keep up with the consumption, so I think that we as buttermakers and operators should understand these things and be able to give a reason for the high price of butter.

Member: What is the reason that there was a drop of six cents a pound in butter in one day?

Mr. Moore: I have had that question put to me before. Do you understand that we had a lot of snow in Wisconsin and Minnesota and that the trains did not run, cream haulers could not get cream and the cream was left on the farms, and Chicago and other centers were cut off from their supplies? Of course butter went up. Then when the roads were open and railroads were running on schedule there was an over supply and the price dropped because the cream and butter could get in.

Mr. Tom Gallagher: I would like to say something about this high price of butter. You all recall that we had a very satisfactory butter market here during the past year, especially since last spring. Commission merchants of the city went out of Chicago and offered all kinds of prices and all

kinds of propositions in order to get butter, and that was one reason why high prices prevailed in the butter market.

Another reason, the demand for butter, as the decrease in production continued, became better and as the demand increased the price manipulated by quotation boards in New York, Chicago and Elgin, and the personal interest in the different boards that had this control never lost sight of their own interest, as self preservation is the first law of nature, helped to elevate the price. The result was we got it up to 36 cents, and as thirteen is always considered an unlucky number I think thirty-six was the unlucky number in the butter business in this case. The butter merchants of Chicago realized that something had to be done to increase receipts and Gallagher Bros.' receipts two weeks ago were as large as any week in June, the other houses on the street the same way and the same is true of New York, the only reason for that, however, is the increase in the consumption of butterine. In Chicago I cater to the grocery trade largely. I know instances where grocery men have never in twenty years handled butterine because they had no use for it, but this year, when butter got so high, they had to take out a license to compete with grocers that did and the result was that the purchase of butter for the local trade fell off fifty per cent inside of four weeks. Then the quotation committees of Chicago, Elgin and New York got out their knives. There was a big sore spot in the butter market and some of us went out to the butter center of the world, Elgin, and took our knives with us, and a week ago last Monday I had the pleasure of being appointed on the quotation committee of Elgin and we convinced the balance of the committee there and everyone, I might say, at the Elgin market that day was in favor of a decided cut in butter, and we cut it six cents a pound. There was not a butter dealer in the United States but suffered and not a manufacturer in the United States but suffered. We all lost money on that cut. I think now we have the thing down to a safe basis. New York market broke 1½ cents today. We

have to do something to get the people back to consuming the pure article.

While I am on my feet I would like to remind the members here present of the banquet to be held tonight. All arrangements have been made, the turkey has been cooked and carved and everything is arranged up in the Congregational church, and on behalf of the committee you are all invited up there this evening. We are going to hold a reception from 6:30 to 7 and sit down to the table at 7 sharp. We are going to have a full house.

Mr. Moore: It has been the practice for the last four years for the trade, comprising the commission men, the creamery supply people, railroad men, etc., to give the banquet to the buttermakers present at the convention. It has been suggested, by some of the buttermakers if you please, that at the next convention they reverse the order of things and have the buttermakers give the supply men, the commission men and railroad men a banquet. How would you like to have it that way. That has been thrown out as a suggestion.

The Chairman: Mr. Carswell, Chairman of the Resolution Committee is here and I presume it is in order for him to read the resolutions.

Whereas; the Mayor, the Business Men's Association, and the kindness of the citizens of the city of Fond du Lac, having given us a royal welcome, entertained us magnificently during our visit here, and favored us with a substantial and prompt donation of cash.

Be it resolved: That we extend to them the most sincere thanks and best wishes of the Wisconsin Buttermakers' Association.

Whereas; the retiring secretary, Mr. J. G. Moore, has labored long and earnestly for the good of the individual buttermaker, the Association, and the improvement of the dairy interest in general.

Be it resolved: That we extend to him our hearty thanks and wish him success in the future.

Whereas; Mr. S. A. Cook, of Neenah, Wis., has again shown his great interest and appreciation of our Association, and in the advancement of the same has donated three leather covered chairs as special prizes and $25 in cash to the pro rata premium fund.

Therefore, be it resolved: That we extend to him our sincere thanks for the aforesaid donation.

Whereas; The J. B. Ford Company, The Wells, Richardson Company, The International Salt Co., The De Laval Separator Company, The Chr. Hansen Laboratory, The Diamond Crystal Salt Company, The Fox River Butter Co., The Creamery Package Mfg. Co., The A. H. Barber Creamery Supply Co., The J. G. Cherry Co., and The Vermont Farm Machinery Company, having donated special prizes for the highest scoring butter, and cash to the pro rata premium fun.

Be it resolved: That as members of this Association we recognize the help and encouragement that such firms have extended to us, both past and present, and while we extend to them our thanks at this time, we wish them such success that they will be represented at all our future meetings.

Whereas: The Monthly Butter and Cheese scoring exhibitons, conducted at Madison, have in the last four months received such new life and impetus under the able management of Prof. C. E. Lee, that every buttermaker, patronizing same, should be directly benefited.

Therefore, be it resolved: That this Association, both through its officers and individual members will do all in their power to increase the number of the exhibits and further the progress of this educational exhibit.

Whereas; this Association and kindred organization throughout the state have been appealing to the legislature by resolutions adopted at conventions and otherwise for laws to control the sale of unclean and unsanitary milk and cream,

and whereas the legislature at their last year's sessions enacted laws, calculated to control the same.

Therefore, be it resolved: That, we, as members of this Association, show our approval of the passage of these laws by doing all we can and using our best efforts towards the enforcement of these legislative acts.

Whereas; The Wisconsin Buttermakers' Association and the Wisconsin Cheesemakers' Association some years ago adopted resolutions, making the Cheese, Creamery, and Dairy Reporter of Whitewater, Wis., their official journal, and whereas the said paper is no longer published and there has recently been established at Milwaukee a paper known as the Butter, Cheese and Egg Journal, ably edited by D. S. Burch, and published by H. P. Olsen, well known gentlemen in dairy publishing business.

Therefore, be it resolved: That said Butter, Cheese and Egg Journal, be made the official paper of this Association.

Whereas; the judging of butter at the Wisconsin scoring exhibitions and conventions by three judges, working independently has given universal satisfaction.

Be it resolved: That this Association in annual convention assembled, commend this system; and, be it further resolved: That this method of judging the butter at the National Creamery Buttermakers' Association be employed in the future.

Whereas; Parties having entered more than one tub of butter from the same creamery have caused the judges and officers of the Association unnecessary trouble.

Therefore, be it resolved: That in the future, any buttermaker or creamery, sending more than one tub to compete for the prizes and premiums offered by this Association, is to be barred from competing again for a period of three years.

Whereas; The Wisconsin Buttermakers' Association is now giving silver cups to County Buttermakers' Associations for the ten highest scores at the meeting of the State Association.

Be it resolved: That in case any such county Association, in possession of any such cup, shall for any reason discontinue their organization, said cup shall be returned to the State Association.

Mr. Moore: I would say, for Mr. Carswell's benefit, that two resolutions especially the last one just read and the one regarding the silver cups, have already been presented and acted upon but it will do no harm to have them again.

On motion, duly seconded, the resolutions were adopted as read and ordered published in the press.

There being no further business, the convention adjourned.

Thursday evening a banquet was held in the parlors of the Congregational church. Plates were laid for two hundred. Mr. S. B. Shilling acted as toastmaster, and toasts were responded to by Messrs. F. M. Givens, Postmaster of Fond du Lac, J. G. Moore of Madison, Prof. G. H. Benkendorf, of the Dairy School, Hon. S. A. Cook, Neenah, Thos. Corneliuson, Madison, E. L. Aderhold, Neenah, Thos. F. Gallagher, Chicago, and Chas. Cole, Minneapolis.

REPORT *of* BANQUET COMMITTEE

Mr. J. G. Moore, Secy.,
Wisconsin Buttermakers' Association,
Madison, Wis.

Dear Sir: The Committee of Arrangements on the Banquet to be held in connection with the convention of the Wisconsin Buttermakers' Association, held in Fond du Lac February 1-3rd, begs leave to report as follows:

RECEIPTS.

45 contributors—$10.00	$450.00
2 tickets—$2.50	5.00
Total	$455.00

DISBURSEMENTS.

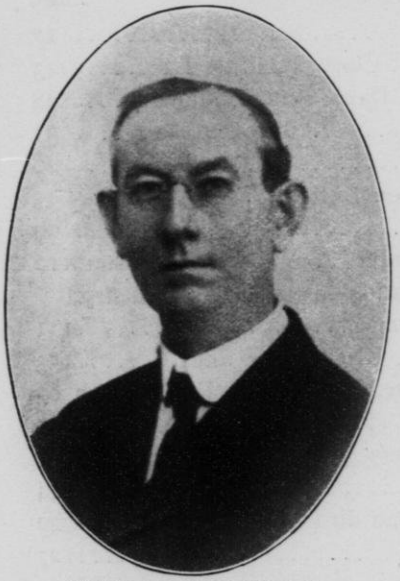
175 plates guaranteed—$1.00	$175.00
Flowers	7.50
Cigars	15.00
Orchestra	6.50
Quartette	20.40
Printing	33.02
G. E. Jenks, arrangement trip F. D. L. Jan. 21 1910	9.20
Telephone	.50
Telegram	.35
Incidentals	7.53
	$275.00
Amount to be pro-rated	180.00
	$455.00

As in our original letter soliciting contributions for this banquet, we stated that any amount left over and above the expense account would be pro-rated among the contributors. We beg leave to report that each and everyone received check for $4.00.

Respectfully submitted,

T. F. GALLAGHER, Chairman.
G. E. JENKS.
LAURITZ OLSEN.

BANQUET COMMITTEE



THOS. F. GALLAGHER,
Chicago, Ill.
Chairman Banquet Committee.

A. H. JENKS,
Chicago, Ill.
Member Banquet Committee.

LAURITZ OLSEN,
West DePere,
Member Banquet Committee.

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