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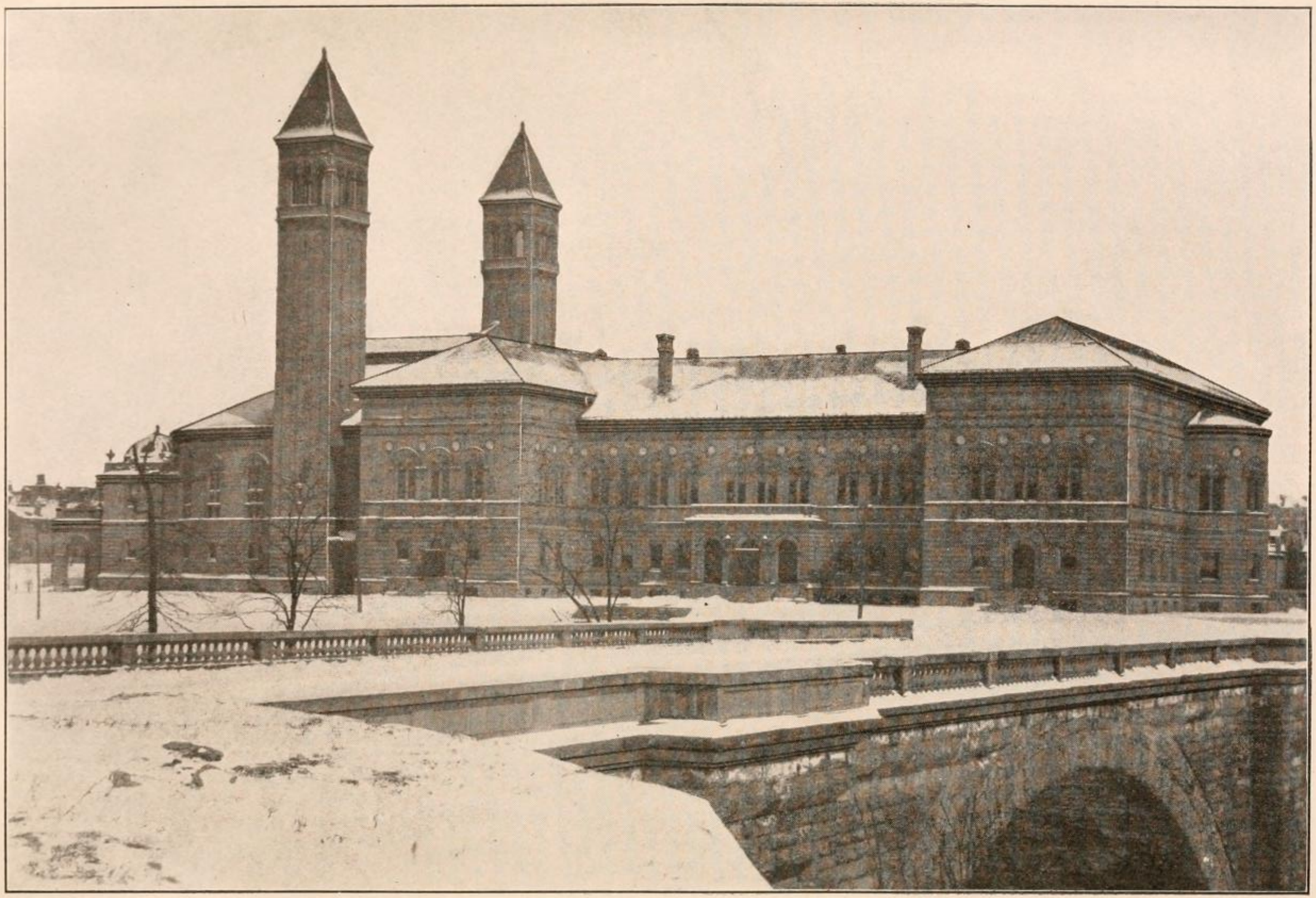
THE CARNEGIE MUSEUM.*

By W. J. HOLLAND, LL. D.,
DIRECTOR OF THE MUSEUM.

IT was a glorious summer day. The sunlight gleamed through the trees, which covered the mountain-top. Checkers of light and shade wove themselves upon the fern-clad soil. Seated upon the trunk of a fallen tree the man whose name to-day is borne by scores of institutions, which his more than princely benevolence has founded, talked to a friend in relation to his plans for the great city, the history of the growth of which is closely linked with the story of his own wonderful career. "The Allegheny Library will before long be nearing completion," he said, "and the time is approaching to execute my designs for Pittsburgh. In my original offer I agreed to give Pittsburgh a quarter of a million of dollars with which to build a library, but I mean to enlarge my gift, and make it a million. I have given Allegheny a library and a music-hall. I wish to do as much for Pittsburgh. The library idea is central. My convictions on that subject are established. But I wish to do something more than to found a library in Pittsburgh. I am thinking of incorporating with the plan for a library that of an art-gallery in which shall be preserved a record of the progress and development of pictorial art in America, and perhaps also of making some provision for advancing knowledge among the people through the addition of accommodations for the various societies which in recent years have struggled into existence among us. These societies deserve to be encouraged. I mean the Art Society, the Botanical Society of Western Pennsylvania, the Microscopical Society of Pittsburgh, and

* Prepared at the special request of the Editor of the POPULAR SCIENCE MONTHLY.



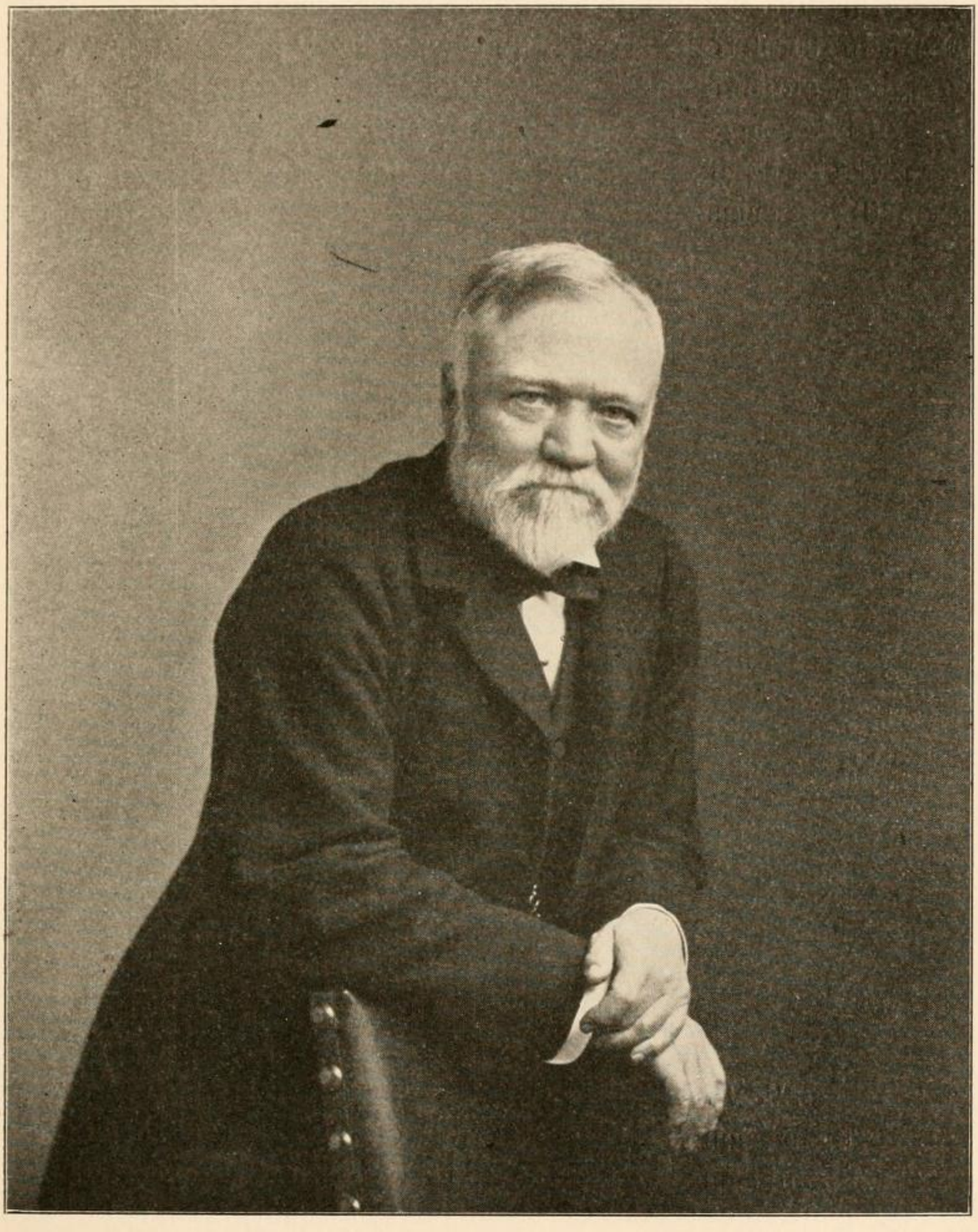
THE CARNEGIE INSTITUTE, PITTSBURGH, PA.

all those other societies. Get them to join their forces and unite to form one society—call it the Academy of Science and Art of Pittsburgh, if you please—and I will furnish accommodations for them when I come to build the library in Pittsburgh. We can treat with one central organization better than with half a dozen different societies. Some of these societies are forming collections of books, historical objects, natural history specimens. These things ought to be kept in fire-proof quarters. That is another point on which I am sound. I believe in fire-proof construction. There are your butterflies, for instance. Such collections should not be exposed to the risk of fire. When I build the library I will provide a good place in which to keep them." So the plan was unfolded and its outlines sketched while the leaves rustled and the birds sang overhead.

