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NEW UNION STATION AND PROPOSED FEDERAL BUILDING, CHICAGO
GRAHAM, ANDERSON, PROBST & WHITE, ARCHITECTS

Thirty-first Annual Chicago Architectural Exhibition

Given Jointly by the Illinois Chapter, A. I. A., Chicago Architectural Club, The Illinois Society of Architects, with the Co-operation of the Art Institute of Chicago

AS expressed in a foreword to the catalogue of the Chicago Architectural Exhibition, "complete cessation of work of that vast portion of society which is engaged in building would be disastrous to our war necessities." Upholding this belief, those in charge of this exhibition have sought to carry forward all professional activities, although confronted by the handicaps besetting the architectural and building fields.

In spite of interruptions that have taken place in all building operations, and the depletion incidental to the departure for military service of many men in the profession, those compelled to stop at home have done their "bit"—and well—in the gathering together of the very dignified showing of archi-

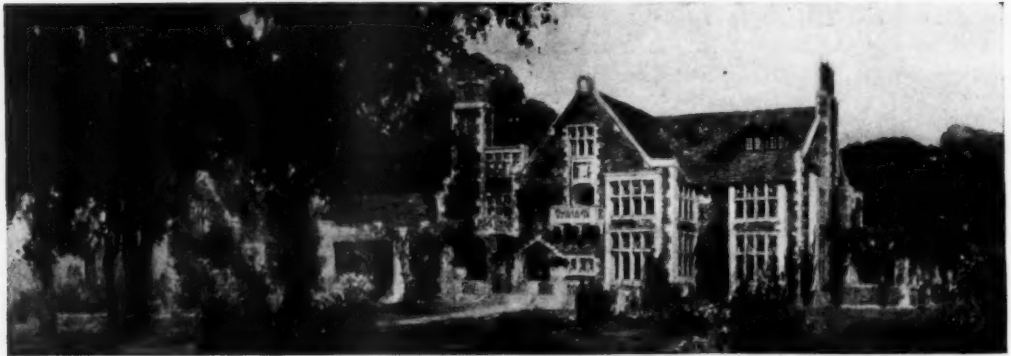
tecture, which was formally opened on April 4, in the galleries of the Art Institute of Chicago, and which will remain open until May 1.

It has been realized thoroughly, to quote again from the foreword, that "architecture as a social service is no less real, and should be no less relied upon by the people in these strenuous times of war than when peace prevails."

As everything that now forms a part of our daily life reflects some one of the many aspects of war, so does this exhibition, in a large measure, present the influences of the great conflict. There is a good presentation of things done in the recent past; there is the presentation of a great amount of work tentatively prepared for possible future

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A HOUSE AT OAK PARK, ILL.
GEORGE MAHER, ARCHITECT

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execution, and there are the problems of architecture which our entry into the war has developed and made more insistent than any others.

The absorbing question of housing in all of its phases, as affecting our rapidly developing industries, is emphasized. The enormous undertakings of the National Government, the activity on the part of various states, the feverish haste of every manufacturing city to have and to hold the great influx of labor, and the comprehensive efforts of large corporations to keep their labor housed and contented, are all reflected in one way or another in architectural practice to-day.

The Western men have been "on the job" from the start. Early to foresee what every close observer felt was the inevitable; quick to grasp the opportunities presented; and strenuously working to keep for architecture that which belongs to it, it is not surprising to learn what has been accomplished in this locality. It is just what would be expected from an energetic, wide-awake body of men.

All these essentials of a spirit abreast of the times are shown in this exhibition.

It has never been the policy of THE AMERICAN ARCHITECT to dwell specifically on particular fea-



GARRETT BIBLICAL INSTITUTE—VIEW FROM LAKE
HOLABIRD AND ROCHE, ARCHITECTS

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GARDEN FRONT

HOUSE OF JAMES M. WILLCOX, RADNOR, PA.
HOWARD SHAW, ARCHITECT

Thirty-first Annual Chicago Exhibition

tures of an architectural exhibition. It will not depart from that custom now. It has, however, as occasion seemed to demand, commented on the composite character of these annual exhibitions. It has no hesitancy in saying in connection with the present Chicago Architectural Exhibition that, in view of the present abnormal conditions, it is a presentation of work that may be commended in the highest terms, and that it reflects the energy of a

group of men alive to the dignities of their profession.

