Transactions of the Northern Wisconsin Agricultural and Mechanical Association, including a full report of the industrial convention held at Neenah, Wisconsin, February, 1886. Together with proceeding...

Northern Wisconsin Agricultural and Mechanical Association
Madison, Wisconsin: Democrat Printing Company, State Printers, 1886

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TRANSACTIONS

OF THE

NORTHERN WISCONSIN

Agricultural and Mechanical Association,

INCLUDING A FULL REPORT OF THE INDUSTRIAL CONVENTION HELD AT NEENAH, WISCONSIN, FEBRUARY, 1886.

TOGETHER WITH

Proceedings of the Association for 1884, to January 1, '86.

Vol. XI. 1884, to January, 1886.

COMPILED AND ARRANGED BY
A. C. AUSTIN, SECRETARY.

MADISON, WISCONSIN:
DEMOCRAT PRINTING COMPANY, STATE PRINTERS.
1886.

CONSTITUTION OF THE SOCIETY.

ARTICLE 1. The name of this Society shall be the Northern Wisconsin Agricultural and Mechanical Association. Its object shall be the promotion of Agricultural, Mechanical and Household Arts.

ARTICLE 2. *Membership*—This Association shall consist of the life members of the same and the Presidents of all agricultural, horticultaral and stock growers' associations within its jurisdiction.

ARTICLE 3. *Life Membership*—Any person may become a life member by the payment to the Secretary of the sum of $25, receiving from him a certificate of such membership, which shall not be transferable, but which shall entitle the person to whom issued, free admission to all the fairs and exhibitions of the Society.

ARTICLE 4. *Officers*—The officers of the Association shall be a President, eight Vice-Presidents, a Secretary and Treasurer, who shall be elected by ballot at the annual election, and who must be life members of the Association, and all of whom shall constitute and be designated *The Executive Board*, a majority of which shall constitute a quorum, and the officers named in this article shall hold their offices for one year from and after January first next succeeding their election, and until their successors are elected and qualified.

ARTICLE 5. *President*—The President shall be *ex-officio* a member of the Executive Board; shall preside at all meetings of the Association and of the Executive Board (but in case of absence or inability, one of the Vice-Presidents shall act as President and discharge all the duties of that office). He shall sign all contracts or other instruments of writing which have first been approved by the Executive Board. He shall sign all warrants drawn on the Treasurer (the account for which the same is drawn having been first approved by the Board); he shall have the casting vote in all cases of a tie, and may call a special meeting whenever he may deem it necessary.

ARTICLE 6. *Treasurer*—The Treasurer shall have charge of the funds of the Association, and pay the same out only on the order of the President, countersigned by the Secretary. He shall attend all fairs of the Association, receive the entrance or admission fee, keep a correct account of all receipts and disbursements, and perform such duties as a majority of the Executive Board may direct, and give bonds for the faithful performance of his duties.

ARTICLE 7. *Secretary*—The Secretary shall do all the correspondence of the Society, keep a record of its proceedings and of Executive Board,

and prepare the same for publication. He shall collect all moneys due the Society from any source, including receipts from grand stand (except fees for admission to fairs), and pay the same over to the Treasurer, taking his receipt therefor; keep proper account books, and discharge such other duties as pertain to his office, or as a majority of the Executive Board may direct. He shall also give bonds for the faithful accounting of all moneys which may come into his hands belonging to the Association.

ARTICLE 8. *Executive Board*—The Executive Board shall have full power to manage the affairs of the Association. They shall fill all vacancies, except that superintendents of departments may appoint judges by and with their consent, arising from inability to serve; fix compensation of all officers of the Association, appoint and remove at pleasure all appointed officers, agents and employes, prescribe their duties and fix their compensation; also to make rules and regulations for the guidance of the officers in the discharge of their duties; they shall classify by department, group and class, all articles likely to be entered for exhibition; appoint the time for opening and closing the annual fair; to prescribe and publish, at least by the 15th of June of each year, a schedule of premiums to be awarded; to fix the price of entries and admission; to appoint appropriate committees to superintend and to make awards in the several departments; to determine upon and fix up proper grounds and place of meeting or exhibition, and to provide rules and regulations governing the same. They shall audit all bills and accounts, and cause to be kept a complete and correct record of all their proceedings, and to allow no moneys or disbursements of the funds of the Society, or any improvement of the property of the same to be made, without the recorded approval of a majority of the Board. They shall, as soon after the annual fair as practicable, pay to the exhibitors premiums which have been awarded, from surplus funds of the Association, and shall, within sixty days after the close of the annual fair, publish a full report of their proceedings and a complete detailed statement of the condition of the affairs of the Association.

ARTICLE 9. *Annual Meeting*—The annual meeting of the Association shall be held on Friday of fair week, at 7:30 o'clock P. M., at such a place as a quorum of the Executive Board may direct. At such annual meeting each life member present shall be entitled to one vote, and each agricultural, mechanical, horticultual and stock growers' association within the jurisdiction of the Association shall be entitled to three delegates who shall be entitled to one vote each, when present, in the election of officers and the transaction of any other business proper to be done at such a meeting.

ARTICLE 10. This Constitution may be altered or amended at any annual meeting of the Association, by a majority vote.

LIFE MEMBERS.

Names.	*Post Office.*
Athearn, John.....	Oshkosh.
Allan, Albert.....	Oshkosh.
Allan, Nelson.....	Oshkosh.
Austin, A. C.....	Oshkosh.
Athearn. G. W....	Oshkosh.
Arnold, Joseph ...	Oshkosh.
Amos, Frank.....	Oshkosh.
Ayres, Raymond ..	Oshkosh.
Allan, J. R.... ...	Butte des Morts.
Brainerd, Jas.....	Oshkosh.
Brainerd, C. M	Oshkosh.
Brainerd, A. M....	Oshkosh.
Beals, P.....	Bear Creek.
Beardmore, Geo. M.	Vinland.
Babcock, H. A	Neenah.
Ball, J. M	Oshkosh.
Barber, Chas	Oshkosh.
Bray, J. M.....	Oshkosh.
Beckwith, S.....	Oshkosh.
Buckstaff, Geo. H .	Oshkosh.
Bauman, Geo.....	Oshkosh.
Beardmore, J. B...	Clemansville.
Bowers, A.....	Clemansville.
Beach, O.....	Oshkosh.
Bentzel, E.....	Oshkosh.
Brockway, J. C....	Oshkosh.
Barnett, R	Oshkosh.
Burgess, W. R.....	Oshkosh.
Brown, W. S	Oshkosh.
Bouck, Gabe	Oshkosh.
Bemis, L. B	Clemansville.
Buckstaff, J.....	Oshkosh.
Bemis, L. C.....	Clemansville.
Barnett, J. T	Omro.
Boss, C.....	Clemansville.
Bennett, R. E	Oshkosh.
Bauman, Gustav...	Oshkosh.
Brown, R. C.....	Oshkosh.
Choate, L	Oshkosh.
Colvin, W.....	Oshkosh.
Catlin, W. S.....	Elo.
Cotton, M. C.....	Oshkosh.
Chase, L. S	Omro.
Cone, C. G.....	Chilton.
Cheney, Thos.....	Oshkosh.
Cronkhite, A. J....	Neenah.
Cross, J. W	Algoma.

Names.	*Post Office.*
Chase, Jas.....	Oshkosh.
Clapp, E. S	Winneconne.
Clough, W	Oshkosh.
Chase, O. F.....	Oshkosh.
Cronkhite, F	Neenah.
Campbell, Robt...	Oshkosh.
Cameron, Geo....	Oshkosh.
Campbell, R. C ...	Oshkosh.
Calkins, W. G	Winneconne.
Church, Geo. S ...	Neenah.
Carter, B. F	Sherwood.
Crary O. F	Oshkosh.
Cronkhite, Geo. P.	Neenah.
Cross, J. S.....	Butte des Morts.
Coy, R. B	Oshkosh.
Champion, Jas....	Winneconne.
Cook, W. H	Stockbridge.
Conlee. E. N	Oshkosh.
Cook, O..	Oshkosh.
Choate, J. B.....	Oshkosh.
Daubner, G. H....	Brookfield.
Dale, H, B.....	Oshkosh.
Dake, J. W.....	Omro.
Davis. J. B.....	Oshkosh.
Dobson, J.....	Oshkosh.
Duane, T. J	Kansas City.
Doughty, Jas.....	Oshkosh.
Doughty, Benj ...	Oshkosh.
Eastman, G. F....	Oshkosh.
Ely, Cook	Oshkosh.
Eaton, M. H.....	Oshkosh.
Eaton, I.....	Winnebago.
Ellsworth, W. T..	Oshkosh.
Foster, Carlton...	Oshkosh.
Freeborn, J	Oshkosh.
Floyd, H	Berlin.
Finch, E. P ...	Oshkosh.
Forbes, D. H.....	Oshkosh.
Felker, C. W	Oshkosh.
Fraker, J. S.....	Oshkosh.
Ford, Milan	Nekimi.
Felker, W. B	Oshkosh.
Fitzgerald, M.....	Oshkosh.
Freeman, D. G....	Oshkosh.
Fisk, J. L	Omro.

Names.	*Post Office.*
Goe, T. R	Oshkosh.
Gordinier, John ...	Little Wolf.
Green, M. B.....	Oshkosh.
Gillingham, Frank.	Neenah.
Gove, John M	Winneconnne.
Gustavus, H. C....	Oshkosh.
Gould, J. P	Oshkosh.
Glass, J. H.....	Oshkosh.
Grimmer, T. D	Oshkosh.
Goodfellow, T. M..	Oshkosh.
Gillingham, T. J .	Neenah.
Gary, George.....	Oshkosh.
Gilky, G. F.....	Oshkosh.
Gratten, P. H.....	Oshkosh.
Hicks, J. H	Oshkosh.
Hawley, A. W	Waukau.
Huntley, D.....	Appleton.
Hart, A. H.....	Appleton.
Hall, Wm.....	Medina.
Hubbard, A.....	Oshkosh.
Hoaglin, J. N.....	Oshkosh.
Ham, J. D.....	Clemensville.
Hutchinson, K. M.	Oshkosh.
Harding, Geo.. ...	Waukesha.
Hazen, Chester....	Ladoga.
Hughes, H. F.....	Oshkosh.
Hall, Elihu.....	Algomo.
Houghton. C. P ...	Oshkosh.
Huxley, H. E.....	Neenah.
Harmon, L. D.....	Oshkosh.
Heath, C. D	Oshkosh.
Hollister, S. W....	Oshkosh.
Harshaw, H. B....	Oshkosh.
Hœrnig, J.....	Oshkosh.
Hume, J. W	Oshkosh.
Hale, A. M.....	Oshkosh.
Hollister, Asa	Oshkosh.
Hall, W. S	Neenah.
Hay, S. M	Oshkosh.
Hart, Isaac....	Neenah.
Jennins, W. J	Rosendale.
Jackson, H. B.....	Oshkosh.
Jewell, A. H	Oshkosh.
Jones, J. V	Oshkosh.
Johnson, C. A.....	Oshkosh.
Johnston, N.....	Oshkosh.
Keys, George.....	Empire.
Kerzertee, Ira.....	Oshkosh.
Kennedy, J. B	Oshkosh.
Knapp, L. E	Oshkosh.
Loper, J. R...	Oshkosh.
Lampard, G. R....	Oshkosh.
Loper, A. A	Ripon.
Lewis, James.....	Oshkosh.
Libbey, D. L	Oshkosh.
Loop, Dr. T. E.....	Eureka.
Laflin, J. W.....	Oshkosh.

Names.	*Post Office.*
Laabs, J	Oshkosh.
Lawrence, S. B...	Oshkosh.
Lane, Wm	Oshkosh.
Lawrence, Thad..	Oshkosh.
Loademan, R.....	Oshkosh.
Ladd, J. W	Oshkosh.
Mayhew, L.....	Greenbush.
Martin, E. R	Omro.
Meyer, C	Appleton.
Miles, Isaac	Oshkosh.
Moore, J. J	Oshkosh.
Miller, L. M.....	Oshkosh.
McConnell, W. M.	Bluffton.
McDougall, G. W.	Madison.
Morgan, F. B	Oshkosh.
Miracle, Joseph ..	Winneconne.
Merrill, S. R	Neenah.
Minckler, G. W ..	Oshkosh.
McMillan, R.....	Oshkosh.
McConnell, J. C..	Dartford.
Mettam, Edward .	Omro.
McWilliams, J ...	Oshkosh.
Morrison, James..	Oshkosh.
McConnell, C. D..	Ripon.
Monahan, John...	New London.
Musser, B. J	Chicago.
Morgan, John	Oshkosh.
McNair, John	Oshkosh.
McCorison, O.....	Oshkosh.
McNair, James ...	Oshkosh.
Morgan, R. T	Oshkosh.
Nelson, J.....	Oshkosh.
Osborn, A. K	Oshkosh.
Olcott, J. B.....	Oshkosh.
Ostertag, S.....	Oshkosh.
Phillips, B. J	Marinette.
Paddleford, S. D .	Omro.
Pinning, Bar	Oshkosh.
Pairsh, P. T.....	Appleton.
Paine, E. L	Oshkosh.
Paddleford, J. R .	Oshkosh.
Pilgrim, D. T	West Granville.
Peck, O. D.....	Oshkosh.
Paige, J. A	Oshkosh.
Pratt, G. W.....	Oshkosh.
Paine, G. M.....	Oshkosh.
Peffer, Kate.....	Pewaukee.
Powers, F. M	Oshkosh.
Paige, C. C	Oshkosh.
Parkinson, M. B .	Oshkosh.
Parson, J. G	Oshkosh.
Porter, A. K	Shawano.
Pierson, Joseph ..	Oshkosh.
Quinlan, C	Oshkosh.

Names.	*Post Office.*
Ransom, E. B.....	Fiskes.
Reed, Jas. S	Vinland.
Russell, T. P.....	Oshkosh.
Rice, H. M.....	Oshkosh.
Rogers, A.....	Berlin.
Rogers, Geo	Oshkosh.
Robinson, C. D....	Green Bay.
Rollins, J. M.....	Oshkosh.
Rublee, J. S	Clayton.
Roe, J. P.....	Oshkosh.
Russell, R, C.....	Oshkosh.
Rockwell, A. G ...	Oshkosh.
Roby, A. F	Neenah.
Roberts, R. N.....	Waupaca.
Robie, Rufus.....	Neenah.
Rumery, L. O.....	Oshkosh.
Rich, Walter	Oshkosh.
Robbins, A. J....	Oshkosh.
Radford, S.....	Oshkosh.
Radford, W	Oshkosh.
Stilson, Eli	Oshkosh.
Sherwood, J. C ...	Dartford.
Suydam, Fred	Oshkosh.
Saunders, E. W...	Oshkosh.
Stoddard, J.....	Greenbush.
Smith, J. M	Green Bay.
Stephenson, Isaac.	Marinette.
Stilson, Edgar	Oshkosh.
Sawyer, P.....	Oshkosh.
Servis, Wm.....	Sheboygan Falls.
Stroud, Geo. F....	Oshkosh
Scribner, Joseph..	Rosendale.
Sawyer, E. P.....	Oshkosh.
Sarau, C.....	Oshkosh.
Sanford, A.....	Oshkosh.
Scott, Geo. E	Neenah.
Simons, Wm.....	Oshkosh.
Seely, Eli.....	Oshkosh.
Smith, C. R.....	Oshkosh.

Names.	*Post Office.*
Stilson, A	Oshkosh.
Schomer, Frank .	Oshkosh.
Sherman, H. B ..	Burnett Junct'n.
Scoville, Geo	Oshkosh.
Sheldon, Wm....	Oshkosh.
Soper, B. H.. ...	Oshkosh.
Streeter, G. B....	Oshkosh.
Stevens, W. O...	Oshkosh.
Streitc, Gabe'....	Oshkosh.
Sawtell, H. C....	Oshkosh.
Torrey, R. D.....	Milwaukee.
Thompson, L. F..	Oshkosh.
Terrell, J. K.....	Omro.
Thomas, H. B....	Berlin.
Thayer, P. S.....	Oshkosh.
Thompson, J. R..	Fond du Lac.
Thurston, C. W..	Stockbridge.
Thompson, Jud..	Neenah.
Thompson, A. E.	Oshkosh.
Vosburg, J	Oshkosh.
Vosburg, C. C....	Oshkosh.
Vosburg, G. H...	Clemensville.
Viall, E. W.....	Oshkosh.
Wilson, M. C	Oshkosh.
Wade, A. B.....	Algoma.
Weyerhost, F....	Black Wolf.
Wakefield, G. M.	Oshkosh.
Woodward, W.W.	Port Hope.
Weston, C. S	Oshkosh.
Weed, J. H.....	Oshkosh.
Whitney, S. L ...	Ripon.
Wolcott, H, W...	Ripon.
Wood, S. E.....	Oshkosh.
Wetherby, D,....	Oshkosh.
Wright, W. W...	Oshkosh.
Washburn, J. R..	Oshkosh.
Washburn, G. W.	Oshkosh.
Waite, F. E.....	Oshkosh.

OFFICERS FOR 1884.

President—C. HAZEN ..... LADOGA
Secretary—A. C. AUSTIN ..... OSHKOSH
Treasurer—E. W. VIALL ..... OSHKOSH

VICE-PRESIDENTS.

D. HUNTLEY ..... APPLETON
A. A. LOPER ..... RIPON
W. H. COOK ..... STOCKBRIDGE
GEO. HARDING ..... WAUKESHA
C. D. McCONNELL ..... BERLIN
GEO. F. STROUD ..... OSHKOSH
R. N. ROBERTS ..... WAUPACA
SEYMOUR HOLLISTER ..... OSHKOSH
J. L FISKE ..... OMRO
B. T. PHILLIPS ..... MARINETTE

SUPERINTENDENTS OF DEPARTMENTS.

Division A, Stock Horses—GEO. HARDING ..... WAUKESHA
Division B, Speed Horses—C. D. McCONNELL ..... BERLIN
Division C, Cattle—H. W. WOLCOTT ..... RIPON
Division D, Sheep—E. R. MARTIN ..... OMRO
Division E, Swine and Poultry—W. H. COOK ..... STOCKBRIDGE
Division F, Field, Garden Dairy and Household—D. HUNTLEY ..... APPLETON
Division G, Fruit and Flowers—J. L. FISKE ..... OMRO
Division H, Domestic Mfrs., Fine Arts., Etc—K. M. HUTCHINSON ..... OSHKOSH
Division I, Manufactures—R. N. ROBERTS ..... WAUPACA
Division J, Machinery—GEO. F. STROUD ..... OSHKOSH

Superintendent of Gates—A. A. LOPER ..... RIPON
Superintendent of Grounds—J. J. MOORE ..... OSHKOSH
Marshal and Chief of Police—SEYMOUR HOLLISTER ..... OSHKOSH

OFFICERS FOR 1885.

President—C. HAZEN ..... LADOGA
Secretary—A. C. AUSTIN ..... OSHKOSH
Treasurer—E. W. VIALL ..... OSHKOSH

VICE-PRESIDENTS.

D. HUNTLEY ..... APPLETON
A. A. LOPER ..... RIPON
W. H. COOK ..... STOCKBRIDGE
GEO. HARDING ..... WAUKESHA
C. D. McCONNELL ..... BERLIN
GEO. F. STROUD ..... OSHKOSH
R. N. ROBERTS ..... WAUPACA
SEYMOUR HOLLISTER ..... OSHKOSH
J. L. FISK ..... OMRO
H. A. BABCOCK ..... NEENAH

SUPERINTENDENTS OF DEPARTMENTS.

Division A, Stock Horses—GEO. HARDING ..... WAUKESHA
Division B, Speed Horses—C. D. McCONNELL ..... BERLIN
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Division D, Sheep—A. B. WADE ..... ALGOMA
Division E, Swine and Poultry—E. R. MARTIN ..... OMRO
Division F, Field, Garden, Dairy and Household—D. HUNTLEY ..... APPLETON
Division G, Fruit and Flowers—J. L. FISK ..... OMRO
Division H, Domestic Mfrs, Fine Arts, Etc.—G. R. LAMPARD ..... OSHKOSH
Division I, Manufactures—H. W. WOOLCOTT ..... RIPON
Division J, Machinery—H. A. BABCOCK ..... NEENAH

Superintendent of Gates—A. A. LOPER ..... RIPON
Superintendent of Grounds—J. J. MOORE ..... OSHKOSH
Marshal and Chief of Police—SEYMOUR HOLLISTER ..... OSHKOSH

REPORTS OF MEETINGS OF LIFE MEMBERS AND EXECUTIVE BOARD.

PRESIDENT'S ROOM, EXPOSITION BUILDING,
SEPTEMBER 9th, 1884.

Members present, Chester Hazen, A. A. Loper, D. Huntley, Geo. Harding, W. H. Cook and George F. Stroud.

Voted to collect pay from life members for seats sold on grand stand. Voted not to allow pools sold on the grounds during races.

COUNCIL ROOM, OSHKOSH,
SEPTEMBER 11, 1884.

Meeting of life members for the purpose of electing officers for the ensuing year.

Meeting called to order by the President, Chester Hazen. Motion was made that the secretary be instructed to cast the vote for the present incumbent, Chester Hazen, for president of the Northern Wisconsin Agricultural and Mechanical Association for the ensuing year. The motion prevailed, and the ballot was cast as instructed. The president was instructed to cast the vote for A. C. Austin, for secretary, also for E. W. Viall, for treasurer, and the votes were cast according to instructions.

The following named gentlemen were elected as vice-presidents for the following year:

D. Huntley, A. A. Loper, W. H. Cook, Geo. Harding, Geo. F. Stroud, J. L. Fiske, C. D. McConnell, R. N. Roberts, S. W. Hollister and H. A. Babcock.

On motion, meeting adjourned.

TREMONT HOUSE, OSHKOSH,

JANUARY 5th, 1885.

Annual meeting of the Executive Board of the Northern Wisconsin Agricultural and Mechanical Association.

Meeting called to order by President Chester Hazen. Members present: A. A. Loper, D. Huntley, C. D. McConnell, J. L. Fiske, E. W. Viall, A. C. Austin. The President appointed the following committee to settle with the secretary and treasurer: A. A. Loper, D. Huntley and A. C. Austin. The committee go over the accounts of receipts and disbursements, and report as finding all accounts correct. Report was adopted. Secretary was instructed to issue certificate of life membership to A. M. Waber on receipt of five dollars ($5.00), and in consideration of twenty dollars awarded in premiums.

After revising and correcting the premium list, the following named gentlemen were elected as superintendents of the various departments:

Stock Horses — George Harding.
Speed Horses — C. D. McConnell.
Cattle — W. H. Cook.
Sheep — A. B. Wade.
Swine and Poultry — A. R. Martin.
Field, Garden and Dairy — D. Huntley.
Fruit and Flowers — J. L. Fiske.
Domestic, Fine Arts, etc. — K. M. Hutchinson.
Machinery — H. A. Babcock.
Manufactures — H. W. Wolcott.
Superintendent of Gates — A. A. Loper.
Superintendent of Grounds — J. J. Moore.
Marshal — S. W. Hollister.

Voted to put fifteen hundred dollars into speed purses.

Committee appointed to secure special attractions: Chester Hazen, S. W. Hollister and A. C. Austin, with authority to invest such amount of money as they deem for the interest of the Association.

Adjourned.

COUNCIL ROOM, OSHKOSH,
SEPTEMBER 17, 1885.

Annual meeting of the life members of the Northern Wisconsin Agricultural and Mechanical Association. Meeting called to order by President Hazen. Motion that a president for the ensuing year be elected by ballot, resulted as follows: Whole number of votes cast, 41; F. M. Powers receiving 1; C. D. McConnell, 1; S. M. Hay, 1; Chester Hazen, 38. Mr. Hazen receiving a majority of all the votes cast was declared elected. Ballot for secretary resulted in A. C. Austin receiving the whole number of votes cast, 41. Ballots for treasurer resulted as follows: Whole number of votes cast 38, of which G. W. Washburn received 1, Edgar Stilson, 1; R. McMillan, 6; S. M. Hay, 2; E. P. Sawyer, 1; James Brainard, 1; E. W. Viall, 26. Mr. Viall having received a majority of all the votes cast, was declared elected. The following named gentlemen were elected vice-presidents: D. Huntley, A. A. Loper, W. H. Cook, Geo. Harding, C. D. McConnell, Geo. F. Stroud, R. N. Roberts, S. W. Hollister, J. L. Fisk and H. A. Babcock.

The president was instructed to appoint a committee of five, himself to act as chairman, to report at the next meeting whether the association would be able to pay expenses and premiums in full or not.

The committee was composed of the following named gentlemen: Chester Hazen, O. Beach, A. A. Loper, Col. Bouck and G. W. Washburn.

Adjourned to meet at 7 o'clock, Friday evening, September 18th.

COUNCIL ROOM,
SEPTEMBER 18, 1885.

Meeting called to order by President Hazen. Report of the committee appointed the previous day was, that in their opinion the association would not be able to pay expenses and premiums in full.

Motion by Colonel Bouck, that Article 9, of the Constitution, be changed so as to read: "The annual meeting of the

Association shall be held on Friday of fair week, instead of Thursday." Carried.

Resolution of Geo. W. Washburn, That no complimentary tickets of admission to the fair be issued by any officer of the fair, except under instructions of the Board of Directors, naming persons to whom same shall be issued. Carried.

Motion by Colonel Bouck, that the officers of the Association be required to report at the annual meeting, the number of complimentary tickets issued and to whom issued. Carried.

Motion by Colonel Bouck, that the Secretary and Treasurer be required to report at each annual meeting, as near as practicable, the receipts and disbursements of the Association. Carried.

Resolution of Colonel Bouck, to amend Article 3, of the Constitution, so as to read: "Any person may become a life member by the payment to the Secretary of the sum of $25, receiving from him a certificate of membership, the same not to be transferable. Life members to be entitled to free admission to all fairs and exhibitions of the S ciety. Motion prevailed.

Resolution by G. W. Washburn.

Resolved, That it is the sense of this Association that its annual expenditures should not exceed its revenues. And that the Executive Board in making its premium list, and the general management of its financial affairs, be especially requested to regard in this respect, the wishes of the Association.

Carried.

On motion of J. H. Hicks, the meeting adjourned.

SECRETARY'S OFFICE, OSHKOSH,

SEPTEMBER 19th, 1885.

President C. Hazen appointed the following named gentlemen to meet with himself at the Secretary's office September 25th, 1885, for the purpose of auditing accounts:

A. A. Loper, S. W. Hollister and Geo. F. Stroud.

Adjourned.

SECRETARY'S OFFICE, OSHKOSH,
SEPTEMBER 25th, 1885.

The above named gentlemen met as requested, and after a thorough examination of the Association's financial condition, instructed the Secretary to draw orders on the Treasurer in payment of all expense bills, and fifty cents on the dollar, of premiums awarded.

Adjourned.

TREMONT HOUSE, OSHKOSH,
JANUARY 6, 1886.

Annual meeting of the Executive Board. Members present: President Chester Hazen, A. A. Loper, D. Huntley, C. D. McConnell, J. L. Fiske, H. A. Babcock, Geo. Harding, E. W. Viall, Geo. F. Stroud and A. C. Austin. President Hazen appointed A. A. Loper and D. Huntley to examine the Secretary and Treasurer's accounts, which they did, and reported everything correct and satisfactory. Report was adopted.

The following named gentlemen were elected Superintendents of the various departments for the following year:

Speed Horse Department — C. D. McConnell.
Stock Horse Department — Geo. Harding.
Cattle Department — H. W. Wolcott.
Sheep Department — A. B. Wade.
Swine and Poultry Department — E. R. Martin.
Grain, Seeds, etc., Department — D. Huntley.
Fruit and Flower Department — J. L. Fiske.
Domestic and Fine Art Department — G. R. Lampard.
Manufacture Department — J. V. Jones.
Machinery Department — H. A. Babcock.

It was decided to charge one dollar for the use of each horse stall during the fair.

Secretary was instructed to pay awards on long wool sheep at the fair of 1885, the same as was paid on short wool or merino sheep.

Secretary was instructed to build a suitable ice box for the accommodation of butter exhibits.

Geo. F. Stroud offered a barrel of White Head-Light oil for the best and most attractive display in Exposition Building during fair of 1886.

No free meal tickets to be issued to officers or employes of the association. No free admission to grand stand.

Secretary instructed to insert in rules, "exhibitors allowed one helper's ticket only."

Treasurer instructed to borrow six hundred dollars.

Voted to appropriate fifteen hundred dollars for trotting races.

Secretary instructed to take three thousand dollars cyclone policy on Exposition Building.

A. C. Austin, Geo. F. Stroud and H. A. Babcock appointed as committee to secure special attractions.

C. D. McConnell, S. W. Hollister and A. C. Austin appointed as committee to arrange speed purses.

The selection of dates for the next fair left with President Hazen and Secretary Austin.

J. J. Moore was elected as superintendent of grounds.

S. W. Hollister was elected marshal.

O. Cook was elected ticket accountant.

Adjourned.

1884.

Speed Horses — C. D. McCONNELL, *Superintendent.*
A. L. OSBORN, *Clerk.*

3:00 CLASS — *Trotting Race. Purse,* $200; *divided, first,* $100; *second,* $50; *third,* $30; *fourth,* $20.

ENTRIES.

	Position.
J. A. Paige, Oshkosh, enters b. m., Dove Eye	1, 1, 1.
S. D. Macomber, New Lisbon, enters b. g., Isicle June	Drawn.
Dr. J. O. Ackerman, Fond du Lac, enters b. m., Breeze	Distanced.
Wm. Groff, Oshkosh, enters b. g., Robin	4, 2, 2.
Pilling, Portage, enters b. m., Irene	2. Dis.
Ed. Swan, Green Bay, enters b. g., Tacon	Drawn.
E. Girardin, Menominee, Mich., enters s. m., Flora G	3. Dis.
A. Russell, Menominee, Mich., enters g. m., Gray Belle	Distanced.
C. H. Sheppard, Bockford, Ill., enters b. m., Beckey Smith	Distanced.

Time — 2:34, 0:00, 2:39½.
Timers — John Dodson and George Turner.
Judges — George Turner, Dr. H. B. Dale and H. A. Babcock.

2:38 CLASS — *Trotting Race. Purse,* $200; *divided, first,* $100; *second,* $50; *third,* $30; *fourth,* $20.

ENTRIES.

	Position.
John Fose, Appleton, br. g., Longfellow	3, 3, 3.
L. Classon, Cato, b. m., Bessie	4, 4. Dis.
L. G. Maynard, Waukesha, b. s., Swigart, Jr	1, 1, 1.
Dr. D. Rowland, Oshkosh, br. g., David R	2, 2, 2.
H. K. Stevens, Joliet, Ill., s. s., Logan Grant	Drawn.

Time — 2:39½, 2:39, 2:34½.
Timers — John Dobson and Grey Turner.
Judges — Geo. Turner, Dr. H. B. Dale and H. A. Babcock.

2:45 CLASS — *Trotting Race; Purse,* $200, *divided, first,* $100; *second,* $50; *third,* $30; *fourth,* $20.

ENTRIES.

	Positions.
John Fose, Appleton, enters br. g., Longfellow	3, 4, 2, 3.
S. D. McComber, New Lisbon, enters b. g., Icicle June	Drawn.
S. E. Smith, Eau Claire, enters b. m., Julia D	Drawn.
E. S. Joslyn, Oshkosh, enters blk. g., Darkness	Distanced.
John A. Paign, Oshkosh, enters b. m.,, Dove Eye	2, 1, 1, 1.
L. Classon, Cato, enters b. m., Bessie	Drawn.
E. Girardin, Menominee, Michigan, enters s. m., Flora G	1, 4, 2, 2.
A. Russell, Menominee, Mich,, enters g. m., Gray Belle	Drawn.
H. K. Stevens, Joliet, Illinois, enters s. s., Morgan Grant	4, 3, 3, 4.
S. Beckwith, Janesville, enters g. g., John Morris	5, 5, drawn

Time—2:39; 0:00; 2:34; 2:47.
Timers—Henry Jewell and C. O. Josslyn.
Judges—Dr. H. B. Dale, H. A. Babcock and George Jerry.

2:30 CLASS—*Trotting Race: Purse*, $200, *divided*; *first*, $100; *second*, $50; *third*, $30; *fourth*, $20.

	Positions.
T. B. Dorsett, Lake Mills, s. g., Sorrel Ned	2, 1, 1, 1.
Wm. Groff, Oshkosh, enters ch. m., Dayton Belle	1, 4, 4, 4.
J. G. Gerrity, Oshkosh, enters b. g., William S	3, 3, 3, 3.
— Pilling, Portage, enters, b. m., Irene	4, 2, 2. Dis.

Time—2:39; 2:41; 2:36; 2:33.
Timers—Henry Jewell and C. O. Josslyn.
Judges—Dr. H. B. Dale, H. A. Babcock and George Jerry.

2:35 CLASS — *Pacing Race; purse* $200, *divided; first*, $100; *second*, $50; *third*, $30; *fourth*, 20.

ENTRIES.

	Position.
C. H. Spafford, Rockford, Ill., b. m., Carrie B	2, 1, 2, 2.
Horace Giles, Milwaukee, blk g., Cloud R	1, 2, 1, 1.
James Hart, Merrill, bro. m., Lady White	3, 3, 3, 3.

Time — 2:40¾, 2:37½; 2:36½, 2:43.
Timers — Henry Jewell. C. O. Josslyn, Geo. Jerry.
Judges — E. P. Finch, Gus. Lawrence, A. C. Austin.

2:40 CLASS — *Trotting Stallion Race, for Gold Medal*, $30, $20.

ENTRIES.

	Positions.
Geo. Morris, Appleton, blk s., Col'n Cloud	1, 2, 1, 1.
L. G. Maynard, Waukesha, b. s., Swigert, Jr	2, 1, 2, 2.
H. K. Stevens, Joliet, Ill., s. s. Morgan Grant	3, 3, 3, 3.

Time — 2:32, 2:35, 2:33, 2:33½.
Judges — Geo. Jerry, E. P. Finch, Gus. Lawrence.

Free-for-all Trotting Race: *purse* $300, *divided; first*, $150; *second*, $75; *third*, $45; *fourth*, $30.

ENTRIES.

	Position.
T. B. Dorsett, Lake Mills, s. g., Sorrel Ned	1, 1, 1.
Wm. Graff, Oshkosh, ch. m., Dayton Belle	3, 2, 3.
David Johnson, Jefferson, ch. m., Foxie V	2, 3, 2.

Time — 2:31, 2:35, 2:34.
Timers — Geo. Jerry, C. O. Josslyn.
Judges — John Finch, Dr. B. T. Phillips, Gus. Lawrence.

SECRETARY'S WARRANT ACCOUNT.

FOR THE YEAR 1884.

No.	*To whom and for what.*	*Amount.*
1	Frek Bunker, premium	$2 00
2	J. L. Fiske, premium	50
3	Lane & Josslyn, boarding officers during annual meeting	21 50
4	Chas. Haase, premium	5 00
5	Postage stamps	6 00
6	C. A. Curtis, premium	1 50
7	M. J. Regan, premium	4 00
8	S. M. Hay, balance of rent of fair ground for 1883	223 55
9	Express on transactions	1 50
10	J. F. Barnett, premium	1 00
11	Postage stamps	5 00
12	J. W. Flack, purse awarded in 1881	25 00
13	James Trelevan, premium	2 27
14	Convention expenses at Waupaca	28 50
15	Oshkosh Times for printing	11 75
16	A. C. Austin, secretary, salary for six months to July 1st	500 00
17	Gary & Harmon, insurance on exposition building	26 12
18	R. H. Sawyer, reports of convention	90 00
19	A. C. Austin, secretary, 3 months salary to May 1st	250 00
20	State gazetteer	5 00
21	Postage stamps	10 00
22	Postage stamps	15 00
23	Postage stamps	16 00
24	Postage stamps	10 00
25	Postage stamps	10 00
26	Postage stamps	10 00
27	Hand stamp	4 00
28	Postage stamps	5 00
29	Rosnar & Schmidt, bill posting	10 00
30	H. K. Stevens, trotting purses	53 33
31	J. W. Durham, Japanese Day, fire works	250 00
32	E. J. Giardin, trotting purse	33 33
33	C. H. Spafford, pacing purse	30 00
34	H. Giles, pacing purse	100 00
35	D. G. Maynard, trotting purses	130 00
36	Frank Storkey, foot race purse	20 00
37	James Hart, pacing purse	30 00
38	T. B. Dorsett, trotting purses	220 00
39	W. H. Rollar, trotting purse	75 00
40	W. H. Groff, trotting purse	145 00
41	R. Casey, foot race purse	5 00
42	J. O. Gerrety, trotting purse	30 00
43	John Paige, trotting purse	200 00
44	Brainard & Hinman, 478 dinner tickets	143 40
45	A. C. Austin, Secretary, 3 months salary to August 1st	250 00
46	John Fose, trotting purse	43 33
47	D. W. Rowlands, trotting purse	50 00
48	J. J. Moore, dinner tickets	5 30
49	H. W. Wolcott, services as superintendent	21 00
50	A. A. Loper, services as superintendent	28 40

No.	To whom and for what.	Amount.
51	J. L. Fiske (and assistants), services as superintendent	$63 50
52	Mabel Loper, premium	2 00
53	C. D. McConnell, services as superintendent	22 40
54	Mrs. C. D. McConnell premium	2 00
55	McConnell, Wood & Son, J. G. Putnam and E. J. Stone, premiums	108 00
56	C. D. McConnell, premiums	155 00
57	J. Ameroux, watchman	10 00
58	Fred Fiske, premiums	12 50
59	Mrs. G. Nash, premiums	1 50
60	Mrs. Leighton, premiums	1 00
61	Fred Bunker, premium	10 00
62	Thompson & Wilson, premiums	11 00
63	F. L. Smith, premiums	7 00
64	Ed Osterhaus, premiums	43 00
65	Miss M. Osterhaus, premiums	24 00
66	S. R. Moody, assistant secretary	17 50
67	J. H. Hicks & Sons, services carpenter work	90 00
68	Edwin Baker, watchman	14 50
69	James Brainerd, premiums	28 00
70	S. E. Wood, gate tender	8 00
71	Paul Reynolds, police	10 00
72	Carr & Blowmans, police	21 25
73	Mrs. E. M. Sanders, premiums	13 00
74	James Dougherty, premiums	4 00
75	M. J. Perkins, carpenter	6 13
76	I. Neville, premiums	18 00
77	W. W. Waterhouse, assistant secretary	30 00
78	N. Wright, premiums	5 00
79	Nellie Wright, premiums	3 00
80	Frank L. Goodwin, premiums	6 00
81	Krum & Hooper, premiums	12 00
82	H. McKenzie, carpenter	13 80
83	N. Dougherty, premiums	91 00
84	Oshkosh Times, printing	63 25
85	Arion Band	200 00
86	Mrs. M. Cartwright, premium	2 00
87	Samuel Lodge, teaming	11 00
88	C. P. Haughton, assistant superintendent	12 00
89	Mrs. C. P. Houghton, premium	7 14
90	H. Pierce, premium	6 00
91	Thomas Davies, premiums	39 00
92	Wm. Ternouth, ice	7 50
93	W. Roach, errand boy	5 00
94	J. S. Cross, premium	5 00
95	I. G. Cross, premium	20 00
96	J. Bonnatt, premiums	28 00
97	Adelbert Stilson, hay and straw	316 29
98	Mrs. H. V. Stilson, premium	1 00
99	J. Sanders, police	7 88
100	W. I. Wyman, premium	3 00
101	P. A. Dale, assistant superintendent	15 00
102	Marcia Howlett, premiums	13 00
103	Mrs. C. D. Smith, premiums	5 00
104	Annie Paige, premium	1 00
105	Ida Gunz, premiums	4 00
106	Germania Ins. Co	45 00
107	P. H. Slattery, assistant secretary	17 50
108	R. H. Sawyer, reporting	21 00
109	H. M. Barnes, police	8 15

No.	*To whom and for what.*	*Amount.*
110	M. McCarty, police	$7 88
111	C. B. W. Ryckman, assistant secretary	18 75
112	John Haynes, assistant superintendent of gates	8 00
113	Mrs. A. Krugg, premium	1 00
114	A. B. Stearns, police	$10 00
115	John Lucy, ass't supt gates	8 00
116	Phœnix Ins. Co	45 00
117	Western Ass'n Ins. Co	45 00
118	Mrs. Chas. Oellerich, premium	7 00
119	Mrs. S. P. Farnsworth, premium	1 00
120	G. F. Schmidt, posting bills	31 71
121	O. Angell, premium	22 00
122	A. L. Osborn, clerk of races	10 00
123	E. W. Viall, Treasurer, for assistants	31 00
124	A. C. Austin, Secretary, expense account	18 10
125	C. M. Conlan, premium	1 00
126	Riley & Humphrey, hack for speakers	3 00
127	M. Wolverton, ass't supt. gates	8 00
128	A. Grady, watchman	10 00
129	I. C. Knapp, premiums	13 00
130	C. P. Houghton, premium	50
131	Thos. Wicks, premium	1 00
132	Mrs. E. Kent, premium	4 00
133	K. M. Hutchinson, supt. and assistants	66 70
134	Mrs. R. F. Kellogg, premium	1 50
135	Mrs. L. C. Booth, premiums	4 50
136	J. F. Morse, power and shafting	100 00
137	Wisconsin Central R. R., freight and carting	4 13
138	J. N. Ruby, ass't marshal	6 00
139	E. M. Brainerd, ticket agent grand stand	8 00
140	Geo. Harding, premiums, and services as supt.	114 00
141	M. H. Burtis, premium	3 00
142	Smail Bros	30 00
143	John Weiss, premium	2 00
144	Mrs. F. Thrall, premium	1 00
145	A. M. Brainerd, premium	7 00
146	S. Ballieb, stone boat	4 00
147	Jones Bros., ribbon	4 75
148	A. W. Hawly, premium	10 00
159	John Hicks, printing, stationery, etc	158 10
160	Mrs. A. Darrow, premium	3 00
161	Mrs. P. Sawyer, premiums	22 00
162	Mrs. A. Lewis, premium	25
163	Richard Kerr, premiums	35 00
164	Mrs. L. M. Taylor, premiums	8 00
165	Homiston, estate, premiums	60 00
166	J. Weidner, printing	17 00
167	John Gordinier, premiums	88 00
168	E. I. Sheldon, premiums	10 00
169	V. T. Taylor, watchman	5 25
170	Isaac Miler, premiums	42 25
171	Mrs. C. B. Crehor, premiums	1 00
172	Mrs. C. B. Crehor, premiums	1 00
173	Mrs. C. H. Root, premiums	27 50
174	F. G. Wilde, premiums	55 00
175	E. W. Streeter, premiums	10 00
176	James Clements, watchman	12 50
177	Chas. Kohlmann & Bro. printing	25 50
178	Chas. Kohlmann, premiums	5 00
179	Home Mutual Ins. Co	30 00

No.	*To whom and for what.*	*Amount.*
180	J. W. Morse & Son, premiums	$138 00
181	Mrs. J. F. Morse, premium	2 00
182	M. B. Green, premium	49 00
183	J. J. Moore, superintendent grounds	50 00
184	J. Westfall, watchman	8 75
185	Susie Rogers, premiums	9 00
186	C. A. Pride, premiums	2 00
187	Isaac Miles, premiums	11 50
188	A. J. Krehler, pursers for athletic sports	38 00
189	Mrs. P. Grube, premiums	5 00
190	Mrs. G. H Gile, premium	50
191	J. A. Bryant, watchman	7 88
192	J. N. Hoaglin, premiums	71 14
193	Richard Kerr, premium	10 00
194	F. E. Morehouse, premium	7 00
195	Birely & Son, gold medal, $50.00; engraving, $1.50	51 50
196	R. B. Kellogg, premiums	81 00
197	James Sullivan, purse, foot race	5 00
198	E. D. Knapp, assistant ticket agent	8 00
199	J. B. Everett, watchman	7 88
200	H. Frohrib, putting heavy stone	3 00
201	C. Perrin, putting heavy stone	5 00
202	Birkhauser & Brow, premiums	15 00
203	Mrs. Rollins, usher	7 50
204	Mrs. Lucy Sporr, premiums	5 00
205	Mrs. L. Badger, premiums	3 50
206	Mrs E. H. Badger, premiums	1 00
207	Mrs. C. Christenson, premium	50
208	Mrs. E. B. Hoaglin, premium	2 50
209	M. Prock, carpenter	7 00
210	Mrs. H. M. Quick	11 00
211	Eliza Stone, premium	10 00
212	Mrs. C. H. Blanchard, premium	13 00
213	E. G. Stone, premium	105 00
214	E. G. Stone, premiums	20 00
215	J. Edwards, premiums	45 00
216	R. L. Porter, premiums	20 00
217	B. H. Soper, premiums	19 00
218	Strang & Wells, premiums	70 00
219	Henry Schneider, hauling stone	5 00
220	Mrs. E. T. Thrall, premiums	5 00
221	J. C. Kiser, premiums	176 00
222	John Athearn, premiums	12 00
223	Chas. Barnes, hauling water	12 00
224	Louis Perrot, premiums	23 57
225	D. Huntley, superintendent	11 20
226	John S. Holmes, premium	15 60
227	D. V. Potter, superintendent forage	14 00
228	M. Sheppard, laborer	8 75
229	E. R. Martin, services as superintendent and premiums	45 64
230	W. Knapp, premium	1 00
231	M. Bower, premiums	22 00
232	W. R. Jones, premiums	22 00
233	G. M. Kenfield, premium	2 00
234	W. F. Pierce, premium	11 00
235	E. Radcliffe, painting	4 00
236	T. Thomas, premiums	39 50
237	Joel Johnson, premiums	6 00
238	Mrs. J. K. Terrell, premiums	3 00
239	Mrs. C. Derber, premiums	4 50
240	A. Brown, premium	3 00

No.	*To whom and for what.*	*Amount.*
241	Ripon Knitting Co., premium	2 00
242	B. I. and H. L. Sweet, premium	3 00
243	J. H. Haigh, premium	14 00
244	J. C. Fisher, premium	5 00
245	F. N. Appleyard, premiums	35 00
246	S. M. Hay & Bro, Hardware	26 40
247	H. B. Harshaw, hack	6 00
248	Miss Washburn, premiums	7 00
249	Mrs. Lampard, premiums	2 50
250	Mrs. J. F. W. Decker, premium	1 00
251	F. D. Cross, premiums	3 00
252	John Owens, premiums	10 00
253	J. P. Rowe, premiums	32 00
254	G. and U. Stroup, premiums	45 50
255	J. Paul, premiums	8 50
256	Barber Randall, premiums	43 00
257	A. J. Atwood, premiums	8 00
258	E. I. Austin, premiums	56 00
259	S. Meidam, premiums	14 00
260	Mrs. B. Phillipson, premium	50
261	H. McKenzie, laborer	2 50
262	C. Hazen, premiums and Lithograph Co	227 87
263	Mrs. D. Howlett, premiums	5 50
264	J. F. Steele, premiums	5 00
265	Mrs. S. E. Searle, premium	1 00
266	H. B. Thomas & Son, premiums	64 00
267	John O'Brien, premiums	18 00
268	James Parks, premium	15 00
269	T. W. Laramy, premiums	43 00
270	Gillett & Moore, premiums	117 00
271	Mrs. E. S. Clapp, premiums	15 14
272	Webb & Brooks, premiums	6 00
273	Mrs. R. Bennett, premiums	3 00
274	B. Henry, premium	4 00
275	Jacob Wantry, premium	5 00
276	M. J. Smith, premium	10 00
277	M. J. Smith, premium	7 14
278	First National Bank, interest on note	240 00
279	P. C. Gallup, premium	15 00
280	R. B. Clark & Co., premiums	101 00
281	A. T. Sanders, premiums	4 00
282	T. H. Bubb, premiums	7 50
283	Mrs. C. M. Moody, premiums	1 50
284	H. L. Bedient, hardware and premiums	11 17
285	J. C. Kiser, premium	10 00
286	Mrs. Eliza Washburn, premiums	26 00
287	Mrs. C. A. Rumary, premiums	2 00
288	H. Saram, bill posting	4 37
289	W. C. Wolcott, premiums	12 14
290	R. D. Lloyd, premiums	2 00
291	Etta Ransom, premium	1 00
292	Oshkosh Times, printing	18 00
293	J. T. Barnett, premiums	5 00
294	A. B. Wade, assistant superintendent	6 00
295	Gary & Harmon, insurance	60 00
296	Davenport Bros., premiums	20 00
297	R. N. Clark & Co., premium	10 00
298	Nelson Olin, premiums	38 00
299	E. H. Bushnell, premiums	1 00
300	Telephone Co	10 00
301	Gabe Streich, premium	3 00

No	To whom and for what.	Amount.
302	Philo Root, premiums	22 00
303	Bowles & Hadden, premiums	76 00
304	Mrs. A. M. Bryant, premiums	1 00
305	W. Hill & Co., ribbons	31 00
306	Mrs. C. Willmarth, premium	1 00
307	James Keewin, premium	2 00
308	Geo. P. Peffer, premiums	61 00
309	W. A. Springer, premiums	41 00
310	G. G Johnson, police	10 00
311	Uriah Stroup, premiums	26 00
312	John Nelson, premiums	54 25
313	Mrs. E. Oliver, premium	50
314	W. D. Lawrence, premium	2 00
315	S. W. Hollister, marshal	15 00
316	G. F. Thoms, premiums	11 00
317	Mr. and Mrs. Weyerhorst	5 50
318	Angus Humphrey, premium	10 00
319	W. B. Daniels, premium	1 00
320	B. W. Daniels, premium	3 40
321	Mrs. G. H. Daubnar, premiums	55 00
322	Chas. Hill, premiums	40 00
323	L. H. Champlin, premium	20 00
324	W. Buchanan, premium	15 00
325	T. Neville, premiums	40 00
326	A C. Rasmussen, assistant superintendent	12 00
327	G. W. Mead, watchman	5 12
328	I. Anthony, premium	5 00
329	G. C. Griffith, premium	3 00
330	James Morrison, premium	5 00
331	H. W. Kellogg, premiums	7 14
332	Mary Harper, premium	50
333	Carrie H. Swasey, premium	1 00
334	Gillingham & Co., premiums	2 00
335	J. B. Roberts, premium	2 00
336	J. F. W. Decker, crockery and premium	22 34
337	Fannie Lombard, premium	50
338	Miss J. Jones	1 00
339	Mrs. Wm. Stillman, premium	1 00
340	G. F. Stroud, glass	15 42
341	E. D. Monroe, premium	2 00
342	Joel Johnson, premiums	9 32
343	H. Floyd, premiums	14 50
344	L. Hinman, premiums	7 00
345	E. W. Viall, treasurer, services and merchandise	63 00
346	Cook Ely, premiums	7 00
347	C. Foster & Co., lumber	17 18
348	D. H. Hillman & Co., premiums	53 00
349	T. R. Allen, premiums	10 00
350	Paine Lumber Co., lumber	1 25
351	J. Dobson, cutting weeds	5 00
352	Mrs. C. W. Harrington, premium	3 00
353	E. R. Bemont, premiums	18 00
354	A. O. Sumerton, premiums	1 00
355	A. C. Austin, secretary, three months' services to Nov. 1st	250 00
356	Geo. S. Church, premium	20 00
357	A. Von Kaase, Copperas	2 00

PREMIUMS AWARDED.

DIVISION A — HORSES.

GEORGE HARDING—*Superintendent.*

CLASS 1.—*Roadsters.*

Best stallion 4 years old or over, John Gordinier	$25 00
Second best, John Holmes	15 00
Best stallion 3 years old and under 4, J. F. Cross	20 00
Second best, E. I. Sheldon	10 00
Best stallion 2 years old and under 3, Bowles & Hadden	15 00
Second best, A. J. Atwood	8 00
Best stallion 1 year old and under 2, John O'Brien	10 00
Second best, J. S. Cross	5 00
Best sucking stallion foal, John Gordinier	10 00
Second best, G. F. Thorne	5 00
Best brood mare 4 years old and over, with sucking colt, John Gordinier	12 00
Second best, G. F. Thorne	6 00
Best filley, 3 years old, F. Bunker	10 00
Second best, James Morrison	5 00
Best filley, 2 years old, John O'Brien	8 00
Second best, W. H. Cook	4 00
Best filly foal, John Gordinier	6 00
Second best, Barber Randall	4 00

CLASS 2.—*Cleveland Bays.*

Best stallion, 4 years old and over, F. G. Wild & Co	$25 00

CLASS 3—*Horses for all Work.*

Best stallion 4 years old or over, F. G. Wild & Co	$10 00
Second best, Isaac Anthony	5 00
Best stallion 3 years old and under 4, John Bonnett	8 00
Best stallion foal, R. Henry	2 00
Second best, A. A. Summerton	1 00
Best brood mare 4 years old or over, with sucking colt, W. R. Jones	8 00
Second best, Jacob Wanty	4 00
Best filly 3 years old, C. Knapp	6 00
Best filly 2 years old, John Athearn	4 00
Second best, G. M Kenfield	2 00
Best filiy one year old, T. Thomas	2 00
Second best, J. H. Haigh	1 00

CLASS 4 — *Imported and Pure Bred Norman and other French Draft Horses.*

Best stallion 4 years old or over, R. B. Kellogg	$25 00
Second best, Bowles & Hadden	15 00
Best stallion 3 years old and under 4, Bowles & Hadden	20 00
Second best, Bowles & Hadden	10 00
Best brood mare with colt, R. B. Kellogg	12 00
Best filly 2 years old and under 3, R. B. Kellogg	8 00
Second best, R. B. Kellogg	4 00

CLASS 5. — *Grade Draft Horses.*

Best stallion 4 years old or over, John Owens	$10 00
Second best, F. N. Appleyard	5 00
Best stallion 3 years old and under 4, F. N. Appleyard	8 00
Second best, Bowles & Hadden	4 00
Best stallion 2 years old and under 3, F. N. Appleyard	6 00
Best stallion 1 year old and under 2, F. Thomas	4 00
Best sucking stallion foal, Jas. Parks	2 00
Second best, Jacob Wanty	1 00
Best brood mare 4 years old or over, James Parks	8 00
Second best, J. H. Haigh	4 00
Best filly 2 years old and uuder 3, F. N. Appleyard	4 00
Best filly 1 year old and under 2, R. Henry	2 00
Second best, J. H. Haigh	1 00
Best filly foal, J. H. Haigh	2 00

CLASS 6.— *Imported and Native Pure Bred Clydesdales and other English Draft Breeds.*

Best stallion 4 years old and over, Richard Kerr	$25 00
Second best, Smail Bros	15 00
Best stallion 1 year old and under 2, Uriah Stroup	10 00
Best brood mare with colt, Uriah Stroup	12 00
Best filly 3 years old, Uriah Stroup	10 00
Second best, Uriah Stroup	5 00
Best filly foal, Uriah Stroup	6 00

CLASS 7.— *Roadsters —Sweepstakes.*

Best stallion, any age, John Gordinier	$20 00
Best mare any age, Bowles & Hadden	12 00

CLASS 8.— *Horses of all Work — Sweepstakes.*

Best stallion, any age, R. Wilbur	$20 00
Best mare, any age, W. R. Jones	12 00

CLASS 9.— *Norman and other French Draft Breeds — Sweepstakes.*

Best stallion, any age, R. B. Kellogg	$20 00
Best mare, any age, R. B. Kellogg	12 00

CLASS 10.— *Clydesdale and other English Draft Breeds — Sweepstakes.*

Best stallion, any age, Richard Kerr	$20 00
Best mare, any age, Uriah Stroup	12 00

CLASS 11.— *Cleveland Bays — Sweepstakes.*

Best stallion, any age, F. G. Wild & Co	$20 00

CLASS 12.— *Grade Draft — Sweepstakes.*

Best stallion, any age, F. N. Appleyard	$12 00
Best mare, any age, J. H. Haigh	6 00

CLASS 13 — *Farm Teams in Heavy Harness.*

Best farm team, Uriah Stroup	$10 00
Second best, Smail Bros	5 00

CLASS 14 — *Carriage Teams, Matched.*

Best carriage team, John Gordinier	$15 00
Second best, I. W. Leighton	8 00

Single Mare or Gelding,

Best single mare or gelding, W. J. Radford	7 00
S cond best, J. F. Steele	5 00

DIVISION B—CATTLE.

Superintendent—H. W. WOLCOTT.

CLASS 15—*Short Horns.*

Best bull 3 years old or over, H. B. Thomas & Son	$20 00
Second best, J. C. Kiser	12 00
Best bull 2 years old and under 3, J. C. Kiser	20 00
Best bull 1 year old and under 2, H. B. Thomas & Son	15 00
Second best, J. C. Kiser	8 00
Best bull calf, J. C. Kiser	10 00
Second best, H. B. Thomas & Son	5 00
Best cow 3 years old or over, J. C. Kiser	20 60
Second best, H. B. Thomas & Son	12 00
Best heifer 2 years old and under 3, J. C. Kiser	15 00
Second best, J. C. Kiser	10 00
Best heifer one year old and under 2, J. C. Kiser	10 00
Second best, J. C. Kiser	6 00
Best heifer calf, J. C. Kiser	10 00
Second best, J. C. Kiser	5 00

CLASS 16—*Ayrshires.*

Best bull 2 years old and under 3, Chester Hazen	$20 00
Best bull 1 year old and under 2, Chester Hazen	15 00
Best bull calf, Chester Hazen	10 00
Best cow 3 years old and over, Chester Hazen	20 00
Second best, Chester Hazen	12 00
Best heifer 2 years old and under 3, Chester Hazen	15 00
Second best, Chester Hazen	10 00
Best heifer 1 year old and under 2, Chester Hazen	10 00
Best bull calf, Chester Hazen	10 00
Second best, Chester Hazen	5 00

CLASS 17—*Jerseys.*

Best bull, 3 years old or over, Wm. N. McConnell	$20 00
Best bull, 2 years old and under 3, L. H. Champlin	20 00
Best bull, 1 year old and under 2, Percy Gallup	15 00
Second best, M. J. Smith	18 00
Best bull calf, Strang & Wells	10 00
Second best, Wm. N. McConnell	5 00
Best cow, 3 years old and over, Wm. N. McConnell	20 00
Second best, Wm. N. McConnell	12 00
Best heifer 2 years old and under 3, Strang & Wells	15 00
Second best, Wm. N. McConnell	10 00
Best heifer 1 year old and under 2, Wm. N. McConnell	10 00
Second best, Wm. N. McConnell	6 00
Best heifer calf, Wm. N. McConnell	10 00
Second best, Wm. N. McConnell	5 00

CLASS 18—*Herefords.*

Best bull 1 year old and under 2, John Edwards	$15 00
Best bull calf, John Edwards	10 00
Second best, John Edwards	5 00
Best heifer 2 years old and under 3, John Edwards	15 00

CLASS 19.—*Holsteins.*

Best bull 3 years old and over, Davenport Bros	$20 00
Second best, Chester Hazen	12 00
Best bull 2 years old and under 3, Strang & Wells	20 00
Second best, Gillett & Moore	12 00
Best bull 1 year old under and 2, Barber Randall	15 00
Second best, Wattrous & Cate	12 00
Best bull calf, Barber Randall	10 00
Second best, Gillett & Moore	5 00
Best cow 3 years old and over, Gillett & Moore	20 00
Second best, Strang & Wells	12 00
Best heifer 2 years old and under 3, Gillett & Moore	15 00
Second best, Gillett & Moore	10 00
Best heifer 1 year old and under 2, Gillett & Moore	10 00
Second best, T. W. Laramy	6 00
Best heifer calf, T. W. Laramy	10 00
Second best, Strang & Wells	5 00

CLASS 20—*Devons.*

Best bull 3 years old and over, Philo Root	$20 00
Second best, J. W. Morse & Son	12 00
Best bull 1 year old and under 2, E. Humiston estate	15 09
Second best, E. Humiston estate	8 00
Best bull calf, J. W. Morse & Son	10 00
Second best, J. W. Morse & Son	5 00
Best cow 3 years old and over, J. W. Morse & Son	20 00
Second best, E. Humiston estate	12 00
Best heifer 2 years old and under 3, J. W. Morse & Son	15 00
Second best, E. Humiston estate	10 00
Best heifer 1 year old and under 2, J. W. Morse & Son	10 00
Second best, J. W. Morse & Son	6 00
Best heifer calf, J. W. Morse & Son	10 00
Second best, J. W. Morse & Son	5 00

CLASS 21—*Polled Cattle.*

Best bull 2 years old and under 3, E. G. Stone	$20 00
Best bull 1 year old and under 2, E. G. Stone	15 00
Best bull calf, E. G. Stone	10 00
Best cow 3 years and over, E. G. Stone	20 00
Best heifer 2 years and under 3, E. G. Stone	15 00
Best heifer 1 year and under 2, E. G. Stone	10 00
Best heifer calf, E. G. Stone	10 00
Second best, E. G. Stone	5 00

HERD PREMIUMS.

CLASS 22 — *Short Horns.*

Best herd of not less than one bull and four females 2 years old, or over, property of exhibitor, H. B. Thomas & Son	$25 00
Second best, J. C. Kiser	15 00

CLASS 23 — *Ayrshires.*

Best bull and four females, Chester Hazen	$25 00

CLASS 24 — *Jerseys.*

Best bull and four females, Wm. N. McConnell	$25 00

CLASS 26 — *Holstiens*

Best bull and four females, Gillet & Morre	$25 00
Second best, T. W. Laramy	15 00

CLASS 27 — *Devons.*

Best bull and four females, J. W. Morse & Son	$25 00
Second best, J. W. Morse & Son	15 00

CLASS 28 — *Young Herd — Short Horns.*

Best bull and four females, under 2 years, J. C. Kiser	$20 00
Second best, H. B. Thomas & Son	12 00

CLASS 29.— *Young Herd — Polled Cattle.*

Best bull and 4 females, E. G. Stone	$20 00

CLASS 30.— *Young Herd — Ayrshires.*

Best bull and 4 females, Chester Hazen	$20 00

CLASS 31.— *Young Herd—Jerseys.*

Best bull and 4 females, Wm N. McConnell	$20 00
Second best, Wm. N. McConnell	12 00

CLASS 33.— *Young Herd—Holsteins.*

Best bull and 4 females, Barton Randall	$20 00
Second best, T. W. Laramy	12 00

CLASS 34.— *Young Herd.*

Best bull and 4 females, J. W. Morse & Son	$20 00

DIVISION D—SHEEP.

Superintendent—E. R. MARTIN, OMRO.

CLASS 35.— *Registered American Merino Sheep.*

In this class the exhibits and awards were as follows;

U. Wood & Son, of Brandon, exhibited 2 rams 2 years old and over; 2 rams 1 year old and under 2; 3 ram lambs; 3 ewes 1 year old; 3 ewe lambs. Was awarded premiums to the amount of	$30 00
T. F. & C. D. McConnell, of Ripon, exhibited 12 rams 2 years old and over; 4 rams 1 year old and under 2; 9 ram lambs; 6 ewe lambs. And were awarded	30 00
E. G. Putnam, Neosha, exhibited 1 ram 2 years old and over; 5 rams 1 year old and under 2; 3 ram lambs; 6 ewes 2 years old; 6 ewes 1 year old; 3 ewe lambs. And was awarded	30 00
E. G. Stone exhibited 1 ram 1 year old and under 2; 3 ram lambs; 3 ewe lambs and was awarded	18 00

The peculiar manner of making awards in this class was the result of a compromise between the judges and exhibitors, which was satisfactory to all parties concerned.

CLASS 36—*Pure Bred Downs.*

Best ram 2 years old or over, Geo. Daubner	$10 00
Second best, Chas. Hill	6 00
Best ram 1 year old and under 2, D. H. Hillman	8 00
Second best, Chas. Hill	5 00
Best pen 3 ram lambs, Geo. Daubner	8 00
Second best, Chas. Hill	4 00
Best pen 3 ewes, 2 years old, Chas. Hill	10 00
Second best, Geo. Daubner	6 00
Best pen 3 ewes, 1 year old, Geo. Daubner	8 00
Best pen 3 ewe lambs, Chas. Hill	5 00
Second best, Geo. Daubner	3 00

CLASS 37 — *Pure Bred Long-Wool Sheep.*

Best ram 2 years old, George Harding	$10 00
Second best, J. N. Hoaglin	6 00
Best ram, 1 year old and under 2, George Harding	8 00
Second best, George Harding	5 00
Best pen 3 ram lambs, George Harding	8 00
Second best, George Harding	4 00
Best pen 3 ewes, 2 years old, George Harding	10 00
Second best, George Harding	6 00
Best pen 3 ewes, 1 year old, George Harding	8 00
Second best, George Harding	5 00
Best pen 3 ewe lambs, George Harding	5 00
Second best, T. Thomas	3 00

CLASS 39 — *Pure Bred Downs — Sweepstakes.*

Best ram and ten of his get, George Daubner	$20 00
Second best, Charles Hill	10 90

CLASS 40 — *Pure Bred Long-Wool Sheep — Sweepstakes.*

Best ram and ten of his get, George Harding	$20 00
Second best, T. Thomas	10 00

DIVISION E. SWINE AND POULTRY.

Superintendent—W. H. COOK, STOCKBRIDGE.

CLASS 41 — *Swine, Large Breed—Poland China.*

Best boar 2 years old or over, E. I. Austin	$10 00
Second best, James Parks	5 00
Best boar 1 year old and under 2, E. R. Martin	8 00
Second best, Geo. Bower	4 00
Best breeding sow, 2 years or over, E. I. Austin	10 00
Best breeding sow 1 year old and under 2, E. I. Austin	8 00
Best breeding sow with litter of pigs, E. R. Martin	12 00
Second best, John Athearn	6 00
Best boar pig over 6 months and under 1 year, E. I. Austin	6 00
Second best, E. I. Austin	3 00
Best sow pig over 6 months and under 1 year, E. I. Austin	6 00
Second best, E. I. Austin	3 00
Best boar pig under 6 months, E. I. Austin	4 00
Second best, E. I. Austin	2 00
Best sow pig under 6 months, E. I. Austin	4 00
Second best, John Athearn	2 00

CLASS 42 — *Berkshires and other Medium Size Breeds.*

Best boar 2 years old and over, Thos. Davis	$10 00
Best boar 1 year old and under 2, Barber Randall	8 00
Best breeding sow, 2 years and over, J. N. Hoaglin	10 00
Best breeding sow 1 year old and under 2, Barber Randall	8 00
Second best, Thos. Davis	4 00
Best sow pig under 6 months, Thos. Davis	4 00
Second best, Barber Randall	2 00

CLASS 43 — *Small Breeds — Essex, Suffolk and others.*

Best boar 2 years old and over, D. H. Hillman	$10 00
Best breeding sow 2 years old, D. H. Hillman	10 00
Second best, Thomas Davis	5 00
Best breeding sow 1 year and under 2, Thomas Davis	8 00
Second best, D. H. Hillman	4 00
Best boar pig over 6 months, D. H. Hillman	3 00
Best sow pig over 6 months, D. H. Hillman	6 00
Second best, D. H. Hillman	3 00
Best boar pig under 6 months, Thomas Davis	4 00
Second best, D. H. Hillman	2 00
Best sow pig under 6 months, D. H. Hillman	4 00
Second best, D. H. Hillman	2 00

CLASS 44.— *Large Breeds — Chester Whites, Jersey Reds, etc.*

Best boar 2 years old and over, Robert B. Clark & Co	$10 00
Best boar 1 year old and under 2, M. B. Green	8 00
Second best, E. R. Bement	4 00
Best breeding sow 2 years old or over, Robert B. Clark & Co	10 00
Second best, M. B. Green	5 00
Best sow 1 year old and under 2, E. R. Bement	8 00
Second best, Robert B. Clark & Co	4 00
Best breeding sow with pigs, Robert B. Clark & Co	12 00
Second best, E. R. Bement	6 00
Best boar pig over 6 months and under 1 year, Robert B. Clark & Co	6 00
Second best, Robert B. Clark & Co	3 00
Best sow pig over 6 months and under 1 year, M. B. Green	6 00
Second best, M. B. Green	3 00
Best boar pig under 6 months, M. B. Green	4 00
Second best, Robert B. Clark & Co	2 00
Best sow pig under 6 months, Robert B. Clark & Co	4 00
Second best, Robert B. Clark & Co	2 00

CLASS 45 — *Poultry.*

For best collection, Robt. B. Clark & Co	Dip. and $10 00
Second best, Noble Dougherty	5 00

REGULAR PREMIUMS.

CLASS A — *Asiatics.*

Best trio Light Brahma Fowls, Robt. B. Clark & Co	$3 00
Second best, Geo. Harding	1 00
Best trio Dark Brahma fowls, Robt. B. Clark & Co	3 00
Second best	
Best trio White Cochin fowls, Noble Dougherty	3 00
Second best, Noble Dougherty	1 00
Best trio Black Cochin fowls, Robt. B. Clark & Co	3 00
Second best, Noble Dougherty	1 00
Best trio Buff Cochin fowls, Robt. B. Clark & Co	3 00
Second best, Robt. B. Clark & Co	1 00
Best trio Partridge Cochin fowls, R. L. Porter	3 00
Second best, Robt. B. Clark & Co	1 00
Best trio Langshans fowls, R. L. Porter	3 00
Second best, Robt. B. Clark & Co	1 00

CLASS B — *American.*

Best trio Plymouth Rock fowls, Noble Dougherty	$3 00
Second best, Geo. Harding	1 00
Best trio Wyandotte fowls, Noble Dougherty	3 00
Second best, Noble Dougherty	1 00

CLASS C — *Hamburgs.*

Best trio Siver Spangled Hamburgs, Robert B. Clark & Co	$3 00
Best trio Golden Spangled Hamburgs, Robert B. Clark & Co	3 00
Best trio Golden Penciled Hamburgs, Noble Dougherty	3 00
Second best, Noble Dougherty	1 00

CLASS D — *Leghorns.*

Best trio White Leghorn fowls, R. L. Porter	$3 00
Second best, Noble Dougherty,	1 00
Best trio Brown Leghorn fowls, Stephen Needham	3 00
Second best, Robert B Clark & Co	1 00

CLASS E — *French.*

Best trio Houdan fowls, Robert B. Clark & Co	$3 00
Second best, Robert B. Clark & Co	1 00

CLASS F — *Polish.*

Best trio White Crested Black Polish fowls, Noble Dougherty	$3 00
Second best, Joel Johnson	1 00
Best trio Silver Polish fowls, Robert B. Clark & Co	3 00
Best trio Bearded Polish fowls, Noble Dougherty	3 00

CLASS G — *Spanish.*

Best trio Black Spanish White Faced fowls, Robert B. Clark & Co.	$3 00

CLASS H — *Dorkings.*

Best trio White Dorking fowls, Noble Dougherty	$3 00

CLASS I — *Games.*

Best trio Black Breasted Red Game fowls, Robert B. Clark & Co..	$2 00
Best trio Black Breasted Red Game Bantam, Geo. Harding	2 00

CLASS K — *Bantams and others than Game.*

Best trio Golden Sebright fowls, Robert B. Clark & Co	$2 00
Best trio Silver Spangled Sebright fowls, Noble Dougherty.....	2 00
Best trio Silver Duck Wing Bantams, Roble Dougherty	2 00

CLASS L — *Turkeys.*

Best pair Bronze turkeys, Noble Dougherty.....	$3 00
Best pair White turkeys, Noble Dougherty.....	3 00
Second best, Noble Dougherty	1 00
Best pair Black turkeys, Noble Dougherty.....	3 00

CLASS M — *Ducks.*

Best pair Aylsburg ducks, Robt. B. Clark & Co.....	$2 00
Second best, D. H. Hillman.....	1 00
Best pair Rouen ducks, Robt. B. Clark & Co	2 00
Second best, Joel Johnson	1 00
Best pair Pekin ducks, Noble Dougherty	2 00
Second best, Robt. B. Clark.....	1 00

CLASS N — *Geese.*

Best pair White China geese, Noble Dougherty.....	3 00
Second best, Noble Dougherty	1 00
Best pair Tolouse geese, Joel Johnson.....	3 00
Second best, Joel Johnson	1 00

CLASS O — *Pea Fowls.*

Best pair Pearl Pea fowles, Noble Dougherty.....	$2 00
Second best. Noble Dougherty	1 00

DIVISION F — GRAIN AND SEEDS, DAIRY AND POULTRY, APIARY, VEGETABLES AND COOKING.

Superintendent — D. HUNTLEY, APPLETON.

CLASS 46 — *Grain and Seeds.*

Largest and best exhibition of grain and seeds, Noble Dougherty.	$6 00
Second best, O. Angell	4 00
Best bushel red winter wheat, O. Angell	2 00
Best bushel spring wheat, hard, Noble Dougherty	2 00
Second best, J. C. Fisher	1 00
Best bushel spring wheat, medium, Thomas Davis	2 00
Second best, Francis Weyerhorst	1 00
Best bushel spring wheat, soft, Francis Weyerhorst	2 00
Second best, O. Angell	1 00
Best bushel winter rye, R. L. Porter	2 00
Second best, O. Angell	1 00
Best bushel spring rye, J. N. Hoaglin	2 00
Best bushel beans other than navy, O. Angell	2 00
Best bushel white oats, J. C. Fisher	2 00
Second best, O. Angell	1 00
Best bushel yellow oats, Noble Dougherty	2 00
Second best, O. Angell	1 00
Best buckwheat, O. Angell	2 00
Best display yellow dent corn, Robt. B. Clark & Co	2 00
Second best, R. L. Porter	1 00
Best display white oats, R. L. Porter	2 00
Second best, Francis Weyerhorst	1 00
Best display yellow flint corn, Robert B. Clark & Co.	2 00
Second best, R. L. Porter	1 00
Best display white flint corn, A. S. Sanders	2 00
Second best, Mrs. Eliza Washburn	1 00
Best display of Canada sweet corn, J. C. Fisher	2 00
Second best, Noble Dougherty	1 00
Best display sweet corn, Mrs. Eliza Washburn	2 00
Second best, Robert B. Clark	1 00
Best display pop corn, C. Knapp	2 00
Second best, Noble Dougherty	1 00
Best bushel timothy seed, O. Angell	4 00
Second best, I. C. Knapp	2 00
Best bushel clover seed, R. L. Porter	4 00
Best bushel red top seed, O. Angel	2 00
Best bushel flax seed, O. Angel	2 00
Best six samples corn on stalk, Stephen Meidam	1 00
Second best, David Hewitt	50
Best half bushel peas, Noble Dougherty	2 00
Second best, Noble Dougherty	1 00
Best sample amber cane syrup, W. D. Lawrence	2 00
Second best, Thomas Davis	1 00

CLASS 47 — *Dairy and Pantry.*

Best three farm dairy cheese, J. F. Barnett	$5 00
Second best, W. E. Thrall	2 00
Best five pounds print or roll butter, Mrs. R. Bennett	3 00
Second best, Angus & Humphrey	2 00

Pro rata premiums on cheese scaling 42 points, on 50 as perfection.

Angus & Humphrey	$10 00
Chester Hazen	10 00
Chester Hazen	10 00
Louis Perrot	10 00
T. R. Allen	10 00
Cheese sweepstakes, Irving Parrott	10 00
Butter pro rata premiums, H. W. Kellogg	7 14
Butter pro rata premiums, Mrs. E. S. Clapp	7 14
Butter pro rata premiums, Mrs. E. S. Clapp	7 14
Butter pro rata premiums, Mrs. C. Wolcott	7 14
Butter pro rata premiums, Mrs. C. Wolcott	7 14
Butter pro rata premiums, Mrs. C. P. Houghton	7 14
Butter pro rata premiums, J. N. Hoaglin	7 14

SPECIAL PREMIUMS.