Nine years took their flight, and at last the dream was transmuted into stone and marble. The structure which the fancy had outlined stood revealed in the beauty of architectural form and the still greater beauty of definite purpose and usefulness. When on November 5, 1895, the edifice was formally presented to the city of Pittsburgh by its donor it was found to contain accommodations for a great central library, with provision for the administration from this center of a number of branch libraries, for the erection of which ample funds had been provided. Under the same roof was a music-hall, one of the most perfect of its kind in the United States, an art gallery of noble proportions and, forming the southern wing of the great building, the Museum, on the first floor of which was provided a spacious lecture-hall adapted to the uses of the learned societies, which, in pursuance of the suggestion of the founder, had been merged into the Academy of Science and Art of Pittsburgh.

Prior to the opening of the building arrangements were made by the Academy of Science and Art to gather together a collection of objects suitable for exhibition in a museum. The Curator of the Academy, Dr. Gustave Guttenberg, labored strenuously to place the material in proper order, and was aided by his associates, who freely gave their time and generously contributed of their means to make the exhibition worthy of the occasion. The result revealed, as all such attempts in our great cities are certain to show, how large an accumulation of really choice specimens exists in the hands of individuals who are possessed of artistic and scientific tastes. Ethnological, mineralogical and zoological collections of no small merit were rapidly brought together from the homes of scores of citizens, whose interest had been awakened, and the collections in the possession of the Western University of Pennsylvania were laid under heavy contribution to fill up any gaps, which required for the time being to be closed, in order to replenish the cases and dress the halls.

When, on November 5, 1895, the edifice was thrown open to the people, the splendid generosity of the gift produced a profound impression, but the gratitude which was felt was converted into amazed thankfulness when the donor announced to the large audience which filled the auditorium that it was his intention to supplement his gift by the



ANDREW CARNEGIE.

bestowal of an additional million of dollars as a permanent endowment, the annual income to be used in promoting the interests of the Art Gallery and the Museum. The custodianship of the endowment fund was committed to a Board of Trustees, consisting of the gentlemen who were already vested with the care of the building, and eighteen others, who were named by the donor because of their interest in those things

which tend to promote scientific and æsthetic culture. The formal title assumed by this body was 'The Board of Trustees of the Carnegie Fine Arts and Museum Collection Fund,' subsequently changed to 'The Trustees of the Carnegie Institute.'

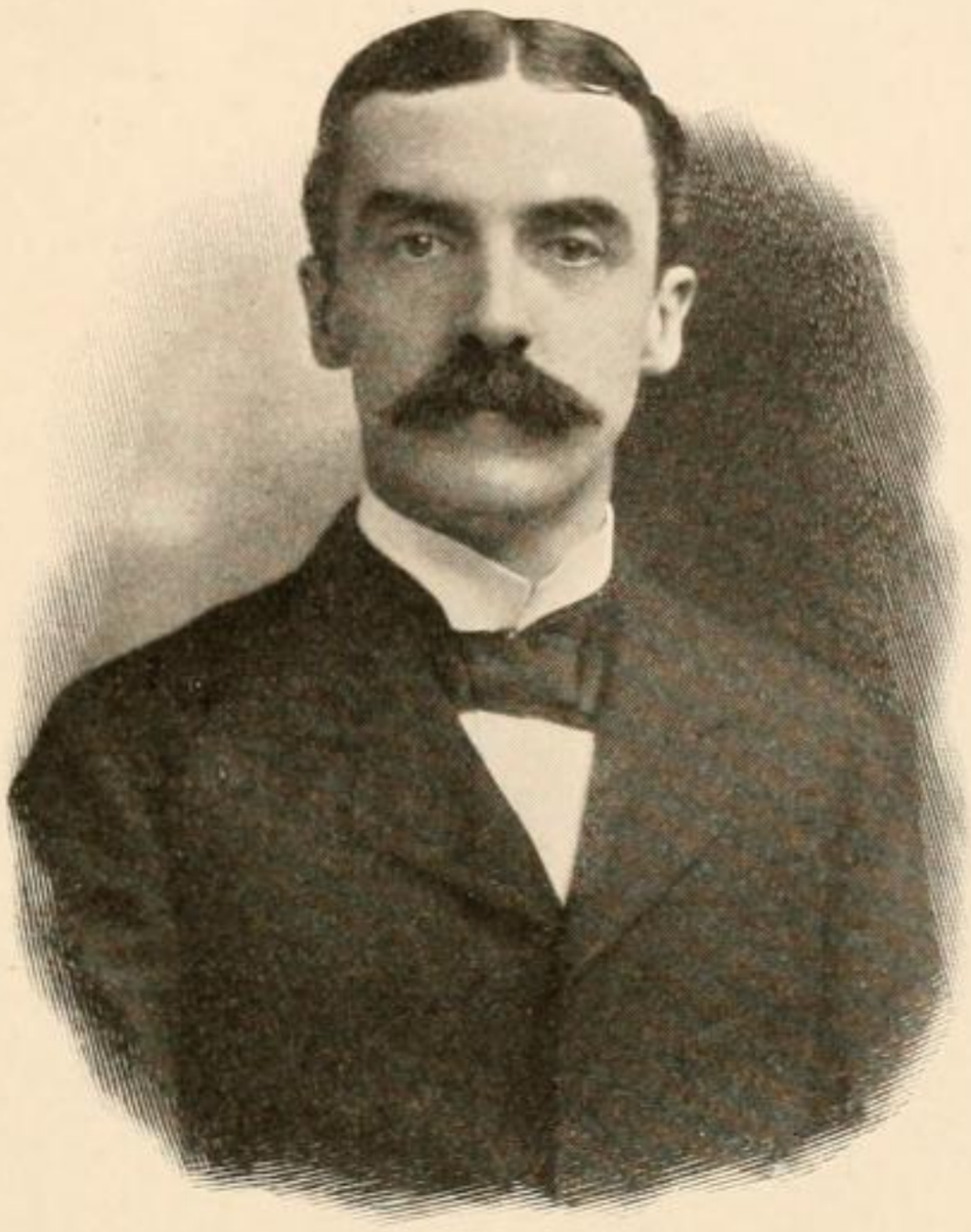
The announcement of this gift and the conditions which were to govern the trust necessitated a change in the administration of the affairs of the Museum. The control of the Museum and the collections contained in it was transferred from the Academy of Science and Art to the newly appointed Trustees of the Endowment Fund, the Academy of Science and Art engaging to cooperate with the Trustees and to apply the revenues in their possession, derived from the annual dues of the membership, to the maintenance of courses of popular lectures in the hall of the Museum.

GUSTAVE GUTTENBERG.

The immediate oversight of the Museum was vested by the action of the Trustees in a committee of eight, including *ex officio* the President of the Board. The committee as at first constituted consisted of the following gentlemen: C. C. Mellor, Chairman; Samuel Harden Church, Litt. D., Secretary; W. N. Frew, Esq., President of the Board; Rev. A. A. Lambing, President of the Western Pennsylvania Historical Society; Hon. H. P. Ford, Mayor of Pittsburgh; John A. Brashear, Sc. D.; Josiah Cohen, Esq., and W. J. Holland, LL. D., Chancellor of the Western University of Pennsylvania.

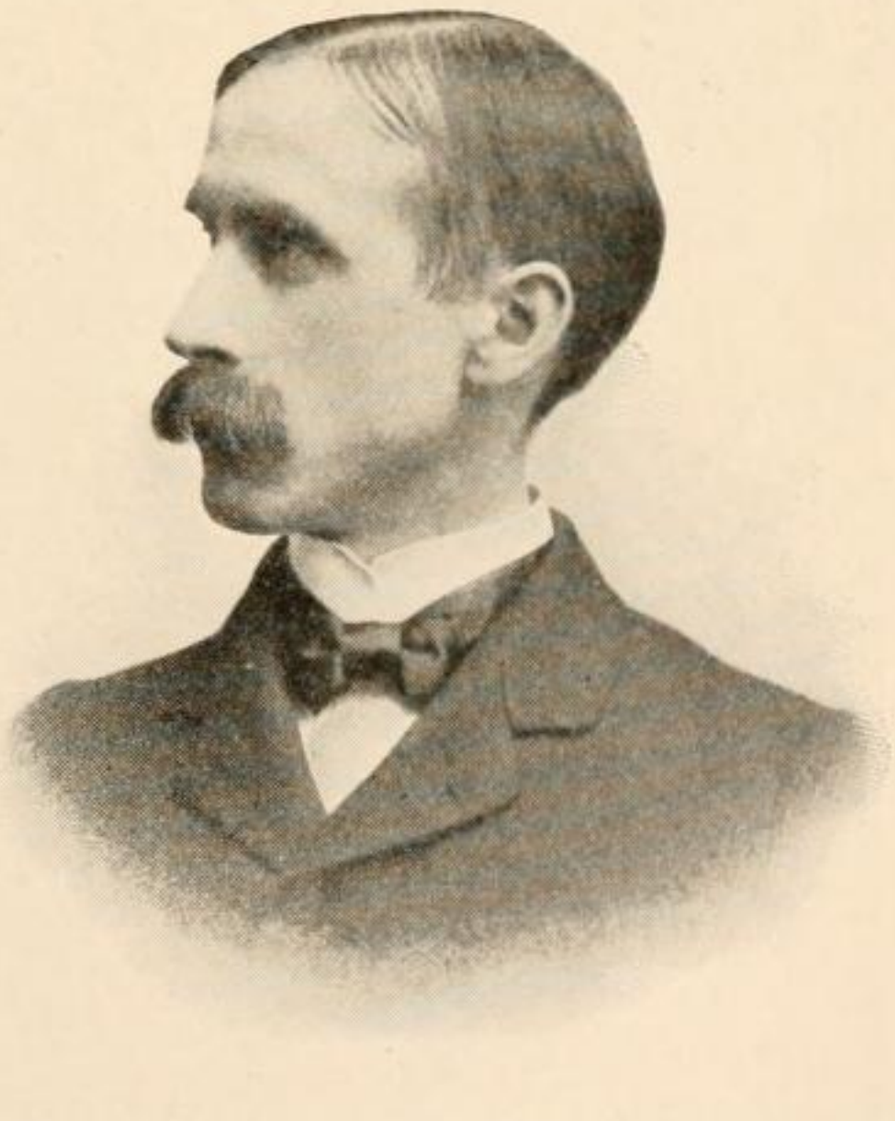
Unfortunately, the hand of death removed the man wno would have been the first choice of the Trustees for the important position of Director of the new Museum. Professor Gustave Guttenberg died in

