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THE INLAND ARCHITECT AND NEWS RECORD

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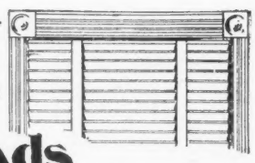

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Whose Fault Is It?

Our attention has lately been called to several invitations to alleged architectural competitions. The terms suggested are simply insulting. Still, many really respectable architects have gone into them and helped drag down the profession in public esteem. This is lamentable indeed, particularly at a time when the better class in that profession are making such strenuous efforts to elevate the general tone and place it where it rightfully belongs in the community. What other profession, or trade, or commercial body is willing to do so much of the total work involved to secure approval? And in what other profession is competition so keen, so really savage, as in architecture? Do we ask doctors to come in and see which one will effect the quickest cure upon our sick, and that without any pay, so that the victorious one may watch over the invalid during convalescence and finally get paid his regular fee, if we like him? Do we ask lawyers to file briefs and pleadings with us for some hypothetical case before we employ one of them to defend our honor and our purse in court? Do we ask a tailor to cut and make a suit of clothes for us on approval? No, we are willing to take samples of goods from merchants, gauging their ability to perform work by what they have done before, their reputation, and we select our professional advisors by what we know of their skill in all else than architecture. And whose fault is it? Have not the architects brought it all upon themselves? If a bank or other institution intimates it may build, it is immediately flooded with requests from architects desirous of submitting "bids," guaranteed estimates, plans that will yield more building at less cost than can be obtained anywhere else, etc. Mutual friends lobby for this or that candidate for the honor of designing that structure, plans are submitted unsolicited, and that building committee is made to feel it is the biggest thing on earth. It is treated and feasted and fawned upon till its several members have to wear extra-sized hats. Is it any wonder then that they feel they are doing the profession an honor when they deign to invite it to compete, even upon such terms as we have alluded to, and to offer it the magnanimous fee of two per cent? When the plans are submitted more mutual friends swarm about the committee — aye, and the competitors themselves — and all sorts of inducements are offered them to adopt this or that set of plans, irrespective of any merit. Is it any wonder the little respect they had left for the profession completely vanishes, and they proceed to bargain and "play" with the competitors, and finally use their selected architect as they would a door-mat? Any one, in most States, who has $3.18 or thereabouts for the painting of a sign with the magic word "Architect" upon it, is as much entitled to that designation in the eyes of the law and of the public as is a Richardson, a Hunt or an Atwood. Our readers have the remedy in their own hands. As the riff-raff debases the profession, let each one of our readers redouble his efforts to raise its standard as high as possible. The opportunities are innumerable; let them work, work with a vim, and put some soul in their efforts to get our beloved profession upon the same footing, legally and in the esteem of the public, as the medical and the legal, or, at least, as exclusive and hedged about with bars to the black sheep as is the exalted craft of apothecary clerks.

LIBRARY CONSTRUCTION.*

THE development of libraries during the latter part of the nineteenth century may be compared with that of cathedrals and abbeys in Norman times, or that of colleges and grammar-schools under the Tudors. In all these cases the age, instinctively discerning its needs, partly by public effort, partly by private munificence, covered the land with edifices for their satisfaction. In so doing it necessarily gave rise to a number of architectural problems. That the libraries of the present day, however smaller in scale, may not be architecturally less honorable to their epoch than the corresponding constructions of the past, must be the earnest aspiration of all who regard them as among the characteristic monuments of the nineteenth century, and a most important manifestation of its intellectual activity. This ideal is the more difficult of attainment, inasmuch as obstacles now exist which were comparatively unfelt in the Middle Ages. The mediæval pious founder was frequently his own architect; at all events, paying the piper, he called the tune. In any case, there was a thorough community of feeling between him and the builders he employed. The builder was thoroughly broken in to his task, and entirely absorbed in it; since, from the inevitable slowness of mediæval operations, arising from the deficiency of capital and labor, the erection of an abbey or a college might be the sole occupation of a lifetime. Far different is it now, when the most extensive architectural undertakings seldom require more than three or four years, and the same architect is equally ready to turn out a church, a library, a theater or a bank. It is inevitable that in the absence of special knowledge of and special devotion to a particular style of edifice, the sentiment of architectural display should gain the upper hand. Hence a continual conflict between the architect who desires a handsome elevation, and the librarian who aims at practical convenience; frequently determined by a committee endowed with no great feeling for either.

Parodying a famous saying, it may be safely affirmed that this state of things will continue more or less until architects are librarians, or librarians architects.

One cardinal rule may be laid down, always to design with reference to the probable future of the library. If it is destined to perpetual insignificance, no particular provision is necessary; but if to a great expansion, this should be foreseen and provided for from the first. A generous view should be taken of such a library. Ample space for additions should be secured, and the plan should be so framed that any future accretion should be a legitimate and harmonious development of the original model. So liberal a procedure, however, is only practicable when and where the public library has established itself in the public consciousness as an institution of paramount importance. American libraries are planned on a larger scale than the British, and with more complete appliances, because the library and the librarian are more regarded in America than here. It rests with librarians themselves, and with national instructors generally, to raise the British conception to the American standard.

The libraries erected during the couple of centuries following the invention of printing differ considerably from the modern type of library building. Then the readers were few in number, and the student was ensconced in a snug alcove, founded on the traditions of the scriptorium. Suites of rooms were built with the idea that they would be used more as exhibition galleries than as storerooms for books meant for study. Many examples of this type of building are to be seen on the continent. Among them may be mentioned the Biblioteca Laurenziana, at Florence, designed by Michael Angelo about A. D. 1515; the most beautiful building of the Libreria Vecchia, at Venice, built by Sansovino in 1571; and the present home of the Vatican Library, Rome, built in 1588 by Sixtus V. from the designs of Domenico Fontana. The latter, indeed, is a typical example; the great hall is a stately vaulted room, 232 feet in length, 48 feet wide and 29 feet high. It is decorated with frescoes, and contains many magnificent specimens of sculpture, porcelain and other works of art, but the books are placed in cabinets and presses, with doors, so that one might walk through the room without knowing the purpose for which it was really erected.

In these old libraries the method of shelving generally adopted was that of erecting high bookcases around the walls of each room. The nuisance of having to use long ladders to reach the top shelves would soon be felt, and so galleries were built around them at suitable heights. The oldest example of these early galleries still *in situ*, and used for the purpose at the present time, is to be found in the Bodleian Library at Oxford, built by Sir Thomas Bodley in 1597, and enlarged some thirty years later. Other instances of this style of architecture may be seen in the library at the Castle of Mannheim, the Court Library at Vienna, and the Monastic Library at St. Gall. The Radcliffe Library at Oxford, designed by Gibbs in 1740, which is now used as a reading-room for the Bodleian, is notable, also, as one of the earliest instances in England of a circular library lit from the roof. An earlier Continental example, from which Gibbs is said to have copied his design, is that of Duke Anton Ulrich at Wolfenbüttel, which was built by Korb about 1710.

The first architect to plan a library which in any way meets the modern requirements of giving ample shelf accommodation was Leopoldo della Santa, who in 1816 published at Florence a quarto pamphlet, with the title *Della costruzione e del regolamento di una pubblica universale Biblioteca, con la pianta dimostrativa.* It is interesting to recall this early attempt to construct a building entirely from a utilitarian point of view. He takes for his site a rectangular plot, with light on all four sides. The entrance is placed in the middle of the narrowest side, and leads to a reading-room in the central part of the building one-third the width of the site, and lit from four open courts and the roof. The portion of the site behind the reading-room is cut up into small rooms for the staff and for the shelving of the rarer books. The remainder of the site on left and right of the reading-room is entirely devoted to two book stores, which extend from the front of the building to its rear, and are planned to shelve the books in double cases, placed at right angles between each window. This design, however, was never carried into effect, although it received the commendation of Vincenzo Follini, librarian of the Magliabecchian Library, and of Molbech, librarian of the Royal Library at Copenhagen.

The provision of a suitable site lies at the foundation of a satisfactory library building. A poor building may indeed be built upon the best site, but it is certain that a well-adapted library can not be expected if the area on which it is to be built is cramped and irregular. In choosing a site, there are three questions which should be asked about it:

(1.) Is it suitably placed for the readers who are likely to use it?

(2.) Is there space sufficient, not only for the present needs of the readers and stock of books, but for its future growth and extension?

(3.) Are the surroundings likely in any way to interfere with the comfort of the readers, or the safety of the building and its contents?

In considering the first of these questions, the general trend of the population is a good guide. Most towns and cities have some recognized center — a main street, municipal buildings, town hall, postoffice or railway station — and it will be natural to look for a site near one or all of these. Care should be taken, however, to select one which, while as central as possible, shall not be unsuitable because of the noise of heavy and continuous street traffic, or the whistling of locomotives and shunting of trains. In some cases a site may be obtained sufficiently ample to allow the building to be set back, and so minimize what many libraries have found to be a great and irremediable nuisance. Quiet is one of the first requirements of a library, and every effort should be used to obtain it.

The second consideration, that of space, not only for present needs of both readers and books, but for future growth, is often but little considered. In many towns expensive buildings, which should last at least a hundred years, have been erected, covering the whole of the ground available, and it has been found in ten years, or even less, that extension is needed, and there is no possibility of shelving more books, or of giving accommodation to the increasing number of readers. Committees new to library work often have no idea of the rapid growth of their libraries. The table, next page, strikingly illustrates the rapid increase both of books and of readers in a few of the representative British free libraries.

The central libraries at Manchester, opened in 1852, at Leeds, opened in 1872, at Glasgow, opened in 1877, have all outgrown their original buildings, and have had to be removed into others; and those of Birmingham, opened in 1866, and Liverpool, opened

* Extracts from "Library Construction, Architecture, Fittings and Furniture," by F. J. Burgoyne London: George Allen, 1897.

in 1853, have had to be enlarged by the absorption of adjoining properties.

In considering the size and shape of a site necessary for a town's library, no hard and fast rule can be laid down. It will be self-evident that a deep site, extending far back, and surrounded by other buildings, with but a narrow street frontage, will only allow of a building being erected upon it one story in height; while a site of the same shape and area, with its long side fronting the street, will allow the erection of a two-storied building, with ample light to all its rooms. A corner site is, of course, preferable to the same area enclosed, and one bounded by streets or open spaces on all of its sides is better still if it can be obtained. Much will depend upon the accommodation required in the building. A town's library should give the public at least a reference department, a lending department, a reading-room or rooms for newspapers and magazines, and the necessary working rooms for the librarian and his staff.

TABLE SHOWING STOCK OF BOOKS IN CENTRAL LIBRARY ONLY.

Town.	At the end of the Years				
	1875.	1880.	1885.	1890.	1895.
Birmingham	57,081	Burnt out in 1879	104,286	132,732	155,633
Bolton	37,235	45,466	55,121	68,061	83,679
Cardiff	8,310	11,810	18,302	33,509	55,080
Glasgow	.....	33,019	62,382	87,193	116,000
Leeds	37,464	52,711	73,023	84,930	99,000
Liverpool	60,808	72,406	86,429	96,689	108,279
Manchester	55,000	70,000	82,000	95,400	107 000
Nottingham	20,579	27,108	51,366	68,535	81,436

TABLE SHOWING THE NUMBER OF BOOKS ISSUED IN THE CENTRAL LIBRARY ONLY.