As an addendum to the excellent catalog of this exhibition, there has been prepared by the Historical Committee a short monograph on the History of Architecture in Illinois for the past hundred years. This is written by Thomas E. Tallmadge,



HOUSE OF O. B. ENGLISH, KANKAKEE, ILL.

S. S. BEMAN, ARCHITECT

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chairman of the committee. As Illinois was admitted into the Union in 1818, the present year marks the close of the first century of the history of the state, as well as of the many activities that



RAVISLOE COUNTRY CLUB, HOMEWOOD, ILL.

GEO. C. NIMMONS, ARCHITECT

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have worked toward its great development. The very important part played by architecture is set forth by Mr. Tallmadge in an interesting manner.

"Illinois, chronologically, at least," writes Mr. Tallmadge, "can lay claim to all of the styles or modes into which American architecture is usually divided." He traces the various periods or epochs in our architectural history from the classic or Greek revival style of 1800 to 1850, the *post bellum* atrocities, followed by the epoch-marking advent of H. H. Richardson.

All of these phases that overspread the United States he finds represented in Illinois.

The author boldly claims for his state the first serious attempt to depart from the practice of classic precedent and the evolution of a new thought in architectural design. He states:

"We should be proud of the fact that the only conscious attempt to break away from European precedent and to create a new style which would be distinctly American occurred in Chicago. The leader of this revolt, the prophet and the apostle of the new dispensation, was Louis H. Sullivan. The movement had glorious birth in his Transportation Building of the World's Fair. It has been fostered by a small number of brilliant and courageous men,

who in the face of opposition and indifference have carried on a losing fight, often sacrificing popularity for principle.

"The characteristics of the style are the strict avoidance of European precedent, an unusual emphasis on the horizontal line, a frank acknowledgment of the construction and materials, and the use of indigenous natural forms in the ornament. The style, sometimes called the Chicago School, has unfortunately been discredited by the excesses of some of its practitioners and has often been made ridiculous by the atrocities perpetrated by ignorant contractor-architects, who have travestied some of its forms and motives in cheap flats and stores. Its best expression we see to-day in the small houses whose owners have not been educated up to the 'styles' and in the warehouses and commercial buildings where the logic of its forms makes a happy union with modern engineering."

An exhibition of photographs and drawings illustrating the architecture of the State of Illinois from the earliest settlements to the present day is an interesting and instructive feature of the exhibition. The exhibits are arranged in chronological order and illustrate the different styles of architectural progress in the state.



UNION STATION, SAINT PAUL, MINN.

CHAS. S. FROST, ARCHITECT

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The Business and Art of Architecture*

By TOM P. BARNETT

THE tendency to-day is to bring everything in its final analysis to be judged by business results.

Some state that business or trade, which is another name for mutual exchange, was the cause of the present great war. Certainly it would appear that this great human force is moving for the liberation of the human race and toward the universal brotherhood of man.

Granting that there is a need for the existence of architects and that each one present, at some time, may be interested in building, either from a financial or esthetic standpoint, let us then consider the business of architecture, and I shall try to show you that you are interested personally more than you realize.

If more careful consideration were given to the erection of the buildings of the country and their design a very different result in the physical appearance, actual comfort, financial prosperity and stability of the country would be obtained.

On the architectural remains of the buildings of past generations are written in words of stone the story of their day. These monuments frequently refute the written annals of historians and are silent sermons on the character and lives of the people by whom they were erected.

The history of Egypt, Greece and Rome comes down to us through the remains that exist of their buildings, and from the work of the archaeologists who are daily bringing to light new evidences of the ancient arts.

If the monuments and the works which we leave behind are such an important factor in forming the history of the country, is it not reasonable that this branch of science and art should receive the most universal and careful study and consideration? Your answer will probably be: Is it not true that adequate study and consideration are being given to art of the present day and are we not making great progress in artistic development?

