THE TENTH

ANNUAL REPORT

OF THE

American Museum of Natural History

CENTRAL PARK, NEW YORK.

JANUARY 1st, 1879.

New York:

CORLIES, MACY & CO., STATIONERS AND PRINTERS,

39 NASSAU STREET.

MDCCCLXXIX.

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New York:
PRINTED FOR THE MUSEUM.
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Heliotype Printing Co. *Boston.*

MAIN HALL, SECOND STORY.

American Museum of Natural History.

Trustees.

ROBERT L. STUART.
WILLIAM A. HAINES.
HOWARD POTTER.
ROBERT COLGATE.
BENJAMIN H. FIELD.
ADRIAN ISELIN.
J. PIERPONT MORGAN.
MORRIS K. JESUP.
D. JACKSON STEWARD.
JOSEPH H. CHOATE.
PERCY R. PYNE.
JOHN B. TREVOR.
JAMES M. CONSTABLE.
WM. E. DODGE, Jr.
JOSEPH W. DREXEL.
ANDREW H. GREEN.
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FREDERIC W. STEVENS.

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CHARLES LANIER.

Prof. ALBERT S. BICKMORE, *Superintendent.*
Dr. J. B. HOLDER, *Assistant Superintendent.*
Prof. R. P. WHITFIELD, *Curator of Geology.*

Tenth Annual Report,

1878.

THE Trustees of the American Museum of Natural History have the pleasure of presenting this, their Tenth Annual Report, to the Patrons, Fellows and Members of the Museum.

During the past year marked progress has been made in the more exact scientific classification of our own collections, and in receiving on deposit, and thus rendering available to the scientific men of our country, several collections which have been the subject of elaborate examination, and have, therefore, become standards of comparison for all subsequent investigation.

To farther aid the student in his original researches, we have received on deposit the several special Libraries of great value subsequently mentioned, and the large general Library of the New York Academy of Sciences.

The Treasurer's Annual Report is annexed, showing that the Trustees, including a small sum from other citizens, have contributed $17,650, mostly for payment on account of the Hall collection of fossils, and from the city the sum of $12,500 has been received, to partly defray the necessary maintenance.

The cases in the lower hall have been perfected by the addition of shelves, and the whole collection of mammals scientifically arranged. Several members of the Board of Trustees have purchased and presented the mounted mammals exhibited by Prof. H. A. Ward at the Centennial Exhibition at Philadelphia, consist-

ing of a camel, moose, elk, male and female and young of the bison, male and female of the Rocky Mountain sheep, caribou, grizzly bear, hooded seal, skeleton of dugong, and many smaller specimens. A large painting, "The Wounded Bison," by the late W. J. Hays, has been deposited by his widow, and is placed on the first landing of the stairway.

In the department of Ornithology, the birds of North America have each been carefully identified, and the name written underneath the stand of those that are mounted. A selection has been made from the skins presented by Mr. D. G. Elliot, to be mounted and added to the collection on exhibition, and the remainder divided into series for study and duplicates for exchange.

Three hundred and eighteen specimens, representing 295 species of the duplicate birds from various countries, have been forwarded to the Smithsonian Institution, and we shall receive in exchange nearly all the species and specimens necessary to render our collection of North American birds complete.

The number of our specimens in this department is as follows:

Exhibition Collection, mounted and including a few to be mounted	8,893
Duplicates (in skins)	1,158
Study Collection (in skins)	461
Total	10,512

At the opening of the Museum, one year ago, our Ethnological and Archæological collections, which are exhibited on the gallery floor, occupied only the eastern side of the room, but now they fill all but two cases on the western side, and in these will be exhibited additions to this department, which have been already shipped from California and Canada.

The principal gifts have been a series of fine stone implements of Ireland, presented by Mr. T. W. U. Robinson, of Durham, England; insignia and ornaments of Chinese officials, presented by Hon. Geo. B. Glover; three models of cliff dwellings in Colorado, by a member of the Board; a small collection of rare stone implements from New York State, and some collected by Dr. C. C. Abbott in New Jersey, presented by Mr. James Muhlenberg Bailey.

From the estate of the late Dr. A. Habel we have received 50 specimens terra cotta vases and figures from San Salvador and Peru.

Many rare implements have been added to the Sturgis Collection, and Mr. G. L. Feuardent has deposited three cases full of stone and bronze implements and pottery from the different Swiss Lakes, and bones and implements of stone from the Dordogne Caves, in Southern France, obtained from the Marquis de Vibray, the whole forming a most interesting series, because it supplements the unique collection from the Somme Valley, deposited by the President of the Board.

In the Geological department the work of opening the duplicate fossils of the Hall Collection has been completed, and they have been arranged in drawers in the attic story. In the Exhibition Hall the collections have been examined and the duplicate material selected therefrom, commencing with the Archæan formation to the Chemung group of the Devonian age inclusive. The specimens have been zoologically arranged under 26 geological formations, and under 35 geographical areas, and the number which remains for exhibition up to the Chemung is 52,298, each one of which has been separately and carefully examined. Of these, the typical and figured specimens number 5,265, most of which are

represented in that important series of scientific works, "The Natural History of the State of New York." These numbers indicate that the whole series of specimens which will be selected for permanent exhibition from the Hall Collection will amount to 80,000 or 100,000, and the whole number of typical and figured specimens at about 7,000.

We have received from the estate of the late Carlos Cobb, through Mrs. E. F. Peterson, a select series, mostly on large slabs, of the fossils of the Waterlime Group, containing 27 types of Pterygotus, Eurypturus and other Crustacea.

Mr. Samuel Sloan has presented several remarkably large and perfect slabs of coal plants from the anthracite mines at Scranton, Pa.

Mr. D. J. Steward has forwarded several large slabs of Schoharie grit from Goshen, Orange Co., N. Y., and many separate fossils.

Mr. A. Woodward has presented and arranged 114 rocks, illustrating the geology of Manhattan Island, and also assisted the Curator of that department.

By exchange with Prof. C. H. Hitchcock, of New Hampshire, we have obtained a relief map of that State and 2,000 specimens of rocks representing the work done by its geological survey under his direction.

From the estate of the late Dr. A. Habel we have received 70 specimens of rocks and fossils from Peru, all of which are new to the collection.

We have received on deposit, and arranged in drawers, where each specimen is secure and accessible, the collection of rocks and fossils gathered by the United States National Survey of the 40th parallel, Mr. Clarence King in charge. It contains 3,523 fossils, 3,880 rocks, and also 2,800 microscopic sections of rocks, which are

described by Prof. Zirkel, of Leipsig, Germany, in Vol. VI. of the elaborate reports of that careful survey. In the adjoining room are the fossils, rocks and minerals collected by Prof. Raphael Pumpelly during his extensive travels in California, China and Japan, and the specimens upon which he has prepared many scientific papers.

In the same room are the lithological collections of Major T. B. Brooks, which contain the rocks described by him and Prof. Julien in the Geological Reports of the States of Michigan and Wisconsin; also a full series from Austria, identified by the lithologist of the survey carried on by that Government, and a similar series representing the lithological work done by the Geological Survey of Sweden.

The lithology of New York and other States received in the Hall Collection fills 78 boxes of 1¾ cubic feet each, and contains the many sections across the State made by Mather and others. The Geological Survey of New Jersey have forwarded specimens of their clays, and will hereafter send, year by year, specimens illustrating the progress of their work.

The 2,000 lithological specimens received from Prof. Hitchcock are each labeled by him, and illustrate fully the volumes published by his survey.

Arrangements are being perfected for the rapid increase of this remarkable amount of valuable material, purchased or deposited with us, for the use of those connected with the surveys of the various States or the nation.

Prof. M. E. Wadsworth, of the Geological Survey of California, worked during a part of the summer on the specimens described by Prof. Zirkel, and Prof. McGold-

rick, of St. Xavier's College, in this city, is studying n this department and aiding us in its arrangement.

To render these collections available to the investigator, we have paid particular attention during the past year to the gathering into this fire-proof structure of libraries of scientific works in the various departments of natural science that come within the province of our institution, with the following gratifying degree of success:

	Vols.	Pamphlets.
Jay Library on Conchology, presented by Miss C. L. Wolfe....	997	180
Brevoort Library on Fishes and General Zoology, deposited by the President of the Board	2,083	1,599
Scientific Works from various donors.....	576	293
Library on Mining and Physical Geology, deposited by Mr. Clarence King.....	2,430	1,652
Library of the New York Academy of Sciences, deposited by the Society for safe keeping.....	4,621	1,537
Prof. Whitfield's Library on Palæontology.....	352	381
Prof. Bickmore's Library on Ethnology and Archæology.....	908	420
Total	11,967	6,062

The Library of the New York Academy is particularly rich in serials, received from over two hundred similar Scientific Societies in all parts of the world. The Museum also is constantly receiving important additions from foreign Societies, through the Smithsonian Institution, and from the geological surveys of the several States and the nation.

Miss C. L. Wolfe has presented an excellent portrait of her father, the late John David Wolfe, the first President of the Museum, which was painted by Mr. D. Huntington, and is placed in the hallway of the principal floor.

A commodious entrance has been added to our building during the past summer, and, at the request of the owners of the surrounding property, the sum of $20,-

000 has been appropriated by the Board of Estimate and Apportionment to be expended in improvements upon our Square during 1879.

The New York and Metropolitan Elevated Railroads have nearly completed their joint route on Ninth Avenue to our building, and soon the Museum will be accessible by a ride of a few minutes from any part of the city.

Our contract with the Department of Public Parks provides that on Wednesdays, Thursdays, Fridays, Saturdays and holidays, the Museum shall be open to the public free of charge, but Mondays and Tuesdays are reserved for the study and rearrangement of the collections, and on these days visitors to the city are admitted, and those contributing money or specimens. A member paying $10 yearly receives a ticket of admission for himself and family on these days, and to the spring and autumn receptions, and complimentary tickets for friends. The privileges of Fellows and Patrons contributing larger sums are stated in the By-Laws.

A considerable balance being still due Professor Hall on account of his collection, and a number of the specimens on exhibition having been deposited with privilege of purchase upon advantageous terms, we confidently appeal to our public-spirited citizens to join us in enlarging and perfecting the interesting collections on public exhibition, and increasing the facilities which will attract the scientific men of our country more and more to our city.

Dr. The American Museum of Natural History *in acc't with* J. PIERPONT MORGAN, TREASURER. **Cr.**

1878.	Balance brought forward, Jan. 1st, 1878	$1,009 37
	Salaries	8,153 32
	Labor	3,238 94
	Coal	1,000 00
	Insurance	150 00
	Printing and Stationery	597 97
	Freight and Expressage	123 35
	Custom House and Traveling Expenses	85 92
	Postage, Car-fare and Commissions	306 99
	Carpenter Work and Fitting	160 70
	Mops, Brushes, Sawdust, etc.	517 22
	Gas, Advertising and Music at Receptions	215 69
	Classifying and arranging N. American Birds	250 00
	Paid Prof. H. A. Ward, for Collection of Mounted Mammals	2,500 00
	Paid Prof. James Hall, on acc't of Geological Collection	12,352 60
	Balance carried forward	93 77
		$30,755 84

1878.	Balance from "Purchase Acc't"	$664 61
	By Check from Hugh Auchincloss	1,500 00
	" " W. A. Haines	500 00
	" " Percy R. Pyne	1,000 00
	" " Adrian Iselin	1,000 00
	" " Oliver Harriman	1,000 00
	" " Cornelius Vanderbilt	1,000 00
	" " Joseph H. Choate	500 00
	" " Robert Colgate	1,000 00
	" " Joseph W. Drexel	1,000 00
	" " Jas. M. Constable	500 00
	" " W. E. Dodge, Jr	500 00
	" " John B. Trevor	500 00
	" " Charles Lanier	500 00
	" " Robert L. Stuart	1,300 00
	" " Frederic W. Stevens	1,000 00
	" " Morris K. Jesup	500 00
	" " Samuel Willets	300 00
	Dividend Atlantic Mutual Ins. Co. Certificate	33 60
	From Department Public Parks, acc't 1877	2,622 59
	" " " " " 1878, and from Annual Members	13,835 04
		$30,755 84

Examined and approved, { ROBERT COLGATE, JAMES M. CONSTABLE, CHARLES LANIER, } *Auditing Committee.*

[E. & O. E.] NEW YORK, *January 10th*, 1879.

J. PIERPONT MORGAN, *Treasurer.*

INCORPORATION.

AN ACT

TO INCORPORATE THE

American Museum of Natural History,

Passed April 6, 1869.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. John David Wolfe, Robert Colgate, Benjamin H. Field, Robert L. Stuart, Adrian Iselin, Benjamin B. Sherman, William A. Haines, Theodore Roosevelt, Howard Potter, William T. Blodgett, Morris K. Jesup, D. Jackson Steward, J. Pierpont Morgan, A. G. P. Dodge, Charles A. Dana, Joseph H. Choate, and Henry Parish, and such persons as may hereafter become members of the corporation hereby created, are hereby created a body corporate, by the name of "The American Museum of Natural History," to be located in the City of New York, for the purpose of establishing and maintaining in said city a Museum and Library of Natural History; of encouraging and developing the study of Natural Science; of advancing the general knowledge of kindred subjects, and to that end of furnishing popular instruction and recreation.

SEC. 2. Said Corporation shall have power to make and adopt a Constitution and By-Laws, and to make rules and regulations for the admission, suspension, and expulsion of its members, and their government, the number and election of its officers, and to define their duties, and for the safe keeping of its property, and, from time to time, to alter and modify such Constitution, By-Laws, Rules, and Regulations. Until an election shall be held pursuant to such Constitution and By-Laws, the persons named in the first section of this Act shall be, and are hereby declared to be the Trustees and Managers of said Corporation and its property.

SEC. 3. Said Corporation may purchase and hold, or lease any real and personal estate necessary and proper for the purposes of its incorporation, provided they shall not hold real estate which shall exceed one hundred thousand dollars in value.

SEC. 4. Said Corporation shall possess the general powers, and be subject to the restrictions and liabilities prescribed in the Third Title of the Eighteenth Chapter of the First Part of the Revised Statutes.

SEC. 5. This Act shall take effect immediately.

STATE OF NEW YORK,
OFFICE OF THE SECRETARY OF STATE, } ss.

I have compared the preceding with the original law on file in this office, and do hereby certify that the same is a correct transcript therefrom, and of the whole of said original law.

SEAL. Given under my hand and seal of office at the city of Albany, this fourteenth day of April, in the year one thousand eight hundred and sixty-nine.

D. WILLERS, JR., *Deputy Secretary of State.*

At a meeting of the Trustees, held at the residence of Theodore Roosevelt, Esq., April 8th, 1869, the above charter was unanimously accepted by a majority of the Trustees.

CONSTITUTION

OF THE

American Museum of Natural History,

IN THE CITY OF NEW YORK.

ARTICLE I.

This Corporation shall be styled the AMERICAN MUSEUM OF NATURAL HISTORY.

ARTICLE II.

The several persons named in the Charter, and such others as they may add to their number, which shall not exceed twenty-five in all at one time, shall be the Trustees to manage the affairs, property and business of the Corporation, and in case of the death, accepted resignation, or removal from the State of any Trustee, a new Trustee shall be elected to fill his place by the remaining Trustees; but no election of a Trustee shall be held except at a quarterly meeting of the Trustees, on written notice of not less than one week, specifying that such election is to be held, and the vacancy which is to be filled; and every election of Trustees shall be by ballot, and no person shall be deemed to be elected a Trustee unless he shall receive the votes of at least three-fourths of the Trustees present.

ARTICLE III.

The Trustees shall meet quarterly on the second Monday of every February, May, August and November, at an hour and place to be designated on at least one week's written notice from the Secretary, and shall annually, at the quarterly

meeting in February, elect the officers and committees for the ensuing year. They shall also meet at any other time to transact special business on a call of the Secretary, who shall issue such call whenever requested so to do, in writing, by five Trustees or by the President, and give written notice to each Trustee of such special meeting, and of the object thereof, at least three days before the meeting is held.

ARTICLE IV.

The officers of the said Corporation shall be a President, a First and Second Vice-President, a Secretary and a Treasurer, an Executive Committee, an Auditing Committee, and a Finance Committee, all to be elected from the Trustees. All these officers shall hold their offices for one year, and until their successors shall be elected.

The election of officers shall be by ballot, and the persons having a majority of the votes cast, shall be deemed duly elected.

ARTICLE V.

The President, and in his absence, the First or Second Vice-President, shall preside at all the meetings of the Museum and of the Trustees.

The Secretary shall keep a record of the proceedings of the Trustees, of the Executive Committee, and of the Auditing Committee, and shall preserve the seal, archives and correspondence of the Museum, shall issue notices for all meetings of the Trustees, and attend the same.

The Treasurer shall receive and disburse the funds of the Museum. He shall keep the accounts of the Museum in books belonging to it, which shall be at all times open to the inspection of the Trustees. He shall report in writing, at each quarterly meeting of the Trustees, the balance of money on hand, and the outstanding obligations of the Museum, as far as practicable; and shall make a full report at the annual meeting, of the receipts and disbursements of the past year, with such suggestions, as to the financial management of the Museum, as he may deem proper.

ARTICLE VI.

The Executive Committee shall consist of five, who shall have the control and regulation of the Collections, Library and other property of the Museum; and shall have power to purchase, sell and exchange specimens and books, to employ agents, to regulate the manner and terms of exhibiting the Museum to the public, and generally to carry out in detail the directions of the Trustees; but the Executive Committee shall not incur any expense or liability for the Museum exceeding two thousand dollars at one time, or exceeding, in all, ten thousand dollars, in the interval between the quarterly meeting of the Trustees, without the express sanction of the Trustees.

ARTICLE VII.

The Auditing Committee shall consist of three, and it shall be their duty to examine and certify all bills presented against the Corporation; and no bills shall be paid unless first approved in writing by at least two members of this Committee.

ARTICLE VIII.

The Finance Committee shall consist of three, including the Treasurer, and it shall be their duty to take charge of and invest the funds of the Museum in its name, and to take all proper measures to provide means for its support.

ARTICLE IX.

A majority of the Trustees for the time being shall constitute a quorum for the transaction of business, but five Trustees meeting may adjourn and transact current business, subject to the subsequent approval of a meeting at which a quorum shall be present.

ARTICLE X.

By-laws may, from time to time, be made by the Trustees, providing for the care and management of the property of the Corporation, and for the government of its affairs.

Such By-Laws, when once adopted, may be amended at any meeting of the Trustees by a vote of a majority of those present, after a month's notice in writing of such proposed amendment.

ARTICLE XI.

The contribution of two thousand five hundred dollars to the funds of the Museum, at one time, shall entitle the person giving the same to be a Patron of the Museum.

The contribution of one thousand dollars, at one time, shall entitle the person giving the same to be a Fellow in Perpetuity.

The contribution of five hundred dollars, at one time, shall entitle the person giving the same to be a Fellow for Life.

Any person may be elected by the Trustees to either of the above degrees, who shall have donated to the Museum Books or Specimens to the value of twice the amount in money requisite to his admission to the same degree, and the President and Secretary shall issue Diplomas accordingly, under the seal of the Museum. The Trustees may elect Honorary Fellows of the Museum in their discretion.

All persons receiving such degrees and diplomas shall be entitled, at all times, to free admission to the Museum and its Exhibitions, but shall not, by virtue of such degrees or diplomas, become members of the Corporation.

ARTICLE XII.

No alterations shall be made in this Constitution, unless at a regular quarterly meeting of the Trustees; nor by the votes of less than two-thirds of all the Trustees; nor without notice in writing of the proposed alteration, embodying the amendment proposed to be made, having been given at a regular meeting.

BY-LAWS.

I.

Patrons giving $2,500 are each entitled to 10 Complimentary Season Tickets, 1 Subscriber's Ticket, and 10 Tickets for a single admission.

Fellows in Perpetuity giving $1,000 are each entitled to 5 Complimentary Season Tickets, 1 Subscriber's Ticket, and 10 Tickets for a single admission.

Fellows for Life giving $500 are each entitled to 4 Complimentary Season Tickets, 1 Subscriber's Ticket, and 10 Tickets for a single admission.

Associate Fellows giving $250 are each entitled to 3 Complimentary Season Tickets, 1 Subscriber's Ticket, and 10 Tickets for a single admission.

Members giving $100 are each entitled to 2 Complimentary Season Tickets, 1 Subscriber's Ticket, and 10 Tickets for a single admission.

Annual Members, paying $10 yearly, are each entitled to 1 Subscriber's Ticket, and 10 Complimentary Tickets for a single admission.

II.

Any Trustee who shall fail to attend three consecutive Regular Quarterly Meetings of the Board, shall cease to be a Trustee, unless excused by the Board.

III.

No gentleman shall hereafter be eligible to the position of a Trustee who shall not be a "Fellow in Perpetuity" of the Museum, unless by a unanimous vote of a quorum of the Board—excepting Trustees *ex-officio*—nor be eligible unless his name shall be presented by the nominating committee at a Regular Quarterly Meeting prior to the meeting at which said election shall take place.

CONTRACT

WITH THE DEPARTMENT OF PUBLIC PARKS

FOR THE OCCUPATION OF THE NEW BUILDING.

THIS AGREEMENT, made and concluded on the twenty-second day of December, in the year one thousand eight hundred and seventy-seven, between the DEPARTMENT OF PUBLIC PARKS OF THE CITY OF NEW YORK, the party of the first part, and the AMERICAN MUSEUM OF NATURAL HISTORY, party of the second part, Witnesseth :

Whereas, by an Act of the Legislature of the State of New York, passed April 22d, 1876, entitled "An Act in relation to the powers and duties of the Board of Commissioners of the Department of Public Parks, in connection with the American Museum of Natural History, and the Metropolitan Museum of Art," the said party of the first part is authorized and directed to enter into a contract with the said party of the second part, for the occupation by it of the buildings erected or to be erected on that portion of the Central Park, in the City of New York, known as Manhattan Square, and for transferring thereto and establishing and maintaining therein its museum, library and collections, and carrying out the objects and purposes of said party of the second part; and

Whereas, a building contemplated by said Act has now been erected and nearly completed and equipped in a manner suitable for the purposes of said Museum, as provided in the first Section of the Act of May 15, 1875, known as Chapter 351, of the Laws of 1875, for the purpose of establishing and maintaining therein the said museum, as provided by the said last-named Act, and by the Act of April 5, 1871, known as Chapter 290, of the Laws of 1871 ; and

Whereas, it is desired as well by the said party of the first part, as by the said party of the second part, that, immediately upon the completion and equipment of said building, the said party of the second part should be established therein, and should transfer thereto its museum, library and collections, and carry out the objects and purposes of the said party of the second part;

Now, therefore, it is agreed by and between the said parties as follows, namely :

First.—That the said party of the first part has granted and demised and let, and doth, by these presents, grant, demise and let, unto the said party of the second part, the said buildings and the appurtenances thereunto belonging, to have and to hold the same so long as the said party of the second part shall continue to carry out the objects and purposes defined in its charter, or such other objects and purposes as by any future amendment of said charter may be authorized; and shall faithfully keep, perform and observe the covenants and conditions herein contained on its part to be kept, performed and observed, or until the said building shall be surrendered by the said party of the second part, as hereinafter provided.

Secondly.—That neither the party of the first part, its successor or successors, nor the Mayor, Aldermen and Commonalty of the City of New York, shall be in any manner chargeable or liable for the preservation of the said building or the property of the party of the second part which may be placed, therein, against fire, or for any damage or injury that may be caused by fire to the said property; but it is agreed that damages as aforesaid excepted, the said party of the first part will keep said building, from time to time, in repair.

Thirdly.—That as soon after the completion and equipment of said building as practicable, said party of the second part shall transfer to, and place and arrange in, said building, its museum, library and collections, or such portion thereof as can be properly displayed to the public therein, and shall have and enjoy the exclusive use of the whole of said building, subject to the provisions herein contained, and the rules

and regulations herein prescribed, during the continuance of the term hereby granted, or until a surrender thereof, as herein provided.

Fourthly.—That the exhibition halls of said building shall, on Wednesday, Thursday, Friday and Saturday of each week, and on all legal or public holidays, except Sundays, be kept open and accessible to the public, free of charge, from nine o'clock A. M. until half an hour before sunset, under such rules and regulations as the party of the second part shall, from time to time, prescribe; but on the remaining days of the week the same shall be only open for exhibition to such persons, upon such terms as the said party of the second part shall from time to time direct. But all professors and teachers of public schools of the City of New York, or other institutions of learning in said city, in which instruction is given free of charge, shall be admitted to all the advantages afforded by the said party of the second part, through its museum, library, apparatus and collections, or otherwise, for study, research and investigation, free of any charge therefor, and to the same extent and on the same terms and conditions as any other persons are admitted to such advantages, as aforesaid.

Fifthly.—That the museum, library and collections, and all other property of the said party of the second part, which shall or may be placed in said building, shall continue to be and remain absolutely the property of said party of the second part, and neither the said party of the first part nor the said the Mayor, Aldermen and Commonalty, shall by reason of said property being placed in said building, or continuing therein, have any right, title, property or interest therein; nor shall the said party of the second part, by reason of its occupation and use of said building under this agreement, acquire, or be deemed to have any right, title, property or interest in said building, except so far as expressly granted by this agreement.

Sixthly.—That the said party of the second part shall, on or before the first day of May, in every year, during the continuance of this agreement, submit to the said party of the

first part, its successor or successors, a detailed printed report of the operations and transactions of the said party of the second part, and all its receipts and payments, for the year ending with the 31st day of December next preceding.

Seventhly.—That said party of the first part shall have, at all times, access to every part of said building for general visitation and supervision, and also for the purpose of the performance of the duties devolved upon it by the laws of the State of New York, or of the City of New York. That the police powers and supervision of said party of the first part shall extend in, through and about said building. That the said party of the second part may appoint, direct, control and remove all persons employed within said building, and in and about the care of said building, and the museum, library and collections therein contained.

Eighthly.—That said party of the second part may, at any time, after the expiration of three, and before the expiration of six months from the date of the service of a notice in writing to said party of the first part, its successor or successors, or to the Mayor of the City of New York, of its intention so to do, quit and surrender the said premises and remove all its property therefrom; and upon and after such notice, the said party of the second part shall and will, at the expiration of the said six months, quietly and peaceably yield up and surrender unto the said party of the first part and its successors all and singular the aforesaid and demised premises. And it is expressly understood and agreed by and between the parties hereto, that if the said party of the second part shall omit to do, perform, fulfill or keep any or either of the covenants, articles, clauses and agreements, matters and things herein contained, which on its part are to be done, performed, fulfilled or kept, according to the true intent and meaning of these presents, then and from thenceforth this grant and demise shall be utterly null and void. And in such case it shall and may be lawful for said Department to serve or cause to be served on the said party of the second part a notice in writing declaring that the said grant hereinbefore made has become utterly null and void, and thereupon

the said party of the first part, its successor or successors (ninety days' time being first given to the said party of the second part to remove its property therefrom), may re-enter, and shall again have, repossess and enjoy the premises aforementioned, the same as in their first and former estate, and in like manner as though these presents had never been made, without let or hindrance of the said party of the second part, anything herein contained to the contrary notwithstanding.

Ninthly.—And it is further expressly understood, and agreed, by and between the parties hereto, that this agreement may be wholly canceled and annulled, or, from time to time, altered, or modified, as may be agreed, in writing, between the said parties, or their successors, anything herein contained to the contrary in anywise notwithstanding.

In witness whereof, the party of the first part hath caused this agreement to be executed by their President and Secretary, pursuant to a resolution of the Board of Commissioners of said Department, adopted at a meeting held on the thirtieth day of January, A. D. 1878, and the said party of the second part hath caused the same to be executed by their President, and their official seal affixed thereto, pursuant to a resolution of the Trustees of the American Museum of Natural History adopted at a meeting held on the twelfth day of February, A. D. 1877.

In presence of
D. PORTER LORD.

JAMES F. WENMAN,
President Department of Public Parks of the City of New York.

WILLIAM IRWIN,
Secretary Department of Public Parks of the City of New York.

SEAL
of the American
Museum of
Natural History.

ROBERT L. STUART,
President American Museum of Natural History.

STATE OF NEW YORK,
City and County of New York, } ss.:

On this 12th day of February, in the year 1878, before me personally came James F. Wenman, President of the Department of Public Parks of the City of New York, and William Irwin, Secretary of the said Department of Public Parks, with both of whom I am personally acquainted, and both of whom being by me duly sworn, said that they reside in the City and County of New York, that the said James F. Wenman is the President, and the said William Irwin is the Secretary of the said Department of Public Parks, and that they signed their names to the foregoing agreement by order of the "Board of Commissioners" of the said Department of Public Parks, as such President and Secretary.

W. C. BESSON,

[SEAL.] (73) *Notary Public, N. Y. Co.*

STATE OF NEW YORK,
City and County of New York, } ss.:

On this 12th day of February, in the year 1878, before me personally came Robert L. Stuart, the President of the American Museum of Natural History, with whom I am personally acquainted, who being by me duly sworn, said that he resides in the City and County of New York, that he is the President of the "American Museum of Natural History," and that he knows the corporate seal of said museum, that the seal affixed to the foregoing agreement is such corporate seal, that it is affixed thereto by order of the "Board of Trustees" of said American Museum of Natural History, and that he signed his name thereto by the like order, as President of said Museum.

W. C. BESSON,

[SEAL.] (73) *Notary Public, N. Y. Co.*

Recorded in the office of the Register of the City and County of New York in Liber. 1426 of Cons., page 402, February 16, A. D. 1878, at 9 o'clock A. M., and examined.

Witness my hand and official seal,

FREDERICK W. LOEW,

[SEAL.] *Register.*

DONATIONS,

1878.

CAPTAIN HENRY ERBEN, U. S. Navy.
1 specimen of the Samoan Pigeon (Didunculus).

REV. GEORGE WILSON, Glenluce, Wigtonshire, Scotland, through PROF. J. J. STEVENSON.
86 species Marine Shells from the shores of Scotland.
77 species Fresh Water and Land Shells, identified by PROF. DUNN, of Edinburgh.
1 piece of Cyclopterus Hibernicus, from Purtonhaugh, Scotland; a fragment of the Slab figured in HUGH MILLER'S "Testimony of the Rocks," p. 453.

BUREAU OF EDUCATION, Washington, D. C., through GEN. JOHN EATON, Commissioner.
"Contributions to the History of Medical Education in the United States, 1776–1876."
"Circulars of Information," etc. Nos. 1 and 2, 1877; No. 1, 1878.
Report of the Commissioner, 1876.

ISAAC F. WOOD, N. Y.
Drawing of a Fish.

GEORGE N. LAWRENCE, N. Y.
"Descriptions of New Species of Birds from the Island of Dominica." Original paper.

STATE OF MICHIGAN, through HON. W. J. BAXTER, Secretary of State.
Vol. III. of the "Geological Survey of Michigan, 1873–1876."

NOVA SCOTIAN INSTITUTE OF NATURAL SCIENCE.
Vol. IV., Parts III. and IV., of "Proceedings and Transactions, 1876–'77."

STATE OF NEW YORK, through HON. ALLEN C. BEACH, Secretary of State, Albany.
Census of the State, 1875.

L'ACADEMIE ROYALE DE COPENHAGUE.
Bulletin No. 2, April–September, 1877.
Report for 1878.

H. H. HILL, Cincinnati, O.
2 casts of Sculptured Faces.
1 cast of Grinding Stone.
1 Ornament.

HON. GEO. B. GLOVER, Shanghai, China.
Collection of 500 Chinese Coins, arranged chronologically from B. C. 245 to the present day.

T. M. TRIPPE, Orange, N. J.
1 Skull and fragments of Pottery from the Mounds of Southwestern Colorado.

STATE OF NEW JERSEY, through PROF. GEO. H. COOK, State Geologist.
"Report on Clays," 1878.
Annual Report, 1877.
13th Annual Report Rutgers Scientific School, 1877.
5th Annual Report New Jersey State Board of Agriculture, 1877.

MINNESOTA HISTORICAL SOCIETY, St. Paul.
Proceedings, No. 1.
Annual Report, 1877.

PROF. A. S. BICKMORE, N. Y.
Knife and Scabbard and Arrow used by the Ainos, Island of Yesso.
Knife and Scabbard used by the Japanese Noblemen.
Malay Cleaver and Sheath, from Amboina.

CAPTAIN CHAS. BATES, Ship Java, 2d, Martha's Vineyard, Mass.
A collection of Reptiles, Fishes and Insects, in alcohol, from Duke of York Islands.

ROBERT L. STUART, N. Y.
Specimen of Preserved Head of S. A. Indian.
Specimen of Preserved Rat.

L. H. AYME, N. Y.
6 bones of the Moa, from New Zealand.
1 skin of Gull, " "
A collection of Algæ and Plants, from New Zealand.
Lot of Shells and Fossils.
2 eggs of the Penguin.
4 bottles of Fishes, Reptiles and Insects.
12 Numbers "Proceedings of Royal Society of Tasmania."

PHILIP HECHT, N. Y.
1 pair Moccasins,
1 bead Necklace,
1 skin of Ermine,
} from the Munneconjoux Indians, Cheyenne.

J. SABIN, N. Y.
9 Volumes Sabin's Reprints.

SCHOOL OF MINES, Sydney, New South Wales, through PROF. THOS. EGLESTON, Columbia College, New York.
2 Geological Maps of New South Wales.

WM. H. COHEN, N. Y.
1 fossil Ostrea.

W. B. DEGARMO, N. Y.
1 Calabash Fruit—Bermuda.
A collection of Coral and Shells.
1 Fish.
Several specimens of the Tropic Bird (Phaeton).

FREDERICK ERATH, N. Y.
1 skull.

DEPARTMENT OF THE INTERIOR, Washington.
"Exploration of the Colorado River," Powell.
"Tertiary Flora," Lesquereux.
Bulletins 1, 2 and 3, Vol. 4, U. S. Geological Survey.
" 10 and 12, National Museum.
"Birds of Colorado Valley," Coues.
"Entomological Commission," 1877.
"Miscellaneous Publications," No. 10.
"Catalogue of Indian Photographs."

ERNEST FESTE, N. Y.
4 Stalactites, from banks of the Mississippi, near St. Louis.

HISTORICAL SOCIETY OF STEIERMARK.
"Mittheilungen und Beiträge," 1878.

THOMAS BLAND, N. Y.
Head-dress of a Seneca Chief.

CINCINNATI SOCIETY OF NATURAL HISTORY, Cincinnati, Ohio.
Journal—Vol. 1, Nos. 1 and 2, 1878.

SMITHSONIAN INSTITUTION, Washington, D. C.
12 packages of the Publications of Foreign Societies.

MRS. WILLARD PARKER.
Ethnological collection from Zulu, Africa.
A collection of Indian Ornaments and Utensils.

ALEXANDER BAMAUNI, Brooklyn.
Necklace of Stones worn by the Aborigines of Mexico.

GEORGE SYKES, Peekskill, N. Y.
Several Stone Implements and fragments of pottery.

D. JACKSON STEWARD, N. Y.
2 large Slabs of Schoharie Grit.

WAR DEPARTMENT, Washington, Bureau of Engineers, through Gen. A. A. Humphreys, Chief.
"Survey of the 40th Parallel," Vols. 1, 2, 3, 4, 5 and 6, with Atlas.

A. H. ALEXANDER, West Hoboken.
Larynx of Howling Monkey.

H. G. MARQUAND, N. Y.
Indian Antiquities, from the Mounds of Missouri.

PEABODY MUSEUM OF ETHNOLOGY AND ARCHÆOLOGY, Cambridge, Mass.
Eleventh Annual Report.

PROF. R. E. C. STEARNS.
"List of his Contributions to Natural History."

M. PREVOST.
1 Porcupine Fish.
2 Fangs of Serpent.
Ball of hair from stomach of a cow.
Cube crystal of Native Salt.
1 Nest of Oriole.

MRS. H. PAINE, N. Y.
Collection of Shells (general).

A. C. YATES.
Specimen of preserved "Native Food."

HON. R. C. WINTHROP, Boston.
"Correspondence of Hartlib, Haak, Oldenburg and others of the founders of the Royal Society, with Governor Winthrop, of Connecticut—1661–1672."

ROYAL ACADEMY OF SCIENCES, Lisbon.
2 Pamphlets on the Botany of Portugal.

GUSTAVUS H. ROBINSON, U. S. Army, Davies Island, N. Y.
1 specimen of Cuttle Fish, caught near the island.

STATE OF ALABAMA, through Eugene A. Smith, State Geologist.
Reports on the Geological Survey—1875, 1876.

THOMAS W. U. ROBINSON, Durham, England.
A collection of Stone Implements, Arrow Heads, etc., from England and Ireland.
1 copy of Greenwell's "British Barrows."

ESTATE OF THE LATE CARLOS COBB, Buffalo, N. Y., through Miss E. F. Cobb.
A collection of Minerals, Fossils and Shells.

HUGH N. CAMP, N. Y.
1 specimen of Lead Ore from the mine of the St. Joseph (Mo.) Lead Company.

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By the Payment of Twenty-five Hundred Dollars.

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Colgate, Samuel J.
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Constable, Frederick A.
Constable, James M.
Constable, Mrs. James M.
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de Garmo, W. B.
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Delamater, Cornelius H.
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Eidlitz, Marc
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Field, Dudley
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Gilbert, Clinton
Gillespie, G. D. H.
Glover, Chas. H.
Goadby, Jas. H.
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Goldenberg, Levi
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Gunther, F. Frederick
Gunther, Wm. Henry
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Hall, Valentine G.
Hallgarten, A.
Hallgarten, Julius
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Harrison, Miss M. J.
Hartley, Marcellus
Hasell, Bentley D.
Havemeyer, J.
Haven, G. G.
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Hay, Allan
Haydock, George G.
Haydock, Robert
Heins, Wm. F.
Heller, Jonas
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Hendricks, Joshua
Hendricks, M. M.
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Hoffman, S. V.
Hoffman, Wm. B.
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Leale, Chas. A., M.D.
Lee, William H.
Lehmaier, M. H.
Le Roy, Daniel
Lesher, Stephen R.
Leverich, Henry S.
Lewis, Charlton T.
Liautard, A. F., M.D.
Lindgens, Henry A.
Livingston, Edward
Livingston, John A.
Livingston, Admiral J. W.
Livingston, Robt. E.
Livingston, Robt. J.
Livingston, Wm. S.
Livingston, Wm. S., Jr.
Lothrop, W. K.
Lowrey, Joseph S.
Ludington, C. H.
Lusk, Wm. T., M.D.
Macy, Chas. A., Jr.
Macy, Wm. H.
Maddux, Lewis
Major, W. K.
Mali, Charles
Man, A. P.
Manice, Wm. D. F.
Marcotte, L.
Martin, Bradley
Martin, W. A.
Martin, Wm. C.
Mason, J. J., M.D.
Mason, Lowell
Maxwell, Alexander
McAlpin, D. H.
McCready, N. L.
McCurdy, R. H.
McGinnis, John, Jr.
McVickar, J. A., M.D.
Mead, Ralph, Jr.
Meeker, W. B.
Merritt, Douglas
Merritt, Mrs. Julia
Metcalfe, John T., M.D.
Milhau, J. J., M.D.
Miller, George M.
Minturn, Mrs. A. M.
Minturn, Edward
Mitchell, James L.
Moir, James
Moore, Henderson
Moore, John P.
Moore, W. H. H.
Morgan, D. P.
Morgan, Geo. D.
Morgan, Wm. F.
Morris, Henry Lewis
Morrison, Edward
Morrison, Geo. A.
Mortimer, W. Y.
Moslè, George
Mott, Alex. B., M.D.
Moulton, Clarence F.
Moulton, Gilman S.
Mowry, A. L.
Muller, Adrian H.
Munoz, J. M.
Myers, John K.
Myers, T. Bailey
Navarro, Juan N.
Neftel, Wm. B., M.D.
Neilson, F.
Nichols, Truman, M.D.
Norre, Adam
O'Conor, Charles
O'Connor, Thos. H.
Odell, Jonathan
Odell, Mrs. Jonathan
Olcott, Hon. F. P.
Olmstead, Dwight H.
Olmsted, Fred. Law
Olyphant, R. M.
Olyphant, Robert
Opdyke, W. S.
Ostrander, C. V. B.
Otis, F. N., M.D.
Ottendorfer, Dr. Oswald
Paddock, Eugene H.
Parsons, Arthur W.
Parsons, George W.
Parsons, John E.
Patterson, Thomas C.
Peabody, Arthur J.
Peckham, Walton H., M.D.
Pell, John H.
Pell, Robt. L.
Penfold, Edmund
Penfold, Wm. Hall
Perkins, C. L.
Perley, Joseph L.
Perry, Myron
Peters, Geo. A., M.D.
Phelps, Royal
Phelps, Wm. Walter
Phillips, J. C.
Phœnix, Phillips
Pinkney, J. H.
Pinkus, F. S.
Platt, John R.
Platt, Sam'l R.
Popham, Wm. H.
Porter, Hon. John K.
Post, Alfred C., M.D.
Potter, Miss Grace H.
Potter, Howard.
Potter, Rev. H. C., D.D.
Powers, Geo. W.
Powers, Wm. P.
Preston, Wm. I.
Prime, Frederick
Prince, J. D.
Purdy, Wm. Macneven
Purssell, James
Pyne, M. Taylor
Pyne, Percy R.
Pyne, Percy R., Jr.
Quintard, E. A.
Ramsay, C. G.
Raynolds, C. T.
Reid, Whitelaw
Reilly, Hon. Bernard
Reisig, Richard, M.D.
Renwick, W. R.
Requa, J. M.
Riker, D. S.
Riker, John L.
Riker, Wm. J.
Riley, Chas. V.
Robbins, George A.
Robertson, R. A.
Roelker, Bernard
Rogers, Chas. H.
Rogers, John
Roosa, D. B. St. J., M.D.
Roosevelt, Jas. A.
Roosevelt, Theodore
Roosevelt, W. E.
Rosenbaum, A. S.
Routh, Henry de B.
Russell, Charles H.
Rutler, Thomas
Rütten, August
Ryan, Columbus
Rylance, Rev. J. H., D.D.
Sabin, J.
Sabine, G. A., M.D.
Sage, Russell
Sandford, Rollin
Sands, Samuel S.
Sanford, Hon. Charles F.
Satterlee, S. R.
Sayre, Lewis A., M.D.
Schack, Frederick
Schafer, Samuel M.
Schafer, Simon
Schley, Wm.
Schuyler, Geo. L.
Schuyler, Philip
Schwendler, Fred.
Shaler, Gen. Alexander
Shaw, Francis Geo.

Shea, Hon. George
Sheafe, J. F.
Shearman, Wm. Pitt
Shethar, Samuel
Sinclair, John
Sistare, George K.
Skidmore, Samuel T.
Skidmore, William L.
Slawson, J. B.
Sloan, Samuel
Sloane, William
Sloane, Wm. D.
Slocovich, G.
Smith, Charles S.
Smith, Edward F.
Smith, H. Erskine
Smith, L. Bayard
Smith, Roswell
Smith, Rev. Cornelius B.
Smith, Samuel M.
Smith, Wm. Alex.
Smith, Wm. Henry
Soutter, Mrs. J. F.
Spier, Hon. Gilbert M.
Spies, A. W.
Spencer, Hon. James C.
Starin, Hon. John H.
Sterling, A. F.
Stevens, A. O.
Stevenson, V. K.
Steward, Campbell
Stewart, David
Stewart, Mrs. Lispenard
Stone, David M.
Strange, A. B.
Strong, Charles E.
Strong, W. L.
Stuart, Alexander
Stuart, Mrs. R. L.
Stuart, Robert L.
Sturgis, Appleton
Sturgis, Miss Margaret B.
Stuyvesant, A. V. H.
Stymus, W. Pierre
Sutherland, John
Sutherland, John L.
Suydam, D. Lydig
Swan, Samuel, M.D.
Swan, Wm. H.
Tailer, Edward N.
Taintor, Chas. M.
Talcott, James
Tappan, Hon. J. Nelson
Taylor, Aug. C.
Terbell, H. S.
Thompson, S. C.
Thompson, W. Prall
Thomson, James
Thorn, Wm. K.
Thurber, F. B.
Thurber, H. K.
Tiemann, Peter C.
Tobias, Samuel I.
Toucey, J. M.
Tousey, Sinclair
Townsend, John P.
Townsend, R. W.
Tracy, Chas.
Tracy, J. Evarts
Trevor, H. G.
Trevor, John B.
Trevor, Mrs. John B.
Troup, Miss Louisa
Tuck, Edward
Valentine, Lawson
Vanderbilt, Cornelius
Van Nostrand, David
Van Winkle, Hon. E. S.
Vermilye, J. D.
Von Post, Herman C.
Wales, Hon. Salem H.
Walker, Evan T.
Wall, Charles
Wall, Michael W.
Wallach, Adolph
Wallack, Lester
Ward, Mrs. M. H.
Webb, Gen. Alex. S.
Webb, Mrs. Gen. A. S.
Weber, John
Webster, Sidney
Weed, Hon. Thurlow
Weeks, Francis H.
Weeks, John A.
Wenman, Hon. James F.
Wheeler, J. W.
Wheelock, Geo. G., M.D.
White, Norman
Whitney, Alfred R.
Wickham, Hon. W. H.
Wiechers, W. A.
Wiley, W. H.
Williamson, Hon. David B.
Wilson, John
Winston, F. S.
Winthrop, Robert
Witherbee, S. H.
Wood, Hon. Fernando
Wood, Isaac F.
Worsham, Mrs. B. D.
Wotherspoon, Henry H.
Wright, Charles L.
Wright, Samuel V.
Wright, Wm. Woolsey
Wyckoff, J. F.
Young, Mason

ARRANGEMENT OF THE COLLECTIONS

OF THE

American Museum of Natural History,

January 1st, 1879.

[Note —A Visitors' Guide is in course of preparation, but large additions having just been received, necessitating a re-arrangement of the collections, the present schedule is now published for gratuitous distribution.]

THE BUILDING.

The building now completed is one section of a plan that can be extended until it occupies the entire area of Manhattan Square, which contains 18¼ acres. A photographic copy of the ground plan is displayed on the right-hand side entrance, showing that marginal park-like areas border the structure upon the outside, and within are four open courts; also a plan and views showing the proposed improvements on our Square during the present year.

This building has been erected by the City, and the collections displayed are purchased by private subscriptions, and are the property of the Museum.

The lowest story is 18 feet high ; the second, or principal story, including the gallery, is 30 feet; the upper story 22 feet, and the rooms in the mansard story 16 feet in height. Each hall is 170 feet long and 60 wide inside the walls.

On the left-hand side of the entrance are plans of the new Museum of Natural History, now in process of erection by Her Majesty's Government at South Kensington, London, and beneath it a plan of the British Museum, the red line indicating the boundary of our Square on the same scale.

COLLECTIONS EXHIBITED IN THE LOWER STORY.

The desk-cases ranged through the middle of the lower hall are filled with the Jay collection of Shells, presented by Miss C. L. Wolfe, as a

memorial of her father, the first President of the Museum. Passing to the northern end of the room, we come to a group, consisting of a Camel from Armenia, a Moose from Nova Scotia, and a Wapiti from the Rocky Mountains, mounted by Prof. H. A. WARD, of Rochester, and presented by HUGH AUCHINCLOSS, Esq.

ECONOMIC DEPARTMENT.

On each side of the northern door, three cases, being an actual Geological Section along the route of the South and North Alabama Railway Company.

Case A contains Building Stones from Japan, and Marbles from Ireland, Italy and Vermont. The desk-case next in order is filled with exquisite Wax Fruits from the Iowa Horticultural Society, made by COL. BRACKETT.

Case B. (1–3): Woods from Bermuda. (4 to 10): Woods from Jamaica. (11–13): Woods from America.

Case C. (Panels 1 to 10): Woods from Japan. (11–13): Woods from Bermuda.

SKELETONS.

Case D. (1–7): Crustacea above, and below skeletons of fish, turtles, Manatee and Dugong. (8–13): Birds.

Case E. (1–6): Skulls of Carnivora, below Marsupials, Rhinoceros. (7): Llama. (8): Skulls and Anatomy of Man. (10–11): Monkeys. (12): Rodents.

MAMMALS.

Case F. *Order Quadrumana.* Old World Monkeys.

Case G. (1–10): New World Monkeys. (11–12): Lemurs. *Order Cheiroptera,* Bats.

Case H. (1–3): Bats. *Order Insectivora,* (3): Hedgehogs. *Order Carnivora,* (4–13): Lion, Leopards, Tiger, Cats.

Case I. (1–4): Cats. (5–7): Genets. (8): Ichneumons. (10–13): Dogs and Foxes.

Case J. (1–2): Martens, Ermines. (3): Fishers. (4–5): Skunks and Coatimundis.

Case K. Grizzly Bear, formerly living in Park Menagerie; Hooded Seal, Greenland.

Case L. *Order Sirenia,* (1–2): Manatee. *Order Angulata, Sub-Order Perissodactyla,* (6–8): Malay Tapir. *Sub-Order Artiodactyla,* (3): Babirusa. (10–13): Llama, Caribou.

Case M. (4): Fallow Deer. (8): European Stag.

Case N. (5): Axis Deer. (10): Roebuck. (12): Musk Deer.

Case O. Male, Female and Young of Buffalo.

Case P. (1–2): Wild Buffalo, Europe, forests of the Czar, very rare. (3–10): Antelopes, South Africa.

Case Q. (1–3): Spring-bok, Siberian Antelope, Chamois. (4–10): Morocco Sheep, Male and Female of Rocky Mountain Sheep. *Order Hyracoidea,* (13): Hyrax or Rock Rabbit.

Case R. (1–4): *Order Rodentia,* Mice, Jumping-Mice. (6): Dormice. (7–8): Below Beavers, above Flying Squirrels. (10–13): Squirrels.

Case S. (4): Chinchilla. (6): Porcupines. (8): Rabbits. (10–11): *Order Edentata,* Sloths, Armadillos. *Order Marsupialia,* (12–13): Opossums, Tasmanian Wolf.

Case T. (1-4): Kangaroo. (5–6): Above Koala, Wombats. *Order Monotremata,* (6): Below Duckbills and Echidna.

On the stair-way, first landing, a painting, "The Wounded Bison," by the late W. J. Hays.

SECOND FLOOR OR PRINCIPAL HALL.

Hallway, at the head of the main stairs, a portrait of Mr. John David Wolfe, presented by Miss C. L. Wolfe.

BIRDS.

Case A (1–6) **and Case B** (1–4): Systematic collection of Birds and their skeletons, illustrating the Families and Sub-Families of the classification adopted (that of Professor Lilljeborg, of Upsala, Sweden), from the Thrush to the Penguin.

Case B. (6): Commence Elliot collection of North American Birds, the sub-family, genus and species and its common names are shown on the labels.
This collection fills also Cases C, D, E and F.

Case G. Humming Birds, nearly all from Central and South America.

Case H. Commences Birds of South and Central America. Verreaux and Maximilian collections fill Cases H, I and J.

Case H. (7): Lower shelf, Cock of the Rock. (8): Middle and lower shelves, Chatterers and Bell Birds. (10): Middle shelf, Umbrella Birds.

Case I. (1): Lower, and (2) Top, Great Macaws of Brazil and Amazon Valley. (3 and 4): Toucans. (6): The Trogons, with plumage of green and gold and scarlet, and below, Jacmars, in bronze tints. (10): Night Hawks. (13): Condors from the Andes.

Case J. (2): Curasows. (5): South American Ostrich.

Case K and Case L. Birds of Australia and the Pacific Islands.

Case M. Commence Birds of Europe and Asia, which fill N, O, P and Q.

Case N. (6): Quail, Europe and the Himalayas. (7): Sand Grouse, Syria. (8–13): Pheasants.

Case O. (1 and 2): Pheasants and Peacocks. (7 and 8): Eagles and Vultures.

Case P. (1–3): Owls. (4): Rollers. (7): Lower shelf, Hornbills. (8–10): Cuckoos.

Case Q. (1–2): Ravens, Rooks, Crows. (3): Jays. (4): Orioles. (8): Two-Tailed Starlings. (12): Pittas.

Case R. Birds of Africa, also in S and T. (1–4): Water Birds. (6–8): Storks. (10): Bustards.

Case S. (3): Rollers. (4): Bee-eaters. (5 and 6): Plantain-eaters. (7): Hornbills.

Case T. (2): Remarkably changeable colored Starlings.

GALLERY.

ARCHÆOLOGICAL DEPARTMENT.

Cases A, B, C and D. Sturgis collection of the Implements of Pacific Islanders.

Case A. Spears and Lances.

Case B. Masks from New Ireland, used in religious ceremonies.

Case C. Elegantly carved War Clubs, Hervey Island.

Case D. (1–2): Paddles, Samoa, New Ireland. (3): top, Savage Island. (3–4): Battle Axes, New Zealand, New Britain.

Cases E and F. War Clubs, Fiji Islands, Solomon Islands.

Case G. (1–2): Ornaments, New Ireland, Fiji Islands. (3–4): Shark's Teeth, Weapons, Kingsmills Island.

Case H. Kava Bowls, Tonga Island. Models of Canoes, Fiji Island.

Case I. Chinese Musical Instruments, presented by Hon. Geo. B. Glover. Malay Krises.

Case J. War Spears and Dresses, Pacific Islands.

Case K. (1–4): Fish and Bird Spears, Bows, Harpoons and Dresses of Eskimos. (5–6): Dresses of Indians, Rocky Mountains.

Case L. Dresses of Sioux Indians.

Cases N and O. Models of Cliff Dwellings and Villages of the Pueblos, Colorado and New Mexico.

Case P. Pottery from Mounds of Missouri, presented by Mr. H. G. Marquand.

Case Q. Stone Rings, Porto Rico; Pottery from Mexico and Central America.

Case R. Pottery from Peru.

Cases S and T. Stone Implements from Swiss Lake Dwellings and Caves in southern France, Feuardent collection, and from England and Ireland, presented by Mr. T. W. A. Robinson, of Durham.

Railing Case. North and west of west side, de Morgan collection of Stone Implements from the Valley of the Somme, in the northern part of France. This collection, which is deposited by the President of the Museum, is regarded as the most complete of its kind, except that of Boucher de Perthes, at Abbeville. Then follow on the west side, collections from the "Swiss Lake Dwellings," the Bement series, representing the Stone Age of Denmark, and specimens from various parts of our own country. South side, Squier & Davis' collections from the Mississippi Valley. On the east side, specimens from Porto Rico, South Carolina, part of the de Haas collection, deposited by Mr. D. J. Steward, and the large and choice collection made by Col. Chas. C. Jones, Jr., of Georgia, described and figured in his "Antiquities of the Southern Indians."

UPPER OR THIRD FLOOR.

JAMES HALL COLLECTION.

On entering the room, near the centre of the floor is seen the fossil Skeleton of the Moa (Dinornis giganteus), an extinct bird from New Zealand.

The Table Cases arranged along the middle of the room contain Fossils from the various formations, represented in the Upright Cases, opposite which they are placed, except the two and a half on the west side, and near the north end, the first of which is filled with Vertebrate remains from Holmes' collection, and the others with a special collection of Brachiopoda, from various formations in Europe.

Case A, on the left as you enter. (Panel 3 and 4): A Geological Map of New-York State, illustrating the classification generally adopted. Below are volumes published by the State Survey, illustrating the fossils of the several formations of the State, most of the specimens figured in them being on exhibition in the Hall. Such *type* specimens are indicated by green tickets, and illustrate the scientific importance of this collection. (1 and 2): Rocks and Minerals of the Laurentian Period. (5): Of the Huronian, and in 6, Rocks representing the geology of New York Island.

Case B. (1–4): and adjoining Table Case, contains 200 *types* and *figured* specimens of FOSSILS from the Potsdam formation of America. Other parts of this and the following cases are filled with specimens illustrating the various formations, as follows:

Case B. (6–7): Calciferous. (8–10): Canadian. (11–13): Chazy, Birds-eye and Black-River.

Case C. (1–7): New York Trenton. (7–13): Western Trenton.

Case D. (1–2): Utica Slate. (3): New York Hudson River. (4–10): Western Hudson River. (11): Medina. (12–13): Clinton.

Case E. (1–2): Clinton. (3–10): New York Niagara. (11–13): Niagara of Indiana.

Case F. (1–6): Western Niagara. (7): Guelph Limestone. (8): Onondaga Salt Group. (10-13): Lower Helderberg.

Case G. (1–3): Remainder of Lower Helderberg. (4–8): Oriskany Sandstone [opposite Table Case, Oriskany of Maryland.] (9–12): Schoharie Grit. (13): Corals of New York Upper Helderberg.

Case H. (1–6): New York Upper Helderberg. (7–11): Western Upper Helderberg. (12–13): Marcellus Shale. (13, upper part): Plants of Hamilton Group.

Cases I and J, and (1–3) in Case K, New York Hamilton. And (4–6) Western Hamilton.

Case L. (1–3): Tully Limestone, Genessee Slate and Portage Group. (4–13): Chemung Group.

Case M. (1–2): Chemung Group. (3–4): Catskill. (5–10): Waverly Group. (11 and 12): Lower Carboniferous Limestones, Burlington Division. (13): Keokuk Division.

Case N. (1–4): Keokuk Division. (5–7): Warsaw Division. (8–9): St. Louis Division. (10–11): Chester Division. (12–13): Fossil Plants of the Coal Measures.

Case O. (1 and 2): Remaining Plants of the Coal Measures. (3–6): Invertebrates and Fish of the Coal Measures. (7–10): Fishes and Tracks of the Triassic Sandstones, including many presented by R. L. STUART, Esq. (11–13): Invertebrates of the Atlantic Coast, Cretaceous.

Case P. (1–3): Plants and Invertebrates of the Upper Missouri Cretaceous. (4–11): Invertebrates of the Eocene. (12–13): Invertebrates of the Atlantic Coast Miocene.

Case Q. (1–2): Cretaceans from the Upper Missouri region, collected by MEEK and HAYDEN. (3–12): Eocene Tertiary, from various localities. (13): Miocene.

Case R. (1–6): Vertebrate remains from the Upper Missouri. (7): Post Pleiocene, from Lake Champlain. (8–13): Collection of European Fossils, embracing Primordial to Carboniferous.

Case S. (1–2): Saurian remains from the Liassic of England. (2–3): Jurassic and Cretaceous Fossils, from Europe. (4): Cretaceous and Tertiary Collections, from various sources. (5–9): Pleiocene and Post Pleiocene collections of South Carolina (HOLMES' collection), containing many types and figured specimens forming the basis of the work of Tuomey and Holmes on South Carolina. (10): Cretaceous and Liassic Fossils, containing some large Ammonites. (12–13): Eocene Fossils, from the Paris Basin Beds of France. (13): Plants of the Miocene Formation of Switzerland.

Case T. Fossil Birds from New Zealand, and a collection of Fossils and Minerals, illustrating the geology of Yesso, Japan.

THE ATTIC STORY.

The attic story is divided into a number of rooms for Libraries and Laboratories for scientific men who are carrying on original researches. In these rooms are the collections of the National Survey of the 40th Parallel, Mr. Clarence King in charge; the rocks and minerals gathered by Prof. R. Pumpelly during his travels, and work on various State Surveys; and the choice and large lithological collections of Maj. T. B. Brooks, containing the rocks described in the Michigan and Wisconsin State Reports, and a full series from Austria, Sweden, and 2,000 specimens illustrating the lithology of New Hampshire. The following are the libraries of scientific works already gathered in this fire-proof structure:

	Vols.	Pamphlets.
Jay Library on Conchology, presented by Miss C. L. Wolfe.....	997	180
Brevoort Library on Fishes and General Zoology, deposited by the President of the Board	2,083	1,599
Scientific Works from various sources	576	293
Library on Mining and Physical Geology, deposited by Clarence King, Esq.....	2,430	1,652
Library of the New York Academy of Sciences, deposited for safe-keeping by the Society	4,621	1,537
Prof. Whitfield's Library on Palæontology	352	381
Prof. Bickmore's Library on Ethnology and Archæology	908	420
Total.....	11,967	6,062

ARSENAL BUILDING,

Near Fifth Avenue and Sixty-fourth Street.

The collections exhibited here are such as cannot be placed before the public in the new building, Eighth Avenue and Seventy-seventh Street, for want of space.

ENTRANCE.

In the entrance, or the first floor, is a skeleton of a large Walrus, from Alaska, deposited by the Park. On the south and west sides are Mammals; on the north side a group, representing an Arab dispatch-bearer, who, while crossing a desert on a swift-traveling camel, is attacked by a lion and lioness. The lioness is represented as fatally wounded and dying, her limbs already rigid, while the lion springs in fury upon the Arab, who is attempting to defend himself with a curved dirk or scimitar, and the camel, aware of its danger, turns its head toward its rider and cries for help. This work was mounted by EDWARD VERREAUX, of Paris, and received the highest prize at the Exposition of 1867.

Passing up the northern stair-way we come to the

SECOND STORY.

Along the east and north sides are Corals, Sea-fans and Shells. On the west side, mounted Fishes, from the Maximilian Collection. Northern case, lower shelf, an Eel 15 inches in girth; lower shelf, next case, the blue Dolphin, which frequently changes its colors when it dies. Next case, lower shelves, the Angel Fishes, conspicuous on account of their long fins and bright colors. Large case, alligator 12 feet long, from Florida; Snakes and Lizards. Large case, Turtles; unmounted Skeleton of Elephant; large Birch Trees nearly gnawed off by beavers for their dams; large Nests made by Hor-

nets. Three southern cases, mounted Fishes, Porcupine Fish, Gar-pike, Sharks.

South and east sides, the Maximilian Collection of reptiles and fishes preserved in alcohol. Table cases, eight filled with Shells, two with Sea-urchins and Sea-fans, and one with Birds' Nests and Eggs.

Ascend the northern stair-way to

THIRD STORY.

East and north sides, minerals. Lower shelves, large masses of Crystallized Quartz, from cave in Ellenville, N. Y., presented by D. J. STEWARD, Esq.

West side, three cases, economic minerals, Iron Ores, Coals and Slates from Centennial Exhibition, and fine collection of Missouri minerals, from M. S. MEPHAM & BRO. Central case, east side, four Moose Heads, and Bison and Caribou Head, W. J. HAYS' collection. West side, Fibres from Jamaica Exhibit; Cocoons and Seeds, Turkish Exhibit. South-west cases, Birds, mounted and unmounted. South-east case, Mammals from the Holy Land. Three cases of Insects, presented by BARON OSTEN-SACKEN and DR. R. A. WITTHAUS.