Town.	For the Years				
	1875.	1880.	1885.	1890.	1895
Birmingham	365,251	410,100	614,428	621,460	641,371
Bolton	194,102	240,708	264,421	318,653	443,989
Cardiff	26,076	54,171	91,372	137,204	179 781
Glasgow	.....	390,732	468,056	Removed to new premises	513,456
Leeds	275,882	362,299	501,766	431,436	504,989
Liverpool	517,393	577,772	650,152	619,748	619,259
Manchester	61,213	203,194	283,232	397,785	416,100
Nottingham	143,096	160,562	319,573	333,807	397,446

To these may be added separate reading-rooms for boys, girls and women; an inner reading-room for students; lecture hall; museum and art gallery; residences for the librarian and the caretakers; strong-room for the safe keeping of MSS. and incunabula, or local collections; and rooms for binding and repairing. In the Birmingham central library, space for the growth of the library proper has been obtained by the transfer of the museum and art gallery, and the patent specifications, etc., to another building, and dedicating the whole of the space thus obtained to reference and lending library purposes only; but even this relief is almost outgrown. Although these alterations were only made in 1880, more shelf room for books will be wanted at no very distant date.

The third consideration, that of the surroundings of the library, is also important. If possible, it should be detached from all other buildings, and so diminish the risk of damage by fire, and annoyance from noise to a minimum, and allow the free access of light and air. In some places these requirements have been happily met by erecting the buildings on plots adjoining open spaces which will never be built over, such as recreation grounds, disused city churchyards or public parks.

The public rooms of a library should not exceed two stories in height, unless a constant elevator service can be secured. A corner site containing 10,000 square feet will afford accommodation for 150 readers of newspapers and magazines; a lending library of 50,000 volumes; a reference library of 150,000 volumes, with 100 readers; together with librarian's office, and proper accommodation for the staff. In calculating the probable shelf capacity of a site, the question of book storing or warehousing, as compared with shelving the books where the public can see them, must be considered. The general type of library building which has come down to us from the Middle Ages is that of a large and lofty hall, with shelving around it to the height of 10 or 12 feet, and above that a gallery or galleries, with similar tiers of shelves. When more accommodation for books was wanted than the wall-shelving gave, it was provided by the addition of bookcases placed at right angles to the walls, and projecting therefrom some 10 or 12 feet into the room. These formed alcoves, and generally tables or desks for the readers were placed in them between each bookcase.

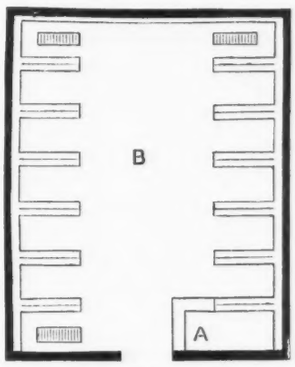


FIG. 4.

Plan of a library arranged on the alcove system.
A — Catalogue counter and attendants' desk. B — Space for tables for readers

No one can deny the fine effect of a library arranged upon this plan. Those who have seen the Guildhall Library, London; the library of Trinity College, Cambridge; or of the Peabody Institute, at Baltimore, know that the result is a room which satisfies the eye, and impresses the imagination. But the waste of space in the center area is enormous, and its shelf capacity is limited.

The opposite extreme is a plan which provides simply for book storage or warehousing, and is obtained by arranging the bookcases in a separate room away from the readers. The walls are first shelved, generally with shelves deep enough to take the quarto and folio books. Then, separate bookcases, shelved on each side, are placed at a distance of about three feet from each other, at right angles to the longest side of the room, with passage ways from the issue counter about six feet in width. The accompanying plans fully illustrate the difference of the two systems. Fig. 4 is the plan of a library arranged with alcoves, and Fig. 5 the plan of the same room divided into book store and reading-rooms, and arranged upon the stack system.

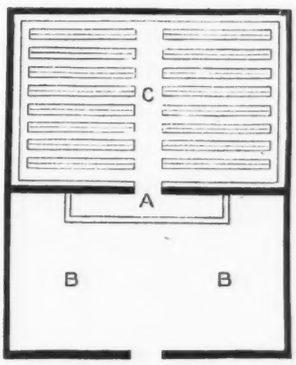


FIG. 5.

The same area as in Fig. 4, arranged on the stack system.
A — Catalogue counter and attendants' desk. B — Space for tables for readers.
C — Separate room for books, with double the shelf room shown in Fig. 4.

An examination of these two plans will show that in each case there is practically the same area available for readers, while the shelf capacity of Fig. 5 is quite double that of Fig. 4. If the alcove system is used for public libraries, it is necessary to have locked doors to the cases, and the greater distance for the attendants to go to obtain the books inquired for, combined with the delay caused by locking and unlocking the doors, materially affect the service. There is also much discomfort to the readers who go into an alcove to be out of the way, and have their atten-

tion distracted by the passing to and fro of the attendants. Supervision of the tables in the alcoves from the catalogue counter is impossible, and opportunities for theft and mutilation of books are provided, without much chance of discovery. The initial cost for shelving in the alcove system is greater than in the other, for it is generally necessary to provide bookcases for the whole room at the inception, while in the second plan they can be added as required, until the room is filled. In Fig. 5 no doors are required for the bookcases as a protection from theft, and as they are out of sight, they can be built without ornament, and of the plainest materials consistent with durability and neatness.

The greatest disadvantages of the alcove system are felt in large libraries, where it is necessary to erect five or six galleries for the books. In cold weather, when artificial heat is used sufficient to warm the lower stratum of air and make it comfortable for readers, a continual current of heated air will rise to the top of the building and slowly roast the unfortunate books shelved there. If open gas-burners are used for lighting, their condition is worse. The products of combustion ascend, and the leather bindings rapidly deteriorate and rot into powder. Some

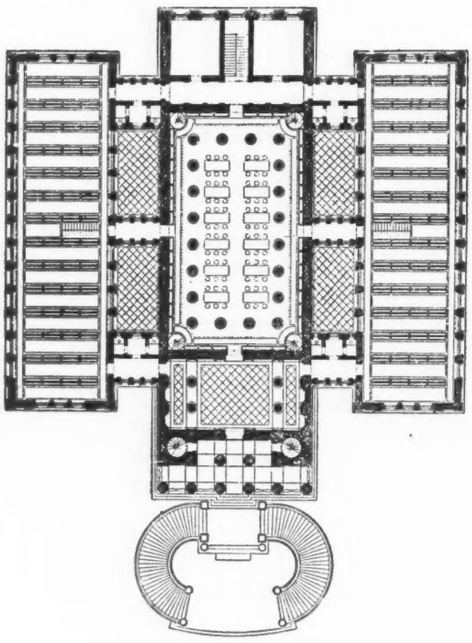


FIG. 6.
The "Valliano" Library at Athens.

of this decay, however, proceeds from other causes, for many of the leather bindings in college and other libraries, where gas is not in use, have been noticed to be similarly affected. Damage is also caused to books by the dust consequent upon the daily cleaning of the readers' part of the hall. In Fig. 5, where the books are in a separate room, the only dust is that made by the few attendants, and so the wear and tear from this cause is reduced to a minimum.

A full consideration of the principles and faults of the two systems lead to the conclusion that for a library which can afford to allow its readers access to the shelves the alcove system is the best, especially where, as in university libraries, the number of readers is limited. But a large public library should have the bulk of its books shelved on the stack system, in book stores adjacent to the readers' room; but this may have a wall case around it for the most popular works, open for use without the formality of filling up a reader's ticket.

The elevation or façade of a library building should, as far as possible, be in keeping with the objects for which it is erected, although there is always a difficulty in making the outside characteristic of the use to be made of the interior. The façade of the portion used for the staff and administrative rooms may indeed differ from that of the book stores and reading-rooms, as the best light for the former may be obtained from windows differing in size and shape from those used in the latter. This has been done in the public library at Athens (Fig. 6), where the central block, in which is placed the reading-room and administrative portion, is accentuated, and the two wings, which are used as book stores, form inner blocks set back from the frontage of the center.

In large libraries the plan of placing the public reading-room in the central portion of the building seems, on the whole, the best, although it necessitates grouping the books around it, and so many will be shelved at a greater maximum distance from the delivery desks than would be the case if they were all placed on one side only of the reading-room. The book stores should be in direct communication with the reading-room, and should be so arranged that the attendants will not have to cross over any portion of the building used by the public to obtain a book.

The decoration of the interiors of libraries should in all cases be severely simple, and kept subordinate. The book stores, to which the public are denied access, do not require much decoration, and if severe economy is necessary, the brick walls may be left exposed to view, without even covering them with plaster. It should always be remembered that the use and storage of books is the *raison d'être* of the building, and that if the public rooms are so ornamented and decorated as to become show-places for sightseers, the readers will be disturbed, and the proper use of the library will suffer. In the new building of the Boston Public Library no expense has been spared to make the large reading-room, with its approaches, one of the finest in the world. The entrance hall and staircases have been decorated by Puvis de Chavannes, the greatest modern master of decorative design. Artists like Abbey, Sargent and Whistler were commissioned to adorn the delivery and reading rooms, and a magnificent temple of art is the result; but the rooms are more suitable for a museum or art gallery than for study, the purpose for which they were built. The beauty of the place attracts numbers of visitors daily, who audibly express their admiration or criticism, and careful reading under such conditions is impossible. It is a pity that the mistake should have been made of attempting to so beautify this noble building that it shall be regarded by the average man rather in the light of an art gallery than of a place for literary work and study.

In arranging the rooms of a library, attention should be given to the probable use that will be made of them by the public. The most frequented parts, generally, are the rooms devoted to newspapers and periodicals, the room for boys, the lending library, and lastly, the reference department. If the library is on a busy thoroughfare, it should be remembered that the latter department must be located in the quietest part of the building. In a two-story library the natural position of the rooms would be to place the lending library, news-room and boys' rooms upon the ground floor, and the reference department and its book stores upstairs. The shelf accommodation required for the lending library will not be so great as that for the reference department, nor need such care be taken to give ample room for its future growth. The books in this department wear out quickly, and as many are of ephemeral interest, they do not require replacement. In our largest towns it is doubtful if a lending library of more than 50,000 volumes will ever be required, as, before that number is obtained, the annual withdrawal of wornout and undesirable works will almost equal the additions. Another consideration upon this point is the provision of branch lending libraries and delivery stations. The experience of our larger towns show that the active sphere of work of a lending library does not extend more than a mile around it, and that branch libraries are necessary for the outlying and suburban districts of each town. It should, indeed, be an axiom that a lending library is wanted for each 80,000 inhabitants, and the experience of towns like Birmingham, Bradford and Nottingham proves that the suburban residents who become readers and use the branch libraries freely, are those who would but rarely visit the central library. An indirect benefit of the multiplication of branches is, that they promote the personal intercourse of reader and librarian in charge, to an extent which would be impossible if the work was concentrated in one building. In Manchester this principle of taking the books to the readers has been carried even further. There is no central lending library, but fifteen well-equipped branches, each containing from ten to twenty thousand volumes, have been distributed over the city with the happiest results.