If you consider the astonishing facts, which, I believe, in many cases may not have been brought to your attention, of the actual conditions of building in America at the present day, you will have grave doubt as to your progress in art.

Many of the structures erected throughout this country are not designed or erected by architects at all, but are constructed by speculators, mostly for financial gain. It is to be regretted that these

parasites are permitted, under the authority of the law, to operate to the detriment of every decent consideration for the comfort, health, sanitation and art of the community. They are the outgrowth of the American's neurotic and fevered effort to get rich quick, and reflect with wonderful fidelity the unmoral state of the country, whose greed for gold, if carried on to its logical conclusion, will undermine the foundations of our liberty.

There will be no evading the verdict of the future generations when such concrete examples, which include mile upon mile of hideous buildings, lacking both in comfort and art, stand, in their ugly nakedness, for centuries to come, a commentary on the ignorance and callous vulgarity of the present age. This may in part be due to the fact that the country is composed of the peoples of so many different nations, and that we are still in the melting-pot stage of development.

If a considerable amount of the great business of architecture and building is usurped in this manner it is highly important to each member of the Art League to make it his or her business to do what little he may to correct these existing evils. They can best be reached and corrected through the proper regulation and management of the building departments of our great cities throughout the country and by State laws, which would restrict the practice of architecture to properly licensed architects who shall have passed a State examination. The Society of Illinois Architects has accomplished great reform along these lines and is working earnestly toward a solution of this problem, for the protection of society in general and the welfare of this country as expressed in the construction of her buildings.

It would be a fitting step forward in the cause of art if the League could be the channel through which might be enacted state laws relating to licenses for architects. This would go far toward the establishment of worthy practitioners of architecture and would operate for the safety and protection of the whole community and for public welfare in general. It is my opinion that the matter should be brought to a vote of the League and referred to the proper committees, with authority to proceed with such steps as might be necessary to secure needed legislation. Laws of this character have been enacted with success in Illinois, New York, in Colorado and in many other States.

To the misinformed the employment of an archi-

*An address delivered before the Art League of St. Louis, Mo.

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tect is a luxury. But I say to you that the architect exists for your service and is a necessity; when he is employed you should become his partner, in fact, and when such harmonious conditions have been established the construction of your buildings will be attended with success, from the financial standpoint as well as the artistic. It is through this intimate relationship of architect and client that great results have been achieved, and the client himself, in a certain way, becomes part architect in the transaction.

The office of an efficient architectural firm is equipped with departments devoted to the special branches of the business. There you have the service of a business expert on one hand—of a scientific designer, artist and decorator on the other—while a mechanical department works out the practical problems of sanitation and engineering, and a corps of trained building superintendents inspects the progress of construction. By this you can see that, in referring a building problem for solution to the modern architect, you receive the benefit of scientific, specialized knowledge. Is not the employment of such an organization good business?

It has not been many years since the spirit of speculative promotion, backed by big financial institutions and great corporations, swept rampant through the land. It threatened to engulf, in a great measure, the profession of architecture and raise to prominence a building guild of wolfish speculators. These building concerns represented themselves to property owners as business men, but their business was rarely to the owner's interest. Business as defined by them was 10 per cent net profit on all work done. The heads of these great building companies were not builders in the true sense of the word. Their interests centered primarily in the money that could be extorted through their schemes. These companies are usually composed of a board of twenty or thirty directors, and it can quite readily be understood what enormous profits must have been lost by the investor in order to declare dividends for these non-productive stockholders. Awarding contracts to corporations of this type, without consultation with an architect, has proven most disastrous to the tired business man.

In a recent competition on a building erected in St. Louis it was found when the bids were opened that this corporate class of contractors was almost 50 per cent higher than concerns operated by individual contractors who had no dividends to declare other than a legitimate profit due for services rendered.

Viewing the matter in this light, it is to the interest of the wise investor to employ the best architectural services he can obtain in order that he

may have the widest competition on the cost of construction of his building unhampered by any interest whatsoever. Yet this, strange as it may appear, is done only in the minority of cases.