Offered by Cornish & Curtis, Fort Atkinson.

Butter sweepstakes, Mrs. R. Bennett ..... Butter worker.
Butter sweepstakes, Mrs. E. S. Clapp ..... Churn.

This enterprising firm is entitled to much credit for the many donations received from them in years past, in the way of special premiums. Their goods are first-class, and the gentlemen who conduct the businees are worthy of a most generous patronage.

CLASS 48.— *The Apiary.*

Largest product of honey from one swarm, Geo. S. Church	$4 00
Largest product of box honey, Geo. S. Church	3 00
Best practical hive for profit, Geo. S. Church	3 00
Best sample box honey, 1 pound, Geo. S. Church	3 00
Second best, W. C. Wolcott	2 00
Best two pounds extract honey, W. C. Wolcott	3 00
Second best, Geo. S. Church	2 00
Best sample beeswax, Geo. S. Church	2 00
Best bee hive, Geo. S. Church	Diploma.

CLASS 49 — *Vegetables.*

Best one-half bushel blood turnip beets, J. C. Knapp	$2 00
Second best, W. E. Thrall	1 00
Best one-half bushel long blood beets, Isaac Miles	2 00
Second best, W. F. Pierce	1 00
Best one-half bushel Mangel-wurtzel Mamoth Red beets, J. N. Hoaglin	2 00
Second best, A. W. Hawley	1 00
Best one-half bushel Mangel-wurtzel, Yellow Ovoid, F. L. Goodwin	2 00
Second best, Noble Dougharty	1 00
Best one-half bushel Laine's Imperial beets, Isaac Miles	2 00
Second best, W. F. Pierce	1 00
Best one-half bushel Yellow Globe beets, J. N. Hoaglin	2 00
Second best, H. Pierce	1 00
Best one-half bushel white sugar beets, J. N. Hoaglin	2 00
Best 3 drumhead cabbage, Noble Dougherty	2 00
Second best, A. M. Brainerd	1 00
Best 3 Winningsteadt cabbage, Noble Dougherty	2 00
Second best, F. L. Goodwin	1 00

Best one-half bushel short-horn carrots, J. N. Hoaglin	$2 00
Second best, J. N. Hoaglin	1 00
Best one-half bushel long orange carrots, James Dougherty	2 00
Second best, Stephen Meidam	1 00
Best one-half bushel half long orange carrots, A. M. Brainard	2 00
Second best, Stephen Meidam	1 00
Best 3 cauliflower, J. P. Roe	2 00
Second best, Stephen Meidam	1 00
Best 3 celery, James Kerwin	2 00
Second best, W. T. Pierce	1 00
Best egg plant, W. T. Pierce	1 00
Second best, John Nelson	50
Best citron melon, J. N. Hoaglin	1 00
Second best, J. N. Hoaglin	50
Best muskmelon, Mrs. J. H. Terrill	1 00
Second best, W. F. Pierce	50
Best watermelon, Mrs. J. H. Terrill	1 00
Second best, W. F. Pierce	50
Best ½ bushel red onions, A. M. Brainerd	2 00
Second best, John Nelson	1 00
Best ½ bushel white onions, Noble Dougherty	2 00
Second best, W. F. Pierce	1 00
Best ½ bushel yellow Danverse onions, Noble Dougherty	2 00
Second best, John Nelson	1 00
Best ½ bushel other variety onions, Stephen Meidam	2 00
Second best, John Nelson	1 00
Best ½ bushel parsnips, James Dougherty	2 00
Second best, Stephen Meidam	1 00
Best show red peppers, J. N. Hoaglin	1 00
Second best, Isaac Miles	50
Best ½ bushel Early Rose potatoes, J. N. Hoaglin	2 00
Second best, Newton Wright	1 00
Best ½ bushel Mammoth Pearl potatoes, Noble Dougherty	2 00
Best ½ bushel Beauty Hebron potatoes, Philo Root	2 00
Second best, Noble Dougherty	1 00
Best ½ bushel Burbanks Seedling potatoes, H. Pierce	2 00
Second best, F. L. Goodwin	1 00
Best ½ bushel Nansemond sweet potatoes, J. N. Hoaglin	2 00
Best ½ bushel any variety sweet potatoes, Stephen Meidam	2 00
Best salsify, J. N. Hoaglin	2 00
Second best, Noble Dougherty	1 00
Best 2 Hubbard squash, W. F. Pirce	2 00
Second best, A. M. Brainerd	1 00
Best 2 Marblehead squash, J. N. Hoaglin	2 00
Second best, Thos. Davis	1 00
Best 2 fall squash, F. L. Goodman	2 00
Second best, A. M. Brainerd	1 00
Largest squash, H. Pierce	2 00
Second largest squash, W. F. Pierce	1 00
Best ½ bushel tomatoes, W. F. Pierce	2 00
Second best, H. Pierce	1 00
Best ½ bushel flat turnips, J. N. Hoaglin	2 00
Best ½ bushel rutabagas, A. W. Hawley	2 00
Second best, Stephen Meidam	1 00
Best show by one exhibitor, J. N. Hoaglin	12 00
Second best, Noble Dougherty	6 00

Special premium by Hiram Sibley & Co.

Best bushel Pride of the North corn, O. Angel ..... Garden drill.

DIVISION G.—FRUIT ANDS FLOWERS.

Superintendent—J. L. FISKE, OMRO.

CLASS 50.—*Apples, Pears, Plums and Grapes.*

Apples—Professional List.

Greatest variety apples, W. A. Springer	$8 00
Second greatest, Geo. P. Peffer	4 00
Third greatest, H. Floyd	2 00
Best 10 varieties adapted to the northwest, W. A. Springer	4 00
Second best, H. Floyd	2 00
Third best, W. Springer	1 00
Best 5 varieties adapted to Northern Wisconsin, W. A. Springer	4 00
Second best, Geo. P. Peffer	2 00
Largest variety winter apples, W. A. Springer	4 00
Second largest, Geo. P. Peffer	2 00
Best 5 varieties winter apples, W. A. Springer	4 00
Second best, J. P. Roe	2 00
Best show 10 varieties without adaption, Geo. P. Peffer	4 00
Second best, W. A. Springer	2 00
Largest variety autumn, W. A. Springer	4 00
Second best, Geo. P. Peffer	2 00
Third best, H. Floyd	1 00
Best 5 varieties autumn, Geo. P. Peffer	4 00
Second best, H. Floyd	2 00

Plates of Apples; Three Varieties—Professional.

Best plate of Red Astrachan	
Second best	50
Best plate Duchess Oldenburg, Wm. A. Springer	1 00
Second best, J. P. Roe	50
Best plate St. Lawrence, W. A. Springer	1 00
Second best, H. Floyd	50
Best plate Fameuse. W. A. Springer	1 00
Second best J. P. Roe	50
Best plate Utters, J. P. Roe	1 00
Second best, W. A. Springer	50
Best plate Plumb Cider. H. Floyd	1 00
Second best, J. P. Roe	50
Best plate Seek-no-Further, W. A. Springer	1 00
Second best, H. Floyd	50
Best plate Willow Twig	
Best plate Ben Davis, W. C. Wolcott	1 00
Second best, E. W. Daniels	50
Best plate Talman Sweet, W. A. Springer	1 00
Second best, J. P. Roe	50
Best plate Golden Russet, J. P. Roe	1 00
Second best, E. W. Daniels	50
Best plate Walbridge, J. P. Roe	1 00
Second best, W. A. Springer	50
Best plate Pewaukee, W. A. Springer	1 00
Second best, E. W. Daniels	50
Best plate Alexander, W. A. Springer	1 00
Second best, E. W. Daniels	50

Best plate Bailey's Sweet, H. Floyd	$1 00
Second best, E. W. Daniels	50
Largest apple, W. A. Springer	1 00
Second largest, George P. Peffer	50
Best plate Grimes' Golden, H. Floyd	1 00
Second best, Geo. P. Peffer	50
Best plate Perry Russet, W. A. Springer	1 00
Second best, J. P. Roe	50
Best plate Tetofski, H. Floyd	1 00
Second best, G. P. Peffer	50
Best plats Wealthy, W. A. Springer	1 00
Second best, Geo. P. Peffer	50

Pears — Professional.

Best six varieties, Geo. P. Peffer	$3 00
Best single variety, Geo. P. Peffer	1 00
Second best, H. Floyd	50
Best five specimens Flemish Beauty, Geo. P. Peffer	1 00
Second best, H. Floyd	50

Plums — Professional.

Best exhibition plums, George P. Peffer	$3 00

Grapes — Professional.

Best show 12 varieties, J. P. Roe	$5 00
Second best, J. N. Hoaglin	3 00
Third best, Geo. P. Peffer	2 00
Best show 6 varieties, Geo. P. Peffer	3 00
Second best, J. P. Roe	2 00
Third best, J. N. Hoaglin	1 00
Best show 5 varieties adapted to northwest, Geo. P. Peffer	3 00
Second best, J. P. Roe	2 00
Third best, J. N. Hoaglin	1 00
Best 3 varieties adapted to Northwest, Geo. P. Peffer	2 00
Second best, J. N. Hoaglin	1 50
Best 2 varieties adapted to Northwest, Geo. P. Peffer	1 00
Second best, J. P. Roe	50
Best single variety, quality to rule, J. P. Roe	2 00
Second best, Geo. P. Peffer	1 00
Best 1 variety adapted to Northwest, Geo. P. Peffer	2 00
Best seedling	
Best 3 clusters on one cane of Concord, J. N. Hoaglin	2 00
Second best, J. P. Roe	1 00
Best 3 clusters on one cane Delaware, Geo. P. Peffer	2 00
Second best, J. P. Roe	1 00
Best 3 clusters on one cane Walter	
Best 3 clusters on one cane Janesville, Geo. P. Peffer	2 00
Second best, J. P. Roe	1 00
Best 3 clusters Isabella, Geo. P. Peffer	2 00
Best 3 clusters one cane 3	
Best 3 clusters one cane 10	
Second best, J. N. Hoaglin	1 00
Best 3 clusters one cane 15, J. N. Noaglin	2 00
Second best, J. P. Roe	1 00
Best 3 clusters on one cane Worden, Geo. P. Peffer	2 00
Second best, E. W. Daniels	1 00
Best 3 clusters Moore's Early, Geo. P. Peffer	2 00
Best 3 clusters Duchess, Geo. P. Peffer	2 00
Best 3 clusters Prentis, Geo. P. Peffer	2 00
Best 3 clusters Brighton, Geo. P. Peffer	2 00
Best 3 clusters Martha, J. P. Roe	2 00

Crab-Apples—Professionals.

Greatest variety crab-apples, Geo. P. Peffer	$2 00
Second best, E. W. Daniels	1 00
Best single variety, Geo. P. Peffer	1 00
Second best, E. W. Daniels	50

Apples, Non-Professional List.

Greatest variety, Nelson Olin	$8 00
Second best, T. Thomas	4 00
Best 10 varieties adapted to Northwest, A. W. Hawley	4 00
Second best, L. Hinman	2 00
Third best, Nelson Olin	1 00
Best 5 varieties adapted to the Northwest, Nelson Olin	4 00
Second best, L. Hinman	2 00
Largest variety winter, Nelson Olin	4 00
Best 5 varieties winter, Nelson Olin	4 00
Second best, A. W. Hawley	2 00
Best show of 10 varieties without regard to adaptation, Nelson Olin	4 00
Second best, T. Thomas	2 00
Largest variety Autum, Nelson Olin	4 00
Second best, T. Thomas	2 00
Best 5 varieties Autum, Nelson Olin	4 00
Second best, T. Thomas	2 00

Plates of Apples of not less than three specimens of each variety. Non-professional.

Plate of Red Astrachan, L. Hinman	$1 00
Plate of Duchess Oldenburg, Nelson Olin	1 00
Plate of St. Lawrence, L. Hinman	1 00
Plate of Fameuse, Mrs. M. J. Smith	1 00
Plate of Utters, Nelson Olin	1 00
Plate of Plumb's Cider	
Plate of Seek-no-Further, L. Hinman	1 00
Plate of Willow Twig, T. Thomas	1 00
Plate of Tallman Sweet, Geo S. Church	1 00
Plate of Wallbridge, Nelson Olin	1 00
Plate of Golden Russet, Mrs. M. J. Smith	1 00
Plate of Pewaukee, Geo. S. Church	1 00
Plate of Alexander, Chester Hazen	1 00
Plate of Bailey's Sweet, T. Thomas	1 00
Plate of largest apple, Newton Wright	1 00
Plate of Sweet Russets, T. Thomas	1 00
Plate of Wealthy, Nelson Olin	1 00
Plate of Tetopski, Fred Fisk	1 00

Plums—Non-professional.

Best exhibition, T. Thomas	$3 00
Best single variety, T. Thomas	1 00

Grapes—Non-Professional.

Best show 12 varieties, James Brainerd	$5 00
Best show 6 varieties, James Brainerd	3 00
Best show 5 varieties, adapted to northwest, James Brainerd	2 00
Best show 3 varieties, adapted to northwest, James Brainerd	2 00
Best show 2 varieties, adapted to northwest, James Brainerd	1 00

Best seedling, Fred Fisk	$2 00
Best single variety, quality to rule, Fred Fisk	2 00
Best 3 clusters one cane Concord, James Brainerd	2 00
Second best, F. Weyerhorst	1 00
Best 3 clusters one cane Delaware, F. Weyerhorst	2 00
Second best, Fred Fisk	1 00
Best 3 clusters one cane Janesville, Newton Wright	2 00
Second best, Fred Fisk	1 00
Best 3 clusters one cane Isabella, Chas. Kohlman	2 00
Second best, James Brainerd	1 00
Best 3 clusters on one cane, 4, James Brainerd	2 00
Best 3 clusters on one cane, 9, Chas. Kohlman	2 00
Best 3 clusters on one cane, 10, James Brainerd	2 00
Best 3 clusters on one cane, 15, James Brainerd	2 00
Second best, Geo. S. Church	1 00
Best 3 clusters on one cane, 19, Geo. S. Church	2 00
Best 3 clusters on one cane, Worden's seedling, Fred Fisk	2 00
Second best, Geo. S. Church	1 00
Best 3 clusters on one cane, Rogers, 28, Geo. S. Church	2 00
Best 3 clusters on one cane, Martha, Geo. S. Church	2 00
Second best, Chas. Kohlman	1 00
Single variety, James Brainerd	2 00

Crab Apples.

Best 5 varieties, T. Thomas	$2 00
Best 1 variety, T. Thomas	1 50
Best winter variety	1 00

CLASS 51 — *Bread and Cakes.*

Best two loaves Graham bread, Miss Susie Rogers	$1 00
Best two loaves white bread, hop yeast, Mrs. E. H. Badger	1 00
Second best, Mrs. C. P. Houghton	50
Best two loaves white bread, milk yeast, Mrs. Eliza Washburn	1 00
Best sponge cake, Miss Susie Rogers	1 00
Second best, Mrs. M. Bower	50
Best pound cake, Mrs. M. Bower	1 00
Best jelly cake, Mrs. M. Bower	1 00
Second best, Mrs. Eliza Washburn	50
Best gold cake, Mrs. Eliza Washburn	1 00
Second best, Mrs. M. Bower	50
Best silver cake, Mrs. M. Bower	1 00
Second best, Miss Susie Rogers	50
Best fruit cake, Miss Susie Rogers	1 00
Second best, Mrs. M. Bower	50
Best Cocoanut cake, Mrs. Eliza Washburn	1 00
Second best, Mrs. M. Bower	50
Best Chocolate cake, Mrs. Eliza Washburn	1 00
Second best, Mrs. M. Bower	50
Best delicate cake, Mrs. M. Bower	1 00
Second best, Miss Susie Rogers	50
Basket fancy cake, Mrs. Eliza Washburn	1 00
Second best, Mrs. M. Bower	50
Best coffee cake, Mrs. M. Bower	1 00
Second best, Mrs. L. C. Booth	50
Best spiced cake, Mrs. M. Bower	1 00
Second best, Marcia Howlett	50

Best marble cake, Mrs. D. C. Booth	$1 00
Second best, Mrs. Thos. Grube	50
Best basket cookies, Marcia Howlett	1 00
Second best, Miss Susie Rogers	50
Best basket doughnuts, Miss Susie Rogers	1 00
Second best	
Best fig cake, Miss Susie Rogers	1 00
Second best, Mrs. M. Bower	50
Best hickory-nut cake, Mrs. M. Bower	1 00
Second best, Miss Susie Rogers	50
Best almond cake, Mrs. M. Bower	1 00
Second best, Miss Susie Rogers	50
Best corn starch cake, Mrs. M. Bower	1 00
Second best, Miss Susie Rogers	50
Best orange cake, Mrs. M. Bower	1 00
Second best, Mrs. Theo. Grube	50
Best cream cake, Mrs. Theo. Grube	1 00
Second best, Mrs. M. Booth	50
Best pork cake, Mrs. L. C. Booth	1 00
Second best, Mrs. M. Bower	50
Best leopard cake, Mrs. M. Bower	1 00
Second best, Mrs. L. C. Booth	50
Best melon cake, Mrs. L. C. Booth	1 00
Best cup cake, Mrs. Theo. Grube	1 00
Second best, Mrs. M. Bower	50
Best layer cake, Mrs. Eliza Washburn	1 00
Second best, Mrs. L. C. Booth	50
Largest exhibition cake, Mrs. M. Bower	2 00
Second largest, Miss Susie Rogers	1 00

CLASS 52 — *Delicacies, Preserves, etc.*

Best collection preserved fruits, Mrs. Eliza Washburn	$3 00
Second best, Mrs. H. M. Quick	2 00
Best sample preserved pears, Mrs. H. M. Quick	1 00
Second best, Mrs. C. H. Root	50
Best sample preserved peaches, Mrs. H. M. Quick	1 00
Second best, Mrs. C. H. Root	50
Best sample preserved plums, Mrs. H. M. Quick	1 00
Second best, Mrs. Eliza Washburn	50
Best sample preserved cherries, Mrs. C. H. Root	1 00
Second best, Mrs. H. M. Quick	50
Best sample preserved strawberries, Mrs. Eliza Washburn	1 00
Second best, Mrs. H. M. Quick	50
Best sample preserved blackberries, Mrs. C. H. Root	1 00
Second best, Mrs. Eliza Washburn	50
Best sample preserved crab apples, Mrs. Eliza Washburn	1 00
Second best, Mrs. H. M. Quick	50
Best sample preserved raspberries, Mrs. H. M. Quick	1 00
Second best, Mrs. Eliza Washburn	50
Best sample preserved currants, Mrs. Eliza Washburn	1 00
Second best, Mrs. Eliza Washburn	50
Best sample preserved gooseberries, Mrs. H. M. Quick	1 00
Second best, Mrs. Eliza Washburn	50
Best sample preserved grapes, Mrs. H. M. Quick	1 00
Second best, Mrs. Eliza Washburn	50
Best sample preserved tomatoes, Mrs. Eliza Washburn	1 00
Second best, Mrs. H. M. Quick	50
Best collection jellies, Cora A. Rummery	1 00
Second best, Mrs. Eliza Washburn	50

Best sample currant jelly, Marcia Howlett	$1 00
Second best, Mrs. C. H. Root	50
Best sample apple jelly, Mrs. C. H. Root	1 00
Second best, Mrs. H. M. Quick	50
Best sample crab apple jelly, Mrs. J. K. Terrill	1 00
Second best, Mrs. H. M. Quick	50
Best sample grape jelly	
Best sample Raspberry jelly, Cora A. Rummery	1 00
Best sample blackberry jelly, Mrs. Eliza Washburn	50
Second best, Mrs. C. H. Root	50
Best sample apple butter, Mrs. Eliza Washburn	1 00
Second best, Mrs. Eliza Washburn	50

Canned Fruits.

Best collection canned fruits, Mrs C. H. Blanchard	3 00
Second best, Mrs. C. H. Root	2 00
Best sample canned huckleberries, Mrs. C. H. Root	1 00
Best sample canned pears, Mrs. C. H. Blanchard	1 00
Second best, Mrs. Eliza Washburn	50
Best sample canned pared peaches, Mrs. C. H. Root	1 00
Second best, Mrs. C. H. Blanchard	50
Best sample canned plums, Mrs. C. H. Root	1 00
Second best, Mrs. C. H. Blanchard	50
Best sample canned cherries, Marcia Howlett	1 00
Second best, Mrs. C. H. Root	50
Best sample canned crab apples, Marcia Howlett	1 00
Second best, Mrs. E. W. Sanders	50
Best sample canned strawberries, Mrs. C. H. Blanchard	1 00
Second best, Mrs. C. H. Root	50
Best sample canned blackberries, Mrs. C. H. Root	1 00
Second best, Mrs. C. H. Blanchard	50
Best sample canned gooseberries, Mrs. C. H. Blanchard	1 00
Second best, Mrs. C. H. Root	50
Best sample canned currants, Mrs C. H. Root	1 00
Second best, Mrs. C. H. Blanchard	50
Best sample canned grapes, Mrs. C. H. Root	1 00
Second best, Mrs. C. H. Blanchard	50
Best sample canned tomatoes, Marcia Howlett	1 00
Second best, Mrs. C. H. Blanchard	50
Best sample canned corn, Mrs. C. H. Root	1 00
Second best, Mrs. C. H. Blanchard	50
Best sample canned peas, Mrs. C. H. Blanchard	1 00
Second best, Mrs. A. F. Smart	50
Greatest variety pickles, Mrs. Eliza Washburn	3 00
Second best, Mrs. C. H. Root	2 00

CLASS 53 — *Professional List — Plants and Cut Flowers, Pot Flowers and Hand Ornaments.*

Best floral ornaments, John Nelson	$3 00
Second best, Isaac Miles	2 00
Best basket or vase of cut flowers, John Nelson	2 00
Second best, Isaac Miles	1 00
Best collection immortelles.	
Best display dahlias, Isaac Miles	1 00
Second best, John Nelson	50
Best display roses, Isaac Miles	1 00
Second best, John Nelson	50

Best display pansies, John Nelson	$1 00
Best display verbenas, Isaac Miles	1 00
Second best, John Nelson	50
Best display asters, John Nelson	1 00
Second best, Isaac Miles	50
Best display balsams, Isaac Miles	1 00
Best display gladiolas, John Nelson	1 00
Greatest variety cut flowers, Isaac Miles	2 00
Second best, John Nelson	1 00
Best bouquet round, Isaac Miles	1 00
Second best, John Nelson	50
Best bouquet flat, Isaac Miles	1 00
Second best, John Nelson	50
Best bouquet wild flowers, John Nelson	1 00
Second best, Isaac Miles	50

CLASS 54 — *Amateur List.*

Best floral ornament, Mrs. C. H. Root	$3 00
Second best, Marcia Howlett	2 00
Best basket cut flowers, Mrs. G. W. Washburn	3 00
Second best, Mrs. C. H. Root	2 00
Best collection immortelles, Marcia Howlett	1 00
Second best, C. Derber	50
Best collection dahlias, C. Derber	1 00
Second best, Mrs. C. H. Root	50
Best collection roses, Mrs. G. R. Lampand	1 00
Second best, Mrs. E. W. Sanders	50
Best collection pansies, Mrs. C. H. Root	1 00
Second best, Marcia Howlett	50
Best collection verbenas, J. P. Roe	1 00
Second best, Mrs. C. H. Root	50
Best collection asters, Mrs. C. H. Root	1 00
Second best, J. P. Roe	50
Best collection balsams, Marcia Howlett	1 00
Second best, Mrs. B. Philipson	50
Best collection gladiolas, Mrs. C. H. Root	1 00
Second best, J. P. Roe	50
Best collection coxcombs, C. Derber	1 00
Second best, Mrs. G. R. Lampard	50
Greatest variety of cut flowers, J. P. Roe	2 00
Second best, Mrs. C. H. Root	1 00
Best bouquet, round, Mrs. E. W. Sanders	1 00
Second best, C. Derber	50
Best bouquet, flat, Mrs. C. H. Root	1 00
Second best, Mrs. C. H. Blanchard	50
Best bouquet wild flowers, Marcia Howlett	1 00
Second best, C. Derber	50
Best minature landscape, Marcia Howlett	2 00
Second best, Mrs. David Howlett	1 00

CLASS 55 — *Plants in Pots and Urns—Professional.*

Best collection of green house plants, Isaac Miles	$5 00
Second best, John Nelson	3 00
Best collection foliage plants, Isaac Miles	3 00
Second best, John Nelson	2 00
Best collections geraniums, John Nelson	2 00
Second best, Isaac Miles	1 00

Best collection geraniums, Zonale variety, John Nelson	$2 00
Second best, Isaac Miles	1 00
Best collection double geraniums, Isaac Miles	2 00
Second best, John Nelson	1 00
Best collection single geraniums, John Nelson	1 00
Second best, Isaac Miles	50
Best oleander in bloom. Mrs. M. Cartwright	1 00
Second best, John Nelson	50
Best display euonymus, John Nelson	1 00
Second best, Mrs M. Cartwright	50
Best display fragrant geraniums, John Nelson	1 00
Second best, Mrs. M. Cartwright	50
Best single spec. geraniums, John Nelson	1 00
Second best, Isaac Miles	50
Greatest variety fuchias in bloom, Isaac Miles	2 00
Second best, John Nelson	1 00
Single spec. fuchias. John Nelson	1 00
Best display roses. Isaac Miles	2 00
Second best, John Nelson	50
Best single spec. roses, John Nelson	1 00
Second best, Isaac Miles	50
Best display abutilon, John Nelson	1 00
Second best, Isaac Miles	50
Best display maranta, Isaac Miles	1 00
Best display bouvarda, John Nelson	1 00
Second best, Isaac Miles	50
Best display lantanas, Isaac Miles	1 00
Second best, John Nelson	50
Best display ferns, Isaac Miles	1 00
Second best, John Nelson	50
Best variety carnations, John Nelson	1 00
Second best, Isaac Miles	50
Best double petunias, Isaac Miles	1 00
Best single petunias, Isaac Miles	75
Best hanging basket with growing plants, John Nelson	1 00
Best display cactus in variety, Isaac Miles	2 00
Second best, John Nelson	1 00

CLASS 56 — *Amateur List.*

Best collection green house plants, Mrs. P. Sawyer	$3 00
Second best, Mrs. E. W. Sanders	2 00
Best collection foliage plants, Mrs. P. Sawyer	2 00
Second best, Mrs. T. Badger	1 00
Best oleander in bloom, J. P. Roe	1 00
Second best, Mrs. E. W. Sanders	50
Best display zonale geranium, Mrs. C. W. Harrington	1 00
Second best, Mrs. L. Badger	50
Best display fragrant geraniums, Mrs. E. W. Sanders	1 00
Second best, Miss Jennie Green	50
Best display double geraniums, Mrs. C. W. Harrington	1 00
Second best, Miss Jennie Green	50
Best display single specimen geranium, Mrs. E. W. Sanders	1 00
Second best, Mrs. L. Badger	50
Best variety fuchias in bloom, Mrs. E. W. Sanders	2 00
Best single specimen fuchias in bloom, Mrs. E. W. Sanders	1 00
Second best, Miss Jennie Green	50
Best display roses, Mrs. David Howlett	2 00
Best single specimen roses, Mrs. C. M. Moody	1 00
Second best, J. P. Roe	50

Best display double petunias, Mrs. C. W. Harrington	$1 00
Best display single petunias, Mrs. C. H. Blanchard	1 00
Second best, Marcia Howlett	1 00
Best hanging baskets with growing plants, Mrs. P. Sawyer	1 00
Second best, Mrs. E. N. Hoaglin	50
Best display cacti in variety, Mrs. P. Sawyer	2 00
Second best, Mrs. L. Badger	1 00
Best single specimen cacti, Isaac Miles	75
Second best, John Nelson	50
Best display begonias, John Nelson	2 00
Second best, Isaac Miles	1 00
Best single specimen begonias, Isaac Miles	50
Second best, John Nelson	25
Best display stocks in bloom, John Nelson	50
Second best, Isaac Miles	25
Best display English ivy on trellis, Isaac Miles	1 00
Second best, John Nelson	50
Best display tube roses, John Nelson	2 00
Second best, Isaac Miles	1 00
Best poincetta, Isaac Miles	1 00
Second best, John Nelson	50
Best calla lily in bloom, John Nelson	1 00
Second best, Isaac Miles	50
Best display caladiums, John Nelson	2 00
Second best, Isaac Miles	1 00
Best display Smilax on trellis, Isaac Miles	1 00
Second best, John Nelson	50
Best fernery, John Nelson	2 00
Second best, Isaac Miles	1 00
Best single specimen house plants, Isaac Miles	2 00
Second best, John Nelson	1 00
Best floral design, Isaac Miles	1 50
Second best, John Nelson	1 00
Best single specimen cactus, Mrs. L. Badger	75
Second best, Mrs. P. Sawyer	50
Best single specimen ornamental foliage, Mrs. P. Sawyer	1 00
Second best, Mrs. E. W. Sanders	50
Best display begonias, Mrs. P. Sawyer	2 00
Second best, Mrs. G. R. Lampard	1 00
Third best, Mrs. E. W. Sanders	50
Best single specimen begonia, Mrs. P. Sawyer	50
Second best, Mrs. A. Lewis	25
Best display lantamy, Mrs. P. Sawyer	1 00
Second best, Mrs. E.W. Sanders	50
Best specimen English ivy on trellis, Mrs. P. Sawyer	1 00
Best display tuberoses	
Best poinsetta, Mrs. P. Sawyer	1 00
Best calla lily in bloom, Mrs. E. W. Sanders	1 00
Second best, Mrs. P. Sawyer	50
Best display caladimus. Mrs. P. Sawyer	2 00
Best smilax on trellis, Mrs. J. F. W. Becker	1 00
Second best, Mrs. P. Sawyer	50
Best fernery, Mrs. P. Sawyer	1 00
Second best, Mrs. L. Badger	50
Best single specimen house plant, Mrs. L. Badger	2 00
Second best, Mrs. F. Thrall	1 00
Best display eronymus, Mrs. E. W. Sanders	1 00

DIVISION H — DOMESTIC MANUFACTURES, FINE ARTS, NATURAL HISTORY, ETC.

Superintendent — K. M. HUTCHINSON.

CLASS 57 — *Cabinet Work and Upholstery.*

Best bedstead, B. H. Soper	$1 00
Best sofa, B. H. Soper	1 00
Best dressing bureau, B. H. Soper	1 00
Best writing desk, Joseph Stringham	1 00
Best spring bed, B. H. Soper	1 00
Best school desk and seat, B. H. Soper	1 00
Best hat rack, B. H. Soper	1 00
Best set cane seat chairs, Joseph Stringham	1 00
Best set chamber furniture, B. H. Soper	5 00
Best set parlor furniture, B. H. Soper	5 00
Second best, B. H. Soper	2 00
Best center table, B. H. Soper	1 00
Best easy chair, Joseph Stringham	1 00
Best mirror, Joseph Stringham	2 00
Best display China, glass and crockery, J. T. W. Decker	12 00
Best display silver or plated ware, Oshkosh Plating Co	12 00

CLASS 58 — *Bookbinders', Paper Makers' and Printers' Work.*

Best ledger, John Hicks	$1 00
Best record book, John Hicks	1 00
Best specimen fancy binding, John Hicks	1 00
Best set books for farm accounts, John Hicks	1 00
Best book printing, John Hicks	1 00
Best card printing, John Hicks	1 00
Best ornamental printing, John Hicks	1 00
Best poster printing, John Hicks	1 00
Greatest variety printing, John Hicks	3 00
Best set general account books, John Hicks	2 00

CLASS 59 — *Staple Goods, Household Manufacture.*

Best rag carpet, John Neiss	$1 00
Second best, Mrs. C. A. Pride	1 00
Best rag rug, Mrs. S. Leighton	1 00
Second best, Mrs. Theo. Grube	50
Best yarn rug, Miss Eliza Stone	1 00
Second best, Mrs. C. A. Pride	50
Best plain cotton knitting, Mrs. Lucy Spoor	1 00
Second best, Mrs. Lucy Spoor	50
Best woolen knitting	
Best fancy knitting, Mrs. S. E. Searl	1 00
Second best, Mrs. C. M. Damuth	50
Best door mat, Miss Eliza Stone	1 00
Second best, Mrs. Carrie Willmarth	50
Best woolen yarn, Mrs. W. E. Thrall	1 00
Best woolen mittens, Mrs. Lucy Spoor	1 00
Second best, Mrs. Lucy Spoor	50
Best woolen socks, men's, Mrs. Lucy Spoor	1 00
Second best, Mrs. C. M. Damuth	50
Best woolen stockings, women's, Mrs. Lucy Spoor	1 00
Second best, Mrs. Esther Ward	50

CLASS 60 — *Quilts.*

Best silk crazy quilts, Mary G. Washburn	$1 00
Second best Mrs. E. B. Hoaglin	50
Best silk quilt, Mrs. Thos. Wicks	1 00
Second best, Caroline Christanson	50
Best log-cabin quilts, Mrs. Theo. Grube	1 00
Second best, Mrs. C. M. Moody	50
Best worsted patchwork quilt, Mrs. L. M. Tryton	1 00
Best cotton patchwork quilt, Carrie H. Swasey	1 00
Second best, Mrs. S. H. Leland	50
Best quilt made by lady over 50 years of age, Mrs. L. M. Tryton.	1 00
Second best, Mrs. Emily Oliver	50
Best knit cotton spread made by lady over 50 years of age, Mrs. Alvina Darrow	1 00
Best silk crazy sofa cushion, Mary G. Washburn	1 00
Second best, Mrs. E. B. Hoaglin	50
Best darned web bed spread, Alice Washburn	1 00
Second best, Mrs. M. Bronson	50
Best darned web pillow sham, Miss Josiphene Jones	1 00
Second best, Mrs. C. A. Pride	50

CLASS 61 — *Embroidery.*

Best silk embroidered child's skirt, Miss Ida Gung	$1 00
Second best, Mrs. Chas. Oellerich	50
Best silk embroidered blanket, Mrs. T. H. Bubb	1 00
Second best, Miss Ida Gunz	50
Best embroidered lambrequin, Mary G. Washburn	1 00
Second best, Elnora Weyerhurst	50
Best specimen raised worsted embroidery, Miss Ida Gunz	2 00
Second best, Miss Eliza Stone	1 00
Best work on worsted canvas	
Second best, Miss Mary Harper	50
Best chenille embroidered lambrequin, A. A. Baldwin	1 00
Best specimen chenille, Miss Nellie Wright	2 00
Second best, Jessie McMillan	1 00
Best worsted and silk embroidered sofa pillow, Mrs. C. B. Crehor	1 00
Second best, Miss Ida Gunz	50
Best worsted and silk embroidered lambrequin	
Second best, Mrs. Geo. Nash	50
Best slipper case, Mrs. R. F. Kellogg	1 00
Best Arosene Kensington table scarf, Mrs. J. F. Morse	1 00
Second best, Mrs. J. F. Morse	50
Best Kensington embroidered banner, Miss Mary Harper	1 00
Second best Mrs. R. F. Kellogg	50
Best crazy silk and Arosena sofa pillow, Mrs. W. F. Stillman	1 00
Second best, Mrs. G. H. Gile	50
Best embroidered lambrequin curtins, A. A. Baldwin	1 00
Best silk chenille embroidered foot stool, Mrs. Ed. Kent	1 00
Best Applique work in felt, A. A. Baldwin	1 00
Best Applique work in plush, Mrs. Dr. C. D. Smith	1 00
Second best, Mrs. Dr. C. D. Smith	50
Best applique work cretonne, Miss Eliza Stone	1 00
Second best, Mrs. Carrie Willmarth	50
Best arrosena banner, Miss Annie M. Paige	1 00
Best arrosena embroidered foot stool, Mrs. Dr. C. D. Smith	1 00
Best plush velvet sofa pillow, Mrs. Chas. Oellerich	1 00
Second best arrosena embroidered pillow, Miss Tony Eckstein.	50

CLASS 62 — *Embroidery, etc.*

Best cotton embroidered pillow sham	
Second best, Mrs. Theo. Grube	50
Best braided pillow and sheet shams, Mrs. E. B. Hoaglin	1 00
Best braided underwear, Mrs. C. M. Damuth	1 00
Best Java canvass tidy, Miss Etta Ransom	1 00
Second best, Minnie Martin	50
Best specimen print guipure, Mrs. Chas. Oellerich	1 00
Second best, Miss Tony Eckstein	1 00
Best specimen print Honiton, Miss Tony Eckstein	2 00
Best Kensington embroidered in crewals, Mrs. Geo. Nash	1 00
Best Kensington embroidered in floss, Mrs. Dr. C. D. Smith	1 00
Second best, Mrs. Dr. C. D. Smith	50
Best outline work, Mrs. Dr. C. D. Smith	1 00
Second best, Mrs. L. M. Tryton	50
Best card album, Mrs. A. M. Bryant	1 00
Second best, Mrs. T. H. Bubb	50

CLASS 63 — *Crochet, Tatting, etc.*

Best carriage afghan, Mrs. C. B. Crehor	$1 00
Second best, Miss Etta Ransom	50
Best crochet shawl, Mrs. C. M. Damuth	1 00

CLASS 64 — *Fancy and Ornamental Goods.*

Best ornamental and hair work, Mrs. Albert Krugs	$1 00
Second best, Miss Jennie Green	50
Best wax flowers, Mrs. J. F. Morse	50
Greatest variety macrama work, Mrs. C. M. Damuth	2 00

CLASS 65 — *Misses Department.*

Best hemmed handkerchief, C. Derber	$1 00
Best specimen patch-work, Mabel Loper	1 00
Second best, Mabel Loper	50

CLASS 66 — *Boys Department.*

Best specimen fret work, W. H. Burtis	$3 00
Best specimen wood carving, W. H. Burtis	1 00
Best specimen animal drawing, Frank Harding	1 00

CLASS 67 — *Natural History.*

Ornithology, Mrs. T. H. Bubb	$4 00
Best collection conchology, Mrs. T. H. Bubb	2 00

CLASS 68— *Works of Art.*

Best printing on velvet, Mrs. Ed. Kent	$1 00
Second best, Mrs. E. B. Hoaglin	50
Best printing on silk or satin, Mrs. Ed. Kent	1 00
Second best, Mrs. Ed. Kent	50
Best printing on China.	
Best display on wood or ivory, Mary Osthaus	1 00
Second best, Mrs. Ed. Kent	50
Best exhibition sun pictures, Cook Ely	3 00
Best specimen business penmanship, Fred D. Cross	2 00
Best specimen off-hand flourishing, Fred D. Cross	1 00
Best collection monotype paintings, Mary Osthaus	3 00
Second best, Fred Osthaus	2 00

Oil Paintings.

Best and largest collection, Edmund Osthaus	$10 00
Second best, Mary Osthaus	5 00
Best Wisconsin landscape, Edmund Osthaus, diploma and	3 00
Second best, Edmund Osthaus	2 00
Best landscape original design, Edmund Osthaus	3 00
Second best, Edmund Osthaus	2 00
Best copied landscape, R. L. Porter	3 00
Second best, R. D. Lloyd	2 00
Best portrait, Edmund Osthaus	2 00
Second best, Edmund Osthaus	1 00
Best animal picture, Edmund Osthaus	2 00
Second best, Edmund Osthaus	1 00
Best fruit picture, Mary Osthaus	2 00
Second best, Mary Osthaus	1 00
Best painting on shell, Mrs. S. P. Farnsworth	1 00
Second best, Mrs. I. H. Tonas	50
Best painting on panel, Will Knapp	1 00
Best painting on plaque, Mary Osthaus	2 00
Second best, Hattie V. Stilson	1 00
Best flower painting, Mary Osthaus	2 00
Second best, Mary Osthaus	1 00

Water Color Painting.

Largest and best collection, Mary Osthaus	$3 00
Best portrait without solar aid, Edmund Osthaus	3 00
Second best, Cook Ely	2 00
Best flower painting, Mary Osthaus	2 00
Best India ink portrait, life-size, F. L. Smith	3 00
Second best, F. L. Smith	2 00
Best painting on silk, Mary Osthaus	2 00
Second best, Mrs. Ed. Kent	1 00

Crayon Work.

Largest collection, Edmund Osthaus	$5.00
Best portrait, life-size, Edmund Osthaus	3 00
Second best Cook Ely	2 00
Best animal picture, F. L. Smith	2 00

Pencil Drawings.

Largest and best collection, Edmund Osthaus 3 00
Best dog in landscape, Edmund Osthaus 1 00

CLASS 69—*Textile Fabrics.*

Best display ladies' clothing, Mrs. C. D. McConnell....$2.00 and Diploma
Best display machine knit goods, Ripon Knitting Works 2.00 and Diploma

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DIVISION I—MANUFACTURES.

Superintendent—R. N. ROBERTS.

CLASS 70—*Manufactures from Iron, Stone, etc.*

Best galvanized iron fence, A. T. Sanders..... $2 00
Best set road horse shoes, W. F. Wyman..... 2 00
Best set trotting horse shoes, W. R. Pryne..... 2 00
Second best, W. F. Wyman..... 1 00
Best set draft horse shoes, W. R. Pryne..... 2 00
Best parlor stove, H. L. Bedient..... 2 00
Second best, H. L. Bedient..... 1 00
Best case plated horse shoes, W. R. Pryne..... Diploma
Display shafting, Novelty Manf. Co ..... Diploma
Display pulleys, Novelty Manf. Co..... Diploma
Display gas fixtures, C. L. Rundle..... Diploma
Display plumbing goods, C. L. Rundle ..... Diploma
Best office stove, H. Krippana..... 2 00
Best cook stove with furniture, Finney & Dugan..... 2 00
Best furnace, Finney & Dugan..... 2 00
Best exhibition pumps, W. Clough & Co..... Diploma
Best exhibition improved locks, Novelty Lock Co..... Diploma

CLASS 71—*Leather and Leather Manufactures.*

Best traveling trunk, G. C. Griffith..... $2 00
Best Gents' satchel, Schmit Bros..... 1 00
Best Ladies' satchel, G. C. Griffith 1 00
Best display satchels, G. C. Griffith ..... Diploma
Best display leather belting, S. M. Hay & Bros ..... Diploma
Best double carriage harness, Berkauser & Bros .....Diploma and $2 00
Best single buggy harness, Berkhauser & Bros .....Diploma and 2 00
Best farm wagon harness, double, Berkhauser & Bros..... 2 00
Best farm wagon harness, single, Barkhausen & Brown 2 00
Best cart harness, Barkhausen & Brown 2 00
Best gents' riding saddle, Barkhausen & Brown 1 00
Best Ladies' riding saddle, Barkhausen & Brown..... 1 00
Best horse collar, Barkhausen & Brown..... 1 00
Best harness, Barkhausen & Brown 1 00
Best fancy blanket, Barkhausen & Brown..... 1 00

CLASS 72 — *Wagons and Carriages.*

Best two seat top family carriage, Jas. L. Clark	$5 00
Second best, Thos. Neville	3 00
Best single seat phaeton, Oshkosh Carriage Co	4 00
Second best, Jas. L. Clark	2 00
Best single top buggy and spring, Thos. Neville	4 00
Second best, Oshkosh Carriage Co	2 00
Best single top buggy, side bar, Thompson & Wilson	4 00
Second best, Oshkosh Carriage Co	2 00
Best single open buggy, Oshkosh Carriage Co	2 00
Second best, Thompson & Wilson	1 00
Best speeding buggy, Thos. Neville	2 00
Second best, Oshkosh Carriage Co	1 00
Best combination spring wagon, Thompson & Wilson	5 00
Second best, Oshkosh Carriage Co	3 00
Best business spring wagon, Jas. L. Clark	3 00
Second best, Thompson & Wilson	1 00
Best two seat cutter, Thos. Neville	4 00
Second best, Thos. Neville	2 00
Best single cutter, wood, Thos. Neville	2 00
Best single cutter, S. M. Hay	3 00
Second best, Thos. Neville	1 00
Best lumber wagon, Gabe Streich	2 00
Second best, Gabe Streich	1 00
Logging sled, Gillingham & Son	2 00
Second best, Richard Hackett	1 00
Best pair bobs, B. F. & H. L. Sweet	2 00
Second best, B. F. & H. L. Sweet	1 00
Best display carriages, Oshkosh Carriage Works	5 00
Second best, J. L. Clark	3 00

CLASS 73 — *Carpenter and Cooper's Work.*

Best plain panel door, J. P. Gould	$2 00
Second best, J. P. Gould	1 00
Best ornamental panel door, J. P. Gould	3 00
Second best, Thos. Driver & Son	2 00
Best window sash, one dozen, J. P. Gould	2 00
Second best, J. P. Gould	1 00
Best window blinds, one dozen, J. P. Gould	2 00
Second best, J. P. Gould	1 00

CLASS 74 — *Bells, Stoves, Copper and Tinware.*

Best coal stove, E. D. Monroe	$2 00
Best cooking range, Webb & Brooks	3 00
Best assortment tinware, Webb & Brooks	1 00
Best assortment copperware, Webb & Brooks	1 00

CLASS 75 — *Household Goods.*

Best clothes dryer, C. M. Conlee	$1 00
Best churn, Noble & Buorke	1 00
Best washing machine, J. B. Roberts	1 00
Best ironing board, J. B. Roberts	1 00

DIVISION J — MACHINERY.

Superintendent, GEO. F. STROUD.

CLASS 76 — *Miscellaneous.*

Best collection woods, Fred. E. Morehouse $7 00

Machinery.

Straw stacker..... Reeves & Co., Columbus. Ind.
Ramson mower.....Ramson Manf. Co., Honelsville, N. Y.
Ramson reaper.....Ramson Manf. Co., Honelsville, N. Y.
Farm Gate..... ...E. G. M. L. Co., Downer's Grove, Ill.
Patent farm gate hinge..... .F. J. Mayer, Oshkosh, Wis.
Harvester and twine binder .....Plano Manf. Co., Plano, Ill.
Mower .....Plano Manf. Co., Plano, Ill.
Binder..... Walter A. Wood, Chicago.
Reaper..... Walter A. Wood, Chicago.
Mower..... ..... Walter A. Wood, Chicago.
Mower.....Fuller & Johnson, Madison, Wis.
Patent animal catcher.....Warren Allen, Oshkosh, Wis.
Patent farm gate .....J. E. Mayo.
Light binder..... Wardner, Bushnell & Co., Chicago.
Two sulky plows .....T. A. Colman, Oshkosh, Wis.

ODDS AND ENDS.

Goods entered under the above heading, were not classified in the premium list, but the following entries were considered by the judges as meritorious, and worthy of premiums:

Creamer.....H. W. Kellogg.
Collection of dental work.....Dr. Wm. Decker.
Fine specimens of gold and rubber plates.....Dr. Wm. Decker.
Delaware Co. Creamer .....E. G. Fuller.
Sad Iron self heater..... ... ...H. S. Pease.
Arnold Automatic Steam Corker .....James Northmond.
Fruit and Vegetable Knife.....F. Soggs.
Sickle Grinder..... J. J. Wood.
Star Broom Rack .....Holmes & Davis.
Broom Holder .....Holmes & Davis.
Specimen Bottler .... Miss Lizzie Greenwald.
Exhibition sewing machines.....Singer Manfacturing Co.
Extension ladder.....E. H. Davis & Co.
Packing boxes.....E. H. Davis & Co.
Collection carpets.....Wm. Spikes.
Pillow sham holder.....W. E. Dewey.
Display dental goods ..... C. E. Edwards.
Pianos, organs, etc.....S. N. Bridge & Son.
School and hall furniture .....Wisconsin Educational Bureau.
Exhibition wall paper.....F. B. Claggett.
Exhibition spices, extracts, etc.....W. Dichmann.
Exhibition pianos and organs..... ..G. R. Lampard.
Exhibition dental instruments..... Wm. Decker.
Exhibition organs..... .....F. Willie.

Mower	T. A. Coleman, Oshkosh.
Two Deering harvesters	M. M. Anderson, Eldorado.
One Deering reaper	M. M. Anderson, Eldorado.
One Deering mower	M. M. Anderson, Eldorado.
Two trucks	M. M. Anderson, Eldorado.
Tiger mower	J. W. Stoddard & Co., Dayton, Ohio.
Tiger hay rake	J. W. Stoddard & Co., Dayton, Ohio.
Hollingworth hay rake	J. W. Stoddard & Co., Dayton, Ohio.
Stoddard Pulverizer	J. W. Stoddard & Co., Dayton, Ohio.
Feed cutter	James Little & Son, Neenah.
Feed mills	James Little & Son, Neenah.
Horse power	James Little & Son, Neenah.
Jack	James Little & Son, Neenah.
Light mower	Warder, Bushnell & Co., Chicago, Ill.
Seeder, iron box, reversible tooth	Wheel and Seeder Co., Fond du Lac.
Six hoe cultivator	Wheel and Seeder Co., Fond du Lac.
Two horse Yankee rake	Wheel and Seeder Co., Fond du Lac.
One horse Yankee rake	Wheel and Seeder Co., Fond du Lac.
Springfield hay feeder	Wheel and Seeder Co., Fond du Lac.
Harrow	Wheel and Seeder Co., Fond du Lac.
Grapnel fork	Wheel and Seeder Co., Fond du Lac.
Hay carrier	Wheel and Seeder Co., Fond du Lac.
Hay pulleys	Wheel and Seeder Co., Fond du Lac.
Reaper	E. H. Gage, Milwaukee.
Mower	E. H. Gage, Milwaukee.
Reaper	D. M. Osborn, Chicago, Ill.
Binder	D. M. Osborn, Chicago, Ill.
Mower	D. M. Osborn, Chicago, Ill.
Mower	D. M. Osborn, Chicago, Ill.
Cultivator, six shovel	Fremont Cultivator Co., Ohio.
Four hay forks	Eagle Fork Co., Appleton.
Two hay carriers	Eagle Fork Co., Appleton.
Adjusting grap nel	Eagle Fork Co., Appleton.
Hitching posts	Eagle Fork Co., Appleton.
Turf stubble plows	Waupun Norwegian Plow Co.
Timothy breaker	Waupun Norwegian Plow Co.
Stubble plow	Waupun Norwegian Plow Co.
Hay cutter	C. G. Luse, Oshkosh.
Sulky rakes	C. G. Luse, Oshkosh.
Pierce mower	C. G. Luse, Oshkosh.
Sulky plows	C. G. Luse, Oshkosh.
Hand plows	C. G. Luse, Oshkosh.
Roger reaper	C. G. Luse, Oshkosh.
Badger Seeder	Appleton Manufacturing Co., Appleton.
Hay carrier	Appleton Manufacturing Co., Appleton.
Hay fork	Appleton Manufacturing Co., Appleton.
Gate roll	Appleton Manufacturing Co., Appleton.
Cast iron horse heads	Appleton Manufacturing Co., Appleton.
Esterly Twine Binder	Geo. Esterly & Son, Whitewater.
Tiger Seeder	S. Rowell Sons & Co., Beaver Dam.
Spring Teeth seeder	D. C. & H. C. Reed & Co., Kalamazoo, Mich.
Sulky harrow	D. C. & H. C. Reed & Co., Kalamazoo, Mich.
Spring Teeth harrow	D. C. & H. C. Reed & Co., Kalamazoo, Mich.
Wood and iron pump	Frank Packard.
Wind mill	O. A. Packard.
Bonanza Sulky cultivator	Fuller & Johnson, Madison.
Shovel cultivator	Fuller & Johnson, Madison.
Fine Tooth cultivator	Fuller & Johnson, Madison.
Double shovel cultivator	Fuller & Johnson, Madison.
Bonanza planter	Fuller & Johnson, Madison.
Bonanza sulky rake	Fuller & Johnson, Madison.
Sweepstake sulky rake	Fuller & Johnson, Madison.
Bonanza Harrow	Fuller & Johnson, Madison.

Wara Harrow ..... Fuller & Johnson, Madison.
Mower ..... Fuller & Johnson, Madison.
Plows ..... Fuller & Johnson, Madison.
Hollingworth rake ..... John Dodd, Dayton, Ohio.
Taylor rake ..... John Dodd, Dayton, Ohio.
Elwood self-dump rake ..... John Dodd, Dayton, Ohio.
Farmer's friend rake ..... John Dodd, Dayton, Ohio.
Corn planter ..... John Dodd, Dayton, Ohio.
Feed mill and power ..... John Dodd, Dayton, Ohio.
Broadcast seeder and cultivator ..... Van Brunt, Davis & Co., Horicon.
Riding cultivator ..... Van Brunt, Davis & Co., Horicon.

TREASURER'S REPORT.

TREASURER E. W. VIALL'S REPORT FOR 1884.

RECEIPTS.

Cash balance from 1883	$596 82
State appropriation	1,000 00
Received from Secretary	1,420 00
Received from Superintendent of grounds	1,079 00
Smail Bros., refunded	10 00
Gate receipts	6,083 35
	$10,189 87

DISBURSEMENTS.

Total amount of orders drawn	$10,139 60
Balance on hand	$50 27

1885.

Speed Horses — C. D. McCONNELL, *Superintendent.*
A. L. OSBORN, *Clerk.*

Green Stallion Race — *Gold Medal*, $50; *Cash*, $30; *Cash*, $20.

ENTRIES.

	Position.
Barber Randall, Hustisford, enters ch. s., Badger Boy	Drawn.
P. Delaney, Wausau, enters b. s., Von Avuim, Jr	2, 2, 2.
H. B. Thomas, Berlin, enters b. s., Harry Mills	Drawn.
P. H. Davis, Milwaukee, enters br. s., Bay View Boy	1, 1, 1.
Chas. Edgell, Appleton, enters b. s., John Powens	5 dis.
A. Sanford, Oshkosh, enters b. s., Chismore	4, 3, 4.
J. C. Wetherby, Mauston, enters b. s., Bismark, Jr	3, 4, 3.

Time — 2:47¼, 2:48, 2:50½.
Timers — C. O. Josslyn and A. L. Osborn.
Judges — David Johnson, George Turner and E. P. Finch.

2:30 CLASS — *Trotting Race. Purse*, $200; *first*, $100; *second*, $50; *third*, $30; *fourth*, $20.

ENTRIES.

	Position.
John Paige, Oshkosh, enters b. m., Dove Eye	1, 1, 1.
S. M. Stevenson, Menomonie, Mich., enters, ch. m., Nina S.	2, 2, 2.
C. Crowley, Ishpeming, Mich., enters, b. m., Bay Nellie	3, 3, 3.

Time — 2:36¼, 2:37, 2:31⅛.
Timers — C. O. Josslyn and A. L. Osborn.
Judges — David Johnson, E. P. Finch and George Turner.

3:00 CLASS — *Trotting Race. Purse*, $200; 1*st*, $100; 2*d*, $50; 3*d*, $30; 4*th*, $20.

ENTRIES.

P. H. Davis, Milwaukee, enters, blk. s., Bay View Boy	2, 1, 1, 1.
E. R. Hammond, Fond du Lac, enters ch. m., Lucy Gold Dust	3, 4, 3, 2.
Dr. D. Rowland, Oshkosh, enters br. g., David R.	Drawn.
John Lucas, Wausau, enters ch. m, Nellie C.	Drawn.
Isaac Stevenson, Menomonie, Mich., blk. g., Green Bay Boy	1, 3, dis.
A. Cole, Oconto, enters blk. m., Lady C.	4, 5, dis.
S. D. Macomber, New Lisbon, enters b. s., Chas. Mc.	5, 6, dis.
A. W. Potter, Neenah, enters b. g., Robin	1, 2, 2, 3.

Time — 2:41, 2:42½, 2:40½, 2:43⅜.
Timers — C. O. Josslyn, A. L. Osborn.
Judges — David Johnson, E. P. Finch, Geo. Turner.

2:37 CLASS — *Trotting Race.* *Purse* $200, *divided;* 1*st*, $100; 2*d*, $50; 3*d*, $30; 4*th*, $20.

ENTRIES.

Dr. D. Rowland, Oshkoshs, enters br. g., David R..... 2, 3, 1, 2, 1, 1
E. S. Josslyn, Oshkosh, enters blk. g., Darkness..... 3, 1, 3, 3, 3, 3
Isaac Stevenson, Marinette, enters b. m., Mary C 1, 2, 2, 1, 2, 2
Time — 2:38½, 2:40, 2:37½, 2:38½, 2:41½, 2:42½.
Timers — C. O. Josslyn, A. L. Osborn.
Judges — David Johnson, E. P. Finch, Geo. Turner.

2:40 CLASS — *Trotting Stallion Race; Purse, Medal,* $50, *Money,* $30, $20.

ENTRIES.

H. B. Thomas, Berlin, enters b. s., Harry Mills .... 1, 2, 2, 1, 1.
P. Delaney, Wausau, enters b. s., Van Avuim, Jr..... Drawn.
J. W. Flack, Appleton, enters b. s., Oshkosh..... 2, 1, 1, 2, 2
Isaac Stevenson, Marinette, b. s., Alan, Jr..... 2 distanced.
Time — 2:39½, 2:36, 2:39½, 2:40, 2:40½.
Timers — C. O. Josslyn, Pat. Delaney and A. L. Osborn.
Judges — E. P. Finch, P. T. Parish and John Finch.

Free-for-all Trotting Race; purse $300; *first,* $1.50; *second,* $75; *third,* $45; *fourth,* $30.

ENTRIES.

John A. Paige, Oshkosh. b. m., Dove Eye..... .... 4, 4, 4, dis.
S. M Stevenson, Marinette, ch. m, Nina S..... Drawn.
C. Crowley, Ishpeming, s. g., Dom Pedro 1, 2, 3
W. H. Biddlecom, Marinette, b. g., Lark's Ghost, formerly John R .... Drawn
David Johnson, Jefferson, ch. m., Foxy b..... 2, 3, 2, 2
Geo. A. Fuller, Benton Harbor, Mich., g. g., Robin 3, 1, 1, 1
Time — 2:32, 2:31½, 2.31, 2.37.
Timers — C. O. Josslyn, Pat. Delaney and A. L. Osborn.
Judges — E. P. Finch, P. T. Parish and John Finch.

CLASS — 2:35 *Pacing Race; purse* $200; *first,* $100; *second,* $50; *third,* $30; *fourth,* $20.

ENTRIES.

J. D. Flack, Appleton, b. g. Billy F.....
John Forbes, Oshkosh, b. g. Forratt Jack .....
N. H. Biddlecom, Marinette, blk g. Pat ....
Time — 2:37, 2:42½, 2:35½, 2:50.
Timers — Mart. Griswald, A. L. Osborn.
Judges — E. P. Finch, P. T. Parish, John Finch.

2:45 CLASS — *Trotting Race; Purse,* $200, *first,* $100; *second,* $50; *third,* $30; *fourth,* $20.

ENTRIES.

H. B. Thomas, Berlin, b. f. Harry Mills	2, 4, 5, 5.
P. H. Davis, Milwaukee, Josie G	4, 3, 4, 4.
E. S. Josslyn, Oshkosh, blk. g. Darkness	Drawn.
Ed. R. Hammond, Fond du Lac, ch. m. Lucy Gold Dust	6, 5, 6, 6.
Dr. D. Rowlands, Oshkosh, bro. g. David R	7, 1, 1, 1.
John Lucas, Wausau, ch. m. Nellie C	5, 7, dist.
C. C. Ward, Waukesha, b. g. Starlight	1, 2, 3, 2.
A. W. Patten, Neenah, b. g., Robin	3, 6, 2, 3.

Time — 2:38, 2:38, 2:39½, 2:40½.
Timers — M. Griswold, A. L. Osborn.
Judges — E. P. Finch, P. I. Parish, John Finch.

PREMIUMS AWARDED.

DIVISION A — HORSES.

GEORGE HARDING—*Superintendent.*

CLASS 1.— *Roadsters.*

Best stallion 4 years old or over, John Gordinier	$12 50
Second best, A. Sanford	7 50
Best stallion 3 years and under 4, P. Delaney	7 50
Second best, S. D. Macomber	4 90
Best stallion 2 years and under 3, J. S. Cross	6 00
Second best, John O'Brien	3 00
Best stallion 1 year and under 2, G. P. Cronkhide	5 00
Second best, Barber Randall	2 50
Best sucking stallion foal, P. G. Furman	3 00
Best brood mare 4 years or over with sucking colt, P. G. Furman.	6 00
Best filly 3 years old, John O'Brien	5 00
Second best, M. Madison	2 50
Best filly 1 year old, S. D. Macomber	3 00
Second best, Barber Randall	2 00
Best filly 2 years old, M. H. Manton	2 00

CLASS 2.— *Cleveland Bays.*

Best stallion 3 years old and under 4, S. D. McMillan	$12 50

CLASS 3 — *Horses for all Work.*

Best stallion 4 years old and over, Wm. Perkins	$5 00
Second best, H. Floyd	2 50
Best stallion 3 years old and under 4, John Bonnett	4 00
Best stallion 2 years old and under 3, H. A. Babcock	3 00
Second best, I. Thomas	1 50
Best brood mare 4 years old or over, with sucking colt, John Bonnett	4 00
Second best, I. Thomas	2 00
Best filly 3 years old, A. Sweet	3 00
Best filly 2 years old, I. C. Knapp	2 00
Second best, J. H. Haigh	1 00
Best filly foal, John Bonnett	1 00
Best filly one year old, H. A. Babcock	50

CLASS 4— *Imported and Pure Bred Norman and other French Draft Horses.*

Best stallion 4 years old and over, Bowles & Hadden	$12 50
Second best, H. A. Babcock	7 50
Best stallion 3 years old and under 4, Bowles & Hadden	7 50
Second best, Bowles & Hadden	4 00
Best stallion 2 years old and under 3, Bowles & Hadden	6 00
Second best, R. B. Kellogg	3 00
Best stallion 1 year old and under 2, H. A. Babcock	5 00
Second best, H. A. Babcock	2 50
Best stallion foal, R. B. Kellogg	3 00
Second best, H. A. Babcock	2 00
Best brood mare with sucking colt, R. B. Kellogg	6 00
Second best, R. B. Kellogg	3 00
Best filly 3 years old, R. B. Kellogg	5 00
Second best, R. B. Kellogg	2 50
Best filly foal, H. A. Babcock	3 00
Second best, R. B. Kellogg	2 00

CLASS 5. — *Grade Draft Horses.*

Best stallion 4 years old and over, F. N. Appleyard	$5 00
Second best, F. N. Applyard	2 50
Best stallion 3 years old, F. N. Appleyard	4 00
Best stallion 2 years old, Bowles & Haddan	3 00
Second best, Elmar Manuel	1 50
Best stallion 1 year old, H. A. Babcock	2 00
Best stallion foal, E. F. Plunket	1 00
Second best, Marcellus Snell	50
Best brood mare with sucking colt, E. F. Plunket	4 00
Second best, Marcellus Snell	2 00
Best filly 3 years old, F. N. Appleyard	3 00
Best filly 2 years old, H. A. Babcock	2 00
Second best, H. A. Babcock	1 00
Best filly 1 year old, J. H. Haigh	1 00
Second best, Wm. Kienash	50
Best filly foal, R. B. Kellogg	1 00

CLASS 6.— *Imported and Native Pure Bred Clydesdales and other English Draft Breeds.*

Best stallion 4 years old and over, T. J. Norton & Bro	$12 50
Second best, Geo. Stroup	7 50
Best stallion 2 years old, Geo. Stroup	6 00
Best stallion 1 year old, W. J. Quick	5 00
Best stallion foal, W. J. Quick	3 00
Second best, Uriah Stroup	2 00
Best brood mare with colt, Uriah Stroup	6 00
Second best, Uriah Stroup	3 00
Best filly 3 years old, Geo. Stroup	5 00
Best filly 2 years old, Geo. Stroup	4 00
Best filly foal, Uriah Stroup	3 00

CLASS 7.— *Roadsters —Sweepstakes.*

Best stallion, any age, John Gordinier	$10 00
Best mare, any age, Martin Madison	6 00

CLASS 8.— *Horses of all Work — Sweepstakes.*

Best stallion, any age, John Grissman	$10 00
Best mare, any age, F. N. Appleyard	6 00

CLASS 9.— *Norman and other French Draft Breeds — Sweepstakes.*

Best stallion, any age, H. A. Babcock	$10 00
Best mare, any age, Bowles & Hadden	6 00

CLASS 10.— *Clydesdale and other English Breeds — Sweepstakes.*

Best stallion, any age, T. J. Morton & Bro	$10 00
Best mare, any age, Uriah Stroup	6 00

CLASS 11.— *Cleveland Bays — Sweepstakes.*

Best stallion, any age, S. D. McMillan	$10 00

CLASS 12.— *Grade Draft — Sweepstakes.*

Best stallion, any age, F. N. Appleyard	$6 00
Best mare, any age, Marcellus Snell	3 00

CLASS 13 — *Farm Teams in Heavy Harness.*

Best farm team, Peter Gratton	$5 00
Second best, W. J. Quick	2 50

CLASS 14 — *Carriage Teams.*

Best carriage team, Dr. H. B. Dale	$7 50
Second best, Jas. Morrison	3 50

CLASS 15 — *Roadsters — Single Mare or Gelding.*

Best single gelding, Geo. La Moure	3 50
Best single mare, M Cowling	2 50

DIVISION B—CATTLE.

Superintendent—W. H. COOK.

CLASS 16—*Short Horns.*

Best bull 3 years old or over, J. C. Kiser	$10 00
Second best, J. C. Kiser	6 00
Best bull 2 years old and under 3, Geo. Harding	10 00
Second best, J. C. Kiser	6 00
Best bull 1 year old and under 2, J. C. Kiser	7 50
Best bull calf, J. C. Kiser	5 00
Second best, J. C. Kiser	2 50
Best cow 3 years old or over, J. C. Kiser	10 00
Second best, J. C. Kiser	6 00
Best heifer 2 years old and under 3, J. C. Kiser	7 50
Second best, Geo. Harding	5 00
Best heifer one year old and under 2, J. C. Kiser	5 00
Second best, J. C. Kiser	3 00
Best heifer calf, J. C. Kiser	5 00
Second best, J. C. Kiser	2 50

CLASS 17—*Ayrshires.*

Best bull 3 years old or over, Chester Hazen	$10 00
Best bull 2 years old and under 3, Chester Hazen	10 00
Best cow 3 years old or over, Chester Hazen	10 00
Second best, Chester Hazen	6 00
Best heifer 2 years old and under 3, Chester Hazen	7 50
Second best, Chester Hazen	5 00
Best heifer 1 year old and under 2, Chester Hazen	5 00
Second best, Chester Hazen	3 00
Best heifer calf, Chester Hazen	5 00
Second best, Chester Hazen	2 50

CLASS 18—*Jerseys.*

Best bull, 3 years old or over, S. D. McMillan	$10 00
Second best, G. W. Washburn	6 00
Best bull, 2 years old and under 3, W. J. Hahn	10 00
Second best, G. W. Washburn	6 00
Best bull, 1 year old and under 2, I. I. Keasa	7 50
Second best, Strong & Wells	4 00
Best bull calf, G. W. Washburn	5 00
Second best, G. P. Washburn	2 50
Best cow, 3 years old or over, Strang & Wells	10 00
Second best, G. W. Washburn	6 00
Best heifer 2 years old and under 3, G. W. Washburn	7 50
Second best, G. W. Washburn	5 00
Best heifer 1 year old and under 2, G. W. Washburn	5 00
Second best, G. W. Washburn	3 00
Best heifer calf, G. W. Washburn	5 00

CLASS 19 —*Herefords.*

Best bull 3 years old and over, O. D. Peck	$10 00
Best heifer 2 years old and under 3, John Edwards	10 00
Second best, J. J. Williams	4 00
Best bull 1 year old and under 2, John Edwards	7 50
Best bull calf, J. J. Williams	10 00
Second best, John Edwards	2 50
Best cow 3 years old or over, J. J. Williams	10 00
Second best, John Edwards	6 00
Best cow 2 years old and under 3.	
Best heifer calf, J. J. Williams	10 00
Second best, John Edwards	2 50

CLASS 20.— *Holsteins.*

Best bull 3 years old and over, Strang & Wells	$10 00
Second best, Gillett & Moore	6 00
Best bull 2 years old and under 3, W. W. Kricklin	10 00
Second best, Barber Randall	6 00
Best bull 1 year old and under 2, P. T. Walker	7 50
Second best, Gillett & Moore	4 00
Best bull calf, Gillett & Moore	5 00
Second best, Barber Randall	2 50
Best cow 3 years old and over, Strang & Wells	10 00
Second best, Strang & Wells	6 00
Best heifer 2 years old and under 3, Gillett & Moore	7 50
Second best, Barber Randall	4 00
Best heifer 1 year old and under 2, Strang & Wells	5 00
Second best, Gillett & Moore	3 00
Best heifer calf, Gillett & Moore	5 00
Second best, Strang & Wells	2 50

CLASS 21 — *Devons.*

Best bull 3 years old or over, J. W. Morse & Son	$10 00
Second best, E. E. Curtis	6 00
Best bull 2 years old and under 3, E. E. Curtis	10 00
Best bull 1 year old and under 2, J. W. Morse & Son	7 50
Best bull calf, J. W. Morse & Son	5 00
Second best, J. W. Morse & Son	2 50
Best cow 3 years old and over, J. W. Morse & Son	10 00
Second best, J. W. Morse & Son	6 00
Best heifer 2 years old and under 3, J. W. Morse & Son	7 50
Second best	5 00
Best heifer 1 year old and under 2	5 00
Best heifer calf	5 00
Second best calf	2 50

CLASS 22 — *Polled Cattle.*

Best bull 3 years old or over, Stone & McConnell	$10 00
Best bull 2 years old and under 3, Stone & McConnell	10 00
Best bull calf, Stone & McConnell	5 00
Best cow 3 years old or over, Stone & McConnell	10 00
Best heifer 2 years old and under 3, Stone & McConnell	7 50
Second best, Stone & McConnell	5 00
Best heifer calf, Stone & McConnell	5 00
Second best, Stone & McConnell	2 50

HERD PREMIUMS.

CLASS 23 — *Short Horns.*

Best bull and four females, J. C. Kiser	$12 50
Second best, Geo. Harding	7 50

CLASS 24 — *Herd Premiums— Ayrshires.*

Best bull and four females, 2 years old and over, C. Hazen	$12 50

CLASS 25 — *Herd Premiums — Jerseys.*

Best bull and four females, Geo. W. Washburn	$12 50

CLASS 27 — *Herd Premiums — Holsteins*

Best bull and four females, Gillet & Moore	$12 50
Second best, Barber Randall	7 50

CLASS 28 — *Herd Premiums — Devons.*

Best bull and 4 females, J. W. Morse & Son	$12 50

DIVISION D — SHEEP.

Superintendent — A. B. WADE.

CLASS 29.— *Registered American Merino Sheep.*

Best ram 2 years old and over, Stone & McConnell Bros	$5 00
Second best, Stone & McConnell Bros	3 00
Best ram 1 year old and under 2, Stone & McConnell Bros	4 00
Second best, Stone & McConnell Bros	2 50
Best pen 3 ram lambs, Stone & McConnell Bros	4 00
Best pen 3 ewes 2 year old, Stone & McConnell Bros	5 00
Second best, Stone & McConnell Bros	3 00
Best pen 3 ewes, 1 year old and under 2, Stone & McConnell Bros.	4 00
Second best, Stone & McConnell Bros	2 50

CLASS 30 — *Pure Bred Downs.*

Best ram 2 years old or over, E. F. Jones	$2 50
Second best, Chas. Hill	1 50
Best ram 1 year old and under 2, Chas. Hill	2 00
Second best, Chas. Hill	1 00
Best pen 3 ram lambs, Chas. Hill	2 00
Second best, Chas. Hill	1 00
Best pen 3 ewes, 2 years old, Chas. Hill	2 50
Second best, Chas. Hill	1 50
Best pen ewes, 1 year old, Chas. Hill	2 00
Best pen 3 ewe lambs, Chas. Hill	1 50
Second best, Chas. Hill	1 00

CLASS 31 — *Pure Bred Long-Wool Sheep.*

Best ram 2 years old, Wm. Perkins	$2 50
Second best, George Harding	1 50
Best ram, 1 year old, George Harding	2 00
Second best, George Harding	1 00
Best pen 3 ram lambs, Wm. Perkins	2 00
Second best, George Harding	1 00
Best pen 3 ewes, 2 years old, George Harding	2 50
Second best, George Harding	1 50
Best pen 3 ewes, 1 year old, George Harding	2 00
Best pen 3 ewe lambs, George Harding	1 50

CLASS 32 — *Registerd American Merino Sheep—Sweepstakes.*

Best ram and ten of his get, Stone & McConnell Bros	$7 50

CLASS 33 — *Pure Bred Downs — Sweepstakes.*

Best ram and ten of his get, Chas. Hill	$5 00

CLASS 40 — *Pure Bred Long-Wool Sheep.*

Best ram and ten of his get, George Harding	5 00

DIVISION D.—SWINE AND POULTRY.

Superintendent — E. R. MARTIN.

CLASS 35 — *Swine, Large Breed—Poland China.*

Best boar 1 year old and under 2, John Athearn	$4 00
Best breeding sow 1 year old and under 2, John Athearn	4 00
Best breeding sow with litter of pigs, John Athearn	5 00
Best boar pig over 6 months and under 1 year, John Athearn	3 00
Second best, John Athearn	1 50
Best sow pig over 6 months and under 1 year, John Athearn	3 00
Second best, John Athearn	1 50
Best sow pig under 6 months, John Athearn	2 00
Second best, J. E. Owens	1 00
Best boar pig under 6 months, J. E. Owens	2 00
Second best, John Athearn	1 00

CLASS 36 — *Berkshires and other Medium Size Breeds.*

Best boar 2 years old and over, J. E. Owens	$4 00
Second best, Clark & Chamberlin	2 00
Best boar 1 year old and under 2, J. E. Owens	4 00
Second best, J. N. Hoaglin	2 00
Best breeding sow, 2 years and over, J. N. Hoaglin	4 00
Second best, J. E. Owens	2 00
Best breeding sow 1 year old and under 2, J. E. Owens	4 00
Second best, J. N. Hoaglin	2 00

Best breeding sow, with litter of pigs, Barber Randall	5 00
Second best, J. E. Owens	2 50
Best boar pig over 6 months and under 1 year, J. E. Owens	3 00
Second best, J. E. Owens	1 50
Best sow pig over 6 months and under 1 year, J. N. Hoaglin	3 00
Best sow pig under 6 months, Barber Randall	2 00
Second best, J. E. Owens	1 00
Best boar pig under 6 months, J. E. Owens	2 00
Second best, J. E. Owens	1 00

CLASS 37 — *Essex, Suffolk and other Small Breeds.*

Best boar 2 years old and over, S. H. & A. E. Joiner	$4 00
Second best, S. H. & A. E. Joiner	2 00
Best boar 1 year old and under 2, S. H. & A. E. Joiner	4 00
Second best, Thomas Davis	2 00
Best breeding sow 2 years old and over, S. H. & A. E. Joiner	4 00
Second best, S. H. & A. E. Joiner	2 00
Best breeding sow 1 year and under 2, S. H. & A. E. Joiner	4 00
Best breeding sow with litter of pigs, S. H. & A. E. Joiner	5 00
Second best, Thomas Davis	2 50
Best boar pig over 6 months and under 1 year, S. H. & A. E. Joiner	3 00
Second best, Thomas Davis	1 50
Best sow pig over 6 months and under 1 year, S. H. & A. E. Joiner	3 00
Second best, S. H. & A. E. Joiner	1 50
Best boar pig under 6 months, S. H. & A. E. Joiner	2 00
Second best, S. H. & A. E. Joiner	1 00
Best sow pig under 6 months, S. H. & A. E. Joiner	2 00
Second best, S. H. & A. E. Joiner	1 00

CLASS 38.— *Chester Whites and other Large Breeds, including Jersey Reds.*

Best boar 2 years old and over, M. B. Green	$4 00
Best boar 1 year old and under 2, M. B. Green	4 00
Second best, N. P. Kellogg & Son	2 00
Best breeding sow 2 years old or over, Clark & Chamberlain	4 00
Second best, M. B. Green	2 00
Best breeding sow 1 year old and under 2, S. R. Merrill	4 00
Second best, M. B. Green	2 00
Best breeding sow with litter of pigs, M. B. Green	4 00
Second best N. P. Kellogg & Son	2 50
Best boar pig over 6 months and under 1 year, Clark & Chamberlain	3 00
Second best	1 50
Best sow pig over 6 months and under 1 year, M. B. Green	3 00
Second best, Clark & Chamberlain	1 50
Best boar pig under 6 months, M. B. Green	2 00
Second best, S. R. Merrill	1 00
Best sow pig under 6 months, M. B. Green	2 00
Second best, N. P. Kellogg & Son	1 00

CLASS 39 — *Poultry.*

For best collection of 6 varieties of 1 male and 2 females, Noble Dougherty	$3 00
Second best, Clark & Chamberlain	2 00
Third best, Albert Humphrey	1 00

CLASS A—*Asiatics.*

Best trio Light Brahmas, James McKean	$1 50
Second best, Albert Humphrey	50
Best trio Dark Brahmas, Yancey & Higgins	1 50
Second best, Albert Humphrey	50
Best trio White Cochin, Noble Dougherty	1 50
Second best, James McKean	50
Best trio Black Cochins, Yancey & Higgins	1 50
Second best, Yancey & Higgins	50
Best trio Buff Cochin	
Best trio Partridge Cochin, Geo. Harding	1 50
Second best, Yancey & Higgins	50
Best trio Langshans, P. C. Gallup	1 50

CLASS B—*American.*

Best trio American Dominique, Noble Dougherty	$1 50
Second best, Noble Dougherty	50
Best trio Wyandotte, James McKean	1 50
Second best, Clark & Chamberlain	50

CLASS C—*Hamburgs.*

Best trio Siver Spangled Hamburgs, C. W. Sanders	$1 50
Second best, Yancey & Higgins	50
Best trio Golden Penciled Hamburgs, Noble Dougherty	1 50
Second best, Noble Dougherty	50

CLASS D—*Leghorns.*

Best trio White Leghorn fowls, Clark & Chamberlain	$1 50
Best trio Brown Leghorn, Clark & Chamberlain	1 50
Second best, Noble Dougherty	50

CLASS F—*Polish.*

Best trio White Crested Black Polish, Noble Dougherty	$1 50
Second best, Noble Dougherty	50
Best trio Plain and Bearded fowls, Noble Dougherty	1 50
Second best, Noble Dougherty	50

CLASS H—*Dorkings.*

Best trio White Dorkings, Noble Dougherty	$1 50

CLASS I—*Games.*

Best trio Black Breasted Red Games, J. S. Cross	$1 00
Second best, Clark & Chamberlain	50
Best trio Silver Duckwing Bantams, Noble Dougherty	1 00
Second best, Noble Dougherty	50
Best trio Black Breasted Red Game Bantams, Albert Humphrey	1 00
Best trio Brown Breasted Games, Clark & Chamberlain	1 00
Second best, Clark & Chamberlain	50
Best trio Yellow Duckwing, Clark & Chamberlain	1 00
Best trio Plymouth Rocks, Albert Humphrey	1 50
Second best, Yancy & Higgins	50

Best pair Bronze turkeys, P. C. Gallup	1 50
Best pair White turkeys, Noble Dougherty	1 50
Best pair Black turkeys, Noble Dougherty	1 50
Best pair Tolouse geese, James McKean	1 50
Best pair White China geese, Noble Dougherty	1 50
Second best, Clark & Chamberlain	50
Best pair Endan Geese, Clark & Chamberlain	1 50
Best pair Rouen ducks, Joel Johnson	1 00
Second best, Joel Johnson	50
Best pair Aylsburg ducks, Joel Johnson	1 00
Second best, Joel Johnson	50
Best pair Pekin ducks, Noble Dougherty	1 00
Second best, J. E. Owens	50
Best pair Pea fowle, Noble Dougherty	1 00
Second best, Noble Dougherty	50
Best Incubator, P. C. Gallup	One copy Breeders Gazette.

DIVISION A — GRAIN AND SEEDS, DAIRY, APIARY AND VEGETABLES.

Superintendent — D. HUNTLEY.

CLASS 40 — *Grain and Seeds.*

Largest and best exhibition of grain and seeds, O. Angell	$3 00
Second best, Noble Dougherty	2 00
Best bushel red winter wheat, O. Angell	1 00
Best bushel white winter wheat, O. Angell	1 00
Best bushel spring wheat, hard, Noble Dougherty	1 00
Second best, O. Angell	50
Best bushel spring wheat, medium, Noble Dougherty	1 00
Second best, Thomas Davis	50
Best bushel spring wheat, soft, O. Angell	1 00
Second best, Noble Dougherty	50
Best bushel winter rye, O. Angell	1 00
Bust bushel white navy beans, J. C. Fisher	1 00
Second best, Noble Dougherty	50
Best bushel beans other than navy, Thomas Davis	1 00
Best bushel white oats, J. C. Fisher	1 00
Second best, P. C. Gallup	50
Best bushel yellow oats, Noble Dougherty	1 00
Second best, O. Angell	50
Best bushel buckwheat, O. Angell	1 00
Best display yellow dent corn, E. W. Daniels	1 00
Second best, J. C. Fisher	50
Best display white dent corn, Clark & Chamberlain	1 00
Second best, J. C. Knapp	50
Best display yellow flint corn, Frank L. Goodwin	1 00
Second best, Clark & Chamberlain	50
Best display white flint corn, E. Owens	1 00
Second best, I. C. Knapp	50
Best display of Canada sweet corn, J. C. Fisher	1 00
Second best, James Wilson	50
Best display sweet corn, J. C. Fisher	1 00
Second best, Clark & Chamberlain	50

Best display pop corn, Frank L Goodwin	1 00
Second best, I. C. Knapp	50
Best bushel timothy seed, Carl Decker	1 00
Second best, J. E. Owens	50
Best bushel flax seed, Noble Dougherty	1 00
Second best O. Angell	50
Best half bushel peas, Thos. Davis	1 00
Second best, Carl Dexter	50
Best sample amber cane syrup, W. D. Lawrence	1 50

CLASS 41 — *Dairy and Pantry.*

Best plate five pounds print or roll butter, J. Treleven	$1 50
Second best, Dale Bros	1 00

The following named exhibitors received pro rata premium on cheese 100 pounds to constitute an exhibit, and a scale of 42 points in a possible scale of 50, to entitle an exhibitor to a premium:

O. J. Angus, Medina	$3 57
C. E. Roblee, Neenah	3 57
C. E. Roblee, Neenah	3 57
Chester Hazen, Ladoga	3 57
Chester Hazen, Ladoga	3 57
T. R. Allen, Allanville	3 57
L. Parrott, Greenville	3 57

The following awards were pro rata premiums on butter:

James Wilson, Berlin	$1 56
J. N. Hoaglin, Oshkosh	1 56
W. C. Wolcott, Eldorado Mills	1 56
L. C. Booth, Omro	1 56
E. R. Martin, Omro	1 56
C. M. Kellogg, Ripon	1 56
H. W. Kellogg, Ripon	1 56
Mrs. E. S. Clapp, Winneconne	1 56
J. Treleven, Omro	1 56
J. Treleven, Omro	1 56
Mrs. M. J. Smith, Oshkosh	1 56
L. Hinman, Neenah	1 56
W. C. Wolcott, Eldorado Mills	1 56
Mrs. Milan Ford, Oshkosh	1 56
Dale Bros., Oshkosh	1 56
Mrs. R. Bennett, Oshkosh	1 56

Cheese Sweepstakes.

To the exhibitor exhibiting the 100 pounds of cheese scaling the highest number of points, O. J. Angus $5 00

Cornish & Curtis, Fort Atkinson, offered the following special premiums on butter scaling the highest number of points, one rectangular churn, which was awarded H. W. Kellogg, of Ripon; also one butter worker to the exhibitor whose butter scaled next to the highest number of points, which was awarded to C. M. Kellogg, of Ripon.

Butter Sweepstakes.

Package of butter scaling the highest number of points, H. W. Kellogg $4 00

CLASS 42 — *The Apiary.*

Best sample box honey, 10 pounds, W. C. Wolcott	$1 50
Best sample extract honey two pounds, W. C. Wolcott	1 50
Best sample beeswax, Uriah Stroup	1 00

CLASS 43 — *Vegetables.*

Best 2 quarts Lima beans, J. N. Hoaglin	$ 50
Second best, Noble Dougherty	25
Best one-half bushel blood turnip beets, W. F. Pierce	1 00
Second best, J. N. Hoaglin	50
Best three bushel long bloood beets, J. N. Hoaglin	1 00
Best three bushel Mangel-wurtzel Mammoth Red, W. F. Pierce	1 00
Second best, J. N. Hoaglin	50
Best three bushel Mangel-wurtzel, Yellow Ovoid, J. N. Hoaglin	1 00
Second best, W. T. Pierce	50
Best three bushel Laine's Imperial, J. N. Hoaglin	1 00
Best 3 drumhead cabbage, any variety, Noble Dougherty	1 00
Second best, John Pierce	50
Best 3 Winningsteadt cabbage, John Nelson	1 00
Second best, John Pierce	50
Best one-half bushel short-horn carrots, Noble Dougherty	1 00
Second best, James Dougherty	50
Best one-half bushel long-horn carrots, James Dougherty	1 00
Second best, J. N. Hoaglin	50
Best one-half bushel half long orange carrots, James Dougherty	1 00
Second best, John Nelson	50
Best 3 cauliflower, H. H. Pierce	1 00
Second best, W. T. Pierce	50
Best 3 celery, James Dougherty	1 00
Second best, James Brainerd	50
Best egg plant, Noble Dougherty	50
Second best, W. T. Pierce	25
Best citron melon, J. N. Hoaglin	50
Second best, J. N. Hoaglin	25
Best muskmelon, any variety, Mrs. J. K. Terrill	50
Second best, P. C. Gallu	25
Best watermelon, Mrs. J. K. Terrill	50
Second best, H. H. Pierce	25
Best ½ bushel red onions, J. N. Hoaglin	1 00
Second best, W. H. Pierce	50
Best ½ bushel white onions, John Nelson	1 00
Second best, J. N. Hoaglin	50
Best ½ bushel yellow Danverse onions, J. N. Hoaglin	1 00
Second best, John Nelson	50
Best ½ bushel parsnips, James Dougherty	1 00
Second best, Noble Dougherty	50
Best show red peppers, H. H. Pierce	50
Second best, J. N. Hoaglin	25
Best ½ bushel Early Rose potatoes, James Dougherty	1 00
Second best, Noble Dougherty	50
Best ½ bushel Mammoth Pearl potatoes, Noble Dougherty	1 00
Best ½ bushel Beauty Hebron potatoes, J. N. Hoaglin	1 00
Second best, Carl Dexter	50
Best bushel Snowflake potatoes, Noble Dougherty	1 00
Second best, Carl Dexter	50
Best ½ bushel Early Ohio potatoes, James Dougherty	1 00
Second best, Noble Dougherty	50
Best ½ bushel Burbanks Seedling potatoes, Noble Dougherty	1 00
Second best, H. H. Pierce	50

best show of potatoes, Noble Dougherty	$1 50
Second best, J. N. Hoaglin	1 00
Best salsify or vegetable oyster, J. N. Hoaglin	1 00
Second best, F. D. Cross	50
Best 2 Hubbard squash, Thomas Davis	1 00
Second best, John Pierce	50
Best 2 Marblehead squash, John Nelson	1 00
Second best, W. F. Pierce	50
Best 2 fall squash, Carl Derber	1 00
Second best, W. F. Pierce	50
Largest squash, any variety, H. H. Pierce	1 00
Second largest, Noble Dougherty	50
Best ½ bushel tomatoes, J. N. Hoaglin	1 00
Second best, Wm. B. Lawrence	50
Best ½ bushel strap-leaf turnips, Carl Derber	1 00
Best show by one exhibitor, J. N. Hoaglin	4 50
Second best, Noble Dougherty	3 00
Third best, Carl Derber	1 50

DIVISION G.—FRUITS, FLOWERS AND COOKERY

Superintendent—J. L. FISKE.

CLASS 44.—*Apples, Pears, Plums and Grapes.*

Apples—Professional List.

Greatest variety apples, G. P. Peffer	$4 00

Ten Varieties Adapted to the Northwest.

Duchess of Oldenburg, Wealthy, Alexander, Pewaukee, Fameuse, Plumb's Cider, Utter's Red, Seek-no further, Golden Russett and Tallman Sweet.

Five Varieties Adapted to the Northwest.

Duchess of Oldenburg, Wealthy, Famuse, Alexander, W. Seek-no-Further.

Five Varieties Winter Apples.

Golden Russett, Allen's Russett, Seek-no-Further (Westfield), Fameuse, Pewaukee.

Largest Show Winter Varieties.

Golden Russett, Allen Russett, Perry Russett, Roxbury Russett, Pewaukee, Tallman Sweet, Westfield Seek-no-Further, Mary Seek-no-Further, Smoke-House, Limber Twig, Winter Pennock, Wine Sop, Ben Davis, Walbridge, Willey, Fameuse, Plumb's Cider, English Golden Russett, Jonathan, Gray Gilliflower, Yellow Bellflower, Northern Spy, Sweet Wine.

Ten Varieties of Autumn.

Alexander, Wealthy, Duchess of Oldenburg, Utter, Fall Orange, Frankfurther Bell, Phœnix, Long Arcate, Hibernal, Fall Granburry.

Five Varieties Autumn.

Fall Orange, Clark's Orange, Alexander, Fall Greeening, Wealthy.

Largest Variety Autumn.

Alexander, Sour Bough, Fall Greening, Fall Orange, Fall Stripe, Fall Granberry, Fall Strawberry, Wealthy, Clark's Orange, Utter, St. Lawrence, Lyman's Sweet, Spice Sweet, Golden Sweet, Haas.

All of the above entries were made by Mr. G. P. Peffer, of Pewaukee.

Second greatest variety of apples, H. Floyd, Berlin	$2 00
Best 10 varieties adapted to the northwest, G. P. Peffer	2 00
Second best, H. Floyd	1 00
Best 5 varieties adapted to the northwest, G. P. Peffer	2 00
Second best, H. Floyd	1 00
Largest variety winter apples, G. P. Peffer	2 00
Second best, H. Floyd	1 00
Best 5 varieties winter apples, G. P. Peffer	2 00
Second best, H. Floyd	1 00
Best show 10 varieties, G. P. Peffer	1 00
Second best, H. Floyd	50
Largest variety autumn, G. P. Peffer	2 00
Second best, H. Floyd	1 00
Best 5 varieties autumn, G. P. Peffer	2 00
Second best, H. Floyd	1 00

Plates of Apples of not less than three specimens of each variety — Professional.

Best plate Fall Orange, G. P. Peffer	$0 50
Second best, H. Floyd	25
Best plate of Red Astrachan, H. Floyd	50
Best plate Duchess Oldenburg, G. P. Peffer	50
Second best, E. W. Daniels	25
Best plate St. Lawrence	
Best plate Fameuse	
Second best, G. P. Peffer	25
Best plate Utters, G. P. Peffer	50
Second best, J. P. Roe	25
Best plate Plumb's Cider, G. P. Peffer	50
Best plate Seek-no-Further, G. P. Peffer	50
Best plate Ben Davis, G. P. Peffer	50
Best plate Tallman Sweet, G. P. Peffer	50
Second best, J. P. Roe	25
Best plate Golden Russet, G. P. Peffer	50
Second best, J. P. Roe	25
Best plate Walbridge, G. P. Peffer	50
Best plate Pewaukee, G. P. Peffer	50
Best plate Alexander, G. P. Peffer	50
Second best, E. W. Daniels	25
Largest apple, G. P. Peffer	50
Second largest, E. W. Daniels	25
Best plate Grimes' Golden, H. Floyd	50
Best plate Tetofski, H. Floyd	50
Second best, G. P. Peffer	25
Best plate Perry Russet, H. Floyd	50
Best plate Wealthy, G. P. Peffer	50
Second best, H. Floyd	25
Best plate Wolf River, E. W. Daniels	50

Pears — Professional.

Best six varieties, G. P. Peffer	$1 50
Best single variety, quality to rule, G. P. Peffer	50
Best five specimens Flemish Beauty, G. P. Peffer	50

Plumbs — Professional.

Best exhibition plumbs, G. P. Peffer	$1 50
Best single variety, J. P. Roe	50

Grapes — Professional.

Best show 12 varities grapes, J. N. Hoaglin	$2 50
Second best, J. P. Roe	1 50
Third best, G. P. Peffer	1 00
Best 6 varieties, G. P. Peffer	1 50
Second best, J. P. Roe	1 00
Third best, J. N. Hoaglin	50
Best five varieties adapted to Northwest, G. P. Peffer	1 50
Second best, J. N. Hoaglin	1 00
Third best, J. P. Roe	50
Best three varieties adapted to the Northwest, J. N. Hoaglin	1 00
Second best, G. P. Peffer	75
Best two varieties adapted to the Northwest, G. P. Peffer	50
Second best, J. N. Hoaglin	25
Best one variety adapted to the Northwest, G. P. Peffer	1 00
Best single variety, quality to rule, J. N. Hoaglin	1 00
Second best, G. P. Peffer	50
Best three clusters on one cane of Concords, J. P. Roe	1 00
Second best, J. N. Hoaglin	50
Best three clusters on one cane of Delawares, J. N. Hoaglin	1 00
Second best, J. P. Roe	50
Best three clusters on one cane, of Watten, J. P. Roe	1 00
Best three clusters on one cane of Janesville, G. P. Peffer	1 00
Second best, J. P. Roe	50
Best three clusters on one cane of Isabella, G. P. Peffer	1 00
Second best, J. P. Roe	50
Best three clusters on one cane of Croton, J. P. Roe	1 00
Best three clusters on one cane of Hartford Prolific, John Nelson	1 00
Second best, J. P. Roe	50
Best three clusters on one cane, No. 3, John Nelson	1 00
Second best, J. P. Roe	50
Best three clusters on one cane, No. 9, J. N. Hoaglin	1 00
Second best, J. P. Roe	50
Best three clusters on one cane, No. 15, J. N. Hoaglin	1 00
Second best, J. P. Roe	50
Best three clusters on one cane, No. 19, J. N. Hoaglin	1 00
Second best, John Nelson	50
Best 3 clusters on one cane, Worden's Seedling, J. P. Roe	1 00
Second best, J. N. Hoaglin	50
Best 3 clusters on one cane, Moore's Early, J. P. Roe	1 00
Best 3 clusters on one cane, Dutchess, J. P. Roe	1 00
Best 3 clusters on one cane, Martha, J. N. Hoaglin	1 00
Second best, J. P. Roe	50

Crab-Apples — Professionals.

Greatest variety, H. Floyd	$1 00
Second best, E. W. Daniels	50
Best single variety, G. P. Peffer	50
Second best, H. Floyd	25
Best winter crab, G. P. Peffer	75
Second best, H. Floyd	50
Best plate Whitney No. 20, G. P. Peffer	50

Apples—Non-professional List.

Greatest variety, Nelson Olin	$4 00
Second best, T. Thomas	2 00
Best 10 varieties adapted to Northwest, Nelson Olin	2 00
Best 5 varieties adapted to Northwest, Nelson Olin	1 00
Larget variety winter apples, Nelson Olin	2 00
Second best, T. Thomas	1 00
Best 5 varieties winter apples, Nelson Olin	2 00
Second best, T. Thomas	1 00
Best show of 10 varieties without regard to adaptation, T. Thomas	1 00
Second best, Nelson Olin	50
Largest variety of autumn, Nelson Olin	2 00

Plates of Apples of not less than three Specimens of each Variety—Non-Professional.

Best plate of Red Astrachan, T. Thomas	$ 50
Second best, Nelson Olin	25
Best plate Duchess Oldenburg, Mrs. J. K. Terrell	50
Second best, Nelson Olin	25
Best plate St. Lawrence, Mrs. M. J. Smith	50
Best plate Fameuse, Nelson Olin	50
Second best, Mrs. J. K. Terrill	25
Best plate Utter, Nelson Olin	50
Second best, Fred Fisk	25
Best plate Plumb's Cider, Nelson Olin	50
Best plate Talman Sweet, T. Thomas	50
Second best, Nelson Olin	25
Best plate Fall Orange, T. Thomas	50
Second best, Nelson Olin	25
Best plate Berry Russett, Nelson Olin	50
Second best, T. Thomas	25
Best plate Walbridge, Nelson Olin	50
Best plate Golden Russett, T. Thomas	50
Best plate Alexander, T. Thomas	50
Largest apple, T. Thomas	50
Best plate Sweet Russett, Nelson Olin	50
Best plate Wealthy, T. Thomas	50
Best plate Wolf River, Mrs. M. J. Smith	50
Best plate Tetofski, T. Thomas	50

Plums—Non-Professional.

Best single specimen, T. Thomas	50

Grapes — Non-Professional.

Best show of 12 varieties, James Brainerd	$2 50
Best show of 6 varieties, James Brainerd	1 50
Best show of 5 varieties, James Brainerd	1 00
Best show of 3 varieties adapted to Northwest, James Brainerd	1 00
Best show of 2 varieties adapted to Northwest, James Brainerd	50
Second best, Fred Fisk	25
Best show of 1 variety adapted to Northwest, Fred Fisk	1 00
Second best, James Brainerd	50
Best seedling, Fred Fisk	1 00
Best single variety, quality to rule, James Brainerd	1 00
Second best, Fred Fisk	50
Best 3 clusters on 1 cane of Concord, H. F. Hughes	1 00
Second best, James Brainerd	50

Best 3 clusters on 1 cane of Delaware, James Brainerd	1 00
Second best, H. F. Hughes	50
Best 3 clusters on 1 cane Janesville, Fred Fisk	1 00
Best 3 clusters on 1 cane Isabella	1 00
Best 3 clusters on 1 cane Rogers No. 3	
Best 3 clusters on 1 cane Rogers No. 4, James Brainerd	1 00
Best 3 clusters on 1 cane Rogers No. 10, James Brainerd	1 00
Best 3 clusters on 1 cane Rogers No. 15, James Brainerd	1 00
Second best, Fred Fisk	50
Best 3 clusters on 1 cane Worden's Seedling, Fred Fisk	1 00
Best 3 clusters on 1 cane Hartford Prolific, James Brainerd	1 00

Crab Apples.

Best 10 varieties, F. D. Cross	$1 00
Second best, Mrs. M. J. Smith	50
Best single variety, F. D. Cross	50
Second best, Fred Fisk	25
Best 5 varieties	
Second best, Mrs. M. J. Smith	50
Best single spec. winter, Mrs. M. J. Smith	50
Second best, Fred Fisk	25
Best Whitney, No. 20, James Brainerd	50

Norway Treat.

Best collection of deciduous, nursery grown, D. W. Harris	75

CLASS 45 — *Bread and Cakes.*

Best two loaves Graham bread, Mrs. Milan Ford	$ 50
Second best, Susie Rogers	25
Best two loaves white bread, hop yeast, Mrs. C. H. Blanchard	50
Second best, Bertha Schmidt	25
Best two loaves white bread, milk yeast, Mrs. S. R. Merrill	50
Best two loaves Indian bread, Mrs. S. R. Merrill	50
Second best, Susie Rogers	25
Best sponge cake, Susie Rogers	50
Second best, Mrs. Theo. Grube	25
Best pound cake, Susie Rogers	50
Second best, Mrs. Theo. Grube	25
Best jelly cake, Mrs. C. H. Root	50
Second best, Mrs. Geo. Gould	25
Best gold cake, Mrs. C. H. Blanchard	50
Second best, Susie Rogers	25
Best silver cake, Susie Rogers	50
Best fruit cake, Susie Rogers	50
Best cocoanut cake, Mrs. C. H. Root	50
Second best, Mrs. Theo. Grube	25
Best chocolate cake, Susie Rogers	50
Second best, Mrs. C. H. Root	25
Best delicate cake, Mrs. C. H. Blanchard	50
Second best, Emma Olcott	25
Basket fancy cake	
Best coffee cake, Mrs. Geo. Gould	50
Second best, Mrs. Theo. Grube	25
Best spiced cake, Mrs. C. H. Root	50
Second best, Mrs. Theo. Grube	25
Best marble cake, Susie Rogers	50

Best basket cookies, Mrs. C. H. Blanchard	50
Second best, Mrs. Geo. Gould	25
Best basket doughnuts, Mrs. S. R. Merrill	50
Second best, Mrs. Irene Evans	25
Best fig cake, Mrs. C. H. Root	50
Second best, Susie Rogers	25
Best hickory-nut cake, Mrs. Geo. Gould	50
Second best, Mrs. C. H. Root	25
Best almond cake, Susie Rogers	50
Best corn starch cake, Mrs. Geo. Gould	50
Second best, Mrs. C. H. Root	25
Best orange cake, Mrs. Theo. Grube	50
Best cream cake, Mrs. Geo. Gould	50
Second best, Mrs. Theo. Grube	25
Best pork cake, Susie Rogers	50
Second best, Miss Susie Rogers	25
Best leopard cake	50
Best cup cake, Susie Rogers	25
Second best, Mrs. Irene Evans	50
Best layer cake, Mrs. C. H. Root	25
Second best, Susie Rogers	50
Largest exhibition cake, Susie Rogers	25
Second largest, Mrs. C. H. Root	1 00
Best hickory-nut cake, Susie Rogers	50
	50

CLASS 46 — *Delicacies, Preserves, etc.*

Best collection jellies, Mrs. C. H. Root	1 00
Best sample strawberry jelly, Mrs. C. H. Root	50
Best sample cranberry jelly, Mrs. C. H. Root	50
Best sample currant jelly, Mrs. C. H. Root	50
Best sample apple jelly, Mrs. C. H. Root	50
Best sample crab apple jelly, Mrs. J. K. Terrell	50
Second best, Mrs. C. H. Root	25
Best sample grape jelly, Mrs. C. H. Root	50
Best sample red raspberry jelly, Mrs. C. H. Root	50
Best sample blackberry jelly, Mrs. C. H. Root	50
Best sample black raspberry jelly, Mrs. C. H. Root	25
Best collection canned fruits, Mrs. C. H. Blanchard	1 50
Second best, Mrs. C. H. Root	1 00
Best sample canned huckleberries, Mrs. C. H. Blanchard	50
Second best, Mrs. C. H. Root	25
Best sample canned pears, Mrs. C. H. Root	50
Second best, Mrs. C. H. Blanchard	25
Best sample canned peaches, Mrs. C. H. Root	50
Second best, Mrs. C. H. Blanchard	25
Best sample canned plums, Mrs. C. H. Blanchard	50
Second best, Mrs. C. H. Root	25
Best sample canned cherries, Mrs. E. W. Sanders	50
Second best, Mrs. C. H. Blanchard	25
Best sample canned crab apples, Mrs. E. W. Sanders	50
Second best, Mrs. C. H. Blanchard	25
Best sample canned strawberries, Mrs. C. H. Blanchard	50
Second best, Mrs. C. H. Root	25
Best sample canned blackberries	
Second best, Mrs. C. H. Blanchard	25
Best sample canned gooseberries, Mrs. C. H. Blanchard	50
Second best, Mrs. C. H. Root	25
Best sample canned currants, Mrs. C. H. Blanchard	50
Second best, Mrs. C. H. Blanchard	25
Best sample canned grapes, Mrs. C. H. Root	50
Second best, Mrs. C. H. Blanchard	25

Best sample canned tomatoes, Mrs. C. H. Blanchard	50
Second best, Mrs. C. H. Root	25
Best sample canned corn, Mrs. C. H. Blanchard	50
Greatest variety of pickles, Mrs. C. H. Root	1 50

CLASS 47 — *Professional List — Plants and Cut Flowers.*

Best floral ornaments, Isaac Miles	$1 50
Second best, John Nelson	1 00
Best basket cut flowers, John Nelson	1 00
Second best, Isaac Miles	50
Best collection dahlias, Isaac Miles	50
Second best, John Nelson	25
Best collection lilies, John Nelson	50
Best collection roses, Isaac Miles	50
Second best, John Nelson	25
Best collection pansies, John Nelson	50
Second best, Isaac Miles	25
Best collection verbenas, John Nelson	50
Second best, Isaac Miles	25
Best collection asters, John Nelson	50
Second best, Isaac Miles	25
Best collection balsams, Isaac Miles	50
Second best, John Nelson	25
Best collection gladiolas, John Nelson	50
Best collection coxcombs	50
Greatest variety cut flowers, Isaac Miles	1 00
Second best, John Nelson	50
Best bouquet round, John Nelson	50
Second best, Isaac Miles	25
Best bouquet, flat, John Nelson	50
Second best, Isaac Miles	25
Best bouquet wild flowers, John Nelson	50

CLASS 48 — *Cut Flowers — Amateur List.*

Best floral ornament, Mrs. G. R. Lampard	$1 50
Second best, Kate Peffer	1 00
Best basket cut flowers, Kate Peffer	1 50
Second best, Mrs. C. H. Root	1 00
Best collection immortelles, Miss Olga Derber	50
Best collection dahlias, Kate Peffer	50
Second best, Olga Derber	25
Best collection roses, Mrs. E. W. Sanders	50
Best collection pansies, Mrs. M. M. Russell	50
Second best, Miss Olga Derber	25
Best collection verbenas, Miss Olga Derber	50
Second best, Mrs. C. H. Blanchard	25
Best collection asters, Miss Olga Derber	50
Second best, Mrs. C. H. Root	25
Best collection balsams, Miss Olga Derber	50
Best collection gladiolas, J. P. Roe	50
Second best, Kate Peffer	25
Best collection coxcombs, Mrs. G. R. Lampard	50
Second best, Mrs. C. H. Root	25
Best collection amaranthest	
Greatest variety of cut flowers, Kate Peffer	1 00
Second best, Mrs. C. H. Root	50
Best bouquet, round, Kate Peffer	50
Second best, Olga Derber	25
Best bouquet, flat, Kate Peffer	50
Second best, Mrs. C. H. Root	25

Best bouquet wild flowers, Olga Derber	
Second best, Edna Howlett	50
Best minature landscape, Mrs. David Howlett	25
Second best, Mrs. C. H. Blanchard	1 50
	1 00

CLASS 49 — *Professional List.* — *Plants in Pots and Urns.*

Best collection of green house plants, Isaac Miles	$2 50
Second best, John Nelson	1 50
Best collection foliage plants, Isaac Miles	1 50
Second best, John Nelson	1 00
Best 3 new coleus, Isaac Miles	50
Second best, John Nelson	25
Best collection geraniums, bronze, etc., Isaac Miles	1 00
Second best, John Nelson	50
Best collection geraniums, Zonale variety, John Nelson	1 00
Second best, Isaac Miles	50
Best collection double geraniums, Isaac Miles	1 00
Second best, John Nelson	50
Best collection single geraniums, John Nelson	50
Second best, Isaac Miles	25
Best oleander in bloom, Isaac Miles	50
Best display euonymus, Isaac Miles	50
Second best, John Nelson	25
Best display fragrant geraniums, John Nelson	50
Second best, Isaac Miles	25
Best single specimen double geranium, Isaac Miles	50
Second best, John Nelson	25
Best variety fuchias, Isaac Miles	50
Second best, John Nelson	50
Best single spec. fuchias, John Nelson	50
Second best, Isaac Miles	25
Best display roses, Isaac Miles	1 00
Second best, John Nelson	50
Best single specimen roses, Isaac Miles	50
Second best, John Nelson	25
Best display abutilon, Isaac Miles	50
Best display maranta, Isaac Miles	50
Best display bouvardia, Isaac Miles	50
Best display lantanas, Isaac Miles	50
Second best, John Nelson	25
Best display ferns, Isaac Miles	25
Second best, John Nelson	25
Best single specimen fern, Isaac Miles	50
Second best, John Nelson	25
Best variety carnations, Isaac Miles	50
Second best, John Nelson	25
Best double petunias, John Nelson	50
Second best—	50
Best hanging basket with plants, Isaac Miles	25
Second best, John Nelson	1 00
Best display cacti in variety, Isaac Miles	50
Second best, John Nelson	37
Best single specimen cacti, Isaac Miles	25
Second best, John Nelson	1 00
Best display begonias, Isaac Miles	50
Second best, John Nelson	25
Best single specimen begonias, Isaac Miles	12
Second best, John Nelson	1 00
Best display English ivy, Isaac Miles	25
Second best, John Nelson	50
Best display tuberoses in bloom, Isaac Miles	

Best display poincetta, Isaac Miles	50
Second best, John Nelson	25
Best calla lily in bloom, Isaac Miles	50
Best display caladiums, Isaac Miles	1 00
Second best, John Nelson	50
Best display smilax on trellis, Isaac Miles	50
Second best, John Nelson	25
Best palm, Isaac Miles	1 00
Second best, John Nelson	50
Best new plant, John Nelson	50
Second best, Isaac Miles	25
Best fernery, Isaac Miles	1 00
Second best, John Nelson	50
Best single specimen house plants, John Nelson	1 00
Second best, Isaac Miles	50
Best floral display of pot plants and cut flowers, Isaac Miles	75
Second best, John Nelson	50

CLASS 50 — *Amateur List.*

Plants in Pots.

Best collection green house plants, Mrs. P. Sawyer	$1 50
Second best, Mrs. D. Howlett	1 00
Third best, Mrs. E. W. Sanders	50
Best collection foliage plants, Mrs. P. Sawyer	1 00
Second best, Mrs. E. W. Sanders	50
Third best, Mrs. D. Howlett	50
Best oleander in bloom	
Best display zonale geraniums, Mrs. D. Howlett	50
Second best, Mrs. P. Sawyer	25
Best display fragrant geraniums, Mrs. P. Sawyer	50
Second best, Mrs. E. W. Sanders	25
Best display double geraniums, Mrs. P. Sawyer	50
Second best, Mrs. D. Howlett	25
Best display single specimen geranium, Mrs. D. Howlett	50
Second best, Mrs. F. Anderson	25
Best variety fuchias, Mrs. E. W. Sanders	50
Second best, Mrs. P. Sawyer	25
Best single specimen fuchias, Mrs. E. W. Sanders	1 00
Second best, Mrs. P. Sawyer	50
Best display roses, Mrs. D. Howlett	1 00
Best single specimen roses, Mrs. D. Howlett	50
Best variety carnations, Mrs. D. Howlett	50
Best display double petunias,	
Best display single petunias, Mrs. D. Howlett	50
Second best, Mrs. C. H. Blanchard	25
Best hanging basket plants, Mrs. P. Sawyer	50
Second best, Mrs. D. Howlett	25
Best display cacti in variety, Mrs. P. Sawyer	1 00
Second best, E. W. Sanders	50
Best single specimen cacti, Mrs. P. Sawyer	37
Second best, Mrs. D. Howlett	25
Best single specimen ornamental foliage, Mrs. P. Sawyer	50
Second best, Mrs. E. W. Sanders	25
Best display begonias, Mrs. P. Sawyer	1 00
Second best, Mrs. E. W. Sanders	50
Best single specimen begonias, Mrs. D. Howlett	25
Second best, Mrs. P. Sawyer	25
Best display latanas, Mrs. E. W. Sanders	50
Best specimen English ivy, Mrs. P. Sawyer	50
Best single specimen palm, Mrs P. Sawyer	50

Best new plant, Mrs. P. Sawyer	50
Second best, Mrs. Fr ancis Anderson	25
Best 3 palms, Mrs. P. Sawyer	50
Best 3 coleus, Mrs. P. Sawyer	50
Second best, Mrs. E. W. Sanders	25
Best 12 coleus, Mrs. P. Sawyer	50
Best poinsetta, Mrs. P. Sawyer	50
Best display caladiums, Mrs. P. Sawyer	1 00
Second best, Mrs. D. Howlett	50
Best smilax on trellis, Mrs. D. Howlett	50
Best fernery, Mrs. D. Howlett	50
Best single specimen house plant, Mrs. D. Howlett	1 00
Second best, Mrs. D. Howlett	25
Best display euonymus.	
Second best, Mrs. E. W. Sanders	25

DIVISION H — DOMESTIC MANUFACTURES, FINE ARTS, NATURAL HISTORY, ETC.

Superintendent — G. R. LAMPARD.

CLASS 51 — *Cabinet Work and Upholstery.*

Best bedstead, B. H. Soper	$ 50
Best sofa, spring seat, B. H. Soper	50
Best dressing bureau, B. H. Soper	50
Best writing desk, B. H. Soper	50
Best spring bed, O. McCorrison	50
Best school desk and seat.	
Best hat rack, O. McCorrison	50
Best set cane seat chairs, O. McCorrison	50
Best set chamber furniture, B. H. Soper	2 50
Best set parlor furniture, B. H. Soper	2 50
Second best, O. McCorrison	1 00
Second best chamber set, O. McCorrison	1 00
Best center table, marble top, B. H. Soper	50
Best easy chair, B. H. Soper	50
Best mirror, O. McCorrison	1 00
Best side board, B. H. Soper	1 50
Best display China, glass, etc., J. T. W. Decker	6 00
Best display silver ware, F. J. O'Brien	6 00
Best display jewelry stock, F. J. O'Brien	6 00

CLASS 52 — *Bookbinders', Paper Makers' and Printers' Work.*

Best ledger, John Hicks	$ 50
Best record book, any kind, John Hicks	50
Best specimen fancy binding, John Hicks	50
Best set books for farm accounts, John Hicks	50
Best book printing, not less than 48 pages, John Hicks	50
Best card printing, not less than 20 specimens, John Hicks	50
Best ornamental printing, not less than 3 specimens, John Hicks	50
Best poster printing, not less than 2 specimens, John Hicks	50
Best and greatest variety of work, John Hicks	1 50
Best set general account books, John Hicks	1 00

CLASS 53 — *Staple Goods and Household Manufacture.*

Best rag carpet, Mrs. J. M. York	$1 00
Second best, James Wilson	50
Best rag rug, Mrs C. Wilmot	50
Second best, Mrs. C. A. Pride	25
Best yarn rug, Miss N. G. Sturtevant	50
Second best, Mrs. Wilson	25
Best plain cotton knitting, Mrs. Theo. Grube	50
Second best. Mrs. Lucy Spoor	25
Best woollen knitting Mrs. James Wilson	50
Best fancy knitting, Miss Whittemore	50
Second best, Mrs. James Wilson	25
Best door mat, Mrs. C. A. Prid e	50
Second best, Mrs. C. Willmot	25
Best wool yarn, home-made, Mrs. James Wilson	50
Second best, Miss Olga Derber	25
Best pair woollen mittens, Mrs. S. B. Farnsworth	50
Second best, Mrs. Lucy Spoor	25
Best pair men's woollen socks, Mrs. Lucy Spoor	50
Second best, Mrs. J. L. Goodwin	25
Best pair women's woollen stockings, Mrs. James Wilson	50
Second best, Mrs. Lucy Spoor	25
Best specimen hand sewing. Mrs. E. W. Sanders	50
Second best, Mrs. S. B. Farnsworth	25

CLASS 54 — *Quilts.*

Best silk crazy quilt, Miss Anne Anderson	$ 50
Second best, Mrs. T. Hurlburt	25
Best log-cabin quilt, Mrs. Theo. Grube	50
Second best, Mrs. C. M. Damuth	25
Best worsted patchwork quilt, Mrs. L. M. Taylor	Diploma
Best cotton patchwork quilt, Mrs. I. W. Merritt	50
Second best, Mrs. E. Williams	25
Best quilt made by lady over 50 years of age, Mrs. E. J. Wilson	50
Second best, Mrs. L. M. Taylor	25
Best crochet spread, Lilly Loop	50
Second best, Mrs. T. Grube	25
Best knitted cotton spread, Mrs. I. W. Merritt	50
Second best, Mrs. Frank Pease	25
Best cotton crib quilt, Mrs. Anna Brown	50
Best darned web pillow sham, Mrs. C. A. Pride	50

CLASS 55 — *Embroidery.*

Best worsted and silk embroidered sofa pillow, Mrs. C. B. Crehor	50
Second best, Mrs. P. C. Peterson	25
Best arrosena embroidered banner, Mrs. W. L. Beckwith	50
Second best, Miss Clara Coffin	25
Best Kensington embroidered fine screen, Nellie Wright	50
Best chenille embroidered table scarf, Mrs. E. A. Blass	50
Best silk embroidered child's blanket, Mrs. T. H. Bubb	50
Second best, Mrs. L. C. Booth	25
Best appalique work in plush, Mrs. M. A. Stone	50
Second best, Mrs. C. Wilmot	25
Best work on worsted canvas, Amanda Hine	50
Second best, Mrs. P. C. Peterson	25
Best silk embroidered lambrequin, Lena Anderson	25
Best silk chenille embroidered panel, Mrs. W. L. Beckwith	25

CLASS 56 — *Cotton Embroidery.*

Best braided set of underwear, Mrs. T. Grube	$ 50
Best braided pillow and sheet shams, Mrs. T. Grube	50
Second best, Mrs. J. E. Root	25
Best Kensington embroidery in floss, Emma Bailey	50
Second best, Emma Bailey	25
Best outline work figures, Emma Bailey	50
Second best, Emma Bailey	25
Best cotton embroidered pillow sham, Mrs. L. M. Taylor	25
Second best, Mrs. J. E. Root	25
Best handkerchief point honiton, Mrs. S. A. Van Valkenburg	1 00
Best display point honiton, Mrs. S. A. Van Valkenburg	50
Best Kensington embroidered crewal and silk, Miss Clara Coffin	50
Second best, Miss Clara Coffin	25

CLASS 57 — *Crochet, Tatting Work, etc.*

Best crochet shawl, Mrs. C. M. Damuth	$ 50
Best child's carriage afghan, Mrs. C. H. Root	50
Best carriage afghan, Mrs. C. B. Crehor	50

CLASS 58 — *Fancy and Ornamental Goods.*

Greatest variety macrama work, Mrs. C. M. Damuth	$ 50
Best variety ornamental and hair work, Tillie Domansky	50
Greatest variety wax flowers, Alice Armstrong	50

CLASS 59 — *Misses' Department.*

Best 3 hemmed handkerchief, Miss Olga Derber	$ 50
Neatest darned stocking, Miss Olga Derber	50
Best specimen patch-work, Edna M. Howlett	25
Best dressed doll, Mamie Root	50
Best specimen pencil drawing, Georgiana Root	50

CLASS 60 — *Boys' Department.*

Best specimen wood carving, U. W. Groat	$ 50
Best specimen map drawing, Fred S. Hoaglin	50
Best specimen fret-work, without regard to age, G. W. Jones	1 50
Best specimen writing, Bennett Smith	50

CLASS 61 — *Natural History.*

Best collection conchology, Mrs. E. W. Sanders	1 00

CLASS 62 — *Works of Art.*

Best painting on plush or velvet, Mrs. Geo. Gould	$ 50
Second best, Clara Brainard	25
Best painting on satin, in oil, Clara Brainerd	50
Best painting on China, Mrs. S. B. Farnsworth	50
Second best, Cora McNair	25
Best painting on wood, Cora McNair	25

Best moulding in clay, Clara Brainerd	50
Second best, Clara Brainerd	25
Best exhibition sun pictures, Cook Ely	1 50
Best specimen business penmanship, Charles Hills	1 00
Second best, F. D. Cross	50
Best specimen off-hand flourishing, Hanlay Clough	1 00

Oil Paintings.

Best and largest collection Miss Annie Ambrose	$5 00
Best Wisconsin landscape, Mrs. F. C. Haddock	1 50
Best landscape original design, Alice Armstrong	1 50
Second best, Emma Olcott	1 00
Best copied landscape, Miss Annie Ambrose	1 50
Second best, Miss Annie Ambrose	1 00
Best portrait, Cora McNair	1 00
Best animal picture, Miss Hattie Ashley	1 00
Second best, Miss Ida E. Robinson	50
Best fruit picture, Frank L. Smith	1 00
Best painting on panel, Clara Brainerd	1 00
Second best, Frank L. Smith	1 00
Best painting on shell, Mrs. S. B. Farnsworth	50
Best painting on plaque, Mrs. L. M. Taylor	1 00
Best flower painting, Mrs. F. C. Haddock	50
Second best, Frank L. Smith	50

Water Color Paintings.

Largest and best collection, Frank L. Smith	$1 50
Best portrait without solar aid, Frank L. Smith	1 50
Second best, Frank L. Smith	1 00
Best India ink portrait, life-size, Frank L. Smith	1 50
Second best, Frank L. Smith	1 00

Crayon Work.

Largest and best collection, Frank L. Smith	$2 50
Best portrait, life-size, Frank L. Smith	1 50
Second best, Frank L. Smith	1 00
Best pastel portrait, Frank L. Smith	1 00
Best animal picture, Frank L. Smith	1 00

Pencil Drawings.

Largest and best collection, Frank L Smith	$1 50
Best landscape drawing, Frank L. Smith	1 00
Second best, Frank L. Smith	50

CLASS 63—*Textile Fabrics.*

Best exhibition mens' clothing, Eagle Clothing Store	$1 50
Best display machine knit goods, Ripon Knitting Works	1 00
Best display woollen goods, Ripon Knitting Works	1 50
Best display knit goods, Ripon Knitting Works	7 50
Best piece doeskin, Wm. Leard	1 00
Best piece of cashmere, Wm. Leard	1 00
Best piece satinet, Wm. Leard	1 00

DIVISION I — MANUFACTURES.

Superintendent — W. H. WOOLCOTT.

CLASS 64 — *Manufactures from Iron, Stone, Clay, etc.*

Best cast iron parlor grate, L. Dimpsey & Co	$1 00
Best wood-heating furnace, L. Dimpsey & Co	1 00
Best parlor stove, L. Dimpsey & Co	1 00
Best office stove, wood, L. Dimpsey & Co	1 00
Novelty Lock Co., made a very fine display of goods	Diploma.
Largest display monuments and head stones, C. D. Quaw	2 50
Best set draft horse shoes, Will Wyman	1 00
Best set road horse shoes, Will. Wyman	1 00
Best set trotting horse shoe, Will Wyman	1 00
Best collection drain tile, Fox River Tile Co	1 00

CLASS 65 — *Leather and Leather Manufactures.*

Best traveling trunk, G. C. Griffiths.....Diploma and	$1 00
Best carpet bag, Schmit Bros	50
Best ladies' satchel, Schmit Bros	50
Best double carriage harness, O. L. Brow.....Diploma and	1 00
Best single buggy harness, O. L. Brow	1 00
Best farm wagon double harness, O. L. Brow	1 00
Best single wagon harness, O. L. Brow	1 00
Best gent's riding saddle, O. L. Brow	50
Best ladies' riding saddle, O. L. Brow	50
Best horse collar, O. L. Brow	50
Best harness, O. L. Brow	50
Best display fancy buffalo robes, O. L. Brow	1 00
Best display fancy blankets, O. L. Brow	50
Best display rubber stamps, Miss Edgarton	1 00

CLASS 66 — *Wagons and Carriages.*

Best two-seat top family carriage, Thos. Neville	$2 50
Best single seat phaeton, J. L. Clark	2 00
Second best, Thos. Neville	1 00
Best single top buggy, end spring, J. L. Clark	2 00
Second best, Thos. Neville	1 00
Best top side bar buggy, Thos. Neville	2 00
Second best, J. L. Clark	1 00
Best single buggy, J. L. Clark	1 00
Second best, J. L. Clark	50
Best speeding buggy, Thos. Neville	1 00
Best combination spring wagon, J. L. Clark	2 50
Second best, Thompson & Wilson	1 50
Best business spring wagon, Thompson & Wilson	1 50
Second best, Gabe Streich	50
Best two-seat cutter, Thos Neville	2 00
Best single seat cutter, Thos. Neville	1 50
Best lumber wagon, Gabe Streich	1 00
Second best, Gabe Streich	50
Best logging sled. J. Gillingham & Son	1 00
Second best, J. Gillingham & Son	50

Best pair bobs, J. Gillingham & Son	1 00
Second best, B. F. & H, L. Sweet	50
Best display carriages, Thos. Neville	2 50
Second best, J. L. Clark	1 50
Best open buggy, Thompson & Wilson	1 00

CLASS 67 — *Carpenter and Cooper's Work.*

Best plain panel door, C. Foster & Co	$1 00
Best ornamental panel door, C. Foster & Co	1 50
Best window sash, one dozen, C. Foster & Co	1 00
Best window blinds, one dozen, C. Foster & Co	1 00
Best assortment tubs, Menasha Wooden Ware Co	50
Best one dozen pails, Menasha Wooden Ware Co	50
Best three tight barrels, Menasha Wooden Ware Co	50

CLASS 68.

Best cooking range, L. Dimpsey & Co	$1 50
Best coal stove, L. Dimpsey & Co	1 00

CLASS 69 — *Household.*

Best clothes wringer, J. Bacon	$ 50
Best butter worker, Curtis & Cornish	50
Best churn, Curtis & Cornish	50

ODDS AND ENDS.

Goods entered under the above heading were not classified in the premium list, but were thought to be worthy of mention:

Cooley creamer	L. Dimpsey & Co., Oshkosh.
Refrigerator	Baldwin Manfg. Co., Burlington, Vt.
Display of wall paper	I. B. Cloggett, Oshkosh.
Case of artists' materials	I. B. Cloggett, Oshkosh.
Display of Singer sewing machines	F. W. Bogk, Oshkosh.
Potato digger	H. & J. Nelson, Waupaca.
Display of musical instruments	Lampard & Son, Oshkosh.
Display manufactured tobacco	Catlin Tobacco Co., St. Louis.
Yaggy's Anatomical Study	Dr. J. D. Wyatt, Fond du Lac.
Carded wool wadding	A. Spiering, Appleton.
Display of White sewing machines	T. A. Coleman, Oshkosh.
Display of Davis sewing machines	G. E. Heup, Menasha.
Case horse shoes	W. F. Wyman, Oshkosh.
Case roller skate wheels	C. Dalton & Son, Oshkosh.
Display bicycles	J. A. Hinman, Oshkosh.
Display rubber hose	E. L. Buckingham, Oshkosh.
Incubator	P. C. Gallup, Oshkosh.
Bank cutter stuff	H. H. Clemens & Co., Oshkosh.
Display musical Instruments	S. N. Bridge & Son., Oshkosh.
3 pine plank	Radford Bros., Oshkosh.
Display of starch	Muzzy Starch Co., Elkhart, Ind.
Display crackers and confectionery	Woodard & Stone, Watertown.
Display tents, awnings, flags, etc	Charles Sands, Oshkosh.

DIVISION J—MACHINERY.

Superintendent—H. A. BABCOCK.

Eureka mower.....J. F. Carey, Madison.
Standard harvester and binder.....Milwaukee Harvester Co., Milwaukee.
Junior harvester and binder.....Milwaukee Harvester Co., Milwaukee.
Iron mower.....Milwaukee Harvester Co., Milwaukee.
Traction engine.....W. & J. Rumely, La Porte, Ind.
Separator.....W. & J. Rumely, La Porte, Ind.
8 Imperial plows.....C. Kurblack, Milwaukee.
1 sulky plow.....C. Kurblack, Milwaukee.
Broadcast seeder.....Appleton Manfg. Co., Appleton.
Badger sweep feed mill.....Appleton Manfg. Co., Appleton.
Badger power shutter.....Appleton Manfg. Co., Appleton.
Badger hand sheller.....Appleton Manfg. Co., Appleton.
1 harrow.....Appleton Manfg. Co., Appleton.
3 cast grinding mills.....Appleton Manfg. Co., Appleton.
1 hay carrier.....Appleton Manfg. Co., Appleton.
2 cast hitching posts.....Appleton Manfg. Co., Appleton.
1 gate roller.....Appleton Manfg. Co., Appleton.
1 band wheel jack.....Appleton Manfg. Co., Appleton.
1 Perry reaper.....Wycoff & Tuttle, Perry, N. Y.
1 Perry mower.....Wycoff & Tuttle, Perry, N. Y.
1 self dump rake.....Wycoff & Tuttle, Perry, N. Y.
1 rotary disc harrow.....F. P. Rogers, Fisk.
1 cultivater and horse hoe.....Appleton Manfg. Co., Appleton.
1 harvester and binder.....J. F. Seberling, Akron, O.
1 mower, enclosed gear.....J F. Seberling, Akron, O.
1 light binder.....Walter A. Wood, Hoosic Falls, N. Y.
1 enclosed gear mower.....Walter A. Wood, Hoosic Falls, N. Y.
1 binder.....Harer & Gamble, Milwaukee.
1 mower.....Harer & Gamble, Milwaukee.
1 twine binder.....Plano Manfg. Co., Plano, Ill.
1 twine binder.....Plano Manfg.Co., Plano, Ill.
1 mower.....Plano Manfg. Co., Plano, Ill.
1 spring tooth cultivator.....Albion Manfg. Co., Albion, Mich.
1 spring tooth wheel harrow.....Albion Manfg. Co., Albion, Mich.
1 spring tooth seeder.....Albion Manfg. Co., Albion, Mich.
1 sulky hay rake.....Albion Manfg. Co., Albion, Mich.
1 adjustable tooth drag.....James Adams, Albion, Mich.
Engines, threshers, binders and mowers.....T. A. Coleman, Oshkosh.
Farm engine.....Russell & Co., Milwaukee.
1 thresher.....Russell & Co, Milwaukee.
1 saw mill.....Russell & Co., Milwaukee.
4 feed cutters.....Smalley Manfg. Co., Manitowoc.
Feed mill.....Smalley Manfg. Co., Manitowoc.
Drag saw.....Smalley Manfg. Co., Manitowoc.
Horse power.....Smalley Manfg. Co., Manitowoc.
3 plows.....Smalley Manfg. Co., Manitowoc.
1 tread horse power.....Smalley Mafng. Co., Manitowoc.
Engine and separator.....Nichols & Co., Battle Creek, Mich.
Display haying tools.....Eagle Fork Co.
1 Van Brunt seeder.....C. C. Vosburg, Oshkosh.
3 plows.....C. C. Vosburg, Oshkosh.
1 sulky plow.....C. C. Vosburg, Oshkosh.
1 spring tooth cultivator.....H. O. Lewis, Portage City.
1 excelsior twine binder.....Horver & Gamble, Miamiburg, Ohio.
1 excelsior mower.....Horver & Gamble, Miamiburg, Ohio.
6 hand plows.....Gabe Streitch, Oshkosh.

1 sulky plow .....Gabe Streitch, Oshkosh.
1 sulky corn cultivator.....Gabe Streitch, Oshkosh.
1 seeder. .....Gabe Streitch, Oshkosh.
2 drags .. ..Gabe Streitch, Oshkosh.
1 iron harrow.. .....James Adams, Oshkosh.
1 thill coupling .....James Adams, Oshkosh.
3 feed cutters .....James Little & Son.
3 feed mills .....James Little & Son.
2 jacks.....James Little & Son.
1 Champion feed cutter.....Chas. Silberjohn, West Bend.

SECRETARY'S WARRANT ACCOUNT

FOR THE YEAR 1885.

No.	*To whom and for what.*	*Amount.*
1	W. H. Cook, superintendent's services	$20 00
2	A. J. Kreter, superintendent athletic sports	3 00
3	C. O. Josslyn, boarding officers, annual meeting	17 00
4	A. C. Austin, secretary, three months salary to January 31st, 1885	250 00
5	A. C. Austin, secretary, expense account	19 00
6	E. W. Viall, 300 postal cards and printing	4 50
7	Postage stamps	20 00
8	Postage stamps	20 00
9	Postage stamps	20 00
10	Gary & Harmon, insurance	45 00
11	Postage stamps	10 00
12	A. C. Austin, secretary, three months salary to April 30th	250 00
13	Postage stamps	5 00
14	Postage stamps	5 00
15	Nellie Burke, Roman racing	900 00
16	N. H. Biddlecom, pacing race	50 00
17	C. L. White, 2:37 and 2:30, trotting races	60 00
18	Not drawn.	
19	Geo. A. Fuller, free-for-all, trotting race	150 00
20	P. H. Davis, 3:00 trotting race	100 00
21	C. Growly, 2:30 and free-for-all races	90 00
22	Dr. D. W. Rowlands, 2:45 and 2:37 trotting races	180 00
23	Not drawn.	
24	E. S. Josslyn, 2:37 race	30 00
25	J. W. Flack, 2:40 stallion trotting race	30 00
26	David Johnson, free-for-all trotting race	45 00
27	J. D. Flack, 2:35 pacing race	100 00
28	T. E. Crane, 2:35 pacing race	10 00
29	C. C. Ward, 2:45 trotting race	50 00
30	A. W. Patten, 2:45 and 3:00 races	80 00
31	John Paige, 2:30 race	70 00
32	E. R. Hammond, 3:00 race	10 00
33	P. Delaney, green stallion race	30 00
34	C. Hazen, expense bills $84.50, donated $40	44 50
35	W. S. Hazen, band team	12 00
36	C. Hazen, Hazen Bros. band	150 00
37	A. A. Loper, services as superintendent	16 20
38	H. L. Bedient, stove and furniture	8 00
39	H. Saran, bill posting	8 00
40	Edwin Baker, watchman	12 50
41	P. H. Slattery, assistant secretary	15 00
42	J. Weidner, entry book	4 00
43	R. A. Spink, Arion band	100 00
44	J. A. Everett, police	7 00
45	J. Hurst, police	7 00
46	O. McCorrison, repairing chairs	5 00

No.	*To whom and for what.*	*Amount.*
47	J. H. Hicks, carpenter and assistant superintendent	$38 00
48	J. H. Hicks, carpenter and assistant superintendent	34 00
49	E. H. Hicks, carpenter and assistant superintendent	34 00
50	C. P. Houghton, assistant superintendent	14 00
51	J. F. Bishop, watchman	7 00
52	W. W. Waterhouse, assistant secretary	25 00
53	R. Kimball, watchman	7 00
54	John Hicks, printing and stationery, $177.29, less $42.50 for privilege of printing premium list	134 79
55	Oshkosh Stock Grower's Association for rent of grounds, $371.74 less 135.00 allowed on insurance on exposition building	241 74
56	Brainard & Hinman, dinner tickets	59 20
57	W. Diacon, draying, driving posts, etc	23 00
58	W. Diacon, assistant marshal	$10 00
59	John Haynes, assistant at gate	8 00
60	W. H. Cook, superintendent	21 00
61	E. W. Viall, treasurer and assistant	50 00
62	F. V. Viall, brooms, pails, twine, etc., as per bill received	3 55
63	Times Printing Co	149 65
64	J. E. Sanders, assistant at gate	8 00
65	John Blake, police	8 75
66	J. L. Moore, assistant superintendent	18 00
67	E. R. Martin, superintendent	18 00
68	Jas. Sullivan, police	7 00
69	P. A. Dale, assistant superintendent	14 00
70	S. P. Gary, insurance	77 00
71	Biraly & Son, two gold medals	100 00
72	W. H. Hunter, carpenter	7 50
73	S. Wood, assistant at gate	8 00
74	M. Dorsey, cleaning vaults	12 75
75	H. Van Valkenburg, police	7 00
76	J. N. Ruby, assistant marshal	12 00
77	W. Lansing, bill posting	5 12
78	M. McCarty, watchman	7 00
79	S. R. Moody, assistant secretary	15 00
80	J. H. Hicks, moving shafting	4 00
81	W. D. Gilbert, police	9 62
82	F. M. Powers, assistant secretary	10 00
83	E. H. Crowell, police	7 87
84	Edgar Stilson, straw	100 00
85	Albert Brezee, police	7 00
86	T. Thomas, premiums	11 25
87	Clara Coffin, premium	1 00
88	J. P. Rowe, premium	14 25
89	Frank L. Smith, premium	20 00
90	Clara Brainerd, premiums	2 50
91	James Brainerd, premiums	15 00
92	O. Angell, premiums	9 50
93	H. L. Lawson & Bro., insurance	22 50
94	Kohlman Bros, printing	17 50
95	C. W. R. Rockman, assistant secretary	15 00
96	L. Dimpse, premium	6 50
97	F. L. Goodwin, premium	2 25
98	E. Ross, hay	263 23
99	A. L. Osborn, clerk of races	10 00
100	L. D. Harmon, insurance	75 00
101	J. F. Morse estate, 150 feet shafting and lining up	121 50
102	J. M. Hutchinson, hardware	10 28
103	S. R. Merrill and wife, premiums	6 50
104	Thos. Riley, police	7 00
105	O. D. Peck, premium	10 00

No.	*To whom and for what.*	*Amount.*
106	H. Floyd, premiums	$12 75
107	Vanass Potter, superintendent forage	12 25
108	M. Shepperd, hauling forage	9 00
109	Mrs. T. Hurlburt, premium	25
110	J. S. Cross, premium	7 00
111	M. H Mantor, premiums	2 00
112	J. McKeen, premium, $5; asst. superintendent $10	15 00
113	G. R. Lampard, superintendent and assistants	51 17
114	R. Bennett, premium	1 50
115	C. R. Nevill, insurance	22 50
116	C. E. Rublee, premiums	7 14
117	J. T. Jones premiums	4 00
118	Mrs. S. A. Van Valkenburg	1 50
119	B. H. Soper, premium	9 50
120	Emma Bailey, premiums	1 50
121	W. D. Lawrence, premiums	2 00
122	Tille Domanski, premium	50
123	A. Hine, premium	50
124	R. H. Sawyer, assistant secretary	15 00
125	W. C. Wolcott, premiums	6 12
126	Mrs. D. & Edna Howlett, premiums	9 00
127	Mrs. F C. Haddock, premiums	2 00
128	Thomas Davis, premiums	9 50
129	D. Conling, police	7 00
130	M. Snell, premiums	5 50
131	Henry Hansen, laborer	13 12
132	P. C. Gallup, premiums	3 75
133	M. Wolverton, assistant at gate	8 00
134	Mrs. Lucy Sporr, premium	1 25
135	Mr. and Mrs. E. W. Sanders, premium	9 50
136	Mrs. Geo. Gould and Mrs. Crahone, premium	5 50
137	D. Huntley, superintendent and assistants	26 00
138	Mrs. E. P. Sawyer, premiums	14 62
139	James Dougherty, premiums	6 50
140	E. J. Smith, prem. 50c; Georgianna Root, prem. 50c; Mamie Root, prem. 50c; Mrs. C. H. Root, prems. $16.25	17 75
141	H. W. Wolcott, superintendent	12 00
142	M. B. Green, premiums	24 00
143	Dale Bros., premiums	2 50
144	W. Wyman, premiums	3 00
145	Cora McNair, premium	1 50
146	Stone & McConnell, premiums	45 00
147	F. J. O'Brien, premiums	12 00
148	E. Manuel, premiums	1 50
149	John Bonnett, premiums	9 00
150	E. S. Josslyn, ribbons	28 88
151	Geo. Stroup, premiums	22 50
152	O. L. Brow, premiums	7 50
153	W. J. Quick, premiums	10 50
154	Uriah Stroup, premiums	21 00
155	J. J. Moore, superintendent grounds and team	54 00
156	John Westfall, laborer	13 75
157	J. C. Fisher, premiums	4 50
158	Nellie Wright, premiums	50
159	M. Cowling, premium	2 50
160	Sievert & Paterson, hack	4 00
161	A. C. Austin, 3 months' salary to July 31, '85	250 00
162	F. B. Claggett, chloride lime	40
163	Mrs. T. Grube, premiums	3 75
164	I. C. Knapp, premium	3 50
165	Anna Anderson, premium	1 25
166	E. F. Plunket, premium	5 00

No	To whom and for what.	Amount.
167	Mrs. A Rollins, usher	$7 50
168	Noble Dougherty, premiums	42 25
169	Carl and Olga Derber, premiums	9 75
170	Mrs. W. L. Beckwith, premium	75
171	Emma Olcott, premium	1 25
172	A. B. Wade, superintendent	18 00
173	Joel Johnson, premium	3 00
174	Mr. and Mrs. Jas. Wilson, premiums	4 31
175	O. McCorrison, prsmiums	4 50
176	Mrs. M. J. Smith, $4.06; Mrs. A. Brown, 50 cts	4 56
177	Mrs. S. B. Farnsworth, premiums	1 75
178	E. D. Knapp, receiver of tickets, grand stand	10 00
179	Isaac Miles, premiums	31 12
180	A. Humphrey, premiums	5 50
181	Morgan Bros. & Co, lumber	82 02
182	C. D. Quaw, premium	2 50
183	Susie Rogers	7 50
184	H. H. Pierce, premiums	3 25
185	Wm. Leard, premiums	3 00
186	J. R. Bloom, bill posting	10 46
187	Nelson Olin, premiums	17 50
188	L. Hinman, premium	2 50
189	A. Sweet, premium	3 00
190	M. Matterson, premium	8 50
191	John Athearn, premiums	25 00
192	Follett & Stanley, power for running shafting	40 00
193	A. Leberman & Co., bill posting	6 00
194	W. J. Bendixon, bill posting	1 00
195	Mrs. C. H. Blanchard, premiums	10 25
196	Western Farmer, advertising	25 00
197	Stevens Point Journal, advertising	10 00
198	Wm. Roche, errand boy	5 00
199	First National Bank, interest on note of $3,000	240 00
200	T. D. Cross, premiums	2 50
201	F. C. Arnold, secretary	5 00
202	S. S. Keese, premium	7 50
203	Sprague & Cotter, hack, $4; livery, $1	5 00
204	Mary L. Edgerton, premium	1 00
205	A. Sanford, premiums	7 50
206	H. F. Hughes, premium	1 50
207	W. W. Kriklin, premium	10 00
208	H. A. Babcock, premiums	38 50
209	I. Bacon, premium	50
210	C. Hazen, note, $600; interest, $22.80	622 80
211	Mrs. C. H. Blanchard, premium	50
212	J. Clements, watchman	12 50
213	W. Keinast, premium	50
214	L. S. Tuttle & Bro, Ins	22 50
215	Lilly Loop, premium	50
216	S. H. & A. E. Joiner, premiums	48 50
217	J. H. Haigh, premium	2 00
218	Bennett Smith, premium	50
219	Mrs. I. W. Merritt, premium	1 00
220	Mrs. Lampard, premium	2 00
221	Mrs. M. M. Russell, premium	50
222	Mrs. Ambrose, premiums	7 50
223	J. C. Kizar, premiums	88 50
224	Ripon Knitting Works, premium	10 00
225	J. E. Owens, premium	28 00
226	Strang & Wells, premium	47 50
227	T. D. Stone, posting bills	4 25
228	Mr. and Miss Peffer	44 25

No.	To whom and for what.	Amount.
229	John Hicks, premiums	$6 50
230	Yancy & Higgins, premiums	5 00
231	Mrs. E. R. Martin, premium	1 50
232	Mrs. C. A. Pride, premium	75
233	James Morrison, premium	3 50
234	Alice Armstrong, premium	2 00
235	John Nelson, premium	29 62
236	W. F. Pierce, premium	4 75
237	T. Neville, premium	13 50
238	F. N. Appleyard, premium	26 50
239	Chester Hazen, premiums	83 64
240	Mrs. A. E. Bloss, premiums	50
241	C. O. Josslyn, Geo. Harding, hotel bill	9 50
242	John O'Brien, premium	8 00
243	Hattie Ashley, premium	1 00
244	G. W. Washburn, premiums	51 00
245	G. W. Washburn, premiums	12 50
246	P. G. Furman, premium	9 00
247	Rufus B. Kellogg, premium	25 50
248	G. W. Jones, premium	1 50
249	O. J. Angus, premium	8 57
250	John Gardnier, premium	22 50
251	Clark & Chamberlin, premium	21 00
252	John Edwards, premium	28 50
253	E. M. Brainard, ticket agent grand stand	8 00
254	Jas. W. Brown, hack	4 00
255	Wisconsin Telephone Co	10 00
256	T. J. Norton & Bro., premium	22 50
257	Mrs. C. A. Pride, premium	50
258	Peter Gratten, premium	5 00
259	Mrs. L. M. Taylor, premium	2 00
260	Mrs. C. M. Damuth, premium	1 25
261	H. Clough, premium	1 00
262	Dr. H. B. Dale, premium	7 50
263	J. N. & Fred. Hoaglin, premiums	42 31
264	J. E. Williams, premium	3 68
265	S. D. McMillan, premium	27 50
266	Mrs. C B. Lambert, premium	50
267	Clark & Chamberlain, premium	2 00
268	G. P. Cronkhite, premium	5 00
269	J. W. Morse & Son, premium	73 50
270	James Clements, coal and draying	4 25
271	N. P. Kellogg & Son, premiums	7 00
272	Barber Randall, premiums	31 50
273	S. D. Macomber, premiums	7 00
274	Ed. Largay, police	7 00
275	H. W. & C. M. Kellogg, premiums	5 50
276	Mrs. J. W. York, premium	1 00
277	Mr. and Mrs. L. C. Booth, premium	1 81
278	Pat Delaney, premium	7 50
279	John Grissman, premium	10 00
280	Bolas & Hadden premiums	39 00
281	Mrs. C. Wilmot, premium	1 00
282	Gillette & Moore, premiums	43 00
283	Fred Fisk, premiums	5 00
284	J. L. Fiske, superintendent and assistants	47 05
285	J. Gilligham & Son, premiums	2 50
286	Mrs. Milan Ford, premium	2 06
287	P. T. Walker, premium	7 50
288	Geo. LaMaure, premium	3 50
289	J. O. Garrity, driving Robin in race per order judges	10 00

No.	*To whom and for what.*	*Amount.*
290	John J. Williams, premiums	$26 00
291	E. W. Viall, freight on books	13 90
292	Crany's Grocery, pails	1 15
293	J. F. W. Deiker, premium, $6; crockery, $3.40	9 40
294	Ida E. Robinson, premium	50
295	Wm. Perkins, premium	9 50
296	E. E. Curtis, premiums	21 00
297	Palmer & McLaren, insurance	30 00
298	Mrs. J. K. Terrill, premium	1 25
299	Chas. Hill, premiums	19 50
300	Geo. Harding, premiums $42; railroad fare, $7.50	49 50
301	E. Largay, watchman	1 75
302	Cook, Brown & Co., coal	4 50
303	Gabe Streich, premiums	1 50
304	Mrs. P. C. Peterson, premium	50
305	James Clements, coal and carting	1 00
306	C. E. McConnell, premiums, $40.50; superintendent, $18	58 50
307	Mrs. J. K. Terrell, premium	1 00
308	Louis De Foe, sprinkling street in front of fair grounds	3 00
309	G. F. Schmidt, bill posting	4 95

TREASURER'S REPORT.

TREASURER E. W. VIALL'S REPORT FOR 1885.

RECEIPTS.

Cash balance from 1884	$50 27
Cash borrowed of Chester Hazen	600 00
Insurance refunded	66 00
Entrance fees at fair	700 00
Rent of grounds, $363; six season tickets, $12	375 00
Grand stand receipts	438 17
Railroad coupons	112 00
Life membership	25 00
Frank Hoyt	1 00
Gate receipts	4,544 70
State appropriation	2,100 00
	$9,012 14

DISBURSEMENTS.

Total amount of orders drawn	8,935 19
Balance on hand	$76 95

GOVERNOR RUSK'S ADDRESS AT THE NORTHERN WISCONSIN FAIR, SEPTEMBER, 1884.

Governor Rusk was introduced by Speaker Finch as follows:

Ladies and Gentlemen—I have the honor and extreme pleasure now of introducing to you His Excellency, Jerry Rusk, Governor of the State of Wisconsin, to my certain knowledge a hard-working, pains-taking Governor, an honest man, "the noblest work of God" in these degenerate days.

Governor Rusk spoke as follows:

Ladies and Gentlemen—It is with pleasure that I meet you here to-day in the northern part of Wisconsin. I am thankful to your society for inviting me to come here to meet the farmers of this portion of the state. Wisconsin is now one of the best states in the Union. We are certainly ahead of one-half of the states making up this Union. In earlier days we turned our attention entirely to the raising of grain and potatoes as a matter of profit. Latterly the grain raising belt has passed further on. It has gone to Minnesota and Dakota and still further west. Our farmers have turned their attention to producing stock as a matter of profit. Since we joined that roll our farmers have become a great deal more prosperous. We stand foremost as a dairy state to-day. No state in the Union surpasses Wisconsin. It is said that Canada is ahead of us in the manufacture of butter and cheese. I can hardly believe that. That has been the report. I don't know how it happens unless it is because some of our energetic farmers went over into Canada and started them in business; but I will say we as a state stand foremost in that industry in this country, and I think it will be a very short time under the present arrangements until we will be ahead of Canada. Now I will give

you the reason why I think Canada has ranked so high. They have paid great attention to the raising of their grades of butter and cheese. They have employed experts to perform that duty.

They have about the same climate that we have, the same water, the same grass, which go to make up the flavoring qualities of butter and cheese. The animals in this state are healthy and produce a very wholesome quality of milk. The reason we are ahead is because we have climate, water and grass and grain suitable. Now, my friends, this year the farmers are extremely prosperous. They have a corn crop and it is secured; it is beyond the reach of frost; and I wish to say that yesterday while I was at Madison, the Democratic party convened in convention, and some of them complained that I ought to control the weather and not have it so hot, they complained it was extremely hot, and I was responsible for it. I said: I will accept the situation and it is very hot, extremely hot for politicians, but it is just right for farmers. So if I had any influence it has been in the interest of hot weather so your corn crop might mature and you would have an abundant crop. The distinguished gentleman who introduced me I think overdone it. I have tried since I have been Governor to be honest and faithful and I hope I have succeded. I can't say positively whether I have or not until the campaign is over and I see what they say about it. Farmers, I feel an interest in you. I was raised on a farm. I was not raised as might be said, between two corn rows, but I saw something marked in your exhibition here, Gen. Butler, that was raised between two corn rows, weighing 250 pounds, and it is the first time that I knew Gen. Butler could play the *role* of a pumpkin. It is a very large sized one; but further along, with no mark on it, I saw one that was a little larger. Now, my friends, what we want to do is to produce the best corn, the best cattle, the best of everything that is produced in the United States. We have the country and we can do it if we are determined to do it; we have the intellect, and determination, all it requires is to say it shall be done and it will be done.

I traveled last year west to the Pacific slope. I desired to

see whether that country west was better than this. I had been east and south. I had made up my mind that we had the spot of all other spots so far as I had seen. In going west, to my utter astonishment it commenced petering out as soon as we left this state, until it petered clear out, and there was not anything for eight hundred miles, and then it commenced petering in a little; but it never got half way up to Wisconsin. On that trip I had the honor of accompanying a large foreign delegation of professors and monied men, and on that trip I had a chance to show them that I was a professor also. We passed along from town to town and everybody was out to see us, and we came along where there was a threshing machine running. They said there is none of this party can run a threshing machine. I said I will not take that banter, and I went and ran the machine. One of my German friends, a professor, rushed up and said: "Were you educated in this country?" I said yes. He said "I didn't know they taught in this country in the schools how to run machinery and that kind of thing." Why my dear sir, I said, Professor, they taught that in the school that I went to and I was a professor. I have run a threshing machine, and I am not ashamed to own it, for six years as a business. I know when we have a good crop we made more money than when we had a poor one. To make good farmers it requires attention, careful preparation of your land, good seed and rain and sunshine; and with the soil we have we will have a better crop than is produced in any state in the Union, to my knowledge. Allow me to thank you for the privilege of being here among you and speaking a few words to you, and as long as I am permitted to occupy the position I now occupy I shall stand by the farmer who is the first in the land. Without the prosperity of the farmer no business is prosperous. It first starts with him, then it reaches all classes of labor and all classes of business. Thanking you, I close.

EX-GOVERNOR FAIRCHILD'S ADDRESS AT THE NORTHERN WISCONSIN FAIR, SEPTEMBER, 1884.

Ex-Governor Fairchild spoke as follows:

Mr. President, Fellow Citizens—I am as well aware as man can be that audiences at agricultural fairs generally consider the speech or address pretty much of a nuisance. I never listened to one in my life, except in old official days when I was compelled to sit on the stand and do so, but I never listened to one voluntarily, and I will pledge you my word that if you will listen to me to-day, you will probably never again listen to a speech unless you find some other man whose address you like better.

When I came to Oshkosh last night I first learned that I was expected to say a few words on the grounds to-day therefore, I am without any set address, without any special preparation for, and I am in very much the condition of the boy in the army during the war who was brought before his colonel for having shown the "white feather" in battle, and when he was asked what he had to say for himself, he said, "Colonel, you ought not to expect much of me, I am nothing but a drafted man," so am I, yet I accept the draft.

I was once a farmer myself, and although, perhaps, you may not believe it, I can boast that I made more per acre in my first year of farming than any farmer in Wisconsin. I grew more wheat and got a better price than any man of you upon a poorer farm. I had a great old breaking plow with four yoke of cattle to break up the land, a very poor cross plow to do the other part of the work. I worked exactly two days on my farm. One day I hauled rails with a pair of long-eared, long-legged mules. The next day I drove the breaking team. I never looked in my life so anxiously to see the sun go down as I did that afternoon that that day's work might be finished. The next morning I left the farm and never did another day's work on it. I left it to

my partner and went to the mines of California. It was straight digging in the mines and I knew how to do that. We had a good crop of winter wheat sowed in March, and I sold my 700 bushels of wheat for $4,900 in hard gold, and I sold my barley for 25 cents a pound.

I say that I am not prepared to make a speech, but I am somewhat in the condition of that man who was called upon unexpectedly to make an address and he declared that he was entirely unprepared and he pulled out of his pocket the manuscript all prepared for a set speech. I have in my hand, not a prepared address, but a draft for a few words at the Burlington fair. I thought I would investigate somewhat the condition of the state of Wisconsin as an agricultural state, thinking that it might interest the farming community. For many years of my life, as many of you know, I was in the consular service and became addicted to statistics. It was one of my duties to make out tables of them in order that the people of the United States might be posted in regard to what was going on in my consular district, and I have been very much surprised and very much pleased at the result of the short investigations I made as to the progress of Wisconsin in an agricultural point of view. We have made enormous progress, equal to that of any state in the Union, and we have all of us, farmers and those who follow other callings, great reasons to be satisfied with the condition of our state as compared with twenty or thirty years ago.

If I don't bore you I want to show you in brief what we have been doing. The total of land in farms in 1850 was 2,976,000 acres. In 1880 it was 15,353,000 acres. Average size of farms in 1850 was 148; average size of farms in 1880, I am glad to say, was only 114 acres to the man. At times in my life I been somewhat worried when I have learned of the vast holdings taken up by one man, the vast farms owned by single men and I was very much afraid our land was to be absorbed by the great farmers crowding out the small farmers. I have been glad to see at every census every ten years the number of small holdings has increased and the number of large holdings has decreased. The great

farms have been parcelled out to other men and more men are actual owners of the soil.

The value of farms in 1850 was $28,528,000; in 1880 it was $35,700,709. That is an enormous increase, from twenty-eight millions to three hundred and fifty-seven millions. The different crops we have raised were: in 1850, we raised 3,413,000 bushels of oats; in 1880, it was 32,905,000 bushels of oats. Rye ran from 81,000 in 1850, to 2,298,000 in 1880. In 1850 we raised only 4,286,000 bushels of wheat; in 1870 we raised 25,606,000 bushels; in 1880 there was a decrease, for we only raised 24,844,000 bushels of wheat. Corn in 1850 amounted to 1,988,000 bushels; in 1880 it amounted to 34,905,000 bushels, showing an enormous increase. We have increased our production of corn in a very much greater proportion than we have wheat. I want to say here, that two years ago when I returned from Europe after a ten years' absence, when traveling through Wisconsin, when the crops were all up, the first thing that struck me was, that I missed the great wheat fields of old, and in the southern part of this state the farmers have very much decreased the acreage of wheat and increased the acreage of corn, and I am glad to say they have grown very much richer on corn than on wheat.

Of wool, we had 253,963 pounds in 1850; in 1880, 700,016,000 pounds. Hay from 127,500 we run up to nearly 2,000,0000 tons in 1880. Hops from 15,000 to 2,000,000 pounds; tobacco from 1,268,000 to 10,608,000 pounds. You will see we have made a very large increase and have abundant reason to be satisfied with the progress of the state of Wisconsin and I tell you my friends, from my own knowledge, from my own observation on the other side of the water, there are no people on the face of God's footstool that are so blessed by Divine Providence as the good people of our state; there are no people so prosperous as ourselves, as well clothed, well fed, well educated and happy with the luxuries of life as are the people of this blessed country of ours. We have resources beyond measure, and we have an institution in this country that brings out the last bit of energy in a man. Every man stands on his own two feet independent. There

is no position in life that is not open to him. Across the water in England—and I have no doubt there are men here that know more about it than I do — it is different. I took great pleasure at times passing through England and observing the state of the farms there. As you know, there are scarcely any farmers in England who own the land they till. The man who does not own his own land is not equal in all that goes to make the man, and has not equal facilities for prosperity in this world as the man who owns his own piece of God's soil. The man who has to pay a large rent, from one pound to two pounds, three pounds per acre, cannot compete with the man who owns his own soil and pays nothing upon it except the ordinary taxes. It would be a blessed time for England — and I hope the time will come, and I think it will some day—when the great mass of the tillable land will be owned in fee simple by the men who work the farms in England. That would put them in a position to enjoy life and be a great deal more prosperous than they are to-day. There are splended farms in England as you Englishman all know, and every farmer in this land could go to England and watch the operations of an English farm and learn something every day in the year. There is no waste, they are careful, they are prudent. They have to be prudent in order to make both ends meet and lay up a little money. There is more waste in the farms of the extreme west.

Speaking as a man who has been absent many years, I have observed more prudence, more saving among the farmers of Wisconsin than formerly. You go further west and you find a greater degree of shiftlessness and carelessness. It pertains to the extreme western life always. From England you go over to France and there almost every man that tills the soil owns the soil. Almost every farmer owns his own farm, but they are not any larger than your thumb. You could not exercise one of these fancy horses on a farm in France. The whole country is cut up into small patches. As you travel through it the farms look about as wide as between these two posts — a little strip of land. There will be hundreds of farms where we will have one farm. Their farms, I think, are too small. If England is a thrifty farm-

ing country it can learn something from France, for of all the saving and carefulness you see it in France. There is not a single spear of grass lost, not one single inch of land left to go to waste, not one single fence corner, for there are no fences; nor hedges. The farms are so small that they must till every single inch of it in order to live. Generally when a man dies in France his property is divided equally among the children. Generally there is but one child in the family that lives, very rarely two, very seldom three, almost never four, five would be a wonder and six would be a thing to go and look at. The farms are not always divided up, because there are not more than one or two children in the family, yet the French farmer is one of the closest living men in the world. He never thinks of killing a fat chicken and putting it on the table. It must be sold in order that money may be had to go into the family. The crop is very small. They live on the coarsest food with their sour red wine, which of itself is quite sustaining. They sell all the best product of the farm. They eat the balance or feed it to the cattle or hogs.

Now pass from France over into Spain if you want to find shiftless farming. To-day there are tens of thousands of farmers in Spain that are plowing with the same old root of tree that they plowed with in Pharaoh's time.

I have seen them by the hundred scratching a little furrow as wide as my hand and two or three inches deep. Yet with that, when they have a good rainy season, they raise good crops. To-day they are using the sickle there as your grandfathers did. I never saw a cradle there. I never saw a threshing machine at work there, and I traveled many miles in their agricultural districts. I have seen hundreds and hundreds of little corrals as they call them out west, with horses and mules driven in and treading out the grain just exactly as they did in the time of Pharaoh in Egypt. They raise a good crop but without our farm machinery, without our conveniences they make very slow progress. A Yankee in Madrid who has been there nineteen years trying to build up a business of selling machinery, told me he had almost built up a business for one establishment, so that a rival has

come in. In one or two other towns they have agricultural implements to sell, but as a rule they have the coarsest machinery, the same as a thousand years ago. I know of no country in the world where they have such splendid machinery on the farm, as a rule, as they do here. In England they have good machinery but the fields are too small to run reapers. We have done another thing in this country, we are raising the best stock almost in the world, as good as anybody else. You see the Norman horse at all our fairs, and Clydesdales and the English coach horse. The finest blooded sheep, the finest blooded cattle in all Europe have been pouring into this country. Almost every steamer during the summer brings over some fine blooded cattle, horses and sheep from the old country.

You remember that great sale in New York in 1877, of Short Horns, of the Duchess breed, near Utica, I think. After that sale I heard of one cow being bought there for six thousand guineas, thirty thousand dollars, and brought to Liverpool. I once made an official visit to my famous country woman, that cow, and it took me a day to go out and back. With my uneducated eye, I would have doubted whether I would have given $30 for her. Two years after although he paid $30,000 for the cow, and the expense of taking her over to Liverpool and putting her on his estate, it was one of the best stock speculations he had made in his life. In two years he had sold two calves for $5,000.

I don't want to run against that horse race my friends if you will let me say one more word. It is popularly believed by all the people of America, and I believed it too some years ago, that the farmers in this country are the great feeders of the world, that we are in this great Northwest sending wheat and flour to the starving millions of Europe; that is the cant phrase. Now do you know we are not by any manner of means feeding Europe; we do not send more than one-half of the food that goes to Eurpoe. England sends to America for wheat. When the telegraph from Liverpool tells the price of wheat this morning, it regulates the price of wheat here at every one of your railroad depots, at every station throughout this land. London and Liver-

pool, being nominally the same market, control the price of wheat all over the world.

I am going to give you about three minutes talk of statistics. England, the great consumer, the great purchaser of food, controls the market of the world. How near do we come to supplying that market? In 1881 England bought twenty-six million dollars' worth of cattle from other countries than the United States, I leave off the odd thousands, and we sent her eleven million dollars' worth — less than one-half of all the cattle she bought from the outside world. Sheep and lambs we sold her to the amount of five hundred and seventy-eight thousand dollars' worth; she bought over ten million dollars' worth of other people. Bacon we sold her thirty-seven million dollars' worth; she bought from other lands over forty-three million dollars' worth. Hams eight million dollars' worth; she bought of other countries eight million dollars' worth; about the same. Salt pork we sold her as much as she bought from any other lands. Fresh beef we sold her nine million dollars' worth, but she bought over ten million dollars' worth of other people, from the Continent I mean and from Australia. In 1881 we exported a little over four million dollars' worth of butter. English people bought of other people than ourselves over fifty-two million dollars' worth. Now we brag on our cheese and we sell a great deal of it. I have seen it over there by the hundreds of tons, and good cheese too. American Cheshire cheese are sent to England, re-wrapped, re-marked and imported into America as English Cheshire cheese, tons and tons of it. England bought seventeen million dollars' worth of us, but she bought twenty-five million dollars' worth of other countries. Lard, ten millions, she bought ten million dollars' worth of other people. Preserved meats we sold to England to the amount of five million dollars' worth, but she bought of other countries over eleven million dollars' worth. We think we sell her the wheat and one would think so to stand on the docks at Liverpool and see the vast fleet of ships sailing into that port from San Francisco and other ports loaded with American wheat. Let me read you the figures. We sold in 1880 ninety-seven million dollars'

worth of wheat; that is a great sum; she bought of other countries one hundred and fifty-two million dollars' worth. As you stand there in those ports and see the wheat going into the hopper from America, you see side by side with it wheat from Russia, from India, from Sweden, from other countries going into the same bin with your wheat from this country. Rye and oats, fourteen thousand dollars' worth, over eighteen million dollars' worth from other countries. That is nothing to be frightened at. We can hold our own and feed ourselves and be happy and grow fat.

Russia is the great wheat growing country of Europe, and they raise good crops. There to-day they are using the old implements that they did hundreds of years ago. There are but few elevators in Russia. I saw by the paper the Government has given a concession for a long line of elevators up those rivers. To-day they are carrying wheat on their backs handling it by men, actual manual labor instead of by the machines that we have here. When they shall have the fine machinery we have, the elevators as we have, the railway system it is going to, she will pour into the hoppers of the world enormous quantities of wheat. I do not feel badly about this. I don't think the farmers need worry about it. Back of that we have a great country of our own to feed. You have a vast army of people who do not produce food to sell. Ninety per cent. of the cereals raised in this country is sold at our door. We are independent of the world. If they can feed themselves, Amen, God bless them, let them do it. The more there is in the world, the more prosperity; the more food, the more that goes to make the world happy the better the world must be. Although persons may be poor at times, although the time may come and run the price of wheat down here, look at it to-day. All over this bright world the crops are good. There are splendid crops on the continent. England's crops are excellent, French crops the best they have ever had. The Russian wheat crop is good. All over the world God has smiled on His people; and in this country the farmers all tell me that the crops are simply magnificent, and if the frost will hold off for ten days we will have a corn crop that will make us

smile (laughter), and perhaps we may open another market, if we can open the door of Germany; we hope to get our respectable hog in there where the door has been recently closed. We think he is a good beast. We think he ought to be taken in any door throughout the world. They think a little different. I hope they will change their mind; and this great corn crop, when it has gone into the hog, may be received not only in Germany, but we may have a market all over the world. I think it is a matter of congratulation rather than discouragement that the crops are good all over the world. I don't know what effect that will have; if we have larger prices somebody must be poorer than we are.

Voice — It don't make any difference at all about the prices.

Mr. Fairchild — Thank God for it. There is an attraction coming on that is worth all the speeches I can make. I will withdraw and give place to the trotting horse.

Voice — Go on.

Mr. Fairchild — You embarrass me by saying go on. I have told you all I know. If I stand here talking for a few minutes you will find out how much I don't know. That is what I don't want you to find out. It is one point every man has in life — to keep his neighbor from knowing how little he does know. I insist on giving way to the trotting horse for I want to see the trotting race myself.

CONVENTION.

NEENAH, February 23, 1886.

The Convention met at Princess rink at 7:30 P. M.

The Convention was opened by President Hazen, who introduced Mayor Whiting, of Neenah, who made an address of welcome, as follows:

Friends—Agriculture and horticulture are the mother and nurse of all arts. They maintain the laborer, the merchant, the manufacturer, in fact all mankind. They animate all industries and give life to commerce. For these reasons all are interested in their welfare; no one is exempt, and we all should be interested in these agricultural conventions, in these agricultural colleges and schools of practical training that are springing up all over the country. There is no reader of agricultural history but that is proud of the mighty strides that it has made and is making. It is the reader that can understand the advantage of these conventions and these schools; it is he that can see that the better disciplined the mind the better the hand will guide the plow, feed the flocks and prune the tree; the better will be the crop, the stock and the fruit. It is my opinion that had they better understood farming in ancient times there would have been no scarcity of corn in Egypt, but the sands of Egypt to-day would be as fertile and productive as the valley of the Nile was then.

As I understand there are many here who have come duly and truly prepared to entertain and instruct you, I shall take but little of your time.

You know there are but few men but in their time have had something to do with agriculture. I, like the rest, have had my experience. I am going to relate one little circumstance that happened once, where I always contended that it was a draw as to whether father or I came out ahead. Now I may not know as much about raising moulding sand

as Brother Vinney, or Blakely. I may not know rifle practice as well as Art. Babcock. I may never have lost a finger in trying to prune a kicking Jersey heifer, as Secretary Austin may have lost his; but, however, I have had my experience. Along about the last year of the war, father got it in his head that he must plow everything; that wheat was the only crop to be raised, and in order to do this, he must buy another team. He heard of a yoke of cattle down near Brandon, so he started out one night after supper, went down, bought the cattle and brought them home. The next morning I got up early to see the cattle, and found they had no tails. The party who broke the steers had twisted a stick in their tails to keep them from hauling which started the bark and as the April showers and spring sun drove the snow from the face of the earth, their tails disappeared. Well, I being the youngest boy, of course had to pilot the cattle; we started out stacking; they would get well covered with flies and go both sides of the shock. I told father that I was not built right to drive the cattle, there was something wrong with my lung—so he put a good big man at one end of a rope the cattle being at the other. They got along first rate. When it come to threshing, father said I could just as well haul down wheat with the cattle as not. I started, and just as I got down to Silver creek, which is a muddy stream, the cattle made for the gee side of the bridge and in they went. I pulled the pin, waded to the shore, went home, took my licking, but didn't drive the cattle any more. Now I want to tell you the grand *finale* of this cattle story. I knew the cattle were of no use nor ornament to the farm, and was bound to get rid of them, so one night a band of those horse traders known or called "gypsies," came along. I watched where they camped, and the next morning went up to see if I could make a trade. Well, now, I found them the nicest men to do business with I ever saw. He said that the tails made no difference; he didn't see what the wise Creator ever put tails and horns on 'em for. So I had no trouble in striking up a trade, and I got a horse for the oxen, brought her down and put her in the barn. When father came home I told him the cattle had met with a transforma-

tion. Asked him out to look over the horse. He said it was a fine looking animal. After dinner hitched her upon a sulky to go up to the farm. In just about one hour Zack Babcock, I think it was, brought the whole outfit home in a basket; there was not enough of that sulky left to make a tooth-pick for a flea. And father, well he was kicked almost out of shape, and as mother was rubbing arnica on the parts most affected, and the doctor was telling him there were no bones broken, I appeared.

Now, it was always a question who came out ahead, father or I.

Father got the cattle,
I got the licking,
I got the horse, and
He got the kicking.

Friends, I bid you a cordial welcome, and trust your deliberations may result in great good.

The address of welcome was responded to by Mr. J. P. Roe, who spoke as follows:

Mr. Chairman, Ladies and Gentlemen, and Hon. Mayor Whiting, of Neenah — It is with great pleasure that I accept this opportunity of making a reply to the kind and courteous welcome that is extended to us by the citizens of Neenah, through their worthy representative their Mayor. We come to you at Neenah, not with the expectation so much of giving, as receiving instruction. My acquaintance with the fruit growers, with the men of this locality, with the farmers, with their farms, with their orchards, with their vineyards is such that I feel that I can with safety say that we came here to learn long years ago. It was from Governor Doty that we obtained one of the earliest gifts in horticulture in the line of grape, what is known yet to the grape growers as the Doty grape. You are all familiar with one of the first vineyards established in this section of our state, that of the old pioneer and most worthy citizen Elder Clayton. I find also in your superior locality — I know none superior to it — the island named from old Gov. Doty, that on that island is growing with a marked degree of success,

a superior variety of white grape from the Danube, grapes which we thought could not be perfected in the northwest. They are grown with success at your doors, they are sold in your markets. I have tasted these varieties, I can but say that they are excellent; and as was stated to me, and I can vouch for the truth of the statement, a gentleman recently arrived from California pronounced one of these varieties nearly if not quite equal to some of the best productions of California vineyards. It is only within a radius of six miles of this city that one of the finest orchards existing in the state is to be found. It is only within an equal distance that one of the most successful apiaries of the northwest is in operation. With these facts before us, and many others that we might allude to did time offer, we can say gentlemen, in coming to you, we expect a great deal.

I would simply say this, that the interest which has been manifested by the city of Neenah in our Society is another strong inducement for us to come to this place. We cannot forget and we take this occasion to make the acknowledgment, to make it as fully, as heartily as possible, the recognition of our condition only but last summer when our city was stricken with the cyclone, when the buildings of our Society, in which we took so much pride and interest were leveled flat with the surface of the earth, when at the last moment it was deemed as a forlorn hope, an effort should be made to rear those buildings in time for the fall session of the Northern Fair; while to the right of us, to the left of us there were expressions rather lacking of sympathy, and some even going so far through the public press as to say now was the opportunity for other towns and other cities to assert their right for the site of the fair, Neenah promptly, heartily and kindly responded to us and through one of your leading citizens, Mr. Clark, took the very first opportunity, which was an offer to send us a check for at least one hundred dollars, as an expression, and a very practical expression, of his sympathy in our behalf, and of his interest in this which does not concern ourselves alone but our entire section of the northern part of the state represented in the Northern Fair. These things we cannot forget. My

last occasion of meeting the gentleman is one that will be borne always in my memory. Then our city was threatened with perhaps the worst conflagration of years. It was only two years ago this fall, when the fire was sweeping down, as it was thought, upon the Main street, at least that portion of the city, our best portion, was threatened, and over $70,000 worth of property was destroyed, when the chief of our fire department was stricken down, who took his place and went to the front and assumed the responsibility, and took the leadership and directed the energies of our fire department and the fire department of your city and of Menasha and of Ripon and even of Milwaukee, who came to our aid? It was the ex-mayor of Neenah, Mr. Clark. Mr. Clark took that pile of shingles, and should the flames have fastened on it, it would have taken the mill of Mr. Pratt, and with that mill the vast planing mill at the rear of it, and says: "Gentlemen, these shingles must be moved. Come." And he took hold, and with lawyers, bankers, doctors and mill men, all classes, he took his bunch of shingles the first of us, and moved them to the rear. This we don't forget. For the interest and sympathy which Neenah has at least shown to us, to the city of Oshkosh, and in a wider plane to the interest of the Northern Fair, which we represent, to-night, gentlemen, we would most heartily and sincerely make acknowledgment.

Now, I would simply say but one word. I trust that the same interest which prevailed in the former meetings of our convention at Waupaca may be true of this occasion. I see a goodly gathering, which promises well for this convention. Gentlemen and ladies, bring your quota here of thought and of interest. There is no one but has something, some happy thought, some practical suggestion, some chapter of their own, which goes to enrich us all. With these suggestions and with this expression of our thanks for the occasion and for the circumstances which we would not forget, gentlemen, I have done.

Mr. Huntley — I presume it is unnecessary for me to introduce our President. You are all acquainted with him. Mr. Hazen will now address you.

Mr. Hazen — *Mr. Chairman, Ladies and Gentlemen*:—The remarks made by my friend Mr. Roe, have covered pretty much the ground that I wished to speak upon on this occasion. In connection with the Northern Agricultural and Mechanical Association, which I have been connected with a number of years, we hold annual conventions. We have come to Neenah, by request of some of the members of the society, for that purpose on this occasion. We have received a hearty welcome from the citizens of Neenah and from your Mayor. In behalf of our society, our friend Mr. Roe has responded. Some of the objects of this meeting might be stated briefly. It is unnecessary to repeat them. I presume you all understand them as well as I do. We meet here for mutual benefit, we meet here to learn something in regard to our occupation and profession as farmers.

We can style farming a profession as well as any other profession. Indeed agricultural interests are becoming developed to that extent that it requires some skill and talent to carry on a farm successfully. We have scientific farmers, we have book farmers and we have practical farmers. On an occasion like this we try to bring them all together, interchange ideas, thoughts, take the advantage of the best methods. There may be a distinction, perhaps an agriculturist and a farmer. As our friend C. R. Beach, of Whitewater, said in the dairy convention defining them, an agriculturist is a man that earns money in some other business and spends it on a farm, a man that put ten thousand dollars in a farm and took out five; the farmer is a man that earns money on a farm, puts five thousand dollars in a farm and gets ten thousand back. He is capable of getting his living off of a farm. We have theoretical farmers, we have scientific farmers, we have practical farmers. We hope to combine these elements on this occasion and get the benefit of it. I for one, have always been able to learn something at these conventions, some ideas, some improvement, some improved systems have been given me. It is hoped all pres-

ent here will take an active part in the discussion on the various papers that will be read. We have papers prepared on nearly every interest pertaining to agriculture and industry of Northern Wisconsin. Northern Wisconsin I claim has as many natural advantages as any part of this, or any state in the Union for the climate that we have, and our farming community appear up to the average, ahead of the most, of any other section that I have visited, in intelligence, industry and economy. When our papers are read we shall expect discussion and sharp criticism on them. It is from this source that we get our best information. I will not detain you any longer. We have some papers to be read this evening. Prof. Henry is not here this evening, we expect him to-morrow. He has charge of the Experimental Farm at Madison, and is Professor of Agriculture. We shall expect to get a good deal of information from him. We have a paper written by James M. Smith. He is not here but has sent his paper which Mr. Huntley will now read.

The paper was then read entitled:

DRAINING LAND—HOW IT SHOULD BE DONE, AND ITS INFLUENCE UPON SOILS AND CROPS.

Mr. President, Ladies and Gentlemen—Within the last ten years there has been a great deal said and written upon the above named subject. Some of it has been well said and worthy of the closest attention, while other productions in this line have, in my opinion, been trash and nonsense. It remains to be seen to which class this paper should properly be assigned.

I shall try to be very practical, giving only such advice as many years of experience and observation have convinced me will be valuable to our farmers, if properly carried out. Sixty years ago there was a miserable, wet, swampy place nearly in the center of my father's farm. It was grown up with such brush and weeds as naturally grow in such places. It had never been plowed. Water stood upon parts of it nearly or quite the entire year.

My father had read and heard something of the system of underdraining as practiced in some parts of the British islands, and it occurred to him that this miserable, unsightly, worthless spot, of perhaps two or three acres in the middle of his farm might be drained and be made worth something.

He made the attempt.

His drains, as I remember them, were dug about three feet in depth, and were filled about half full of small stones thrown in loosely, with no attempt to make any regular watercourse through them. The result was a complete success. The worthless swamp became at once one of the most valuable pieces of land upon his farm. This was one of the first, if not the very first, underdrain ever made in the United States. Encouraged by his success he put in many others, but never one that did not add immensely to the value of the land in which they were placed. Their value is as great to-day as when they were first put down.

The question naturally arises, what soils need draining and how, and under what circumstances can it best be done? First, all wet and springy soils should be thoroughly underdrained. I believe this proposition will hardly be disputed. In addition to this, nearly all heavy clay soils, or those of a heavy loam with a clay subsoil will pay handsomely for the expense of underdraining. It is nearly twenty years since I commenced the work upon what is now my garden. Tile were not to be had unless imported from other states, and then at enormous prices. Lumber was plenty and cheap. Hence nearly all of mine are either of paneling or of two inch plank. Tile is now plenty and cheap, and will be used hereafter. My plan has been substantially as follows: I have first carefully examined the ground that needs draining. As my land is nearly level it has sometimes required some care to lay out the drain in such a manner as will give the necessary fall, though let me say here that but very little fall is really necessary. After the line is decided upon a team and plow are used to throw out all the earth that can be moved in this manner, and then the spade and shovel must do the rest. There are now spades and other tools

made expressly for that purpose, and upon clay or other heavy soils they are very valuable for the purpose for which they were intended. I prefer to get them down about three feet where it can be done, still two feet will answer provided they can be put no deeper. I have never used surveyors or other implements for determining the fall, but have always selected a time when there would be a little water in the contemplated drain and then used the water, which is certainly an excellent instrument for the purpose. The bottom of the drain should be made smooth in order that the tile have as near an equal bearing as possible upon the ground for fear of breaking. Care should also be taken that there are no places where dead water will remain in the tile, for fear that during some of our very cold winters the frost may reach and freeze the water, and burst the tile. Hence the necessity of a steady current whenever there is any water in the drain. For a single drain two-inch tile is large enough for all ordinary purposes.

But it is often the case that the single drain should lead only to the larger one, which in a good system must often carry the water of quite a number of the smaller ones. It is very easy to determine the size of the main drain by the number of smaller ones. Suppose for instance that you wish to lead half a dozen two inch drains into one main. 2x2 is 4, which is practically the cubic measure of the single main, 5x5 is 25, the full capacity of the six single mains. After the tile is placed in position, fill the ditch and the work is finished. In fact there is nothing about it, from begining to end that a good common man cannot do, and make a success of from the first. I have never put down one that was a failure, and never expect to. Here a question naturally arises: How far apart should they be placed? I see that I am referring to myself quite often. Please allow me to do so without accusing me of being egotistical, as I can illustrate my ideas the better by referring to my own practice. Within the last four years I have been purchasing additions to my garden, until now it contains about forty-three acres. This has made other changes necessary and among them an enlarged system of drainage. Nearly the entire ground

has a slight slope to the south. The entire garden is laid out in beds running north and south, forty-one and one fourth feet, or two and one half rods wide, measuring from center to center of the alleys. These alleys are so constructed that they will carry off all the surplus water that remains on the top of the ground as fast as it falls, and is not absorbed by the soil. The beds are so made that they slope a little each way from the center to the alley; hence no water can stand upon them or upon the growing crops, until the alleys are running over full; but, as above stated, each alley has an outlet for the water to run off.

Underneath each of these alleys is or will be when the work is perfected, a tile underdrain in addition to the thorough surface drains now in operation, with the exception of a small portion of the land where both the soil and the sub-soil are so light a character that tile drains are not needed.

This, gentlemen, is my ideal of perfect drainage. The exact width here given is of course of no consequence in this respect; I made them this width in order that I might always be able tell by simply measuring the length of a bed, or of a number of them, just how much land there was given to any crop. But how about the cost. I can now purchase two inch tile for about $11 per 1,000 feet. The cost of putting them down depends so much upon the quality of the soil, its unevenness, etc., that it is hardly posssible to name any definite sum. Not long since one of my sons took four of the hired men with him, and commenced at 7 A. M., upon one of just about 500 feet in length. They had it completed some time before the six o'clock bell rung for quitting work. This as will be seen is 100 feet for each day's work. This can be done only upon soil that is very easy to work. A neighbor of mine whose sub-soil is a very stiff hard clay finds it much more expensive, and I presume that it costs him upon an average at least twice as much as it does me to do the work owing entirely to the difference in the soil and sub-soil.

Now comes another question of the utmost importance, viz.: will it pay? It is evident from what has been said,

that even under the most favorable circumstances it will cost something to tile drain a farm of 100 or more acres. Unless it will pay, the average farmer can hardly afford the expense. If it does pay, and pay well, he can hardly afford to do without them.

In regard to this I will repeat the words of a man who while living was one of the best farmers that I have ever known, and at the time he made the remark he doubtless had more miles of under-drains upon his farm than any other man in the Northwest. We were conversing together upon the advantages of drains when he made the following statement: "I am perfectly satisfied from my own experience that if a man whose farm needs under-draining, and nearly all those upon heavy soils do need it, will raise the money to thoroughly drain ten acres of his farm, the extra crops upon that ten acres will pay the expense of draining ten acres more the following year, and in this way he may continue draining ten acres from the extra crops of his first ten, until he has drained his entire farm, and when his work is complete it will have cost him nothing except the money expended upon the first ten acres."

I think I have never heard the advantages of this branch of farm improvement more fairly expressed; and from my own experience and observation I do not believe he overrated its value.

A number of years since Mr. R. B. Kellogg, a banker in Green Bay, purchased over 600 acres of land, about two miles from the city, and commenced a series of improvements, and one of them was the most thorough system of drainage that I have ever seen upon so large a scale. I have known the land for more than thirty years. Portions of it have been cultivated during the entire period of my acquaintance with it. Previous to its coming into the possession of Mr. Kellogg I have no recollection of ever having seen a year's crop upon it that would have paid fairly well for harvesting and marketing. The soil is naturally a good one, being a deep, heavy loam, with a very stiff, heavy clay sub-soil. The most of it was wet, springy, cold, and almost altogether unpromising, except its location, which is beauti-

ful. In its native condition it produced a little poor, coarse pasture and some still poorer hay.

During the summer and fall of 1884 he cleared some ten or fifteen acres of it of the brush that was growing upon it. It had never been plowed, and I do not believe that it had ever paid the interest upon ten cents per acre. His system of drainage is about perfect. He applied it to this piece of land. In the spring and early summer of 1885 he plowed and planted it. A few acres were planted with Amber cane, and the balance with different varieties of corn. All of it planted thick to be cut green for feed. Some of it was not planted until about the first of July. This portion of the piece although good, did not get to its best before it was time to cut it in order to save it from frost. But the yield of the balance of the field including the Amber cane was simply immense. I can hardly imagine how a large crop of the kind could be grown unless it could be made to grow higher, and I can assure you that it was much more than an ordinary one in height.

I mention this particular case because it is so marked, and the great yield could not by any sensible way be attributed to any other cause than the perfect drainage or to state it in a different form; no matter how perfect the cultivation had been in all other respects, this wanting, the crop would have been a failure.

A few years since as I was about concluding the purchase of what is now one of the finest portions of my garden, he and I were chatting one day and I said to him, "if I succeed in getting the addition to my garden for which I am now negotiating, I want to make a proposition to you to go ahead with your improvements and make the finest farm in the northwest, and I will make the finest market garden in the northwest, and we shall then have at least two good things in Brown county." He laughed and said that he was not certain that he knew enough to make the best farm in the northwest; but if he continues his present system of improvements for the next 10 or 15 years, I tell you gentlemen that will be one of the very finest, if not the best farm of its size in the northwestern states, and Mr. Kellogg's com-

plete and thorough system of drainage will be the means by which it will be accomplished, and without which such a result will be simply impossible. It may be asked how or why do such results follow a system of drainage. I will try and give some of the reasons in a few words. You have all doubtless noticed that our first frosts in the fall are upon wet, cold, soils and damp places. The same is true of the late spring frosts. They are found upon the cold, wet places of the farm. By getting rid of this surplus water the sun warms the ground earlier in the spring and it retains the heat later in the fall.

I estimate that upon an average the land in my garden has at least two weeks longer of good growing weather in the spring and fall than it would if there were no drains in it, and some of it would be practically worthless for any purpose without them. During the growing season, the roots of crops upon land that is well drained go much deeper into the soil, and as a result they not only stand drouth much better, but have a better opportunity of getting a full supply of plant food, and as a matter of course the crops are much larger and finer in every respect than those upon land equally good in all other respects.

Gentlemen, I have made this paper longer than I expected or intended when I began. The great importance of the subject must be my excuse. I fear that in this respect we are behind some of our sister states. I understand that Illinois has 50,000 miles of under-drains and that the farmers there are very rapidly becoming acquainted with their great value, and that they are being put down with great rapidity in almost all portions of the state. This is an age of improvements, and we who are the cultivators of the soil cannot afford to be left behind in the onward march. If we do our duty and do it well we shall be in the front rank and not in the rear as some of our number have always been, and I fear will always remain. Let not this be said of any of us. But let us rather be ready to adopt any and every plan that tends to the improvement of our lands, to beautifying our homes, and that promises additional comfort and

happiness not only to those who are dependent upon us, but to the friends and neighbors as well.

DISCUSSION.

Mr. Hazen — The paper just read is from Mr. James M. Smith of Green Bay, President of the State Horticultural Society. Mr. Smith is a successful horticulturalist, as much so as any we have in the state and his paper on drainage seems to me an appropriate one.

Mr. Roe — The subject of the paper we have just heard will probably rank as one of the most important papers that will come before this convention. I know of no one subject more practical, none more pressing, none more worthy of our consideration and careful consideration than the subject just brought to our notice by the paper of Mr. Smith's. It was the subject of that paper that brought me here. I am personally interested in this matter of under-drainage. I think we all are. I have come as a learner on this matter and I hope that you will all give your attention and there will be that amount of questioning, that cross fire of questioning here that will start a good deal of practical information.

Mr. Huntley — I see quite a successful gardner that has had some experience in under-drainage that is present. Mr. Winslow I presume can give us some suggestions in regard to that question.

Mr. Winslow — I hardly know why Mr. Huntley should call on me to give my experience on under-drainage when he certainly has perhaps ten rods to my one. I have been located on a piece of land near Appleton for the last three years. When I first went on there some portions of it, as the neighbors expressed it to me, were unfit to drive a team onto in the dry time of haying. I put an under-drain through that piece of land and it is now the first piece in the spring that is fit to work, it is the first piece on the farm that is fit to put a team onto. I think it is one of the best investments that a man can possible make. Under-drain-

ing is one of the best investments a farmer can possibly make.

Mr. Gillingham — The question in my mind is in regard to the depth of this under-drainage, whether the variation of the soil has not got something to do with the depth of the drain. Mr. Smith suggest three feet deep. My experience is that three feet is too deep in our heavy clay soils, the water don't penetrate through the clay and get to the tile quick enough. I have had quite an experience with under-drainage. I am like some other gentlemen here, I am interested in under-drainage. My friend, J. B. Russell, used to be a farmer in Vinland. He can recollect the first under-drain I put in. I think it must be twenty-five years ago. We drained a piece next to the road. It was a willow hole. I recollect of drawing willows out of there with oxen to put in the road so teams could go through. Now it is the best land on my farm. I put in a board drain first. That rotted. Afterwards I put in tile. I have got a farm near town where it is a very strong clay. You put a drain through a knoll, no matter how dry it may make the knoll, it is just as mellow as black ground. I don't think it is necessary to put underdrain so deep in heavy clay soil as in soil not so strong. That is the question I would like gentlemen who have had experience to talk upon.

Mr. Huntley — My land is heavy clay. I don't think I have got any too deep. There are cat holes in my land. In going through them if there has been any fault whatever it has been in not getting it deep enough. In going through the hole it would drain but it would not under-drain. I understand there is a difference between drainage and under-drainage. A drain put one foot beneath the top of the soil will not under-drain, it will drain off the top, it will not drain below. My fault has been in not getting them deep enough. If the land has a slope that is nearly uniform perhaps a little less than three feet would do but I think it would be cheaper after all. The distance apart will be in a ratio to the depth a good deal. One, one foot, will only drain half as much as one, two feet; no it will not only drain one quarter. One, four feet will drain say four rods on each side; of

course you can get it too deep. I think more than three feet would be too deep in most soils, but I think if there is any mistake made it is oftener in not getting them deep enough, but it may be as the gentleman says that in heavy clay soils it may not get into the drain quick enough in heavy floods, or large rains. I was reading an article, I think it was in the *New York Tribune*, on drainage. It was when General Burnside was living. It was on his farm. It stated he failed on the first drain he put down; they got filled up through the joints. In the last drainage he did, he took coarse bag sacking or burlap or whatever it is called, cut it and put it over some that had been down ten years and were doing nicely. I don't know but drains get filled up some times, we don't know exactly what is the matter until we examine them, I don't think they can be put down too carefully and the work done too thoroughly.

Mr. Roe—I would make this inquiry in regard to the effect of frost upon tile, if we use tile, and tile has been mentioned. I think that tile is in use in the market garden of Mr. Smith, that tile is used on the farm mentioned, of Mr. Kellogg of Green Bay and also Mr. Gillingham referred to the use of tile. Now as to the depth of tile—in an address of Mr. Wallace, delegate from the Iowa State Horticultural Society in our convention at Madison, he urged putting in the tile at least three feet deep. One advantage he advocated was avoiding the effect of frost in the heaving of the tile and in the crumbling or as he used the phrase, the scaling of the tile. That there would be with severe frosts, winter following winter a scale taken off from the surface of the tile which would eventually disintegrate the tile and would destroy it sufficiently to destroy the drainage. Now starting in as I have commenced, I expect to go to a heavy outlay in tile drainage. I should like that question met as to what is the proper depth, not only as affecting the soil and percolation or rapid taking off of the water and moisture, but also as to what would be safe for a permanent and sufficient drain.

The following paper was then read, prepared by Mr. G. F. Stroud, of Oshkosh.

To the Northern Wisconsin Agricultural and Mechanical Convention — I am requested by your worthy secretary to contribute a paper on fish. I will endeavor to comply with his request, but whether I succeed in interesting you on this subject, I am not competent to judge. I am undoubtedly an enthusiastic angler. There is a something about it different from any other sport. The ingenuity of man has provided us with a frail craft, that we can move along on the surface of unknown depths, of that fluid called water, and underneath its surface no mortal can tell what it contains. This undoubtedly is, as it should be, else the charm or expectation and excitement of the angler would be lost. It is the uncertainty of success, in those unknown and unexplored regions below the surface, that adds to the excitement and calls for the ingenuity of man. Nature has provided in this vast commodity of fluid, a living substance called fish, a substance of many species and valuable to the human race for good palatable food, as well as affording a great and harmless pastime and amusement in angling for this finny tribe. Much has been said and written on the habits of the game fish of the world; the writer of this has been trying to study the habits of our game fish for the last twenty-five years. Sometimes I think I have got them down fine, after a successful day's angling, but when I go out again the next day, with all the science I can bring to bear, knowing that the fish are near and plenty of them, and I return at night with a meagre supply; then I think I have much yet to learn. It is the opinion of many, and much superstition prevails among anglers, that the wind has got to be in just such a direction, but I have been equally as successful with the wind at all points of the compass, having caught equally as good strings with the wind from every direction; two things about the wind is all that enters into it. I don't want it too heavy, neither do I want a dead calm, but a nice little riffle. Nature has done nobly by Northern Wisconsin in giving us such a vast area of water, abounding in rivers and lakes, and filled with such nice

game fish as black bass, wall eyed pike, pickerel, Moskalonge, cat fish, perch, sun fish, rock bass and white bass, also vast numbers of small streams and lakes in the northern part of the state full of brook trout. The principal point I shall make in this article, will be on the protection of these fish, from the onslaught made on them, by a set of men with nets who would soon exterminate them.

Every state in this union are passing stringent laws to protect the fish from lawless net fishing, and establishing fish hatcheries for the propagation of fish, and planting them in the different streams throughout the states. The legislature of Wisconsin, at its last session appropriated the sum of $24,000 to be used to maintain our fish hatcheries, and for planting fish in our inland waters. This seems to me to be a preposterous and uncalled for outlay, when not one dollar was appropriated to protect the fish from the net pirates that are to-day infesting our waters. If these net fishermen were driven out, nature would propagate more fish than a dozen fish hatcheries. These waters have become famous for anglers. A few years ago in a small way net fishing was commenced, and from year to year has increased, until now there are whole colonies of net fishermen. One colony of these men, consisting of some fifteen families, living and subsisting on their lawless depredations, on the lake shore of Winnebago, at Oshkosh; six or eight families at other points around the lake and about seven or eight at Winneconne.

These men are too lazy to work or engage in any legitimate business. Their labor is simply setting their nets, taking out the fish and shipping them. It would be a surprise to you were you aware of the tons and tons of fish that are shipped to Chicago out of Lake Winnebago and its tributaries. Every man owning a foot of land in Northern Wisconsin, is interested in preserving these game fish, and every law abiding citizen should take it upon himself as an insult to himself and the state, that these net pirates should defy the law and keep on fishing. When you ask why is it? Why don't you stop it? We have tried to stop it and have made them trouble by arresting them. But the trouble is, the

penalty is too light, the fines are not heavy enough, and it takes money and time to get the evidence to make the arrests. Then when this is done, the trouble is the want of men on the juries that have got the manhood to convict them. The plea of some pettifogger for the poor fishermen creates a sympathy, and the jury acquits the lazy culprit and he goes on with his lawless occupation, setting his nets at ungainly hours of the night, when honest men are asleep. What I wish to call your attention to, is to make yourself a committee of one to see that you elect such men to our future legislature that will pledge themselves to use their influence to pass more stringent laws, with heavier penalties and an appropriation to pay fish wardens, and a sufficient number of the same to carry on these prosecutions. The prosecutions carried on this last year have been done by a very few individuals, and they propose to keep on, but in order to have it done properly these prosecutions should be under the auspices of the state. When wardens are appointed with certain powers, with confiscation of nets, and paid by and acting under the state authorities, then this net fishing would be stopped. When this is accomplished, Lake Winnebago will be one of the most famous angling waters on this or any other continent, and every foot of available space will be utilized for the erection of summer resorts, and people from all parts of the South will flock here to spend their summer vacations. The laboring classes in this country are as deeply interested in the preservation of our game fish as any one. The mechanics and laborers after their day's work often try their luck at angling, in the hopes of catching a string of fish for their families, and the time has been, when after supper in an evening, they could go out before bed time and catch a splendid string of fish. But these net fishermen have made such inroads on them, scattering the schools of fish, that now they are getting disgusted with their luck and are crying to have the net fishing stopped. Let us see to it that the next session of our legislature is composed of men who will see to it, that a thorough protection of our game fish is established.

Mr. Roe—In regard to this paper I will simply say my friend Stroud means every word that is put here upon paper. I know of no man who has been to greater trouble and expense in this matter, who has devoted more of his time as a business man to try and preserve the game fish of our lake, and there is one strong point he makes here which I think will come to us dwellers on the lake, and that is the result or the inducement which is held out to the preservation and improving of our fish supply. I refer to the future of these waters as a summer resort. Already what has been accomplished in your vicinity is such as to invite your careful attention to this matter. Lake Winnebago, the largest body in area of any single one lake in any state of this Union, with possibly one exception, from the quality of the water, from the location, from the varieties of fish peculiar to it, is one that I know of no region where the inducements held out to the angler and to the sportsman can be made greater than on the shores of this lake. I myself own a farm upon its shores. On that farm, as it comes down to the lake there is a fish bank for black bass, another for white bass, also at one season regularly year after year, until within the last three years in the sixteen years I have owned the farm, our largest fish, the lake sturgeon, would come up annually until it seemed that they knew the hour and day that they should come up there to spawn. You might calculate on a given day of the year of going to that fishing bank and you would find the sturgeon there. That is no longer the case. I have gone down and caught sturgeon as heavy as myself. In one instance with nothing in my hand but an ordinary pitchfork. It was a question whether I went into the lake or the sturgeon came out, but with some help to the rescue we succeeded in landing a one hundred and fifty pound sturgeon. The cry came from the boy the fish were up, and we broke and ran for the lake. That day is past and they are becoming very scarce in our waters.

It was for a good many years that the boys at the old float bridge, its place being now taken by a substantial stone bridge in the fifth ward in Algoma, caught a forty pound muskalonge with an ordinary spoonhook. That day is past.

I can vouch for this. I have taken pains to make some inquiry. I have looked up the matter carefully. I have seen these fishermen every hour if I should get up in the night, in stormy weather, they are out plying their vocation. Unless some special effort is made the waters of our lake will be depopulated. They are shipping barrels after barrels from one place and another. Now it is from Oshkosh, now from one depot, now it is from Fond du Lac; they have even taken pains to send them through other roads on the east shore of the lake. At the rate the depopulation of our waters is going on we will speak historically of our fish: "*We used to go a-fishing.*" Why cannot we have the same condition of things in this great lake, fifteen miles in width and thirty miles in length as they have in that little lake at Pewaukee. They have protected the fish; what is the result? The influx of summer visitors from all parts of the country from the south, is increasing from year to year until the business interests of that little town are being rapidly built up. I was there but a few weeks ago making a visit to a personal friend before going to the horticultural convention at Madison. All the talk was the fish in their little lake, how much it was accomplishing for them. Look at the interest that was built up at Pewaukee, built up at great labor and expense at Green Lake, and we have far better facilities than Green Lake. This Lake Winnebago is far superior to Green Lake in many respects, in its yachting, in its safety. Green Lake is not a safe lake. It has sudden squalls that sweep terrible disaster. You are familiar with them. We have a broad expanse of yachting, the finest yachting grounds of our continent are always at our doors. With such facilities as we have why may we not build up here such a business. There is no estimate in dollars and cents of what it will do for these twin cities of Neenah and Menasha, Oshkosh, for Fond du Lac, and for the cities being built up on the shores of this beautiful lake in the home markets. These parties who come from the south, these parties who come from Chicago, these parties who come from Milwaukee, they come with their families, they come to stay, money in their pockets, they come with the intention of spending their money and of hav-

ing a good time. They build up these interests right in our midst. If we hold out inducements to them the result will be most satisfactory in our enjoyment and in our pockets.

The convention adjourned until 9 o'clock A. M., February 24th, 1886.

February 24th, 9 o'clock A. M. Convention called to order by the president.

A paper was then read, prepared by Mr. P. P. Schotzka, of Minneapolis, entitled:

THE FORESTS OF THE COUNTRY.

Agriculture, horticulture and arboriculture are all parts of one great whole; that cultivation of the soil and its various productions, upon which not only the prosperity but the very existence of mankind depends.

Agriculture leads the van of this three-fold group, as being the fundamental element of wealth and national advancement. Fertility of soil, variety of climate and wise selection of plants and grains, combined with energy, enterprise, skill and industry on the part of its inhabitants, are sure guaranty of the prosperity of any country.

But strange to say, the attempt at scientific development of the husbandman's art, many of its branches, dates back only half a century. Previous to that date both agriculture and horticulture may be said to have been conducted upon the "Virgillian" system, adherence to blind custom rather than by means of intelligent investigation and judicious experiment.

The first book in the English language, which treats of the relation of agriculture and chemistry, was pulished in 1795, and its teachings, though containing some measures of truth, are more than absurd when viewed in the light of the present attainments. No accurate analysis of vegetable life and structural development was made until the year 1810, and as late as 1838 the Goettingen academy offered a

prize for a satisfactory answer to the question "whether the ingredients found in the ashes of vegetables, were essential to growth."

The last half century has begun to place agriculture upon a true scientific basis, and during that period the advance has been simply wonderful, the investigation of competent men in their several departments have disproved many an accepted theory, while they laid bare the secrets of germination and elemental growth, the mystery of fruition and propagation.

Advanced, however, as we think our own age to be in this direction and plain as appears the road to further and still more important developments, promising ultimate and complete success in all branches of farming and gardening, it is a startling fact, that one of the most essential factors, in securing this success, has been almost if not wholly ignored. Science so active and aggressive in particular directions, seems to be turning its fade away, from one, that would lead it to most valuable results. The question as to what effect the forests of a country have upon the cultivation of the soil, upon the quantity and quality of its products and upon the health and comfort of the inhabitants, seems scarcely to have been more than suspected.

True, the Agricultural Bureau, at Washington, has of late made some effort in the direction of preserving the present area, and extending the future limits of forest culture. The Secretary of the Interior, as authorized by congress, has attempted to prevent the wanton destruction of growing timber on public domain, and has sought by provision for timber claims to secure the planting of trees by the new settlers upon the open prairies of our western states and territories. But all this seems to have been as a sort of experiment — empirically, that is not scientifically; with only incidental, one might say *accidental* reference if any at all, to the well known and established law of nature.

The time has certainly arrived for giving full and intelligent consideration to this whole subject, and we hail with sincere gratification the following statement, made by Mr.

N. H. Egleston, to the commissioner of agriculture, in his report for 1884.

"The state of the forests is so intimately connected with the most important interest, of the country, with the health and comfort of the people, with the water supply and consequently with the conditions of agriculture, manufacture and commerce, that it should be one of the foremost subjects of consideration by any people and any government."

This ought to be the beginning of better things. If the eyes of the nation are opened to the vital importance of this subject, they will demand, and only by such demand, secure proper attention to it.

It is a well established fact, that the forests of a country should cover as least from a quarter to a third of its whole area, if that country is to be healthful and its climate salubrious; fulfilling all the conditions under which agriculture may be carried on with the assurance of success.

And not only must the extent, but also the location and distribution of the forests over a country be taken into careful consideration, every state and territory, every county and every township should have its due proportion, if we would secure the utmost possible benefit to the entire nation. The forests of the Adirondacks, however necessary to the welfare of New York, have little value for the inhabitants of Wisconsin or Minnesota. But if they could be transplanted in full branch and foliage and placed between the Mississippi and Missouri, no one could estimate the advantage to the western farmer and merchant, to the new settler on the broad prairie, and to the citizen of our growing towns and cities. This, gentlemen, is a subject in which we are all interested personally and individually, and the narrowest selfishness as well as the broadest and most kindly philanthropy and patriotism, should lead us to due consideration of it, and then to the adoption of such measures as will adequately provide for the improved condition of our people and add to the material prosperity of the commonwealth.

Money can build and beautify a castle, but it cannot create a grand and majestic tree. Inventive genius has con-

structed wonderful and useful mechanisms, but it has never given life to the dead trunk, or forced the fruitful sap through the leafless branches. It takes eighty years and more to grow a full size pine, and from two to three centuries to develop the bulk and majestic stature of the giant oak; consequently the first step ought to be — must be — in the direction of preservation, and of such economical use of our present forests as will prevent wasteful destruction, and at the same time in the replacing of the denuded places with forest growth.

The consequences which have followed the destruction of the forests in other countries are too serious to be visited upon and repeated in this prosperous land. Let us not think that the country has a sufficient area stocked with forest trees yet, and that the time has not arrived for considering means for their maintenance and improvement of their conditions, each and every one here present must acknowledge and admit that the sudden changes of temperature, the severity of the climate, the frequent occurrence of high floods, and the some times long lasting drouths, we now endure, were not formerly known in this country, and that the hurricanes and cyclones which sometimes break loose upon section of this country, bringing terror to the sternest souls and dealing destruction and death in their path, are only of late origin with us. Equal causes are followed by equal results. Such terrible occurrences as just described, have their homes in all such countries. Where the destruction of forests has taken place, and their appearance in our beautiful country is an adequate warning for this people to stop and not ruin the country in their crazy hunt after the almighty dollar.

In the face of such facts is it not an insult to the citizens of this glorious country, if the lumberman in all his pride for the great deed he is accomplishing, publishes in the newspapers how many million feet of logs he is going to cut down during the appearing winter.

Any citizen who has a spark of patriotism left for his country and, and if acquainted with the mission which the forests have to fulfill in the household of nature, and who

knows the great inroads that have already been cut into our primeval forests, will be filled with indignation against such arrogant publishing and blowing, neither the lumberman nor anybody else has added anything to the forests which are so brutally felled.

The generals and the flower of our pine forests have already gone, the stragglers are left for us. But not only the pine forests of the country are in a dreadful condition, another kind of forest will soon follow.

Those extensive forests called the second or third growth or cut. The entire disappearance of these forests is naturally and unavoidably a question of the near future. Each species of trees has a time when it comes to maturity, after which, as happens with the animal kingdom, it must die. Now if the deciduous trees have been cut down before reaching this point of maturity, their stumps will send forth new shoots which will in their turn grow into trees, and until the original stump has reached what would have been the age of maturity of the first tree cut down; no matter how often these shoots may be cut down, others will grow to take their places. But just as soon, or nearly so, as the stump has arrived at this natural period of maturity the formation of young shoots ceases and the parent and offspring die together. The absurdity then of the idea of some persons who imagine that this cutting down of successive growth can be carried on for all time to come is apparent, such a thing is not in unison with the workings of nature, consequently at the appointed time these forests will disappear before the eyes of the astonished owners. These forests form the bulk of those left in the settled part of the country and supply the farmers' annual requirements and necessity.

All those forest groves where the sun has unlimited entrance, and where every falling leaf is carried off before it reaches the ground, have their fate designated and cannot escape exhaustion, as the sun burns out all vegetable matter deposited before, and the new forming by the trees themselves is carried on the neighbor's farm.

A forest, no matter how small, to do well must have the ground fully shaded and its boundaries thickly planted so as

to keep the wind out, which will otherwise carry off the only fertilizer (the leaves) which forest trees receive and also drive out the carbonic acid so favorable for the growth of plants.

As I have a book in print which teaches forestculture, I hope to be able to present the same soon to those who will entrust themselves to the teachings of an adopted citizen, who has the opportunity to study forestculture practically and theoretically in a country where this business is elevated to a science, and where the forests are considered as a blessing for a country by government and people.

Mr. Roe — I would respectfully urge a word in regard to this paper. It would seem that the subject which is brought before us in some of its bearings is one of the most important that could be brought to our attention. The cyclone, the cold, the long drouth, the sudden changes of temperature, are all danger signals which Providence is throwing in our path, lifting up before us the warnings of the on-coming events — events that are as sure to happen in our future as night succeeds day. And it would seem as though so practical a people as the American people, where there is so much intelligence diffused among the masses, where there are so many thinking, public spirited, patriotic citizens that the condition that attains to-day should be what it is, is a matter of wonder. You have seen in the reports of the Northwestern Lumberman the actual amount of pine left standing. Twenty years at the very fartherest will sweep off all the pine of Michigan, of Wisconsin and of Minnesota. A man in this vicinity, I refer to one of your leading citizens, Mr. Webster, of Menasha, told me sometime ago of the growing difficulty in obtaining just such hard wood as required in the manufacture of hubs and spokes. The statement was made to me by Joseph Bolles of the great Wooden Ware Establishment. They are compelled to move further and further at a greater expense to obtain raw material. The great forests of black walnut, once true of Indiana, Kentucky and Tennessee are almost entirely exhausted, so that now in

the recesses of the Tennessee mountains, the mountains of North Georgia—that belt of mountainous country where it is exceedingly difficult to transport lumber, is the only place where black walnut can be obtained. Things have reached that pass with that variety of wood to-day, that even the old black walnut fence rails are being worked up and transported to Chicago and Milwaukee and Grand Rapids and to other points to be worked up into furniture. We cannot take time to forest all this paper, one thing we can do. We can think this matter over carefully; we can make up our minds, what was so urgent upon the people of Nebraska, to plant trees; that one day in the year shall be known in our locality and in our homes as tree day. When the yearly time comes take your little child and let that child hold the tree to which you give a name and date to which that child will associate with its parent, and every succeeding year will be marked by a tree, and your lanes, avenues and roads and your farms will be lined with double rows of trees.

Take the black walnut for instance. I have trees of my own planting on my own farm that are producing walnuts. Trees that are now four to six inches in diameter that have stood the test of 40 degrees below zero. If the black walnut is as hardy as that, we might say it is perfectly hardy. These trees are not over 10 years' growth. Ten years ago they were planted, they were two years old when I purchased them, two years from the seed. Of course the planting set the tree back the first fall. Ten years from the date of the planting they are from four to six inches in diameter and produce nuts. And I believe it will be true of the chestnut. We can obtain chestnuts from northern Massachusetts, from southern New Hampshire, southern Vermont, that will stand the Wisconsin climate. We can grow the chestnut as well as the black walnut, obtaining the nut from northern localities the same as we obtain corn from northern localities. That corn is successful, whereas if we obtain seed from southern Illinois it is very doubtful of the result. It is as true of the nut tree as of corn or the grape. I merely mention these facts that we think them over very carefully in the future in view of the next session of the

legislature that we may memorialize the legislature for some definite action to be taken to preserve what remains and propagate others by every inducement, by the remission of taxes or whatever action the state may take for the encouragement of tree planting in our own state.

Mr. Huntley — I would like to inquire if any gentleman present has set out the catalpa in any locality and made a success of it.

Mr. Brainerd — I can answer the direct question. I can say there is a row of them in Oshkosh that has been growing for twelve or fifteen years at Crowell's residence on Algoma street. The tree is perfectly hardy. There is no more handsome tree in the north when in bloom. I think it is as handsome as the Magnolia itself. I never planted any of them but they are growing there and are perfectly hardy. Now of course that paper referred to the pineries. We cannot stop these lumbermen from cutting the pine but I will tell you what we can do. We can plant trees on our own land. Now I have heard it stated, and I think those who are here in this room that have lived in Winnebago county thirty years will admit that it is true, that there is more wood growing in Winnebago county to-day than thirty years ago. You ride from here to Berlin and you see forests on every side. You cannot look ahead ten or fifteen miles as you could when I came to the country. These small groves are growing and furnishing fuel for the farmers of this county. That we can do. Mr. Roe has referred to the black walnut. I have one tree in my garden on which I had a bushel and a half this fall. It is perfectly hardy. In setting out these trees why not set out something that is hardy. This is what hinders setting forest trees. We think we shall not live long enough. The paper shows it takes eighty years to make a pine, two or three hundred to make an oak. Quite a number of years ago a man came into my garden. We were talking about setting fruit trees. He was nearly eighty years old. He moved from Massachusetts into Maine in middle life and set out an orchard. A man said to him what are you setting out an orchard for, you will never see the fruit. He staid there, picked two or

three hundred bushels of apples. He moved to another state, set another orchard, came again to Wisconsin and set out another orchard in Nekimi. He was picking the fruit. I remember reading in my scrap book: In New York a grand father sat with a child under a fine elm tree and said to the child I remember when I was a boy my father set that elm tree. I thought I would pull it up and I did. He took that elm and gave me a threshing with it and set it again. Now we are sitting in its shade. I think all these stories are very encouraging for us to set trees. If we have only a city lot we can set out a few trees. They will help to regulate the evaporation and temperature.

Mr. Huntley — I would like to know what kind of trees would be the best to set out. Perhaps Mr. Brainerd can help us out. He spoke of the black walnut. If we are going to grow it for timber more than for fruit perhaps something else would be better than that for quick growth.

Mr. Roe — The timber of the black walnut is of such value that in 20 years only an acre of black walnut will pay principal and interest on an outlay of a thousand dollars an acre at present value of black walnut. In less than twenty year's time that black walnut would be ready for the market. Where is the investment where you could put that amount where it would make surer and better returns than an acre of black walnut. I know the catalpa species *catalpa syringifolia* is mentioned, box elm is mentioned, or ash leaf maple is also a success. I think it is on the grounds of my friend Huntley. It is in our region, and this tree is not only valuable for shade, it makes very fair fuel and I was about to urge it is second to the sugar maple for sugar. I have tasted a splendid article of syrup made from the ash leaf maple or box elm. You know how rapid is the growth of that tree, and the ease of propagation. We can have a sugar maple grove brought right on to our doors. We have the shade and we have the lumber which can be created rapidly. We can add largely to this list. The white ash in particular. Hickory grows with great rapidity. It does on my farm. There were a lot of trees that were not over six feet high that are now commencing to bear and I think

from the varieties that we have of our native varieties we can obtain a sufficient number of trees that will pay admirably well for any labor and expense we may go to in their planting and preservation.

Mr. Huntley — To show how cheaply this can be got and how quick they will grow I will say that ten years ago I purchased one hundred trees for fifty cents, of Ash Leaf Maple, one year from seed. I set them out. The other day I was measuring some of the limbs. They extend fifteen, once in a while twenty feet on each side. The expense of setting a tree that has only grown one year from the seed is small. It is only about a foot long. Freight is nothing. During that time I have never seen a bud killed back in the winter. It is very little expense and then they are of very rapid growth.

Mr. Perrott — Is the timber of any value after it is grown?

Mr. Huntley — I think Mr. Roe stated correctly. They make sugar. I have seen several pounds of sugar made from them.

Mr. Perrott — Is not it a soft wood?

Mr. Huntley — I don't consider it so any more than perhaps you would the soft maple. It is good timber for fire wood.

Mr. Roe — Far superior to that abomination called the Lombardy Poplar.

A paper was then read prepared by Andrew Anderson, of Neenah, entitled:

PAST MISTAKES IN HORTICULTURE.

Past Mistakes in Horticulture, is the subject I have chosen. Horticulture commenced at a very early day. It is said that God placed the first human pair in the Garden of Eden, and the first work done by Adam and Eve was Horticulture; and to dress and keep up the garden, showing that skill and labor were required even in Paradise; and that neglect and sloven culture now so apparent everywhere, are the consequences of the fall. The adaptation to our said climate of Wisconsin is the great question in Horticulture that im-

mediately concerns us, and to this branch of the subject I ask your attention.

LOCATION.

The first thing that we naturally should consider is, where shall the orchard be located? Will fruit trees grow and do well on any location where the soil is sufficiently dry? I answer, no. Very much of success or failure in fruit-growing depends upon the location of the orchard. We do not sufficiently consider the fact that our climate is rather to rigorous for the apple and other fruit, and we need a favorable location to produce healthy and productive trees. I fear that the idea that an orchard is to be a permanent thing, and should thrive and bear luscious fruit for the generations to come after us, does not control the selections of most orchard sites in Wisconsin. There are but few farms in this region but what a location can be found, where with proper choice of varieties and suitable care, a person may not have reasonable hopes of success in fruit-growing. There are several points to be considered in the selection of an orchard site; among which may be mentioned elevation, aspect, protection, soil, sub-soil, drainage, etc. It is a fact, known to people of observation, that the temperature of high lands is less variable than that of the valleys or low lands; that is, the temperature rises higher in daytime and sinks lower at night in the valleys than on the ridges; hence, other things being equal, a tree would be less injured by changes of temperature on the ridges than in the valleys.

Again, the soil of the low land is less adapted to the growth of healthy trees than that on the high land. Frosts frequently occur in our valleys sufficiently severe in the spring of the year to injure the blossoms or young fruit, while the ridges escape entirely. We say then, select for your orchard site some of your most elevated lands.

ASPECT.

What shall the aspect be? Shall it be a hillside, facing the north, east, south or west? or shall it be flat land? My observation has been, both at the east and west, that a north or north-western slope is not favorable to a vigorous and

productive orchard. In our rigorous climate, our cold northern winds tend to evaporate the moisture contained in the trees, and, as a consequence, they make rather a stunted growth, and the vitality of the buds being injured by the same process, the trees do not produce an abundant crop of fruit. Anywhere in Wisconsin a south-western exposure should be avoided, if you would have sound trees. As has been intimated, the orchard should be located where it will be as free as possible from sudden changes of temperature. To secure this object, I would locate it if possible, on a gentle slope, with northeast, east or south-east exposure, in the order named, for these reasons, viz.: most of our winds from those directions are moist, and their tendency is not to evaporation of the juice of the tree. The temperature of these aspects is greatest by noon, and has the afternoon to cool in, consequently the change of night is not so sudden, whereas, a south-western exposure receives the heat of the sun late in the day, and has its greatest heat near night, and hence has a more sudden change of atmosphere, which proves detrimental to the tree.

PROTECTION.

Protection from our cold winds has much to do with the health and productiveness of our orchards. A location that is unfavorable in many respects, may be modified and made a very fair orchard site, with ample protection. A natural protection, elevated land, or belt of timber on the north and west affords the best protection. In the absence of these a good protection may be produced by planting a few rows of fast-growing, deciduous trees on the sides where protection is desired, and a row of evergreens planted around the orchard trees would be of great advantage. My observation has been that a well protected orchard is more generally productive than one without protection.

SOIL.

The health and vigor of a tree depends largely upon the nature of the soil where grown. A light or sandy soil does not contain the elements necessary to produce good, sound,

healthy trees, if we except the Siberian family, which, however, seems to do very well upon sandy soil. The soil that seems most congenial to the production of healthy trees is a clay loam, or moderately stiff clay with a clay sub-soil, and the best results seem to obtain where it is underlaid with limestone.

DRAINAGE.

Any land on which water stands at or near the surface for any length of time is unfit for the production of any kind of fruit. Consequently our land for the orchard must be situated as to have a natural drainage, or else artificial drainage must be employed, either surface or under-drain. Plowing the land very deep, throwing up ridges on which to plant the trees, and leaving a dead furrow between the rows, may answer a very good purpose.

HOW TO GROW AN ORCHARD.

We now come to the second part of our subject. We may have selected a good site for an orchard; with ample protection; with soil well adapted to the growth and development of trees; the site may be perfectly drained, and yet we may fail entirely of obtaining even a meagre supply of fruit. For, after all our painstaking in selecting a site, we may have planted unhealthy or worthless trees; or, as is too often the case, the orchard has been neglected, vainly thinking that all that was necessary was to select a site and plant the trees, and we were sure of having fruit.

After having decided to plant an orchard and selected the site, the next thing in order is to have the ground thoroughly prepared. The land, being in condition to work, should be plowed as deeply as possible; the surface thoroughly pulverized and put in fine condition for a crop of corn, and laid off for your orchard rows, which, in my opinion, should be from eighteen to twenty feet apart each way. There is another class of adaptations bearing upon all the pursuits of life, of full greater importance than those which we have been considering; it is the adaptation of the person to the pursuits in which he is engaged. This is a matter of pre-eminent importance in horticulture. Success can only be

achieved by the most persistent labor; if this labor is likely to become irksome or be neglected by any individual, he is not adapted to this business and he will not succeed. The day of success with neglect is past, if it ever existed. If a man does not feel the utmost resolution to succeed, in the face of a good understanding of the difficulties to be encountered, he had better not engage in the contemplated business. The day of luck is passed away. It is unfortunate that there is anything, even in gold hunting, which can be described as a bonanza. It leads men to neglect the studious and and diligent care which is the only true ground work for success in anything. My motto is, "That the man who works, is the man who wins." It will be found true in horticulture if not in gold seeking. I have no faith in anything else. This idea had become a proverb before the Christian era. It was embodied in the old fable of the race between the hare and the tortoise. A man is not likely to prosper in any business which he does not enjoy. If he does, it is because he holds himself to it by moral force and runs it on strictly business principles.

Now I ask who has taken these precautions? Who have ever given it a moment thought? Where do you find such? We have planted close to the dwelling home, whether it was suitable or not; and the deplorable condition of our dead orchard, all bear witness against us. The first organization of the Horticulture Society of Wisconsin was organized November 13th, 1853, at Whitewater, Wisconsin, and Hon. Hans Crocker was elected president; Mark Miller, secretary; R. M. Parker, treasurer; D. J. Power and Glifford executive committe, and since that date up to February 5th, 1886, the said society have been to work for the interest of fruit, and advancing the interest of the fruit growing of our noble, prosperous state. But the society like all others had several things to learn, like all business must be learned; by observation, experiment, long waiting for result. We have had many noble men who, now rest of their labor, have given us valuable lessons over thirty-three years. They have published the annual report since 1868, so we now have eighteen Volumes of Wisconsin Horticulture Report. And what

have we learned; what advancement has been made. As it is, by past failures and errors we must learn. As will be admitted, as far as this county is concerned the last six or eight years, we have gone backward, and a drive through the country, will tell the sad story of all decayed apple trees, not here only, but all over the state of Wisconsin. Now let us see if we have made any mistakes, and what are they? I will now show that the society first erred in recommending too many kinds, and did not know of their hardiness. What was recommended in 1875 was condemned in 1880, and what was recommended in 1880, was condemned in 1885, and so on. We have men who are now members since 1860, who have recommended hardy trees in 1860, condemned it in 1863 and took it up in 1867; in 1870 condemned and in 1875 recommended, and again condemned in 1883, and so on; by examining the volumes through, we are apt to be led astray to some extent.

Now we will show how the most fatal errors to fruit growing in the Fox River Valley. 1. That we don't know the trees we buy, and know nothing of their hardiness, if they can stand 33 degrees or 35 degrees below zero in winter, and 98 to 100 degrees of heat in the summer. That we leave it all to what is called a tree peddler; you have all seen him or at least heard of him. As some of you have not had an interview with him, I will give you an illustration of what he is, and how he acts, and how he does business. He calls about dinner time, shows fruit in a magnifying glass, shows all kinds on canvass. He is a well read phrenologist, knows where to hit and strike you on a weak *bump*, although you have sworn times and times again that you will set the dog on the first one that comes along, but his flow of language and noble eloquence gets the start of you. Why I did not know we could raise such apples, such grapes! Oh! such plums, cherries, pears! Oh! such big strawberries! Oh! my goodness! wife and daughter are all so magnified. Why, *Oh Jerusalem!* we must have of those white strawberries that grow as large as eggs, need no cultivation, no winter protection, no weeding, only two dollars for twelve roots, cheap at that. Oh, the cherries, the grapes, dear me. It

makes your mouth almost melt to look at the jar. And the plate book! Must have one grape root at $2 a root. Call it *Pocklington*, but when it comes to bear, which is very seldom, it is a common Concord or a Clinton, or perhaps a wild one. Oh the plums! have two or six trees; gracious! what fruit; one dollar each, and so on till the bill comes to forty or fifty dollars; he sells for such a firm, shows you his authority, (all, of course, a forgery.) Now you are happy, live in great expectation, what a blessing you will have some day, a new light has come over you, great expectation, next fall or spring a note comes that the trees are here, and you come, find a man, a new one, a sharp one, and tell you there is your bundle, it looks small, frosted, dry and poor, he shows you your order, and you must pay for it whether you take it or not. You take counsel and pay one dollar for it, then you go back, take the bundle, pay for it, you go home, look it over. Why, goodness! the apple trees are as small as whip-stalks; grapes, a little cutting one year old; cherries, same; all look dead; strawberries, small one; looks like a wild one picked up in some marsh; you plant it and the result is nine-tenths all dead; the balance, not true to name; worthless thrash; and you are entirely discouraged and humbugged, as you ought to be, and the next agent that comes along woe to him; and you will now swear that Wisconsin is not the place to raise fruit in, and here his horticultural pursuit ends. Now we come to a man who has bought trees of a reliable firm, say one in Wisconsin, as they are all good, reliable firms. We have learned from his neighbor above not to buy of a tree peddler. We order the bill, get them in good order, (but as horticulture is a second hand concern) leave them over night exposed to the frost or sunshine, is always very busy in spring, so it must be planted in a hurry, and it must be done at once. So dig a little post hole, say eight by twelve inches deep, jam the trees in. Why a tree don't grow without mellow ground, and without soaking the roots in water before planting is worthless, and it goes in the ground as if he planted a post. It needs no mulch, and the balance done just as careless. Grapes, raspberries, currants, blackberries

and strawberries all done in a *slip-shod* manner; and in the fall most of it has perished or starved to death, here the nurserymen receive a lecture across the fence, that they are a fraud, a cheat and he won't or can't be convinced that he is in the wrong. He is through with raising fruit forever. It is no use to try it any more.

Another man buys his nursery stock of a reliable firm down east, gets his goods all right, but the trees are such as Ben Davis, Yellow Belle Flower, Rhode Island Greening, Price's Sweet, Baldwin, Spitzenburg and several other good kinds in New York or further south, but are not made for our Wisconsin winters of thirty-three degrees below zero. In a few years not one tree is left. Another failure. But have you ever heard one of these chaps admit it is their ignorance? No, they will blame it to the rigid, hard climate and so on, another failure generally, and never plant another tree again. The motto is, we can't raise fruit here in Wisconsin; there is no use of trying it any more.

Another reason that we fail is this: As we have but six varieties that we can depend on, and these are the Duchess of Oldenburg, a summer apple; Wealthy, a fall apple; Pewaukee, a winter apple; Tetofsky, an early summer apple; Wolf River, a winter apple; Alexander, a fall apple; second hardy are St. Lawrence, Fall Orange, Utter Red, Walbridge, Willow Twig, Golden Russet. The Horticultural Society have the Fameuse, Plumb's Cider, Tallman Sweet on the list of hardy varieties, but here in Winnebago county they are a complete failure generally. And the Red Astrachan is also a complete failure here.

Now, how many have planted of, from the first list, and the second, which is half hardy, and the second list will winter kill where it is thirty degrees below zero. If we go outside this variety first named we cannot depend on them, and we must here also remember that all mankind don't live, and so do not all trees of the six hardy varieties. Now, look and see when you order trees that you order from some good, responsible firm. Don't order of any agent unless you know him personally. Never plant a tree where an old

tree has died or grown, as the old tree has used up all vitality. We have tried it several times. But the new tree will not grow or prosper where an old one has stood. Nor do we fail alone in apples, we also fail in the small fruits. Grapes especially, because we don't lay them down and cover them with earth; but instead of that it seems to be a fashion to let them remain on the trellis all winter, to be exposed to thirty degrees of cold. Who could expect fruit from such a treatment? And still we have intelligent men who do this act and then trust on, we can't raise this valuable fruit; but there is still another reason — that we do not plant enough of the Concord, Worden, Janesville, Delavan and Rogers No. 9.

Another thing is pruning the trees. Who has not seen the tree that has had all the limbs on, that will grow as if the *magnitude* of limbs will carry the fruit. We fail to rub off the buds when small; it can then be done in a few minutes, and not wait until we have to use an ax or a saw. This is one reason why we fail, because we raise wood, instead of fruit buds. We also fail to keep the moss off the trees, from their early days, and not wait till it is all moss-covered. We know that a moss-covered tree will as a general rule, not carry fruit. To do this, wash the trees in May with soap suds, and no moss will form that season. Again, the *slip-shod* men tell us we can't raise blackberries and raspberries; they will freeze off, winter kill. This is no use; that class go up in the woods to get blackberries. They will go 30 or 40 miles, spend three or four valuable days, come home all torn to pieces, and all tired out with only a few quarts, and sometimes with nothing whatever. If these people would do half the work on a few hundred blackberry bushes at home they would secure more berries and have them all the year round. But they are, as a general rule, too knowing to learn, and thus we can't raise anything in the blackberry line. Raspberries can be grown by almost anyone even if they are careless and lazy. They will prosper under neglect. A great and good man once said, "We shall judge the future by the past." I believe it was Patrick Henry who said it over a hundred years ago, and if we

should judge the future horticulture of Wisconsin, by the past, we would be in a few years completely annihilated How many in this hall who have used these above rules? If there is any one here present I hope they will go home, and make a vow to start a new orchard this spring and begin anew. Don't look on the past disappointments. We have met, as we have gone through the war of cold winter, hot summer, wet weather and drouth, and those trees that have stood all these vicisitudes we can depend upon. Is there any prospect for us in the future? I say yes; as long as we have such men as Geo. Peffer, Geo. Kellogg, J. C. Plumb, A. J. Tuttle, J. A. Philips, James Smith, F. Floyd, Wm. Springer, J. P. Roe, and many others. We have varieties enough in the state. There is a bright future before us now by the past experience, let us not look back but forward. There can be no failure with such a brigade of Horticulturists, and such a beautiful country as we have; we are making wonderful progress, and the time will soon come that we all will have plenty of fruit, and let our motto be "Forward, upward and onward."

DISCUSSION.

Mr. Hazen — This paper is about as well written one as I ever heard. It explains many points that will be of great benefit to me at least.

Mr. Huntley — Before this discussion commences I move we limit the time of talking to five minutes each.

Carried.

Mr. Floyd — The subject of fruit growing or apple growing is a subject that I have given a good deal of attention to, but I do not see any particular encouragement ahead of me at the present time, still I shall try the more hardy varieties further. I have an idea that it was not the winters wholly that killed our orchards last year, but it was due to the tremendous exhaustion that had taken place by bearing a very heavy crop of fruit, and also the hard winter before this, and also the fungi that was growing in the leaf. That fungi prevented the elaboration of the sap and the storing

up of material in the sapwood of the tree to withstand the winter, hence the tree succumbed to that winter when it would not have done so otherwise. This fungi that is making destruction in our orchards, I regard as the most formidable enemy we have ever been called upon to meet, in the apples especially. Its depredations are somewhat entensive in the grape field, but this insect enemy and fungi are encroaching upon us everywhere. This is not only so in our own state, but everywhere. It is in Michigan, California. We have got to investigate this subject — study them. We are not going to raise fruit just by setting out trees. We have got to have any amount of vigilance and perseverance if we grow fruit in the future. The Oldenberg has a splendid leaf; that leaf is what saved it here. If we could get half a dozen varieties with as good a leaf I would regard it as a great blessing. We may get some out of the Russians. The quality is hardly up to the American ideas of fruit. We may get some of the best. If we can get ten varieties out of them, then we will have to go to work and get seedlings crossed with our best varieties. I presume in that way we may get hold of something that will be better. The Wealthy is undoubtedly a cross with the Siberian, has Siberian blood in it. The habit of the tree seems to warrant that, but I suppose there is no positive knowledge on that subject, and in fact I understand Mr. Giddings to say that in planting seeds of the Wealthy he got little cherry crab apples. That would go to show it had Siberian blood in it anyway.

Mr. Roe — I make a statement here as a lawyer would say in view of reading my article this afternoon. I can bring abundant evidence to prove that I didn't sleep with Mr. Floyd last night. What I introduce here is a matter of my own; his runs so parallel with mine there seems to be a collusion between the parties. I think there are ideas advanced in its brief words of suggestion that should put us in the right road to success. I would remark in the brief time allotted to me about one point. A man can make one point, just simply this: In our observation and experience, in all matters of growth, animal as well as vegetable, we have this

fact, the weak, feeble are usually attacked by any kind of parasite. They are the most susceptible to disease. They are the first to go under. Now it should be our endeavor so far as possible to preserve the vitality and to stimulate the vital forces of our orchards. In the first place allusion has been made to drouth. We can protect against drouth by careful mulching, and what I believe preferable to that, stirring the soil and under-drainage, the two combined. Culture above, under-drainage beneath, is in my judgment even preferable to mulching, because mulching has a tendency to throw the root upwards. Some of the orchards on Ball Prairie, one at least, I think perished because of the excessive moisture. Another cause is that of over-production. Here is the matter of greed on one side and laziness on the other. We look at the orchard and calculate the number of bushels, and too busy and too indolent to reduce the overburthen of the tree. We allow that tree to ripen that fruit; we gather that fruit, and that is the beginning of the, if not the end of that tree in the orchard. The next winter it is in no condition to the vicissitudes of the climate. It is practically exhausted. Its vital forces are so drawn on that it has no reserve. As an illustration of this: A near neighbor of mine had a vineyard, which upon one occasion bore so excessively and made such a magnificent showing that from all parts visitors were invited to come and look upon that magnificent show of grapes, the Concord being the most vigorous in the vineyard brought through the crop. The other varieties brought that crop to almost the point of maturity and then the entire crop of that season went down to the bottom of the tressel. That was a telling lesson to him and also to me. Another point referred to in that paper. In regard to the preservation of the vitality of our orchards. After we have endeavored to keep up the moisture of the soil, after the agency of thinning out the fruit, then we must fertilize the orchard. It is not just nor right to draw upon a bank where we are making no deposits; by and by we have checked out the last dollar, and we are respectfully informed by a note of the paying teller there is no deposit for us. We must reinforce the orchards. The best applica-

tion after all is barn yard manure well dropped, well harrowed in or plowed in. Give the tree food, feed the tree and the tree will honor you with returns. As said, what you give to the cow in the mouth she will return to you in the pail. The same is true of the tree. With the subject of moisture, over-production, fertilizers, I think we can make fruit growing a success.

Mr. Huntley—One point I will try to make. The gentleman made three. The paper from the state society tells of under-draining and gave us some of its benefits. One reason given was that it produces or induces early growth and late growth. It occurs to me that is just what we want in fruit growing. Do we want early and late growth. I presume the gentleman's paper will also advocate that surface draining is all right in growing fruit trees. We generally think perhaps that under-draining is all right. Inducing early and late growth they tell us is not right. I just throw this out. I would like to hear it further elaborated.

Mr. Floyd—A tree should have the benefit of the full season to elaborate food by the course of one year's work and there should not be very much interruption. If there should be a drouth come on and everything was shut down so the tree could not mature its wood it might be necessary to have it grow a little later in the fall in order to fortify itself to carry itself through the winter.

Mr. Huntley—But if it grew it should not grow late.

Mr. Floyd—No, if we have the wood ripened up properly in the latter part of the season. I had a paper down at the horticultural meeting this winter that was rather an inroad on the practices of some nurserymen, and I think it is a very important matter too. I, years ago, found that nurserymen were in the habit of cutting up apple tree roots and grafting on pieces of root. I did the same thing myself. But I watched the result, and I have experimented enough now so that I greatly prefer to grow my trees than to have any nurseryman grow them for me. Unless you have a contract with them and specify how they shall graft them they will cut up the roots, give you perhaps three trees from a single root whereas they should be worked from the collar

and the root only shortened a little. I know a tree has a great deal better trunk. You can make the tree a great deal better shape. The long root below throws up a strong trunk, the straight limbs that come out of it are not larger than the trunk. Where they cut up the root it will throw out a limb that will be the strongest part of the tree. You do not get an even balanced head on the tree. Now just as quick as I go into a nursery I can tell whether the roots are fractional or whole roots, and I think it is very essential that they should be whole roots. The office of the lower part of the root is to throw down a sub-soil feeder. If you take off the bottom part of that root and plant it, it grows on. You take the upper part and it grows up and the limbs spread out. You don't get a good trunk but you get strong limbs, strong side roots, but no strong sub-soil roots. I claim we don't make any mistake in growing the root so long the first year. If it was not necessary for the apple to have that kind of a root they would not produce it. It is all wrong for a nurseryman because he can make three trees out of one root to cut it up and spoil it and make a poor class of trees.

The following paper was then read:

Mr. Huxley—I suppose this paper was assigned to me to read because I become the nearest to being an aborigine than any one present, being in this vicinity nearly forty years. It was handed to me by the secretary this morning.

ABORIGINAL FARMERS.

The aborigines of this country were better acquainted with the cultivation of plants than most savage races are when they first come under the notice of civilized people. The methods they pursued in raising corn and tobacco are still followed. It is to be regretted that so little care was taken in preserving a record of how they conducted many of their farming operations as practiced in the east.

Women were the original "gar-te-gaids," or farmers, of North America, for the savage lords of the soil scorned tillage as does a modern shop-boy, and passed their time in

fighting or in hunting or in fishing, although they never refused to eat the products of the soil. When a new field was to be cleared up in "wonne-squam-sauke," the squaws would take their hatchets (made of sharpened stone) and girdle the trees by bruising off a wide circle of the bark; "mo-ni-e-jeeg-l-kwai-wug," as they called this employment. The next spring, twelve months after heaping dry limbs and leaves around the decayed trunks, they would apply fire, and while the flames consumed the dead giants of the forest, and the heat killed the roots of the underbrush, the ashes would leave the soil mellow and in fine heat. A field thus tilled would be used by generations, thus proving the excellence of wood ashes as a fertilizer for Indian corn.

Great care was taken by the Indians to select for seed the best ear for "kamoon," which was their name for Indian corn, although they had distinct appellations for the white, the red, the yellow, and the black varieties, all of which they possessed, and kept pottage fish and flesh of all sorts, either new taken or dried, as shad, eels, alewives, or a kind of herring, or any other sort of fish. But they dried mostly those sorts before mentioned. These they cut in pieces, bones and all, and boiled them in the aforesaid pottage. Also, they boiled in this fermenty all sorts of flesh taken in hunting as venison, bear's flesh, beaver, moose, otter, or raccoon, cut in small pieces. They also mixed with it several sorts of roots, as Jerusalem artichoke and ground nuts, and other roots and pumpkins and squashes. Also several kinds of masts, as oak acorns, chestnuts, walnuts — these, husked and dried and powdered, they thickened this pottage therewith.

Melons were raised in great abundance, as were also gourds of all sizes, from the large "calabash" that would hold two or three gallons to the tiny receptacle for pigments used in painting for war. From the sap of the maple they made a coarse-grained sugar, which, when mixed with freshly-pounded Indian meal and seasoned with dry whortleberries, was baked into a dainty dish for high festivals. The dried meats of oil-nuts, pounded and boiled in water, was the beverage at such feasts, and from the green wax of the bay-

berry they made candles with rush wicks, which gave clear light, and yielded a pleasant fragrance while burning.

"Mishimin," in the Algonquin tongue, signified apple, although it is the opinion of some learned writers that this fruit was unknown before the rerival of Europeans. I have in my possession, however, several old printed compilations of early voyagers, each of which reckons apples among the early native fruits, and unless crab stocks were found I do not clearly see how the large orchards mentioned by the early writers could have been made productive so soon. Mr. Wolcott, a distinguished Connecticut magistrate, wrote in 1835 (certainly not more than five years after this colony was planted): "I made five hundred hogsheads of cider out of my own orchard in one year." This would have been almost impossible had he been obliged to raise his orchard from seed, or even had he carried trees of such size as could have been transported through the trackless wilderness. The apple may not be indigenous to the soil of New England, and yet the Indians may have possessed it, as they did Indian corn, which undoubtedly came from the south, and which was never found growing wild.

After the spring showers when the oaks began to leaf, the squaws would cultivate, or, rather, would root up the fields with the flat shoulder blade of the moose, and then mark the future hills by making small holes (about four feet apart) with a rude hoe, the blade of which was a large clam shell. Into each hole they would put an alewife, caught in some adjacent stream, or a horse-shoe crab from the seashore, and on the stimulant drop and cover a half-dozen grains of corn. The land thus planted was guarded against the depredations of the birds, and, as the corn grew, the earth was scraped around the stalks with clam-shells until the hills were two feet high, a mode of culture superseded by plowing, although some persist in laboriously following it at the present day. Generally the stalks grow six or eight feet in height, bearing two ears each, and we are told that there were eight rows, containing thirty grains or over, on an ear. Early in September the ears were plucked, leaving the stalks and leaves to enrich the ground, and were carried in back-

baskets to their wigwams. There the corn was placed unhusked, on frames resembling the fish-flakes of our time, under which a smoldering fire was kept up. When the corn was thoroughly dried it was husked, shelled, and packed in large birch-bark boxes, which were buried in the ground below the action of the frost. Sometimes, when they cooked this corn, it was soaked in lye until the hull came off, then dried again, pounded in a wooden mortar, and called "nausamy," which was boiled with venison fat and a bit of dried salmon to give it a flavor. "Omonee" was the dried corn, simply cracked in a stone mortar and then boiled; "suppaun" was the corn meal sifted through a basket, which they baked into cakes on flat stones. The warriors and hunters, however, when away from home, subsisted upon simple parched corn, a supply of which they carried with them. Roger Williams speaks of having "traveled with near two hundred Indians at once, near one hundred miles through the woods, every man carrying a little basket of this at his back, sufficient for one man three or four days." They call it "nocake."

Several varieties of beans were raised with the corn; that the fall dish of "musickquatush," or green corn might be enjoyed. It was not, however (like the "succotash" of our days), simply composed of corn and beans, for Goodkin tells us that "they frequently boil in this."

Certainly it is that they had orchards of peaches and of cherries and of plums, stores of which were dried for winter use. Huge grapevines entwined many a forest tree, and there was an abundance of berries. Small patches of tobacco, too, were cultivated by the squaws of every chieftain, and the "medicine men" had their apothecary wigwam so well stocked that they would be considered invaluable nowadays by the disciples of Dr. Thompson, or the good old dames who find a panacea for every ill in a nice cup of "yarb tea."

Their wigwams were constructed of saplings, set into the ground in a circle, and then drawn together at the top until they formed a conical frame some nine or ten feet high at the apex. This was covered with thick mats, or with large

sheets of birch bark sewed together with the dried sinews of the deer, and "calked" with some resinous gum. In the center was a stone-hearth, with an opening above it for the escape of smoke, and the only article of furniture was a large couch, elevated about a foot from the ground, and spread with skins and mats. Birch-bark boxes were used to hold clothing and provisions, while the framework of the wigwam was hung with war clubs, bows, arrows, fishspears, hoes, axes, and the few other rude implements which the owners possessed. They reckoned time by moons, and each lunar period had its distinctive name, based upon some phase of vegetable life, such as "the planting moon," "the green-corn moon," "the chestnut moon," and "the falling-leaf moon."—*Boston Budget.*

Mr. Hazen—This paper was selected by our secretary. We considered it a proper paper to be read in this meeting. It dates back to original agriculturalists of our country. Perhaps some one will want to make some comments upon it. We have a gentleman from Fond du Lac, president of our dairy board of trade, who will read a paper.

Mr. A. J. Decker of Fond du Lac—*Mr. President, Ladies and Gentlemen:* This is rather an accident my appearing before a Neenah audience to either read a paper or talk. I have recently become connected with the Fond du Lac county agricultural association. I thought perhaps that I could gain some points of information from this meeting; I came up here to see what I could get, not say anything in reference to any topic whatever, but to get some points that would be of interest to us. In reference to our agricultural society I would say we started out with new officers and everything with bright promises for the future. We started out to have a fair this fall that will have merit in it to bring fifty thousand people to visit us. We will have something for that fifty thousand people to see, and I would say to this Northern Agricultural Society that Fond du Lac stands ready if we have our fair first, and we certainly shall not conflict, that Fond du Lac stands ready to extend a hearty

hand shake to the Northern Fair, and that fifty thousand people will come to make the Northern Fair a grand success, greater than it ever has been yet. I lived at Neenah a great many years ago. When I look over the audience I recognize a great many faces, and in the twinkle of the eye I see that I am recognized in turn. This is a great satisfaction indeed. I happen to have the *Stockman's Journal* in my pocket. It is a record of the Wisconsin dairymen's proceedings. It had some short sketches. I told Mr. Hazen I would read that if it would be of any benefit. I will give you that paper as it is copied.

The paper written by Mr. Decker was as follows:

If we note carefully the conditions under which the cheese in Wisconsin is now made, we may suggest some improvements. The system almost universally practiced in cheese factories in Wisconsin is to make the cheese on a co-operative plan, the factory doing the work of making the cheese and furnishing the materials of manufacture for a given sum per pound, usually one and a half cents per pound. The cheese-maker agrees to warrant his cheese to bring the ruling price. The patrons who furnish the milk receive credit for the number of pounds of milk they deliver, with little reference to quality, and receive the returns from the cheese, in proportion to the amount of milk furnished. If the cheese-maker suggests to a patron that his milk lacks strength or quality, the answer usually is, "If you do not like it, I will go to the next factory, or I will build a factory myself." Add to this the idea held by some patrons, that the cheese factories are making the largest share of profits. Factories in many localities have become so numerous that they have become weak. The small amount of milk secured at each factory compels retrenchment in expenditures, and a low-priced cheese-maker; cheaper materials used in cheese-making are tried.

The old vat has been patched and mended, until it has become a stink-pot, to contaminate every batch of milk that is put into it, because the factory has not made enough to buy a new one. This same influence applies to the patrons

and their old cans. I have been at factories when the milk has been taken in, and often one-half of the cans in which milk is brought should never receive a batch of milk again. These patched cans, when the milk is emptied, are filled with sour whey and taken home, and this often remains in the can during the entire day; at milking time the can is emptied and rinsed out with cold water, and the warm milk turned in. This is, I think, the general practice, and the result is tainted milk, when the first requisite of good cheese is good milk.

Another practice is, commencing to bring milk when they get a good deal ready in the spring, and quitting in the fall by the same standard, without notice or consideration of the factory's interest. In this a grave mistake is made, for the success of the patron is based on the success of the factory. The patrons should feel that the factory is theirs, and, to make it give them good returns, they must give it good, healthy support in quantity and quality of milk. Patrons watering and skimming milk is a wilful practice that depreciates the quality of Wisconsin cheese to a large per cent.

(This is in Fond du Lac county. I am not speaking of Winnebago county.)

One of our factories in Fond du Lac county that was receiving 3,800 pounds of milk, detected a patron skimming the milk he brought to the factory. The next morning the cheese-maker told each patron as he delivered his milk that a skimmer had been detected, and he was going to be exposed and prosecuted, but did not tell who it was. The next day the cheese product was fifty pounds more than on previous days, although the amount of milk was not any greater. The solution to this problem was very plain. It showed that skimming or watering had been a regular custom, to the amount of twelve per cent. of the cheese product of the factory, which was shown by the abrupt stop put to the practice by fear of detection.

Many factory men know that this state of things exist, but say that if you go to rooting round to find these fellows, you will lose their patronage, and the factory can hardly

live as it is, and, besides, the law is so complex and uncertain that the chances of conviction are slim. These things exist, but what are you going to do about it? The subject of this short paper is to answer that question.

The question of producing rich milk by good, rich food, and good, rich milk-producing cows, is but a question of time, and is being pushed to a higher standard by the leading farmers and dairymen, led by the agricultural and dairy organizations of the state. To keep the milk pure until it is delivered at the factory, a system of paying according to its cheese value, and not by the weight of the full bulk delivered, must be adopted. It has been plainly shown that different cows vary forty per cent. in the richness of their milk and the amount and quality of cheese it will make. One patron may furnish one hundred pounds of milk that will make twelve pounds of cheese, another patron furnish one hundred pounds of milk that will make but eight pounds of cheese, and both receive the same amount of money.

One man loses two pounds of cheese, while the other gets pay for two pounds that he did not deliver, while, by the system of paying according to the cheese value, each would have received pay for exactly what he had delivered. Another man adds ten per cent. of water to his can and gets pay for the water, according to the present system; but if he received pay according to the cheese value, his watering, or skimming, would injure none but himself. This system would not only correct the injustice of scaling down good milk to make up the deficiency of poor milk, but would effectually prevent watering or skimming milk, and thereby give Wisconsin a richer, purer milk from which to make cheese than that we have had before.

(I made a statement at Richland Center that was severely criticised because it had not been tested by a thorough chemist. The criticisms were undoubtedly just, but the experiments had been made directly in connection with cheese making. They would take one pound of milk and would coagulate it just as it was coagulated in the vat. Then it would be filtered and evaporated and the solids weighed. It

seems on the face that it is just, but it is stated I think that it cannot be entirely relied upon.)

The great Aylesbury Company, of London, who furnish great quantities of milk, test their milk with alcohol and ether, which separates the solids from the water, and the percentage of each is shown in fifteen minutes. A company in St. Louis is making a similar test, with similar results. I had hoped to be able to learn the exact formula before the time of this meeting, so I might be able to make practical tests here. But I have been able to make certain results plain by simply coagulating the milk and filtering, which gave the range of difference in quality referred to. The question may be raised, that the average cheese-maker will not be competent to make these tests, or figure the proper percentage for his dividends. But the cheese-maker that is not competent and will not learn to come up to the highest point of the profession should be dropped and never reinstated, unless he advanced with his business. By sifting out indolent and ignorant cheese-makers we will improve Wisconsin cheese. The system of paying for making the cheese is one-sided and defective; it matters not whether cheese is five or ten cents in market, the making is the same.

(In making that statement I make it as an experiment without definite results. I do not want it to go on record as stated that that is correct, because if I do, I will soon catch it.)

The interest of the patron and factory man should be alike in producing the best results, and both sharing in the profit or loss. As it is, there is often an antagonistic feeling and interest between the factory man and patron. The factory man works for his regular price per pound, and feels perfectly safe, while with the patron, if the price is running below cost of production, it invites watering, skimming or any fraud that may appear likely to make his loss good. Often lack of care of milk will send poor milk to the factory. The cheese-maker does not detect it in time, and a sour, bad-flavored batch of cheese is the result. The cheese-maker not feeling that he was to blame, keeps the bad-flavored cheese out of sight, in boxes or elsewhere, when the buyers come to

inspect them. But when the shipment is made they are substituted for an equal number of those accepted, and the fraud is not detected until after the cheese have been delivered and paid for. This creates a question of fraud between buyer and salesman, and the factory suffers in reputation.

Establish a system of dividends based on the prices received, and make the cheese-maker a co-salesman, and you will make a co-equal interest in quality that will raise the standard of Wisconsin cheese.

This scale of prices would be something after this form. If cheese came down and sold at five cents a pound, that is as losing game to the cheese maker he furnishing everything and making that cheese, or one cent a pound. When it raised one cent, he would have one-eighth added to the price. When cheese came to nine cents he would have a cent and a half a pound. He would have a lower price in hard times and would receive a higher price when a higher price was received for cheese.

There are too many small, weak factories, whose profits will not pay a good, intelligent cheese-maker, and boys of a few week's practice, with small pay, are considered all they can afford. The boys work to a disadvantage, by not having milk enough to work to advantage. The buyers as a rule, avoid the small factories, and the cheese is often left on the shelves until past the proper season, and an uneven lot is the result, and the lowering of the average of the state product is the result.

Establish a standard of skill in manipulating; have a knowledge of the elementary principles of chemistry sufficient to know when, how, and where the chemical changes take place in the formation of the cheese, how to care for and cure cheese properly; have a state superintendent who will visit the factories and examine into the cheese-maker's qualifications and give or hold certificate, as the case may require, give directions as to the proper methods of operating, and, after the first year no cheese-maker would be qualified to accept any position without the certificate of the superintendent. This will raise the standard of Wisconsin cheese. The question of expense of an instructer, and the

arbitrary rule of compelling the cheese-maker to learn his business is brought in question. But careful thought shows that the opposition to this plan is penny wise and pound foolish. We felt keenly the fact for several years past that Canada was selling her cheese product at a cent in advance of what we were selling ours for, after Mr. Harris had spent several seasons instructing their cheese-makers. Add one-half cent to the product of Wisconsin cheese and you would pay the salary of a competent superintendent, and leave a handsome sum of profits in your treasury.

The amount of cheese made in Wisconsin has reached thirty million pounds. Suppose you add one cent to the price, just think of the amount of profits you have. You would have three hundred thousand dollars. That would pay a good many superintendents.

In times of depression in business, profits lie only on the highest points of success, and the manufacturer must reach high to get them. The Wisconsin State Dairymen's Association has raised Wisconsin dairying from a low, disgraceful grade to respectability. But more work is yet to be done, and I firmly believe that in the near future the clear-headed dairymen of Wisconsin will adopt measures in substance of the suggestions of this paper, and Wisconsin cheese will stand pre-eminently the model of elegant perfection and bring the prices that such goods merit; and any factory man who does not push ahead with the tide of advancement must keep in the old rut and continue to take the same old scrub price for his goods.

Mr. Hazen — It is true that I have some experience in manufacturing cheese and dairying in Wisconsin. The suggestions set forth in this paper are very good. Whether they can be carried out or not is the point. I believe I was the pioneer factory man in Wisconsin, built and ran the first factory west of Lake Michigan. In the early days of our factory system of making cheese we labored under great disadvantages. Before we manufactured cheese enough to ship out of the state we began to run into the factory sys-

tem, the dairy interest increased, we wanted an outlet for our cheese outside of the state. We found dealers in Chicago, Milwaukee and the east were discriminating against western cheese — Wisconsin cheese. One little instance I would relate that came under my notice in Milwaukee, in a cheese house, one day. The gentleman had a bill of cheese and was sorting it. He had a man handling it for him. He stood there with a tryer in his hand and put that pile here and that pile there. I says, "Where was this cheese made?" "Oh, here in the southern part of this state." He says, "Brand that pile New York factory." That was the pile he had selected as the best cheese; "Brand that Wisconsin." I says, "Is that the way you sell Wisconsin factory cheese?" He says that meant good cheese, the other they sold for what they could get for it. I told him, "I don't think you will ever buy any cheese of me. I would not sell cheese to a man that would use us in that way." That was the first idea I had of organizing a State Dairymen's Association. It came into my mind at that time that this difficulty had to be overcome. The next winter a meeting was called and the State Dairymen's Association was organized, and the principal object at that time was to overcome this trouble of discrimination against our western cheese. Eventually we accomplished that object. The first time we had an opportunity to compete with the eastern states was at the centennial, when our Dairy Association made an exhibit. We were awarded more premiums than York state for the amount of exhibits we had on that occasion.

Again, two or three years afterwards in New York state at the International Dairy Fair two winters in succession which put our cheese on a par with York state cheese, for a number of years Wisconsin was as high as York state cheese. I am sorry to state that has not been the case for a number of years and the reason for it lies at the door of many of the members of the Dairymen's Association. Decker has not stated all the reasons why Wisconsin cheese is not up to York state cheese. It is because many of the manufacturers have been making two products from the milk, they have been making butter, and making a soft

cheese that will cure quickly and spoil quickly. They put it on the market trying to make people believe it is all milk cheese. It lies more at the doors of dairymen than as stated in the paper. They make butter and cheese from the same product. This subject was talked up at the State Dairymen's Association. A gentleman read a paper not over three years ago where he advocated making skim milk cheese. He could make better returns by making butter and cheese than in making a full milk cheese. As long as that practice continues our cheese will not come up to the standard of the best York state cheese. We have some good manufacturers of cheese in the state. They make as good cheese as any other state as appears by our success in competing with other states in our International and State Dairy Fair, but that is not the case with all our cheese and I think with the majority of it. There has so much skim-milk cheese gone into the market that it has reduced the average of our cheese and deteriorated and injured it in the markets of the world. This is in my opinion the reason of Wisconsin cheese not being up to the standard and not being what it was a few years ago in the general markets.

Prof. Henry — How are we going to stop this?

Mr. Hazen — That question I would like to be able to answer, but I cannot answer it. How are we going to stop them from making butterine and oleomargarine.

Mr. Ford — How about the returns of skim-milk cheese and butter to the patrons?

Mr. Hazen — I am happy to say for the last two or three years the profits have not been as great where they made butter and cheese, as if they made all butter or all cheese. Perhaps butterine having reduced the price of butter will be in favor of the cheese market. Butterine has come to stay with us, and oleomargarine the same. Some will make skim-milk cheese. The less they make the better. One skim milk cheese on the market will spoil the market for half a dozen good full cheese.

Prof. Henry — What did your patrons get for milk this summer on an average?

Mr. Hazen — I could not give the average.

Prof. Henry — I don't care to a cent. I want to know something about what they got for their milk?

Mr. Hazen — I don't think the factories have averaged over sixty-five cents a hundred in the season. Sometimes nearly that I should judge. The fore part of the season sold very low. Some cheese sold for five cents. The latter part of the season it run to about nine. Some lots I guess sold as high as ten. Very few.

Mr. Decker — In answer to your question I would say the factories paid about sixty-five cents for milk to the patrons after all expenses had been taken out. That includes the first sales when cheese was five cents a pound. In reference to the statement of our president that butterine has come to stay, I think it is a fact, and the only thing to do with butterine is to get well acquainted with it, and make it appear precisely as it is, and what it is, so it cannot come in the disguise of something else, and then it becomes a direct cheat.

Mr. Loomis — I think the people would not eat it if it was going to stay that way.

Mr. Decker — You will find it is very hard to detect it from good butter, so much so that there are large amounts of it sold throughout the entire northwest.

Prof. Henry — It is better than half the butter.

Mr. Decker — People who make skim cheese have got to come back and be comparatively honest.

Mr. Hazen — I suppose there are some cheese men in the audience.

Mr. Randall — I am conducting the Outagamie county dairymen's board of trade during the summer, each Saturday afternoon, and the cheese-makers generally were present. I must say that the price of cheese was not as high as given by Mr. Decker. Perhaps it was owing to the fact that we gave a cent and a half a pound for making. Then again our products were so much more towards the last of the season when it was selling as low as four and a half cents may probably be another cause for reducing the general average. The point I wish to raise is our state made an appropriation some four or five years ago for experimenting with amber cane. Could not our state legislature be me-

morialized to make an appropriation for a superintendent of dairy products, and I refer to this more particularly from the complaint made by the city of New York when Canada, our neighbor, had outsold them in the London market. The manner in which Canada did her work was this, to send out instructors and have them visit the principal factories. It would not be necessary for them to visit each one, because the cheese-makers are kind of social. No one cheese-maker gets hold of an idea that is advantageous in his business but it is soon exchanged. If the superintendent would spend a short time in each dairy county during the manufacturing season he certainly would bring up the standard of cheese or bring it nearly to the same quality. There would not be that variation that there is now in the factories. The factories there did actually outsell Sheboygan Falls. The point I wish to raise is this, if we could through the state legislature, adopt some general plan of a board of instruction which would reach this case and convene on the day of the meeting of the dairy board of trade. The instructor should come in there. He would meet a class of young men. A great many of them are German in our county. I guess but two or three native Americans. Most of them are foreign born or their parents. They are eager to get hold of the best methods and processes. The rule should be adopted by the factory that there should be no adulteration or skimming. They should not be exhibited on the board of trade or sold. They would have to be sold on the street. Then they would go a little slower. They would like to sell when their shelves are full. It there is any fraud practiced, and they are caught, they are going to come to time. Dairy products have run so the past year that it has discouraged a good many. The fact is it is about on a par with all other business — corn, beef and pork — all these have fallen. Dairymen need not be discouraged. They have made more money than any other industry when they turn their attention to it.

Mr. Hazen — I would state for the benefit of the gentleman in regard to the contemplated action, there was an appropriation made a year ago last winter of a thousand

dollars to the State Dairymen's Association. They used a part of it for some other purpose. They contemplate hiring a superintendent for the coming season to travel through the state and instruct the dairymen. This plan has not been completed as yet. It was talked over at the time of our convention at Richland Center, and I expect they will hire some gentleman competent to teach the art of cheese making and try to teach the cheese makers throughout the state so as to make it as uniform as possible. Our people are different from those in Canada. They make a fine cheese for the English market. The English market has been the best market for our cheese. At the present time it is not. They are having a larger home market than before. The southern trade or western trade is increasing. It calls for a more diversified cheese product than the Canadian manufacturer. Theirs all go into one market. The English like a good, firm, solid cheese, that would be a good old cheese. Some of them here like a softer cheese. There is but one way to make a safe cheese where we can hold them and when they become mature and ripe they are the best cheese. Still many others would like a slacker made cheese, what we call soft curd for persons to use when it is new. Those things are in the way here. If we should make all for the English market it would be the better way. There has come up a demand for a flat cheese, while England wants a Chedder shape cheese. A very small portion of our cheese go to England.

Mr. Randall—I suppose the market is for the southern trade.

Mr. Hazen—We expect to establish some rule of that kind.

Mr. Decker—In answer to the question as to what was paid at the factory for making, it was a cent and a half. It was sixty-five cents and we sold no cheese for less than six cents. The early making we held on to hoping for a market that would bring better results.

Mr. Randall—Four and a quarter was ours.

Mr. Decker—All of our cheese was sold on the board of trade. If we thought the offer was not sufficient we held

it. If you have got a good article you are sure of getting the market price, a little better than the market price.

Mr. Floyd — I was in a factory a couple of years ago where they were making cheese. They were making butter and cheese. They were skimming the two pounds of butter from a hundred pounds of milk. The milk was netting the patrons ten shillings a hundred. They got five thousand pounds every other day. That was at Whitewater, Wisconsin. They made flats. The cheese was contracted at nine cents a pound; butter at twenty-eight at the depot in that town. They paid four cents a pound for making the butter and a cent and a half for the cheese. That was this winter. They were making flats. Put two cheese in a box.

Mr. Decker — That brings up the question of winter dairying which is very different from summer dairying.

Mr. Hazen — I would introduce Prof. Henry of the State University at Madison.

Prof. Henry—*Mr. Chairman, Ladies and Gentlemen:* I do not like to let this subject go by without a word, for this reason: Your dairy interests are somewhat depressed. Keeping cows and taking care of them and having laborious duties and onerous work is very apt to become discouraging and you are very apt to give up. Coming up on the train to-day I was impressed with the character of your soil, as I saw it from the car windows, and it seemed to me that you are pre-eminently in a dairy section. If you wish to turn your attention to it what you can raise in place of something of this character. This is a very fine fruit section. While we can grow small fruits pretty well, we cannot grow apples, pears and peaches to compete in the open market with favored localities. In the growth of potatoes some parts of the state are excellent. When it comes to cattle only of the better kinds can we do anything. We have to compete with Montana and plains from there to Texas. It leaves us with dairying or something akin forced upon us. We should not be worried about dairy products, the trouble is how to get better prices or to make the cows make larger profits.

Take cheese in my family with my wife and baby. I often go to two or three stores before I find cheese that suits me. Two or three times this winter, that was the best I could find; after putting it on the table once or twice we have thrown it away; it has a discouraging effect upon me to make the next purchase, I don't like to think of losing in the same game so often and then try it again. I think if I could find a good cheese regularly in my family we would eat four times as much cheese. Last summer we got it from the factory. I know our consumption was four times as much as this winter. I know I am a fair representative of a large portion of the community. We like to get a good article, but we cannot find it with any certainty. When you cheat a man two or three times he is going to be very shy and go to some other place, if the article is going to find its way in the slop pail at last. Now my opinion is, no one who has any cows worth saving, should for a moment think of selling. If you have got poor cows, it is a splendid time to get rid of them. Do not start in next summer with poor cows. On the other hand if you have got a cow that is any good at all, breed her in the very best possible way, no matter what the expense. If you have ten cows and have to sell two of them in order to get better calves from the eight, my advice is to sell the two and get good calves. There is no theory in that, nothing hifalutin or fine spun. It is simply business. I know how this thing is run over the state, I am through so many herds of cattle I know the men that are climbing up, and I know the men that are going down. Now in regard to colt raising, farmers will pay $20 or $25 for a good Norman colt, they know the horses that go into the logging camps are reared from such sires, it is surprising to see how slow they are to improve their calves. A farmer who introduces a good sire into a neighborhood is almost boycotted by his neighbors. People have got to eat butter; they are going to eat cheese if you give them anything fit to eat. The dairy interest is pre-eminently the interest of our state and it must continue to be so.

I don't know as I will say anything on the cattle question now, but it is a good time to be planning about calves that are

going to be dropped a year from now. I wanted one or two cows for the Experimental farm. I offered a young farmer $95 for a cow. I felt that I was safe to go that price. Says he, "I cannot sell her, my price is $100." I had paid a farmer a hundred dollars for some before and was a little criticised, and was so somewhat delicate. I wish now I had bought the cow at his price. The young man was exceedingly pleased for the compliment paid, for no one had offered him sixty. He said that pays me for the way the neighbors had laughed at me. He had been introducing Jersey blood only, the products of valuable sires. At this time he had between 25 and 30 Jerseys. I knew this cow would be worth that to me or to the state farm, for practical purposes. I knew she was worth that money; I knew she was actually the cheapest cow I could purchase as a machine to make butter to put on the market. I think she is the cheapest, with the exception of one or two where the owners did not know their value. I want to talk further on this point. The springing up of these boards of trade is no doubt the best way out of this. I am greatly pleased with what the Fond du Lac board is doing. When they catch a member playing some little trick, that man is exposed the way he could not be otherwise. What farmers want is organization. When a country is made for dairying, when dairying will give a man an opportunity for intelligent labor which must be profitable in the end, I say let us adhere to that in this section. No matter if you do lose on cheese. Merchant's have to carry their goods over. You must feel the hard times as well as the merchant. I do not see how men can make much out of milk at 65 cents. I do not see how there is any money in it at that price. But we will get better prices.

One word in regard to butter. Butterine has come to stay. The only legislation we want is to make butterine stand on its own merits. My idea is it should be put under the Internal Revenue Department. The factories supervised as the cigar factories are. Make it pay its way. I don't want a ten cent tax. If I want to buy butterine rather than use the miserable butter that I sometimes find in the stores, if I

want to escape that bad smelling stuff and want to get something that is pleasing to my taste, let me go and buy butterine at as low a price as I can get it. Because you are farmers you ought not to kick. Suppose I was running a line of stages from Pere to Deadwood. That is a profitable business. They charge ten cents a mile, and the Northwestern railroad runs there. We get up a petition that the Northwestern road shall not run the railroad because it would stop our business, which makes us sell our horses. The Northwestern railroad will probably go through. The stage coach is slow going and will have to get out of the way. In England they got up a petition that railroads scared women and the children and would do away with the raising of horses. They found the difference. We will find good butter sold on its merits will still have a better price than butterine sold on its merits. Let us be calm. Don't let us get hot-headed and excited over this. It is all bosh. Our representatives will not respect us as voters. I claim a ten cent tax instead of giving what we want will simply kill the bill. If we represented working people in Congress we would laugh at anything like a ten cent tax on butterine. The way to get ahead of the market is by cheapening the production. That is what the factory does. In shoe factories they study every means possible to get the price lower down; to get the machines in that will make a shoe a cent apiece cheaper if possible. Just the same in farming. If we could get a cow that would make one hundred and fifty pounds of butter or get a cow that would make two hundred or two hundred and fifty, we will have a little profit. If a shoe factory can get a machine that makes a shoe for a cent apiece cheaper, they will figure how long it will take to pay for the machine. I have several cows on the Experimental farm that are good for three hundred pounds of butter a year. You might not judge so from the looks, but I know from the record. They are a good deal different from a cow that makes one hundred fifty pounds, that would stand along side of them and eat just as much and took just as long to milk them.

Mr. Huntley — Those are larger.

Prof. Henry — They are larger. Their carcass would

bring seven or eight dollars more. I don't insist on the Jersey, but they are pre-eminently a butter cow. I found in Lake Mills one butcher had killed five hundred calves. He was a regular Herod it seemed to me. I says to him I want you to buy me some of the same calves like those you have killed. Get as good as you can and bring them to Madison. He hauled the calves in a wagon to Madison. The sixteen calves weighed 1,920 pounds the 22nd day of last June. To-day those calves weigh over 7,000 pounds. They had only a few pounds of full milk. One was only three days old. They have been fed upon the products of the farm and skim-milk. I think they will weigh 7,300 to 7,400 next Monday morning when we weigh them again. We are going to get a little out of them, even with the low price of meat. We will make something out of them. We are getting the manure back. That is a waste product that with care can be saved. Then we must learn to cheapen the food that goes to these butter cows. We must learn to handle our fodder just as well as we can and raise it just as cheap as possible. I think the growth of fodder corn is one of the best possible ways to cheapen food. If fed late in the summer it will keep up the flow of milk when we are apt to neglect it. We enter the fall in a prosperous state, with the cows in good condition. In the fall we carry our cows through in good shape. At some of the meetings where I have been with the farmers I have seen the results of my talking with them. I can do more with the Norwegians and Germans than with the Americans. When they get a good idea they work on it. I have seen blooded stock go into a neighborhood after I have talked this way. I have known men to write where they can get good stock. I am not in collusion with any stock breeders who keep valuable stock. That is just as much a business as any other business, as the nursery business. There is no farmer in the state but should use a valuable sire. I talked with a farmer who claims he is doing as well as Hiram Smith. That if he turned his sheep into cows and horses into cows he will keep one cow on two acres of land. He says I have not got an animal on my farm but what is registered or

eligible to registry. He says pedigree never eats anything. I would not advise you to go as far as that. I say never breed from an animal that is not a valuable animal. It would pay five times my expenses to come up here if you take that and operate on it. People in Germany, Holland and northern England are making butter on land that costs five or six hundred dollars an acre. They have not got very poor cows. The people of Jersey have not got very poor cows. Most of you are converted to the idea of Norman and Clyde horses. You can do just as much with the money invested in Jerseys as in horses, but in that somebody else has put the brains. In the cattle business we have to put our own intelligence more closely. That is the reason we have moved more slowly in this matter at this time.

Mr. Loomis—I would like to ask you how you preserve cheese from moulding, that cheese that is all full of holes?

Prof. Henry—This summer we used Young America cheese. The maker says cut the rind off of the top, cut off what you want and turn it upside down on a dinner plate. Cut off of the exposed surface. Take the Young America cheese, cut off your section, and turn it on a dinner plate, leaving the rind intact on the other side, we found we could keep the cheese.

Mr. Loomis—Perhaps it is a hard pressed cheese. This that is full of holes will mould I don't care which side you turn down I have succeeded this winter. Mine will weigh from thirty to forty pounds. When it is cut it will keep moulding right through. Of course I have to throw half of it away. I have adopted a new plan lately. I take some of the softest part of the cheese and plug all the holes up, then just put a coat of butter over it and then a thin cloth, and I cut some a day or two ago that was not mouldy. That was the first cheese I stopped from moulding. I thought you might have a shorter plan. I know they will not buy such cheese in England because it is American and is full of holes. I have seen it sell for four cents a pound less than English made cheese side by side. Of course you have made a better article lately according to my reading, and it has been sold in England a great deal.

Mr. Huxley read a paper entitled: Organization for Farmers a Necessity.

ORGANIZATION FOR FARMERS A NECESSITY.

The world's history at the present time presents a vast combination of interests invested with the power and purpose of self-protection — each seeking the advantage of associated effort and the most thorough methods are devised to secure their greatest welfare. The most powerful influence in a state or nation is the degree of education to which its people have attained.

While the great interests of agriculture should be foremost among the industrial interests of the country, they are and ever have been far behind; although every industry is practically dependent upon the tiller of the soil.

We live in a day and age of progress. Education is the key to success, it is the only sure foundation for national greatness; the very essence of a free government for a free people. To educate and elevate should be the crowning glory of every good citizen. The laws and institutions under which we live have a right to ask and expect our active efforts for the general good of the community in which we live.

As individuals singly and alone, we can accomplish but very little. Thus the history of the world has proved the necessity of organization. It has ever been the foundation of all progress. Very little has ever been accomplished since the world began without some form of organization. It is contrary to the very nature of things for a single individual in any capacity or vocation to even live without to a greater or less extent uniting his efforts with others. The great Master of the universe never designated nor intended that any mortal should live for himself alone. Our domestic, social, moral, intellectual and all our relations depend upon co-operation. All branches of business are based upon and sustained by this great system of co-operative effort.

The farmer, the manufacturer, the miner, the mechanic, the laborer, all, are dependent upon the other, and must co-

operate to contribute to the wants and comforts of every class of the human family. The farmer however, is the prime producing power of wealth, and is the source of the ordinary course of trade in this country. But in the combinations that are made in every dependent business, he has but little voice, and has to submit to the dictation of combination. All the other industries of the country are thoroughly organized and are constantly at work by combination of capital and influence to control the legislation of the nation. Then why should not farmers organize? Self-protection and security demand it, if he maintains his relationship with the other industries of the nation. "Knowledge is power," and nowhere is it more effectual and remunerative, than in the domain of agriculture.

The prevalent idea that a political farmer may raise, harvest and market the productions of the farm without much education, is fast becoming obliterated. A new era is dawning upon the American farmer. Already the light of liberty sparkles across his pathway and he is beginning to see the way to a higher life and plane. It is coming through education and organization. It is coming largely through the influence of the Order of Patrons of Husbandry.

This is a subject in which Wisconsin farmers need to be more interested and become better acquainted with its objects and principles. The time is coming, if not already here, when something must be done to relieve farmers from the oppression which for long years has been forced upon them. Every other occupation has its organization for mutual improvement and protection. But, last of all, comes the farmer. What does he need of an organization? If every other class is organized, does not the farmer of all others need to be organized? He who pays three-fourths of all the taxes of the country and yet has the least to say about the control of the government and the affairs of this great nation. Self interest demands that farmers organize for their own benefit and protection. If there is ever any relief from the oppressions that farmers have to contend with the work must be done by the farmers themselves.

They have the power to do it if they will but organize and become united.

The farmer is now as he was centuries ago, and will ever continue to be, a tiller of the soil. The manner of farming, however, has greatly changed and the farmer of to-day is and should be, a very different man than was the farmer of years ago. Our excellent free school system and other educational advantages have had a marked effect the past twenty-five years. The average farmer of to-day and his family, have the enjoyment of books, papers, music, works of art, and other evidences of culture and refinement in their homes, according to the measure of their means and income. No reasonable person desires to see the Agriculturist driven back to the style of living of forty years ago.

But the question naturally arises, "How can farmers keep up and maintain the present style of things with the existing prices for the products of their labor?" The old adage, "to live within the income," should ever be kept in view. The farmer, as well as any other business man, should keep accurate accounts, and know definitely how his business stands in everything pertaining to his affairs, and then he will be able to act intelligently and to the best advantage. Farmers must also recognize the fact that great changes are taking place in all kinds of business, and he, too, must wake up and bestir himself, keeping pace with the times, applying new and better methods, bringing success and plenty out of his business instead of suffering failure and disaster to overtake him.

Verily the farmers do not appreciate the fact that they are the most potent factors in this great nation were they only united and organized.

Education is not all acquired within the walls of the school-room. The Grange halls should be used more for this purpose. Here is a grand opportunity, and many reforms have had their origin in the Grange. Organization must meet organization. Every interest in the land is organized for self-protection, and neutralizing the power of each to harm the other. Gigantic powers, if left unchecked, control and dictate the policy of others. It is natural for

the strong to oppress the weak and hold every advantage gained until forced from their position by superior strength or numbers. Is there any good reason why the majority should be governed and oppressed by a minority? When farmers combine as a unit there may be "a tide in the affairs of men." But who ever heard of a combination of agriculturists? Corporations may combine to accomplish any particular purpose, business men may form syndicates, force the channels of trade and amass fortunes at the expense and suffering of others. But the farmers must not think of taking any measures to protect themselves or prevent the rapacity of those who live upon the fruits of their toil.

Other professions exceed in influence, for they will understand the importance of thorough organization and preparatory training. To this end technical schools and colleges are devoted exclusively to imparting such instruction as will best fit the student to enter upon his chosen profession. The agriculturists may well profit by their example, and only be satisfied when their sons and daughters who propose to remain on the farm are afforded equal advantages in separate technical schools that other classes and professions enjoy. The great need of the farmer to-day is education. With education, union and organization they would be a power within themselves. They would then command the respect due their calling. They would then retain on the farm the brightest and most intelligent sons, instead of seeing them go out into the already crowded professions. The farmer, therefore, cannot afford to stand still. He must educate, and go with the current or he will be left far behind.

If there is any class of people that should be educated, that should be elevated, that should be protected in their legitimate calling, that class is certainly the agricultural. For the interests that the agriculturists represent is the grand moving power by which the machinery of government is run and successfully carried on. Suppose agriculture were to cease but for one year, it would bankrupt the nation. Commerce would be driven from the seas; manufactories would fail to give employment to the millions, and

business of every description would languish and die. From the farms are filled the great store-houses from which all classes must be fed. How important then that we thoroughly understand our profession, and how necessary that we are united for the protection of our own liberties.

We live in an age of progress and invention. Steam and electricity have revolutionized the world. Nearly seventy thousand miles of ocean cable unite the old world and the new, giving life to trade and commerce. Railroads span the continent, and with the water-ways carry the millions of passengers and freight. All these grand and mighty facilities for transportation have brought about a demand for improvement upon the farm. The sulky plow, the self-binder and the steam-thresher have taken the place of the more ancient implements used by our fathers, and the demand is heard from Maine to California for farmers to organize.

The most powerful influence in a state or nation is the degree of education to which the people have attained. It is no idle boast that our agricultural population makes up the class upon which the stability of our free institutions depend. This has been the testimony of the best observers and thinkers of all ages. Thomas Jefferson, the third president of these United States, the author of the Declaration of Independence, and a true friend of agriculture, declared: "That his confidence in the perpetuity of republican institutions in this country was based upon the fact that agriculture was to be the chief occupation of the people." If this was true one hundred years ago before the free school and the mighty power of the press had brought intelligence upon all subjects and into every household, how much more should it be true now with all the present advantages.

Agriculture cannot be recognized in any other light than as being the foundation and support of all other industries. Yet from its weak and unprotected condition it becomes the prey of other classes and professions. This is the result of the unorganized condition of our industry and the force of habit among farmers to act independently. While the farmers constitute about one-half the population of the

nation, yet it is conceded by all intelligent and candid citizens that as a class they have but little control over the national interests of the country and exercise a very limited influence over the political affairs of the nation.

By organization and unity of action every other interest and industry in the land has greater political power than agriculture, while in extent and material importance it exceeds all others combined. Do the farmers fully realize these facts and the consequent results to their interests? By organization and combination other interests are continually making agriculture menial to bear their burdens and contribute to their support. And they will continue to do so just so long as farmers quietly submit to their exactions. There seems to be but one course to pursue to a successful relief from these unjust burdens and assert and maintain the rightful position to which agriculture is justly entitled. It may be accomplished by united effort and organization and by these instrumentalities only. The Grange is the only effective organization the farmer has, and it speaks in no uncertain voice. What it needs is support and every farmer should rally to its standard. It is through the workings of the Grange that the people are gradually awakening to the importance of agriculture. And it is encouraging that agriculture is showing itself worthy and capable of being recognized.

We live in the greatest country known in the annals of history—with its hills and valleys stretching from ocean to ocean; from the snow clad hills of the north to the slope of the sunny south and its millions of people. The best interests of all this vast territory depend upon the farmer, and they are without doubt planting, and which generations hence will ripen in achievements, surpassing in results, far above the most sanguine expectations.

If any one supposes that organization has a real significance, his knowledge has been limited of what has been done the past ten or fifteen years. There is no other influence that has done more to mould society in localities where the inhabitants are devoted to rural pursuits and are necessarily isolated in position. These people have thus been brought

together in thousands of Grange homes, where they have had a common interest, and new opportunities which have been used for the advancement of all. If any proof of this is wanting, it may be found in the numerous Grange halls that are scattered all over the country wherever the Grange has obtained a foothold, and in every state in the Union this influence may be seen. This influence in farm-life has brought more refinement, broader perceptions, higher aspirations, more noble ambitions, and has tended as it ever will to a higher and a more noble manhood and womanhood. The benefits it brings to the home and the family in social and educational directions is shared by all alike — the wife as well as the husband—the daughter as well as the son, thus making the farm home more refined and attractive, and developing a greater interest for the wishes and desires of our children in whose hands the future destiny of American agriculture is held. From the youth on the farm shall rise men and women who shall be the leaders of this nation—for it is here they are receiving the starting-point to acquire the ability to reach the highest honors.

The following newspaper paragraph touches this point most admirably in these words:

"Born and raised on a farm." Any boy should thank God for being so fortunate as to have been born and raised on a farm. There is no place on this green earth so well adapted to perfectly develop mind, muscle and manhood as the farm. There a boy has the purest air, the freshest and healthiest food, plenty of unrestricted exercise, the brightest sunshine and the soundest sleep, the very conditions necessary for the highest development. Nine-tenths of all the men who have made their mark in any business, profession or pursuit have been born and raised on a farm. This is not so much because there is better blood on the farm as because the surroundings of farm life are better calculated to call out what there is in a boy, and develop a full-grown, healthy, perfect, self-reliant man. Added to the pure and ennobling educational surroundings which the farmer possesses in his quiet, thoughtful life comes this farmers' society — the Grange — this school so well calculated for his advance-

ment; giving him that training which is to put him in the possession of the ability to act well the part of manhood under all circumstances and on all occasions. The Grange was organized for the sole purpose of bettering the condition and elevating the American farmer. To assist each other in educating themselves to a better understanding of farm work and its management. To better prepare them for their duties as farmers and as citizens by understanding the rules of business, the laws of trade, and all the affairs of government. If farmers were thus thoroughly organized and educated could they not manage their affairs and transact their business to better advantage to themselves? Is it not an absolute necessity for the present and future welfare and prosperity of the farmers that they be thus organized and educated? This is the great object and mission of the Grange. It is peculiarly adapted to the necessities of the farmer. It originates thought, develops ideas, and elevates and ennobles all who come within the radius of its influence. Silently and almost imperceptibly its power is deepening and widening and to-day there is not a state or territory in the Union where the agriculturist has not been benefited by this organization.

DISCUSSION.

Mr. Hazen — Mr. Huxley comes before as a granger I believe they call them, as a member of the order of patrons of husbandry of the state of Wisconsin, and from his paper I should surely think he was one. Many farmers that are not members of the order might have occasion to criticise that paper somewhat. If there are any such I would be glad to hear from them. I have had some experience in the grange. I have been a member from about the commencement of their organization in the state, and from my observation and experience much benefit has been derived by the farming community. Many outside of it look upon it with suspicion because it is a secret organization. They have some secrets by which they protect themselves from being imposed upon by those who are not members. The farmers of

Wisconsin and every other state are, in my opinion, much benefited by the workings of the order, although they are not members themselves.

Mr. Floyd—I have been a member of the order of patrons of husbandry, and wish it were so that I could continue to be a member. I don't think it would be possible to find a farmer that would be willing to stay out of it after it had made its healthy growth; but the benefits to be got out of it were very much curtailed in its operations against political measures. They did not dare touch politics, did not dare bring in any reform that would help the farmer. They were afraid partisan discussions would come up in the grange, whereas they ought to have discussed those questions in the grange and enlightened the people on subjects that were most vital to their interests. I have no doubt but that the grange will eventually take hold of all of these great questions and handle them as they should be handled. As a social organization it is worth all that it ever cost, and as an educational influence its value can hardly be estimated by any of those who participate in the workings of the order. I am sorry that it has not taken hold of the more vital questions earlier in its life. That is the only fault I ever found with it.

Prof. Henry—I want to speak a good word for the Grange. In going about the state as I have for five winters past, I have mingled with grangers and non-grangers, and I have found the organization goes a long way with the farmer. Sometimes I would speak in a church, sometimes a school-house, sometimes in a grange hall. When I went to the grange hall the building was always lighted if it was needed, and was usually warm, but I have been invited to speak in places where there was no grange, and I have gone ten or twelve miles through the snow-drifts to get to the church and the door was locked. I have had the pleasure of helping build the fire, or built it myself. Then the audience was sometimes quite a tax. The grange from its very nature makes this work easy. They have good speakers. The parliamentary practice is worth all it costs. I remember once when I was a lad eleven years old, at the time of get-

ting the volunteer soldiers to go into the army, I remember sitting in a school-house and a farmer was called up, but he did not know enough to introduce the speaker; a good farmer, he was so bashful and ignorant; I will use the word. He did not know enough to make a little speech to introduce the speaker. In this day the man would be competent to attend to that duty if it devolved upon him. The boys that get into the grange become quite proficient in parliamentary practice. They overcome the difficulty that keeps all of our young men back. I know what it is for a boy to break down in speaking to the public. It is always a trial and a struggle to get through. If I had lived where there was a grange I know I would have been saved some very trying times. The meeting of the grangers in our city of Madison, each winter, is a very pleasant thing. Every winter there are two or three hundred that come to Madison, as deputies. They shake hands with the governor, they talk with him about state affairs, they come and visit us at the State Farm, they go through the State University. We have a good many students that come there through those visits. We have quite a good many bright boys that are taking a short course in agriculture that are grangers' sons or members of the grange. We have four from Reedsburg, all members. If you cannot belong to any organization that suits you you better belong to the grange. Belong to something. Don't be a cipher, a zero in this matter, have some sort of a farmer's club. At Rosendale, they have one 18 years old. Baraboo has one 14 years old. At Reedsburg they filled the court house until the people stood up. If you cannot get one kind of an organization get another. If you cannot get something better than the grange take the grange.

Mr. Huxley—I wish to say one word to correct the false idea that may go out from the remarks of my brother on the right in regard to this political feature with the Grange. The fact is the Grange never has been and, I assert, it never will be a political organization, although it has been classed so in certain directions many times. It never has anything to do with politics and I hope and trust it never will from the fact if you bring politics into an organization of this

kind it will be the death knell of this institution. We have all classes connected with the Grange, democrats, republicans, greenbackers and what not, farmers that belong to all classes of politics, and you see at once to bring partisanship into the organization would be entirely out of order. I make this statement to correct any error that may have grown out of the remarks of my brother on the right that the Grange is not a political institution and never will be.

Prof. Henry — We can discuss political measures in the Grange, but we do not admit partisan politics. But matters pertaining to political economy, what is to the advantage of every farmer and every citizen are not only discussed but are invited to be discussed.

Mr. Blakely — I would like to make a remark or two in relation to the subject that is before us, not that I wish to criticise the paper for I have the honor to be a member of the Grange and have no cold water to cast upon the Grange. I think it has been a benefit to me and to all farmers that have been connected with the Grange. In the Grange we do discuss questions that are for the best interests of the country. You may call it politics or what you please. What I understand by politics is the science of good government and there can be no impropriety in discussing questions of good government, and we may have to criticise measures that our congress is enacting from time to time, and we have a perfect right to do it.

Now, the Grange has had an influence in this state for good. You will admit that the Potter law, for instance, was carried through our legislature, giving the people the low fare upon the railroads if they wished to travel. That was carried through, but did it stand? No, it was repealed, and how the railroad men said we will not submit to that law. The governor says, "You will submit to the law or I will call out the militia." These men were not very fond of breasting bullets, so they went to work in a different way to bring about a certain measure — the way that things are generally brought about at the present, and that was by money. When the next legislature met that law was repealed. Now I do not know what these railroad men loaded

their cannons or muskets with, but I am afraid it was greenbacks. Anyhow it brought the legislature. We established one thing. We established the fact that the state had the right to dictate to and manage the railroad companies. It was a matter that came under the jurisdiction of the state. Of course in the territories they could not reach it. Now the state of Nebraska has to pass her products through seven states before she reaches the seabord, but those states can manage the railroad companies because the state has the power, but in the territories the general government has the power. I would speak of another institution which has a formidable bearing upon the welfare of this nation. It is a strong institution. In the state of Nebraska they have what they call the Farmers' Alliance. They have become so strong that they have placed themselves on this ground. They are not a secret order. They are gaining all the time through the different states. In that state they have become a power. They said to the political parties we will support you if you will go for our interests and will go for the public good and not for class legislation. We think we have so many lawyers in the congress of the United States and capitalists and bankers that the laws of the country are being warped in their interest. Now we want to send you to congress to go for our interest. They got the legislature pledged to do that thing. They sent Mr. VanWyck to the United States senate. What did he do? He went into the senate of the United States. What did he do? When the committee was called upon to pass upon the question that was of interest to his state he found that the chairman of these railroad companies was absent. He bore this for some time and finally went into the senate of the United States and says to that chairman, "I want this bill to come up and I am going to have it come up," and he told the senators of the United States how they had spirited away the chairman of that committee, and succeeded in getting through that which was a matter of giving to the people a million of acres to one of the Texas railroads that had been forfeited by their not complying with their charter. After a long, laborious effort he got that matter through the senate of the

United States. He gave to the people a million of acres that is probably worth to-day six million dollars. That is what the Alliance did in the state of Nebraska. That, I think, will go to effect what the Grange has done in this state in relation to the Potter law.

A paper was then read by Mr. Floyd, entitled

THE DRAFT HORSES OF FRANCE.

WILL COUNTY, ILL., October 21.

Editor Prairie Farmer: Noticing the article on the Draft Horses of France, in your October 10th issue, I trust that you will permit me to say a few words in reply. I have been an importer of French draft horses for some fifteen years, having visited France seven times, and must say that I have made as much inquiry concerning pedigrees of draft stallions as any other man in America. Until the last visit, I don't think any importer in this country had been to more places to buy horses than myself, and among all the parties with whom I have dealt, not one could give me a single pedigree of his horse. Every one, without any hesitation, told me that no breeding records of their draft horses were kept, and to-day the most responsible dealers in France will *all* tell you that this pedigree *furore* is a humbug. The dealers also say that they were not asked for the pedigree of their horses until within the last two or three years, by any person except those making use of the so-called French Percheron Stud-book. The same importers who make a great cry about Percheron pedigrees, have bought their horses from Adolph Rinier, I. Fraizier and Eugene Vidal, the same men from whom I purchased mine, the latter being the former owner of Duke de Chartres. All three of these men told me last year that they sell to these importers of pedigreed Percheron horses, and never furnished pedigrees to any of the horses, simply because they have none to give. When these horses get to America, however, they have pedigrees extending back many generations.

To illustrate the value of the Percheron pedigree, let me relate a little occurrence which happened on board the

steamship Periere last season. The importer was talking about the pedigree of his horses, saying that he should have them sent to him if possible. I told him that he could not get a correct pedigree, as no records of any kind of draft horses were kept. He said there was a Percheron stud book published in France, and he thought he could get the pedigree of all his horses, the object being to increase the selling price of the horses. He acknowledged to me in the presence of two other importers, that for himself he would not believe a Frenchman under oath in regard to pedigree, as not one of them had ever kept any record of their draft horses.

Now as to the name "Percheron." The name La Perche does not appear on any French map, and no such place can be found at the present time; the name being only local and a nickname at that. Normandy is real, and hence the name Norman was adopted in America, and the first stallions that ever came here from France were called Normans. If any record of the breeding of French draft horses had ever been kept, I should think that the editor of the *Breeders' Gazette* when he published his first volume of the so-called Percheren Norman Stud Book, would have tried to find out the facts of the breeding of the Percheron horse, if there was such a breed in France. I will quote what he says:

"The precise date when this race of horses [Percheron] assumed the distinctive features which entitles it to be classed as a fixed breed is not known; neither can all the various elements which entered into its composition be determined *with certainty,* the literature of France being especially barren of any definite accounts concerning the origin of any of the breeds of horses reared in that country. No stud books *of any kind have ever been kept,* and no systematized attempt at recording the genealogies of any of their *breeds was ever made.* It is a well known historical fact, however, that the *Norman* war horses, as used by the armor-clad knights during the time of the crusades, in the days when chivalry flourished, were famed for their stoutness as well as their activity, and that in spite of the lack of proper pedigrees and stud books, selection of *the best* and

survival of the fittest, had given to this part of France, many centuries ago, a race of horses that was pre-eminently adapted to the wants of that country, and whoever looks for a definite point in the equine history of France, when they first came to be acknowledged as a *distinct breed, will search in vain.*"

Again, he says, that in the entire district which was once the home of the Percheron, it is now diffiult to find a pure Percheron, as the old type that once made these horses famous, has been given up to the demands of commerce for *greater size.* I would ask if any pedigreed Percheron horse breeds any better than Louis Napoleon, Roland, Pola, Success or Duke de Chartres, none of which had any pedigree, and the last of which I sold for more cash in hand than any draft stallion was ever sold for in America.

While there is no man in Illinois who would indorse a pedigree which cannot be questioned quicker than myself, I think that a false pedigree is worse than no pedigree at all, and I will venture to say that you can not find two importers of French draft horses out of ten, who will deny what I have written concerning the extended pedigrees of French draft horses.

JAMES A. PERRY.

The advance in modern agriculture, the addition of machine after machine to do farm work, created the necessity of making the horse the most important factor employed in husbandry, excepting brains to direct the same.

In view of the great variety of work and almost constant employment of the horse on the farm, it behooves the breeder and grower of horses for this work to be careful in his selection of stock for breeding purposes. No vicious, ill-tempered or broken down dilapidated institution of a mare is fit for breeding purposes, on the principle involved in the great natural and universal law that *like begets like under same conditions.* A good horse can only be the product of a good sire and a good dam, and the qualities *they* embody will be transmitted to the progeny. This is the essence of the phrase in common use, that *blood will tell.*

Also, since the value of the animal is in proportion to its ability to continuously perform the greatest amount of work in the least possible time, and with the greatest convenience and pleasure of his driver.

In short, should be born of good sound and pleasant parentage, with a nicely balanced, nervous system. Right here is the most important point to be studied in breeding the horse, since a well developed, nicely balanced, powerful nervous system is what gives greater value to a well bred than to a low bred horse. Such a horse has *capacity* to learn, and learn quickly, to do the great variety of work on the farm in the best possible manner, if in proper hands. Has endurance, ambition and pluck; is a wonder at the load, can be driven long distances and repeat without much seeming fatigue or inconvenience to themselves. Walk faster, do more hard day's work, live longer; are always good feeders as well as great performers. In short, is truly *American* in character, and have a world-wide reputation as being the best business horse on the face of the earth.

The *American horse* is made up of a very large per cent. of thoroughbred blood. In his veins may be traced the blood of *Messenger, Morgan*, Bashaw, Diamond, Bellfounder, Hambletonian and others; but the greatest of these was Messenger. He was undoubtedly the most popular horse America has ever known. His direct descendants gave us a foundation from which we produce the American horse of to-day. In the veins of the American horse are coursing the best blood known in the equine world; why should we run after strange goods when we have far better, all our own. Why are we seized with an almost universal *craze* for foreign goods? the good and bad points of which we know so little about, and at such exorbitant figures? The secret of this whole business lies right here. We deceive ourselves. We judge of these goods from our own standpoint, or the standpoint of the American horse, of high quality and great power; which the imported article does not possess. Hence, we placed an estimate value, where exists only seeming value. To illustrate this point more fully, a friend of mine in Whitewater, who had bred and reared some Norman

colts, says of them, the best that I have ever known were not worth fifty per cent. of what they sold for, and many not even twenty-five per cent. This is the verdict of an honest man, who knows what he is talking about. C. M. Clark, of Whitewater is the gentleman above quoted.

I asked a dealer in heavy horses what he considered the weak point in the Norman or French horse. He answered promptly, the *loin.* I learn by inquiry, through many sources, this same fact. Hence, when we get this same verdict, from many sources, we cannot help giving it weight. I am unable to see how a weak-loined family or breed of horses can be the best material for draft or farm stock, as many claim. If this paper, which I now offer you farmers of this section of our state, had not been prepared in your interest and for your benefit, I should not have mentioned the *Norman Percheron French horse* with pedigrees running back fifteen or twenty generations without a record.

But fellow farmers are we *able,* or are we willing, if we are able, to nurse, foster and protect every humbug, that gets a foothold among us. I am not willing to go on record as against progress; but I am willing to go on record as against the Norman Percheron French as being the best breed of horses for farm work, or even to set up as a fairly good standard, by which to judge a good farm team.

The American horse is often called a mongrel, because of his combination of hot and cold blood; if he is the best *farm horse,* we care nothing for the name, since that is the point we are after.

The mingling of certain hot with cold blood, gave us our different families of trotters, which are constantly being improved by crossing the best specimens of the different families, in size, speed and mildness of temper. The best, or largest of these, mated with fairly good dams, will give the very best possible farm work stock. The surplus of such stock will for a long time be short of the demand for it, to supply other wants, such as draft, carriage and road horses.

Heft is also an important point to be considered. Eleven to fourten hundred pounds are regarded as the extremes by well posted farmers, who understand economy in husbandry.

More heft is cumbersome; makes a horse logy and awkward with himself; takes too long to turn around, stop and start, and costs to much to support. On the other hand, too light weight in a horse before heavy loads for long distances, taxes the energy and nerve power too heavily, since a horse does not draw by weight alone, but by its muscles and nerve energy combined with weight. Hence, proper weight should be had, with a well balanced and powerful nervous system, good sound feet and limbs, deep chest, raking or slanting shoulder. short back, strong loin — wide, well set, strong hock joint, well muscled every where, with a good healthy digestive and asssimilative apparatus, makes the best possible horse for farm work.

The idea I wish to convey by the phrase well balanced and powerful nervous system is, ambition enough to keep up the bit without the use of a whip, and not enough or so much as to be fretful or unpleasant to work; wear, worry or chafe unnecessarily when at work. Whereas too little, or not any, gives you a horse of no ambition; just as lief get stuck as not; wants a whip or a goad and brad behind them all the time. If a trip is made on time with such a team, the energy of their driver will be severely taxed in securing it. Whereas to strike the happy medium, the true goal, is the highest type of scientific breeding, and is the especial point to bo studied in order to secure pleasant and valuable stock.

Secondly, how shall we grow and educate? (I like the word *educate* much better than the word *break*, and hence use it in its stead here.) Education may commence early in the colt life, or it may be deferred until weaning, and continued from time to time up to maturity. Weaning should be gradual and with a milk ration, if possible. I prefer to halter the colt, stand it by the side of its dam, and let it suck three times a day, then two, then one, last every other day, but be sure to increase the milk ration as you decrease the milk from the dam.

WINTERING THE FIRST WINTER.

By keeping a colt free from vermin I am always able to grow it as thriftily as when nursing its mother, by giving

it warm quarters nights and stormy days, also good clover hay or oats, with a daily two quarts of oats and four of bran ration in two feeds, also from eight to ten quarts of skimmed milk in two feeds, and an occasional feed of carrots or oil meal.

I have known many colts spoiled by high grain feeding the first winter. They could not thrive on pasture alone after such stuffing, nor can we secure as large size at maturity by so doing.

In giving a colt its first lesson, in commencing its education, I confine it in a roomy box stall, my tools are a whip and card. I commence very gently with a sharp whip on the hind legs. It soon learns to stand at the word whoa, without being held, and be handled all over, head feet and legs, come at call, etc., and if not previously haltered, I use that on it, at this first lesson. It is very surprising to every one to see for the first time, a colt trained in this way, how fast they learn, and perhaps more so, if they should learn that they never forget it.

THE SECOND WINTER.

Good hay with beans and carrots is a far better practice for the good of the future horse than with the use of grain. Education should be continued by bitting for an hour or two at a time, harnessing often, driving single and double. I can handle four yearlings easier than a green four-year-old.

The education of the colt may be carried to almost any extent by the proper use of the whip and a regular system of credits for all acts properly performed.

The operator should be guided by good, sound, common sense and not make mistakes, since it is much harder to unlearn than to learn correctly at first. This system of whip culture was some time since reduced to a science, and has been used by trainers of circus horses, and for horses in fire departments. I speak of it here, hoping that it may be utilized by the average farmer, also his sons and daughters, since a lady may handle colts under this system as well as a man.

In summing up this question of horses, I regard the utilization of the hot blooded race horse, with his fine, solid

bone, strong cord and ligament, with his immense nerve power, crossed with cold-blooded horses, as being the best possible use to make of him. Here his value is almost unlimited in the high quality and strength of bone, firmer joints, greater endurance, easier movers, more intelligence, great longevity, better walkers and stronger horses.

THE GENERAL PURPOSE HORSE.

Much has been written upon the various breeds and classes of horses, and more perhaps about the thoroughbred, or race horse, than any other, and less about that large and necessary class, the general purpose horse, or horse of all work. Our fairs still have a class so called, but many horsemen claim there is no such horse to be found. We admit that it is difficult to combine the various requisites, strength, action, a high degree of intelligence, and the necessary stamina, so as to make a harmonious whole, yet with judicious mating we can render it possible to produce a horse that will so cleverly fill every requisite demanded of him by the general farmer, that it would be inappropriate to claim for him less *distinction* than the "horse of all work." The majority of farmers are not able to support *draft, saddle and roadsters* in *separate or respective classes.* Neither have they time to spend, that would justify keeping them, had they the means at their command to procure them. What we as a class of farmers want, is a horse that will weigh from 1,200 to 1,400 pounds, with good action, a marked degree of stamina and horse sense, tractable, with fine form and style, soundness of body and limb, and endurance that will bear up under a hard day's work in the field, under the saddle, or on the road. One that will do his share with ease, hauling a sawlog or in the plow or reaper or drill. One that can walk from four to five and a half miles per hour under the saddle, or measure off six miles per hour on the road, and repeat it from day to day. Also one that will go slow and steady when required to do so, in plowing corn and working the garden.

Much will depend upon the manner he is treated in his colthood days. His education should commence while running with his dam. He should be taught to stand haltered and to lead with halter. If he is fondled and taught from infancy that he must obey at command, and treated with kindness and firmness, there will be but little trouble breaking or handling him. He should not be expected to perform as intelligently at the start as a horse that has been working for years. Too many expect unreasonable things at the start, expecting them to pull from the first time in harness, and *beat* them if they fail to comprehend their master's desire. This is all wrong. No man should handle colts that can not exert a reasonable amount of patience and bear with him while he is taking his first lessons. Do not use him at heavy work before he is well matured, although he may be handled at light work with advantage; yet if you would have him last well, do not overtax him while young, and bring on all appearances of old age while he has not yet arrived at his teens. Feed him liberally during the first year on bone and muscle and tissue-forming elements, avoiding unnecessary fat, but feed enough at all times to keep him growing, and do not fail to give him daily exercise in the meadow or paddock, sheltering him from wintry blasts and storms. Stable him at nights in a comfortable, well-bedded, roomy stall.

These are some of the conditions necessary to rear, handle and have at your command a general purpose horse, or horse of all work. In order to succeed with this class it will require much thought and discrimination in mating or breeding, or we will find our horses are too light to fill the place desired; on the other hand, if they are heavy and clumsy, they will not make a handy horse. As all classes are used and find a ready market at good prices, it might be profitable not to confine ourselves exclusively to one class, but raise a draft horse to meet the demands of heavy work in cities, moving the city traffic; also the roadster and saddle horse are always in demand and eagerly sought for, for business and pleasure. *Let those who make a specialty of*

handling the thoroughbred and trotter, grow them! No one farmer in ten thousand will ever succeed in raising a Maud S. It takes more time and money than farmers as a class are willing to spend in grooming and training, for competition with the wonderful time that scientific trainers have achieved. While I admire the speed and courage of these wonderful horses, and their impress upon the common horse for staying qualities, yet my opinion is we have enough judgment to exercise in developing the horse of all work.

ASA H. HOGE.

BLOOD WILL TELL.

The horse picture in this number is taken from life. The animal is a son of Arcola, a thoroughbred, who won distinction as a five mile runner. The sire of Arcola was Lexington, who stands at the head of runners, the dam by Glencoe. His twenty mile race years ago has never been exceeded, except by two of his sons, and then only about a quarter of a second was claimed. The dam of our horse was a Blackhawk and Rattler mare, half and half. Her dam was by David Hill's Blackhawk. Here then is a combination of running and trotting blood, and it produced a horse of wonderful substance and power. Old Messenger comes in through Rattler. For a horse of his size, sixteen hands and two inches, he is most remarkably close ribbed and smooth. The bone is small but has all of the toughness which characterizes the thoroughbreds.

This horse was not a fast trotter and was never tried as a runner, but as a worker he is unsurpassed. He has often drawn loads, alone, which a team of two horses could not move, and has shown such intelligence as to stop before going on a railroad track and to look both ways to see if the cars were coming and then go on of his own accord. He has been through all kinds of hardships, but is still perfectly sound, and his owner thinks he will be a good horse when thirty years old. It only proves that the staying qualities of the thoroughbreds can be turned to a good account, besides racing. The never-give-up of the racer is exemplified

in the ambition of our horse not to get "stuck," but always to do his best. There is such a thing as nerve, grit, pluck, perseverance, intelligence and appreciation in horses. Such a horse is good anywhere. The stupid dunghill does not possess these qualities. Our picture is a model horse.

HISTORY OF JUSTIN MORGAN.

Justin Morgan, the founder of the Morgan family, that bears his name, was bred in Springfield, Mass., and foaled in 1783, the property of Justin Morgan, who took him to Randolph, Vt., where he became very celebrated as a stallion, and has left a larger number of descendants, probably, than any other horse in North America. Justin Morgan was sired by True Briton, or Beautiful Bay, owned by Sealy Norton, of East Hartford, Conn. True Briton has a romantic history. He was ridden in the American Revolution by Gen. Delancy, a British officer in command of some refugees on Long Island. True Briton was captured or stolen from Gen. Delancy by one Smith, at King's Bridge, who took him over to the American forces, near White Plains, and sold him for $300 to Joseph Ward of East Hartford, Conn. Ward used the horse three or four years for a saddle and carriage horse, and afterwards disposed of him to Sealy Norton, who stood him for mares during his life. The following extracts from an advertisement of True Briton are taken from the Connecticut *Courant* for April 26th, 1791:

Beautiful Bay will cover (for the benefit of the public), for 15s. the season. Cash or grain next Fall. His sire was the imported Traveller, owned in New Jersey. His dam Delancy's imported Racer. Ten pounds was offered for one of his colts, when ten days old, at Lanesborough. He is in his prime, in fine order; bright bay, fifteen hands high; trots and canters light.

Justin was small; he stood about fourteen hands high and weighed about 950 pounds. Though small, he could not be beaten in style, strength, or speed, by any competitor of the day. He was often matched for short races, and never found his equal. He proved an overmatch for larger horses in drawing heavy loads. Mr. Evans had hired the little Morgan to log off ten acres of chopping. While engaged in

logging, a drawing match took place in the vicinity. On returning from his labors, he was informed that large horses hitched to one large log could not move it one length. Evans offered to bet a gallon of rum that he could draw it with three starts, to the mill. The challenge was accepted. He hitched the little Morgan to the large log. He told the by-standers that he was ashamed to hitch his horse to a little log like that, "but," said he, "if three of you will get on and ride, if I don't draw it I will forfeit the rum." The horse started, and with two starts landed the log at the logway, to the astonishment of the crowd. He drew, fair and square, a log that larger horses could not fairly start, and that too. with the extra weight of three men.

Mr. Huntley — I would like to inquire if he knows where there are any Morgans to be purchased. I came from where they were raised.

Mr. Floyd — I think you will find all the Morgan blood any where. There is only a small per cent. of it to be found in any one animal. There occasionally may be found one that has got a large per cent. of Morgan blood, but I don't know really where they are.

Mr. Whitenack — I have found a pair right here in Neenah belonging to Mr. Scott.

Mr. Huntley — Can you give us any light on that question.

Prof. Henry — What blood would you recommend farmers to use to produce general purpose horses.

Mr. Floyd — I would use any of the families of trotting horses that were large rangy horses, any family of Hambletonians or Bashaws that are large and strong. They are all strong but have not the size.

Prof. Henry — How long has the Norman blood, so-called, (should be the Percheron) been used in this section.

Mr. Floyd — I cannot tell you how long. They have been for quite a number of years.

Prof. Henry — What kind of a work horse are the half bloods, fair half bloods?

Mr. Floyd — Fair half bloods, if their dams have got plenty of hot blood in them, are good, fairly good. There is not any cold-blooded horse that is fit for an American to work. They have not got snap enough, they have not got *git* enough, they cannot go right into the pinery and last six weeks. When a man puts a team into the pinery he means business. They go up there and die or come home dilapidated.

Prof. Henry — Have these Norman grades gone up that way.

Mr. Floyd — Yes, sir.

Prof. Henry — What is the experience?

Mr. Floyd — The experience is they do not last six weeks. They call them six weeks horses up there. They are best sold by their looks and we judge them from our standpoint. They look substantial. There is nobody invests in them that knows anything about them.

Mr. Roe — I would inquire whether the Norman is not valuable in the ratio of the less Norman blood and the more American.

Mr. Maxwell — I wish to speak one word on the Norman question. I used to own one and I sold him. I sold to a man up to Menomonee. He told me he had sixty pair, and they were the only horses he would have in the woods. They would do more work than any other kind of horses. I have had a little experience in buying Norman horses. I know an Illinois importer, a man who has imported a great many horses, his name is F. T. Pierce. He said he bought his horses from a man that was reliable, a man that had their pedigree from the starting point, and it seems to me that there must be a starting point on the pedigree of those horses. I do not think that all men in France are liars. I think that there are some that can be believed just as well as in this country.

Mr. Babcock — I have been dealing in these Norman horses for the last ten years, and I have pedigrees from the French government, traced back to 1820. I have the register from France of two volumes which shows they have been recorded for a good many years.

Prof. Henry — This side represented by the gentleman who read the paper, is virtually the side of Mr. Dillon, the representative of one class of importers. Mr. Dillon is the man who calls them Norman, and a man who fights for the word Norman. Mr. Dillon has brought over some wonderful horses. Then there is Mr. Dunham, who represents another class of importers, who insists that the name of the horse is Percheron and not Norman. The fact is, the French government sends officers through the breeding districts of France. When these officers approve of a horse they dock his tail. In a degree they spoil that horse's tail. Instead of branding him they dock him. I think there is a great deal of good in the gentleman's paper, but we want to curb him a little. I think he shows a little too much hot blood. If we were to let that paper go just as he read it I am afraid it would be a victory for not what he wants, but for the scrub horse again, the dunghill. I am afraid it would lead to the idea that a five dollar horse is good enough. I do not believe that it pays. I do not say we all want Norman horses. We are using them on the Experimental Farm. They have given us good satisfaction. I find the farmers like them pretty well. Some like the Clides. I believe there are places where they prefer the Clydes. The province of La Perche, which has now geographical division. I give you this from my old professor who went over there and lived with those people, just as he lived with the Holstein breeders. He went and lived with them to see how they took care of those horses. This is what he told us boys who were studying with him. The people who take care of these horses are farmers who are in a good grass district. The man that keeps the breeding mares has not but a few, and he works his farm with these breeding mares and raises the colt until it is weaned. The weaned colt is sold because the farmer has no place for it, no use for it. He works the brood mares and works the land, and sells this weaned colt to other farmers who do not keep brood mares, and these farmers keep them until they are broken. They break them very early and work them for a time and sell them to another set of farmers, who neither keep brood mares nor colts,

but young horses, and these farmers carry on all their work with them and finally take them to the horse market, where they are sold to go to Paris, and they go into Paris all males left entire. We can see them pulling omnibusses and drays about the city. Mr. Dillon went no further than Paris. They would stand on the streets and see these horses go by pulling omnibusses, and would pick up in the stables of Paris all the horses they wanted. I understand Mr. Dillon made his first purchases on the streets of Paris. Later, the men went up to the source where these horses came from. Does not it seem that that kind of rearing would be very suitable for the horse. The farmer who keeps brood mares does not train horses at all, educates them. These mares are worked up to within a day or two of foaling, and begin to work very soon after dropping the colt. These colts are taken while yet yearlings and broke, and then sold to another man. They have found out that this division of labor was preferable; just as your shoe factories put a man at a certain piece of work, so the farmers have drifted into a special business. Where I scold our Norman and Clyde friends, they keep their horses like hogs instead of horses. They keep a stallion like a hog. They keep brood mares like hogs. When I visited one establishment I was sorry to see Mr. Kellogg did not keep these mares working right along. He will lose colts. You can keep a horse when he is sixteen or seventeen and build up good bone. The bone of the hot blooded horse is like iron. The skeleton of one of the Clay horses was dug up afterward, and it had been buried fourteen years, and was mounted and was a good skeleton. We cannot make that kind of bone in three years by keeping horses like hogs. Where farmers are going to make Norman horses worth anything they have got to feed a different diet. I stand with the gentleman very firmly on that subject; we have got too many loggy horses in trying to make them weigh so many hundred when they are so many months old.

Mr. Floyd — In the neighborhood there were some very nice Norman colts, and a friend of mine wanted me to take him over there. They had suckled the mare that summer.

The gentleman had just gone into his house after he had done his chores at night. We went directly to the stable. We found the colts. Those two colts had half a bushel of corn for their supper that night, they had two inches of fat on their ribs, they would weigh at least nine hundred pounds. Those colts were not worth taking anywhere. The reason why the Norman ever failed in the woods was, there is a lumbering establishment in Michigan that sent a lot of Norman horses into the woods, and said to their foreman they had never expended so much money on horses and they would expect of him a very good job. What was the result? They said they had a horse hospital all winter. They went to pieces faster than they could harness them. It is not so much the horses as the way they are produced. One man in France says the normal weight is 1,400 pounds. When you get above that you produce a monstrosity. There is no country in the world where horses go to pieces faster than they do in France.

Mr. Maxwell — When I was in Illinois putting up horses I was at a number of ranches where they would raise all kinds of horses. Where they would have from five hundred to a thousand horses on a farm. I will tell you why these horses are no good in the woods. They feed them like hogs. They do not do anything with these horses until they are about four years old. They are just as fat as they can roll. They will break these horses and turn them out and feed them on corn and oats until you can hardly work them. They are kept in that same condition. A man will go from here to buy horses to put in the woods. They are smart and active, look nice; he will buy those horses and fetch them here; they never did a day's work in their lives; they take them into the pineries; what is the consequence? In six weeks they are dead horses. That is the trouble with the horses in the south. You take a pair of horses that have been used and served as horses should be, feed them as they should be fed, you put them into the pinery and they are the best horses in the Northwest. That is my experience.

J. P. Roe then read a paper entitled

THE IRON-CLADS OF THE FUTURE.

We are compelled to write our title as we do for that the iron-clad of the present is almost a thing of the past. From year to year, at the annual winter convention of our State Horticultural Society, the work of revision and discussion has been a part of the programme, the lines narrowing rather than widening. But as the reports came in from the different sections of our state at the last gathering of the fruit men, and as one old and tried favorite after another went down under the Arctic waves of the winter of 1884–5, the final conclusion arrived at was that each fruit grower should consider the conditions of his own locality in regard to exposure, soil and climate, and meet so far as possible the demands of the situation. This, under the circumstances, was the best advice that could be given.

The picture of the last of the survivors of Waterloo — of the old veterans of Greenwich hospital, the two sitting sunning themselves on the same bench on the banks of the Thames, will illustrate the condition of our iron-clads. For of the goodly list once marshalled on the field, now only the Duchess and Wealthy answered to the roll-call after the winter campaign of 1884–5. History is full of instances where the vital forces of great causes, great principles, and even nations were reduced by adverse fortunes to their minimum, and then from the lowest point of depression, they commenced to rally after defeat and disaster, and almost extinction, the residuum became the seed of a new and broader sowing, the germ of a better fruiting. The lessons of defeat were so learned and used that disaster became the stepping stone to success. We believe that the like spirit, endeavor and results may be spoken for now and written afterwards of the fruit growers of the northwest. If we knew their mettle rightly they are not the men to make surrender of hope and effort while there appears a fighting chance, or as the Irishman would put it, "a nate choince to fight" left.

But the question naturally follows, Of what lines will the

coming and yet still coming battles be fought? And here we are left to two distinct lines of progress, each promising good results. The importation of the Russian — the growing and propagation of our native seedlings. And to this we would add a third, the crossing of our most approved varieties on the Russians, in the importation of the Russians, particularly of the numerous varieties of the great family Astrachanica, from the great interior plains and valley of the Volga, where the conditions of climate are the most like ours in the peculiarities of a continental climate, the extremes of cold and heat, the effects of drouth, yet more exaggerated there than with us. Here undoubtedly hardiness of constitution may be secured by process of selection or continued experiment as to flavor, size, and shipping and keeping qualities, be obtained. The most thus far introduced are calculated for yet higher latitudes than ours, and make consequently but summer and fall fruit, of which we have perhaps a sufficiency, or rather for which there exists no such demand as for winter keepers. Out from the many already introduced, from the more yet to come to our shores, a goodly number will be eventually culled for general use and propagation. Those from the middle and lower valley of the Volga will undoubtedly prove the best for our locality — from the upper Volga, for the regions of the far northwest, of varieties adapted to a Manitoba climate.

Second — Our own native seedlings. From different portions of our state there come up to our horticultural exhibitions specimens of seedlings and reports of their hardiness, the product of trees which have stood in some instances the test of twenty winters. These are coming to public notice, are being subjected to a wide range and severe process of testing. From the many of these, on the principle of the "survival of the fittest," some will be found worthy of propagation. Trees to the manor born, with constitution capable of endurance and quality to rule equal to the best of the old reluctantly abandoned eastern favorites, the famous Waupaca county seedlings, are an example of this. And we mention these with the more confidence from the report

made the past winter of their resistance to the excessive cold of the winter of 1884–5. Of these there are trees of from fifteen to twenty years' standing, which are yet, by latest reports, in good and sound condition. Over one-half of the varieties exhibited at New Orleans from Waupaca county are still as promising as ever. In the growing of seedlings, the Duchess of Oldenburg may, with advantage, be used as a parent stock. The seed of this apple is producing a number of very interesting and promising seedlings, and more will in future be reported as to its value from its hardiness of constitution, its remarkably and characteristically healthy leaf, its pubescent nature, proving its origin of the family of Astrachanica, and further, because of the health and vigor of leaf — its power to resist blight and fungi. The Wealthy may also prove the parent of a valuable progeny.

We would here throw out the suggestion that good results may be obtained from the crossing of the Duchess, or the most approved of our recently condemned old iron-clads; none of the latter proving sufficiently hardy, yet some of these are too valuable as winters keepers, and too good in point of flavor, to be readily abandoned. The combination of the blood of the Duchess or the old iron-clad stock may produce most happy results.

Third — Crossing the Russian upon our best seedlings. Here *hardiness* of constitution may be looked for and quality retained. We consider that one of the best results for our locality from the importation of the Russians, will be the infusing of their new fresh blood into our old iron-clad stock.

Thus by cross-fertilizing and planting the seed thus obtained, will come the new iron-clads of the old Northwest. Fruits that to eat them will be to like them; grown upon trees that have come to stay. So much for the origin of the future iron-clad. We believe in the coming iron-clad; we believe that it is coming, that it is sure to come, and that in some one of these pathways it will be found, and the man or woman who gives to the community one or more of these, will not have lived or toiled in vain, though their bones may

moulder in some forgotten grave. Yet with each recurring springtime and summer, so sure as the bloom of May and the harvest of October, their memory will be kept green. Their mission (humble as it may appear to them and the inconsiderate many) has been Godlike, for they have been co-workers with the great Creator of all in the creation of the beautiful and good.

But the future Iron-clad must not only depend upon the utmost care in selection, as 1st. To parentage, 2d. To offspring; but also to the methods adopted — adhered to in its propagation. And here

First— Instead of using roots for root grafting, grown from eastern, or at best unknown seed, simply bought by the bushel as apple seed—seed utterly unknown as to character—it may be of the tenderest varieties of eastern fruit — seed which may be sure to convey to the future tree a fatal defect of constitution, sometime to be made apparent. The seed to begin with, will be known and approved. Only that allowed which has been obtained from our hardiest varieties and which presumably will carry with it and transmit the constitution of its parent. Care will thus be taken against any defect in the foundation. On this the propagator will build with equal care and honest intent, using for his root grafting, 1st. Vigorous, healthy roots. 2nd. Whole roots, not dividing and sub-dividing the root to the detriment of the future tree; but collar grafting, with the honest use of the whole root. And we state in conclusion, that while this may not inure to immediate profit of the nurseryman, yet let this method be honestly adhered to and he and the whole community will be finally the gainer.

Mr. Roe — In that great pomological contest of the world, I might say in that great aggregation of apples, that magnificent exhibit, the finest in the world at New Orleans, the seedling of our state, the Wolf River, took the first premium over all the fruit grown north of latitude 36° and 30′, from the Atlantic to the Rockies.

Mr. Randall — About the time I bought the first lot of

trees I commenced to raise a little nursery, and I used common seedlings. The result was, after I got them well established they went up, and when we came to examine the roots they were decayed, that is below the point of grafting. That is my experience, but like Paul Jones, when they called to him to give up, he said he had just begun to fight. The next time I selected my own seedlings from the Duchess of Oldenburg. It was the only tree in bearing except one Russett. I selected all the seeds from that and planted them. After they came up and got established, Mr. Peffer came out there with his Pewaukee. The Pewaukee was not in bearing when I first started. I have now some twenty or thirty varieties of the Duchess apple. I do not believe they could be fertilized, except from that one tree, known as the Golden Russett. There was a marked difference with their seedlings in their botanical nature. I have some twenty of those that are bearing. They are hardy. I have no axe to grind, no trees to sell. Those trees that have large thick foliage stand the climate. Many of those that have smaller leaves are stopped. Most of these seedlings are peculiar. Most of them are tall, upright growth, and I have known wood larger than my finger the first year's growth, not even killing to the terminal buds. Some of the seedlings went up. I don't know the cause, but I know those having thick foliage bore no relation to the Duchess family.

Mr. Roe—I have at least ten seedlings of my own that are in bearing. They have stood the severe weather of the winters. That was true of the grafts as well as of the parent tree. I have not a tree to sell, I have only tested them, honestly endeavored to test them. Bye and bye when that test is sufficient and to my satisfaction it is time enough to put them on the market. The fruit of one of them was exhibited at New Orleans last winter and it stood until the 15th of February under glass. It was a mild, sub-acid instead of sweet. The apples keep well. The gentlemen spoke of not giving up the fight. There are men working on the same line. Our friends in Waupaca county are going on and testing and selecting. I might mention a seedling from Depere exhibited by a young lady. A seedling from the

Fameuse. We have seedlings that after the campaign of 1884–1885 are sound. With such fruit of our state we went before the world in a competitive contest and took the first premium. Had it not been for the neglect in keeping our fruit back, allowing it to stand ten days on the cars at New Orleans with the thermometer ranging up to 90, from the gross neglect of the party who had the fruit in charge, we would have literally swept the decks at New Orleans, that is as to color, size, beauty, general appearance and worth, and I think there is a future before our state and we never need lay down our arms and say there is no prospect for the fruit growers of Wisconsin.

Mr. Huntley — I would like to inquire of Mr. Roe and the other gentlemen whether they ever saw the apple on exhibition Mr. Gideon brought out under his own name. I have seen pictures with our itinerant fruit peddlers. I would like to know if any gentleman has seen the apple.

Prof. Henry — I know of nothing. I know Mr. Gideon has got a picture of several seedlings. He exhibited his pictures at St. Paul, but did not show any fruit.

Mr. Huntley — I see this is referred to in several journals.

Mr. Roe — I should say of our friend Gideon as the old Indian chief said of himself. He said, "I am an old hemlock, I am dead at the top." It is true of that old pioneer of pomological science that he is mentally off his base and that has been painfully apparent to his friends. That fruit is a peculiarity of the old man. He said it has two names, one to day, one prospectively. He calls it now, in view of its making a good fruit, Peter. If it should turn out a failure, we shall call it Short.

Mr. Huntley — Before Prof. Henry came in the question was asked whether under-draining of the orchard, late and early growth, was not a detriment, or whether it was a benefit?

Prof. Henry — I only know of one place where underdrainage fails. That is a barn yard. I don't know of any other place that it is not a good thing. I shouldn't want to underdrain a sand hill, a sand heap, because it would not be profitable, but it would not do any hurt. Any clay ground,

I think, can be underdrained profitably for an apple orchard. Prof. Burrill, of botany and horticulture, recommended that apple orchards be set upon lands naturally low and damp, but which had been previously thoroughly underdrained and well prepared for the orchard. He said the old idea of setting apple trees upon hill sides and elevations, which we previously had, was not correct, but to take the low lands and drain them and use them for the orchard. His reason was that when the summer drought, which was quite common with us, came, the growth of the apple tree was checked; it partially gets ready for the winter during that drought. Then the fall rains come and during the moist, murky weather we have after this drought the trees start an almost spring-like growth, then comes the vigorous cold winter and the tree is caught in that condition and checked. He thinks if the trees were planted upon well drained low lands, in that nicely pulverized, moist soil, there would not be that checking during the summer drought, and the tree would be more naturally prepared and heeled in, if I may term it that, for the winter. You can imagine how this took J. C. Plumb back. I heard him give several groans.

Mr. Roe — That is the very plan I am proceeding upon. It is gentle slope, almost a level, a gentle slope to the northeast which I am now underdraining, that I put in the varieties I am now testing. I did not hear that address of Prof. Burrill, but my own experience and observation has brought me to just that conclusion. Now while we are alluding to underdraining, pardon me, Professor, if I should ask a few questions that comes home to me individually. Last evening mention was made as to the depth of drains for different soils, as to the depth in regard to the safety of the tiles during the winter, as to the freezing or scaling of the tile, crumbling or anything of that nature. Would a depth of two and a half feet be sufficient? Is that a safe depth? Going down three feet would the percolation be too slow?

Prof. Henry — I should not drain so shallow as two and a half feet if I could drain deeper. If I had a black board I could make that plain. While I would in a few cases run two and a half feet, I should only do it when I was forced to.

I should make it a rule to run three and a half feet, and deviate when necessary. When the tile is down three and a half feet examine the point where the water rises; the water is above your tile. Suppose this is the pipe. It settles down and becomes a slanting plane on both sides of this line of pipe, that plane becomes more and more horizontal, reaching the surface. You can see by having the pipe three and a half feet you carry that further back before it reaches the surface than it will with two and a half feet. Here you save the tile. As to freezing, I start a line of tile of about one-third of a mile. I come out in an open ditch near Fourth lake, and came out at such a point that the tile was within eight inches of the surface of the ground. The upper end of the tile, one-third of a mile away, was about three and a half or three feet ten inches deep, and the tile gradually comes nearer and nearer the surface, until where it pours into the open ditch it is within eight inches of the surface of the ground. That ditch was running water all winter, and a day or two before I started here, I went down to see it, and it was running a very nice little stream of water. It fluctuates, of course, running more or less, but that drain has run all the time, and this is the second winwinter. There is snow over it, and it seems to be doing very nicely. The line of pipe is just about like a brook. I wish farmers would get interested in this. I believe you have got a good tile factory at Oshkosh.

Mr. Huntley — We have the firm of Cook, Brown & Company. I deal with them and I would say I know of no men who are making greater efforts for the introduction of their tile, and from the tile I have had of them I would say it is a good article, as good an article as produced anywhere. You can tile for cash at car load rates. It is made across the lake and boated to their yards, and depots at Oshkosh. We have extraordinary facilities and cheap rates.

Prof. Henry — At the University, with twenty-two boys studying agriculture, it is of a great deal of interest to them in the theory of underdraining. One young man says he is going home and help his father to drain two hundred acres of land. The lay of your land indicates that you have a

rich soil, but the water must trouble you somewhat, and it is a very easy problem with tile draining. When land gets up to $40 or $50 an acre, it will pay you far better to put your spare cash, or to borrow money and pay seven per cent., and put it into tile draining on the land you now have, than to buy more land and go in debt, or to put your extra money into more land. Suppose you have a farm of eighty acres, you are querying whether you better buy another forty or drain a part of your eighty that is wet. You are paying taxes upon swamp land on your farm, possibly upon a low piece of land. If good land in your neighborhood is worth $50 an acre that is improved, then with tile drain at such prices as you can buy it, it will pay better to put your money into your own farm than to put your money in another piece of land. You will make more as an investment. You will make more than seven per cent. Suppose you have two hundred dollars lying idle, you don't know whether to leave it in the bank and run the chance of the bank failing, or to loan it to somebody and take a mortgage, or to buy another piece of land. With this money what will you do? I will say if you have any wet land, I will predict you can make twenty per cent. by putting your money in the ground, and you will have it where nobody can steal it from you if your title is good to the farm. I would not lay smaller tile than two and a half inches. This is contrary to the English directions, but it is what is called the Illinois plan. The reason of the English directions comes from the fact that they have a drizzling rain. We have floods. In England it drizzled. In America it pours, so we need a tile that will carry off a great deal of water now and then. In England they use a very small pipe, a collar over each so they match perfectly. We lay the pipes without such collars; if we lay a small pipe a little slipping prevents the water from running easily from one pipe to the next, so we lay a larger pipe.

Mr. Huntley — Do you have a tool to round the ground where the tile lies, so the ground is concave?

Prof. Henry — Yes, but that is not very important.

Mr. Huntley — Do you put in anything over the tile before you put in the earth?

Prof. Henry — If we lay large pipe we take building paper. When cut it will curl up, and we lay it around the pipe. In small tile we do not. There are some young men in the room. To them I would say, here is something to do that your fathers have not done. You have to take land that is worth $40 to $50 an acre, and make something out of it and do as well as your fathers did, and you have got to study new problems. Here is one of the nicest things you can go at. It is a big problem for you to take your fathers' land at $50 and make a living out of it, and make something. They took it at a dollar and a quarter, and made it worth fifty. Tile draining is one of the things that a young man can take and push with great pleasure to himself. I think a man in laying tile is about as interested in his work as the bee keeper, when he is a good bee keeper. They will discusss it in meetings. Our horticultural friends will talk about iron-clads. As soon as a young man gets interested, on Sundays you will be sneaking down before you have got the chores done to see if the line of pipes are running water. After a heavy rain you will put on your rubber boots and go down to see how the water is running. You will find the water colored. Then you will go down to see how the color is. Then you will begin drinking it, and you will be as delighted with your tile drain, as a boy with a new top.

Mr. Huntley — I know that is so.

Mr. Winslow — Do you know anything about these ditching machines?

Prof. Henry — No. I have not seen them; but the conditions under which they have been tried are so excellent that what is said is very reliable. The Ohio Agricultural Society offered a premium to a ditching machine. The Renny is a perfect machine of its kind. It costs three or four hundred dollars. Of course no farmer could buy it, but I think it would pay some man to buy one with others and put it in as they do a separator and go around the neighborhood digging ditches the same as threshing. I believe with such land as I see about Neenah and this section it will pay any

man twenty per cent. a year to drain some of the land in this vicinity. I will tell you what I did at the State Farm. I drained a piece of land that we lost the crop off of for three successive years, barley crop first, and two corn crops, on account of the wet. We then put in pipe which cost about twenty-five dollars an acre. The year after we put in the drain we grew sixty-eight bushels per acre on that land. You can imagine my feelings where the farmers going along the road would sneer at the professor's farming, recommending me that I put blankets upon the corn and carry it over to the next year so it would get a start. I knew it was not my fault, and the next year we got sixty bushels to the acre, with no more work and a great deal pleasanter feelings, on the very same piece of ground. If I had a strip of land with six rods between the tile and the tile three and a half to four feet deep, I should think it well drained in this country.

Mr. Perrott — Would twenty-five dollars an acre drain it?

Prof. Henry — I think it would. It would depend on the price of tile. Six rods into 160; it would take less than thirty rods of tile. It would be digging a ditch thirty rods long and putting in the tile in which that many dollars would probably accomplish. Tile draining is practicable; it is not one of the agricultural humbugs that people catch onto for two or three years and then give up. It is something that lasts. When you have got twenty-five dollars worth done it is safe; it is a good loan not only for yourself but for your children, and is going to bring you a constant income. You can plow probably two weeks earlier. In Illinois where they had corn and the land was tile drained two years ago, when the corn universally froze, it did not freeze on the tile drained land. Just as the frost settles in the low places, so it skipped these warmer places that had been tile drained.

Mr. Maxwell — You can buy tile for a cent a foot where you get the tile at the factory.

Mr. Gillingham — You cannot buy tile for less than $13.00 a thousand. Do not you consider it necessary to have a good outlet?

Prof. Henry — The gentleman is correct. Next to laying the tile the most important thing is to secure a perfect outlet. Suppose you have a four inch tile, there will be a big stream of water pouring out. It will wash out. The last tile will begin to drop out. If your outlet is too low, and the water backs up, it may wash full of mud and cause the water to wash through the joints. So you must have your outlet perfect. It should be protected. If it is not, a dog chasing a rabbit and the rabbit in a great hurry will get up the pipe, and be unable to turn around. There should be some sort of a box or grating. At the outlet we had a brick wall built up and an iron grating. Ordinarily you would build it up and take some boulders, or take a wooden box and put some sticks across for a grating.

Mr. Gillingham — Is it necessary to put the pipe all at an even depth? Mr. Smith's paper treated of light soils. Is it necessary to go deep in these heavy clay soils. Will it not take longer to penetrate down to the drain?

Prof. Henry — The experience in England was this: first they put the drains shallow. Many of the farmers took their drains all up again and put them deeper. They went to the other extreme. One man put his drain down fourteen feet. Of course somebody always goes to the extreme. This individual was an extremist. They took up two and a half foot drains and put them down deeper. If I were you I would not worry about the clay. The frost will loosen up the clay. It will take two or three years, but it will be loosened up.

Mr. Gillingham — I have got some drains. I put them in when we first commenced to use the old horse shoe tile fourteen years ago. I put them two and a half feet deep; some places deeper; some not so deep. I am satisfied that there has scarcely a year passed since that that drain has not paid the cost of putting it in. I had one piece of land that I drained two years ago that I know the first year paid the expense of the drainage.

Prof. Henry — Are those horse shoe tile working well?

Mr. Gillingham — First rate. I crossed one of those ditches two years ago and it was working well.

Prof. Henry — What kind of soil did they rest on?

Mr. Gillingham — On a sub-soil of heavy clay. I like the round tile better. They are not so apt to settle and get in the shape you spoke of awhile ago.

Prof. Henry — What is your experience as to the time you can get onto the land as compared with what it was before?

Mr. Gillingham — It is ten days earlier, because we could not get onto it so as to put a crop in. That would put back the crop on the whole field.

Prof. Henry — Do you consider my statement of twenty per cent. extreme?

Mr. Gillingham — No, sir; I do not.

Prof. Henry — I am supported by the tax payers.

Mr. Gillingham — I think the first under-draining I put in was twenty-five years ago. I used lumber first until we could get tile. Since then I have been using tile. First I put in slabs when I could not buy the lumber.

Mr. Roe — I will make one statement in regard to the operation of tile last fall. I had depended on what I thought was a sufficiently porous sub-soil and location, but tons and tons of my grapes were lying this fall at the bottom of the tressel. Some varieties there were 50 to 75 per cent. unfit for use of those hanging yet on the vines. I go to an old friend of mine. His vine-yard is thoroughly under-drained with tile. He had the same varieties of grapes and in that entire vine-yard of the varieties most susceptible to mildew and rot I could not find as many grapes affected as I could hold in my double hands. I had lost tons. In the entire vine-yard there were not as many damaged grapes as you could hold in your doubled hands. I think you could hold them in the palm of one hand. He explained to me the whole principles of under-draining. He told me what had happened with wooden drains; that wooden drains would breed mildew. In a vine-yard less than a quarter of a mile from me where it is well drained with wooden drains, at least the owner thought so, the Delaware, Concords and Rogers No. 15, were more or less affected. This gentleman goes into the vine-yard, takes his digging fork and pries up a little earth close around one of the posts and there was a white film. He

says, "If I could do it, I wouldn't have a wooden post because there is the fungoid of mildew. That is his theory. I merely give the theory of a practitioner.

Prof. Henry—I do not blame the bee men getting enthusiastic. I do hope our iron-clad friends will be iron-clad, only there are so many young men that do not get interested. They are not particularly interested in horses. I want to say to every young man, "have a hobby that is as good as the bee keeper's hobby or the iron-clad's." I would like to see some of these boys get enthusiastic on tile draining. They will get just as interested as those people. That is what I meant to say, and not to draw any odious, invidious comparisons.

EVENING SESSION.

Convention called to order by the president.

SILK CULTURE.

A paper was then read on silk culture, by Rev. H. W. Fischer, of Oshkosh.

As food is necessary before any kind of animal is raised, thus food is the first thing necessary in silk culture, and this must be good, plenty of it, and convenient to be had. The traditional and only plant food of the silk worm besides the Osage Orange (*Maclura Aurantiara*), are the leaves of the mulberry tree. There are several kinds of mulberry trees, first: the white (*Moros Alba*) being considered generally as the best kind for raising silk, a native of Asia; the trunk is of hard yellow wood, grows up to sixty feet high, and bears reddish-white berries, which have almost too sweet a taste. This tree has many varieties, as the Marett tree, from the garden of Count Maretti, at Para, Italy; the Malus Multicaulis, a shrub-like tree; the Chinese Marus Intermedia Japonica; the Spanish; the Italian Rose-mulberry shrub. Secondly, I shall name the black (*Marus Niqra*) which is inferior to the other as silk worm food. While I shall not dwell any longer here to give particulars about trees which

we cannot raise here, for I tested this matter and failed, I consider it my duty to go into the details in giving you all the merits of a tree which we surely can raise here in our state, and in the northwest, even as far up as to the forty-ninth degree of latitude; a tree which has more good qualities than any kind of tree transplanted in the northwest yet, for it makes the finest kind of shade tree with its large rich foliage; several different shaped leaves are often found in one and the same tree; its wood is hard and in great demand for ship building; cabinet makers and turners find it as useful as the wood of the walnut tree; it bears large and sweet berries, and so abundantly that in six years a single tree will give many hundred thousand seeds, for it is a fast grower and an early bearer; it stands cold weather of forty degrees below zero, and more than that its young branches fed to the hogs is a sure cure of hog cholera, as has been detected but lately, and last, but not least, every leaf of this tree is worth money, for it is excellent food for silk worms. And what is the name of this tree? It is the Russian mulberry tree, or Morus tarl, with its botanical name.

S. S. Crozier, a French grower and good authority, now living in Mississippi, says: "The hardy so-called Russian mulberry tree is the Marus Alba in all its varieties, but degenerated; it is a classic tree, and the best cocoons are obtained from it." The Russian mulberry tree was introduced here first by the Russian Mennonites, who a hundred years ago were forced by a despotic government to plant a certain number of these trees for silk culture, and having discovered the great value of the tree, they commenced to raise them as soon as they arrived in Kansas and Nebraska, and consequently we find to-day their farms beautified with long hedges of Russian mulberry trees, which is an everlasting fence and furnishes food for millions of silk worms; and thus silk culture has found its warmest friends among those Russian Mennonites in Kansas and Nebraska, where millions of cocoons are raised every year not only by the people living in cities, but even by well-to-do rich farmers. And after having shown in detail how valuable the Russian mulberry tree is, after having proved that it is a tree which

endures our long and severe winters, for I have raised many thousands of them which passed the last two severe winters successfully, and a good many other parties who own Russian mulberry trees are ready to acknowledge this fact, I ask if not every citizen, even if he owns but a small lot, should not plant these most important and valuable trees? Farmers should avail themselves of this golden opportunity at once and commence to enclose their fields with Russian mulberry trees, trim off the tops when about six or seven feet high, so the lower part will spread about so much more. Owners of lots in cities and towns who think they cannot spare any place in their yard should so plant them from twelve to fifteen inches apart along their fences, and in a few years they can remove their board fence for they will have a golden fence — a hedge which enable them to harvest golden threads of silk. The poplar tree, which to say the least are but a common nuisance for filling the air with their obnoxious wool, should at once be cut down and the Russian mulberry tree should be planted in place of them along the sidewalks; and although a great many citizens may not be able to comprehend the great usefulness of the Russian mulberry tree, yet I venture to predict that in a few years they can not only readily sell the fine sweet aromatic fruit, but also the leaves, by the barrel, as the people already do now in some of the eastern states. While we hear so much complaint of thousands of persons that they cannot find any work, here is a chance for hundreds of thousands of persons to get a fair income; here is a chance for women, children, and old and feeble persons, for invalids, etc., to make, by pleasant, light and clean work, work which can be done right at home, several hundreds of dollars, as the raising of cocoons and feeding of silk worms has to be done in the months of June and July, just at the time of school vacation. This new industry serves double and threefold purposes; first, that the children will be engaged in a very useful and highly instructive employment which teaches them how wonderful the grand works of our heavenly Creator are, by perceiving the apparent different changes of the silk worms being hatched from a small egg similar to the

appearance of turnip seed, out of which a small little gray and black worm creeps about the size of a pin's head; but they soon begin to grow, and after feeding them about thirty days they reach the size of about three inches in length and have turned from black and gray into white. During that time the worms shed their skin several times, and finally appear the greatest wonder — a wonder indeed not only to the children, but to everybody, when the worms spin themselves entirely up with silk and thus form the cocoon of one yellow thread of silk of from twelve to one thousand five hundred feet long, or transform themselves into a chrysalis and then break the cocoon when the moth desires to creep out of the same; but secondly, this important new industry keeps the children from bad company and off the street, and offers them a golden opportunity to render themselves useful for some good purpose; their ambition will be awakened to see that they are able to earn some money already, which they save for some other good purpose. Yes, the raising of silk is especially family work. It requires the nicest attention and plays so gently with human affections that men, women and children are instinctively now in love with the culture in this county and in this state. Why shall we not try to get a fair share from the many millions of dollars sent abroad to foreign countries every year for raw silk and still more for manufactured silk goods? Bismarck objects to our pork, England tries to exclude our heat. Should it not be becoming for free citizens of this great country to say, and we do not want your silk for we can raise our own and we are determined to do so too, since it is an established fact that it can be done.

It is not very many years ago that people thought it an impossibility to raise the delicious grape or amber cane in our state, and to-day everybody is bound to acklowledge the fact. Just so with sericulture. While the masses of people are either afraid or prejudiced to embark in this new and profitable industry, I appeal to those who are philanthropically inclined to take the lead, and I say, fear nothing; plant mulberry trees and plenty of them, and the rest will follow as certainly as the rains fall and the sun shines. The last

census of the United States shows that there are 382 establishments to manufacture silk goods, with a capital of $19,125,300, which give employment to 9,375 males above 16 years, 16,396 females above 15 years, and 5,560 children, and who earn $9,146,705 in wages during the year. These establishments use $22,467,701 of material and produce $41,000,000 silk goods. It is also statistical that these manufactures use over twenty millions of dollars' worth of raw silk which is all imported free of duty. And ladies and gentlemen, I presume many of you have heard of the later report that several of the largest silk mills in Europe are now ready to establish themselves here in our country. While this will naturally increase the demand for raw silk, we ought to strive that this demand can be satisfied right at home, and although silk culture does pay now one dollar per hour for actual work performed therein at a properly arranged and large cocoonery, it will still pay more when there are at least as many thousand of cocooneries in existence as there are hundreds now; for the time has finally arrived when we will knock at the door of our congress and ask for protection; that is, to demand that an *ad valorum* tax is put on raw silk, stop all imports of the same, and keep the large bulk of money at home with us where it will do the most good; notwithstanding that all infant industries asked protection from congress and received the same too, our petitions will be readily granted, as both political parties are unanimous in taxing luxuries; but the longer our people are obstinate or distrustful to help to reach this important point, the longer our people neglect to become interested enough to help themselves in this direction, the longer we will lose the great benefit of these natural resources bestowed upon us by a kind Providence; we will lose all these great advantages, but more than what I anticipated, a great deal more; we will lose by waiting and watching without acting in the matter. We shall not only lose the fair income by not raising silk in large quantities, but the great and good chance to establish our own filatures (places where the silk is reeled from the cocoons) and build our own silk mills and offer steady word to thousands of men and women, which

would benefit these and our community considerable, as I expect to prove at no distant day, having the good will and promise of several of our most prominent and wealthy citizens in the state to organize a stock company to carry out this plan, and to prove to the public what can be done with this new industry of sericulture, while I have supplied several parties with Russian mulberry trees in this county, and several other counties, who raised silk last summer first for experimental purposes. Their crop will increase from year to year, as the trees grow up and the day will not be far distant when we can raise millions of cocoons.

But I now hear already the whispering that the business will be overdone, but you need not to be afraid at all about that, for there is no cause to be alarmed, as you will very soon admit after having considered the following figures based on facts. One ounce of silk-worm eggs consists in the average of about 40,000. These 40,000 worms will eat the first five days about nine pounds of leaves, the next four days about twenty-six pounds, the next six days about ninety pouuds, the next seven days about 250 pounds and in the last ten days more than 1,200 pounds. Now is this not an enormous quantity of food required to feed these little animals, and as most sericulturists only take a limited number of mulberry trees it will take years before they are able to feed that many worms; but even many would take so many trees, so they could say the first season, so many trees I have for each worm, but we will find it *vice versa* generally. There would be no over production, for by establishing our own silk mills, the large import of ready-made silk goods would be reduced to a minimum, and innumerable millions more of cocoon will constantly be in demand, for it takes thousands of millions of cocoons to supply one filature and silk mill, as you will readily understand by the following figures. About 300 cocoons make one pound (each worm makes and spins one cocoon). This will produce from 130 to 140 pounds of cocoons from one ounce of eggs. Choked cocoons will reduce the weight about fifty per cent., and all cocoons which shall be reeled must be choked. It requires about three pounds of choked cocoons

to make one pound of reeled silk, and one pound of reeled silk will make about forty yards of good silk satin or brocade, according to quality. Thus you see there is no easy chance for overproduction, especially so, as there are a great many cocoons not choked in order to allow the moths to deposit eggs for the next year's crop, and to sell them to our government, which supplies France, Italy and even China, as they find the eggs from our worms healthier than their own. Another question I often hear, which is this: Would we be able to sell our cocoons right now? I say, yes, indeed. I shall purchase all good cocoons from persons who purchase their outfit of me, that is, sllk worms or eggs, of which I keep now about one million on hand, mulberry trees, for which you need not to pay one dollar apiece, as the nurserymen from the eastern states generally charge, but I sell my trees for the mere cost of raising them; that is, ten, fifteen, twenty and twenty-five cents apiece, and then you can have your choice in case you will call at my nursery; and last but not least, you will receive trees raised here, and consequently acclimated, and be sure that they will. My instruction book, "Guide on Successful Silk Culture," costs twenty-five cents, wherein the whole business is so plainly explained that everybody will be able to follow it, and do it right, and have success. I also have millions of silk worm eggs on hand for distribution.

Although I fear I am taxing your patience too heavily, I deem it my duty to answer one more question, which I very frequently have to answer. It is this: "What shall we do in the winter with the silk worms?" My answer is, you have nothing at all to do with them; neither have I or any other sericulturist in the world, for the whole work is done in the months of June and July; after which time the worms are killed by choking the cocoons and this is the last of it; and, consequently, we have no worms in the winter, which is the beauty of it. As the raising of eggs is not to be attempted by novices, or else they may ruin one whole crop, I shall always keep a large stock of eggs on hand to supply all persons with them who desire to receive any, and these eggs are in fact the only thing which I have to keep

during the winter, which is not so difficult a task as to keep them from getting alive when warm weather sets in, and the mulberry leaves are probably not yet sufficiently developed. Our last congress considered it most important to encourage silk culture and, consequently, appropriated $15,000 and erected a new department to which I forwarded samples of my cocoons for examination, and the report came back to me that the cocoons were of as fine, firm and good quality as any examined. The day will not be far distant when our state legislature will deem it wise and prudent to help along this industry, which will become quite an important factor throughout the state, in offering premiums to sericulturists, similar to what the legislature of the state of California is doing now, which is offering premiums of $1,000; that is, $500, $300 and $200 respectively. And last, but not least, our different fair associations throughout the state will follow suit to the Northern Fair association, which holds out premiums to sericulturists at our next fair. This will be highly appreciated, for it is a proper move in the right direction, and both the association and the public will in time derive more benefit from this than for premiums lavishly bestowed upon objects of minor importance, and to wind up this useful point in good shape, I shall offer a five dollar cash premium for children, to induce the little ones to prove themselves to be the right material to help to increase the wealth in our state and grand republic. Finally, one more special important point I have to explain, and that is this: by experience I am ready to state that we, citizens of the northwestern states, cannot only raise silk as people living in the southern states, but I am prepared to assert that our chances for raising silk are better than with the people of the southern states, and this assertion is not only sustained by facts, but acknowledged down south. The soil and climate in the southern states drive the trees so fast and produce very large leaves, but they have been found to be highly charged with watery matter, which not only is of no advantage, but often proves the cause of disease, as Gattine, Grasserie and Muscardine, of which we know nothing up here; for, although our trees

do not grow so fast (some grew about six feet with me last summer), our leaves are healthier; only our cocoons seem to be fastened with more glutin and, consequently, the thread is loosened with more difficulty, but I rather have this a little imperfect, which can be remedied by steam reels, as to have sickness among worms, which is contagious, and thus to be in fear to lose the whole crop. Nature has done all she can for us, sound policy effect the rest. The revival of interest in silk production has stimulated inventions and serious attempts have been made in the past and present year. Let us do our share in the same direction.

Mr. Roe — In that grand exhibit in the government building that covered twelve acres, there was not a single state represented, but had its silk exhibit. That of California was magnificent. It was labeled the work of California girls. I think at our Northern Fair you will see a magnificent exhibition and it will be labeled the work of Badger girls. We have heard a good deal spoken, sneeringly of the negro in the south; of his incapacity; of his general laziness and worthlessness. The finest exhibit of silk culture, was made by an ex-slave, and the largest enterprise now in the state of Alabama is run by that same colored man. He is teaching his people and devoloping that industry among the people and the ex-slaves of his state.

A paper was then read by Mr. Brainard, of Oshkosh, entitled:

GRAPES, THEIR CULTURE, AND HOW TO BRING TO EARLY MATURITY.

Hundreds of times during our fairs, I have been asked: "How did you get your grapes so ripe?" Once a person remarked to her companion, "I bet they are the same ones he had here last year." Well, there isn't any secret about it, although it caused me years of labor and waiting.

First I noticed that vines set out as I set fruit trees, uniformly ripened their fruit earlier than those set where special

preparation of the land had been made. I therefore began to set my vines on land prepared as follows: plowed in beds the width that I wanted my rows apart (seven feet), being particular to stir up the land in the dead furrows, as deep as possible. After I had finished plowing the plot of land over in this way, I would turn the land all back again beginning at each dead furrow.

It was now ready for the vines, which I set out eight feet apart on the ridges, in soil fifteen or eighteen inches deep. My sub-soil is within twelve or fifteen inches of the surface, and composed of a hard clay gravel. My grapes are all in rows, running north and south; and I think this is very important, for then every leaf and every inch of soil will get the direct rays of the sun during the hottest hours of the day; such could not be the case if the rows ran in any other direction.

About ten years ago, I dug up all my vines where the rows ran east and west.

In regard to pruning grape vines, no set rule can be given; still I think this is fully as important as the setting, and perhaps more so. Were I to give any rule at all it would be Nicholas Longworth's — which was, "Trim your vines all you think they need, and then go over them again and cut out half there is left." Some advise us to leave a good quantity of cane in the fall, and after the fruit is well set in the spring, go over the vines and pick off all small imperfect bunches, so as to leave just what the vines can mature; but I think the best way is to trim very close in the fall. I think there is more profit in limiting vines to about ten pounds each—which would give nearly four tons to the acre, than there is in trying to ripen more than that amount. We all know that no vine, plant or tree can mature or ripen a large crop of fruit, and make a strong growth of ripe wood or vine at the same time.

I have found, as a rule, that vines that are allowed to set a large crop of grapes, are far more apt to be troubled with leaf blight, mildew or rotting of berry. I have suffered but very little from the above diseases. Think I can say—have

never lost a hundred pounds of fruit from all of the above causes.

Roots of all plants will seek out and find the richest and choicest food adapted to their wants. If such food is placed below the vines, the roots will run down of course. My aim has been to keep the roots just as near the surface of the ground as possible. I obtain this partly by setting near the surface in shallow soil and partly by working in well rotted manure near the vines and between the rows. I always mulch my Delawares by putting a wheelbarrow of well rotted manure around each vine about the first of June.

I do not practice summer pruning at all. Do not believe in it in fact under any circumstances. Nearly ruined my vines at first by practicing it. I have seen vines nearly stripped of their foliage right in the hottest part of the summer, under the mistaken idea that the sun hastens the ripening of the fruit by shining directly on the berry. When, as I understand it, the growth and maturing of fruit depend upon the proportion existing between leaf surface and amount of fruit. We may sometimes, perhaps, get size but never ripeness or maturity by close summer pruning. I am well satisfied that leaf blight on our small thin leafed varieties is almost wholly caused by the small amount of leaf surface or shade given the vines by their own foliage in proportion to the fruit they have to carry. Close fall pruning, high surface manuring and no summer pruning will largely prevent the blight I think.

I have but very little to say about varieties, as we have so many that are excellent. The Warden, Janesville and Delaware are splendid early ones. The Rodgers' are all good with me and splendid keepers. Have grown the Catawba for most thirty years and made more money from it, per pound, than from any other one kind. Ripens late; never drops the berries; birds seldom molest it, and one of the best keepers I know of.

My advice to all is, never pay a big price for some new variety that you know nothing about. If you want grape vines, and of course you do, buy a few varieties of well known sorts, and then take them out and take care of

them. I have over a hundred vines, some of them set twenty-nine years ago this spring. Have exhibited grapes at every fair that has been held in Oshkosh, except the first one, and I do not believe I have ever given my vines over ten minutes care each during any season. Yet that care has been given them just when needed. I believe that grapes can be successfully grown on any well drained land that will raise a good corn crop. I therefore advise all to set vines enough to furnish themselves and friends with plenty of this rich, healthy fruit.

To secure early maturity, set in shallow worked soil, keep the surface well enriched and prune close in the fall, after the leaves drop.

Mr. Roe — One point I would like to make here, and that is in regard to the direction in which the grape should be planted. Mr. Brainard says run your tressels north and south in view of the eastern and western exposure to sun. I am a new beginner. In setting my vineyard I remember of purchasing of Mr. Brainard and receiving his advice. I planted according to his advice, north and south. My land was a clay loam with a sub-soil of limestone and gravel. I planted largely for I had faith in the grape, and I have yet to-day. Each tressel or row was plowed through, when the summer rains fell that whole vineyard became a magnificent brickyard. I lost nearly three-fourths of them. Then I commenced the process of re-constructing the vineyard. I had to plant repeatedly. It was late when I got at my work. I made the rows perfectly true north and south, but utterly regardless of their direction east and west, and I have been endeavoring to straighten it. If you see an irregular row you will know how it originated. My advice would be, from sixteen years' experience, set your grapes according to the lay of the land. If your land pitches to the east, set them in that way. If to the west, set them in that way and I think you will profit thereby.

Prof. Henry — I would like to ask Mr. Brainard how he cultivates?

Mr. Brainard — Between my rows where I raise my grapes I always raise early peas followed by celery; I make my land very rich, and right here will come in the question that was discussed this morning in regard to the length of the season of the growth of trees. I have raised the Catawba. It is one of the latest grapes we have. I have never had any trouble with under-ripe wood trimming and covering. They have always come out in the spring as fine as any vines I raise. I think by surface manure, keeping the roots as near the surface as possible the vine starts earlier in the spring. Of course we all know it requires a number of degrees of temperature to ripen the different kinds of grapes, to ripen the wood I do not believe in having the roots run deep. I will state that the first patch of grapes I set of the Delaware, I set after the instructions of Mr. Alwood of Lake Mills. I dug the land all over, stirred the land all over about three feet deep and after great expense I had grapes. Afterwards I dug out a ditch. I went up to the slaughter house and gathered up all the old bones of cattle, heads and any old carcasses I could get, and put them underneath. The richer I made it the fewer ripe grapes I had. I can set any grape and I can load that vine with grape that will ripen. I do not care how early it is. I I can take the Delaware, I will take the Hartford Prolific. I can load the vines but they will never ripen. As I said to Mr. Roe set your vines north and south; I think your vineyard should be drained first. I don't believe that land where water would stand an hour after heavy rains is suitable for setting grapes. I would drain it first, and then set the vines. I would cultivate the land and cultivate it thoroughly.

Mr. Huntley — What with?

Mr. Brainard — I use a horse cultivator.

Mr. Huntley — Do I understand you grow celery?

Mr. Brainard — Yes, sir.

Prof. Henry — How wide are the rows?

Mr. Brainard — Seven feet.

Prof. Henry — How many rows of celery?

Mr. Brainard — One.

Prof. Henry — Does not that necessitate quite deep digging?

Mr. Brainard — No, sir. I set the celery near the surface of the ground, perhaps two or three inches. I grow it there and bleach it in the cellar. Of course I could not bank the celery with a spade in the rows.

Mr. Huntley — How deep do you cultivate with the horse cultivator; one, two, or three or four inches?

Mr. Brainard — I should think two or three or four inches. It is quite a fine tooth.

Prof. Henry — Do you tear up many grape roots?

Mr. Brainard — Oh yes, sir.

Prof. Henry — Don't you think you cultivate too deep according to your own theory about shallow rooting?

Mr. Brainard — I do not. I know that it never injures the vines by tearing up a few roots. Why should it any more than corn?

Prof. Henry — You were speaking of very shallow cultivation, yet if you go down three or four inches that would hardly be called shallow cultivation.

Mr. Brainard — What few I tear off never injured the vines. Of course it is not one hundredth part of the roots that I tear off.

Mr. Anderson — What time in the spring do you uncover your vines?

Mr. Brainard — I can hardly answer that; but I would never uncover them until I found the buds are pretty well started. I would rather break off a few buds than uncover them.

Mr. Huntley — Did you ever have any rot before they were uncovered?

Mr. Brainard — I never did.

Mr. Huntley — Never leave them long enough for that.

Mr. Brainard — That must be in wet ground saturated with water. It is not drained so the water will run off.

Mr. Winslow — You spoke of putting on manure as a mulch. Do you put that close to the vines?

Mr. Brainard — Right up against the vines.

Mr. Huntley — Leaving it around the vines as a mulch.

Mr. Brainard — Yes, sir.

Prof. Henry — Have you tried the Niagara grape.

Mr. Brainard — I have not. I would say fifteen or twenty years ago I invested somewhat in a new grape. I invested in the Walter. I have not seen many pounds of the Walter. Two or three years ago I paid for another. It is two or three feet in height. If I live long enough I expect to pick a bunch of grapes. We have so many good varieties. Any one that has been to the Northern fair knows of ten or fifteen varieties of grape.

Mr. Huntley — Have you ever planted the Duchess.

Mr. Brainard — No, sir.

Mr. Huntley — Some of your Oshkosh friends recommend that every year.

Mr. Brainard — Yes, sir.

Prof. Henry — What do you think of the Worden.

Mr. Brainard — It is a good grape. I don't know as it is so much better than the Concord.

Prof. Henry — Is it as good?

Mr. Brainard — Yes, sir; it is with me.

Prof. Henry — Is it earlier?

Mr. Brainard — Yes, sir.

Mr. Huntley — Will not it drop its berries worse?

Mr. Brainard — Yes, sir.

Prof. Henry — Will it sell as well?

Mr. Brainard — No, sir. I think the Concord has that rich bloom that it has not. It is pleasing to the eye as well as taste, and the Worden lacks that bloom.

Mr. Huntley — I took the same ground at the Horticultural Association. Some were picking off the leaves with the idea that it was going to ripen the grape. Some were doing this with the tomato. Do you not often find ripe tomatoes down underneath. Every leaf you pick off I believe retards the ripening. Everything goes through the leaf. I would like to ask Prof. Henry's opinion on that one point.

Prof. Henry — There is a very interesting point. I ought not to say a word. I have said too much but it comes in so closely with many of our farming operations that it is well that we understand it. The elaboration of plant food goes

on in the leaf, and not in the root. The root of the plant is not very important after all. The work is done in the leaf. The plant brings up from the soil, water. The plant does not get any water through its leaves. All the water in the plant comes through the ground, comes up through the root and works its way up into the stem. The carbonic acid gas is taken from the air. The mineral water comes up through the root. You can imagine what that is by burning up the plant. That is worked over in the plant by the aid of the sun light, the green material in the paint, chlorophyl we call it. There is a substance like starch, glucose or cane sugar built up in the leaf. They are not soluble. They start from their place of manufacture in the leaf. In the sorghum plant it goes to the seed; when once in the seed it becomes insoluble. The same in the wheat stalk, it goes into the grain. In the grape, that saccharine matter works into the berry, and the man who is foolish enough to pinch off the grape leaves is cutting off these little laboratories where this work is being done. You had better prune the roots of your grapes than be cutting off the leaves. One word more. If you tie a string around your grape stem you will notice that the grape stem will grow quite large above where you tie it, where the wire is around the tendril, showing the food is made above the constriction and not below.

Mr. ——— — I would differ with my friend Mr. Brainard in regard to some of these varieties. I think all the progress that has been made in horticulture has been made by those who are willing to go to the expense and trouble of propagating and testing. I have had experience with Parkinson. I had a hundred vines. There were at least twenty that grew a large height and occasionally some very choice fruit. I think Mr. Huntley will corroborate my statement in regard to the experience in Outagamie county with the same grape and I think that the same is true of the Duchess. The finest show of grapes I saw in the city of Oshkosh or anywhere was a show of white grape, and they were from the vineyard of Messrs. Kohlman Brothers, and they came through in good order and were not affected as they were in the immediate vicinity. They were enthusiastic in their

praise of the Duchess. I have not yet tested the Niagara. In my own vineyard I find the old fashioned Isabella ripens with me perfectly. I think the Concord is a more profitable grape. I can get more pounds to the vine, more tons to the acre, more salable on account of its beauty and that bloom. The parties to whom I ship my grapes complain of the shelling as they call it. Certain varieties would shell and unless they sold immediately it would take on a dull color and shell. That is not true of the Concord. You have an advantage there. At the same time the Concord makes a much better growth. It is a more vigorous vine. Side by side with the Worden, the Worden was more affected by grape rot for the reason that the Concord's power was greater, being the more vigorous vine.

Mr. Anderson—What would you do with the extra shoots that start out in the spring?

Mr. Brainard—I let them shoot. That is, I trim close in the fall. I do not trim any in the summer, unless they are in the way. Then I take a corn cutter, but not to trim the vines. We all know who have raised grapes for twenty years, that the success of these varieties is more dependent on locality than anything else. In France and Italy the wine made from the grape from the foot hills and part way up the hill is entirely different. Experts will tell the difference in the same vineyard. The grape that does well in Mr. Kohlman's garden might not do at all in Mr. Roe's or mine. That is why I say I would not encourage any one to try these new varieties. They talk about iron-clads in fruit trees. That may mean those that live below the ground as well as above. We have a few iron-clad grapes, the Concord, the Delaware and the Rogers, and many others. In the grape line we will have to depend on the Concord and the Delaware.

Mr. Huntley—If you were going to recommend three kinds, what three varieties would you recommend?

Mr. Brainard—I do not know as I could stop at three.

Mr. Huntley—Suppose a man was not doing anything with the grape, but wanted to start, and says he don't want to take but three.

Mr. Brainard — Of course the first would be the Concord, Rogers No. 3 and Rogers No. 4, I think from the first thought, if you confine me to three. The Rogers No. 3 is an early grape. I would have four Rogers No. 19. I can keep No. 4 of Rogers, and No. 15 and No. 19. Can keep them until this time, as fresh as when I picked them.

Mr. Huntley — If you were to take two more, say five?

Mr. Brainard — I would have the Delaware, Concord, Rogers Nos. 3, 4 and 15.

Prof. Henry — If you had to eat them yourself?

Mr. Brainard — Yes, sir.

Mr. Winslow — Mr. Brainard speaks of keeping grapes until this time?

Mr. Brainard — I have tried all ways recommended. When I did not try anybody's plan the grapes kept. I will say though, pick them and put them in drawers, what I mean by drawers is shallow boxes, one layer thick. Put them in some dry place. My cellar is as dry as a chamber. Leave them until the stems are perfectly dry. Then pack them in boxes of ten or fifteen or twenty pounds. Nail them up, not perhaps tight, and put them on a shelf in the cellar. The Rogers is a good keeper with me. Of course, if the juice is all evaporated from the stem the berry itself is hermetically sealed. There is no evaporation and the berry keeps.

Mr. Huntley — Which is the earlier, the Massasoit or the other numbers?

Mr. Brainard — I do not know anything about the Massasoit.

Mr. Huntley — That is No. 3.

Prof. Henry — No. 3.

Mr. Anderson — In the fall do you cover as fast as you prune?

Mr. Brainard — I should like to leave them a week.

Mr. Anderson — What do you cover them with?

Mr. Brainard — Simply cover them with earth.

Prof. Henry — What is your opinion about the Prentice?

Mr. Brainard — I do not know anything about that.

Mr. Roe — The Prentice is a weak grower.

Mr. Huntley — I want to ask about the Brighton.

Mr. Schaub — I have the Brighton. I call them the best grape I have. They are good growers, one of the best grapes of new varieties, good keepers.

Mr. Huntley — Of all the rapid growers I never saw anything commence with the Niagara. I sent for a few after the meeting of the Horticultural Society last summer. I set them out. Those I set out made nineteen feet of wood.

Mr. Fisk — They are not Niagara.

Mr. Huntley — We got them of persons who claim to have a monopoly of that plant.

Mr. Brainard — In the course of twenty-nine years I have been raising grapes over twenty. I have been exhibiting grapes, I have had a great many competitors at these fairs. Many of them have set grapes and have gone into grape growing with a good deal of enthusiasm, and I have not heard from them since; and looking at their vineyards I have found that these rapid growing vines are the most unsafe vines for new beginners.

How many feet did your vines grow, Mr. Huntley?

Mr. Huntley — Nineteen.

Mr. Brainard — I suppose a man who knew nothing about grapes would not have cut that vine back two buds. Probably next year he would have left twice as much wood as should be left. The result would be he would have a weak vine, a lot of rotten berries. Sometimes in this northern country where we have to lay down the vines, the new wood is so far from ripe that we have to cut the vines close to the ground. I have seen vineyards where they have ceased to raise good grapes. It is because they leave so much wood. They have a lot of fine canes that never bear fruit. We have got to use the knife and use it unsparingly.

Mr. Huntley — You would not get long new wood?

Mr. Brainard — I would just as soon. They will not always grow according to the books and pictures. I would not like to cut clear down to what they call crown of the vine.

Mr. Anderson — I would like to ask if you worked the grape ground when it was wet.

Mr. Brainard—I certainly would not work any land of the nature of mine, clay soil, when it was wet.

Mr. Huntley then read a paper entitled,

CORN, COWS AND CLOVER.

There can be no good farming that does not keep constantly in view the improvement of the farm; making it continually more productive. How to do this will be the effort of this paper.

You cannot take late crops of grain or grass year after year from the same piece of land, returning nothing back to enrich it, without exhausting the soil and impoverishing the land, as too many farmers all over the state have too slowly and too sadly learned. Constant manuring with good cultivation will not only keep up the original fertility of the soil, but will enable us to grow larger and better crops than were grown when the land was first cleared and broken and responded so generously to the pioneer farmers' first efforts. One writer says good cultivation is manure. While this may be true in part, or so far as drawing from the atmosphere is concerned, I never yet saw a farm too highly manured or too well cultivated for corn. Corn, Cows and Clover, are the three factors which I shall use to assist me in the solution of the problem now before us. Were my land rich enough I should grow but little clover, or if I knew of any practical way of keeping up the fertility of the soil without clover in the rotation, then I might leave it out, for I believe that nearly twice the amount of feed can be grown with corn as with clover. Let us keep constantly in mind the solution of this problem, that the larger the crop of feed the more cows can be kept on a given number of acres, and this gives more manure with increased fertility. But the trouble is right here, we cannot and do not grow large crops; our land is not in so high a state of cultivation as it should be by a long way, and I use the word "cultivation" in its broadest sense.

Clover is the only crop grown which takes so much from the atmosphere and so little from the soil; bringing up from the sub-soil below, just what the corn crop, which is to follow it needs. And when plowed under, even after the hay has been taken off at the rate of three or four tons to the acre including first and second crop, the land is in excellent tilth, and seems in better condition than before the large crop of clover had been taken from the land. I remember a statement of George Geddes in the New York *Tribune*, which said, "on a certain piece of land handed down to him from his ancestors, had been grown more than one hundred crops in as many years, and was still growing them, on which there had never been any manure and these crops were universally large, the fertility had been kept up by constant plowing under of clover." This would seem to disprove my first proposition, but such is not the fact. Clover roots have been known to penetrate the sub-soil to the depth of six or eight feet and further, bringing up two or three new farms from below and constantly drawing from the atmosphere. So I say, I would always seed with clover when sowing any of the smaller grains, to be immediately followed with plaster, thereby insuring a good stand or catch, and a strong growth. And right here it might not be amiss to give my method of cutting and saving clover. Cut while in the blossom after the dew is off, and put in cock the same day opening and drawing in, the next day, or cutting in afternoon when the weather is fine, and drawing in, the next day. I should also use this clover crop, to cut to feed in mangers in the morning before turning the cows to pasture. Soiling in connection with pasture I think any one will find profitable. I know some object to this on account of the labor; but if the labor pays, that is all that is necessary to know. The circumstances of the farmer and the season will govern or modify the feeding to a great extent, no cast iron rules can be laid down for all to follow. But it is positively certain that more feed can be grown and used in soiling, than in pasture—often twice or three times as much, especially with sowed corn.

This brings me back to the first factor — corn. How to

save it? Why, everybody knows how to do that. Why ask such a simple question if that is so? And it is so easy to raise it; why don't everybody raise a maximum crop—100 bushels of shelled corn and forty dollars' worth of corn fodder on the same acre? This would certainly be a consummation devoutly to be wished by any farmer. Why is it that the state of Illinois, perhaps the best natural corn land of any state in the Union, only raises thirty-six bushels on the average to the acre. Why, they average more than that among the hills of Vermont and New Hampshire. The only answer that can be given is lack of good cultivation; much of the land too wet; all of it too weedy; much of it plowed shallow, therefore subject to drouth. All soils which are too wet, some portions of the season are more subject to drouth if any part of the season should be too dry, and so with poor, or no cultivation, when the soil is saturated with water, with all the obstacles that undrained land present, the average yield is very low, not only in Illinois but all over our country. This should not be. A large stock cannot be carried with such farming, and consequently but little profit and little manure in proportion to the acres cropped, the land constantly depreciating in value. A good farmer would under-drain every foot of ground that would be benefited thereby, and in so doing secure himself against flood or drouth, and those places which had produced little or nothing would grow the largest crops, and grow them every season, whether wet or dry. I presume there is not one per cent. of cultivated farms in this state that are in as high a state of fertility as it would be profitable to have them. We usually suppose that gardens are better cultivated than any other portion of the farm, and not one-tenth of them are producing what they might or what they would by better cultivation.

I never realized the truth of this more than during the last season. In a field of corn that every one who saw it called extra good, there was a difference of more than 50 per cent. in the yield of different portions of the same field. In one portion, directly over and on each side of an underdrain, we husked nearly four bushels of sound corn from

each shock, or a double wagon box full of sound corn, 45 bushels from 35 rods of ground. Although we had two very severe storms of rain in July, both of which produced almost a river between each row at this place named, the corn did not suffer by being too wet, and we were able to cultivate and hoe it while other portions of the field were so damp it could not be cultivated, although the whole field would be called a dry one, with enough descent so that no surface water stood upon any portion of it. Now if this whole field had been so thoroughly under-drained that it could have received another thorough cultivation and hoeing where necessary, the increased crop would have paid or nearly so the increased expense the same season. This increased crop would have enabled me to have kept several more cows, and they in return would have increased the fertility of my land. Now I would not be so egotistical as to think that I could teach many persons present anything about growing corn, but as I wish to learn myself how to do it, and as in a multitude of council there is wisdom, I will give the manner of handling the field of corn referred to. It was a piece of clover sod turned over in the fall, after a good crop of hay had been taken from it in the summer; during the winter I hauled manure from my own stables and what we could get from town, and spread upon it, covering only the poorer portions of the field. When the ground was in condition to work I cultivated it both ways with an Acme harrow or pulverizer, and as I had no horse corn-planter, I raised the front teeth of my sulky cultivator, and set the hind teeth 3½ feet apart, and opened two furrows at once in which to drop the corn, and set two men dropping. We tried to get it about twice as thick as when sowed both ways, perhaps a little thicker than that on the average. I would continue marking till I had a quantity of rows ahead, and then take the Acme and cover two rows at once, going lengthwise of the rows. When the whole was finished I crossed it with a planker or smoother; it came up much more evenly than a piece the men planted by hand or with a common hand planter.

That was sowed both ways. I cultivated it three times

and should have gone over it again, had it not been for the big rain the first of July; before it was dry enough the corn was too large; some two acres of this we re-plowed with a sulky plow to cover the manure, setting it about three inches deep; I do not know as it was any better than where the manure was only dragged in. I got more sound corn than when planted both ways; besides some short ears not husked, left in the fodder. The fodder was not so coarse and more than twice as much of it. For several years I have sowed a piece for summer feeding; one year ago, last summer, we never fed any of it in summer, the pasture was so good; but the last season I could not have done without it, as the grasshoppers grew so fast and increased so rapidly that they ate up all the fall feed and I took each morning a load of corn and spread on the pastures; they would eat the ears off first and come back during the day and finish up the stalks; this was sweet corn; about equal parts or equal number of rows of Early Minnesota, Crosby's Early, Potter's Excelsior, and Stowell's Evergreen. I like Crosby's Early better than either of the other kinds. The stalks of the Early Minnesota are too small and Stowell's Evergreen too large and late. Crosby's Early stools out, ears well and will produce a large quantity of first class feed if the land is rich enough. For winter feeding I prefer a flint variety; I raise a variety with yellow ears, with red tips; Canada Smut, some call it. I see some are advocating cutting this even when first green and feeding it in stable with a little mill feed mixed with it, but I think it is unnecessary work, besides the ears are sufficient grain without any mill feed.

With the experience of the last two years I think that more satisfactory results can be obtained by drilling in the corn with reference to obtaining both a crop of corn and a crop of fodder, sowing about ten or twelve kernels to every four feet. It often happens after the main corn crop is put in, and all other crops sowed, say from the first to the twentieth of June, that there is every appearance of there being a short hay crop; meadows look thin and short, pastures not yielding as was expected. Then it will be best to plow a few acres of pasture or meadow and put it into sowed corn,

take the poorest part, putting on all the manure you can get of course, what may have been left in the hurry of the spring's work or from lack of help or for any cause. When put in late it should be sowed the thicker. This will give you from five to ten times the feed that the poor meadow or pasture would have done. Another benefit, it lengthens the season for getting in the crops.

As a help to utilize all our ground to the best advantage, I have found a portable fence a necessity. I have been using one for the last few years, made in the following manner, one of my own invention, though perhaps many have used the same: Set two posts, one on either side of the field that is to be fenced, and brace them. Stretch a barbed wire from one to the other. This will give you a straight line and also makes half the fence; then stick stakes or small posts, two and a half or three inches in diameter is large enough, sixteen feet apart. A man with a sledge standing in a wagon will drive them very fast; nail the first wire four feet high, leaving the staples out far enough to draw them with a hammer; stretch a second wire and nail sixteen inches below this and the work is done. This can be taken off and reeled up and taken to another field almost as fast as a man can walk. Two men will build from eighty to one hundred rods in half a day. I keep a supply of cedar stakes always on hand for this purpose. I now make all my division fences in this manner with only two wires, and my stock have never troubled them. When not needed, they are very quickly removed and the wire put away for future use. Last season I saw that my pasture was growing much faster than the stock were eating it. I cut off a portion of the field and saved the hay for winter use, which would have been wasted but for the portable fence.

HOW TO SAVE THE FODDER.

Cut the corn as soon as glazed, putting eight rows of corn in one row of shocks. This will make the shocks pretty large, but I have had much more corn fodder damaged on the outside by rainy, muggy weather and by falling down, than by not drying through. Cut three or four hills or

enough to stand alone when lightly bound, and set around this till the square is cut and the shock is finished, setting each handful or armful close at the bottom, and standing each one towards the center of the shock; then bind with rye straw; one dollar's worth will bind ten acres. Some cut and set around a horse, others around a hill, or three or four hills. I have tried all of these ways and none of them is as good as the mode mentioned; not done as quickly, and will not stand up as well; not one-half of one per cent. will fall down when put up in the manner spoken of. Corn fodder when once on the ground through a heavy rain might as well be thrown away; it is as badly damaged as good hay would be under under similar circumstances.

In husking I put four shocks together, binding in bundles; convenient to handle, standing them as perpendicular as possible, binding with double band of rye straw or sheep twine; if the fall is dry and favorable this can be stacked or put in barn, but it will keep nicely where it is, and can be drawn and fed in winter when wanted, or a few loads at a time. Corn fodder is very liable to heat when put up in large quantities, and then is almost worthless. By plowing four or five bouts between every other row of shocks and setting the stalks upon this you can have the whole corn-field plowed when you are done husking with no extra labor; these lands will be about four rods wide. This corn fodder I would cut with power and feed with mixture of bright oat straw and clover hay, also cut a few whole stalks when the day is bright and the cattle out for exercise, will be relished by them, and at night a feeding of hay after their ration of cut feed. I have fed this cut feed, stalks, oat straw and hay with ground feed, but I am now feeding the grain separately, and I think with better results; they do not muss over the fodder so much, eat it cleaner, and more of it. If much grain is to fed it may be better to feed it on the cut fodder; in that case feed it on cut hay or straw. I shall experiment further in this line, and try to prove to a certainty which is the better way.

I might here discuss the kind of breed of cows to keep for profit, for it is the profit we are all after. But so much has

been, and is being written in all of our farm journals, and so many experiments reported, that no man's views would be changed or influenced by my opinion; no doubt there is a difference in cows in all breeds, though not as much in the full bloods or high grades as in the scrubs. It is for each person who keeps cows to know by actual weight or measure the quantity of milk given, and by test, the comparative richness of each cow's milk; and by so doing he can weed out the poor ones and keep only the best.

It will also depend on circumstances whether he will send his milk to the cheese factory, the creamery or what disposition he will make of his milk, for what might be profitable for one might not be for another differently situated.

But these are certain principles and practices that must be followed. There must be good milk producing food and plenty of it at all times of the year, and you cannot depend on pasture alone to supply this even in summer. You must grow and be on hand with some kind of soiling crop in case of shortage either by drouth, flood, grasshoppers, or what not. The cows must have extra care between hay and grass, both spring and fall, or if there is any difference in the feed let it be better at such times. If you have any hay that is extra good let it be fed then. If from twenty to fifty bushels of Mangle can be fed to each cow during the spring and fall it will pay a big profit on the expense, or labor of raising them. There must be neatness and care in handling the milk.

I would not try to handle the milk of two cows even without an ice house; with an ice house well filled with ice, no matter how hot or how cold, you are master of the situation, your milk is always sweet, your cream always rises. I believe there is twice or three times the feeding value either to hogs or calves in sweet milk that there is in sour, as much difference as there is in the juice of a rich, sweet apple and in vinegar. Isn't it strange we learn so slowly and stick with such stubbornness and dulness in the old ruts. I am tempted to give you my plan of an ice house for I have kept ice over two summers, and then take out part of the bottom layer to make room for new ice, and that after using

it from the day snow left us in spring till it was cold, freezing weather in November. I might discuss the kind of cans to use deep or shallow setting. The relative profit of feeding cows for milk or steers for beef, but this paper is already too long and I forbear, hoping that these discussions may make us all do better work.

DISCUSSION.

Mr. Gillingham — I would like to ask Mr. Huntley how deep he covers his corn when he covers it with a cultivator?

Mr. Huntley — This was sod corn. It was pulverized with the Acme until it appeared like old ground. In opening the furrows I think they were three or four inches, probably.

Mr. Gillingham — What is your theory? Do you believe in deep cultivation or shallow cultivation of corn?

Mr. Huntley — I cultivate with a sulky plow. The first time I cultivate deep, with the teeth set so the front teeth lean back as deep as this. Set them as close to row as you can run. The hind teeth will follow them and fill it. The roots have not filled the ground. The second time I cultivate shallow.

Mr. Gillingham — When you get through you calculate your land will be level?

Mr. Huntley — Yes, sir; I think the first cultivation is the most essential of all. We make a great mistake in cultivating shallow at that time, when the roots will not be in the way of mellowing the ground close to the corn.

Mr. Gillingham — What stage of the growth of clover hay do you consider the best time for cutting?

Mr. Huntley — Cut it in blossom.

Mr. Gillingham — Just as the blossoms begin to die?

Mr. Huntley — I would rather cut it before it all has blossomed than to wait until they began to die.

Mr. Gillingham — Do you consider that if we cut clover hay to-day it is fit to haul to-morrow.

Mr. Huntley — Yes, sir; but I usually put it in cocks. The trouble with me, and I presume with everybody in clover

hay is the shelling of the leaves—a great deal is lost. I think if you cut it early and put it in cocks after it is dry the leaf will become tougher.

Mr. Gillingham—You don't feel any alarmed about it if it commences to heat.

Mr. Huntley—I have never been troubled in that way. It may color a trifle. I never have lost any.

Mr. Gillingham—My experience with clover hay has been if we put it in green, sixteen inches or a foot on top would be poor. If you throw that off, you get good.

Mr. Huntley—We usually cover it with something. I am not farming on a very large scale. I try to take care of the straw and I think it would pay to press the straw as soon as it is threshed. Have the press run in connection with the thresher. The straw is worth half as much as hay any way, perhaps more if it does not get wet. Quite a good many times I have mixed straw with clover as it has been put in, and I like to put straw on top of the clover. Of course no cast iron rule can be laid down.

Prof. Henry—How did you build your ice house.

Mr. Huntley—My ice house is 14x20 feet with 6 feet cut off the end to put our milk in. That makes a room 6x14 and leaves 14 feet square for the ice. For the foundation we dug a trench clear around it two feet wide and threw the dirt into the center. There are two things you want to keep in mind when you build an ice house; drainage and ventilation. Then build your wall of cobble stones around it. Also, draw enough cobble stones and put in the center, so it will be level. The dirt thrown out of the trench will not do that, but in building up the wall around it the filling it in with cobble stones will make it level. Put coarse at the bottom and fine on top, and you get a flat surface. There should be a good drain running from this. I put something like a foot of sawdust, then the ice. This chamber will take six cakes, thirty-six cakes as they usually cut them for the ice houses. I go to the river and take the ice as they are cutting it to fill the ice houses in the city for the breweries. The joists are six inches wide. It is sided on the sides, and cull fence boards worth $6 to $7 a thousand used on the inside. This

is not stuffed in between, only enough to keep out the dampness from the outside. You can see through to the ice. Outside is not the best lumber. This will leave a foot around the ice for sawdust around the edges. That we fill as fast as we put in the ice. We put in four tiers deep, handily. The rest we dump on the ground and afterwards take a tackle and block, and a horse, and put in eight tiers. That will give 288 cakes. They will weigh about 100 pounds or 125 some of them. With 12 or 14 cows you will use one and a half. We set our milk in ice water with deep cans. We don't have to change the water. We do not pretend to have the women folks help about that, or keep a boy around to change the water. The ice don't cost anything. Place your ice right so when you come around at noon there will be ice. In the summer we never have any sour milk. It is right in the field from the house to the road. A dipper stands there, they can take a drink at any time. I had a son returned from Kansas. He laughed a good deal that we should keep skim milk on the table. It is nutritious. You can raise a better calf on skim milk than on full milk if you know how; it has bone and muscle making properties in it. I have got off of the ice house subject. To return to that, we then cover with sawdust all the ice. We have to use it all the time. Once in a while we get up a dish of ice cream, when the boys and girls want it. We have ice to give to the neighbors; any time they want any, we give to them and tell them to come any time they have a mind to. In a few minutes, if the women are behind and have not got any dessert, they can put ice cream on the table.

Mr. Gillingham — Do you use the Cooley creamer?

Mr. Huntley — I do. I would like to hear other gentlemen on that. When the can is not full I think the standard in the center is an objection.

Mr. Gillingham — I said the Cooley.

Mr. Huntley — No, I use a can that is about thirteen inches in diameter and has a center post. The theory is the water comes up in the center; there is a current of cold water passes in. In the pictures you will see an arrow how it runs. I think when I get more cans I shall have some

made that are smaller and do away with the center post. I have seen them where the milk was drained off and the cream left and a gauge at the top.

Mr. Gillingham — That is the way with the Cooley, draw the milk off.

Mr. Huntley — We skim ours with a funnel skimmer. We can't get all the pure cream as we sell our cream in the city. We find out by experience that it is the best policy to sell the cream. I think the saving of the milk will more than pay every season for the ice house. Our water is not spring water. If anybody has a spring I don't know but that would be sufficient. Where you have to change the water every little while it is a good deal of work.

Mr. Gillingham — I don't think it is necessary to change the water more than once a week.

Mr. Huntley — Change it occasionally. We change it as often as that. In taking off the cream and keeping it we keep it in ice.

Mr. Gillingham — Do you warm your milk for the calves?

Mr. Huntley — Every time.

Mr. Gillingham — Calves don't like cold milk coming off the ice.

Mr. Huntley — You can't give a calf milk off the ice. In the summer where you feed three times a day, and I think that is the way you should feed, you can set the milk out and the sun will warm it so you will not have to warm it at noon. It will not pay to feed ice water or ice milk at any time.

CORN-STALKS COMPARED WITH MIXED HAY AND CLOVER HAY FOR PRODUCING MILK AND BUTTER.

Prof. W. A. HENRY, of the Wisconsin Agricultural Experiment Station, Madison.

The following described experiments were conducted to ascertain:

1st. The relative values of corn fodder and mixed hay for producing milk and butter.

2d. The relative values of corn fodder and clover hay for producing milk and butter.

3d. The amount of milk and butter an acre of corn will make when fed to milch cows.

4th. The value of an acre of corn when turned into milk and butter.

All the materials fed were good of their kind, the corn-stalks being from a lot described further on, cut early, and well cured in the shock and bound into bundles, after husking the fully matured ears. The mixed hay was about one-third clover and two-thirds timothy. The clover hay was from medium red clover, cut early enough to preserve the leaves and heads in good condition. The corn-meal was from Kansas corn, thoroughly dried and ground fine. The bran was Minneapolis new process.

The hay and fodder were fed long, thus necessitating much waste with the corn-stalks, which might have been avoided by running the stalks through a cutter, but as this was a preliminary trial, it was deemed best to take each fodder in its simplest form, leaving other tests to show us the loss by feeding in this way.

Four excellent butter cows were selected and divided into two lots of two each, of equal capacity for producing milk and butter as near as we could judge. During the trials they held their weights and maintained their appetites so well that no further mention need be made of these points.

In every trial a week's preliminary feeding preceded the two weeks of actual test, this time being considered neces-

sary for accustoming the animals to their diet, and to get the full effect of the food on the milk.

In the first trial the ration of Lot I was five pounds of corn meal and seven pounds of bran per cow daily, in two feeds, fed dry, and as many corn stalks as they would strip of the softer, finer parts. The ration for Lot II was the same as that of Lot I, except for the corn-stalks, mixed hay was substituted, a full supply being kept before them. After feeding carefully for a week the ration was continued and the milk and butter product saved for fourteen days. At the end of this period the hay and corn-stalks of the two rations were changed about for the two lots and the trial repeated. The two cows of each lot, therefore, were on both sides of the trial, thus eliminating largely the errors due to the difference in individuals.

Six weeks were required to complete the test with mixed hay and corn-stalks, and, this done, the whole trial was repeated except that clover hay was substituted for the mixed hay, the corn-stalk ration being continued.

The tables here given show in a condensed form the results:

FIRST TRIAL—CORNSTALKS VERSUS MIXED HAY.

Two cows in each lot; each period 14 *days.*

	Numbers of the cows of Lots I and II.	Amount of corn-stalks fed.	Amount of mixed hay fed.	Refuse weighed back.	Amount of corn-stalks eaten.	Amount of hay eaten.	Amount of corn meal eaten.	Amount of bran eaten.	Amount of milk given.	Amount of butter made.
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.oz.	lbs.oz.
First period, Jan. 9–25.	1&2	1186	.....	43 3	750	.....	140	196	640.9	29.13½
	3&4	.....	300	26½	.....	273½	140	196	480.8	28.10½
Second period, Feb, 4–18.....	1&2	.....	455	11	.....	444	140	196	583.7	27.7
	3&4	1188	.....	367½	820½	.....	140	196	480.3	27.3

SECOND TRIAL—CORNSTALKS VS. CLOVER HAY.

Two cows in each lot; each period 14 days.

	Number of the cows of Lots I and II.	Amount of cornstalks fed.	Amount of clover hay fed.	Refuse weighed back.	Amount of cornstalks eaten.	Amount of clover hay eaten.	Amount of corn meal eaten.	Amount of bran eaten.	Amount of milk given.	Amount of butter made.
		lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.oz.	lbs.oz
First period, Feb'y 26—Mch. 11—	1 & 2	922½	.....	343	574½	.....	140	196	607.13	25.12
	3 & 4	.....	366	49½	.....	316½	140	196	497.13	25.8
Second period Mch. 19–Apr. 1.	1 & 2	.....	276½	19	.....	257	140	196	561.4	29.0½
	3 & 4	944½	.....	298½	646	.....	140	196	471.6	26.6½

Comparing cornstalks with mixed hay, when supplemented by 280 lbs. of corn meal and 392 lbs. of bran, we find—

2,374 lbs. of cornstalks yield 1,120 lbs. 12 oz. milk, making 75 lbs. 0½ oz. butter;

755 lbs. of mixed hay yield 1,063 lbs, 15 oz. milk, making 56 lbs. 1½ oz. butter;

or, 56 lbs. 13 oz. milk and 15 oz. of butter more from the stalks than from the mixed hay.

Comparing cornstalks with clover hay, as in the previous instance we find—

1,867 lbs. cornstalks yield 1,079 lbs. 3 oz. milk, making 52 lbs. 2½ oz. butter;

642½ lbs. clover hay yield 1,059 lbs. 1 oz. milk, making 54 lbs. 8½ oz. butter;

or, 20 lbs. 2 oz. more milk, and 2 lbs. 6 oz. less butter from the cornstalks than from the clover hay.

Taking into consideration the fact that the milk and butter yield are both larger from the stalks than from the mixed hay it is fair to say that the corn stalks were worth one-third as much as the mixed hay; that is, one ton of mixed hay is worth three tons of stalks fed as these were.

From the second trial we see that one ton of clover hay was worth somewhat more than three tons of cornstalks fed as described.

In the two trials 4,241 pounds of stalks were fed, and 1,450 pounds weighed back as coarse parts that the cows refused to eat. This is over 34 per cent. of the whole amount of the stalks, by weight, lost by feeding in this manner. Whether the part thus lost is proportionally as valuable as that eaten, and what amount can be saved by passing the stalks through a feed cutter is work for future experiments.

Arranging our figures in another form, we have the following:

Food required for 100 pounds of milk when feeding cornstalks;
193 pounds of cornstalks.
25 pounds of corn meal.
35 pounds of wheat bran.

Food required for 100 pounds of butter when feeding cornstalks:
3,880 pounds of cornstalks.
514 pounds of corn meal.
719 pounds of wheat bran.

Food required for 100 pounds of milk when feeding mixed hay:
71 pounds of mixed hay.
26 pounds of corn meal.
36 pounds of wheat bran.

Food required for 100 pounds of butter when feeding mixed hay:
1,348 pounds of mixed hay.
500 pounds of corn meal.
700 pounds of wheat bran.

Food required for 100 pounds of milk when feeding clover hay:
60 pounds of clover hay.
26 pounds of corn meal.
37 pounds of wheat bran.

Food required for 100 pounds of butter when feeding clover hay:
1,179 pounds of clover hay.
513 pounds of corn meal.
718 pounds of wheat bran.

From the data here given one can easily calculate the cost of food necessary to produce one hundred pounds of milk or butter. Supposing hay is worth $8 per ton, then the corn-

stalks would be worth $2.66, or one third the value of the hay, as shown by these experiments. Suppose further, that bran can be had for $12, and corn meal for $15 per ton. Assuming these prices we will find that the food necessary to produce one hundred pounds of milk costs, as the average of the before detailed experiments, about sixty-six cents, and the food to produce one hundred pounds of butter costs about $12.84.

In considering these experiments the reader should bear in mind that during each of the four periods lasting three weeks each, including the week of preliminary feeding, the cows were upon one variety of food, and that only. Variety in food is as essential to beast as to man, if we wish the best results, and these results may be looked upon as the lowest we should receive from these food articles, rather than average or high results. Any careful feeder of dairy cows has observed that the cow is the quickest of all animals on the farm to appreciate and respond to variety and a change of diet from time to time.

The cornstalks used in these experiments were from a plot of ground 3.27 acres in area. This corn was grown upon tile drained land that in former years had been of little value owing to crops drowning out almost every year.

The corn was of the Pride of the North variety, a small stalked, small eared, early yellow dent corn. The 3.27 acres produced 14,684 pounds of stalks and 16,160 pounds of ears, or 4,490 pounds of stalks and 4,941 pounds of ears of corn per acre. This was 68 bushels of 72 pounds each.

With these facts and those of the experiments before us, let us attempt to estimate the butter that can be produced from an acre of corn land.

For this purpose let us assume that the 4,941 pounds of ears from an acre would make 4,000 pounds of corn meal allowing for shrinkage and grinding about twenty per cent. which is fully enough for corn as dry as this at husking.

Now most farmers would be unwilling to trade a ton of corn meal for a ton of bran, but let us substitute bran for corn meal, pound for pound in part, so as to have seven pounds of bran for each five of corn meal. The two tons of

corn meal then would give us 2,334 pounds of bran and 1,666 pounds of corn meal.

By our experiments we have shown that by feeding as described, 193 pounds of cornstalks made 100 pounds of milk and for 100 pounds of butter 3,874 pounds were required; also that 25 pounds of corn meal and 35 pounds of bran were required in addition to the cornstalks for 100 pounds of milk; and 514 pounds of meal and 718 pounds of bran for 100 pounds of butter.

From this we see that an acre of land produced sufficient grain food for 6,664 pounds of milk, or 324 pounds of butter, and sufficient cornstalks for for 2,324 pounds of milk or 115 pounds of butter.

Valuing milk at $1.00 per 100 pounds and butter at 20 cents per pound (winter prices) we find that one acre of land produced sufficient corn stalks for $23.24 worth of milk, or $23.00 worth of butter, and meal sufficient for $66.64 worth of milk, or $64.88 worth of butter.

It will be noticed that about three acres of corn stalks are necessary to supplement the corn from one acre, as we fed it. Practically the farmer can grow hay in part for coarse feed, thus giving variety and maintaining the balance between crops so essential in successful farming.

During the coming winter it is designed to continue experiments in this direction, using the feed cutter to reduce the corn stalks to a condition in which they can all, or nearly all, be eaten.

DISCUSSION.

Mr. Wilson — Do these figures represent the best proportion of food?

Prof. Henry — They represent the best proportion of food for the cornstalks and very nearly the right amount for the mixed hay; but there is a little too much bran ration to go with the clover hay according to the experiments of the German feeders. That is, the clover hay contains more flesh-forming food in a hundred pounds than cornstalks. Bran is flesh or cheese-forming food; so when I made the

ration up I made it up really for the cornstalks, and it is a more perfect ration for feeding cornstalks than clover hay. It is rather too good a ration to feed with clover hay. We save by cutting about three hundred pounds on a thousand. Whether a man could make it pay would depend on the kind of cutter and how cheaply he could run it. No one wants to think of using a hand cutter. You want the biggest cutter you can get and shove the fodder through as fast as you can.

Mr. Roe — I understand that 193 was the divisor and 4,490 was made the dividend. Should not 14,684 be the dividend?

Prof. Henry — That was for three acres.

Mr. Roe — The other would be for one acre.

Prof. Henry — Yes, sir. The reason why I am so interested in this work is we have to take lower prices for our products. There is no use of our making up our minds that we will get the fancy prices we have had. Now our study must be for cheaper production. That is what manufacturers are working for. How to produce this or that article a little cheaper and undersell the other manufacturer. So the coming farmer must produce an acre of corn cheaper than his neighbor if possible, then he must feed more economically than the average farmer and make a finer product by his cheaper labor, and he must have his profit left.

Mr. Wilson — Will you speak for a moment of the result, if one of these grain rations was omitted?

Prof. Henry — The gentleman is going to get me into a discussion of the best feeding combinations. I am at home on that, although Prof. Armsby takes that up more particularly. It is very important that you understand that. In some parts of the state they will discuss it readily. In some parts of the state we talk proteine, albuminoids, carbhydrates as familiarly as other parts talk about butterine. The farmers are figuring our rations carefully. We have farmers write, asking us about buying tons of oil meal, telling us the feeds they have to put with it. We have a good many questions coming to the station about what kind of food to buy. We use food for our ourselves or for our cattle for the purpose of taking into our bodies or theirs material

to produce flesh and muscle and fat. I don't care what the quality of the food is; I don't care how many different kinds of dishes you order at the hotel. You are hunting for that. The proteine goes to make up your muscle; if it is fed to the cow it goes to make the cheese in the milk unless it goes to make muscle. If it is fed to the chicken it goes to make the egg. The egg is the representative of proteine. You see why the egg is so valuable and it makes a whole chick as large as the shell. On account of it the cows make the cheese in the milk. Next the carb-hydrates. For instance for human consumption the classes of proteine food are cheese, eggs, lean meat or blood albuminoids which is the same thing. The next classes are cheaper in the market than these expensive, of which I have spoken, which are the dearest. The second class is the carb-hydrates, starch, sugar, woody fibre. They cost for human or animal food only a small part of what the others do. Carb-hydrates in the body cannot go to make up lean meat or blood. You cannot eat sugar and make blood, you cannot eat sugar and make lean meat. You can burn it up in your body and make warmth or make fat which will burn up later. Animals put it into fat or put it next into milk. Fats go with the carb-hydrates. You feed an animal fat or oil, it can make heat out of it or fat out of it, reserving the fat for heating purposes, but it can make no lean meat or cheese part of the milk. When we go into the market we ought to know enough about foods, especially in buying for our stock. The discussion of human foods not being at present so essential because we buy what we want whether it is the cheapest or not.

In the selection of food for our stock we should always know what we want. Let us take this ration. When we feed this ration 196 pounds of corn-stalks, we gave them a good deal of fat; we gave them a good deal of sugar, but we didn't give the cows sufficient food to make the cheese of the milk. The cow must have the cheese-making qualities. She cannot make different kinds of milk. She makes milk of such a composition at all times. A cow cannot vary her milk only between the slightest limits. It is to feed the calf.

We must give her proteine. We get that proteine in that thirty-five pounds of wheat largely. There is considerable in the corn-meal. A hundred pounds of corn-meal will contain about eight pounds of proteine; it will contain about sixty pounds of carb-hydrates, while this wheat bran will contain from two to three, twice as much proteine in the same number of pounds. Of course there is some mineral matter. Of course there is plenty of mineral matter, but we will leave that out of the discussion. We feed the cow cornstalks to furnish cheap carb-hydrates. We gave her twenty-five pounds of corn-meal; that gave her in small bulk a considerable amount of carb-hydrates and proteine. To run up the proteine without increasing the bulk of the feed we add the bran. When we have done that we have given the cow in what she is eating in a day, about what we have to give to a horse doing his full work in the winter. We give them two pounds of proteine a day, twelve to fourteen of carb-hydrates. In a day's ration we have given our cows about that amount. When we come down to the other feeds we have not so perfect a feed. Our mixed hay contains more proteine; the clover hay contains still more proteine. The clover is about two to three times as rich in proteine as cornstalks, so I need not have fed so much bran, and the bran being more expensive than clover hay, I should have probably cut it down a little, but I did not want to change the ration.

Mr. Huntley — These cornstalks were fed long?

Prof. Henry — Yes, sir.

Mr. Huntley — In feeding the ration of grain I suppose the corn meal and bran was mixed.

Prof. Henry — Yes, sir.

Mr. Huntley — In cutting the food would feed the ration of grain mixed with the cut food.

Prof. Henry — Yes, sir; it would need fully that.

Mr. Huntley — You do not understand that anybody would feed the corn stalks separate and the grain separate.

Prof. Henry — Yes, sir; I would not try to mix them. It is easier to make good butter than to make the old fashioned butter. It is simpler to feed accurately and scientifically

than to feed imperfectly. Other things being equal it does not pay to cook the food, neither for the food or the labor. Some of the chemical experiments show that food is actually lost by cooking for the animal, that it is less digestible.

Mr. Gillingham — How would it be for beef?

Prof. Henry — If you were feeding a grown animal where you did not have to make muscle and bone, if you were fatting, simply putting on fat, you would feed cornstalks or hay, feed a good deal of corn meal and also bran, because we do not care about making lean meat, but the cow must put a certain amount of cheese with the fat and sugar, so she needs proteine.

Question — How would it be to take ground oats in place of the bran?

Prof. Henry — There is a principle in oats that is hardly weighable that excites the milk secretion. The oat is the finest grain for producing milk that there is, yet the question of expense must come in. It is a very expensive food. A hundred pounds of oats has no more proteine in it only by very little than a hundred pounds of corn meal. On account of the husks there are less carb-hydrates, so the amount of proteine to the amount of carb-hydrates is in excess. The grain of corn is filled up with the starch. It has a larger husk to the hundred pounds and has only a little more proteine in it than corn meal, so the per cent. in oats is higher, but the total is not. You must take into account the expense.

Mr. Huntley — I saw a statement I think in the *Rural New Yorker*, that a feed of corn fodder was placed at ninety-one instead of sixty or sixty-one. I presume that is corn. Do you know about that, whether that relative value was correct or about ccrrect?

Prof. Henry — I do not.

Mr. Huntley — I saw it was quoted at ninety-one, hay being a hundred.

Prof. Henry — I don't like these newspaper statements.

Mr. Huntley — It was taken from a German chemist.

Prof. Henry — Yes, sir. A man might say a plow was a hundred in farming and a horse was ninety, or a horse a

hundred and a plow and harrow only worth fifty. You have got to have a horse and plow to plow. There is no use of saying a horse is worth more than the plow for farming. It is this way: You have got to make three columns. The hundred pounds of corn meal has eight pounds of lean meat material or cheese material in it. It has sixty pounds of fat and heat material; I will put the fat and heating material together. We have eight pounds of lean meat material and sixty pounds of heat and fat. A hundred pounds of oats has about eight pounds, call it nine of lean meat material and it has only about forty of heat and fat. You can see that on account of the husk; so you see oats are richer in lean meat material although it has not got any more. A hundred pounds of the average straw has between one and two pounds of lean meat material in it, about forty pounds of heat and fat. You see how it is with animals running to a straw stack can keep their bodies alive but they cannot make any flesh. The steer has got to eat a hundred pounds to get one or two pounds of material. He uses that one or two pounds in getting to the straw and chewing and digesting. When you put the oats or corn into him you change it. A hundred pounds of straw has one or two pounds of muscle material in it and about thirty or forty pounds of heat. That is too much heat. I might say oat straw is pretty nearly as good as oats. It is like the horse and the plow, you cannot get along in plowing without both. You see by this that you can save a good deal of money in a year. That was the case of the large omnibus company in Paris; they wanted to find out whether they could not keep their several thousand horses cheaper. They sent to one of these chemists and had him analyze these foods. The result was they got a new ration. They saved several thousand dollars. You have got to make the animal cheaper. Young man it is going to be a hard battle for you. Your fathers were the old pioneers. You have got to take the present property and make something out of it. You have got to take it and leave it a very little higher than you bought it and make your living out of it. You have to study problems that they sneer at, that they think beneath

their notice. You have got to take them up and work on them if you succeed.

Mr. Gillingham — I would ask the professor which of the three rations he would feed for making beef, stalks, mixed hay or clover hay?

Prof. Henry — That would depend upon the prices, altogether on the prices.

Mr. Gillingham — As we have them on our farm; we have hay on our farms, we have stalks, we have cows and young cattle; whether it is preferable to feed the stalks to the steers, or mixed hay or clover?

Prof. Henry — You mean growing steers.

Question — They are not usually matured?

Mr. Gillingham — I mean growing, fatting cattle, two year old steers or three. I feed yearling steers.

Prof. Henry — You can make a yearling stop growing and put on fat. A farmer near Madison, sold all his oat straw and bought hay. He sold his oats and bought hay. Now, in your cows I would feed heavily and feed with corn. I would not feed corn meal. I do not like feeding it to cows. I should feed a good deal of corn. I should feed some cornstalks or clover hay. I don't believe in feeding corn meal generally. I don't like to give the boys one-eighth of the corn crop to husk, and the miller another eighth to grind it.

Mr. Huntley — Suppose you have a mill of your own.

Prof. Henry — You cannot grind it cheaper than the miller.

Mr. Gillingham — Suppose you grind it, cob and all.

Prof. Henry — Experiments have shown that that is better than corn meal.

Mr. Huntley — You mix the corn meal and reduce it with bran?

Prof. Henry — Yes, sir.

Question — How? With one-fourth of corn meal mixed with bran?

Prof. Henry — That is fine.

Mr. Huntley — If you were feeding for milk and had a large quantity of corn and no bran, would you consider it

better for the farmer to sell part of his corn and buy bran and make a perfect ration.

Prof. Henry — By all means. The manure from your feed is valuable almost in the ratio of proteine. There are phosphates in the husks of the bran, but generally the higher price your food the more proteine, and the more proteine, the more valuable. You talk of hen manure being valuable. If you fed her on oat straw it would not be so valuable. It is not the chicken that makes the manure rich; it is the kind of food she eats that makes it rich. Suppose you go out and buy bran; you get manure with the elements of that food in it. The animal does not take out but a small part of what is in the food. The most of it goes out in the solid excrement.

Mr. Gillingham — Bran, clover hay and corn meal makes better hay than the straw stack.

Prof. Henry — Yes, sir. If the manure from a ton of straw is worth $1.60 to you, then the manure from a ton of bran is worth $10. You can see the difference.

Mr. Huntley — Prof. Arnold says it would pay to buy the bran for manure.

Prof. Henry — You can run that bran through the cow and get eighty to ninety per cent. of its value and have the milk and butter besides. You take the horse and feed him a bushel of oats. All of those oats pass in the manure. Every bit of the animal that is worn out by mental or physical exertion is in the liquid part. You say you feed a hundred bushels of oats and drive the horse on the road. All that, is taken in the body and disappears; when the muscle is worn out through the liquid, and not the solid part.

Mr. Huntley — Do you keep the manure covered?

Prof. Henry — We either haul it out to a large pile where we can rot it, or draw it right upon the field, in the southern part of the state.

Mr. Huntley — Do they spread it?

Prof. Henry — Yes, sir. Mr. Hiram Smith don't spread it.

Mr. Huntley — Don't that waste when the snow comes on top of it?

Prof. Henry — Very little. It is not worth considering, only a little on a hill side, where a neighbor's farm is below, the land did better.

Mr. Huntley — I manured a piece of meadow two years ago. In the spring there was a small river of this liquid going across the road. Would not that manure go in that liquid?

Prof. Henry — You can tell that just as well as I can. In nine farms out of ten of such land as I see around here, you will not lose a quarter as much as to let it run off in a big stream in the yard.

Mr. Huntley — I am satisfied of that.

Mr. Gillingham — What is your idea in regard to manuring meadows on the surface?

Prof. Henry — If you do not have too much litter, I would manure in the last year before breaking up and putting a corn crop on grass land. Manure grass land and break it up.

Mr. Gillingham — I have had the best success in putting in oats the first year and corn the second.

Prof. Henry — With us the oats would all fall down.

Mr. Huntley — Do you save the liquid manure?

Prof. Henry — Yes, sir.

Mr. Huntley — What is your manner of saving it?

Prof. Henry — We have a tight floor and a good deal of bedding and for that reason we let the manure rot.

Mr. Huntley — What is your bedding for an absorbent?

Prof. Henry — We have to cut the grass under the trees and keep the place looking like a lawn and use that matter for bedding.

Mr. Huntley — Do you think it would pay to haul sawdust for bedding with the idea of an absorbent?

Prof. Henry — If you can hold your liquid manure by any means it will economically keep the liquid manure if you have to throw away the solid.

Mr. Huntley — I expect a cistern would be better?

Prof. Henry — They are too expensive. It would be the nicest to have a cistern and go out and sprinkle it, but it would be too expensive.

Mr. Mott — Do I understand that your table shows that clover hay is worth more than timothy to produce milk?

Prof. Henry — Yes, sir. This was one-third clover and two-thirds timothy.

Mr. Mott — My experience shows that timothy is worth a good deal more than clover.

Prof. Henry — The trouble is in the clover. You have got extraordinary good timothy and poor clover.

Mr. Mott — When I fed clear timothy I had the largest flow of milk.

Prof. Henry — What did you feed with it?

Mr. Mott — I fed oat meal, corn meal and bran, a fixed ration.

Prof. Henry — Your ration may have been so rich you lacked carb-hydrates?

Mr. Mott — I feed largely of oat meal.

Prof. Henry — When you come down to the chemical side of it you have got the explanation. The gentleman is feeding a very rich ration. When he feeds the more carbonaceous oat straw he gets more proteine than when he feeds clover hay.

Mr. Mott — Do you keep plaster in the barn?

Prof. Henry — Very little.

Mr. Mott — Will not that fix the ammonia?

Prof. Henry — It will not do any more than road dust. We had that question answered for Hiram Smith. He said he was putting half a bushel of plaster a day. He wrote to the station to ask if that would pay him. Prof. Armsby told him he thought it wouldn't. He would get that half of a bushel over so small an area when he came to spread the manure for one day.

Mr. Mott — Would not dry earth be a good absorbent?

Prof. Henry — Yes.

Mr. Gillingham — Will it pay to sow land plaster in the spring?

Prof. Henry — No one can answer that for yourself. You may be exhausting certain ingredients from the soil. The land plaster may have just what you want. Your neighbor might follow your plan. Prof. Armsby analyzed two

samples of land plaster from Green Bay. One sample did not have one single iota of plaster in it, the other was good.

Mr. Gillingham — Was not that poor plaster gray?

Prof. Henry — I could not tell you. They were both I understood, fine looking articles. Adulteration is so common. He is working up the thing and it will be made public.

Question — In the state of Tennessee they have a strict law in regard to plaster?

Prof. Henry — Yes, sir.

Mr. Huntley — The English are ahead of us in regard to laws.

Prof. Henry — We like to be humbugged so well in this country. One of these Green Bay firms was selling a good article. The Michigan plaster and the Fort Dodge is good plaster. That man had got an article that he was ignorantly or knowingly palming off upon the public. I only speak of this that you may be careful. When you make an experiment, seeing it for the first time, do not be certain but that you may have got a poor article.

Question — Is there any way of telling by the specific gravity?

Prof. Henry — They had fixed that. They break up stone and put in clover seed.

Mr. Gillingham — When would you cut clover hay?

Prof. Henry — If I am to divulge a secret, I fed steers two winters upon hay that was early cut, and late cut, and I got the best results from the late cut hay both times. As it has been done only two years, I don't like to advocate that without restrictions, because I believe generally we should begin to cut early.

Mr. Huntley — Did the seed ripen in your late cut?

Prof. Henry — The seed ripened, yet we got the best results in feeding steers with the corn ration.

The following circular was read:

UNIVERSITY OF WISCONSIN AGRICULTURAL EXPERIMENT STATION, NEWSPAPER BULLETIN NO. 1.

This Station proposes to issue from time to time short "Newspaper Bulletins," in order to bring promptly before the public results which are of general interest, but which are not judged of sufficient importance to justify the expense of a printed bulletin. These bulletins will be mailed simultaneously to every paper in the state and it is hoped that the Press will aid the Station by printing them in full. They cannot be supplied to individuals.

ANALYSES OF LAND PLASTER.

The following samples of land plaster have recently been examined at the Station and serve to illustrate the variations in the quality of the commercial article:

No. 7. Sandusky land plaster, manufactured by Marsh & Co.; $7.50 per ton.

No. 8. Bay Settlement land plaster, manufactured by M. M. Brans; $2.00 per ton.

No. 9. Buffalo land plaster, manufactured by Sherman Bros; $1.25 per barrel.

All were sold by F. Hurlbut, of Green Bay, and were sampled and sent to the station by R. B. Kellogg, of Green Bay.

ANALYSIS.

	No. 7.	No. 8.	No. 9.
Insoluble in acid	0.40	58.61	5.38
Pure plaster	96.27	None	76.36
Undetermined	3.33	41.39	17.82
	100.00	100.00	100.00

Sample No. 8 is not land plaster at all. While not absolutely worthless, its manural value is too small to be worth

considering. As a substitute for plaster it is valueless. Of the other samples, No. 9 is of fair, and No. 7 of excellent quality. Assuming No. 9 to weigh 300 pounds per barrel, it costs $8.33 per ton, and we have the following as the relative value of the samples:

	No. 7.	No. 8.	No. 9.
Pure plaster in one ton	1,925.4 lbs.	None	1,527.0 lbs.
100 lbs of pure plaster cost.....	39 cts.	———	54½ cts.
$100 buys of pure plaster.....	256 lbs.	None	183 lbs.

H. P. ARMSBY,
Prof. of Agr'l. Chemistry.

MADISON, WISCONSIN, March 10th, 1886.

Mr. K. M. Hutchinson, of Oshkosh, then read a paper entitled:

MY NEIGHBOR AND I.

An old gentleman, a neighbor of mine, often calls upon me in the evening if it is winter, and at any time he catches me wandering about my grounds, if in summer.

He is a great talker, but what is peculiar about him, he never talks about himself or his former history, but seems to give much of his time to meditation upon subjects outside the range of every day events, as the weather, politics, or town affairs, and having matured his thoughts — loaded himself up as it were — he then seeks the first opportunity to fire them off at me, at the times I have mentioned.

If it is winter he comes in at the kitchen door without knocking (and this is a great annoyance to our servant girl, for she sometimes has a beau who comes to talk philosophy with her), goes through the hall-way, lays aside his overcoat and hat, stands his cane in a corner, then walks into our family sitting room, and with a cheery "good evening, my

good friends," for he knows we are all such except the kitchen maid and her philosopher referred to, takes an easy chair and without further ceremony commences to talk.

It would be impossible for me to give but the outlines of the many discourses he has at various times delivered to me, as I could not possibly recall his exact language.

One thing however I soon discovered I must not do; that is to contradict him, or to question the correctness of his conclusions. If I did it would only prolong the discussion indefinitely so that the hours I am accustomed to give to "refreshment and sleep" would be sadly encroached upon. So I let him go on unquestioned until he runs down, as it were. The subject being exhausted the machinery stops for want of material. He then gathers himself up and takes his departure by the way he came.

It was on an evening not long ago he came in as usual and after the accustomed salutations, commenced as follows:

"Don't you think we have had an unusual number of burglaries, murders, suicides, bank robberies, defaulters and dishonest clerks—a perfect deluge of crimes and wrongdoing the past year—more than usual? The papers seem to be full of such things."

I knew this was a trap set to catch me, for I knew his tricks, and knowing them, was nothing to be gained by nibbling at the bait, I swallowed it at once and assented to his statement.

"Well," said he, "I am not surprised at your answer, because had you given the matter the slightest thought or investigation you would have answered differently."

The fact is, most people lose sight of, or never think of that law of General Average which is an important factor in all human affairs. It is also recognized in the physical world. But let us start right by defining as clearly as we can what we mean when we speak of average. To be brief as possible, average means the mean of unequal numbers or quantities—as to say in numbers six is the mean between four and eight, it being at an equal distance from the two extremes, four and eight.

Life insurance tables are based upon this law of average.

A person insuring his life at twenty years of age pays a less premium than one at forty years, because the probabilities are that he will have longer to live, and so by the greater number of his annual dues though less in the amount, yet will equal at the time of death, the amount paid by the insured of forty years.

In the physical world this law is recognized or claimed to exist. The signal service gives us the probabilities of the weather a few hours ahead only, while Vennor and others take as the basis of their predictions the observations of years of the periodical recurrence of atmospheric phenomina, viz: that in about so often peculiar seasons appear, and that by a careful study of these the future can be quite safely predicted. I don't think I care to go quite as far as this. I do, however, contend that the law of average holds good as regards the weather to this extent.

Since writing the above I met the following extract from the Chicago *Journal*, of January 11, 1886. The editor refers to the cold wave that reached Wisconsin and Illinois on the 9th.

> There is no wisdom in the suggestion of some of the cranky theorists to the effect that the world is growing colder. There are returns of cold cycles which appear remarkable in the utmost degree to the generation in which they occur. A few centuries ago the English Channel was frozen over; the south of Europe was congealed, and the extreme cold penetrated the torrid zone. If mankind had then understood the mysteries of the glacial period, as recently explained by geologists, they would have thought that it had come again, and that the extinction of human and animal life north of the tropics was imminent. But the cold cycle passed away, and since that era there have been winter seasons even farther north than our latitude, and up to the coasts of Labrador, that were as mild as the ordinary winter on the Mediterrean. The seasons come and go; they are salubrious or inclement; they bring comfort or suffering; they are lit by auroral splendors and midday sunlight, or are chilled by blasts from winter's polar lairs, according as nature, in its wise decrees, may appoint, and as the mysterious influences of thermal change are produced by agencies hidden from human research. Science has not explored the causes by which they are produced, and they can only be met as they come, and we must make the best of them.

Take the average seasons, wet or dry, cold or moderate, for any five years, and they will be found not to differ ma-

terially from any other five years in the same locality. Let us go more into detail. Get the amount of rain or snow fall, the number of days the wind blew from any given direction, the number of degrees of heat above or cold below the freezing point, and any other phenomena concerning the weather for a certain number of years, and then compare the result with any other equal number of years, and they will be found to be very near if not exactly equal.

Again, go to the records of the police magistrates of any city and you will find the number of arrests for misdemeanor and convictions therefor will correspond with that of any other time. Ask the postmaster how many letters have been left in his office without any address or any stamps for postage during the year, and you will find the same forgetfulness or oversight to be the same as that for any other year. (I don't know how some of these illustrations came to me, but it seems to me that I have met them somewhere, but where I know not.)

The same law of general average will be found in all departments of human action. Take in any community, the population nominally the same, the number of births, deaths, marriages, divorces, failures in business, etc., and they will be found for a term of years not materially to differ.

Man individually may be said to be an *enigma,* but *collectively* he is a mathematical certainty and as easily understood as the simplest problem. The irregularity of mental phenomena is in appearance only.

A man has the power of concealing his thoughts, of appearing honest and trustworthy, of wearing a mask thereby concealing all evil designs or propensities, thereby gaining the confidence and good will of his associates. But in an unguarded moment he loses his balance so to speak. The evil propensity that is in him, slumbering for so many years banked up, blazes forth to the amazement of his neighbors and the supposed honest man comes out under his true colors as an accomplished villain.

Now the number of men living for years with good reputations, proving in time defaultless and dishonest, can by

this inflexible law be very accurately determined. Not that we can tell who the man or men will be, but that they will show themselves in due season, needs not be doubted.

In making calculations, however, upon all cases where human actions are concerned, the fact must not be lost sight of that there is such a thing as "human progress" and that events dependent upon human thought, impulse or passion, though they will eventually repeat themselves, yet a certain percentage must be allowed for the influence of this important factor.

Although the earth revolves on its own axis once in twenty four hours, yet it is moving onward at the same time in its yearly journey around the sun.

I question if there is any such thing as chance or "capricious uncertainty" as some one has defined the word. It is the conviction of observing men that the recurrence of events at stated intervals, whether physical or such as pertain to society in its social, political or commercial aspect, is the effect of occult perhaps, but nevertheless imperative laws.

What more inconstant than the wind? "It bloweth where it listeth!" Does it not rather blow by reason of causes that compel it to blow.

Scientists and philosophers are said to deal only in certainties; that they are familiar only with the "regular movements of natural forces" as at present recognized, but the time will surely come when laws of *disorder* will be as fully understood as those of *order*, and what are now called capricious events will be as clearly known as any other established fact or principle.

Here, like the clock in the famous kitchen when the pendulum refused to swing, my neighbor came to a full stop for I was giving unmistakable signs of being sleepy which I suppose he noticed.

He gave me a parting shot, however, as he arose to go. "I don't blame you; it is a sleepy subject, and possibly it is beyond your ability to comprehend."

A few evenings after this my neighbor called again, saying, as he came into the room: "I have come again, because

I wish to be consistent with what I said the other evening by keeping up the average of my visits."

With this facetious observation he began to talk on various subjects in a desultory manner until he struck his regular gait and kept it up without interruption until he had his talk out, and then went home much to my relief.

"A few years ago," my neighbor began, "I was in England and spent a day in Cambridge. I was aware of the peculiar names of English public houses. Such as the 'Cross-Keys,' 'Black-Horse,' 'Bull's-Head,' etc, but the most curious was the one I found in this ancient city of learning, it was called

THE FIVE ALLS.

There was the usual high square post or column in front of the hotel, with an arm at right angles to it from which hung the sign itself on loose hinges.

Upon the sign were painted five human figures.

The first was that of a king with a scepter in his hand and a crown on his head. The legend was "*I govern all.*"

The second was that of a *Priest* in his robes and holding a book. His legend was, "*I pray for all.*"

The third was a *Soldier* with a gun, the motto being, "*I fight for all.*"

The fourth was a *Lawyer* with a big wig on his head, saying, "*I plead for all.*"

The fifth and last was a *Farmer* with a fat pocket-book, and bags of money beside him, seeming to say with great complacency, "*I pay for all.*"

While I was looking up at this curious sign the like of which I had never seen or heard of before, I came to a certain conclusion concerning the legends before me, as to their truth or falsity.

I have since given the subject some thought and the result has been to confirm my first conclusion, viz: that the first four only were true.

Let us "reason together" and examine into this a little. Men are engaged in diversified pursuits. Although it is a common and quite true saying that "As from the earth we came so to it we must eventually return," and as the culti-

vator of the soil is most nearly allied by his calling with our mother earth, we have naturally become accustomed to exalt his business as beyond and above all others in usefulness to mankind. We are apt to forget that the man who makes a hoe does as much for agriculture as the man who wields it. So with all other farm implements and machinery. It is true we must eat to live; it is also true that we must spin that our bodies may be clothed, and we must construct houses for shelter or we would perish with cold. Hence has arisen, as occasion demands, the various trades and occupations, each and all producing something the human family demands as necessary for the comfort and happiness of its members. The king, the priest and the soldier are supported by contributions from all classes of people who own property that can be taxed. If the farmers alone were the people who paid the taxes, the legend that, "he pays for all" would be true. That it is not so we respectfully refer the most skeptical to the tax assessment as made up last fall by our board of supervisors. The truth is, one department of human industry cannot be exalted above another except in degree only, for all in due proportion, are useful.

The farmer, therefore, is entitled to credit for what he does; that is, if it is well done, as any other laborer in the vineyard of human industry; but no more.

Here my garrulous old friend made a long pause and appeared for the time in deep meditation. He waked up after a time and was getting ready to depart to his own home, but paused at the sitting room door merely to say: "But all men, who own farms, are not by any means farmers. Quite a number of my friends own farms, but who live in the city."

These are what my old friend, Eli Stillson, used to call agriculturists: A farmer, he once said, lived on his farm and proved the saying of Franklin, that:

> "He who by the plow would thrive,
> Himself must either hold or drive."

But the agriculturist was a man who lived and did business in the city to earn money to spend on his farm. Good night.

DISCUSSION.

Mr. Gillingham — Professor Henry, we want to know how the growth of those calves was made.

Question — Give us the best ration for milk after the milk has begun to go to the cheese factory instead of to the calf?

Prof. Henry — It is hard work getting blood out of a turnip. I don't think a calf can be profitably reared in hard times without some milk to start with. People may do it. You can do lots of things in an experimental way, because you have said you can do it. The main thing is attention. The usual care of the calf is to leave it to the care of the most shiftless person on the farm, that is, to the boy or the hired man. The younger the calf, the more care he needs, and he must get it if he succeeds in growth. If the calf has been taken from the mother, say when it is two or three days old, we have found that for a time we better give more or less full milk from the mother, teaching the calf to drink the naturally warm milk. Then after the calf is one or more weeks old we put in skim-milk. I took full-blooded Jerseys when they were two weeks old. I had them drink nothing but skim-milk. Their mother's milk was so rich I saw the calf was going to suffer, so I changed to skim-milk. The sixteen calves that now stand in our barn (and you will receive a report of them before very long) weighed on the 22d of last June, 1,920 pounds. Now they weigh 7,000 pounds. They have been fed 16 lbs. of sweet skimmed milk per day. They have been fed that for about fourteen weeks. The average of the fourteen weeks will make less than fourteen pounds a day. Each calf is fed three times. The milk is heated each time about a hundred degrees. The thermometer is always put into the milk until the man becomes so expert he can tell without it. When I take a new man I make him use the thermometer until he becomes expert. Have your milk a hundred degrees warm divided into three feeds. Give each calf his own portion and have him tied up by himself. Do not let the calves run, because the strongest will get two feeds. We have a strap around their necks

and a post, and ring that runs up and down the post. Keep each calf by itself where it cannot suck the other calf.

Begin skimming the milk as soon as you possibly can. If butter is very valuable you hurry the calf off on to sweet skim milk. When the calf is two weeks old have a box of oats near by. You set the pail of milk in front of the calf. As soon as the calf gets through he is anxious for something to suck. Pick up a handful of oats and shove them into his mouth. He tries to spit them out. He shakes his head. It will not be many days before he will begin to crack these oats. In two or three weeks the average calf will be chewing the oats. I feed whole oats. If we have a calf that will not eat whole oats we grind them. The calf will take care of the oats better than the cow or steer. Put a wisp of hay in front of him. Coax him to eat all you can. You can't hurt a calf. You can hurt the calf by giving him sour milk. Keep the milk ration down. There have none of those calves been off this feed. I keep them right up to the surfeiting point. We are making more than eight dollars a ton on hay and a margin for labor. As we weigh every calf we get correct results. There is no use of letting the calf run with the cow if you want the butter product. You can make two hundred pounds of butter from the cow and raise the calf.

Mr. Gillingham — What blood were those?

Prof. Henry — I don't know.

Mr. Gillett — How long would you feed warm milk?

Prof. Henry — Up to the last. The milk is set cold. You get a calf off feed first by cold milk and upset his stomach, next by feeding too seldom. It gulps the milk down, it goes on an empty stomach, third by feeding too much skim milk.

Mr. Gillett — Have you ever tried feeding sour milk?

Prof. Henry — No, sir. I want to learn to feed a calf on food.

Mr. Huntley — Do you feed oats unground?

Prof. Henry — We are feeding them first one thing and then another. Most of our oats now are ground. We watch the manure. If we find any kind is not satisfactory as shown by the manure, then we change it.

Mr. Huntley — You made the statement that the milk was too rich to feed the calf.

Prof. Henry — The Jersey milk was.

Mr. Huntley — Mr. Sturtdevant says it is not too rich in butter product or fatty matter.

Prof. Henry — This cow's milk takes 13 or 14 pounds of milk to a pound of butter. Those two Jersey calves gained two pounds a day during last winter upon skim milk and such grain as we could get down.

Mr. Thompson — Will it do to feed roots; turnips?

Prof. Henry — After they are several weeks old, yes sir.

Mr. Gillingham — What effect will it have on steers that are fattening to feed them on such as ruta bagas and mangel-wurzels.

Prof. Henry — The only trouble is a man must consult his pocket book. It costs a good deal of money to raise roots. Steers are very cheap. We are experimenting in growing corn and grain. We have reduced it to the minimum. Root growing is pretty expensive; there is the cheapness about it.

Mr. Gillingham — Do you keep your calves confined through the day all the time?

Prof. Henry — Yes, sir. Of those sixteen we are saving their manure to see what it is worth. We let them out this weather. Each calf has its place. We put it back. Our calves have never sucked each other's ears. We have two calves that have never been loose except to be led to the scales and weighed.

Mr. Gillingham — When you feed them milk do they run to pasture?

Prof. Henry -- No, sir. That is one of the facilities to take a poor little thin-skinned calf and tie him on the hot side of a fence and let him be blistered over with flies and then think a kind Providence is going to bless your labors and help you pay your taxes.

Mr. Randall — A substitute for roots is ensilage.

Prof. Henry — Let Mr. Randall talk on that subject.

Mr. Randall — I should have to talk about the farms in England, where they use a ration of mangel-wurzels with clover hay. I want to discuss corn ensilage with mangels.

The digestive organs of the animal all through the winter is kept up. We are bothered to keep the mangels from freezing. With a temperature as low as 70 degrees you can't bring your mangels from the cellar and cut them with any better effect. I have been disappointed this winter in feeding horses. I commenced feeding a small ration to my horse because I had an excess of ensilage. After I began to feed ensilage they would whinney and paw and call for that until I fed them. They will leave the cut feed invariably and take the ensilage. My horses are peculiar. They seem to alternate. I give them half a cow ration, one bushel basket between a pair of horses. The ensilage is pure corn. Last year it was half clover and half corn put in in alternate loads. I am proud of the silo. I think it will take the place of root culture.

Prof. Henry — There is one point I wish to straighten, that is the care of calves. I should keep every calf tied up, I should not allow a young calf out to grass at all. If you want a good veal calf keep him tied up in a dark room. If you want to make him comfortable give him more light but keep him confined. A calf cannot do anything in a pasture. The flies will take more off him than the grass will put on him. Skim milk will do better than the little grass he will get.

Mr. Thompson — Do you give your calves cold water.

Prof. Henry — Of course with that amount of milk they do not want any cold water. They do not care for it. I believe it will pay to warm the water. A ton of hay will give us more heat in the cow than it will in the stove. Where you give cold water at thirty-two it is cheaper to warm the water with wood than with the cow. That is the reason people have such success with bran mash by giving warm water instead of cold. They get a better result.

Mr. Thompson — You keep the calves confined during the whole fall?

Prof. Henry — No. I should let them out as soon as the question of the flies bothering them was got over. I should turn them out nights earlier. When the flies did not bother them I should let them out. I would use my judgment.

Judgment tells a man cold milk is not the thing for the stomach. With a calf tied in a fence corner with its legs all covered with flies common sense shows that it does not pay. You cannot cheat nature or the Almighty. When the flies bother, put them in. Use calf sense in raising them.

Mr. Gillett — Of course your opinion is to keep them in when the flies bother them and let them out when the flies are not troubling them.

Prof. Henry—The statement was made in Baraboo last week, by a Short Horn grower, that Wisconsin cattle stood lower in the Chicago market than Texas steers. If that is true, I believe it is time we begun to study how to take care of cattle.

A paper was then read by C. M. Bright of Oshkosh, entitled:

TAXATION.

By C. M. BRIGHT, Oshkosh.

There is an ancient and familiar story about an honest farmer who had been for years in the habit of sending his boy on horseback to mill, with a bushel of wheat in one end of a bag and sixty pounds of rock in the other to balance it. The horse had thus to carry sixty pounds of wheat, sixty pounds of rock, and the boy. One day an ingenious neighbor showed the farmer how he might divide the grist and leave the rock out. This story is something of a joke on the farmer, but considered as an illustration, such as suits the purpose of its present use, it is not much of a joke after all.

The human race progresses, but by the slowest and costliest methods. History has been defined as the record of human progress. It has been made by the efforts the race has been engaged in, through oppression and bloodshed and suffering, to better its condition by enlarging its liberties, and relieving itself of unjust and unnecessary burdens. Some burdens must be borne. It was necessary for the

horse to carry sixty pounds of wheat and the boy to the mill and back again; but the added burden of the rock was an unnecessary and grevious tax upon the animal's strength.

MY THEME IS TAXATION.

This is a subject that everybody is familiar with in one way or another. The annual visit of the tax assessor, at which time the wealthy man is willing to acknowledge an equality with his poorer neighbor, and insist upon it even to swearing away seven-eighths of his own possessions; the annual visit to the tax gatherer — a visit so hard for the poor to make — these are incidents as common as summer and winter. But there are other taxes beside which these compare as a potato hill to Mt. Shasta. Most of the burden imposed upon the people in the form of direct tax is an undoubted necessity. It is the multitudinous form of indirect tax — the burdens that one portion of the people have to bear for the benefit of the rest, that makes the comparative number of poor ever increase, and the distance that separates them from the wealthy ever grow larger. Pauper and millionaire, hovel and palace — this is the division that has always been made, and always will be so long as the vast majority who receive the smaller part in the great apportionment are willing to take it.

Taxation is defined variously as a sum imposed by government, a rate, a duty, a tribute, a demand, a burden. There are direct taxes, levied by the assessors' board; there are customs or duties on merchandise imported. A tribute, in its accepted sense, is a payment to a foreign state made in acknowledgement of subjection to it. The people of the United States, whose watchword is Freedom, annually pay hundreds of millions in tribute, not to a foreign state — there would be some excuse for them if they did that, and could not help themselves — but to the favored and law protected interests at home, as an acknowledgement of subjection, complete and abject as ever people acknowledged to a foreign tyrant. Honest toil is wronged out of these millions, that it is by every law of equity, by every reason of right, entitled to retain and enjoy. The taking of this is taxation;

the laying on of burdens. Every such burden is a grievous load, and every enactment that legalizes it is an outrage upon the rights of labor. Every dollar that is taken from one man for the enrichment of another, is a theft. The result of every hour's labor that is not left with him who earned it, for his enjoyment, to do with as he pleases, is a theft. This is so self-evident a truth that none will be found to deny it. And still, it is doubtful if a majority of the American people to-day would not uphold, by their votes, a protective tariff; while four-fifths of all the rest affect to believe in the wisdom of that bag with wheat in one end and rock in the other, called a tariff for revenue only.

There is no subject more written or talked about than the tariff, and now about which less seems really to be known. Protectionist voters and "tariff for revenue only" voters, assume to believe in these political doctrines. They do not know why they believe them, but they believe them, and vote as they believe. "Protection to home industry," "Protection to American labor," "Protection to our infant industeies," and like cant phrases do regular, and to all appearances, satisfactory duty between people who utter them without any apparent thought of their significance, and people who listen to them without ever troubling their minds as to what it all means. The "infant industry" gag has become about obsolete. An infant as old and broad shouldered, and with as big a bank account as most of our industries, is almost enough of a joke to be seen even by a protectionist voter.

The tariff is a political question, and politics is barred from discussion in conventions of this character. But the tariff rightfully belongs to my subject of taxation. So, with a promise that there is nothing of a partisan political nature in this paper, or anything, indeed, that a political party of to-day advocates, I press my right.

What is the tariff? I have heard men who are supposed to possess ordinary intelligence on other subjects, say it is a protection to the country levying it. This implies protection against some other country, and that is a tax paid by the country that exports to the country that imports. A

tariff was originally invented for the purpose of getting money by a government out of its subjects, and was levied on all merchandise imported and exported. It did not originate with us. It is no "American idea." It was invented to give people a chance to pay "indirect taxes," one dollar of which goes to the state, and one dollar to run the machine for collecting it, for making good the leakages, for the extra cost of living, and doing all kinds of business, carrying on manufacturing enterprises, of smuggling and hunting smugglers, and into losses on importations by the bribery of customs officials. At its best, this is a fair picture of a tariff for revenue only — the central economic idea of one of the leading political parties of the day. A tariff for protection is the principal dogma of the other.

The argument in favor of protection is the most curious conglomerate of inconsistencies, inaccuracies, contradictions and misstatements that can be conceived. It says that under the protective system the cost of living is not increased, but that the price of things is higher. It says that protection is a good thing because it enables the employer to pay better wages — as if an employer even does pay better wages than he has to! It argues that American industries cannot compete with those of other countries even-handed for American trade, and that it can compete with them, with the cost of transportation added, for the trade of the world.

The bald fact is, the tariff does enable the protected interests of a country to exact higher prices at home; and an additional fact is that wages are neither better than they are compelled to be, nor contingent in any degree, or in any way, upon the existence of tariff laws. The American laborer to-day, except in a few classes, is working for starvation wages, and the number of unemployed is a sufficient answer to the great claims of the benefits the wage class receives from a protective tariff system.

The fact that wages in this country are higher than in Europe is a protectionist's first and favorite proof that the tariff protects the laborer. We have the tariff, and we have higher wages; therefore the tariff brings better wages. Thousands of miles of railroad have been built; the popula-

tion and wealth of the country have increased vastly during the twenty odd years of high protective tariff. The tariff is, therefore, the cause of the expansion and the increase. You have all heard this, and read it. But it is mere assertion, for which there is no proof. The prosperity of the country, whatever degree of it has been enjoyed, might, with quite as much earnestness and noise, and with quite as much truth and good reason, be attributed to any one of a dozen different causes as to the tariff. Suppose I say the material growth of the country, and the amount of wages paid is owing to our free school system; or to the fact that we have universal suffrage; or that we have no established church; or suppose I attribute it to our pension laws, or the national debt. You will want my reasons for so doing. Well, you can put two and two together. We have free schools, universal suffrage, a national debt, no established church and we pay out a lot of money in pensions; and we have grown at a tremendous rate, and are still growing. It is not for me to prove that this effect is attributable to these causes. You may undertake to prove that it is not, if you like.

It serves the purpose of the protectionist politician to credit the tariff with the wages paid in this country, and he always compares the wages here with those of England, which comes pretty near being a free trade country. But England pays better wages than protected Germany, or France, or Italy. China is protected almost to the degree of prohibition, and pays her wage class but the value of a few cents a day. The Chinese protectionist would have to look up some other arguments than the old campaigners of this country. And here is a pipeful that may be smoked at leisure: The cheap assertion that American labor cannot compete with the pauper labor of Europe is met by the fact that any given amount of money invested in American labor will produce more dollars' worth of manufactured products than in any other country in the world. American labor *can* compete with the pauper labor of any country and beat it. Pauper labor is the most expensive labor in the

world. It is the well paid, well fed, intelligent labor that pays the employer the world over.

But why is there pauper labor in Europe? Why is it in the "protected" as well as in the free trade countries? When we get down to the truth of the wage question and find upon what it depends, we shall be able to understand why the pauper class of Europe is so large, and perhaps to see how it is not going to require many years to create a pauper class in our own country. For we have been making such strides in that direction during all these splendid years of our much boasted prosperity as no other country ever made in the same length of time.

Protection protects. There is no question about that. But its beneficent influence is felt by a small portion of the people. To the rest it is a burden. The consumer not only has to pay for the benefit the protected interest derives from its protection, but he has to pay profits on the increased investments necessary to be made by the various people through whose hands the product passes in getting to him. An article that is protected twenty per cent. and passes through three hands in going from the producer to the consumer, each of which receives the moderate profit of twenty per cent., not on the original cost, but on what it cost him, costs the consumer about two dollars for every dollar in "protection" the producer receives. It figures up like compound interest. Protection protects, but it costs somebody awfully.

Protected interests that have within twenty years made millionnaires of men who were worth but a few hundreds that length of time ago, have been protected too much; for other interests, some of which are protected, and some not, have had to pay for it. There are manufacturers in Neenah who will tell you to-day that they could not have built up their business without a protective tariff; and they have accumulated more property, ten times over, in twenty years than all their employes have been able, with a closer and more pinching economy than the employers ever dreamed of practicing, to save. These fortunes, if they came as the men who possess them claim, by and through a protective tariff, came because consumers have had to pay more than they

would, but for the legalized robbery; and the fortunes ought to belong to the other men.

Protection protects. There are millions in it for those who are protected. Else expensive lobbyists would not be maintained at Washington by the protected interests whenever there is an agitation of the question and a threatened reduction in the amount of tribute the people of the United States pay, as an acknowledgment of their subjection to the tariff barons at home. There can be no protection unless this tribute is paid. One class pays of what it earns to enrich another class, else there could be no protection. And it does it according to law. Think of a self-governing people having such laws!

A tariff, if it is anything, is a tax. A protective tariff is, therefore, a protective tax. Can a more absurd idea be conceived than a people taxing itself rich? But this is just what the "protective" theory amounts to. A tax or tribute paid by the many to the few may make the few rich, but it makes the many poor. The tariff tax is paid, let it be remembered, by our own people. Our tariff tax is no burden upon the people of other countries. This fact seems always to be lost sight of. And we even hear talk of a "retaliatory tariff." That is to say, if one country imposes a burdensome tariff tax upon its people, another country can "retaliate" by imposing one still more burdensome upon its people. As if a farmer, seeing a neighbor chopping down his fruit trees, should go home and "retaliate" by chopping down his own, and then to get a little more than even should go into the house and smash the furniture.

The burden of the tariff is borne by the people of the country that imports, not by the people of the country from which the products are purchased, and the "protection to home industry" comes in the higher price it can get by reason of the tariff. The higher price is paid by the consumer. If this is not so, then there is no merit in a protective tariff. If the great number do not pay tribute to, and enrich the few, then is protection a delusion as well as a snare.

The owners of the Russian petroleum fields have become vastly wealthy out of their business. One of our late mag-

azines contains an article descriptive of this industry, and very significantly says of it that the profits are very large in Russia, as the owners enjoy a protective tariff of six cents a gallon on kerosene. This tax does not come out of the American producer. It is simply a tribute of six cents a gallon on all the korosene burned in Russia, levied for the benefit of a corporation in favor with the powers that be. Even an American protectionist will be able to see the injustice of that tariff.

American tobacco farmers are just now clammoring for increased protection against Summatra tobacco. If they succeed in their demands, the only thing they will be likely to accomplish is to make Summatra tobacco cost our cigar manufacturers more, and it may increase the price of domestic tobacco, which will also come out of the manufacturers, or out of the consumer; and if the consumer stands it he will do it by smoking poorer cigars. A tariff that encourages one interest must perforce discourage some other interest.

The lumber industry is one of the protected "infants" of the country. The millions of acres of pine, once the property of all the people, and for which the government should have received the stumpage value, was gobbled up and next to nothing paid for it. A protective tariff of two dollars a thousand was secured to keep Canadian lumber out of the states. Net result: a tribute paid by whoever uses pine to those who produced it, a horde of wealthy men made by it, and numerous successful aspirants from their ranks to seats in congress, whither they go to vote protective tariffs on all interests represented by other congressmen who will agree not to reduce the tariff on pine lumber. The favor of protection is not bestowed upon worthy objects, if there are any worthy of it, but upon such as command trading votes in congress. Had there been as many wool growers as pine and iron barons in congress, the tariff on wool would have been increased instead of diminished.

The tariff question will be re-opened in congress this winter. There is but one possible good that can come of it. The more the question is talked about the more the people

are bound to think, and *thinking* never makes anything but a free-trader, if the man who does it is honest. Tariff reform, so-called, is not reform. It is only agitation. It matters not what the proposed plan, the result is the same, the business of the country is unsettled by it, and the reduction, if accomplished, brings us but from a protective condition to that other — no better in any way except that it is a degree nearer, free-trade — a tariff for revenue only — a bag with wheat in one end and stone in the other. There is but one way to really reform the tariff: abolish it. Moderate reduction year after year has the effect on business that a cautious surgeon would have on his patient whose leg must come off above the knee, if he should begin at the toes and cut off an inch at a time so as not to give the poor fellow too great a physical shock. It is doubtful if the total abolition of all tariff laws would unsettle the business of the country much more than these periodical agitations do.

If it is necessary to give aid to industries that are not self-supporting, it would be cheaper to give it in direct cash bounties. There would be no waste in this way of doing. It would cost the people what the uncouraged industries would receive, and no more. There would be no stone in one end of the bag. And in this way the people would know just what they would be doing, and how long they would want to do it. It does not take a farmer of any intelligence many years to get out of a crop or a breed of stock on which he continually runs behind.

I would divide protectionists into three classes: First, those who believe in protection because they are selfishly interested; second, those who believe in it because they believe anything that pays politically; and, third, those who believe in it because they are told it is the thing to believe. I can conceive of no other class or of any reason for one. Everybody is at liberty to classify his protectionist acquaintances to suit his fancy.

The internal revenue tax, once necessary, is another expensive machine that the country would be better off without, and it ought to be abolished. This suggestion always causes expressions of holy horror, and you are asked if you

would made liquor and tobacco cheaper — with a very big exclamation point after the question. Yes, I would. Why not? If people want them, and will buy them, I should like some reason to be given why they should not have them for the least possible cost.

Not only abolish the tariff tax and internal revenue tax, but abolish absolutely all tax on the results of men's toil. Let every dollar and every dollar's worth of property, whether it be hundreds or millions, that is created by a man's labor and enterprise, belong absolutely to him, with no part of it to go to enrich a favored class, or to the government.

Then where will the revenue for government support come from? Let us go a round-about way for an answer.

There are probably few people in the country who, should they be asked what the probable effect would be if the landlord and tenant system should become firmly established and general here, would not say they think it would be bad. Why would it be bad? They might answer by citing the condition of the tenant farmers of Great Britain, and of the European continental countries, where the landed aristocracy is supported in every luxury, and those who labor starve. They might possibly call to mind the condition of the Roman republic before its fall, and tell you that the great writers and thinkers of that time and this, agree that the ruin of the ancient republic was the fruit of a system of land monopoly. But it would be a difficult task to convince any great number of them that there is danger of trouble in our own land from such sources.

When the land of a country is monopolized by a few, the many have got to do without it or pay tribute to the few for the use of it. This brings about the condition of landlord and tenant. In a land like ours, with a domain broad enough to give to every citizen and every comer all the land he could make use of, there ought to be no danger of such a system becoming established. There never needed to be, and had the laws governing land tenure been rightly made, there never would be. But the system is here. It has taken root in every state and territory, and its remarkable

growth is no less surprising than the growth of the country itself. This is the great question which we, as a people, have some day got to meet. It is a question, that, more than the tariff, more than wages, for it, and it alone, involves the question of wages, more than any other economic consideration, has to do with the future well-being of our increasing millions. It is the same question here that it is in Europe. It matters little whether a country has a protective tariff, or a revenue tariff, or free trade, if ninety per cent. of its people pay the other ten per cent. a tribute for the use of the land, that country will be distressed. Its laboring class will be unemployed, and wages will be low. It may try this remedy and try that, and effect no change for the better.

There is no disputing the fact that the tendency in this country is towards large and constantly increasing estates in land. It has always been so, but never to such a degree as during the past two decades, during which time the public domain has been so rapidly swallowed up. With the opportunity to get free farms gone, the price of land is bound to rise. Wealthy men are ready to invest in property that has a rising value. The result is natural. They invest in land. The price goes up. The public domain is to-day practically exhausted. It has been used up at the rate of twenty millions of acres a year for the past twenty years. To-day it does not exceed five millions of acres of good farming lands open to the homesteader; and the virgin acres of the western states and territories, held by railroad corporations and speculative syndicates are rapidly increasing in price. It requires more capital than most home-seekers in the west have to buy, improve and get a first crop from a quarter section of this land. If, while land was free, the tenant farming system has become established upon our soil, what will it be now that the chance for free farms is forever gone?

The census in 1880 was the first that ever dealt with the subject of agricultural tenures. It showed that, while there were less than three millions farmers who own the farms they cultivate, there were over one million tenant farmers in the country. This number is supposed to have increased to

one and a quarter millions now, and it will be one and a half millions before the time for the next census. Tenant farmers are not a product of the older states alone. They are found in greater numbers in the comparatively new states. There are, in round numbers, 85,000 in Illinois; 50,000 in Ohio; 50,000 in Indiana; 15,000 in Michigan; 13,000 in our own state; 55,000 in Iowa; 60,000 in Missouri; 23,000 in Kansas.

In the city of Springfield, Illinois, there are two hundred families living in all the enjoyment that wealth gives on the rental of farming lands, worked by tenant farmers. One county in Illinois pays over $100,000 a year to an Irish landlord who lives in England and has his affairs here managed by an agent. Ex-Senator David Davis, of the same state, receives an annual rental of $150,000 for the use of farming lands. Thousands of tenant farmers in the western states pay their rent to the agents of English landlords. A late English publication says that Englishmen own more land in the United States from which they receive a rental than they do in England.

The United States has to-day a larger number of tenant farmers than any other country in the world. Ireland, robbed and ground into the dirt by its landlords, until even the hearts of its English masters have been moved in pity for it, has less than one-half as many; and adding those of England, Scotland and Wales, the total falls a quarter of a million short of what we have here, where we have been priding ourselves that the system could never gain a foothold. There are millions of acres of unoccupied land to be sure, but it is held by railroads, to which it has recklessly and lavishly been given in grants; by speculators, and by the Indians in their reservations. The cattle barons of the west and southwest, many of them aliens, are occupying vast areas which they got for almost nothing. These lands are all going to become immensely valuable within a few years. The growing population, with its increasing demand for land, will operate as an increasing demand always operates. Prices will go up. Poor men cannot purchase, and must lease. The tenant portion of the population will increase in a rapid ratio, and the landed aristocracy will increase in

wealth and power, and the distance that separates the two classes will grow as rapidly.

The increasing millions of the people, cut off from their equal right to the use of the land, forced to pay to the favored landholders a tribute for the right to live, must grow poorer. The condition here will be as it is in Europe. There will be competition among laborers for a chance to work. Wages will go down. The pauper class will increase. This is the condition the world over, where land is monopolized. Where it is not monopolized, wages are high and there is no pauper class. The reason, and I believe the only reason why wages are higher in the United States than in Europe, is because there is not yet such a close monopoly of the land as in Europe. But wages here are on a constantly decreasing scale. This is because rents increase, and by rents understand not amounts paid for the use of land by the tenant to the landlord, but the value of its use, occupied by tenant or the owner himself. If land increases in value, it is because the rent increases. And if rent increases, the return to labor and capital must decrease. The productive power of labor has been doubled and quadrupled within fifty years in all civilized countries. But wages have not advanced, because rents have increased and swallowed up the results of the increased production. As civilization advances wealth increases, but wages are driven lower *because* rents advance. Land monopoly in Europe has produced a condition of things that forces the tremendous tide of emigration to this country, where land monopoly if it is not checked, and an overstocked labor market are preparing a condition of things for the laboring class, such as the world has never seen. We are a young people, but we have given the world some startling examples in making millionnaires and paupers already. Give the subject time enough to make a picture of what we will be able to show the world in another hundred years, with the population there will be then! It is a poorly managed government that has no thought of the future.

The condition of things that, under the present order, is coming to this country, as it has come to Europe, will be

bad. But it may be prevented. To doubt that there is a possibility of less poverty and distress is to doubt that a Divine will had anything to do in planning the world, and to believe that we and our institutions are creatures of chance. Call it a Utopian dream if you will, but it *is* possible to have a condition in which there would be less misery and poverty and sorrow in the world, and a nearer equality in the enjoyment of its blessings. This condition has not been brought about by a protective tariff, nor by any system of currency yet invented, nor by laws fixing wages, nor by laws regulating the number of hours for a day's labor, nor by co-operation, nor by any restraint upon the increase of population, nor by combinations of laboring men, nor from a close sub-division and more general distribution of land. All of these have been tried, and all have failed.

There is one natural opportunity for man to secure a living. It is the land. To how many people does the thought come why this opportunity should all be owned by one portion of the human family to the exclusion of the other portion? No man ever made an acre of land. It represents no labor or enterprise. It is as necessary to all as the air, the water, or the sunshine. It is nature's gift to man; not to a few men who happen to get possession of it, and after using it as long as they want, say who shall use it after them, but to all men. This patch of the great foot-stool, called the United States, ought to be the common property of all the people who claim protection under its laws, or may be called upon in time of danger to defend it. Still, it is all owned by a comparatively small number of its citizens, and the many have got to do without it or pay for the use of it. What justice is there in this? Why should one man take from another a portion of what he earns with his labor in return for allowing him the use of natural opportunities?

I would abolish private ownership in land. Make the land what it was intended to be, what justice demands that it should be, what its best use demands it should be, the common property of all. This can be done by simply placing a ground rent upon every foot of land that is used by any-

body; the rent to go to the state in lieu of all other forms of tax. Here is a source of revenue. The land, belonging to all the people, could be used by an individual only by the payment of this ground rent. If a man should want the exclusive right to land enough for a farm he would lease it for just what it was worth an acre, a year. If he wants a business lot in a city, he would lease it by paying for it, and by paying, his title to occupy it would be as permanent as it is now. He would own his improvements, and own everything he could earn. But he would not want to pay rent on much land he could not use. He would hold no land for a rise in value, for land would have no value except as it would be used. He would not have to pay so much rent to the government as to a landlord because the land being all for rent would not bring so high a price. No man could make a living off land he did not use, and there would be no taking one-half the crop by the man who had done none of the work. The landlord of to-day would have no reason to complain, for he has had the right to collect rents on the common property of the people much longer than it should have been given him. English and other foreign capitalists who are living off the rents of American land, would find of a sudden that there is no further use for their kind in this country.

The value that is in any piece of land is given it by the improvements that surround it. The value depends upon the the accident of its location. Land in Chicago is worth one, two or three thousand dollars a front foot, not because of anthing its owner has done to make it so, but because Chicago has near three-quarters of a million people. If all these people, but the man who owns this valuable lot, were to leave Chicago, this lot would not be worth a dollar. It is only just, then, that the value made by the people of Chicago should be theirs, and that the man who uses the land should pay them what its use is worth.

There is not space in a paper of even the length to which I am drawing this out, to discuss this question. If it can be suggestive it will accomplish all I can hope for. And with this wish in view, let us consider a conundrum or two.

Why should a city business lot, because of its location, be worth to its owner $20,000, and another lot of the same size, but lying a few blocks away, be worth to its owner but $500? one man having done as much as the other to give value to the property of the city?

Why should a vacant city lot, around which thousands of people have settled and built up, grow to have a great value, and that value belong to the man who has done nothing but hold on to the title, instead of to all the people who have been the cause of its increase in value?

Why should one man and his descendants forever be compelled to pay another man and his descendants forever for the right to use a portion of the earth?

This ground rent which has been suggested, which would take the place of every other species of tax, would be easy of collection. The present machinery for collecting direct tax could be simplified, and made to serve. There would be no frauds, no lying about property, no smuggling, no bribing custom house officials, no moonlight distilleries, no government spies — just a simple, business-like collection of the people's dues by the people's agents. How it would simplify the question of land tenures. How it would relieve people from trouble growing out of titles. What an effect it would have upon the courts, and the lawyers! Some say it would be revolutionary. Well, a dose of physic is revolutionary; but it is administered sometimes with a purpose. The body politic is in a condition just now when a revolutionary dose is needed. It is afflicted with a load it needs to be rid of, and the sooner it is relieved, the sooner it will be on the road to perfect health.

Having gone so far in relieving the people of the burdens they bear, go enough farther to make the government the owner of all railroad and telegraph lines, and the express business. These properties could be purchased at an appraised value, less what they have received in local aid and government grants of land. In such a transaction watered stocks would find their level. Now these monopolies run the government in their own interests. They have more representatives in the two houses of congress and in the

legislatures of the states than the people have. Then the government would run them in the interests of the people. Legislation at Washington and the state capitals would be free from the influence of their lobbyists, because they would be wanting nothing, and afraid of nothing. There would be no freight and passenger pools, no railroad wars, no striking employes, no discrimination in freights, no annual or trip passes and special cars for some, for which the rest have to pay. Rail and telegraph rates would be greatly lessened, because the expenses would be lessened. There would be no possible future Vanderbilts and Goulds, no stock gambling, no panics or broken banks — the result of such gambling, because there would be no stocks. And a town with one railroad would get as good rates as if it had a dozen.

There is objection to all this, but there would be objection to the government assuming control of the postal business if it had always been carried on by a corporation, or a number of them. But is it safe to say that, if the government had had control of these various means of communication for a term of years, it would be difficult to organize any considerable sentiment in favor of turning them over again to the hands in which they are held to-day, any more than one might be built up now to give Jay Gould control of the postal business. The fact is, when the people get a little power and into the habit of attending to their own affairs, they are no more likely to relinquish it than an individual is. The people are honest and safe. Because this is a people's government, it is safe for the government to have power. And because it is a people's government is a double reason why it should exercise all the power that can be given it; only make it in reality as it is in name, a government of and by the people, and there is no danger of power being abused. The railroads and other corporate monopolies are great political machines now, and use their power to control elections, and to corrupt legislatures, the courts and the executive itself.

The times are out of joint. Labor and capital — and by

capital understand that part of wealth that is used in conjunction with labor, in production — do not receive their just reward. Privileged classes grow richer out of the toil of other classes that grow poorer. Think for a moment of the Vanderbilts accumulating three hundred millions of dollars in two generations. The fact of that immense accumulation is not in itself so bad as the fact that opportunities have made it possible. There are too many opportunities for making millionnaires, and it is a bad thing for the country that there are, for, for every millionnaire there have got to be a thousand paupers. This is not a socialist cry for the overthrow of the wealthy, or for an equal distribution of property. It is rather a plea for a change in the condition of things that robs labor and makes millionaires and paupers; that almost in the shadow of the palace builds hovels where pinching want is the ever present guest. It is a plea for an equality in the opportunity to acquire wealth. But this equality can never be so long as there are interests and classes that enjoy special protection and advantages under the law. Such equality never yet was and never will be found in a country where the land is monopolized, because of the power the ownership of land gives to those who possess it over those who do not. This monopoly takes from labor and capital, labor's assistant in production, the fruits of labor, and, absorbing them, keeps labor down. There is no conflict between labor and capital, for each is dependent upon the other. But there is a conflict, between labor and capital upon the one hand, and land monopoly upon the other — a conflict which so far has been all a one-sided affair. Failure to recognize this truth is the great economic error of the times. It is the error that labor organizations have made, and are making. They work from the wrong point of view, and quarrel with their friend instead of uniting with that friend, and making common cause against the common enemy. It is the error of that class of statesmen who regard the tariff as the regulator of the question of wages and the general prosperity of the people. Equality in opportunity can never be so long as there are advantages which some enjoy at the expense of others.

Then wipe out the tariff laws. Wipe out the internal revenue laws. Wipe out all taxation on property accumulated by toil and enterprise. Place the tax upon the land, the common property of the people, to be paid by whoever uses the land. Do away with land speculation. Wipe out the landlords. Give back to the people the broad acres of land held by the railroads and other monopolies, given them in grants. Did you ever think how many millions of dollars given away our boasted prosperity for the past twenty-five years has cost the people? Take from foreign owners the land from which they are deriving splendid incomes from the fruit of American toil.

Oh, some say, but it cannot be done. Cannot be done! Yes, it can. There is the power to do it, once that power moves. I think it was Henry George, the soundest thinker and the ablest and most fearless writer on economic subjects this generation has produced, who said that the three grandest words in the language are We, the People! When the people of the United States think the time has finally come to do a thing, it is done.

These questions are to be involved in our politics at some time in the future. Their agitation has only begun. So long as want and wealth increase; so long as men willing to work are without bread; so long as there are wrongs to right, there will be unrest. And these wrongs, here, as they have elsewhere, will continue to deepen. Whether a new political party shall rise up to redress them, time alone will tell. But it is coming; and some day, in the fulness of time, some party will become educated up to the grand idea that, in a free country, every man is entitled to his equal chance with every other man; that no class shall bear burdens to enrich another class; that all have an equal right to natural opportunities. Then, with an actuating spirit that can remember the grandeur of the past, with its victory for free speech, a free press and free men, it will add to the glorious list free trade and free land, that party shall do the work that is to be done.

DISCUSSION.

Mr. Roe — I would say as a phenomenon or specimen of political economy that the paper just read is a very interesting paper to us. The gentleman says that those who believe in protection may be divided into three classes — those who are interested in being protected, who see money in it; those who have political capital in advocating protection, and those who shout protection because they are taught to. That reminds me of the old saying, there is orthodoxy, my doxy, heterodoxy, your doxy. That is a very easy way to get over this mattor. There are a few facts I would like explained in this gentleman's paper with regard to free trade and protection. Take the condition of England to-day. The political economists and statesmen of England are brought face to face with the social and political economy problem. They are compelled to meet it in some form. It is shown in the depreciation of its business interests and the trouble deepening and widening among the masses, as shown in the recent riots or threatened riots, for they hardly reached the actual point of bloodshed on the streets of London. There is growing up in every part of England, among the English thinkers, the idea of a protective tariff, to be increased year after year until finally they will be able to raise their voice over the entire kingdom, and the point they make, and they make a very able showing of figures, is that the present ruinous condition of every industry of England is the result of free trade. That is the situation of England to-day. Free trade England! That is the outcome. I am not prepared to charge the whole of this on free trade. I believe there are other agencies at work to the detriment of England. The bad harvests that they have had for a term of years undoubtedly has swept away vast amounts of capital. The collisions between labor and capital, owing to the combinations on one side and lock-outs on the other, have dislocated manufactures and trade, and other currents which we have not the time now to take the measure of. That is the condition of free trade England. Now we will go north of us. What is the condition of things in Canada?

Protective tariff Canada! Only a few years ago, not more than ten years ago, Canada was deeply in debt, with a depleted treasury, at the wits end of its people and a government to carry on, the government of the Dominion, from year to year getting further and further in arrears. There came over Canada money, a revolution.

What is the result of that revolution? They set up a paper currency entirely. Protected themselves even against the old country, even against manufacturing England, and British empire and the daughter of the old mother country took measures to protect hers against English industry, against the English empire and English goods. What is the condition of Canada? Everything goes on smoothly and harmonious, except in Manitoba, and that is local you may say. That is a separate matter standing by itself. In the various manufacturing centers of Canada within the last ten years, manufacturers have been increasing and the population has largely increased also. A manufacturing town is a growing town. A large farming community does not build up a state. Take for instance two cities side by side—Oshkosh and Fond du Lac—Oshkosh with its big pickerel pond, Lake Winnebago. Fond du Lac surrounded on all sides by a large flourishing rural community of well-to-do farmers, but few manufacturing interests. Her manufactures are rather diminishing than increasing. With the diminution of her manufactures, that city, with all the advantages of her locality, is diminishing in population. With our own city of Neenah you see the difference in growth. With a city or town of manufactures the increase of population and the rural element all around, it is finding a home market for its product right there at the doors. They are not compelled to ship their goods in Canada to Quebec or across the water to Liverpool or London, in Canada. They find a home market for them and they take their goods to the market and take their money home in their fists and spend their money in various comforts, dry goods and groceries. So much may be said of the progress in Canada. What is good for Canada I think is good for the Yankees.

I would just call your attention to a little matter that just came to me as a matter of family interest.

I had a relative, a large iron manufacturer of New Jersey. He was a millionnaire at one time, a large hearty whole souled man, an honorable righteous man. The change in the tariff reduced it below what he could possible manufacture for, although he made every possibly effort. He put forth giant energies to uphold his business. Little by little, surely but slowly he had to sink under the current of indebtedness, and he went under as every iron manufaturer in New Jersey at that time did, without a solitary exception. When the whole iron industry of New Jersey and the adjoining states was prostrated, what was done? Right on the market was placed English iron at double the figures it was before. They would now recoup. They would get even now for months and years, until they had ruined American manufactures. They put their iron on the wharfs of New York at lower figures than America could produce it. When the American manufacturer was out of the market then up went English iron. The consumer of this country had to pay the difference. These are historical facts. In regard to this distribution of land. Here are some city lots. They are exactly of the same width, they are exactly of the same depth, they are exactly of the same area. The one is a back lot, the other, a fine corner lot and fronting a corner. Now why should I take that lot on the corner? Why not be satisfied with the lot on the alley? Just so much of God's sunshine is upon the one as upon the other. One is as rich as the other. It is merely a matter of taste. You will say there is nothing intrinsic in the value of the lot. Well there are others that have their tastes, peculiarities and fancies and whims. The result is that there are two or three more want the same. Now what could be done? Both cannot have it. Only one can obtain it, and there must be some means devised whereby one or the other will be the possessor and holder of the lot. And the result is it would go into some sort of competition. In land there is a preference. Just put it up at auction. Now comes in the difference. I have not as deep a pocket as my friend, when this bidding comes up.

If it was a matter of theory or a matter of choice, I should not take a back seat. It is very unfair. The thing is an outrage you say, but I don't see any other way. And so it goes with all this matter of property. I can conceive how the same condition would attain when we came to this rearrangement of property. I for one am decidedly opposed to the increase of offices and office holders—one of the greatest vices of our country. One of the greatest problems connected with every incoming administration of our country, is the pressure for office.

We will suppose that all the land of this country from ocean to ocean, from the Lakes to the Gulf is to be put up at auction and rented, the government must appoint parties to take care of the rentals, to see that they are duly auctioned off at the outset, then that the rents are duly collected, that the parties who hold said lands are not getting into arrears, and we will have a horde of office-seekers that will double and treble the crowds that rush to Washington. I am opposed to that class. We are a nation burdened with taxes. It is a matter of our own choice. We are paying now nine thousand millions of dollars in rent. The figures are actually above that. I have given you the hundreds for it, not the exact figures for three years, only incidental expenses; what are they? Go to the superintendent of our insane asylum. The most expensive party who is boarded by the state is an insane person, and the superintendent will tell you that one-half of the boarders in that great city of mental suffering, are caused directly by drink. Go to another great establishment at Waupun, the state prison at Waupun, and they will tell you that two-thirds of the inmates are sent there directly through the use of intoxicating liquor. Then you take criminal affairs. The expense of one long suit we had in the city of Oshkosh, and we farmers had to put our hands in our pockets and pay it. Now we are ready to cheerfully pay out over nine hundred millions of dollars and all other incidental expenses in this matter.

We have this matter in our own hands. I am not a prohibitionist. The gentleman has not touched on the truth at

all. Why touch the little finger when there are whole loins that may be dissected.

Mr. Randall — The author of the paper has gone. I do not like to answer his questions in his absence. He asked the question, what is the cause of the pauper labor of England? He asked the question and then proceeded right along with his paper without giving a direct answer or, in fact, alluding to it so we could get any clew to his bearing. In one sense his paper was sound. The great cause of the depression in England and the cause of the pauper labor in England is the great extravagance of the nation. Now that the wealth of every nation is dependant upon labor is an established fact. If that labor is squandered by the landlord, if he own the land running from the channel to the sea, every individual on that estate is depressed just in proportion to the extravagant and wasteful expenditure of that landlord and his employes. The fact of supporting so many people out of employment is a great tax upon the American people. Say we have a community of one thousand inhabitants located in a single township. If there are in that township fifty men that are abundantly able to take care of themselves and send their children to school, and buy every luxury in life, and have abundant means to pay for them, and there are also fifty paupers in that town whose only support goes into the annual tax, in the matter of political economy those fifty idlers consume just as much of the product of labor as though they had not a copper in their pockets, and they are just as much a tax and eat up the vitality of the laboring class in that town just as much as the fifty paupers. It is the idleness of the capitalist and the idleness of the individual thrown out of employment. You throw out of employment one thousand individuals and throw out another thousand that is not producing one iota of labor, the tax of one is just the same as if they were all millionnaires or all paupers. The system he refers to as being so fine is being tried in Indian Territory. They are supporting a government without any expense to themselves. They own the land as a nation. Each individual owns simply that on which he lives. The ruling power is

with the chief. They have no tax, everything is simply done by revenues collected from the products of that nation. It was the same thing in the Oneida community, but the American spirit, American enterprise and the Yankee does not take any stock in any such thing. He wants his little own and knows it is all paid for. As long as he has the ballot and as long as he knows he can control the expense, in one sense he is satisfied with this kind of government. The system he refers to would create a great horde of government officers, revenue officers to impose upon the people as they do upon those who visit Niagara. A person very innocently buys something and starts home. The revenue officer taps him upon the shoulder. The hack driver is in the ring. If he gives a certain signal that the person has purchased something the officer knows it.

Mr. Russell—The political economist, the prohibitionist simply give us one side of the question as in fact all of the statesmen, that taxation brings no return; that it is all tax, all outgo and no incomes. Now I contend that this great institution known as the "asylum," is a great benefit to Winnebago county. It is a great market. Every farmer goes there to sell something. They come to these mills to buy flour. It is not an unmixed evil. For instance, take Winnebago county, its tax was about $27,000 paid to the state this year; $16,000 of that tax was school tax, one per cent. school tax. The city of Menasha paid on that tax $700. We got back $1,400. We have 1,400 children. The city of Neenah paid for that tax $1,425. They get back $1,600. The city of Oshkosh paid on that tax $5,250. They get back $7,000. All these taxes are not paid out for nothing. We get something for them. They are coming back constantly in one way and another. These people, like the English landlords who do not do anything, spend their money. What becomes of the money? It better be thrown about wastefully to them, than be hoarded up in the safe. These questions all have two sides to them. Here is a man, he is a spendthrift. He is worth more to the community than a miser. The idea is, there is another side to these questions. When we go to pay our taxes we should go

whining as if we were going to throw away fifty dollars. We are paying an honest debt. My taxes are high. I shall never pay them under protest. We have got the value of them. We have got good bridges, good sewers. This constant and eternal growling about taxes is nonsense. Rise up with the dignity of men and don't be eternally whining about what you are paying out to somebody else. We are getting the benefit of it ourselves.

Mr. Wilson — It becomes more and more the fact that labor needs supervision, and it is not profitable for men to employ laborers without careful supervision. It may be that there are only a few men in a society that are qualified for supervision. Those who do supervise are just as valuable; they are more valuable than the laborer. I believe the man who justly and righteously supervises and directs, is one of the most important and one of the most valuable persons that can be in a society. I do very much depreciate the spirit that declines to recognize the value of the overseer and the employer. If I only had a little more ability I might have been an employer. That was the lack with me. Had I had good ability I would have been an overseer or employer, been a capitalist and employer, but instead of that I accepted my humble situation and went on contentedly. I have another idea and that is the doctrine of averages. It is the impression of people that the doctrine of averages is inevitable. There is not a more sophistical idea, a more injurious idea. When I was here twenty years ago I purchased a cow of a farmer a little way out, and I had a friend, a local preacher in poor circumstances, a little way out, an old class-mate. When I had the cow I was proud of her yield. She gave a good quantity of milk. One day as I was going where my friend resided, I filled up a good size jug with milk and carried it along to him. Says he, what does this mean? I says I have bought a cow. Says he, that is a poor investment; cows average only four quarts of milk a day. Well, said I, I am going to beat the average. That is the idea about farming. You lay down on the average and you are losing, but let every young man beat the average. I cared for that cow well and she did finely. I moved away from here to

Waupaca county. Up there on the sandy land the pasture was poor and she began to dry up. I accepted that as an indication of Providence. I thought to myself I will give her a little meal. She immediately gave it back. I said no, I will not feed her. I sold her to my friend Mr. Gillingham. I was glad to have him take her away. The next cow, when the fall came dried up. She would not give any milk. I said I am going to beat the average. I am not going to have that cow dry up, and gave her ground feed. That cow just enlarged her heart toward me and her udder. I had milk to give away. Any line of business you are engaged in depends upon beating the average. It is a caprice. Take that caprice. That is what you are here for, to beat the average.

Mr. Roe — There is one difficulty about this great land question. It is looming and there are clouds on the horizon that are causing anxiety. There are other matters, there is the question of pauper labor, the growing and increasing expense of living. All these problems are coming before us to solve. I think we have one way out and that is this which is common to us, which is being common to the masses of England and the different nations, and that is the free talk which is taught in our common school system, that you may knowingly and intelligently, and in your manhood exercise the right of speech as American citizens. With these privileges we can hew our way out to daylight from the jungle of care.

Mr. Hazen — If we had to divide up now how long would it be before there would be just as many paupers as there are now. How many would there be in a better condition? How many of us would come here as many of us did, and buy us a farm and hew us out a home? What incentive would there be for doing anything? Who would put up homes? Who would put up a nice house to rent to the government? Would the government do it? I do not see reason in these things. Where is the capital to carry on the business of the country? Where are the men with ability to draw it out? What would become of manufactures, what would become of the railroads? Railroad corporations are extensive in this country. Where would you be without

them? When I came to Wisconsin I footed it from Milwaukee to Fond du Lac in two days. It was good bye to railroads at Buffalo.

Mr. Mott — I would like to say a few words. The paper that was read by Mr. Bright alluding to this land question, and discussing it in some measure, very inadequately presented it. It is a question too large and too profound to be discussed thoroughly and understandingly within the limits of the time that this meeting can afford to devote to it. The idea which he wished to get at was one that was elaborated by Henry George, and the suggestions which have been thrown out by Mr. Roe and others that we would lose our property are not just. The idea is that the government should have the fee simple of all the land in the country, and that whoever occupied any land should pay ground rent upon it, and that his title should be perpetual to him and his assignees forever so long as he chose to pay the rent and put the land to use. No man should be limited to the amount of land, but he should occupy just as much as he was willing to pay rent on. The result of that would be that he would occupy no more land than he could occupy with a profit to himself, so that when I or any other poor man wanted a portion of this land, we could get it. If he could afford to occupy it remuneratively he would allow me to take my little section of it for the support of myself and family. That is the idea upon which that great theory of land is based. I am not standing up to advocate or condemn it. The idea that this system would increase the number of tax gatherers is fallacious. It would take no more tax gatherers to collect the tax on each city lot in the city of Neenah than it does under the present system. The only question which arises is, could the land titles be affected without affecting the public at large. Mr. Roe alluded to the fact that there was great pauperism and distress in the old countries, and he seemed to convey the idea that that arose partly out of the free trade system. I apprehend that free trade had nothing to do with it. I apprehend that the landlord system of Great Britain and Ireland has more to do with it than free trade, and the prodigality and profligacy

of the classes themselves. No one thing alone does it, but the landlord system of Ireland and England has more to do with it than any one thing; not the free trade system.

Mr. Roe — There is just one difficulty arises in this matter of land. The gentleman states that they would rent no more than they found use for. The question is, what use is. What would be the objects? Here is the Duke of Athol who wants land for a game preserve and for a deer park. It is use. He has got the money to put into rent for said land. The Scotch crofter has not that money. He can't bid against the Duke of Athol, and the Duke of Athol gets the land for his park. It would be very difficult for the government to say you are to apply this land to such a purpose, you ought to have so much plow land, so much in pasture, and so on; but the government would not go behind the means of the party who applies to rent the land, to acquire his object. He wants the land for his own purposes and he is willing to pay the rent for the land, so many acres at so much per acre.

Mr. Mott — I think the gentleman still misconceives the idea — the theory of Henry George practically is that the Duke of Athol or Argyle has no right to hold thousands and thousands of acres of good tillable land that will bring forth wheat and other crops when his neighbors are starving for the necessities of life at his doors, when he could have an opportunity to earn these necessities. The idea is they have no right to monopolize all this land, any more than you have the right to monopolize all the land in the world and crowd the human race off into space. That is the theory and I have yet failed to find a man that could answer it.

Mr. Hazen — On the whole I do not think that taxes are unjustly levied. If one man has got property he has got to pay taxes on it to support those who have not got any means of support. I don't know that we own any land. I have got a deed from the government. A man don't own any land himself. Let him neglect to pay his taxes a couple of years and some one else will own the land.

Mr. Huntley — I guess the government owns it now.

Mr. Hazen — As long as the government stands and is a government, we hold our lands by virtue of that government, the government we are supporting and maintaining and fighting for.

Mr. Winslow — At the present time I am paying rent on a piece of land. I am debating in my mind whether I would not do better to go and buy a piece of land, running in debt for it and paying interest on the money, which amounts to about the same thing. I do not see the particular difference whether one duke pays the rent of a hundred thousand acres or whether he pays the rent of ten to raise crops on. If he has got the money and rents the land, it is his. We have got to pay our rent every year whether we own the land or rent it to somebody else. I notice the tax-payers say I have come to pay my rent. They have to pay rent the same as Mr. Hazen does. It is about as broad as it is long. We have a goodly number of farmers here. Most every farmer keeps some cows and stock of different kinds. I am a dairyman and a stock farmer. In my first experience in farming in Wisconsin we had no railroads to get the grain to market. It frequently cost more than enough to eat up the profit. My first idea was to look about and see what I could produce on the farm and pay the transportation, that I could get into the market and have a little something left for producing it. I stocked my farm with cows in 1850. From that time I have run a stock farm, kept what stock I could on the farm. Many of our farmers in an early day, I think made a mistake in raising wheat. Wheat was the principal crop until the farms became exhausted, and the farmers were driven to some other crop. As I am a dairyman I might perhaps talk a little about the dairy cow. Dairy products have been very low the last season. You have cheese factories among you. The price is so low it is almost impossible to pay expenses. What to do in such a case as that is the query with the dairymen. We have got to take what we can get. We cannot make the markets. We can make as good an article as we can. The better the article, the better the price, and the more readily the sale. If a man keeps a dairy, the first thing he

wants to look at is to get a good selection of cows. It will not pay to keep poor cows. In these times of low prices it will not do to keep an ordinary cow. It takes first-class cows. You must do it by selection. You always have some cows that are getting old or failing; turn them off for beef.

I have been more successful in raising stock from some of the best cows than in buying. If a man observes the laws of breeding he will get up a better dairy in that way in a few years, than in picking up cows through the country. My advice would be to breed for certain points. If you want dairy cows, breed for that. If you want a dairy for cheese and carrying the milk to the factory, select your dairy for that. If you have a market for milk, select them for that purpose. If you have a market for butter, select them for that purpose. I think there is a great advantage in breeding from pure blooded stock. In all events select your males from the best milking families. Breed in that direction and continue to breed so. In raising heifers from your best stock, if you make a wise selection you will choose four-fifths heifers, and the heifers will make first class cows. They will not all make first class cows. If you raise heifers from indifferent stock without any regard to the breeding from pure stock on the male side, the chances are you will not get one in four first class. The value of pure stock to breed from lies in that direction; like begets like. Breed from a pure male whatever your stock is, horses, cattle, sheep or swine. I claim no farmer can afford to breed from grade stock on the male side. If one man cannot afford to buy a good animal, club together and get the best. It will pay you fifty per cent. over and above what the majority of farmers in our country do breed from. As I commenced running a cheese dairy I got the Ayrshire stock. I have had some experience with the Holsteins the last four or five years. For a cheese dairy, I would prefer the Ayrshires. Whatever breed you select be careful in making the selection. If you want to make butter I think the Jerseys would be a good breed to cross with. You get a pure male animal from a milking family and the grade heifers and cows will

be as good for all intents and purposes on the farm for milk as the pure bloods. I think they are hardier and give as good a flow of milk. If you raise beef, breed in the line for beef.

The idea of a common purpose cow, good for all purposes, beef and milk, I think is going out of date, as much as the horse for a race horse, carriage horse and cart horse. You have got to breed in some line for some special purpose if you ever succeed. I am not here to advocate any particular breed, but with the experience I have had in my dairy I do like to say this much on breeds of dairy stock. We have had advocates of the different breeds in our country that are breeding for sale. If you buy an animal you better know what they are breeding. It is not a sufficient guaranty to any of you to take a male animal, whether a pure blood Jersey, whether a pure blood Ayrshire, whether a pure blood Holstein, to know the breed. Are the families good milkers. I have noticed pure blooded stock brought into the country for the purpose of speculation. Look out you do not get deceived in them. Know what you are buying for the purpose. They can tell just as good a tale about a poor animal as a good one. Get as good an animal as you can. Some of those who sell pure blooded stock get as much as they can for them and they will take all they can get of you. That has been my experience and observation at least. Know what you are buying. With the low prices as I stated before of our dairy products we have got to do something to make our dairy pay, and the first thing is to improve the quality of our cows. A poor cow will not pay for good feed. A good cow well cared for ever at the present prices of cheese, the lowest it has been for twenty-five years, if judiciously managed will pay expenses and a little something for the capital invested.

We had a little discussion on the horse question yesterday. I want to express an opinion on it. It is all proper enough to bring out the discussion. The farmers who raise colts for sale are most of them aware that the grade Norman or grade Clyde horses are about the best breed that we can raise for the general farmer. You can find a ready market for them. Half bloods make good horses. They find a

ready sale, and plenty of demand for them. It is the same in this as in other breeds. If you want to breed colts, breed from pure blooded stock. It will pay you to do it. Many farmers think they cannot afford to pay for a colt more than five or six dollars. If you breed from that stock and raise colts, in nine times out of ten those bred from pure blooded stock will be worth two of the others in my experience and observation. So in all classes of stock. There is no farmer in this community can afford to breed from anything but pure blooded stock on the male side. It will pay you fifty per cent.

Mr. Huntley — I have been a good deal interested since I have been here in hearing the discussions that have taken place. Of course we read the short reports in the journals of the institutes that have been held throughout the state by Mr. Morrison. It seems to me it will pay every farmer to keep track of these discussions. They will be reported I presume in full, the papers will be published in full. I know some of our journals have promised to do that. I have learned something in the fruit line that will change my practice in the coming year. This system of farming requires the closest study and most careful practice. Farming in the old fashion has gone by. It has got to be reduced to a science. Everything must be saved and made the most of. We must use all the machinery that will help us to do our work cheaper and easier without running off the bridge the other way, and investing money we have not earned we must use. There is a medium. Any farmer can buy too much machinery. It is like selling a cow to buy a patent milk pail. Still it will not pay to have it cost twice as much because you have not got the machinery to do it with. If there is one thing more than another that I was interested in, it was the discussion on feeding.

The amount of butter from one acre of land there at Madison was a pretty good showing even at present prices. It seems to me that these older men who have had more practice, got more money, ought to do as well as he with his instructions. It is the privilege and the duty of every

person to see if he cannot improve on that. There is work. I believe we are doing good work. Our calling is as independent and as remunerative as the majority. We can live perhaps in as good style. Our homes can be filled with periodicals and papers, and the farmer's sons and daughters and himself can be as intelligent as those of the professional men in the towns. I should feel badly if, when I met a lawyer, doctor or mechanic, and we struck any common subject that interested us all, politics or otherwise, I had to keep my mouth shut for fear of exposing my ignorance. Let every farmer be intelligent, let him see that his children are well educated, that they have plenty of reading, that they have all the necessities and many of the luxuries in all seasons. He can have a good garden, berries in season, everything that pertains to the farm. It pays to work close. It will pay to be generous to our children, to ourselves. I believe the farmer ought to be a bigger man, a broader man, a more intelligent man than the general run. He can be. The time has come when he ought to be.

A vote of thanks was passed to the citizens of Neenah for the use of the hall.

Mr. Hazen—I would like to make one announcement in regard to the Farmers' Institutes. We have one of the best men I know of to take charge of them. There will be two more held in the northern part of the state this winter. There will be one held at Brandon, Fond du Lac county, on the 23rd.

On motion, the convention adjourned *sine die*.

MISCELLANEOUS PAPERS.

HOW TO MATE FOWLS.

It is during the fall and early winter especially that fowls do not receive the attention they should have. It is quite an important season for them. The old hens are in the midst of the moulting season, and it is then they need especial attention and care. The young chicks are by this time nearly as large as the old ones, and the pullets should all be put up in a department by themselves, and thus be separated from both the old and the young roosters: it would be an excellent idea to have the old hens by themselves, or they could be put in the same department with the pullets, or anyway, so as to separate them from the young, ambitious roosters, and give them a season of rest for eight or ten weeks. It would be much better for them, and they would be in better breeding condition the following spring. But be sure when you separate them in this way that they have a good roosting place, as the nights grow cooler, and it is essential that they have a warm resting place.

Do not mate up the breeding pens too early; nothing is gained by it. It is better to wait until they are well formed, and if the breeder is observing and notes down which are the earliest and steadiest layers among his flock, and studies the characteristics and condition of the fowls he intends to use for breeding, then he will be able to mate them with good results.

The first of January is early enough to mate up the breeding pens for all practical purposes, but it should not be delayed much longer than this, especially when early chicks are desired. Of course a few early chicks are desirable for nearly all breeders to have, for they want a few, choice, early chicks to take to the fairs the following fall and winter; but nothing is gained by having any considerable num-

ber of chicks hatched out too early, unless you have a glass house to receive them, hens and all, for ordinarily they are a source of trouble, annoyance, and generally a large percentage of them are lost; but of course, if an incubator and an artificial mother are used it is a different thing; but even then it hardly pays to hatch out chicks intended for breeding before the first or middle of February. This is plenty early enough for all practical purposes, for when hatched at this time they will make fine, large pullets in the fall, and if judiciously taken care of will commence laying early, and will keep laying right along if they are properly managed.

The large breeds should be mated together sooner than the smaller varieties, for it takes an Asiatic chick much longer to mature than it does a Leghorn, and for this reason they should be set earlier, and the chicks hatched out earlier in the season so as to give them more time to grow and become matured.

When hens are used for hatching chicks they should not have more than nine or eleven eggs given them for the first setting, for if they have more the eggs are liable to be exposed and get chilled through, and thus destroy the chicks in them.

Incubators are quite valuable at this season of the year, if for no other reason than that they can be set going at any time, for in many cases it is a hard matter to get hens that will sit early enough; but with an incubator you can put in as many eggs as you want, and of course they will all hatch out together; and if a good brooder is used in raising the chicks, they will not give near as much trouble and vexation as they would if the hen had them. — H. S. Waldo in *Poultry Monthly.*

THE SHEEP BREEDERS' CONVENTION.

The fifth annual festival of the Central Wisconsin Sheep Breeders' and Wool Growers' Association was held at the fair grounds, in this city, May 1st and 2d. The weather was extremely disagreeable and the number of entries was there-

fore, somewhat less than they would have been with bright warm weather. Still there were about one hundred sheep on the grounds, and a glance at our tabulated table printed above, will show a most flattering comparison with the showing of last year. The entire standard of both animals and production is very materially raised, and breeders and producers are to be congratulated upon the result.

The wool industry is fast forging to the front and as a result the Central Wisconsin Sheep Breeders' and Wool Growers' Association in their meeting for 1885, have scored a record which is almost without parallel in the history of any state in the Union. The number of fleeces taken was fifty-seven, and the number of sheep represented by owners on the grounds was way up in the thousands.

The best sheep on the grounds, if indeed he is not the best which stands on hoofs in the world to-day, was the celebrated Merino Ram, bred by Mr. McConnell, sire Backus, which tipped the beam at two hundred and one-half pounds in the fleece, and produced a fleece weighing thirty-one pounds, the staple measuring four and one-fourth inches and grading one hundred. To this ram was awarded the first premium, although there were others which held him a close contest. The McConnell Bros. are among our heaviest sheep growers, and their pens are filled with the finest blooded and best class of wool growing animals which can be found in the world.

These gentlemen also took second premium on their ram bred by Sherwood, sired by Harlow, which turned off a fleece of 29½ pounds. Third premium was awarded to J. B. Morrison, whose 265 pounds of avoirdupois was well-nigh balanced by the ram which threw off a fleece of 29¼ pounds. Mr. Morrison has a herd of 190, mostly Merinos, which are all bred up to a high grade. He is one of our wealthy farmers, and is making a business of breeding full-blooded rams for the market. Probably the next best animal on the grounds was U. Wood's well known Farnsworth ram which took first premium at the Oshkosh fair last year against eighteen competitor, and walked away with the sweepstakes prize for two consecutive years at the Ripon fair. The ram is

native bred, full blood Delaine Merino. Mr. Wood has sold off a large number of his flock for breeding purposes but still has 120 left, which are said to be the handsomest flock to be found anywhere. Mr. Wood is one of Brandon's foremost citizens, and progressive and prosperous farmers.

C. F. Thomas, of the town of Berlin, had two splendid animals, a ram and ewe which were raised by himself. He has twenty-four full blood Merino ewes and seventeen rams, and is breeding to the purest strains obtainable.

W. F. Munson, of Utica, had five excellent sheep entered. From his flock of 230 he selected five to represent the general standing of the flock, and by a glance at the table you will see that Mr. Munson has reason to feel proud of his splendid flock. He has lost but one lamb this spring. From six ewes he has nine splendid Merino lambs all doing well.

E. G. Stone, of Fisks, makes a highly credible showing on the table with his entry of six rams and three ewes. Mr. Stone commenced the breeding of sheep from the McConnell stock, nine years ago, and made it a leading industry up to the present time. He is raising full blood Delaine Merinos for the market and cannot supply the demand.

E. Corliss, of Nepeuskun, had a splendid ram, which was the center of a great deal of interest among growers. He has three hundred sheep and is grading them up to pure bloods very rapidly.

Wm. Dixon, of Springvale, had three excellent sheep entered, which received a good deal of attention from all men assembled. They were young sheep and give promise of a most wonderful maturity. He has two hundred and twenty-five sheep and out of seventy lambs dropped this spring he had saved all but three. His stock is native ewes crossed with full blood Merino rams. Mr. Dixon is one of our most successful sheep breeders and prominent farmers.

F. Brinkerhoff, of Springvale, had a ram shorn, which weighed one hundred and eighty-one pounds in fleece. He has been breeding sheep for years, and sold a large number of rams. His flock is principally unregistered sheep, but are high bred and growing purer every season. He is having most excellent success with his lambs this season and is

an enthusiast on the subject of wool growing. A large majority of his flock are full blooded Merinos.

There was a much better class of sheep and wool on the grounds than ever before, and everyone wore a smile of satisfaction at the general improvement in all directions. The center of the attraction was around the fleece of the McConnell ram and when it went on the scales they crowded around with such remarks as "get the hay scales," "I'll bet it goes 31," "Wisconsin against the world" and the like. It will be seen by reference to the foot notes at bottom of table that in many instances the fleece weighed more than one-fifth of the entire weight of the animal.

At noon each day the people present were served with a most sumptuous repast, provided for the occasion by the farmers' wives, and it was a feast which does credit to the culinary ability of the ladies. One man remarked as he gazed upon the groaning tables, "Sheep ain't the only thing we've got to brag on, just look at that 'lay out' and then brag of the women who provided it."

This very appropriate remark was seconded by the entire assembly and they did ample justice to the substantial food before them. It would be a difficult matter to find an assemblage of more intelligent and substantial men than were assembled, and although dealing in the article a man would find it difficult to "pull the wool over their eyes" for a minute.

Much credit is due Mr. H. W. Wolcott who first instituted the movement and for his hearty labors in making the Association a success.

Officers elected for the ensuing year: President, H. W. Wolcott, Ripon; Vice President, C. D. McConnell, Berlin; Treasurer, A. Osborn, Metomen; Secretary, H. L. Wolcott, Ripon. Executive Committee: E. S. Corliss, Rushlake; E Reynolds, Metomen; E. G. Stone, Fisks.

REPORT OF THE FIFTH ANNUAL FESTIVAL OF THE CENTRAL WISCONSIN SHEEP BREEDERS' AND WOOL GROWERS' ASSOCIATION.

OWNERS' NAME.	No. Entry.	Registered No.	Sex.	Age.	Breeder's Name.	Sire's Name.	Weight in fleece.	Weight of fleece. lbs.	Weight of fleece. oz.	Age of fleece. days.	Length of staple.	Quality of fleece.	Condition of the animal.	Postoffice address.	Class.
T. F. & C. D. McConnell	1	137	Ram	6	Ketchum	Bunker	143	22	4	369	3⅜	95	100	Ripon	2 2
T. F. & C. D. McConnell.	2	64	Ram	5	Sherwood	Harlow	173	29	8	369	3⅝	96	100	Ripon	2 1
T. F. & C. D. McConnell	3	281	Ram	3	McConnell	Backus	159	21	2	369	4⅜	95	100	Ripon	1 1
T. F. & C. D. McConnell.	4	284	Ram	4	McConnell	Backus	178½	22	1	369	3⅜	95	100	Ripon	1 1
T. F. & C. D. McConnell.	5	411	Ram	2	McConnell	Backus	137	22	6½	360	4⅜	100	100	Ripon	1 1
T. F. & C. D. McConnell.	6	425	Ram	2	McConnell	Backus	132	20	5	360	4⅛	100	100	Ripon	1 1
T. F. & C. D. Mc onnell.	7	422	Ram	2	McConnell	Backus	132½	22	12¾	360	4	100	100	Ripon	1 1
T. F. & C. D. McConnell	8	424	Ram	2	McConnell	Backus	137	19	4½	360	3¼	95	100	Ripon	2 2
T. F. & C. D. McConnell.	9	418	Ram	2	McConnell	Backus	162	25	9	360	3	90	100	Ripon	2 2
T. F. & C. D. McConnell.	10	.....	Ram	2	McConnell	Backus	153½	18	3	360	3⅝	95	100	Ripon	2 2
T. F. & C. D. McConnell	11	.....	Ram	2	McConnell	Backus	121	19	5½	360	4	10	100	Ripon	1 2
T. F. & C. D. McConnell	12	410	Ram	2	McConnell	Backus	126	20	2½	360	3½	100	100	Ripon	1 1
T. F. & C. D. McConnell.	13	.....	Ewe	1	McConnell	Backus	65	8	5½	.....	4¼	100	100	Ripon	1 1
T. F. & C. D. McConnell	14	438	Ram	1	McConnell	Jack	112	16		.....	4¼	100	100	Ripon	1 2
T. F. & C. D. McConnell	15	472	Ewe	1	McConnell	Backus	80	15		.....	3⅛	95	100	Ripon	
T. F. & C. D. McConnel	16	476	Ewe	1	McConnell	Backus	.....	.....	.....	.....	.....	.....	.....	Ripon	...
T. F. & C. D. McConnel	17	480	Ewe	1	McConnell	Backus	.....	.....	.....	.....	.....	.....	.....	Ripon	...
T. F. & C. D. McConnell.	18	.....	Ewe	1	McConnell	Backus	.....	.....	.....	.....	.....	.....	.....	Ripon	...
T. F. & C. D. McConnell	19	496	Ram	1	McConnell	Backus	.....	.....	.....	.....	.....	.....	.....	Ripon	...
T. F. & C. D. McConnell.	20	443	Ram	1	McConnel	Backus	109¼	14		.....	2¾	100	100	Ripon	2 2
T. F. & C. D. McConnell.	21	442	Ram	1	McConnell	Backus, Jr	109¾	12	10½	.....	3⅝	100	100	Ripon	2 2
T. F. & C. D. McConnell	22	441	Ram	1	McConnel	Backus	104¼	13		.....	3⅞	100	100	Ripon	2 2
T. F. & C. D. McConnell	23	468	Ram	1	McConnell	Backus	.....	.....	.....	.....	.....	.....	.....	Ripon	...
T. F. & C. D McConnell.	24	469	Ewe	1	McConnel	Backus	73¼	9	3¼	.....	.....	100	100	Ripon	...
C. S Thomas	25	24	Ewe	2	Thomas	.....	91	15	8	352	4½	100	95	Berlin	1
C. S Thomas	26	64	Ram	2	Thomas	.....	125	26		352	4½	100	95	Berlin	1 1
W. F. Munsill	27	.....	Ewe	1	Munson	R. C. N. 101	73	15	6¼	264	2¾	100	100	Utica	1 2
W. F. Munsill	28	....	Ewe	1	Munson	R. C. N. 101	77	11		373	3½	100	100	Utica	2 2
W. F. Munsill	29	.....	Ewe	1	Munson	T. D. Hall 216	63	10	2	375	3⅞	100	100	Utica	2 2
W. F. Munsill	30	.....	Ewe	1	Munson	Stubb	100½	15	6	381	3⅜	95	90	Utica	2 2
W. F. Munsill	31	.....	Ram	1	Munson	Stubb	.....	.....	.....	.....	.....	.....	.....	Utica	2 2

E Corliss	32	302	Ram	2	Morrison	No. 157	139½	26	7	369	2⅜	75	90	Nepeuskun	...
McConnell & Stone	33	296	Ram	3	McConnell	Backus	200¼	31		369	4¾	100	100	Ripon	2
McConnell & Stone	34	419	Ram	2	McConnell	Backus	177	28		369	3½	100	100	Ripon	1
McConnell & Stone	35	.....	Ram	1	Stone	Broker	.....	16	2	.....	3½	100	100	Ripon	2
McConnell & Stone	36	.....	Ram	1	Stone	Backus	143	16	11	....	4⅝	100	100	Ripon	2
McConnell & Stone	37	.....	Ram	1	Stone	Broker	125	17		.....	4⅛	100	100	Ripon	1
McConnell & Stone	38	.....	Ram	1	Stone	Broker	115	16		.....	4⅛	100	100	Ripon	1
McConnell & Stone	39	.....	Ewe	1	Stone	Broker	99	14	13½	.....	4	100	100	Ripon	1
McConnell & Stone	40	.....	Ewe	1	Stone	Broker	100	14	8	.....	4¼	100	100	Ripon	1
McConnell & Stone	41	.....	Ewe	1	Stone	Broker	93	14	13	.....	3½	100	100	Ripon	1
E G. Stone	42	.....	Ram	2	Stone	Jumbo	200	21	5¼	361	4	100	100	Fisks	2
U. Wood & Son	43	101	Ram	3	Weed & Son	Farnsworth	174	25	8	369	4¼	100	100	Brandon	1
U. Wood & Son	44	99	Ram	3	Weed & Son	Farnsworth	.....	.....	.....	369	.....	.....	.....	Brandon	1
U. Wood & Son	45	116	Ram	2	Weed & Son	Farnsworth	133	20	8	369	4¼	100	100	Brandon	..
U. Wood & Son	46	.....	.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	Brandon	1
T. F. & C. D. McConnell	47	436	Ram	1	McConnell	Backus	107¼	14	6	.....	4⅝	100	100	Ripon	...
W. Dixon	48	.....	Ram	1	....	.....	127	15	14	356	4¼	100	100	Springvale	1
W. Dixon	49	.....	Ewe	3	.....	.....	86½	15	5	.....	4	100	100	Springvale	1
J. B. Morrison	50	260	Ram	5	Merrill & Son	.....	144	29	4	369	3½	100	100	Waukau	1
J. B. Morrison	51	.....	Ram	3	C. P Morrison	No. 157	149	27	13	369	4	100	100	Waukau	1
J. B. Morrison	52	81	Ram	2	J. B. Morrison	Major 260	111	22	4	355	2¾	95	85	Waukau	1
J. B. Morrison	53	24	Ram	2	J. B. Morrison	Major 260	.....	.....	.....	.....	.....	.....	.....	Waukau	1
J. B. Morrison	54	5	Ram	2	J. B. Morrison	Major 260	.....	.....	.....	.....	.....	.....	.....	Waukau	...
J. B. Morrison	55	85	Ram	2	J. B. Morrison	Major 260	.....	.....	.....	.....	.....	.....	.....	Waukau	...
J. B. Morrison	56	38	Ewe	2	J. B. Morrison	Major 260	.....	.....	.....	.....	.....	.....	.....	Waukau	...
J. Brinkerhoff	57	.....	Ram	4	A. & P. H	.....	181	19	15	362	3¼	100	95	Springvale	2

*Classes:—1, Delaine Merinos; 2, Fine Combing Wool. Class 3, weight of fleece only consideration—Entry 33; M. Connell & Stone, first, 31 pounds; entry 2, T. F. & C. D. McConnell, second, 29½ pounds; entry 50, J. B Morrison, third, 29¼ pounds. Class 4, weight of fleece in proportion to weight of carcass only consideration—Entry 26, C. S. Thomas, Berlin, first, 4 21-26 to 1, entry 27, W. F. Munsill, Elo, second, 4 13-15 to 1; entry 51, J. B. Morrison, Waukau, third, 4 108-117 to 1. A large number who averaged from below five upwards.

There were over one hundred entries but only about fifty sheep were shorn, owing to the lack of time and scarcity of shearers.

METEOROLOGICAL RECORD FOR THE YEAR 1884.

Furnished by K. M HUTCHINSON, Oshkosh, Wisconsin.

JANUARY.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	15	23	15	Cloudy.	10th, 2 inches snow.
2	13	20	14	Clear.	23d, 2 inches snow.
3	—11	— 8	—15	Clear.	28th, 3 inches snow.
4	—28	—20	—23	Clear.	The January of 1883 was
5	—29	— 7	—11	Clear.	colder by 53 degrees
6	—21	— 6	— 7	Clear.	than this month calcu-
7	—19	— 5	— 6	Clear.	lating by the total num-
8	— 8	10	8	Cloudy.	ber of degrees below
9	—11	10	9	Fair.	zero.
10	9	24	16	Snow.	
11	2	10	15	Cloudy.	
12	4	12	10	Fair.	
13	27	45	34	Cloudy.	
14	15	15	7	Fair.	
15	—10	10	3	Fair.	
16	— 4	20	15	Fair.	
17	11	31	30	Fair.	
18	21	30	26	Fair.	
19	— 2	9	3	Clear.	
20	—13	9	0	Clear.	
21	— 7	23	15	Fair.	
22	12	31	24	Cloudy.	
23	5	14	0	Snow.	
24	—21	— 8	—10	Clear.	
25	— 7	16	11	Cloudy.	
26	4	20	20	Fair.	
27	21	36	29	Cloudy.	
28	27	44	35	Cloudy.	
29	32	38	35	Cloudy.	
30	35	35	20	Cloudy.	
31	6	15	8	Clear.	

FEBRUARY.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	— 7	17	16	Snow.	1st, 2 inches snow.
2	30	32	22	Cloudy.	3d, 2 inches snow, high wind.
3	5	15	7	Snow.	
4	3	12	12	Cloudy.	5th, 2 inches snow.
5	16	33	26	Fair.	6th, light snow.
6	14	31	18	Snow.	12th, 6 inches snow.
7	3	19	10	Cloudy.	17th, 3 inches snow.
8	11	31	25	Cloudy	22d, 2 inches snow.
9	14	22	16	Fair.	24th, 2 inches snow.
10	— 2	25	15	Cloudy.	35th, 2 inches snow.
11	6	22	10	Cloudy.	27th, 4 inches snow.
12	5	17	14	Snow.	Total, 25 inches.
13	7	29	17	Snow.	
14	—12	31	15	Fair.	
15	— 6	15	17	Clear.	
16	19	40	34	Fair.	
17	30	43	34	Snow.	
18	26	47	36	Cloudy.	
19	36	42	28	Sleet.	
20	— 7	21	14	Fair.	
21	6	16	12	Clear.	
22	15	36	17	Snow.	
23	— 4	17	11	Fair.	
24	5	35	22	Clear.	
25	20	45	31	Snow.	
26	18	44	34	Cloudy.	
27	17	40	18	Snow.	
28	—15	11	1	Clear.	
29	—17	15	10	Fair.	

MARCH.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	— 2	15	10	Fair.	8th, 3 inches snow.
2	— 4	32	25	Snow.	10th, 2 inches snow, turning to rain.
3	— 5	18	13	Clear.	
4	—13	15	15	Fair.	21st, robins came.
5	5	37	20	Fair.	23d, blackbirds came.
6	4	27	18	Fair.	31st, thunder shower.
7	— 2	26	12	Fair.	
8	1	25	15	Snow.	
9	7	35	29	Fair.	
10	8	28	25	Snow.	
11	35	50	43	Fair.	
12	13	27	30	Fair.	
13	17	32	31	Fair.	
14	14	32	31	Clear.	
15	24	37	34	Clear.	
16	29	45	41	Cloudy.	
17	30	41	38	Clear.	
18	23	45	36	Fair.	
19	30	37	35	Rain.	
20	30	45	46	Clear.	
21	30	52	48	Fair.	
22	37	47	43	Rain.	
23	39	47	45	Fair.	
24	33	52	53	Clear.	
25	38	45	42	Rain.	
26	38	56	55	Fair.	
27	39	62	58	Fair.	
28	43	43	45	Cloudy.	
29	35	37	36	Clear.	
30	27	44	39	Fair.	
31	32	50	48	Rain.	

APRIL.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	34	36	32	Snow.	1st, 6 inches snow; wind northeast.
2	28	48	45	Fair.	
3	29	57	50	Clear.	7th, 3 inches snow; wind northeast.
4	40	50	50	Clear.	
5	35	50	57	Clear.	8th, sleet all day.
6	32	44	39	Cloudy.	15th, heavy cold; 24 hours rain.
7	30	42	38	Snow.	
8	30	42	41	Sleet.	Steamer Fashion came from Berlin the 8th.
9	32	59	44	Fair.	
10	34	47	45	Cloudy.	Steamer Tom Wall went up the river the 10th.
11	35	51	48	Fair.	
12	38	57	51	Fair.	Steamer Carters' first trip on Winnebago the 22d.
13	44	53	48	Cloudy.	
14	40	49	54	Rain.	
15	42	41	40	Rain.	
16	32	47	45	Cloudy.	
17	39	46	48	Clear.	
18	35	43	50	Fair.	
19	41	44	43	Rain.	
20	33	41	40	Fair.	
21	38	43	40	Clear.	
22	37	49	50	Fair.	
23	48	55	56	Clear.	
24	48	60	60	Clear.	
25	53	67	65	Clear.	
26	60	71	65	Fair.	
27	50	60	52	Cloudy.	
28	50	61	60	Clear.	
29	40	55	51	Fair.	
30	50	68	74	Rain.	

MAY.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	56	60	55	Rain.	27th and 28th, cold east wind.
2	42	52	55	Clear.	
3	60	65	60	Clear.	29th, slight frost. Much damage to southern portion of the state and northern Illinois.
4	57	54	50	Rain.	
5	53	65	64	Rain	
6	52	65	65	Rain.	
7	50	68	70	Shower.	
8	65	68	72	Clear.	
9	67	68	68	Clear.	
10	55	75	71	Fair.	
11	62	70	78	Fair.	
12	51	72	67	Fair.	
13	55	59	60	Fair.	
14	55	66	62	Showers.	
15	65	66	65	Fair.	
16	42	61	35	Fair.	
17	55	67	66	Fair.	
18	65	82	73	Fair.	
19	54	58	65	Rain.	
20	60	78	80	Fair.	
21	64	73	70	Fair.	
22	60	76	75	Rain.	
23	65	80	71	Cloudy.	
24	60	71	62	Cloudy.	
25	54	60	62	Cloudy.	
26	54	71	72	Fair.	
27	60	65	61	Clear.	
28	56	57	56	Clear.	
29	58	65	65	Clear.	
30	60	77	77	Clear.	
31	70	80	74	Cloudy.	

JUNE.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	70	85	79	Fair.	
2	60	62	60	Rain.	
3	60	77	77	Clear.	
4	67	81	78	Fair.	
5	68	83	78	Cloudy.	
6	80	83	79	Fair.	
7	80	86	83	Fair.	
8	81	87	76	Shower.	
9	57	63	63	Cloudy.	
10	64	67	79	Clear.	
11	70	77	79	Fair.	
12	70	78	72	Fair.	
13	66	69	63	Fair.	
14	65	71	72	Fair.	
15	64	75	75	Fair.	
16	65	86	80	Fair.	
17	76	98	83	Shower.	
18	76	73	80	Shower.	
19	70	84	80	Fair.	
20	74	87	82	Fair.	
21	75	84	82	Fair	
22	80	87	82	Showers.	
23	78	82	83	Showers.	
24	78	87	81	Fair.	
25	60	70	67	Fair.	
26	67	72	71	Clear.	
27	70	76	95	Clear.	
28	74	81	80	Clear.	
29	70	84	83	Clear.	
30	80	90	89	Fair.	

JULY.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	80	83	81	Clear.	3d day, heavy rain.
2	71	83	80	Fair.	5th, high wind southwest.
3	70	86	67	Rain.	23d, heavy showers.
4	60	73	75	Fair.	24th, heavy showers.
5	65	70	79	Fair.	25th, heavy showers.
6	65	74	70	Clear.	
7	69	76	74	Fair.	
8	71	78	75	Fair.	
9	66	78	78	Fair.	
10	70	81	81	Clear.	
11	76	85	80	Fair.	
12	75	84	70	Fair.	
13	69	73	73	Clear.	
14	65	78	75	Fair.	
15	66	81	77	Fair.	
16	66	73	72	Fair.	
17	63	79	77	Fair.	
18	70	81	76	Fair.	
19	67	79	77	Fair.	
20	69	77	78	Fair.	
21	72	82	82	Fair.	
22	78	92	86	Cloudy.	
23	70	80	81	Rain.	
24	71	82	70	Rain.	
25	69	77	77	Rain.	
26	68	79	80	Fair.	
27	72	80	81	Fair.	
28	75	79	81	Fair.	
29	78	84	79	Fair.	
30	70	85	71	Rain.	
31	65	81	75	Fair.	

AUGUST.

Day	7. A. M.	12 M.	5 P. M.	Weather.	Comments.
1	69	77	75	Fair.	2d, very heavy rain.
2	70	85	79	Rain.	18th and 20th, light showers.
3	70	78	75	Rain.	
4	60	66	61	Rain.	
5	60	71	74	Clear.	
6	65	77	75	Fair.	
7	56	66	65	Fair.	
8	58	68	66	Clear.	
9	60	71	68	Clear.	
10	62	76	76	Clear.	
11	70	83	83	Clear.	
12	71	83	81	Clear.	
13	76	83	82	Clear.	
14	72	83	82	Clear.	
15	76	85	82	Clear.	
16	74	86	83	Clear.	
17	76	86	83	Clear.	
18	73	88	84	Rain.	
19	75	90	87	Clear.	
20	80	89	79	Rain.	
21	66	73	70	Clear.	
22	68	76	73	Cloudy.	
23	62	71	69	Clear.	
24	61	77	70	Cloudy.	
25	61	73	72	Fair.	
26	63	71	69	Clear.	
27	68	76	75	Fair.	
28	65	77	74	Clear.	
29	65	74	62	Rain.	
30	64	74	69	Fair.	
31	59	71	68	Clear.	

SEPTEMBER.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	62	77	75	Cloudy.	The past summer has been exceptionally fine, neither too hot nor cold, wet nor dry, but just such a happy medium as to yield to the farmer the most abundant harvest since 1860. No wevil, chinch bug or rust attacked the wheat and the heat and moisture of August and September fully matured the corn. All crops were sound and in good condition. No frost this month.
2	70	80	79	Clear.	
3	74	84	83	Fair.	
4	69	80	78	Fair.	
5	71	85	85	Clear.	
6	74	88	76	Shower.	
7	69	83	78	Cloudy.	
8	65	86	79	Fair.	
9	73	83	81	Fair.	
10	76	86	77	Rain.	
11	58	68	65	Clear.	
12	55	71	62	Clear.	
13	61	71	67	Clear.	
14	62	75	72	Clear.	
15	61	69	68	Rain.	
16	55	66	65	Clear.	
17	49	69	68	Fair.	
18	51	70	69	Fair.	
19	52	64	61	Clear.	
20	54	69	69	Clear.	
21	58	66	62	Fair.	
22	56	68	65	Rain.	
23	62	69	64	Cloudy.	
24	51	67	66	Clear.	
25	54	72	70	Clear.	
26	62	73	70	Fair.	
27	65	75	72	Showers.	
28	58	67	67	Clear.	
29	59	66	68	Clear.	
30	65	77	70	Fair.	

OCTOBER.

Day	7 A. M.	12 M.	5 A. M.	Weather.	Comments.
1	54	58	52	Rain.	1st, rain all day and night.
2	56	72	72	Fair.	8th, the first break from warm weather, 22 deg. drop in 12 hours.
3	65	80	78	Clear.	
4	71	78	71	Rain.	
5	65	81	70	Rain.	9th, first frost, but light.
6	57	69	71	Fair.	22d, light frost.
7	62	73	64	Rain.	23d, ice formed.
8	42	49	47	Clear.	
9	37	53	54	Clear.	
10	45	60	58	Clear.	
11	52	60	58	Cloudy.	
12	52	68	64	Fair.	
13	50	58	55	Fair.	
14	44	59	54	Clear.	
15	44	59	60	Clear.	
16	56	65	65	Clear.	
17	57	63	61	Clear.	
18	42	55	53	Clear.	
19	56	69	65	Clear.	
20	60	65	50	Cloudy.	
21	43	55	44	Cloudy.	
22	38	45	38	Cloudy.	
23	26	33	31	Clear.	
24	30	47	41	Fair.	
25	30	43	42	Fair.	
26	42	49	47	Rain.	
27	36	43	35	Cloudy.	
28	26	39	30	Fair.	
29	40	51	49	Rain.	
30	43	50	45	Cloudy.	
31	45	51	43	Cloudy.	

NOVEMBER.

Day	7 A. M.	12 M.	5 P. M.	Weather	Comments.
1	34	40	35	Snow.	1st, first light snow.
2	26	41	42	Clear.	16th, thunder showers.
3	33	45	41	Fair.	23d, snow squalls.
4	39	42	36	Rain.	25th, 2 inches light snow.
5	29	38	33	Fair.	22d, navigation closed.
6	26	40	36	Fair.	
7	33	46	43	Fair.	
8	30	46	45	Clear.	
9	38	54	53	Clear.	
10	41	46	43	Cloudy.	
11	39	46	42	Clear.	
12	32	48	47	Clear.	
13	38	50	46	Clear.	
14	14	50	49	Clear.	
15	36	52	50	Clear.	
16	40	48	48	Rain.	
17	27	33	28	Clear.	
18	15	30	25	Clear.	
19	19	35	31	Fair.	
20	32	36	32	Clear.	
21	29	35	31	Cloudy.	
22	36	40	40	Rain.	
23	28	25	12	Snow.	
24	— 7	4	5	Cloudy.	
25	12	25	12	Snow.	
26	4	20	19	Fair.	
27	22	32	22	Fair.	
28	7	29	19	Fair.	
29	7	30	22	Fair.	
30	6	30	19	Fair.	

DECEMBER.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	15	37	28	Cloudy.	1st, light snow.
2	27	38	29	Fair.	6th and 7th, 48 hours' rain.
3	24	40	35	Fair.	14th, 3 inches snow.
4	32	44	38	Fair.	16th, 1 inch snow.
5	33	37	35	Cloudy.	22d, 10 inches snow.
6	35	36	39	Rain.	24th, 2 inches snow.
7	37	38	33	Rain.	29 and 30th, 48 hours' rain.
8	31	34	31	Fair.	
9	17	25	21	Fair.	30th, the trees, shrubbery and telephone wires were loaded with ice.
10	20	35	30	Clear.	
11	20	26	21	Clear.	
12	18	25	20	Cloudy.	
13	19	27	25	Cloudy.	
14	21	36	24	Snow.	
15	15	27	15	Fair.	
16	2	7	— 5	Clear.	
17	—19	— 3	— 7	Clear.	
18	—22	—12	—16	Clear.	
19	—22	1	—10	Clear.	
20	2	21	15	Cloudy.	
21	11	20	14	Cloudy,	
22	12	25	2	Snow.	
23	—14	9	— 6	Cloudy.	
24	— 2	13	5	Cloudy.	
25	—18	— 5	—10	Clear.	
26	—14	18	9	Fair.	
27	19	32	30	Sleet.	
28	34	42	35	Sleet.	
29	38	48	40	Rain.	
30	34	33	31	Rain.	
31	28	24	12	Fair.	

METEOROLOGICAL RECORD FOR THE YEAR 1885.

Furnished by K. M. HUTCHINSON, Oshkosh, Wisconsin.

JANUARY.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	— 5	1	— 6	Clear.	6th, 15 inches snow.
2	—19	— 5	— 6	Clear.	14th, 3 inches snow.
3	5	23	19	Cloudy.	16th, 2 inches snow.
4	15	29	28	Fair.	24th, 1 inch snow.
5	28	39	31	Fair.	30th, 2 inches snow.
6	29	41	32	Snow.	31st, 1 inch snow.
7	18	30	25	Clear.	Comparison of January
8	24	43	32	Fair.	with previous years
9	25	32	20	Clear.	since 1874. The num-
10	5	30	25	Fair.	bers represent the total
11	28	42	35	Fair.	degrees below zero at
12	12	11	— 6	Clear.	observations taken at
13	—26	—10	—14	Clear.	7 A. M., 12 M., 5 P. M.
14	—10	12	0	Snow.	1874..... 52 degrees.
15	— 1	12	8	Fair.	1875.....330 degrees.
16	— 2	17	5	Snow.	1876..... 24 degrees.
17	— 1	10	0	Clear.	1877.....105 degrees.
18	—17	— 6	—14	Clear.	1878..... 20 degrees.
19	—25	— 7	—12	Clear.	1879.....114 degrees.
20	—16	7	3	Fair.	1880..... 1 degree.
21	—15	— 5	—10	Clear.	1881.....142 degrees.
22	—28	— 5	— 4	Clear.	1882..... 21 degrees.
23	— 1	25	16	Fair.	1883.....371 degrees.
24	15	33	22	Snow.	1884.....208 degrees.
25	— 2	25	5	Cloudy.	1885.....391 degrees.
26	—15	3	—11	Clear.	
27	—17	2	—10	Clear.	
28	—25	— 5	—10	Clear.	
29	—19	6	8	Snow.	
30	— 1	20	11	Clear.	
31	12	40	23	Snow.	

FEBRUARY.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	2	17	5	Clear.	2d, 1 inch snow.
2	8	30	25	Snow.	4th, 1 inch snow.
3	27	39	31	Cloudy.	19th, 3 inches snow with
4	26	41	29	Cloudy.	light northeast wind.
5	— 3	3	1	Clear.	Drifted badly. Trains
6	— 7	21	13	Snow.	delayed.
7	— 3	15	15	Snow.	For the purpose of com-
8	3	21	14	Fair.	parison I append the
9	— 2	7	12	Snow.	number of degrees be-
10	—23	— 8	—14	Clear.	low zero during the
11	—25	11	— 4	Clear.	month of February for
12	—20	11	— 5	Clear.	10 preceding years.
13	—20	16	— 5	Cloudy.	1874.....12 degrees.
14	— 1	23	13	Snow.	1875.....49 degrees.
15	— 2	27	13	Fair.	1876.....31 degrees.
16	—14	2	— 4	Clear.	1877..lowest 9 above.
17	—16	8	9	Clear.	1878. lowest 10 above.
18	— 7	13	4	Clear.	1879.....65 degrees.
19	— 5	9	3	Clear.	1880.....20 degrees.
20	—11	15	11	Clear.	1881.....37 degrees.
21	— 2	28	16	Clear.	1882..lowest 6 above.
22	— 2	28	23	Clear.	1883.....127 degrees.
23	3	36	25	Clear.	1884.....70 degrees.
24	19	41	32	Fair.	1885.....198 degrees.
25	7	35	33	Clear.	Although in this month
26	25	53	40	Clear.	we have had the longest
27	19	40	39	Clear.	continuous period be-
28	30	55	45	Fair.	low zero, 14 days, yet
					the February of 1875
					excelled it by 292 de-
					grees.

MARCH.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	33	44	37	Fair.	Slight flurries of snow from the 1st to the 6th. A northeast snow storm commenced in the night of the 5th with high wind and continued for 24 hours. Amount that fell estimated at 8 inches. 15th, cold northwest wind with snow. 17th, Manitoba wave. 26th, robins came. 30th, one inch snow.
2	22	47	35	Fair.	
3	33	54	44	Fair.	
4	29	52	35	Fair.	
5	22	45	31	Fair.	
6	20	35	22	Snow.	
7	10	32	25	Clear.	
8	1	32	29	Clear.	
9	25	47	44	Clear.	
10	15	25	23	Clear.	
11	11	37	37	Clear.	
12	19	28	20	Clear.	
13	20	50	30	Fair.	
14	33	56	41	Cloudy.	
15	12	23	20	Cloudy.	
16	— 3	10	9	Clear.	
17	— 8	23	19	Fair.	
18	8	34	24	Fair.	
19	4	30	12	Fair.	
20	— 5	20	12	Fair.	
21	— 5	17	19	Clear.	
22	6	24	25	Clear.	
23	8	35	35	Clear.	
24	29	45	35	Fair.	
25	19	45	37	Fair.	
26	25	55	50	Fair.	
27	35	47	42	Clear.	
28	28	29	30	Clear.	
29	20	42	40	Clear.	
30	35	49	44	Clear.	
31	41	47	47	Clear.	

APRIL.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	32	40	35	Fair.	1st, thunder shower followed by sleet.
2	33	37	35	Cloudy.	
3	27	35	36	Clear.	14th, snowfall all day, wind southeast, 8 inches in depth and very damp.
4	28	52	45	Fair.	
5	47	55	56	Clear.	
6	41	52	52	Clear.	20th, steamer Fashion down from Berlin, and tug boats go the boom.
7	48	62	46	Rain.	
8	28	32	36	Clear.	
9	32	44	45	Clear.	22d, steamer I. Choate went to New London.
10	37	49	41	Rain.	
11	37	52	46	Cloudy.	27th, snow, sleet and rain; wind northeast.
12	35	46	41	Fair.	
13	25	35	38	Clear.	28th, Lake Winnebago open.
14	32	37	37	Snow.	
15	37	60	43	Cloudy.	The fall of snow during the winter was 58 inches.
16	35	47	44	Cloudy.	
17	35	44	41	Cloudy.	
18	36	55	54	Cloudy.	
19	45	54	59	Cloudy.	
20	50	74	65	Cloudy.	
21	63	77	76	Fair.	
22	62	78	76	Fair.	
23	52	54	57	Rain.	
24	47	54	60	Clear.	
25	41	60	46	Cloudy.	
26	55	64	60	Cloudy.	
27	42	41	37	Snow.	
28	35	50	52	Clear.	
29	55	62	64	Fair.	
30	45	58	56	Fair.	

MAY.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	45	53	56	Clear.	7th, ground white with snow in the morning, with frequent snow squalls during the day; wind west.
2	50	51	54	Clear.	
3	48	60	57	Clear.	
4	52	65	69	Clear.	
5	47	54	48	Rain.	
6	43	60	56	Fair.	8th, Same as above; storm continued. At Appleton snow fell 3 inches deep.
7	34	45	40	Snow.	
8	39	47	42	Snow.	
9	42	55	52	Fair.	
10	40	62	60	Fair.	12th, warm weather with warm south wind.
11	48	58	58	Clear.	
12	58	66	65	Clear.	18th, cold northeast wind with rain.
13	64	75	72	Clear.	
14	70	77	78	Clear.	
15	75	82	79	Clear.	
16	74	83	77	Cloudy.	
17	68	74	62	Rain.	
18	45	50	48	Rain.	
19	45	47	50	Cloudy.	
20	47	69	69	Cloudy.	
21	63	78	74	Fair.	
22	74	78	80	Clear.	
23	70	82	81	Clear.	
24	78	85	82	Clear.	
25	70	76	79	Fair.	
26	73	82	82	Clear.	
27	67	72	69	Clear.	
28	57	70	70	Cloudy.	
29	56	60	58	Rain.	
30	57	77	78	Clear.	
31	70	82	81	Clear.	

JUNE.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	60	76	77	Clear.	7th, thunder shower and high wind.
2	60	74	70	Rain.	
3	60	82	78	Fair.	26th, heavy showers.
4	45	62	67	Rain.	
5	61	73	71	Cloudy.	
6	62	70	68	Rain.	
7	66	75	77	Cloudy.	
8	59	63	65	Clear.	
9	50	72	73	Clear.	
10	60	76	75	Clear.	
11	65	83	83	Clear.	
12	78	89	89	Fair.	
13	70	82	85	Fair.	
14	75	90	79	Fair.	
15	70	86	81	Fair.	
16	56	77	72	Fair.	
17	59	77	76	Fair.	
18	60	84	84	Fair.	
19	63	87	86	Fair.	
20	71	84	84	Rain.	
21	63	81	76	Fair.	
22	53	71	71	Clear.	
23	53	75	77	Clear.	
24	40	79	79	Cloudy.	
25	68	87	85	Cloudy.	
26	68	83	79	Rain.	
27	70	40	89	Clear.	
28	70	80	76	Cloudy.	
29	50	72	71	Clear.	
30	72	73	74	Clear.	

JULY.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	60	80	79	Showers.	8th, tornado, much damage done to the city of Oshkosh and country; Fair building demolished.
2	60	81	81	Clear.	
3	60	83	80	Cloudy.	
4	60	83	85	Clear.	
5	70	93	87	Cloudy.	
6	75	88	82	Fair.	12th, very heavy rain in the night.
7	70	88	85	Showers.	
8	74	94	90	Rain.	The average temperature and moisture above previous years.
9	78	81	78	Fair.	
10	60	75	77	Fair.	
11	64	80	80	Clear.	
12	66	85	84	Fair.	
13	58	80	75	Fair.	
14	56	82	78	Rain.	
15	74	83	85	Fair.	
16	69	90	87	Fair.	
17	69	78	82	Fair.	
18	73	83	78	Fair.	
19	79	87	74	Showers.	
20	70	85	88	Cloudy.	
21	70	84	85	Fair.	
22	70	80	83	Showers.	
23	74	90	89	Showers.	
24	76	91	77	Showers.	
25	78	85	73	Rain.	
26	71	77	77	Clear.	
27	72	83	87	Clear.	
28	76	91	91	Showers.	
29	71	89	81	Showers.	
30	74	87	88	Clear.	
31	80	87	87	Fair.	

AUGUST.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	71	84	82	Cloudy.	
2	68	72	68	Rain.	
3	62	76	69	Cloudy.	
4	66	78	72	Fair.	
5	61	76	73	Fair.	
6	62	70	68	Rain.	
7	66	75	77	Cloudy.	
8	70	72	78	Rain.	
9	72	80	79	Clear.	
10	65	80	78	Clear.	
11	67	81	79	Cloudy.	
12	71	86	86	Clear.	
13	67	81	69	Rain.	
14	62	68	68	Clear.	
15	62	77	73	Clear.	
16	67	79	77	Clear.	
17	65	83	84	Fair.	
18	71	85	84	Clear.	
19	65	74	76	Clear.	
20	62	81	76	Cloudy.	
21	70	82	74	Cloudy.	
22	62	83	71	Cloudy.	
23	65	81	71	Cloudy.	
24	59	66	65	Cloudy.	
25	48	66	65	Fair.	
26	51	66	62	Fair.	
27	53	71	68	Fair.	
28	57	73	68	Cloudy.	
29	61	74	72	Rain.	
30	59	74	71	Fair.	
31	55	69	64	Fair.	

SEPTEMBER.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	54	66	62	Fair.	Light frost during fore part of month, but doing no damage.
2	52	69	69	Fair.	
3	55	63	62	Fair.	
4	54	65	64	Fair.	8th, cold N. E. rain continued through the day. and night.
5	45	60	60	Fair.	
6	49	66	63	Fair.	
7	51	67	65	Fair.	Average temperature above previous years, and after the storm on the 8th, pleasant, agreeab'e weather.
8	57	57	55	Rain.	
9	54	55	60	Fair.	
10	43	60	60	Clear.	
11	55	70	65	C oudy.	
12	63	77	78	Showers.	
13	63	78	76	Fair.	
14	60	73	71	Clear.	
15	55	68	67	Clear.	
16	47	64	64	Clear.	
17	54	73	71	Clear.	
18	50	70	69	Clear.	
19	52	74	67	Cloudy.	
20	62	77	77	Clear.	
21	67	82	82	Clear.	
22	63	67	60	Fair.	
23	51	69	70	Clear.	
24	57	74	78	Clear.	
25	61	78	77	Clear.	
26	60	76	73	Clear.	
27	62	72	70	Cloudy.	
28	62	71	69	Cloudy.	
29	62	74	72	Cloudy.	
30	63	64	63	Cloudy.	

OCTOBER.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	53	62	65	Fair.	8th, hard frost.
2	53	68	70	Clear.	20th, sleet.
3	51	54	47	Cloudy.	25th, thunder shower in the evening.
4	38	50	50	Fair.	28th, snow and sleet.
5	34	49	45	Fair.	October of this year does not differ materially from that of previous years. There have been the usual number of pleasant and unpleasant days; cloudy and sunshine, fair weather and foul alternating — with frost at night and warmth at mid-day. Snow and sleet, slush and sunshine are always characteristic of our October weather. In this month, "leaves have their time to fall," and the north winds breath gives us unmistakable indications that the summer is rapidly going, and that winter approaches.
6	35	48	47	Fair.	
7	41	43	43	Rain.	
8	39	51	47	Fair.	
9	38	55	56	Fair.	
10	46	64	64	Clear.	
11	50	69	61	Clear.	
12	52	65	60	Clear.	
13	54	62	54	Rain.	
14	45	54	55	Clear.	
15	43	54	61	Clear.	
16	42	61	62	Clear.	
17	48	58	66	Clear.	
18	35	57	50	Fair.	
19	45	43	38	Rain.	
20	35	43	38	Cloudy.	
21	32	46	37	Cloudy.	
22	35	47	44	Fair.	
23	30	45	43	Clear.	
24	33	53	51	Clear.	
25	45	60	56	Clear.	
26	51	63	52	Fair.	
27	40	45	42	Fair.	
28	36	37	37	Rain.	
29	27	42	35	Fair.	
30	28	39	30	Fair.	
31	35	40	39	Rain.	

NOVEMBER.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	35	40	39	Rain.	6th, steady pouring rain all day, followed at night with thunder showers, wind northeast.
2	35	42	38	Cloudy.	
3	34	44	36	Clear.	
4	40	49	44	Fair.	
5	33	43	41	Cloudy.	
6	41	43	43	Rain.	30th, light snow.
7	45	47	42	Cloudy.	
8	38	45	40	Cloudy.	
9	34	37	38	Fair.	
10	36	45	42	Clear.	
11	38	54	51	Cloudy.	
12	45	47	49	Rain.	
13	26	31	28	Fair.	
14	22	34	31	Fair.	
15	25	35	32	Clear.	
16	21	39	36	Clear.	
17	34	49	45	Fair.	
18	43	44	42	Cloudy.	
19	31	40	32	Fair.	
20	35	38	29	Fair.	
21	29	40	35	Fair.	
22	29	35	33	Fair.	
23	32	40	35	Fair.	
24	30	43	36	Fair.	
25	24	38	32	Fair.	
26	29	35	31	Fair.	
27	24	35	30	Clear.	
28	33	42	40	Fair.	
29	38	47	41	Fair.	
30	37	38	37	Rain.	

DECEMBER.

Day	7 A. M.	12 M.	5 P. M.	Weather.	Comments.
1	32	35	34	Cloudy.	4th, driving north-east snow storm during the day turning to clear and cold next morning.
2	32	41	38	Fair.	
3	28	34	34	Fair.	
4	34	34	24	Snow.	
5	11	17	10	Clear.	8th and 9th, 12 inches of snow fell.
6	4	6	— 6	Clear.	
7	—17	— 1	— 2	Fair.	12th and 13th, slight flurry.
8	4	15	13	Snow.	
9	20	27	22	Snow.	22d, snow mostly gone.
10	12	33	22	Cloudy.	28th and 30th, rain and sleet both days.
11	5	24	12	Fair.	
12	— 1	23	12	Snow.	Number of degrees below zero in December, 1884, 185; number in 1885, 27.
13	10	30	20	Snow.	
14	5	10	9	Clear.	
15	10	31	20	Fair	A bunch of pansies grown in the open air, and in full bloom was brought me on January 1st, by W. B. Doughty. A similar case was in December, 1877.
16	18	32	22	Fair.	
17	24	36	20	Fair.	
18	22	44	38	Clear.	
19	18	27	22	Clear.	
20	16	42	32	Clear.	
21	35	51	41	Fair.	
22	40	43	42	Cloudy.	
23	39	46	44	Cloudy.	
24	31	32	31	Cloudy.	
25	26	27	35	Clear.	
26	21	34	29	Clear.	
27	29	32	34	Rain.	
28	35	40	40	Cloudy.	
29	38	40	40	Rain.	
30	37	36	32	Sleet.	
31	30	35	30	Cloudy.	

CONTENTS.