The position of the librarian's office and the work-rooms for the staff will depend greatly upon the size of the library. In some places the librarian seems to be considered as a kind of superior janitor or caretaker, and an attempt is made to so place his office

that he can sit and watch the entrance hall and note each person entering the building. This is a wrong conception of a librarian's duties, and has come down to us from the Dark Ages, when it was thought a librarian's chief work was to preserve his books from the assaults of the would-be readers, instead of acting as a key to unlock the stores of his library. The old feeling is happily changing, and the readers are finding that the more "alive" a librarian is, the more useful to them he can be in assisting and directing their studies. In small libraries the librarian should be close to the delivery desk of the lending department, for it is there that his advice and opinion will be chiefly in request. In larger libraries, where a greater portion of the librarian's time is of necessity taken up with the administrative duties of his position, it will not be possible for him to come into close personal contact with the readers, but he should be so placed as to be readily available when wanted.

In small libraries, where the staff of attendants is limited in number, an attempt should be made to obtain some supervision of all the public rooms from a given point of vantage, say, the issue desk of the lending department. In some libraries this has been done by erecting one large room, shelving the books round the walls, and placing the newspapers and periodicals on tables and stands in the center. This is a plan to be avoided if possible, for not only is the noise inseparable from the work of the lending

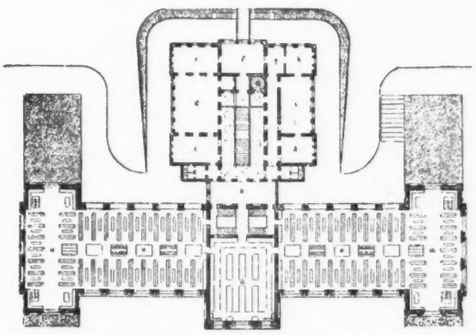


FIG. 7.

Königl. Bibliothek zu Stuttgart.

a, Book stores; *b*, vestibule; *c*, writing room; *d*, reading room; *e*, manuscripts; *f*, librarian's office; *g*, bookbinder; *h*, assistant librarian; *i*, catalogue room; *k*, porter.

department annoying to the readers, but the vitiated air of the room — if it is used at all largely — plays havoc with the unfortunate attendants, who have to respire it for nine hours or more each day. The lending library should in all cases be in a separate room. Supervision can easily be obtained by good planning and a liberal use of glass screens in the division walls.

Opinions are divided upon the question of supplying free sanitary and lavatory accommodation for readers. If the library is large, and can afford to engage an attendant, they are most useful adjuncts; but if they have to be left open without supervision, they will prove a nuisance in more senses than one. The provision of a lavatory for hand-washing only is almost necessary for reference libraries, and will repay itself in the better condition in which the books are maintained. A certain amount of dust seems inseparable from the reference department, and it is well to give the scrupulous reader an opportunity to remove it.

Safety from fire is a great consideration, more especially in the larger libraries, where special collections have been formed, or unique specimens of typography or art are stored. In such buildings the rooms for the staff and those used for the administrative work of the library should, if possible, be separated from the book stores. This has been done in the Royal Library at Stuttgart, which is planned in the shape of a capital T (Fig. 7.). The central block is entirely administrative, and the reading-room is placed at the junction of the cross-piece with the upright. The book stores are situated on either side, right and left of the reading-room. Space for extension will be provided by building a return at each end of the cross-piece parallel with, and as long as, the central block. This plan admits of complete isolation of the books from all other parts of the building, and as they are shelved in two stores, one-half of the stock is separated from the other half, and so the contingency of the total destruction of the library is further diminished. A dread of fire is by no means unnecessary, for history gives us many examples of almost irreparable loss. Without going far back, there may be mentioned the destruction of the Cottonion MSS. at Ashburnham House in 1731; and the Central Library at Birmingham in 1879, with its priceless Shakespeare and Staunton collections; the Welsh University Library in 1885; the library of Congress at Washington in 1851; and the University Library at Brussels in 1886. Fires have also recently taken place in the Newcastle-upon-Tyne and Manchester libraries, but fortunately without doing irremediable harm.

(To be continued.)

CHRISTIAN ARCHITECTURE.*

BY JAMES E. SCRIPPS.

ALL the architectural engravings up to about the beginning of the last century had been very inferior from a technical point of view, and of little use to the architectural student. Exactness of detail was something not at all thought of. Dugdale, Bentham and Grose were all antiquaries rather than architects. The first really useful work, technically, was "Carter's Ancient Architecture of England," a large folio volume published in 1795. The original edition is now rare, but a new edition was brought out in 1887, in which the plates were reproduced by lithography. This edition was published at £12 sterling, but I picked up my copy at auction for $7.

John Carter was born about the middle of the eighteenth century. His father was an architectural sculptor, and the lad inherited an acute sense of form and became very skilful with his pencil. The attention of the Society of Antiquaries being drawn to his work, he was employed by them to sketch and etch a series of views of ancient buildings. While thus earning his bread, his delight was to make for himself accurate drawings of details, with exact measurements and copious manuscript notes. These he embodied in the work described above. Carter was essentially a student and probably the first in modern times to seriously delve into the minutiæ of ancient Gothic work. He then began a series of letters to the *Gentleman's Magazine*, which a century ago was the great medium of discussion on all art and literary subjects. In these letters he embodied a vast amount of discriminating architectural criticism which had an important influence in the education of the country. The letters numbered two hundred and twelve, and were extended over twenty years, but were brought to an abrupt stop in 1817 by the death of the gifted writer.

In the same year in which Carter's work appeared, Joseph Halfpenny published his "Gothic Ornaments in the Cathedral of York." This is a folio volume containing one hundred and five etched plates illustrating the more curious and beautiful capitals, corbels, finials, bosses and other carved work in, to my mind, England's grandest cathedral. I secured a copy lately for the trifling sum of $2.25, and, it needing rebinding, I had it put in a white calf cover, white being the color of the Yorkists, as red was of the Lancasterians, in the famous war of the roses. The volume possesses increased value from the fact that the drawings were made before the memorable fire of 1829, which of course destroyed many of the originals. It will be remembered that a religious fanatic named Jonathan Martin, impressed with the idea that the clergy of the Church of England were blind guides, and that the glory of God would be conserved by the destruction of the cathedral, secured entrance to it in the night, and, piling up all the prayerbooks and other inflammable articles around the carved oak stalls, set them on fire. The stalls, organ, roof and a good part of the stonework of the choir were destroyed. The damage was estimated at over $300,000. Martin was tried, but acquitted on the ground of unsound mind, there probably being a liberal sprinkling of Methodists on the jury. For $1.50 I lately picked up a couple of contemporary pamphlets, printed in York, containing respectively an account of the fire and the report of the trial of Martin.

The next important step in the literature of architecture was the valuable work of John Britton. He was born in 1771 and lived to be eighty-five. In the course of his long life he published no fewer than seventy works, all dealing more or less directly with architecture and archæology. He began life as a wine merchant's apprentice, in London, became an active participant in young men's debating clubs, and began his literary career by describing a topographical excursion through the county of Wiltshire. In 1805 he began an elaborate work on the architectural antiquities of Great Britain, which extended to five volumes, the last appearing in 1826. The plates are most beautifully engraved, largely by John and Henry Le Keux, who for excellence in architectural engraving have never been surpassed. This work was followed by a series of illustrated monographs descriptive of the principal cathedrals of England, which, collected into five volumes, form Britton's "Cathedral Antiquities of England." His last work, left incomplete in 1856, was probably the most voluminous autobiography ever written. Britton was not a practical architect, but was well informed on the history and theories of the art, and was also a skilful sketcher of archi-

* Second paper of a series written for and printed in the Detroit *News-Tribune*, revised by the author for publication in THE INLAND ARCHITECT.

tectural subjects. He also had the discrimination to secure as collaborators the very ablest architects and engravers, as Pugin, the Le Keuxes and others. His works hence have permanent value.

It will be seen that the revival of ancient architecture was brought about mainly through the realm of literature. Through men not themselves practicing architects the world was being educated to an appreciation of the beauties of mediæval work, an education which was to find its fruition in the wonderful development of beautiful constructions half a century later.

Sir Walter Scott, through his Waverley novels, did much to cultivate a taste for the mediæval. He was himself an enthusiastic antiquary, though possessing no technical architectural knowledge.

Rev. John Milner (1752-1826) was a Roman Catholic divine, I think a bishop. He was also a profound archæologist and is best remembered for his architectural writings. In 1800 he published an essay on the rise and progress of the pointed arch, in which he claims that it grew out of the practice of intersecting round Norman arches in wall arcades, whereby a series of sharp-pointed arches is produced. Milner, in 1810, wrote the article on architecture in Rees's Encyclopedia, United States Justice Bradley's copy of which I now possess.

Eastlake says: "The origin of the pointed arch has proved a subject of as much fruitless discussion as the authorship of

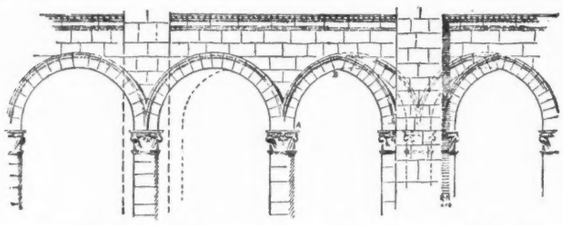


DIAGRAM SHOWING THE ORIGIN OF THE POINTED ARCH IN THE NAVE OF LE MANS CATHEDRAL.
Kindly drawn by Mr. Wm. Reed-Hill.

Junius, or identification of the man in the iron mask. In Britton's Architectural Antiquities no fewer than sixty-six different theories appear on the subject."

I am unable to find in Britton's antiquities the sixty-six different theories of which Eastlake speaks, though that author does quote sixty-six different opinions in regard to the origin of gothic architecture. For the origin of the pointed arch I can trace but eight different theories. I enumerate them in order of their increasing probability:

1. That it was a Hebrew sacred form emblematic of Noah's ark.
2. That it was suggested by the interlacing boughs of trees in the sacred groves.
3. That it was of Roman origin.
4. That it was developed by the order of freemasons, and an application of the principles of timber construction.
5. That it was of Saracenic origin, and was introduced into Europe by the crusaders.
6. That it was the result of mathematical calculations which showed it to be the strongest form of arch. [This is not true. A single ring of mason work of a semi-circular arch will sustain itself, while the same in a pointed arch would obviously collapse by its own weight.]
7. That it was devised to lessen the thrust upon the sustaining piers.
8. That it was suggested by intersecting Norman arches observed by Milner.

To these ancient theories I am able to add one of my own discovery, and which I have never seen referred to in any works on architecture. About one hundred miles southwest of Paris is the old city of Le Mans, with a cathedral built about the year 1060. Portions of this have since been entirely rebuilt, but the old nave remains. It was originally a Norman structure, with round pillars and semi-circular arches. As was common in that century, the roof of the nave was of wood, although the aisles were vaulted with stone — the span of the nave being considered, no doubt, too great for a stone wall. A century later the fashion of vaulting wide spaces had become common, and the cathedral authorities now decided to cover in their nave with stone.