The architect is, in every building operation, the master builder. From his brain and hand emanate the creation of the building, and the plans and detailed information from which it is to be constructed must be obtained from his office.

In the construction of buildings by building trust concerns the elimination of the architect is desired because he is, from their standpoint, inimical to their interests.

The architect can be of the greatest service to the investor if he has breadth of vision and foresight and can, by his advice, prevent an owner from erecting an improvement which, within a few years, will not maintain the proper income on the investment. It is the business of an architect to advise his client *against* building with the same enthusiasm as he would advise him to proceed, if he can so better serve his client's interests.

Even the short-sighted speculator would find it good business to employ an architect if he had the brains to realize the advantage of such service.

To cite an incident of this character: A set of speculator's plans was laid before an architect in this city, who, after examining them, showed that a better arrangement could have been made of the problem, more rooms added, with better light and ventilation within less space; that the same revenue could have been produced with 25 per cent less of the cubic contents of the building; or, to bring the matter to a relative comparison, enough building material could have been saved in the structure to have paid the architect's commission many times over, the revenue enhanced, and a slightly, convenient and practical solution of the project obtained.

Would it not have been good business for that speculator to have employed an architect rather than to proceed without one, simply because a lax code of building law permitted him to do so?

Let us consider the improvement of a piece of valuable property in the heart of a congested business district. Remember that every square foot of space is covered with a potential income-producing possibility. Is it not good business for the owner of such a piece of land to have the building design developed by the most skillful architects, when there are one hundred possibilities of developing that land incorrectly and probably only one right solution?

In a hotel building recently planned, by the improper development of the property, \$50,000 a year revenue was lost to the owners, occasioned by the poor arrangement, loss of space and poor distribu-

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tion of the rooms throughout the structure. Are not these concrete examples illustrating the need of an architect's employment in business?

Inasmuch as the majority of people are called upon to build sooner or later they should familiarize themselves with the value of architects' services, in order to profit by them when their time comes to build. An insight into architecture should be made a part of the teaching of the grammar school, as well as of the college and technical institutions of learning.

The business of architecture may be prosaic to some, but the lack of understanding that good architecture is also good business is one of the great reasons why the country is covered from one end to the other with countless financial and artistic failures.

To decorate construction, not construct decoration, is one of the basic principles of good architectural art.

To idealize the commonplace and to clothe the practical with a beauty of form, design and color is where art attracts the eye, satisfies the brain and grips the imagination. The charm of the artistic environment cannot be overestimated.

Taking up the subject of "Art in Architecture":

Greece and Rome will be remembered by their art long after the names of their conquerors are forgotten. After the great wars of ages, after slaughter and devastation, men have turned instinctively to the building up of new areas of beauty to eradicate from the memory, if possible, the horrors wrought by the baser elements of human nature.

It was after the conquest of Spain that the wondrous Alhambra was erected by the Moors; Rome was built between the campaigns of her conquering armies. In Greece, the country in which art attained its highest perfection, almost every man was a critic. In Europe there is what one might call a democracy in art. There it is not confined to the learned, the rich and scholarly alone, but is bred in the bone of the humblest peasant as well. The fisherman's cottage on the Italian lakes is as beautiful and appropriate in its setting as is the Villa Charlotte, with its wonderful treasures of art, design and sculpture. Every vista through the crooked streets and from the heights of Naples, the wonderful remains to be found at Pompeii all testify to an instinctive taste, intuitive knowledge of the fitness of things, seemingly as natural to an Italian as a breath of air. This quality of disposition is reflected in the lives of the people, who sing as they work and who remain free from the American obsession that the accumulation of money is the road to happiness.

A nation's greatness is largely measured by its

reverence for its artists and the honors it bestows on the creators and producers of the beautiful.

Why America should have deteriorated in the artistic sense is hard to explain and surely cannot be predicated on the early works of American architects and American people. The forefathers of this country, from the landing at Plymouth Rock and the settling of Maine and Massachusetts, built homes, schools and meeting houses in the simple taste which reflects the sturdy, rigid virtue of their lives, and, while we may not admire the austerity of certain of the work, it is full of virility, straightforwardness and character.

The Dutch Colonial of New York State; the famous old houses of Salem, Mass., examples among them of some fine old designs by Sir Christopher Wren; the old City Hall of New York; the Capitol and White House at Washington; the best of the Colonial works throughout Virginia and in New Orleans, where we find the influence of the exquisite detail of the French, all move us to wonder what has become of the artistic ideals of America judged by its present-day buildings. This criticism does not apply, in any sense, to the numberless good things being done in this country every day, but is an indictment that the far greater portion of the work is far beneath any standard of good art. The fault does not lie primarily with the architect, however, but more with the material he is given to work with and the manner of his employment.

In commercial structures he receives a set of cast-iron orders from prospective tenants, which he must follow or lose his commission.

In St. Louis residential building he is given a flat grass plot, a lot of 100 feet frontage at most, and expected to construct a home without a background, garden or environment of any character. Possibly he is required by a client to build a Renaissance palace immediately beside a Gothic abortion on one hand and a Byzantine rough rock or granite boulder on the other. This heterogeneous mixture of styles can never be productive either of dignity or tranquility in Art. The old rows of connected houses in vogue some forty years ago, built with no attempt toward artistic merit, were more restful to the eye than this architectural ragtime.

It may be possible that the wide variance in style is caused by the different races and conditions of people gathered together in our cities. If this is the case would it not be a fine idea to segregate each race to itself, the Russians in one quarter, the Turks in another, and in that way bring out a little harmony from an architectural chaos?

As there is a more hopeful movement in the business of architecture, so there is a more intelligent effort being brought to bear on the larger problems of design. A large manufacturing concern in the

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East has started a plant and has employed a prominent architect to lay out not only the plant but the surrounding town as well. The buildings are designed with a uniformity of style, and I have no doubt but that the result will be most successful.

The great civic movements in the cities are rapidly assuming intelligent form under the guidance of civic commissions, and the building works of our great universities are being done along lines well laid out and with carefully considered plans.

While we cannot look at once for the millennium, we are grateful for intelligent efforts toward a better condition in general. Much of the architectural work done to-day is ruined by the fact that the architect is allowed to do only a part of the work. This is especially true in residential building where the owner appears to think that after the architect has designed the shell of the structure it is better to pass him up and call in a decorator to complete the work, which usually results in robbing the house of any individual charm that might be attained from the personality of the owner working in co-operation with the architect. The effect produced is that of the department-store expert, who overloads the house at the expense of good taste and the owner's bank account, and leaves it a junk-shop where a heterogeneous mass of poorly correlated objects are inartistically combined to produce the worst results obtainable.

If we bear in mind the fact that better taste is shown by what we omit from an interior rather than what we crowd or drag into it by the heels, it would seem evident that the well-informed architect were best fitted to carry out his own ideas to completion.

Buildings take on the individuality of their owners and architects. I have in mind a residence erected in the suburbs of St. Louis, where the owner and architect worked side by side for the production of an ideal. The building was built of the stone collected on the estate; the stone for the foundation was quarried on the premises. The house when finished was a realization of the owner's and architect's dreams of what the home should be and appeared to have grown out of the ground, so thoroughly did it fit the location and environment.

The architect has no right to expect, and it would be presumption on his part to demand, recognition if he has not equipped himself through study, research and education to carry out in their entirety all problems presented to him for solution.

The great architects of the Renaissance period, among them Peruzzi, Michael Angelo, Leonardo de Vinci, Raphael, were artists in the fullest sense and

meaning of the word, being architects, sculptors, painters, and in many cases poets and musicians. Their education in the arts was catholic, in that they employed them all to round out their judgment and temper their discretion. As color has played from the earliest ages so important a part in all architecture, it must follow that unless an architect be properly trained in the feeling and application of this form of decoration he cannot produce the results expected in the best structures of to-day.

As many of the problems of the present-day architect comprise the reproduction of the primitive and antique, a great part of his field of endeavor lies in research for the method of decoration and character of workmanship employed in those periods.

To the American student's and traveler's desires to emulate the best works in Europe we owe the finest examples of modern work in America to-day. Architecture can be made, if you desire, a study of absorbing interest, and the stories of the Italian villas are filled with the romance of the Medici, of Dante and Boccaccio.

Here we can follow the work of Botticelli, of Palladio and of Paul Veronese. In France the château is linked with the history of Francis I; the châteaux of Fontainebleau, Chambard and others testify to the discriminating taste and respect for art during this period, and later the art of Louis XIV, XV and XVI, on which so much of the modern interiors are based, which would well repay the study given them by the American reader and thinker and would have a marked influence for the better on the appreciation of art in this country.

In conclusion, the St. Louis Art League has been the most potent factor in the artistic development of St. Louis. It will be the means of retaining artists in their native city instead of forcing them to go to other places for recognition. And so I entreat you to keep ever before you your high aim and altruistic purpose. Do not ever let this society become commercialized, for it has been said that "Organization is the life of the material as it is the death of mental and spiritual processes."

There is a possibility of again reviving the golden age of art; let us all bend our efforts toward its attainment. Let us build the thing as we see it, for the good of things as they are. And while we work let us build into our making somewhat of our dreaming, for the most lasting thing in the world is illusion—is Art. "The bust outlasts the throne; the coin Tiberius." "And the dreamer lives forever; the toiler dies in a day."

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Government Housing for Delaware River Shipyards

THE treatment of the acute housing situation by the Government has received so much attention, and the profession and the public generally have become so interested in the solution of the difficulties, that the recent announcements in Philadelphia, emanating from the offices of the Emergency Fleet Corporation, have created a very unpleasant impression, and have raised very serious forebodings as to a mismanagement of the whole housing problem.

There was reason to hope that the Shipping Board would treat this matter in such a manner as to produce an early solution of the difficulties and at the same time take advantage of the great opportunity to use the Government funds in permanent improvements which would result in a minimum of loss when the bookkeeping of the war is closed, and which would further provide large additions and intelligent improvements in the communities where the housing is required.

It is now understood that the Fleet Corporation proposes to purchase several hundred houses in West Philadelphia and South Philadelphia, evicting the present occupants and installing tenants who are directly employed in the Hog Island shipyard.

If Philadelphia possessed a surplus of housing,

such a transfer of titles of existing properties to the Government would insure the use of the properties for governmental employees, but all of the investigations and reports indicate that there is no surplus of housing in that city. This course of action, therefore, only means a transfer of title and a change in occupancy of the houses, which will not in its final result relieve the congestion in any degree.

As a further solution of the problem it is understood that the Fleet Corporation proposes to employ, through a banking institution, a number of the house-building contractors of Philadelphia to construct, on their own plans, several hundred houses of the typical low-cost Philadelphia type.

The basis for this curious procedure seems to be the assumption that the Government can thereby obtain houses in less time and at lower cost than by the carrying out of its already well-considered and definitely formulated program for housing in the Fortieth Ward.

This housing program was fully prepared and ready to put into execution in early March, and but for the interminable handing about of the decisions from one official to another might have been started at least six weeks ago. The elapsed six weeks are, of course, important, and any reasonable method which would make up for some of the lost time should have consideration; but the proposition of turning over the program for solution to the speculative house builders upon a cost and percentage basis, with the perpetuation of the disadvantages of the typical Philadelphia housing operation, are too apparent to require specific condemnation. The housing plans developed for the Government provided simple, well-arranged houses of a cost not in excess of the usual Philadelphia operation, if built upon the same grade of specification. It was wisely determined at the outset that the houses to be built by the Government, be rented to the Government's employees for two, three, or more years and that they should be better in the quality of work, particularly as to fittings, than the usual speculative house which is built for immediate sale. An additional cost on each house of \$100, \$200, or \$300 would be a conservative added investment, as it would produce a more durable house, which would be in better condition for sale at the end of the period of renting than would the standard Philadelphia house.

The cost of the Philadelphia-operation house has been pared down to the utmost, and the result is a quality of construction which is anything but commendable.

If the Government houses were built on a specification comparable with the speculative house it would probably be necessary at the end of even

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two years' renting practically to renew the hardware, the metal fittings of the plumbing fixtures, and to repaint throughout.

The standard plan of the low-cost Philadelphia house has as an essential feature an interior bathroom lighted and ventilated through the skylight. The architects who were advising the Housing Department of the Shipping Board voted at the outset against this principle, and there is no doubt but that any one who has studied the typical Philadelphia plan will indorse this position.

It is not to be believed that the method indicated above will be adopted as the final solution of the situation created by the Hog Island shipbuilding operations, but that it should be proposed, and seriously considered, is alarming. The profession, and every one interested in proper community development, should protest against it. The proposal is bad from the standpoint of good housing and equally bad from the standpoint of conservation of public moneys.

Plan Now

THE new order of the day will compel many manufacturers either to build new plants or radically alter and remodel their existing buildings, if they expect to compete successfully for business after the war. As an emergency measure, the Government has fixed a maximum price for many products, and this price is naturally based on a cost which is determined by the Government from properly planned and efficiently operated plants.

As the producer and the consumer become accustomed to this condition there is a very strong probability that the consumer will demand some form of price regulation after the present emergency is over and normal conditions again obtain. The prices that have been fixed are based on abnormal conditions, and are not as closely adjusted as they would be under ordinary conditions.

The manufacturers of this country can produce, at the present time, sufficient products to meet with the needs of the Government, of our home consumption, and have a large surplus for export. Curtailment of production at this time is due to lack of transportation. This condition of affairs is rapidly becoming adjusted, and when the vast tonnage of American-owned vessels is released for peaceful commerce it must be utilized for our new foreign trade.

Competition must be met. To compete successfully, costs must be equalized to a reasonable extent. The building which houses the process of production has an important effect on the cost of the output. A plant so arranged that there is interference with the routing of the product causes a

loss, in added labor cost and a slowing up of production. This is a vital point; equally important is the proper heating, lighting, ventilating and sanitation of the plant in order to enable the workman to be a unit of maximum production. An improperly designed power plant is a waste factor, and increases cost.

The cost of insurance on buildings, equipment and contents is based on the ability of the building to resist destruction by fire. A high insurance rate is a waste and an added cost to production.

It costs no more per square foot of floor space to construct a properly planned, substantially built and effectively equipped factory than to build one that is so poorly arranged and equipped that it is a liability rather than an asset. Many plants, on correct analysis, are liabilities rather than assets.

Governmental restriction of building construction not essential to war needs has resulted in a surplus of labor and material adapted to the uses of the building industry. This important economic element becomes a national liability, and its employment is an economic necessity and a patriotic duty.

The expansion of the currency has resulted in comparatively high labor and material costs, and these high costs will obtain for some years after the war. This has been the history of all times such as these.

The need for better buildings to enable producers to compete under the approaching order is apparent on every hand. When the new order arrives an excessive demand will arise for the planning and construction of new plants, and the erection of hastily and ill-conceived plants will be the result.

The need of buildings of all kinds for residential and commercial use is established by competent surveys that have been made recently. There is scarcely an active community that is not in need of dwellings, apartment houses and hotels. The scarcity of office buildings, wholesale and retail stores, and especially the shortage of warehouse space, is causing a restriction of business activity that can be ill afforded at this time. The best evidence of these needs is realized in the increased rental charges that exist almost universally throughout this country.

Now is the time to utilize the architect, his knowledge, organization and careful study, during a period when he is not overbusy. The consequence will be funds well invested, in a return that cannot be obtainable at a later time. Although the manufacturer and others are busy now, this is the proper time for them to devote themselves to preparation for their future needs.

To finish, one must *start*. To build, one must start with a *plan*. The new housing of industry, commerce and people is a need to be supplied by planning now.

Criticism and Comment

The Editors, THE AMERICAN ARCHITECT:

While I have no sympathy with captious criticism of any Government department at this time, I am impressed with the correctness of the statements contained in the leading editorial of your issue of March 13 on the possible improvement of the design of cantonment and similar buildings from the standpoint of fire protection, without any material increase in cost, or any change in the general layout.

As a result of our considerable experience in fire prevention and fire protection in this state, we know it to be a fact that no amount of fire fighting equipment will satisfactorily remove the serious danger of a sweeping fire in a group of wooden buildings. We also know it to be a fact that the introduction of incombustible fire stops in the spaces between studing and joists materially reduces the fire hazard, and also that the substitution of a plaster exterior and interior in place of wood sheeting would greatly decrease the danger of a sweeping conflagration.

I believe you are doing a real service in bringing these matters to the attention of the Government.

Very truly yours,

INDUSTRIAL COMMISSION OF WISCONSIN,
S. J. Williams, Engineer

Madison, Wis.

The Editors, THE AMERICAN ARCHITECT:

I have read with the greatest interest the editorial in *THE AMERICAN ARCHITECT* of March 27, entitled "Why Did He Do It?" The interpretation of the reasons for action is as stimulating as it is sound.

I agree with you that, professionally speaking, the architect occupies a difficult position and I must confess that I cannot see a complete solution of the problem. The artistic aspect of his work calls for individual effort, the business aspects for organized effort. In this present world of ours where organization counts for so much, it is difficult to see how architecture as an individualized pursuit, can long retain its independence. If it persists in attempting to do so, it will, as you suggest, be absorbed. It may be that to save itself from such a result architecture must assume the fabric of organization and must include in its activities the

work of the building contractor. My own belief is that in this country the architect must ultimately become both the designer and the builder, and that if he declines to assume the responsibilities of such a solution, the designer will ultimately yield his position of superiority to the builder.

But it is a great question and one which can be but imperfectly presented within the limits of a brief letter.

New York.

W. F. M. Goss.

Book Review

A HISTORY OF ARCHITECTURE. By Fiske Kimball and G. H. Edgell, full cloth, 600 pages, size 5x8 inches, illustrated. Price \$3.50 net. New York: Harper Brothers, Publishers.

In writing a text book on architecture, it is difficult to keep one's efforts from taking on a musty, archæological aspect. Constant delving into the crumbling fragments of antiquity tends to minimize the vital importance of living, growing art. Hence, it is refreshing to find a volume of architectural history in which the relationship between the old and the new has been nicely kept. In the editor's preface to this volume it is stated that "the endeavor has been to consider the art of the past in the light of the present; to show the relation of modern art to that which has preceded it."

In spite of this, however, the book is, in its main aspects, highly conventional. As a matter of necessity the usual points are taken up, in the usual order, and are treated in much the expected way. The illustration is quite the expected thing, although it is as adequate and inspiring as might be desired.

The unusual feature of this book lies in the emphasis which has been put upon American architecture. A considerable discussion is given of different types of American buildings—ranging from the early Colonial to the Louis Sullivan and Frank Lloyd Wright varieties. This recognition of American efforts is encouraging, indeed, although there is no reason for such buildings as St. Paul's Chapel, New York, The Boston State House, and others having been ignored in previous works.

This volume is one of Harper's Fine Arts Series, and is intended primarily for use in class rooms. For this purpose it should be pre-eminently successful, relating as it does the past with the present; pointing out the vital influence of classic precedent on modern effort; and showing by what means recent developments have sought, more or less successfully, to break away from this influence.

Housing Problem in Germany Acute; Building Is Stopped in the Big Cities

Housing is a serious problem in Germany as well as in America, according to the United States Department of Labor, which is about to publish an account taken from official German reports. Building has practically ceased in the great German cities. Only one-ninth as many houses were built in 1916 as in 1912, and the houses are much smaller. The total number of houses erected in the 45 largest cities in Germany was only 1009 during 1916 and still less in 1917. The total number of houses erected in all Germany was much less than the number built in any one of a dozen American cities.

In such cities as Berlin, Hamburg, and Frankfort building has long since ceased. