REPORT OF THE PRESIDENT.

His Excellency, Cadwallader C. Washburn,

Governor of Wisconsin:

Sir: In compliance with the law, I have the honor to submit the following report of the "financial and other transactions" of the Wisconsin Academy of Sciences, Arts and Letters, for the year ending February 18th, 1872. And inasmuch as circumstances prevented the delivery of the report of the previous year in time for its transmission to the last Legislature, it has been deemed proper to embody herein such important facts as are necessary to complete the public record of the Academy from the date of its organization.

I.

MOTIVES IN WHICH THE ACADEMY ORIGINATED.

The Academy was organized on the 16th of February, 1870, by a Convention called for that purpose by the Governor and more than one hundred other prominent citizens of the State.

The general objects aimed at were these:

The material, intellectual and social advancement of the State;

The advancement of Science, Literature and the Arts.

1. On the part of the State, the reasons were as many as the number of the elements involved in both of these general objects. For while it was obvious that the advantageous geographical position of the State, the variety and vastness of its natural resources, and the character of its popula-
tion, both demanded and encouraged the employment of agencies calculated to rapidly advance it to a condition of material prosperity and power, it was no less demonstrable that true greatness could only be assured by the timely adoption and earnest use of measures looking to high intellectual and social development.

What then is the status of Wisconsin as a civilized State? was a question that demanded attention. And since the development of a people is illustrated and measured by its cultivation of Science and the application of it to the numberless uses of political, social and industrial life, as well as by its achievements in Literature and Art, it was a question that could be answered—a question, indeed, that must be answered, if new agencies for the advancement of the commonwealth were to be wisely planned and put into successful operation.

To the question, What has hitherto been done in the various departments of Science—that is, for Science and by means of it? the answers were these:

In Philosophy, which may be called the science of Science, and is the common, though unseen, source in which all the so-called sciences have their origin,—in Philosophy, distinctively considered, almost nothing, so far as had appeared to the public through the medium of any publication; unless, upon the one hand, by the application of established principles, to confirm past deductions, or, on the other, to supply facts for new generalizations. Indeed, we have learned of but a single important contribution to Philosophy made by a citizen of our State, and even that was a contribution to its literature rather than to Philosophy itself, to wit:

Upon the Present Stand-point of Philosophy. By Dr. K. S. Bayrhoffer, Ph. D., late of Green County, Wisconsin. Published by the Philosophische Monatshefte of Berlin, Germany, Vol. III., Nos. 4 and 5; Vol. IV., Nos. 4 and 5.
In Jurisprudence, barely so much as is represented by the organic and statute law of the Territory and State, and by the reports of judicial proceedings.

It was a just ground of pride and satisfaction that the decisions of the supreme court of Wisconsin had gained so high a reputation in the country at large, and that the jurists had won for themselves and the state so honorable a place in connection with American jurisprudence. But it was, nevertheless, a fact that hitherto no contribution had been made to the science and literature of this great department other than those contained in the catalogue of publications herewith presented, to wit:

Statutes of the Territory of Wisconsin. 1839 to 1848.
Revised Statutes of Wisconsin. 1849.
Revised Statutes of Wisconsin. 1858.


The General and the Private and Local Laws since enacted and annually published.

A Digest of the Laws of Wisconsin from the year 1858 to the year 1868, both years inclusive; to which is added an Appendix, giving a List of all the Laws and Provisions of the Constitution passed upon by the Supreme Court. Compiled by E. A. Spencer, Counselor-at-law. Madison: Atwood & Rublee. 1868. One vol. 8vo. pp.


A Complete Digest of the Decisions of the Supreme Court of the State of Wisconsin, in Law and Equity, from its organization down to and including the Cases reported in vol. xiv of the Wisconsin Reports. By Wm. E. Sheffield, Counselor-at-Law. Chicago: E. B. Myers & Co. 1865. One vol. 8vo.

A Digest of Wisconsin Reports, from the Earliest Period to the year 1868; comprising all the Published Decisions of the Supreme Court of Wisconsin presented in Burnett's, Chandler's and twenty volumes of the Wisconsin Reports, with References to the Statutes. By James Simmons, Counselor-at-Law. Albany: William Gould & Son. 1868. One vol. 8vo.


In the Science of Politics, so much had been done, and such contributions had been made, as appeared from the legislative journals, the executive messages, the proceedings of political conventions, the discussions and reports of discussions contained in the public journals, and the few political speeches which had been published in pamphlet form, namely:

Speech on the Fugitive Slave bill, delivered in the United States Senate, August 6, 1852, by Hon. Charles H. Durkee.

Speech on the Lecompton Constitution, delivered in the United States Senate, March 20, 1858, by Hon. Charles H. Durkee.

The Calhoun Rebellion; its basis. Speech of the Hon. J. R. Doolittle in the United States Senate, December 14, 1859.


The State and the National Governments; their Mutual Political Relations; a speech delivered at Madison in 1860, by Hon. Tim. O. Howe.


On approving certain acts of the President. Speech of Hon. Tim O. Howe in the United States Senate, August 2, 1861.


On the Amendment to the Constitution. Speech of Hon. Tim O. Howe in the United States Senate, April 4, 1864.


The Legal Consequences of the Rebellion. Speech of O. H. Waldo, Esq., made at Racine in 1866.


Reconstruction. Speeches of Hon. Tim. O. Howe in the United States Senate, January 10, 1866, June 5, 1866, January 31, 1868.

On the impeachment of the President. Speech by Hon. Tim. O. Howe in the United States Senate.


In Social Science, so much of Political Economy as was found in the executive messages, the legislative discussions and enactments, the annual reports of the State departments and industrial societies, of the boards of trade, and in the proceedings of conventions held in the interest of the various industries and of public improvements looking to our commercial supremacy; so much of Educational Science and Social Economy as was shown by our schools, libraries, charitable,
reformatory and penal institutions, by the statute law of the State, and by the documents, journals, and other publications mentioned below:

**POLITICAL AND SOCIAL ECONOMY.**


The Practical Development of the Resources of Science in relation to Agriculture and the Health and Habitations of the People. Dr. D. B. Reid, LL. D., F. R. S. E. Svo, pp. 20. See also Trans. Wis. State Agr., vol. vi., 1860.


Banks and Banking. Svo, pp. 6.

Annual Reports of the State Treasurer of Wisconsin. 1848 to 1870.

Annual Reports of the State Agricultural Society. 1851 to 1870.

Annual Reports of the Milwaukee Chamber of Commerce. 1857 to 1870.


Proceedings of the Wisconsin and Fox Rivers Improvement Convention, held at Prairie du Chien, November 10, 1868, and at Portage City, Octo-
The Claims of the Natural Sciences to Enlarged Consideration in our Systems of Education. Inaugural Address by Dr. E. S. Carr, M. D., Wisconsin State University. 1856.
Annual Reports of the State Superintendent of Public Instruction. 1848 to 1870.
Annual Reports of the Regents of the University of Wisconsin. 1849 to 1870.
Annual Reports of the State Board of Normal School Regents. 1857 to 1870.
Annual Reports of the Trustees of the State Institution for the Education of the Blind. 1850 to 1870.
Annual Reports of the Board of Trustees of the Wisconsin Institute for the Deaf and Dumb. 1852 to 1870.
Annual Reports of the Board of Management of the Soldiers’ Orphans’ Home, 1866 to 1870.
Annual Reports of the Board of Managers of the Wisconsin State Industrial School for Boys. 1859 to 1870.
Annual Reports of the State Prison Commissioners. 1852 to 1870.
Annual Reports of Board of Trustees of the State Hospital for the Insane, 1860 to 1870.
The annual publications of the colleges, seminaries, academies and local boards of education.
The published Proceedings of the Wisconsin State Teachers’ Association. 1852 to 1870.
The Wisconsin Journal of Education. Published and edited successively
by Geo. S. Dodge, Janesville; John G. McMynn, Racine; A. J. Craig
and John B. Pradt, Madison, from 1856 to 1864; by Williams & Peck,
Mineral Point, from 1866 to 1869.

In Journalism, which might properly enough be considered
under the head of Social Science, Wisconsin had reached a po-
sition which at once evidenced the general intelligence of her
population and reflected credit upon her journalists; for the
total number of newspapers and other periodicals was no less
than 174,—of which 6 were monthly, 1 semi-monthly, 14 daily
and weekly, and 153 weekly,—and for creditable appearance,
editorial ability and extent of circulation, they compared fa-
borably with the like publications of any state in the union.

It is also worthy of note that Wisconsin was one of, if not
the, first of the states to form an editorial association (organ-
ized in 1857,) and that the same has had a career of uninterr-
upted prosperity and usefulness; holding annual meetings
and publishing fourteen volumes of its proceedings.

A list of the newspapers and other periodical publications
regularly issued at the date of January, 1870, will be found
in the Legislative Manual for that year.

In the Natural Sciences more had been accomplished than at
first appeared; but unhappily for our State, comparatively
little of it could be credited to Wisconsin; and even this had
been chiefly the work of a few private citizens devoted to
scientific pursuits, such as Dr. I. A. Lapham, LL. D., and Dr.
P. R. Hoy, M. D., who without other reward than the satis-
faction of having done the public a great service, have con-
tinued their scientific labors without intermission even from
early territorial times down to the present hour. Moreover,
the work actually done, whether by citizens, the State, or the
United States, had been almost wholly confined to geodetic,
topographical, nautical and natural history surveys.
The State had four times in quick succession legally recognized the importance of a geological survey by the appointment of a geologist, or a commission of geologists, to perform that service—once in 1853, by the appointment of Edward Daniels; once in 1854, by the appointment of Jas. G. Percival to succeed Mr. Daniels; again in 1857, by the reappointment of Mr. Daniels, upon the death of Dr. Percival; and yet again by the appointment of a Geological Commission consisting of James Hall of New York, and Edward Daniels and E. S. Carr of Wisconsin, in 1858. Nevertheless, except in the Lead Region, to which considerable special attention had been given by the several state geologists, but little more than general or preliminary work had been accomplished up to 1861, when the law instituting the survey was repealed.

In Pure Mathematics, and in Physics, including Astronomy, nothing of importance could be claimed by us. What had actually been accomplished, both by us and for us, in the departments of scientific investigation first above named, up to the date of which we are now speaking (1870), will appear on reference to the following quite complete catalogues of the books, journals and charts embracing the results of such labor:

IN DESCRIPTIVE GEOGRAPHY, GEOLOGY, TYPOGRAPHY AND HYDROGRAPHY.


Observations on the Wisconsin Territory: Chiefly on that part called “The Wisconsin Land District,” with a Map of the settled part of the Territory, as laid off by Counties by act of the Legislature of 1837. Philadelphia. 1838. 12mo, pp. 134.

*The author of this report has pleasure in stating that for the material of this and the subsequent bibliographical enumerations he is largely indebted to that efficient and conscientious public officer, Mr. Daniel S. Durrie, Librarian of the Wisconsin State Historical Society, and Member of the Academy, whose Bibliography of Wisconsin, being now quite complete, should somehow be published at an early day. For the perfection of his chartology, he acknowledges his indebtedness to Dr. I. A. Lapham.
A Condensed Geography (and History) of the Western States, or the Mississippi Valley. Cincinnati. 1838. 2 vols. 8vo.


Map of Wisconsin Territory; Compiled from the Public Surveys. By Capt. T. J. Crane. Senate Document. No 140. 1st Session 26th Cong. 1838.


Chart of West End of Lake Superior, St. Louis River, etc. Lake Survey Report. 1861.


Map showing the Position of the Reef near Racine Harbor. By S. Farmer. 1837. The same, smaller. 1838.

Township Map of Wisconsin. By S. Farmer. 1837. The same, reduced. 1868.

COUNTY MAPS OF THE FOLLOWING COUNTIES.

Winnebago. By I. H. Osburn. 1855.

Milwaukee, Waukesha, Racine, Kenosha and part of Walworth. By S. Chapman.

Dane. By A. Menzes and A. Ligowski. 1858.

Milwaukee. By Louis Lipman. 1858.

Milwaukee. By H. F. Walling. 1858.


Dodge. By ——— ——— 1860.

Columbia. By A. Legonski & C. Wasmund. 1861.
Sheboygan, By Randall & Palmer. 1862.
Grant. By J. T. Dodge. 1863.
Grant. By Gray & Pettengill. 1868.
Milwaukee County and City. By Silas Chapman & S. Crampton. 1869.

IN PHYSICAL GEOGRAPHY.


Lake Superior: Its Physical Character, etc. By Lous Agassiz. Boston. 1850. 8vo, pp. 428.


Reports of Meteorological Observations. See Army Meteorological Register,
Report of the President.

1820-1854. 4to and 8vo. Also Transactions Wisconsin State Agricultural Society, 1851 to 1859. Also Patent Office Reports, 1849 to 1861. Also Reports of Commissioners of Agriculture, 1863 to 1872.


IN GEOLOGY:


C.
A Canoe Voyage up the Minnay Sotor; with an account of the Lead and Copper Deposits of Wisconsin, etc. By G. W. Featherstonhaugh. London. 1847. 2 vols. Eighty maps and plates.


First and Second Annual Reports of the Geological Survey of Wisconsin. By James G. Percival, State Geologist; (being for the years 1855 and 1856), with map. See Executive Messages and Documents of those years. pp. 101 and 111.


Report on the Montreal River Copper Location, Ashland county. By Chas. Whittlesey. 1865. 8vo, pp. 5.


Account of the Copper Lands of Sections 15, 16 and 21, Town 45 north Range 2 west, Ashland county. By Chas. Whittlesey. 8vo, pp. 6. 1865.

Fresh Water Glacial Drift of the Northwestern States. By Chas. Whittlesey. See Smithsonian Contributions. Vol. 15. 1866. pp. 32. Maps and Figures,
Mineral Regions of Lake Superior as known from their earliest discoveries to 1865. By Henry M. Rice. See Collections of Minnesota State Historical Society. 1867, pp. 8-12.


IN BOTANY.

Catalogue of Plants found in the vicinity of Milwaukee. By I. A. Lapham. 1888. 12mo, pp. 23.


IN ZOOLOGY.


IN MEDICINE.

Transactions of the Wisconsin State Medical Society, Vols. I and II, 1842 to 1859.
Reports of Superintendent of the State Hospital for the Insane. See Reports of Board of Trustees, 1866 to 1870.

The Useful Arts had been cultivated with considerable success. Agriculture had advanced with steady pace, until the improved lands had an area of nearly five-and-a-half-million acres, and a total valuation of more than three hundred million dollars. Horticulture had won many honors in its struggles with the adversities of climate. The inventive genius of our citizens had made valuable contributions to the mechanic arts. Manufactures had reached an aggregate annual production of more than eighty million dollars, and in some important classes gained a supremacy in the western markets. State and county societies were in successful operation, guiding and stimulating the industry of the state in its various departments. Books and lesser documents had been regularly issued by authority of the legislature, while periodical and occasional publications, looking to the same end, had made good record of individual enterprise, and sown the seed of future harvests, as will appear from the following catalogue of industrial publications:

Observations on the Wisconsin Territory; chiefly on the part called the "Wisconsin Land District," with a map of the settled part of the Territory, as laid off by counties, by act of the Legislature of 1837. Philadelphia. 1838. 12mo, pp. 134.
A condensed Geography (and History) of the Western States, or the Mississippi Valley. Cincinnati. 1838. 2 vols. 8vo.

The Wisconsin Farmer; a monthly Magazine devoted to Agriculture, Horticulture, Mechanic Arts and Rural Economy. 18 vols. 8vo. 1848 to 1866, inclusive. Managed from 1848 to 1856 by Mark Miller; 1856 by Powers & Skinner; 1857 to 1860, by Powers, Skinner & Hoyt, 1860 to 1866 by Hoyt & Campbell; 1866 by W. B. Davis. Changed January, 1867 to a weekly folio, with title of Western Farmer; 1867 to 1870, by Morrow Brothers.

Transactions of the Wisconsin State Agricultural Society. 8 vols., to wit: vol. 1, 1851; vol. 2, 1852; vol. 3, 1853; vol. 4, 1854–5–6–7; vol. 5, 1858–9; vol. 6, 1860; vol. 7, 1861–8; vol. 8, 1869, 8vo, pp. 500, each. Prepared by A. C. Ingham, D. J. Powers and J. W. Hoyt, successive Secretaries.


Wisconsin Gazetteer: containing the names, location and advantages of the counties, cities and towns, etc. By J. W. Hunt. Madison. 1853. 8vo, pp. 255.


Hand Book of Wisconsin; or Guide to Travelers and Emigrants. By Silas Chapman.


Wisconsin; its Natural Resources and Industrial Progress; with a Map showing the General Geology, Climatology and Distribution of Timber. By J. W. Hoyt. Reprinted from Transactions Wisconsin State Agricultural Society for 1860, by order of Legislature. Madison. 1862. 8vo, pp. 68.


Statistics—History, Climate and Productions of Wisconsin. Published by order of the Legislature. 8vo., pp. 32, with maps.


Reports of Wisconsin State Horticultural Society, 1865-1870. See Transactions Wisconsin State Agricultural Society.


*The Fine Arts* had received some attention, but had made little impression upon the life and character of the people. The practice in Architecture, both in the construction of private dwellings and buildings for public use, gave here, as elsewhere in our country, painful proof of a prevailing ignorance of the principles of the art. Painting had been favored with many votaries of considerable promise, but no effort had been made to bring them into any sort of relations of associated effort, and there was nowhere in the State, even the beginning of what could be called an Art Gallery. Sculpture had been attempted by but two of our citizens, so far as we are aware, both of whom, however, were artists of high promise, and one of whom—Miss Vinnie Ream, a native of Madison—had already commanded the attention and confidence of the National Government and won for her name a more than national distinction.

*In Letters*, the product of our labor, though interesting, and in some cases of very superior quality, did not aggregate much
in amount outside of History. Even in this important branch, although a history of the State had been published, and important researches were steadily progressing under the direction of Hon. Lyman C. Draper, the accomplished and indefatigable Corresponding Secretary of the State Historical Society, comparatively little had yet been accomplished beyond the collection of material—an important work, to which the Historical Society has devoted itself with so much zeal and with such signal success that its library and collections fairly entitle it to rank second among the historical societies of the United States. So that the facts of Wisconsin history then accessible to the student, in printed form, must be sought for in a great number of works, of which, however, the somewhat extended catalogue herewith presented is believed to be very nearly, if not quite complete:

IN LANGUAGE.


A Latin Reader; with Copious Notes and Vocabulary. By same authors and publishers. [Also found in list of Educational Works.]

The First Six Books of the Aeneid. Translation and Notes by F. S. Searing, A. M., Professor of Ancient Languages, Milton College.


HISTORY—ANTIQUITIES.


Ancient Monuments of the Mississippi Valley: comprising the result of Extensive Original Surveys by Edward G. Squier and E. H. Davis, with


The Antiquities of Wisconsin surveyed and described on behalf of the American Antiquarian Society, with drawings, maps, etc. By I. A. Lapham. Washington. 1855. 4to, pp. 95.


EARLY EXPLORATIONS AND TRAVELS.


English edition of the above London. 1698. 12vo.

New Voyages to North America; containing an account of the several nations of this vast continent; their customs, commerce and navigation on the lakes; the attempts of the English and French to dispossess one another; and the various adventures between the French and the Iroquois confederates in England. Containing also a geographical description of Canada, etc.; to which is added a Dictionary of the Algonkine Language; with twenty three maps and cuts. Written in French by the Baron La Houton; done into English. London. 1703. 2 vols. vols. 8vo. La Haye. 1703. 2 vols. 12vo. La Haye. 1715. 2 vols. 12vo.

Relations of the Jesuits: Contenant ce qui s’est passé de plus remarquables dans les missions des pères de la campagne de Jesus dans La Monville France. Ouvrage publié sans les auspices du Gouvernement. 1611–1672. Quebec. 1858. 3 vols. 8vo.

Quotations from, in Smith's History of Wisconsin. Vol. 1. pp. 839. (Crespel's visit to Green Bay in 1728.)

Historical Journal of the establishment of the French in Louisiana. By Bérard de La Harpe. See French's Historical Collections Louisiana. Vol. 3. Also Smith's History of Wisconsin, vol. 1, pp. 321. (Le Sueur's visit to Green Bay and voyage up the Mississippi in 1693 and 1700.)


History of Louisiana or the western part of Virginia and Carolina, with Descriptions of both sides of the Mississippi River. By Le Page du Pratz. London. 1763. 2 vols. 12mo.


History of the War between the United States and the Sacs and Fox nations of Indians in the years 1827, 1831 and 1832. By John A. Wakefield, Jacksonville, Ills. 1834. 12mo, pp. 142.


History of Illinois; (containing an account of the Black Hawk War.) By Gov. Ford, Henry Brown, Ex-Gov. John Reynolds.

Various other works relating to the Black Hawk War, by the following authors: Orrin Clemens, Keokuk, 1866, 12mo; Samuel G. Drake, Boston, 1851, Svo; Lient. Gen. Winfield Scott, New York, 1864; Benj. Drake, Cincinnati, 1856 and '58, 12mo; Elbert H. Smith, New York, 1848, Svo; J. B. Patterson, Cincinnati and Boston, 1833 and 1834 and 1845, 12mo.
Annals of the West: embracing the principal events which have occurred in the Western States and Territories. By Jas. R. Albach. Pittsburg. 1857. 8vo.


Sketches of Iowa and Wisconsin. St. Louis. 1839. 12mo, pp. 103.


History of Wisconsin from its first discovery to the present time. By Donald G. McLeod. Buffalo. 1846. 8vo, pp. 399.

Sketches of the West; or Home of the Badgers: comprising an early history of Wisconsin and familiar letters on the country. Milwaukee. 1847. 8vo, pp. 48.


Historical Collections of Louisiana; embracing many rare and valuable Documents relating to the Natural, Civil and Political History of the State; compiled with Historical and Biographical Notes. Philadelphia and New York. 1846-1869. 6 vols. 8vo.


Report of Congressional Committee on the Petition of Sundry Indians of the Stockbridge Nation, comprising their Title to certain Lands. House Report, February 24, 1820.


Sketch of a Tour to the Lakes, of the Character and Customs of the Chippewa Indians and of incidents connected with the Treaty of Fond du Lac; with a Chippewa vocabulary. Baltimore. 1837. 8vo, pp. 493.

A Pilgrimage to Europe and America, tending to the Discovery of the Sources of the Mississippi, etc., with a Description of the whole course of the same, etc. By J. C. Betrami. London. 1828. 2 vols. 8vo. With Maps and Engravings. New Orleans. 1824. 8vo, pp. 325.


Dakotah; or Life and Legends of the Sioux around Fort Snelling. By Mrs. Mary Eastman. New York. 1849. 12mo, pp. 308.


Our Whole Country: Historical and Descriptive. By John W. Barber, Cincinnati. 1861. 8vo, pp. 1496. (Wisconsin portion, pp. 1167 to 1210.)


Historical Collections of the Great West. By Henry Hare. Cincinnati. 1853. 8vo, pp. 410.

Various papers relative to the supposed identity of Rev. Eleazar Williams (for a time resident at Green Bay) and Louis Capet, Dauphin of France, to-wit: In Putnam’s Magazine for 1853, 4 and ’08, by Rev. J. H. Hanson and A. H. Vinton; in New York World (September 19, 1867.)


A Soldier of the Cumberland; Memoir of Mead Holmes, of the twenty-first Wisconsin Volunteers. Boston. 1864, 1864, 12mo, pp. 240.

Metomen, Springvale, Alto and Waupun in Fond du Lac Counties, Wis., during the late War. Brandon. 1837. Svo, pp. 16.


Opening of the Mississippi: or Two Year’s Campaigning in the Southwest; a record of the campaign, sieges, actions and marches in which the Eighth Wisconsin Volunteers participated. By a non-commissioned officer. Madison. 1864. Svo.


BIOGRAPHY AND GENEALOGY.

Biographica, Genealogica Americana; an Alphabetical Index to American Genealogies and Pedigrees contained in State, County and Town Histories, Printed Genealogies and kindred works. By Daniel S. Durrie, Librarian of the Wisconsin State Historical Society. Svo, pp. 296. 1868.

Steele Family; a Genealogical History of John and George Steele, settlers at Hartford, Conn., 1635-6, and their Descendants, with general information respecting the families of the name. By Daniel S. Durrie. Enlarged edition. Sup. royal Svo, pp. x., 168. 1862.

Holt Genealogy; a Genealogical History of the Holt family in the United States; more particularly the descendants of Nicholas Holt, of New-


Such is a pretty full record, so far as made public, of the labors which had been performed by and for Wisconsin in the Sciences, in the Arts, and in Letters up to the year 1870. If it shows that in the Practical Arts—in the rough work of civilization—we had achieved marvelous results for a State of but twenty-two years, it reveals, on the other hand, how little has been accomplished in those higher fields of human activity, the scientific, literary and aesthetic, whose cultivation, if more difficult and apparently less fruitful of immediate results, is nevertheless not only indispensable to them but also essential to those high intellectual achievements which exalt man as an individual and make of the otherwise half-civilized community an enlightened and refined commonwealth. And, in so far as this deficiency has been shown, to that same extent has it been demonstrated that the welfare of the State would be promoted by an efficient organization formed for the express purpose of supplying it.

2. On behalf of Science, Literature and the Arts, the reasons which influenced the founding of the Academy are briefly stated.

The sympathies and aspirations of a people should not be limited to objects which refer to the State. Every community is in duty bound to contribute something to the common stock of human knowledge. Nay, more; there is a sentiment higher than even philanthropy, namely, fealty to truth independent of all its relations. It can hardly be said, to-day, when the rule of might is not yet ended, that a state or nation is influential in proportion as it cherishes those higher sentiments and makes them the rule of its conduct. But it is certain that none can justly claim the respect of mankind from whose policy they are excluded.
In other words, a people become truly great, prosperous and powerful, and thus fulfill the ends of the State, in proportion to their loyalty to the best interests of the race.

It was in view of all the foregoing facts and considerations that so large a number of the leading citizens of the State united their efforts in the movement which resulted in the establishment of this Academy, and that, in the call issued by them for the convention at which the organization was effected, they used the following language:

"An institution of the kind in question would bring into more intimate relations many men, who, though already more or less engaged in original studies and investigations of various kinds, accomplish less than they would had they frequent association with each other, a common storehouse into which to bring their material collections, and some proper medium through which to publish the approved results of their scientific labors to the world.

"It would awaken a scientific spirit in all enquiring minds, and thus lead to a more fruitful intellectual activity among the people at large and to a wider diffusion of useful knowledge.

"Through a scientific and economical exploration of the State, to which it would early lead—and which it might with great advantage direct—as well as through the published results of independent investigations, conducted by its members, it would do much towards bringing the many natural advantages of our State to the notice of foreign populations, and especially to capitalists, both at home and abroad; thus promoting the more rapid and more economical development of our material resources.

"It would result in new and important applications of science to the practical arts, and thus advance the industry of the country.

"It would associate artists of every class, establish higher standards for the execution of works of art, and lead to the formation of an art museum.

"It would bring together men of letters and promote advancement in every department of language, literature and philosophy.

"It would also tend to promote the literary and aesthetic culture of the people, and by the quickening, invigorating, and elevating influence it would exert upon all our higher educational institutions, largely contribute to the social progress of the State, and the earlier insure to Wisconsin an advanced position among the most enlightened communities of the world.

"We further believe that the time has now come, when, with proper effort on the part of those who may be reasonably expected to aid in so important an enterprise, the foundations may be laid for an institution that shall be of great practical utility and a lasting honor to the State."
II.

Plan of the Academy.

In view of the general objects to be accomplished, the great value of associated effort, and the relation of harmony that exists between the several departments of knowledge, the Academy was broadly planned, so as to embrace every important interest of the State and every department of investigation looking to the advancement of knowledge.

Its objects more specifically stated, are set forth in the terms of the Charter, as follows:

"Section 2. * * * Among the specific objects of the Academy shall be embraced the following:

1. Researches and investigations in the various departments of the material, metaphysical, ethical, ethnological and social sciences.

2. A progressive and thorough scientific survey of the State, with a view to determine its mineral, agricultural and other resources.

3. The advancement of the useful arts, through the applications of science, and by the encouragement of original invention.

4. The encouragement of the fine arts, by means of honors and prizes awarded to artists for original works of superior merit.

5. The formation of scientific, economical and art museums.

6. The encouragement of philological and historical researches, the collection and preservation of historic records, and the formation of a general library.

7. The diffusion of knowledge by the publication of original contributions to science, literature and the arts."

The Departments named in the Constitution are these:

The Department of the Sciences.
The Department of the Arts.
The Department of Letters.

But with a view to subsequent development, the Constitution provides that, "any branch of these Departments may be constituted a Section; and any Section or group of Sections
may be expanded into a full Department whenever such expansion shall be deemed important."

By reason of modifications made under this provision, the present scheme of the Departments is as follows:

1st. The Department of Speculative Philosophy (not yet organized).

2d. The Department of the Social and Political Sciences—Embracing:
   Jurisprudence.
   Political Science.
   Political Economy.
   Education.
   Public Health.
   Social Economy.

3d. The Department of the Natural Sciences—Embracing:
   Mathematics.
   Physics.
   Natural History.
   Medicine.

4th. The Department of the Arts—Embracing:
   The Useful Arts.
   The Fine Arts.

5th. The Department of Letters—
   Embracing:
   Language.
   Literature.
   History.

Each department has its own officers, while all are under the direction of a General Council.

The membership embraces Honorary and Corresponding D.
Members, Founders, Patrons, Members for Life, and Annual Members.

Three meetings are held annually for the reading and discussion of papers.

The proceedings of the Academy at these meetings, including brief abstracts of the papers read, are published, as soon as practicable after the adjournment, in a neat octavo periodical called the Bulletin.

III.

What the Academy Has Done.

At the time of its organization, the attempt, in so new a State, to form an association whose active members must of necessity be capable of making either original researches and investigations or valuable contributions to the Arts, was thought by some cordial friends of the objects of the Academy to be a little premature. The results have shown, on the contrary, that the enterprise had been too long postponed. The presidents of our colleges as well as the professors connected therewith, distinguished scientists and members of the several professions, have heartily united in the inauguration of the enterprise and have since shown their deep interest in its welfare by giving to it not only their moral and pecuniary support, but also the fruits of their intellectual labor.

The present number of Life Members is, 12; of Annual Members, 55; of Corresponding Members, 29.

The report of the Treasurer, herewith submitted, shows the condition of the fiscal affairs of the Academy at the date of the late Annual Meeting.
Report of the President.

[Copy.]

TREASURER'S REPORT.

WISCONSIN ACADEMY OF SCIENCES, ARTS AND LETTERS,
OFFICE OF THE TREASURER,
MADISON, Feb. 14, 1872.

HON. J. W. HOYT, President of the Wisconsin Academy of Sciences, Arts, and Letters:

SIR:—I have the honor to report the financial condition of the Academy as follows:

Total annual fees received from 44 members.......................... $480.00
To fees from life members ........................................... 807.25

$1,287.25

Disbursed in payment of warrants, as per vouchers heretofore and herewith furnished........................................... 382.75

Leaving a balance in the treasury of .................. $904.50

Placed to credit of life members' permanent fund.................. $807.25
To credit of general fund ........................................... 97.25

$904.50

REPORT OF FINANCE COMMITTEE.

I have this day examined the foregoing report and account of the Treasurer, and compared the same with the vouchers and stub books, and find the same in all respects correct.

NELSON DEWEY,
Chairman Finance Committee.

MADISON, Feb. 14, 1872.

As the duties of all officers have been performed without compensation, and the expenses of members in making their investigations and attending the meetings have been defrayed by themselves, the only expenditures have been for incidental purposes and for the printing of the Bulletin, of which five numbers have been issued.

The Museum of Natural History and the Useful Arts has made considerable growth, and must eventually come to be exceedingly valuable to the State for scientific uses, as well as interesting to the general public. By favor of the Governor and of the State Agricultural Society, it occupies the larger
one of the elegant apartments in the capitol so generously assigned to Agriculture some years ago.

There are many private collections in the State which would make great gain in usefulness could they be brought together at the capitol, and which, it is gratifying to be able to add, their proprietors, in some cases, purpose giving to, or depositing with, the Academy, so soon as suitable preparations are made for them.

Field work in Geology and the other branches of Natural History, being necessarily attended with considerable pecuniary outlay, it cannot be expected that very great progress will be made therein until the Academy is in a condition to relieve its members of at least a portion of such burden of expense. It already includes gentlemen fully competent to thorough work in each of the departments; and when this condition of pecuniary ability is reached there is reason to believe that, under a well devised system, embracing a judicious division of labor, a good deal may be done by it towards a scientific survey of the State, with comparatively little expense.

It is of much practical as well as scientific importance that further work of this kind should be done; for as yet no single county has been thoroughly examined in its relation to all the departments of natural history, and much the larger portion of the State, as already intimated, has not been favored with so much as a general reconnoissance.

The construction of railroads now in progress through the centre and northern portions, which are believed, upon evidence already furnished, to be rich in mineral and other resources, will facilitate the needed explorations and should prompt the state, as well as citizens who have an interest—and what citizen who has not?—in the development of that region, to extend to the Academy all reasonable encouragement in its endeavors to institute and carry on such investigations as properly come within the plan of its scientific labors.
The nature and extent of the work actually performed by members of the Academy, in the field, laboratory, and private study, since its organization in 1870, will appear from the following titles of papers prepared for its meetings:


On the importance of more attention to the Preservation and Culture of Forest Trees in Wisconsin. By Mr. P. Englemann, Secretary of the Natural History Society, Milwaukee.

The Coniferae of the Rocky Mountains, and their adaptation to the Soils and Climate of Wisconsin. By Hon. J. G. Knapp.


On the Importance and Practicability of finding a Unit of Force in Physics that shall be of Universal Application. By Prof. John E. Davies, M. D., Wisconsin State University.

The Fauna of Lake Michigan off Racine. By P. R. Hoy, M. D., Vice President of the Academy, Racine.

On the Age of the Quartzite of Baraboo. By Dr. I. A. Lapham, LL.D., General Secretary of the Academy.


The Metamorphic Rocks in the Town of Portland, Dodge county. By Rev. A. O. Wright, M. A.

The Metamorphic Rocks of Devil's Lake. By Rev. A. O. Wright, M. A.

Some Observations upon the Fauna of Mammoth Cave. By Mr. P. Englemann, Milwaukee.


The Mineral Well at Waterloo, Wisconsin. By Rev. A. O. Wright, M. A.

On the Classification of Plants. By Dr. I. A. Lapham, LL.D., Milwaukee.


The Mammalia of Wisconsin. By Dr. P. R. Hoy, M. D., Racine.

Results of Recent Observations in the Lead Regions of Wisconsin. By Hon. John Murrish, Mazomanie.


On the Kinetic Measure of Forces. By Prof. John E. Davies, M. D., State University.

On the Duty of the State to its Idiotic Children. By Prof. O. R. Smith, Milwaukee.

On the Place which the Indian Languages should hold in the Study of Ethnology. By Prof. John B. Feuling, Ph. D., Secretary of the Department of Letters, State University.

On the Clay Deposits and the Fossils found therein in the Region about Appleton. By Dr. R. Z. Mason, LL.D., Appleton.


Suggestions as to a Basis for the Gradation of the Vertebrata. By Prof. T. C. Chamberlin, State Normal School, Whitewater.

Facts Relating to the Local Geology of the Whitewater Region. By Prof. T. C. Chamberlin.


The Relations of Capital and Labor. By Dr. A. L. Chapin, D. D., LL.D., Vice President for the Department of Letters.

Social Science and Woman Suffrage. By Hon. Charles Caverino, Secretary for the Department of the Social and Political Sciences.


Insects injurious to Agriculture—Aphides. By Dr. P. R. Hoy, Vice President for the Department of the Natural Sciences.

On the Age of the Quartzites, Schists and Conglomerates of Sauk county. By Roland Irving, M. A., M. E., Professor of Geology, etc., in the State University of Wisconsin.

Observations on some of the Coal Deposits of Colorado. By Dr. J. W. Hoyt, President of the Academy.


On a Modification of Grove's Battery for a special Purpose. By Prof. John E. Davies, M. D.

The Theory of Evolution illustrated by the Science of Language. By Dr.
John B. Feuling, Ph. D., Professor of Comparative Philology, in the University of Wisconsin.
The Rural Population of England, as classified in Domesday Book. By Wm. F. Allen, A. M., Professor of Ancient Languages and History in the University of Wisconsin.
Outline of a Plan for a National University. By Dr. J. W. Hoyt, President of the Academy.

While many of these papers were of such interest as to make their publication in full very desirable, the Council have limited their selection for this purpose to those herewith submitted, the important character of which must commend them to an intelligent public.

On behalf of the Academy, I have the honor to be, Sir,

Very respectfully,

Your obedient servant,

J. W. HOYT.

MADISON, March 10, 1872.