At that time it was considered necessary that a vaulted area must be approximately square, the weight of the vault resting at the four corners. As the bays of this nave were the width of the aisles, in pursuance of this theory when the aisles were vaulted and the nave was double the width of the aisles, two bays had to be treated together in forming a vaulting square for the wider space.

To carry the weight of this new vault every alternate pillar had to be strengthened, the original round ones not being calculated for this increased load. They were accordingly enlarged to great square piers, with a half pillar of the original size on each face.

It is easy to see that the enlargement of the alternate piers narrowed the spaces between the arches by so much. It now remained either to leave a lop-sided segment of an arch, turn a new semi-circular arch, which would have looked small and insignificant, or meet the voussoir A B by a similar segment thrown out from the new pier, thus forming the pointed arch. The latter was at once the simplest and most elegant solution, and thus the pointed arch came into existence through a mere structural exigency.

That the process I have described was the true one is clearly proven by the walls still showing portions of the voussoirs of the old round arches above the apex of the pointed arch.

In 1818 the population of England was so rapidly increasing that the need of greater church accommodations began to be seriously felt. Then parliament created a commission to promote the erection of places of worship. In less than a dozen years no fewer than one hundred and eighty-four were built under their auspices. In none of these was much attention given to architectural taste, the greatest seating capacity for the least cost being the main consideration with the commissioners.

About this time (1819) appeared a work which did perhaps as much as any other ever published for the education of an intelligent knowledge of architecture. This was Thomas Rickman's "Attempt to Discriminate the Styles of English Architecture." To this day it is a most valuable textbook of the art. The author, strange to say, was a quaker. The affectionate interest he takes in steeple-houses, as George Fox, the founder of his sect used contemptuously to call them, is very remarkable. But then I am of quaker ancestry myself and nothing more thoroughly delights me than a beautiful old church.

In the first quarter of the century just closed quite a notable building was erected in London in the great hall of Christ's hospital, or the Bluecoat school. It is 187 feet long, 52 wide and 48 high. John Shaw was the architect, and the style Tudor or late Gothic. It is now about to be pulled down, the land having become so valuable for business that the school is being removed to a site a little out of London.

When at school in Chelsea, sixty years ago, we boys were accustomed frequently of a Sunday afternoon to attend services at St. Luke's church. This was built in 1824 and is notable as the first modern church to be constructed with a groined vaulted roof throughout. It was a pretentious edifice with flying buttresses, and cost $200,000 or more, but at the time of its erection the Gothic revival had not made much progress and it has been much criticized in the light of more recent attainments. I well remember that even to my boyish eyes it had faults. One J. Savage was the ambitious architect.

Edward Blore was born about the close of the last century. He developed remarkable taste for drawing, his sketches possessing almost the accuracy of photography. He was apprenticed to an engraver and engraved the illustrations to Dibdin's "Edes Althorpianæ," a copy of which is in the public library. In 1826 he was appointed surveyor of Westminster Abbey, in which capacity he executed many judicious restorations. He also supervised the repair of Glasgow cathedral and other important works. From his great familiarity with ancient work everything he executed was superior in character. I only learned the other day that he was the architect of Stratford church in Essex, just out of London, where in 1840 I regularly attended services every Sunday and greatly admired the architecture for its reminders of Westminster Abbey. This was before the ritualistic movement had made much progress and the congregation were wont to turn around and kneel at the seats with their backs to the chancel while the prayers were being read. This was the common practice in all Protestant churches till the fashion came in of not kneeling at all.

Since writing the above I have received from a sale in New York a beautiful copy of Blore's "Monumental Remains of Noble and Eminent Persons," which contains thirty plates of sepulchral monuments, drawn and some of them engraved by Blore. It is probably the finest example of architectural engraving ever done. The work, published at £3, 15s in 1826, cost me the magnificent sum of 75 cents.

Among the first of the English architects to really attempt the reproduction of the old-time architecture was Augustus Welby Pugin. He was only son of Augustus Pugin, a French refugee, born in 1762, who settled in London and supported himself as an architectural draftsman. He so excelled in correctly drawing the details of ancient work that by the advice of some of the best architects of the day, he abandoned the drafting board and began the preparation and publication of a series of books which are to this day among the most valuable in any architect's library. His first work was "Specimens of Gothic Architecture," two vols., quarto, 1821. This was followed in 1827 by "The Architectural Antiquities of Normandy," two vols., for which Britton furnished the literary portion, and in 1830 by "Examples of Gothic Architecture," three vols. He died in 1832.

His son, Augustus Welby Pugin, was born in 1812, and educated at Christ's hospital, or the blue coat school referred to above. This school was founded by Edward VI. on the remains of a dissolved Franciscan monastery. It was intended as a place of education for orphan boys, but has been greatly diverted from that charitable object, the presentation to it lying altogether with the board of governors and being exercised by them arbitrarily. Perhaps I should have been a "blue coat boy" myself, if my father had not emigrated to this country and made a farmer of me, for he had the promise of a presentation. There were, no doubt, however, too many candidates ahead of me. The boys dress in the costume of the sixteenth century, with short yellow breeches, a long blue coat coming down to the ankles, and a little cap about the size of a tea saucer, which, for convenience, is usually carried in the pocket, the boys going bareheaded in the

streets. The living is very plain and regime hard, but there is absolutely no cost to the pupil. The best scholars are sent to the university on scholarships. A very full and interesting account of life in Christ's hospital is to be found in Leigh Hunt's autobiography, he having been a blue coat boy.

The younger Pugin excelled in drawing and assisted his father in some of his works. Then, for a time, he dabbled in theatricals, and later, having a taste for the water, commanded a trading vessel. At last he settled down to the architectural profession and became the sturdiest advocate of the Gothic style. In 1836 he published "Contrasts," a pungent satire on the debased architecture of the day. In 1841 followed "The True Principles of Pointed Architecture," and in 1843 "An Apology for the Revival of Christian Architecture in England." These are all rare books. The profound study of mediæval church architecture very naturally affected Pugin's religious convictions, and he became a devoted Catholic. In 1842 he built a most perfect little church at his own expense at Ramsgate, in Kent, where he resided. He was largely employed in the erection of Catholic churches. A notable one, in which I was much interested, is that of St. Barnabas, in Nottingham, just across the street from the house in which the great Christian poet, Henry Kirk White, was born. Pugin was left more than once a widower, and his persistent attentions to a young lady who endeavored to avoid him were the first symptoms of the insanity in which the last months of his life were clouded. He died in 1852. His life has been interestingly written by his friend and fellow-architect, Benjamin Ferrey.

THE METROPOLITAN MUSEUM OF ART.

MR. A. J. BLOOR dwells upon the early history of the New York Metropolitan Museum of Art in a recent issue of the New York *Herald*, in the following words:

"*To the Editor of the Herald:* The first page of the fifth section of your issue of July 28, with its fine illustrations and the very artistic framework in which they are grouped, forms an ensemble which worthily introduces your paragraphs on 'Some of the Possibilities of the Metropolitan Museum of Art.' Your article makes very interesting reading, and not least for those who were active in the formation and the earlier doings of the museum, and who remember its 'day of small things.' Perhaps you will permit one who had a humble part therein to correct an error or two that have crept into your statement.

"To begin, then: What had been Mrs. Douglas Cruger's mansion in West Fourteenth street, still or very lately standing, was the second, not the first, home of the museum. Its first was a large double house on the east side of Fifth avenue, built for his own use by Dodworth, a famous bandmaster of his day, and somewhere, I think, between Forty-second street and the Cathedral, though the precise location has escaped my memory, and the books and papers to which I might refer I do not bring away from New York when on summer vacations.

"In that building the first elected trustees, with Messrs. Russell Sturgis and Theodore Weston as joint secretaries, for perhaps a couple of years, after a short provisional joint secretarvship by Mr. S. P. Avery, Sr., the art connoisseur, and myself, laid the foundations of those collections which have since grown to such great proportions, through the devotion and generosity of the museum trustees, especially of its present president, Mr. H. G. Marquand, and the capacity and energy of their chief officer, General di Cesnola.

"Neither is it quite correct to say that 'the plans for the entire building were prepared by the late Richard M. Hunt.' Time and again, during and after their preparation, I examined the original plans, as designed by the late Calvert Vaux and J. Wrey Mould, with the help of the partners and assistants of the former. Their scheme was, indeed, considerably enlarged and changed by Mr. Hunt, as he himself told me more than once, but they both designed and executed the oldest section of the museum — that including the original great hall, in which are deposited models, to a scale greater than ever before attempted, of several of the largest, as well as most famous buildings of the world, as produced under the direction of and furnished by the Willard architectural commission, while the designer of the museum's south section, an interior view of which is shown among your illustrations, was a young architect, since deceased, named Tuckerman.

"It is noticeable, by the way, that while your reporter's attention was called by one or another of the 'many persons interested in the work' of the museum, to some half-dozen of its collections characterized as 'unrivaled,' 'the finest in existence,' 'envied and desired by the museums in Europe,' etc., such as the Cypriote antiquities, classic and mediæval glassware, Chinese porcelain, Assyrian cylinders and musical instruments, no allusion is reported as having been made to the perfectly unique character of the larger objects in the Willard architectural collection, for which the museum is primarily indebted to the foresight and influence of the just deceased Mr. Napoleon Le Brun. It is true that these unmentioned examples could be replicated, while the others, specified as treasures apart, could not. But that does not sufficiently account for the apparent fact that not one of your reporter's informants seems to have had architecture on his mind as one of the fine arts needing in its representation at the museum adequate curatorship at least as much as the others — some of those others, by the way, being generally classed as minor arts.

"Any criticism to this effect, however, would probably be met by the statement that 'the department of casts' includes examples of architecture. But though the greater may include the less, the less can not include the greater. The term 'casts' is a very indefinite one, and has neither sufficient distinctness nor distinction in its application to large scale reproductions, under the direction of the most eminent architectural archæologists in Europe, of famous buildings like the Willard models; nor yet to the collection of architectural examples — very choice ones, even if less impressive — subsequently acquired by the museum through the initiatory exertions of Professor Ware.

It is true that some men practice architecture as a trade, rather than as a profession, but that is equally true of some practitioners in all professions, and does not invalidate the fact that architecture *per se* is as much a fine art as its frequent and generally (but not always necessarily) desirable auxiliaries, painting and sculpture. The community is under very great obligations alike to the founders, to the subsequent promoters and to the present authorities of the museum. But it will owe the last a still greater debt when they frankly acknowledge this fact, and regulate both their statements as to its needs and their future labors in its behalf accordingly.

"In conclusion, let me recommend your reporters, if they are despatched after further information as to the history and possibilities of the Metropolitan Museum of Art, to interview, if he permits it, the Hon. Andrew H. Green, the father of Greater New York, and through the greater part of an active life one of our most public-spirited citizens. He was one of the most prominent founders of the museum and coincidentally the controller of the Central Park, as afterward of the city of New York.

"The extensive site of the museum was secured mainly, if I recall rightly, through his influence, and his close, constant and prolonged attention to municipal affairs and to the future interests of our great metropolis entitles him to the most respectful hearing on the salient points relating to its history during the last four or five decades and to everything predicable as to those interests."

THIRTY-FIFTH ANNUAL CONVENTION, AMERICAN INSTITUTE OF ARCHITECTS.

PRELIMINARY NOTICE.

THE coming convention of the American Institute of Architects will be held in Buffalo, New York, on October 3 to 5, inclusive, 1901. Address by the President, Mr. Robert S. Peabody, Reports of the Board of Directors, Chapters, Standing and Special Committees. The report of the chairman of the Committee on Government Architecture, Mr. George B. Post, will be followed by papers on the effectiveness and possible improvements in the Tarsney Act, by Mr. Cass Gilbert, of St. Paul, Minnesota; Mr. W. A. Boring, of New York; Mr. John H. Rankin, of Philadelphia.

In connection with actual study of the buildings, decoration, statuary, landscape and their grouping in the Pan-American Exposition, the following papers have been promised: Mr. Carlton Sprague, of Buffalo, on "Some Phases of Exposition Making"; Mr. W. D. Kimball, of Omaha, Nebraska, on "The Management and Design of Expositions"; Mr. C. Y. Turner, of New York, on the "Exterior Color Effects"; Mr. Luther Stieringer, "Electrical Installation and Decorative Effects in Pan-American Exposition."

Members of the Institute who contemplate visiting the Pan-American Exposition will have facilities for viewing and understanding the various sights during the convention which they would not have as individuals, and for this reason they are advised to make their visit during the convention.

Members are urged to return, at their earliest convenience, the slip which has been mailed to each member signifying their intention to attend the convention, so the Committee of Arrangements will be able to make their plans for railway rates, entertainments and hotel accommodations.

GLENN BROWN, Washington, D. C.,
E. B. GREEN, Buffalo, N. Y.,
WALTER COOK, New York, N. Y.,
Committee of Arrangements.

LIBRARY DESIGN.

IT is apparent that the whole problem of library design is to be raised into a position of hitherto unheard of prominence. There seems no cessation to the flow of the torrent of public libraries over this thirsty land, and the question naturally arises, what is to be the general architectural character of these particular buildings? When the deluge first began, Romanesque was running its turbid course, but this was suddenly checked by Messrs. McKim, Mead & White's Boston Public Library. For a time everything was delicately classical after the best Italian fashion, then the French fever swept over the country and the classic rapidly became tinged with a decidedly Parisian coloring. At the same time, curiously enough, there was a certain reversion to the most formal Greek type. The two libraries above referred to are good examples of these two tendencies, French and Neo-Hellenic. Both of the styles adapt themselves very well to the requirements of the modern public library; the first, because the exterior must of necessity develop logically from the plan, which in the case of libraries, should always stand first of all the con-

siderations; the second, because it has unrivaled dignity, self-respect and an unmistakably learned character. There is nothing that is distinctively American in either style. Perhaps this quality is one at present impossible of achievement. The greater defect lies in the fact that buildings in neither style fit very well into the inevitable surroundings that characterize the smaller American cities; perhaps this latter is an inevitable condition also, and it may be just as well that a library by its very architecture should show its aloofness from its commercial and too often sordid surroundings. It almost seems, however, that the good qualities possessed both by the French and Neo-Hellenic styles might be obtained, together with an ethnic flavor and a certain adaptability to surroundings, through the use of a style hitherto almost wholly ignored in library architecture, namely, the Collegiate Gothic of Oxford and Cambridge. This style also adapts itself with singular felicity to library requirements. It belongs to the race, it can easily be given a distinctively American character, it has dignity, gravity and a suggestion of learning, and it permits of the use of brick and low-toned stone. This latter consideration is one of some importance. Buildings of marble and white granite are very beautiful when the scaffolding is first removed from them, but they must inevitably grow dingy with time, for their environment prevents any other result. Red brick and gray stone improve the longer they stand; smoke and noxious gases are impotent to do them injury.

Considering all these points, is there not a measure of reason in advocating this style for the purposes of library architecture?—*Ralph A. Cram, in Architectural Review.*

FOR BEAUTIFYING WASHINGTON.

IN an interview on his return from a study of the great capitals of Europe, Mr. D. H. Burnham, of the Commission on Beautifying Washington, expressed himself to the Chicago *Tribune* as follows:

How to apply some of the artistic ideas of European capitals to improvements at Washington will be the substance of a report to Congress now being prepared by D. H. Burnham, the Chicago architect.

Mr. Burnham has just returned from a tour in Europe, landing at New York on Thursday from the steamer Deutschland. He was chairman of a commission of three appointed by Congress to visit the capitals of Europe, especially those famed for beauty, and offer suggestions for changes in the United States capital. These suggestions are to be used in contemplated improvements at Washington. In his trip of less than two months Mr. Burnham visited London, Paris, Madrid, Rome, Vienna, Buda-Pesth, Munich, Berlin, The Hague and Brussels, omitting St. Petersburg because of lack of time to make the long journey, and also because St. Petersburg is more like Washington than are the other capitals.

"No one city struck me as a more valuable lesson than the others," said Mr. Burnham. "Paris, of course, is known as the great city of art, and it is a wonderful place of beauty—but the other cities are just as wonderful. From Berlin much was to be learned. Artistically, the German capital is one of the first places in the world. Vienna has a boulevard lined for a long distance on both sides with beautiful public buildings, making one of the most imposing architectural effects to be seen in any city. Brussels also has many beautiful buildings.

"The commission was together all the time during the trip. We have already begun to prepare our report, which we present at the next session of Congress. Just what the improvements in Washington are to be I am unable to say. We took particular care in viewing the parks, estates and villas, with the intention of adopting the best ideas for use over here. I suppose our report will bear particularly on the improvement of streets and parks and on the selection of sites for future public buildings.

"When the report is presented, our work is done, so I can not say how many foreign ideas will be adopted in Washington as a result of our investigation."

ARCHITECTURAL STYLE.

ARCHITECTURE is an expression rather than a style and is the outcome of certain conditions in a certain civilization. If instead of the word style is substituted the word civilization, it will be seen how many are at fault. For instance, if instead of speaking of a Louis Quatorze style you speak of putting a Louis XIV civilization in State street it is easy to see how fearful of the anacronism. We must seek to express our own feelings and the form must in every case follow the function of which it is an expression. Style is not an origin, it is an incident, and can only be found by a faithful expression of what are our needs in a natural manner." LOUIS H. SULLIVAN.

"America is too young, or, better stated, too new. Had we existed 2,000 years ago we should doubtless, like all the other nations, have an old style of our own that would affect the architecture of today. The introduction of the skyscraper, with its tall steel construction, demanded a special treatment that if it had a precedent found it in the tower or in the column with its ornamental base, its plain shaft and its rich cap. As this skyscraper is an American invention, so this column style is distinctly American, but it is yet too new." W. L. B. JENNEY.

—*From the Chicago Chronicle.*

CORRESPONDENCE.

Editor Inland Architect:

My attention has been called to the fact that I am mentioned in your last issue as one of the architects of the St. Louis Fair. I should be obliged if you would deny this. I was obliged to decline the honor because of pressure of business in other directions. Yours very truly, D. H. BURNHAM.

ZINC WHITE IN FRANCE.

THE French authorities have gone far in their support of zinc white to the exclusion of all other white pigments, as is evidenced by the following circular from the Minister of Public Works. STANTON DUDLEY.

"My attention having been called to the dangers threatening the health of workmen in using colors with a lead base, I asked the President of the Council, Minister of the Interior, to bring the question before the consulting Committee of Public Health in France. I invited at the same time the chief engineers to inform me if from a technical point of view they could bring forward any objections to the exclusive employment of zinc white on any work they may have to direct. The result of this double inquiry is that it is agreed that on the one hand the substitution of zinc white for white lead is altogether desirable from the point of view of health, and that on the other the substitution can be realized without inconvenience from the technical point of view. I have in consequence decided that in all work executed on account of my administration the use of paints or glazings with a white lead base shall henceforth be interdicted. The tenders for the execution of these works, whether by agreement or adjudication, must mention this interdiction, a special clause being inserted to this effect in the terms of tendering. In the altogether exceptional case where the engineers believe the use of white lead to be indispensable, they must provide themselves with a special authorization from the superior administration."

MOSAICS.

AMONG the special attractions at the exposition this fall will be an architectural exhibition given under the auspices of the Milwaukee Architectural Club. Space has been allotted for the purpose in the art gallery, and it is the intention of the architectural club to make the exhibition one of high merit and real educational value. George B. Ferry, William H. Schuchardt and Elmer Grey have been appointed a committee to take charge of the arrangements and R. C. Spencer, Jr., George M. R. Twore, of Chicago, and Samuel Ilsley, of Santa Barbara, California, have consented to act as a jury of selection. The direction of the exposition has been placed in new hands this year, and the event promises to be one of unusual interest throughout. An entirely new arrangement of booths has been made, a decorative architectural scheme of monumental proportions has been adopted, and many new special features have been introduced to make it additionally attractive.

OUR ILLUSTRATIONS.

Public Library, Erie, Pennsylvania. Alden & Harlow, architects.

Studio for J. C. Jorgensen, Milwaukee, Wisconsin. Ferry & Clas, architects.

Hazelwood Branch, Carnegie Library, Pittsburg. Alden & Harlow, architects.

Carnegie Library, Pittsburg, Pennsylvania. Longfellow, Alden & Harlow, architects.

Public Library, District of Columbia. Ackerman & Ross, architects, New York city.

Lawrenceville Branch, Carnegie Library, Pittsburg. Alden & Harlow, architects. Detail of Entrance is shown also.

A Chimney Piece in Reception Hall of a Hunting Lodge. Rougevin Competition, Ecolé des Beaux-Arts, Paris, February, 1899. First Prize Design by G. Lefort.

Views of Remodeled Grand Central Railroad Station, New York city. Samuel Huckel, Jr., architect. The following views are shown: Main Waiting-room; A Corner in Main Waiting-room; View of Concourse and Entrances to Main Waiting-room; View in Lobby of Vanderbilt Avenue.

Photogravure Plate: Franklin Savings Bank, New York. York & Sawyer, architects.

PHOTOGRAVURE PLATES.

Issued only with the Photogravure Edition.

Residence of William Bloomingdale, New York.

Residence, East Orange, New Jersey. Lamb & Rich, architects.

Residence, East Orange, New Jersey. Lamb & Rich, architects.

Metropolitan Museum of Art, New York. Richard M. Hunt, architect.

Residence of J. K. Innes, Binghamton, New York. C. E. Vosburg, architect.

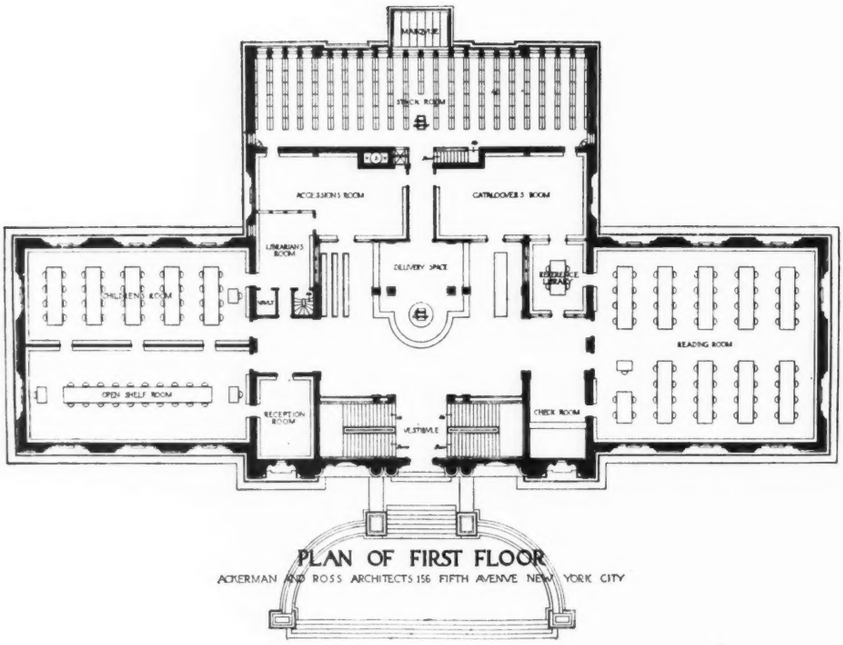
Residence of Mr. Bayliss, Binghamton, New York. Gardner & Bartoo, architects. A plate is given also to the stable of same.

VIEW IN VANDERBILT AVENUE LOBBY, ENTRANCE TO MAIN WAITING-ROOM, GRAND CENTRAL STATION, NEW YORK.

SAMUEL HUCKEL, JR., ARCHITECT.

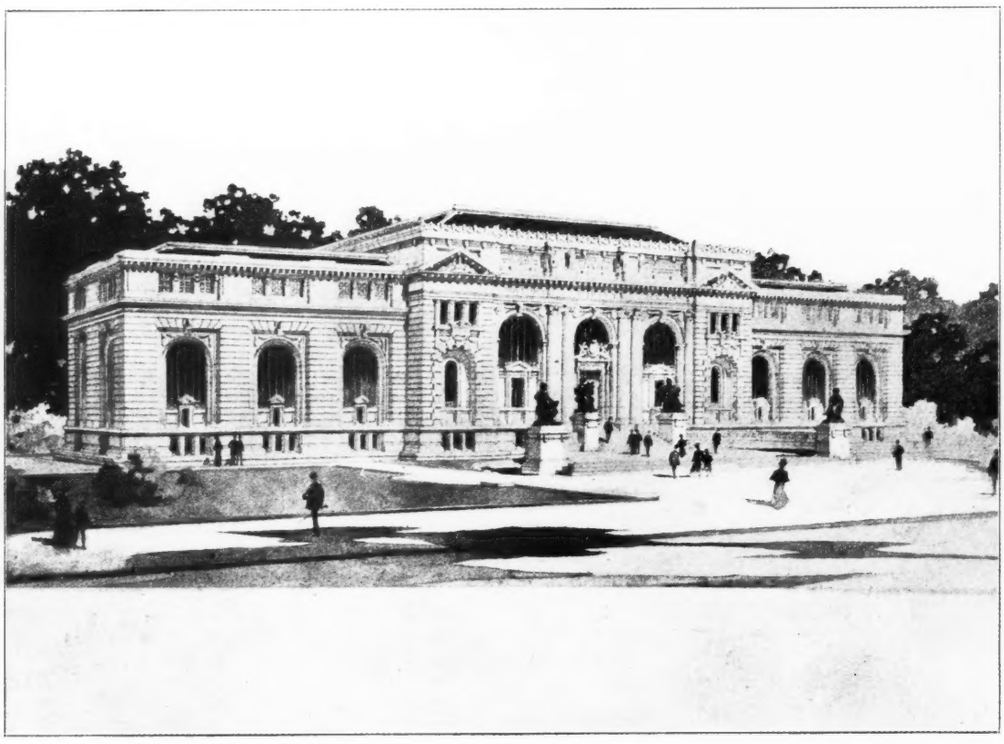
A CORNER, MAIN WAITING-ROOM, GRAND CENTRAL STATION, NEW YORK.

SAMUEL HUCKEL, JR., ARCHITECT.



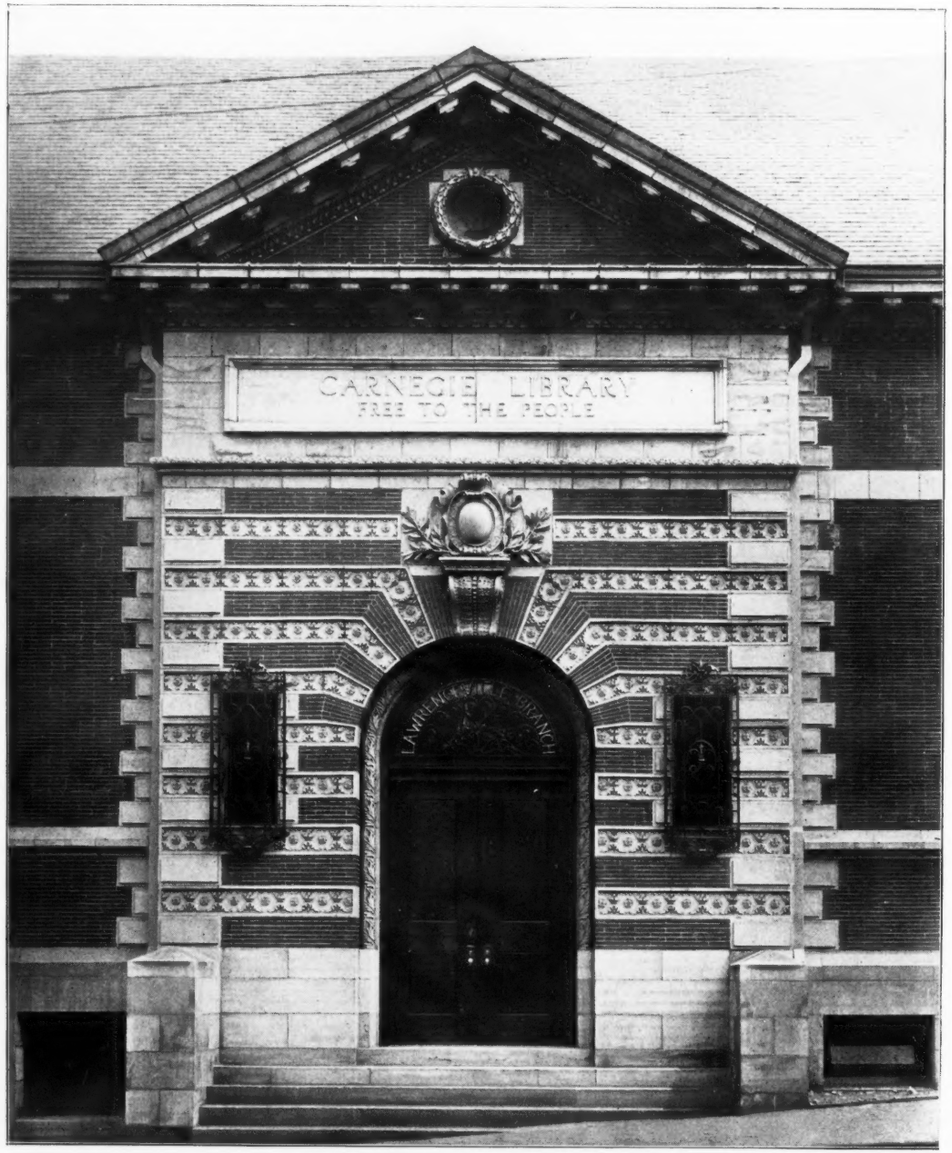
PLAN OF FIRST FLOOR

ACKERMAN AND ROSS ARCHITECTS 156 FIFTH AVENUE NEW YORK CITY

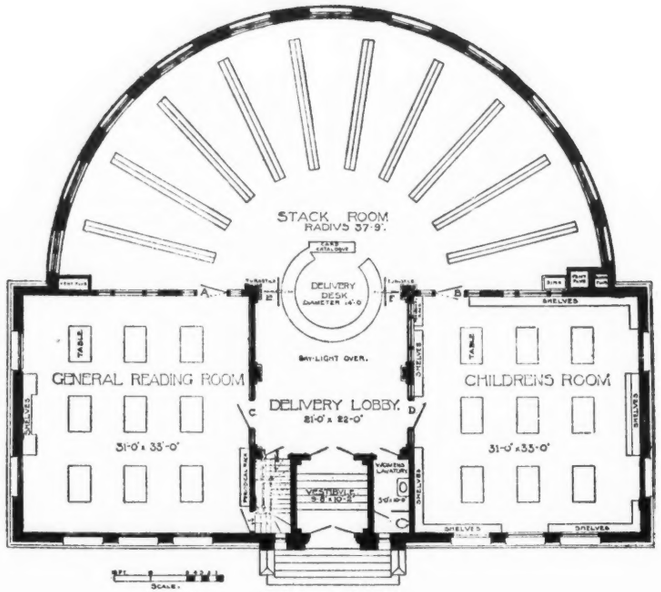


PUBLIC LIBRARY, DISTRICT OF COLUMBIA, WASHINGTON, D. C.

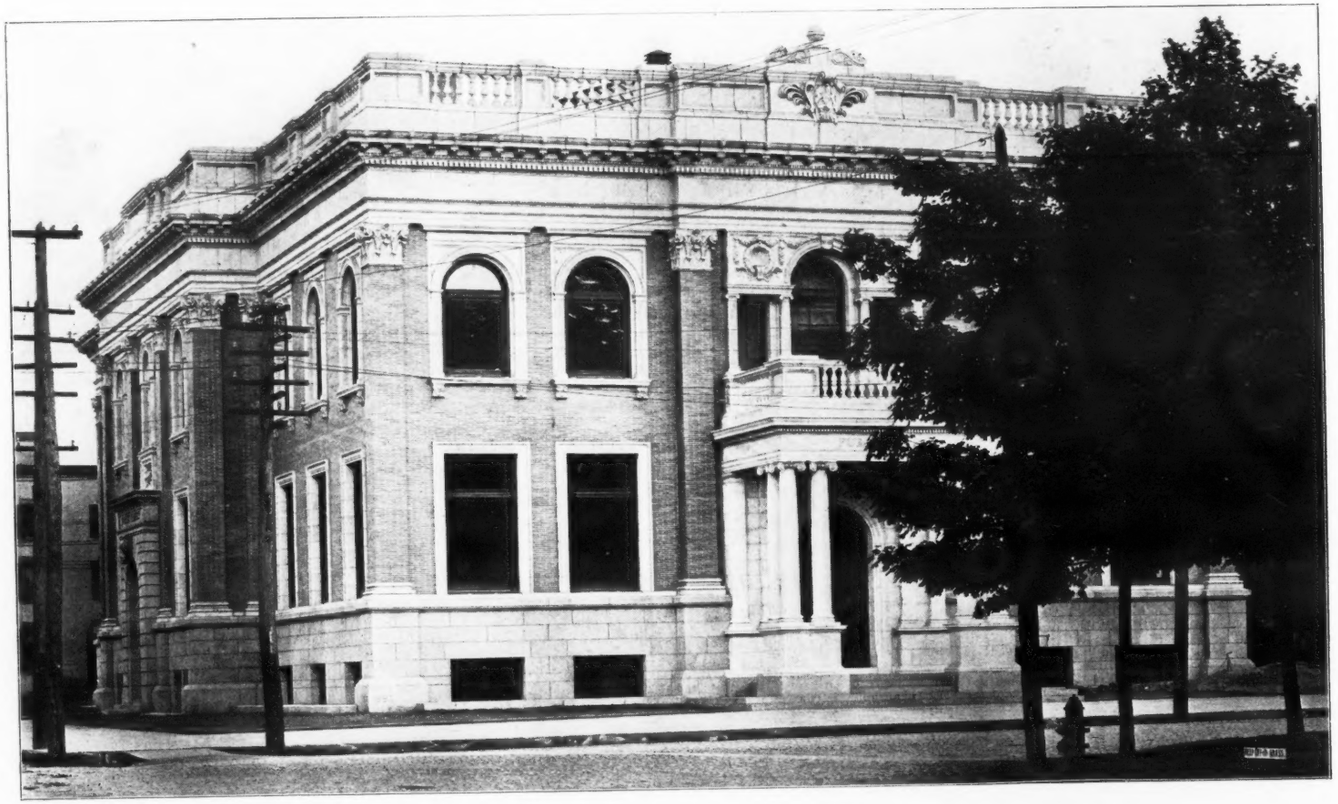
ACKERMAN & ROSS, ARCHITECTS, NEW YORK CITY.