Vienna before a full organization of the committee on the affairs of the Museum had been effected. The first act of the Board was to purchase from his widow the beautiful collection of minerals which he had made, and which had been one of the attractive features of the opening exhibition of the Museum.



W. N. Frew, President of the Board of Trustees.

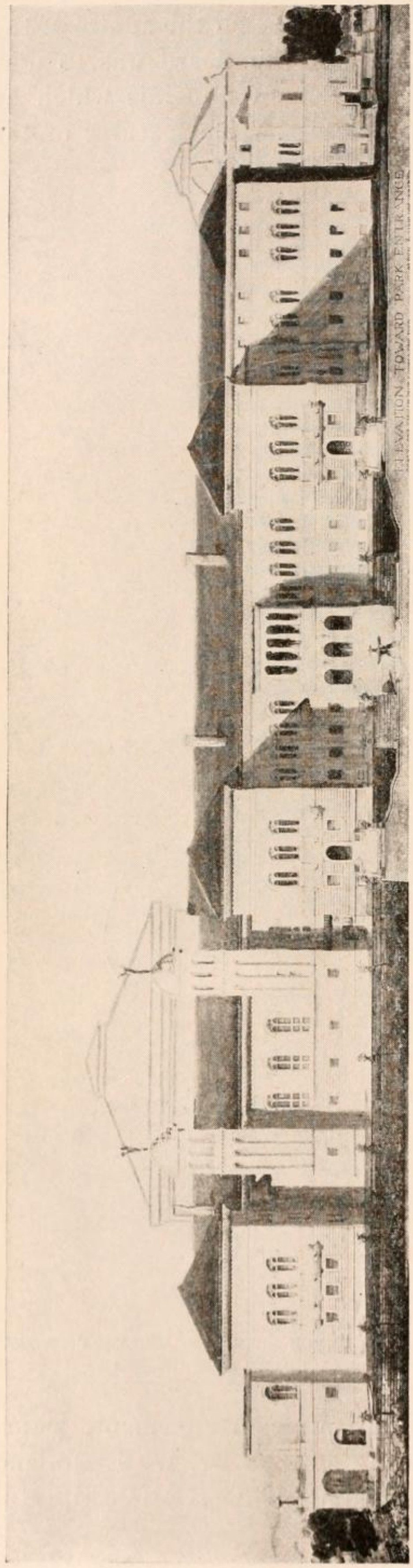
C. C. Mellor, A.M., Chairman of the Committee on the Museum.



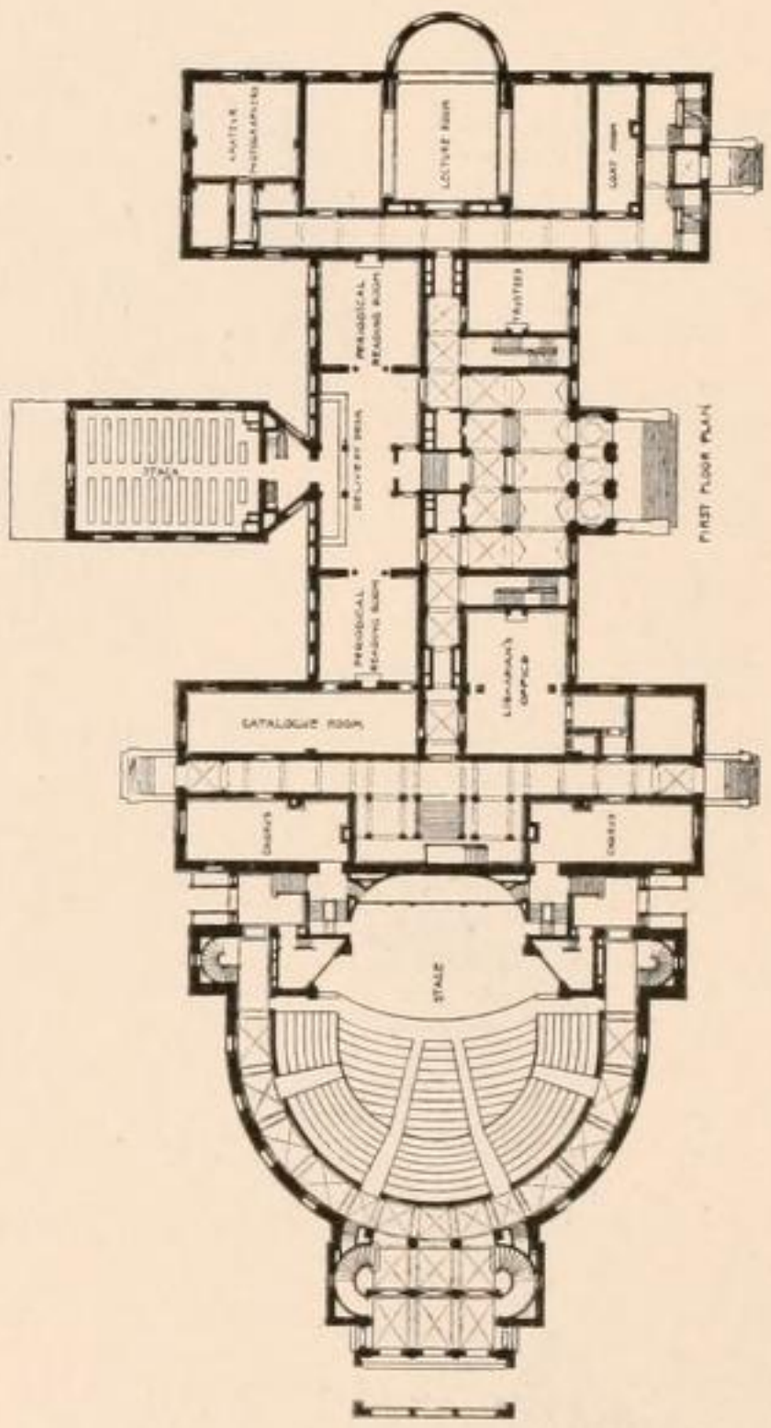
S. H. Church, Litt. D., Secretary of the Board of Trustees.

After several experiments in administrative arrangement, which were not wholly satisfactory, in the spring of 1898 Dr. W. J. Holland was elected as the Director of the Museum. This relationship still continues.

The Museum at present occupies six halls, which are devoted to

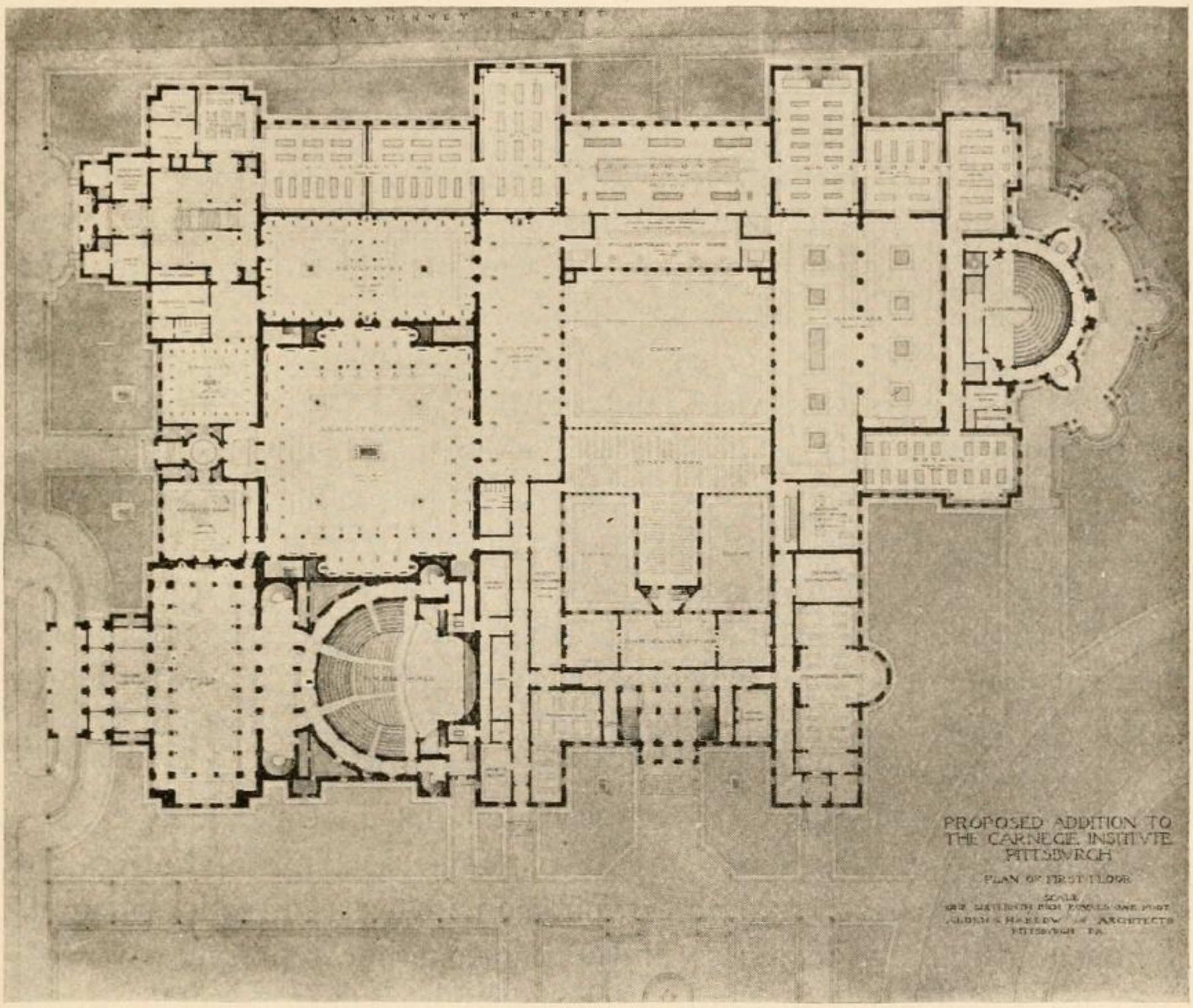


SIDE ELEVATION OF THE PROPOSED NEW BUILDINGS OF THE CARNEGIE INSTITUTE.



GROUND PLAN OF THE PRESENT CARNEGIE INSTITUTE.

purposes of display, and seven rooms which are used as laboratories and offices. Three of the exhibition halls are situated on the second floor of the building and three upon the third. Two of the laboratories are situated on either side of the lecture-hall on the first floor, and the three remaining laboratories are in the basement of the building. The floor space available for the display of the collections amounts, at the present time, to a little more than twelve thousand square feet. The floor space devoted to laboratories is five thousand square feet. The lecture-hall will comfortably accommodate about six hundred persons.



GROUND PLAN OF THE PROPOSED ADDITION TO THE CARNEGIE INSTITUTE.

The walls of a museum are to its contents what the frame is to a picture. The generosity of the founder provided at the outset a beautiful edifice under the roof of which to assemble the collections which it was destined to contain, but he did not forget to provide for what after all is the museum itself, and has from year to year supplemented the income derived from his original gift of a million of dollars by the purchase of collections, which he has himself selected, or by placing at the disposal of the Director of the Museum funds with which to make special collections.

The growth of the Museum and the related departments of the Institute has been so rapid, and the usefulness and popularity of the entire undertaking has been so great, that the founder has found himself constrained to again provide for further enlargement, and in the fall of the year 1899 and the spring of 1900 preliminary plans for extension were prepared, which subsequently were approved by Mr. Carnegie. These plans contemplate the ultimate expenditure of $3,600,000, in new construction, greatly enlarging and perfecting the facilities of the Museum, the Library and the Art Gallery. When these plans are executed the city of Pittsburgh will have an institution second in its importance to no other of like character in the New World, and surpassing many of the famous institutions of Europe in the provision made within its walls for promoting a knowledge of literature, science and art.

Inasmuch as Pittsburgh is located in the very heart of the Appalachian region, it was in the beginning determined among other things to make the collections acquired by the institution as thoroughly illustrative of this region as possible. Accordingly much effort has been expended in endeavoring to obtain specimens illustrating the geology, the mineral resources, and the flora and fauna of the region of which Pittsburgh may be said to be the metropolis. By the gift of the large herbarium of the Western Pennsylvania Botanical Society, to which extensive additions have been made, the flora of the region is already well represented. The fauna is also represented by collections which are extensive and rapidly growing. Almost all the mammals and birds known to exist in Western Pennsylvania are contained in the collection, and through the diligence of those in charge of the department of ornithology several species not heretofore known to occur within the limits of Pennsylvania have been added to the faunal list. The collections representing the insect life of the region are great. Extensive research is going on in every direction, and it is hoped ultimately to amass and bring together representatives of every form of life, whether animal or vegetable, known to occur in the upper valley of the Ohio. Collectors have been sent out who have extended their labors over the whole western half of the State, from Erie to the southern boundary, and westward into eastern Ohio, and southward into West Virginia. It no doubt will require many years finally to complete the biological survey of this extensive region, but a very satisfactory beginning has already been made. Side by side with the work done in the department of biology much work has been done in gathering together ethnological and historical material, the former throwing light upon the aboriginal inhabitants of the territory, the latter serving to illustrate its development since occupied by civilized man. The industries of the region likewise have claimed

attention, and important industrial exhibits have been formed, showing the development of commerce and manufactures in western Pennsylvania.

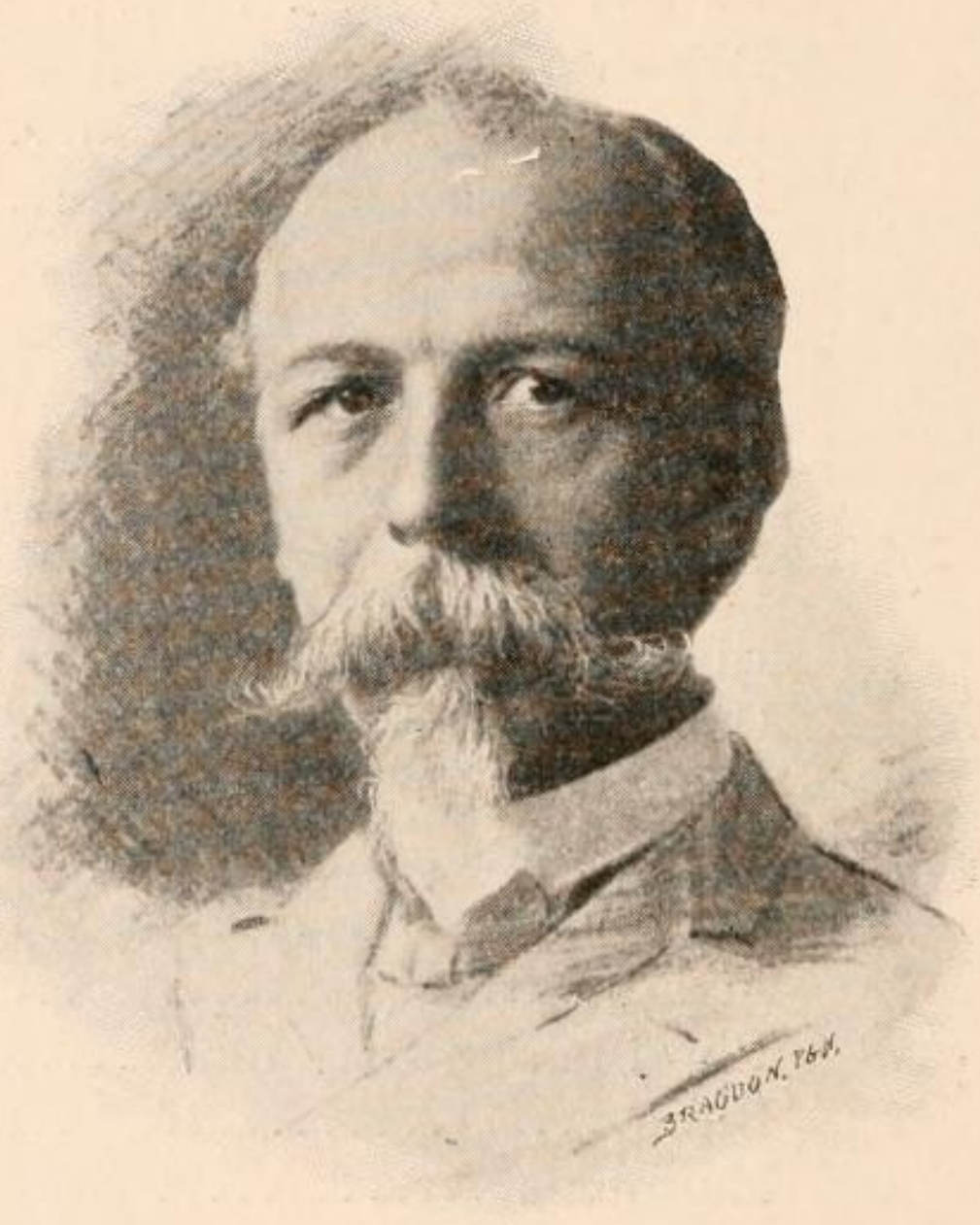
It is far, however, from the purpose of the Trustees to restrict the Museum to the work which has just been outlined. The whole field of research is before them, and already very large accumulations of material from distant parts of our own continent and from foreign lands have been brought together. The collections already in the possession of the Museum may be approximately classified as follows:

	Species and Varieties.	Specimens.
Minerals	400	4,000
Geological Specimens		1,000
Botany (recent species)	17,000	100,000
Botany (fossil)	150	1,200
Paleontology (invertebrate)	500	2,400
Paleontology (vertebrate)	160	3,500
Porifera, Echinoderms, etc	500	1,250
Mollusca	9,500	100,000
Crustacea	100	2,000
Arachnida	300	1,200
Myriapoda	50	1,200
Hymenoptera	1.250	4,000
Lepidoptera	20,000	300,000
Diptera	1,000	5,000
Coleoptera	20,000	275,000
Hemiptera	750	4,000
Orthoptera	400	1,600
Neuroptera	300	1,200
Fishes	500	1,800
Reptilia and Batrachia	150	1,750
Birds	1,200	9,000
Mammals	300	1,050
Total	74,510	822,150

The foregoing table shows that the collections representing the various classes in the vegetable and animal kingdom are somewhat unequal in the matter of extent. The assemblage of shells is already large because of the acquisition by the Museum of several considerable collections, one of them made in South America by Mr. Herbert H. Smith; the other by the late F. R. Holland, which contains a large number of species represented by cotypes and specimens autographically labeled by Adams, Anthony, Bland and other early American conchologists. This collection at the time of its acquisition by the Carnegie Museum contained over six thousand species and is especially rich in West Indian terrestrial mollusca. The collection of Lepidoptera is also exceedingly rich in species, as well as specimens, containing as it does, the entire collection of Mr. W. H. Edwards, the author of the 'Butterflies

of North America,' with almost all his types, as well as many types and paratypes obtained from Boisduval, Tryon, Reakirt, Henry Edwards, S. H. Scudder, and Dr. Herman Behr. The collection also includes the entire collection made by Theodore L. Mead, the types of all species described by the present Director of the Museum, numerous types of species described by Lord Walsingham, E. L. Ragonot, Arthur G. Butler, Sir George Hampson, William Doherty, Dr. Henry Skinner and others, and cotypes of a multitude of species obtained from various authors in different parts of the world. There are over three thousand types and cotypes in the collection of Lepidoptera. The collection is particularly rich in North American, Japanese, Indian and African species. The Knyvett collection of Indian Lepidoptera was purchased

HENRY ULKE.



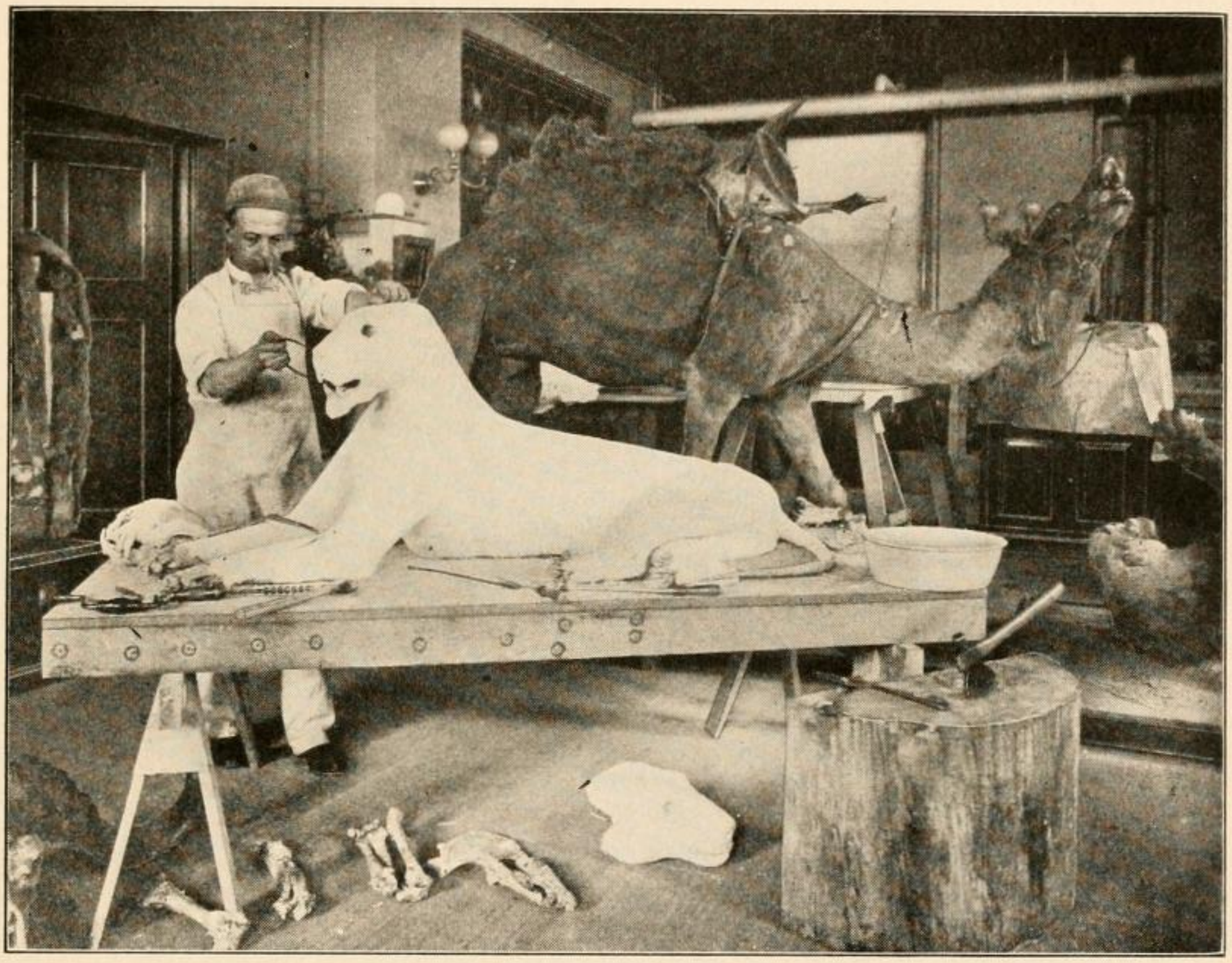
FREDERICK S. WEBSTER.

by Mr. Carnegie some years ago. It contains over three thousand species of Indian Lepidoptera, mostly represented by large series of specimens. Large portions of the collections made by Doherty in India and in the Malay Archipelago are also here. The micro-lepidoptera of Japan, collected by the late Henry Pryer, of Yokohama, are also incorporated in the collection, having been purchased in 1887, a year before the lamented death of Pryer. Latterly extensive additions have been made in the form of material secured from various localities in Africa, Mexico and Central America, and from the continent of South America, the latter principally through the labors of Herbert H. Smith.

The assemblage of coleoptera, comprising among other things the collections of the late Dr. Hamilton, of Allegheny, and of Henry

Ulke, of Washington, D. C., is one of the largest and most perfect collections of the beetles of North America in existence. It is rich in types and cotypes, several thousand species being thus represented. In addition to the North American collections of coleoptera, there are vast accumulations of material from other parts of the world, especially from Africa, tropical America and Japan. The collections in other orders of insects represent mostly North American material, though in every order there is more or less exotic material.

In the ornithological collections North American species preponderate. There are about nine thousand specimens of birds in the pos-

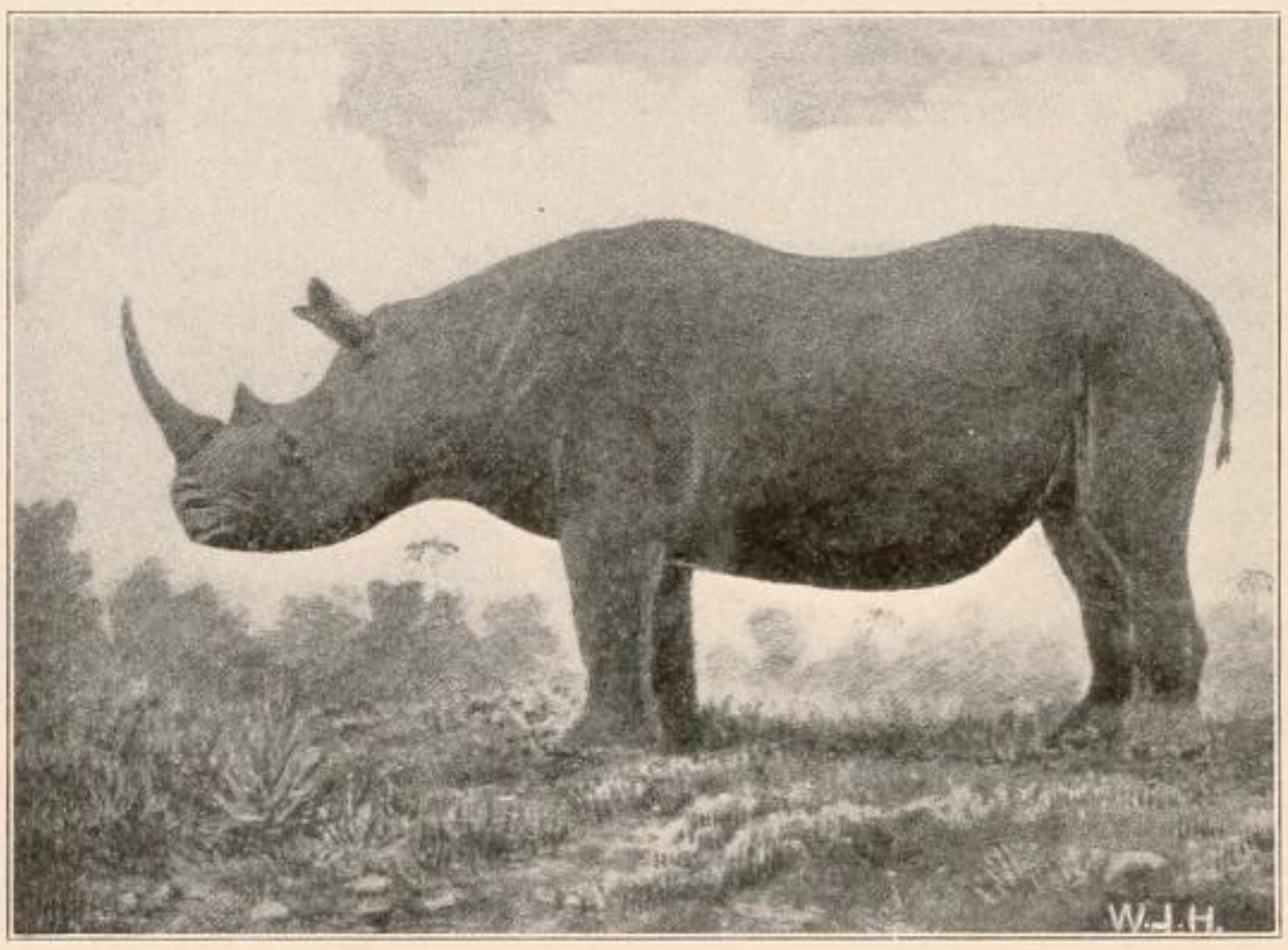


A Peep into the Taxidermic Laboratory.

session of the Museum, as the result of the accumulations made during the last three years. Fully three-fourths of these belong to the native series. Of the species of birds known to occur within the State of Pennsylvania almost all are represented. Great skill and taste have been displayed by Mr. Frederick S. Webster, the chief preparator in the department of zoology, in the composition of a number of very life-like and attractive groups representing some of the more remarkable as well as the commoner forms of bird-life found in America. The groups of flamingoes, Californian condors and brown pelicans are large and effective. One of the most striking compositions is that of the famous setter-dog, 'Count Noble,' flushing a covey of quails. 'Count Noble,'

the progenitor of many of the finest dogs of his race in America, breathed his last in Pittsburgh, and by happy fortune his skin was preserved and came into the possession of the Museum. Many of the smaller groups of birds delineate accurately the habits of the more familiar species and are accepted as masterpieces of the taxidermic art.

The mammals are represented by small, but important, collections. One of the recent acquisitions is that of a specimen of *Rhinoceros simus*. This large mammal, which is, with the exception of the elephant, the largest of terrestrial quadrupeds, is believed to be on the verge of extinction. A few years ago the Hon. Cecil Rhodes secured a specimen by purchase, which he presented to the South African Museum at Cape Town. Another was secured by the British Museum, a third specimen was acquired by the Hon. Walter Rothschild for his private collection at Tring, and a fourth was purchased by the Imperial Academy of Sci-



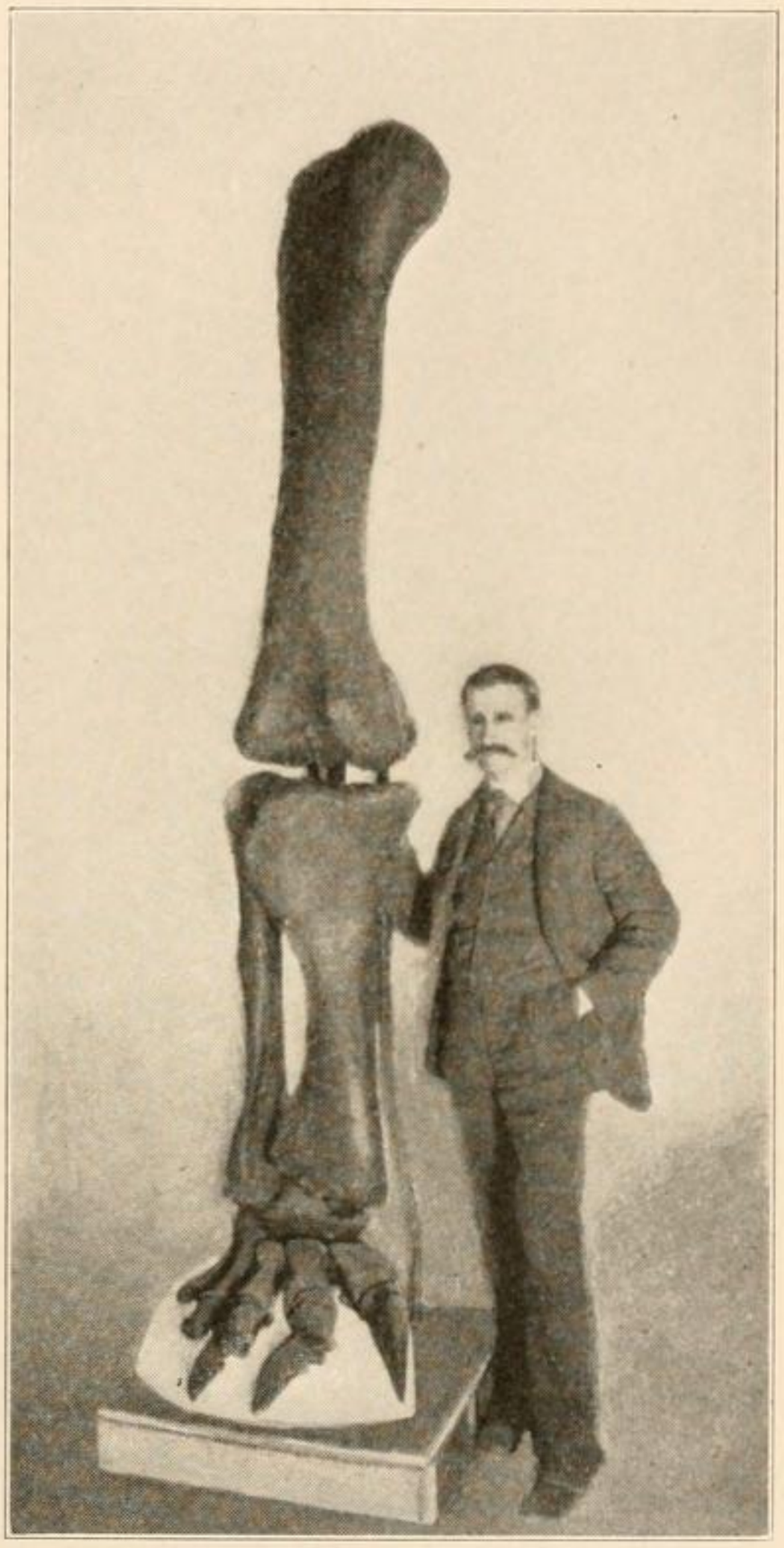
RHINOCEROS SIMUS BURCHELL.

ences at St. Petersburg. The specimen just acquired by the Carnegie Museum is the fifth to be preserved as a memorial of its rapidly vanishing race, and is the only specimen known to exist in the New World.

One of the most fruitful departments of activity in connection with the Museum is presided over by Prof. J. B. Hatcher, the famous explorer and paleontologist. Mr. Carnegie has long realized the importance of paleontology as throwing light upon the evolution of species, and in the spring of 1899 provided a special fund for research in this direction. The results have been most satisfactory, when regard is had alike to the number of the important discoveries which have been made and the beauty and perfection of the specimens which have been obtained. It is well known that the evolution of the horse took place in North America. The discoveries of Professor Hatcher made in 1900 show that in all probability in like manner the rhinoceros was

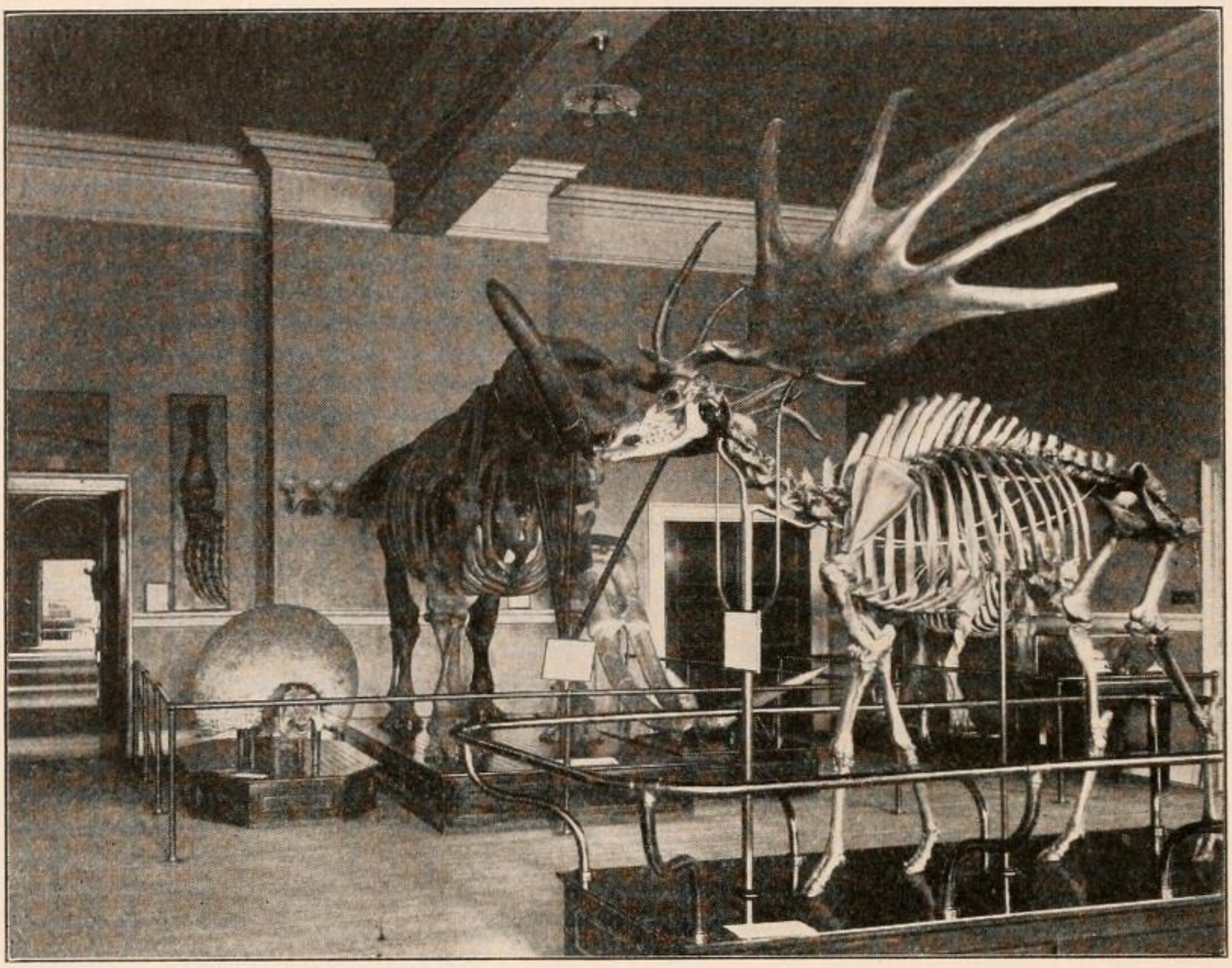
evolved from a primitive form upon the same theater of zoogenic energy. The most striking objects in the paleontological section, from a popular standpoint, are the huge dinosaurs from the Jurassic beds of Wyoming and Colorado. The most perfect specimen of *Diplodocus longus* Marsh known to exist anywhere was secured in the summer of 1899. This huge, lizard-like quadruped was about seventy feet in length from the tip of the nose to the end of the tail, and stood fully fifteen feet in height at the hips. Six skeletons of Brontosaurus, a still huger mon-

GORILLA, SPECIMEN COLLECTED BY REV. A. C. GOOD, PH. D., AT KANGWE, OGOVE RIVER, WEST AFRICA.

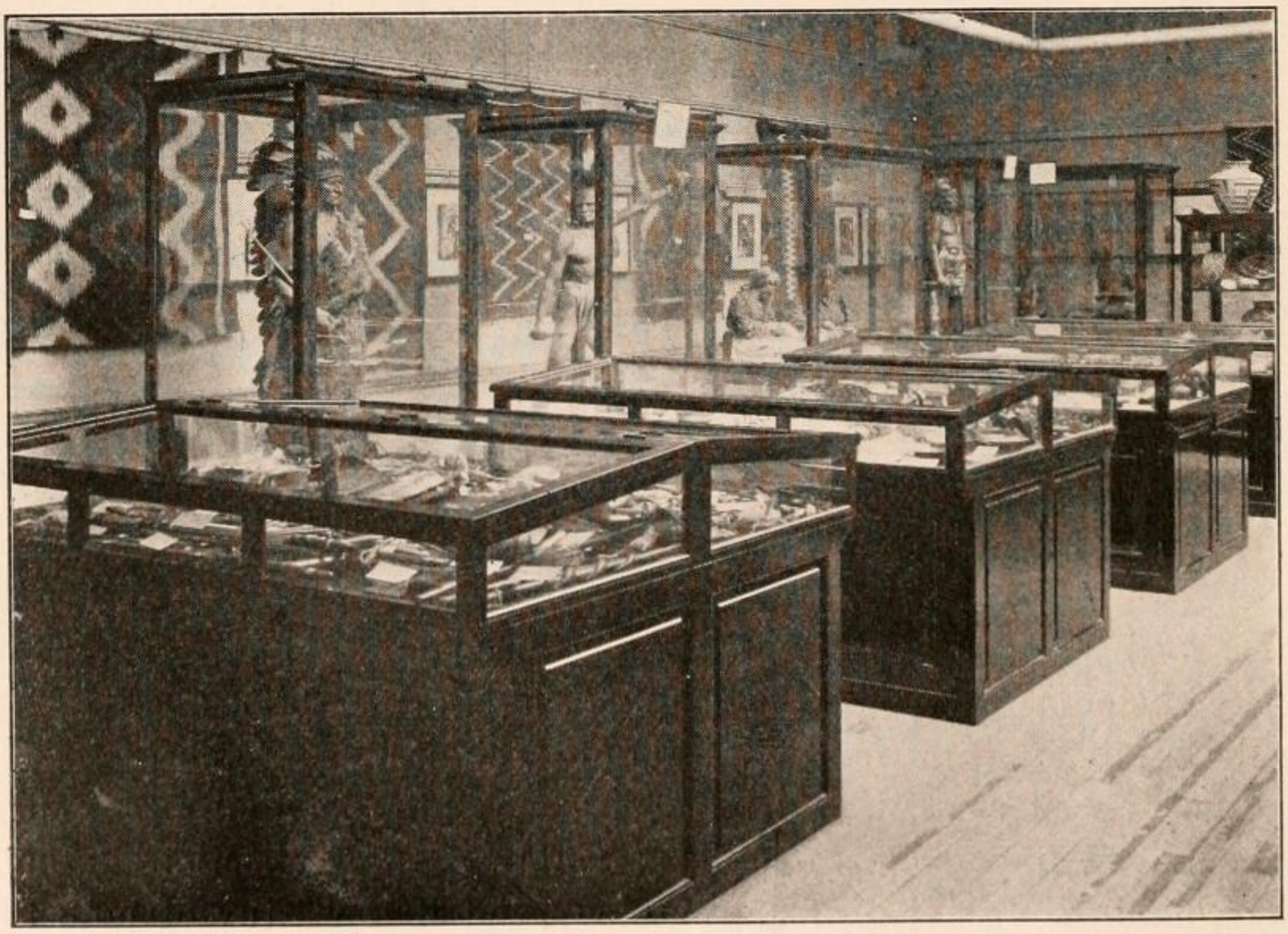


IN THE PALEONTOLOGICAL LABORATORY: SETTING UP THE HIND LEG OF A BRONTOSAUR.

ster, have also been discovered and collected. In no instance were these skeletons complete, but enough material has been secured, it is believed, to admit of the restoration of a composite skeleton of Brontosaurus as well as that of Diplodocus. Within the limits of a brief sketch it is impossible to speak at length of the collections brought together in the section of paleontology, but it is worthy of note that the Museum contains the largest specimen of the Mastodon known to exist, and with the single exception of the 'Warren Mastodon,' which



A Corner in the Hall of Paleontology.



A Glimpse into the Hall of Ethnology. North American Indians.

is now hidden away in Boston and invisible to the public, probably the most perfect specimen in any Museum.

A good foundation has been laid for the development of the section of archeology. The aboriginal races of America as represented by the mound-builders of the Ohio Valley, the cliff-dwellers of Arizona and the ancient populations of Mexico are in evidence in many ways. One of the latest acquisitions has been a series of reproductions of the carvings in stone preserved in the National Museum of Mexico. These

THE MOKI SNAKE DANCERS. GROUP MODELED BY T. A. MILLS.

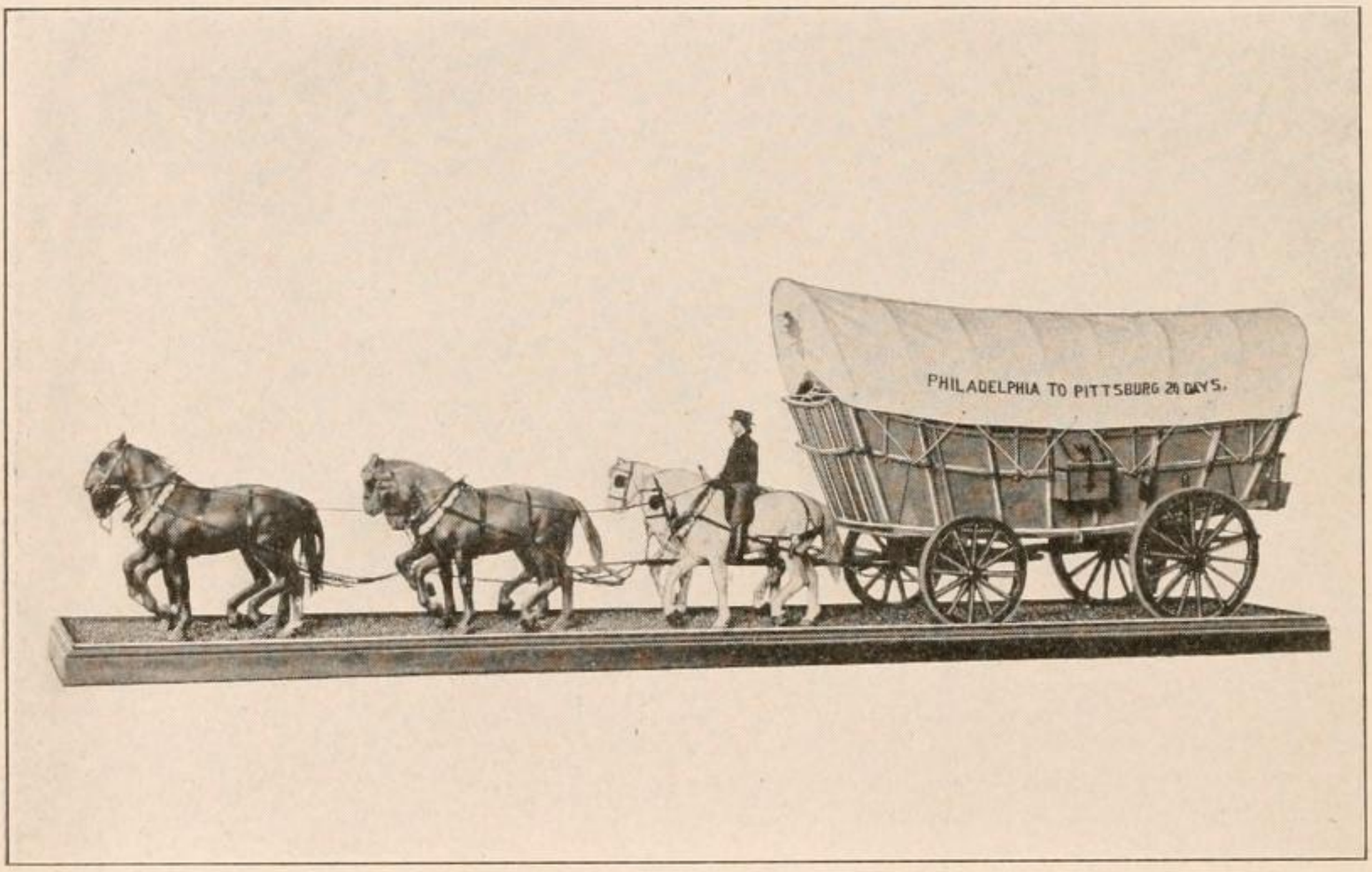
reproductions were made at the expense of Mr. Carnegie and are a duplication to the city of Pittsburgh of the gift made recently to the city of New York by the Duc de Loubat, and preserved in the American Museum of Natural History in Central Park.

The surviving Indian races of North America are represented by an extensive series of models and groups made by Mr. T. A. Mills, the well-known sculptor, all being clothed in characteristic costumes, selected with great care to represent the manners and customs which prevail among them. Besides, there are extensive collections of imple-

ments and utensils in use among these various tribes. The same remark holds good of the Esquimaux of Alaska.

The archeology of the old world has not been forgotten, and already, partly by gift and partly by purchase, considerable assemblages of specimens throwing light upon the ancient civilizations of southern Europe, Egypt and Asia Minor have been secured. The collection of reproductions of the famous Neapolitan bronzes, presented by Mr. Carnegie, duplicates for Pittsburgh the same series now in the Metropolitan Museum of Art in New York. The collections annually obtained through the Pittsburgh Branch of the Egypt Exploration Fund constitute an ever-growing series of high valuable and important objects.

The development of the domestic and industrial arts in America from the first colonization to the present is illustrated by a series of

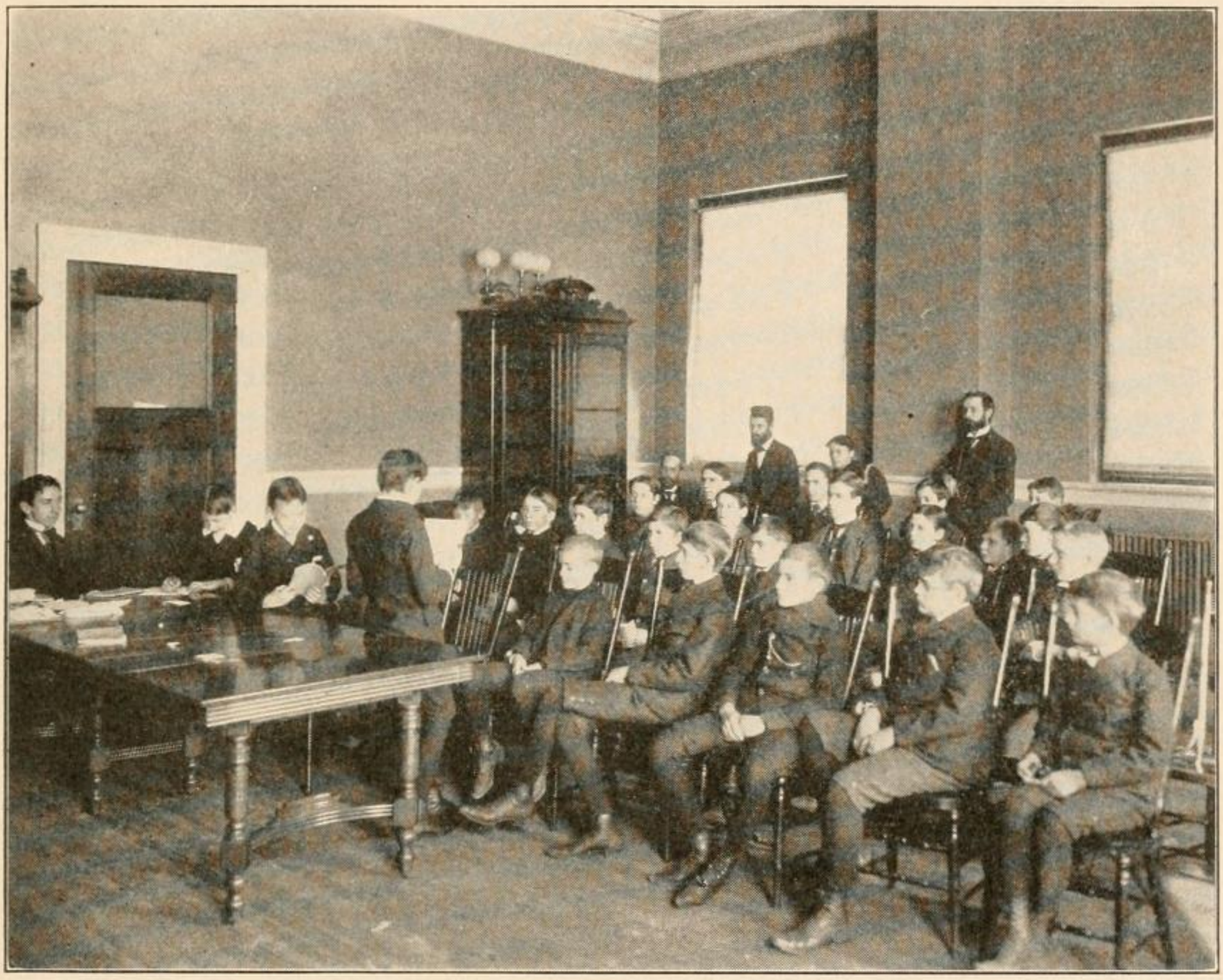


MODEL OF CONESTOGA WAGON, MADE BY WILSON BANKS AND T. A. MILLS.

collections to which additions are being rapidly made. The evolution of methods of transportation is shown by a long series of models constructed by Mr. Wilson Banks, Mr. T. A. Mills and others. This series is in part a reduplication of specimens now in the U. S. National Museum at Washington.

The end for which museums exist is not simply the acquisition and preservation of curious and instructive specimens. The great object which such an institution should ever keep in view is the diffusion of knowledge. The management of the Carnegie Museum has realized this from the very inception of its work. Care has been devoted to the proper arrangement, display and labeling of those parts of the collections placed on view. The late G. Brown Goode once said in substance,

'A good museum is a collection of good labels, illustrated by carefully selected specimens.' Much time and thought has been expended in the endeavor to tell to the observer in simple and intelligible language the truth which the collections are intended to illustrate. In order to enlist the interest of children a series of prizes has been annually offered to the pupils in the high-schools and the upper classes in the grammar-schools of the city of Pittsburgh. The prizes are awarded to those who shall write the best essay upon some subject illustrated by the collections contained in the Museum. Thirty-eight prizes, ranging in value from $25 to $2, were offered in 1900. Eight hundred and forty-three essays were submitted in competition. The decision of the awards is made by a committee of judges consisting of thirty of the most cultivated ladies and gentlemen of the city, among them a number of eminent clergymen, lawyers, editors and authors. The plan requires on the part of the contestants a personal visit to the Museum and the study of the collections. During the month preceding the close of the contest the Museum was at times crowded by eager throngs of intelligent boys and girls armed with note-books and pencils. The delicious compliment of imitation has been paid to the Carnegie Mu-



A Section of the Andrew Carnegie Naturalists' Club in Session.

seum since this plan was adopted by several kindred institutions in America and in Europe.

A further effort to interest and instruct the youth of the community has led to the formation of a society known as the Andrew Carnegie Naturalists' Club, which consists of between two and three hundred young people who meet every other week on the afternoon of Saturday in the lecture-hall of the Museum and hear lectures, often illustrated by specimens and the stereopticon, and who read papers upon subjects of interest. During the summer months the club makes excursions in the neighborhood, and the various subdivisions receive practical instruction from the staff of the Museum in the art of collecting and preserving specimens of plants and animals.

The wider diffusion of knowledge among scientific men and institutions is provided for by the publication of the 'Annals' and 'Memoirs' of the Museum. The former appear in octavo form, the latter in quarto. This series of publications began with the first month of the twentieth century, and it is hoped will not end so long as the centuries run their course.

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