DETAIL OF ENTRANCE.



FIRST FLOOR PLAN



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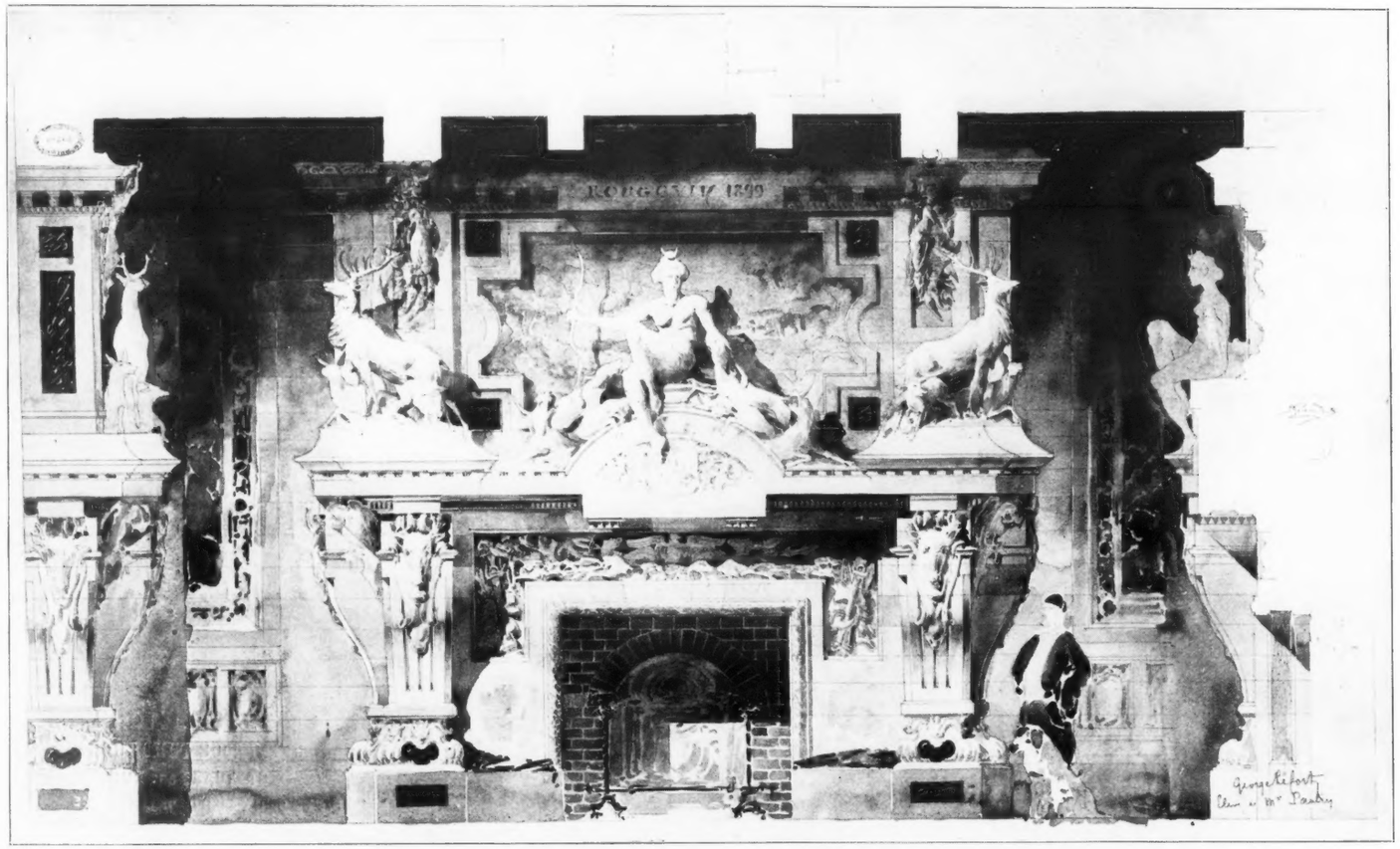
ALDEN & HARLOW, ARCHITECTS.



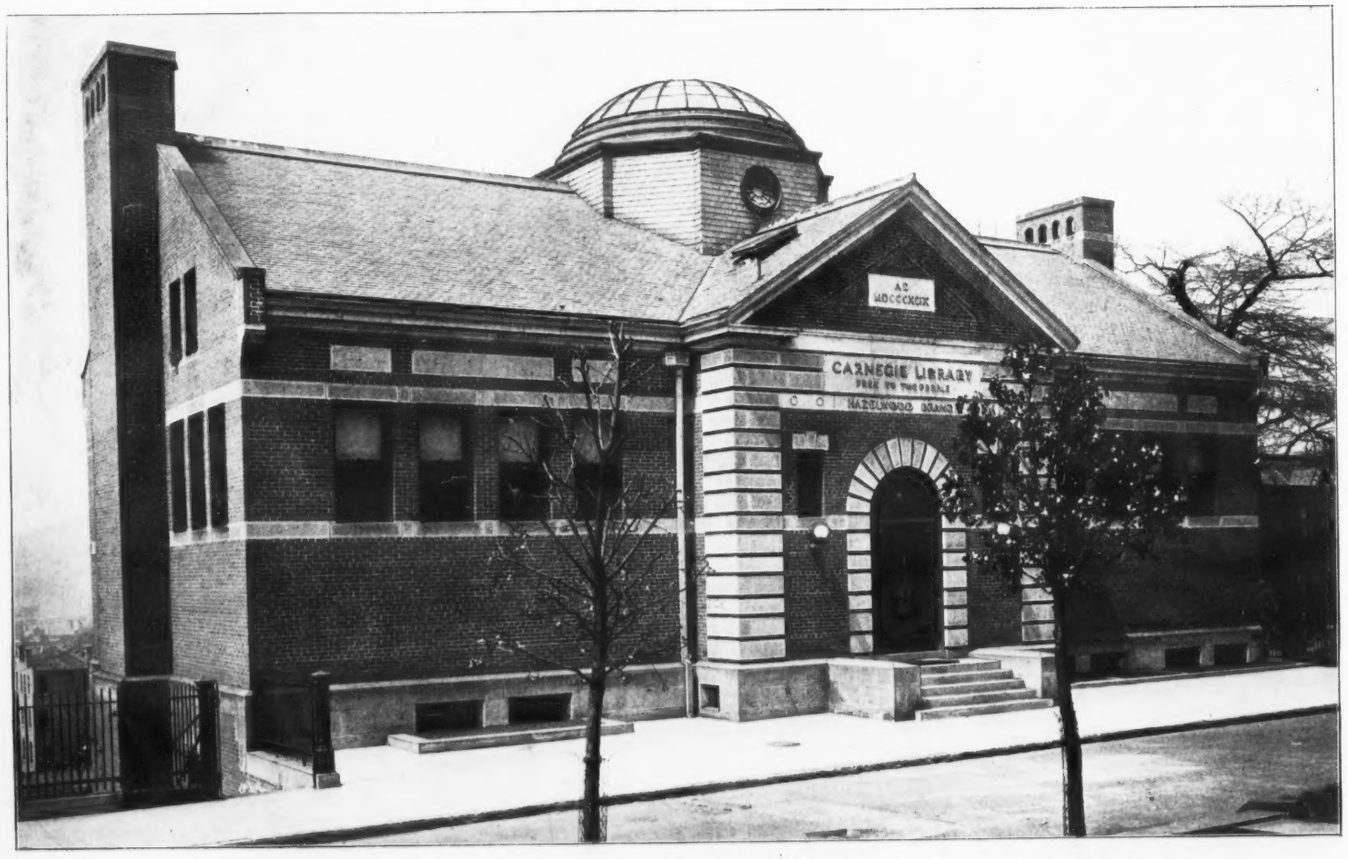
A CHIMNEY PIECE, RECEPTION HALL OF A HUNTING LODGE.

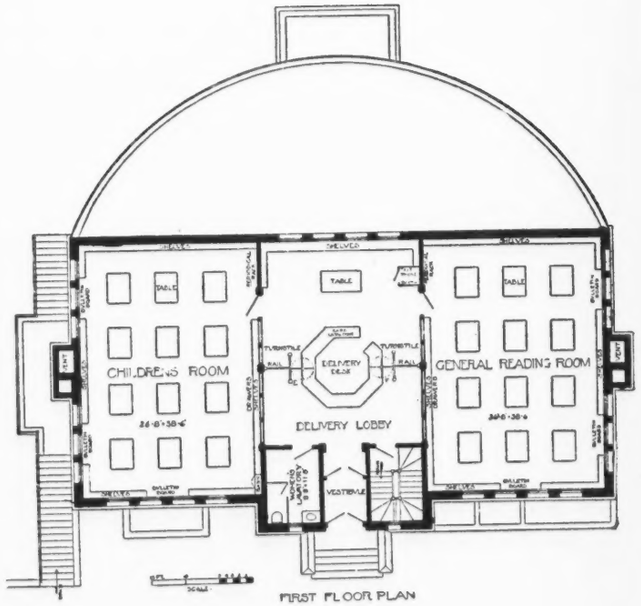
ROUGEVIN COMPETITION, ÉCOLE DES BEAUX-ARTS, PARIS, FEBRUARY, 1899.

FIRST PRIZE DESIGN BY G LEFORT.

STUDIO FOR J. C. JORGENSEN, MILWAUKEE, WIS.

FERRY & CLAS, ARCHITECTS.





HAZELWOOD BRANCH, CARNEGIE LIBRARY, PITTSBURG, PA.

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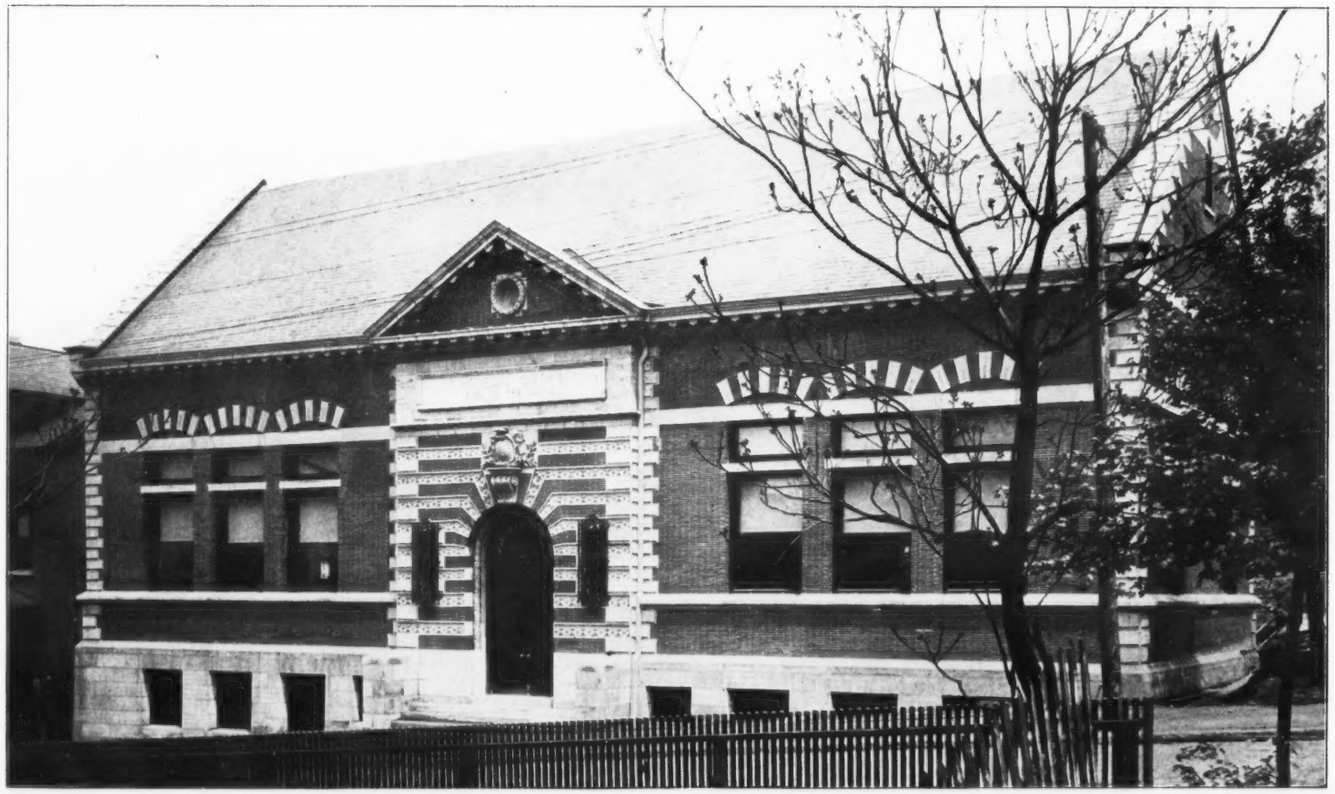

LAWRENCEVILLE BRANCH, CARNEGIE LIBRARY, PITTSBURG, PA.

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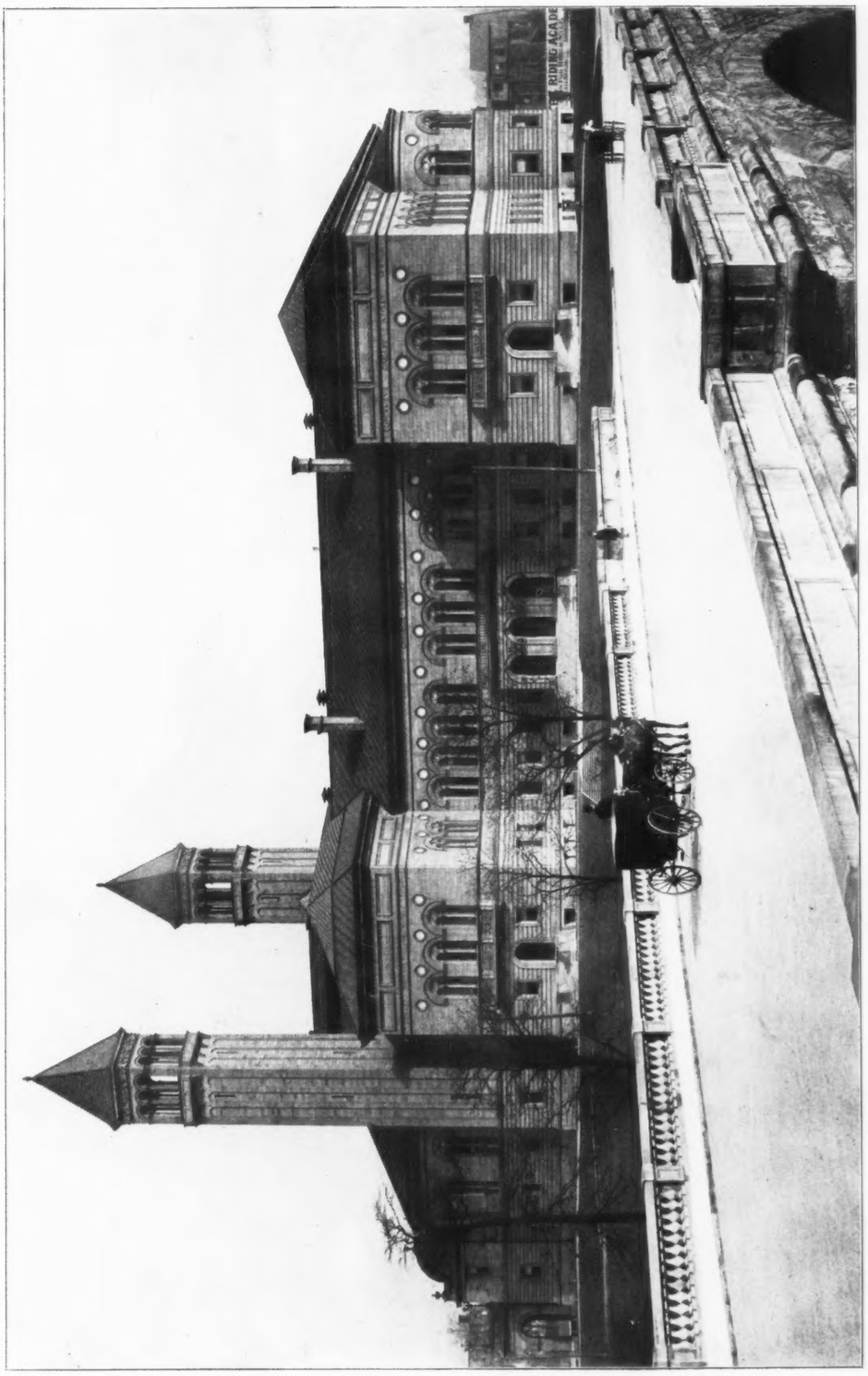


CARNEGIE LIBRARY, PITTSBURG, PA.

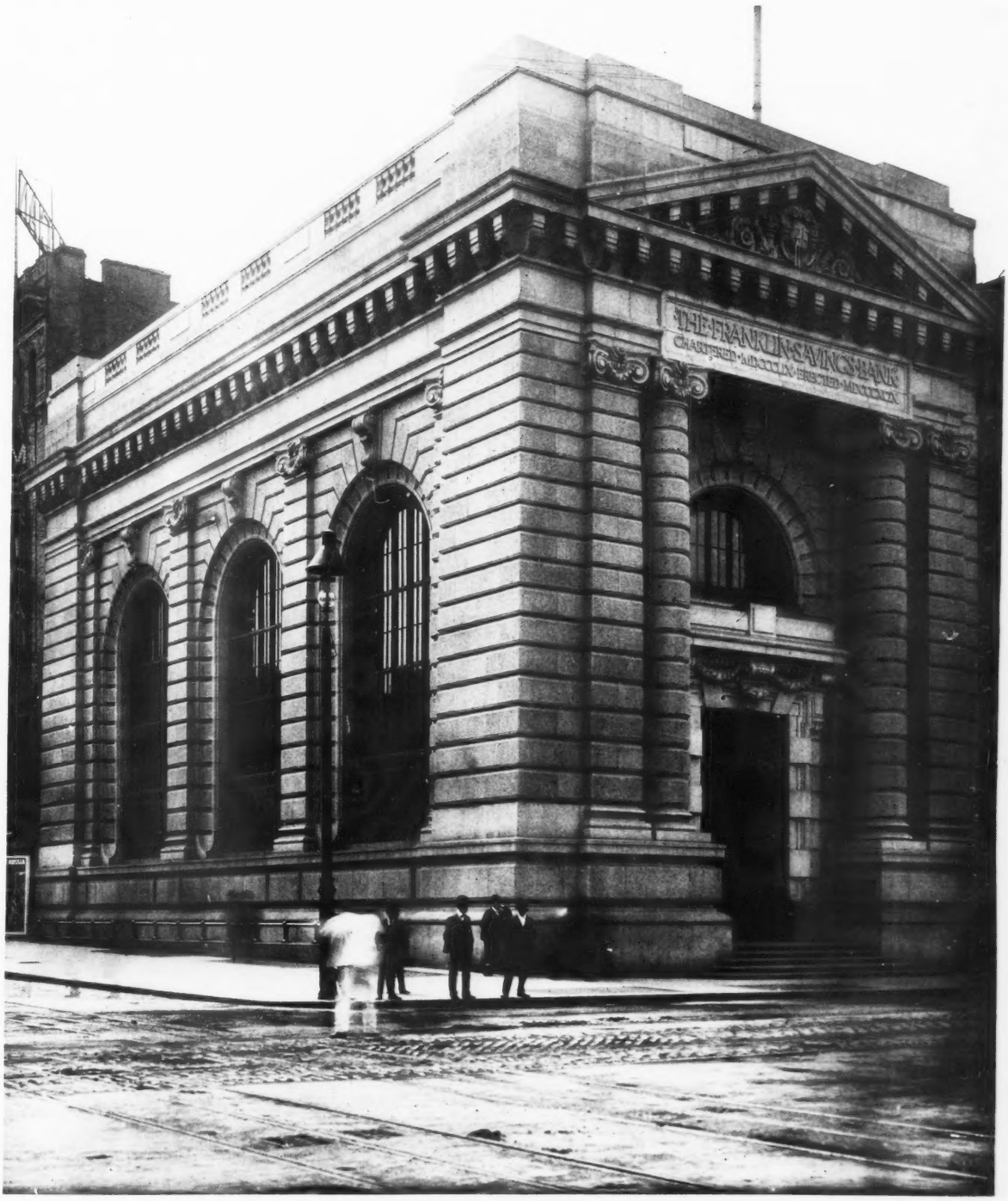
LONGFELLOW, ALDEN & HARLOW, ARCHITECTS.

MAIN WAITING-ROOM, GRAND CENTRAL STATION, NEW YORK.

SAMUEL HUCKEL, JR., ARCHITECT.

VIEW SHOWING CONCOURSE AND ENTRANCES TO MAIN WAITING-ROOM, GRAND CENTRAL STATION, NEW YORK.

SAMUEL HUCKEL, JR., ARCHITECT.



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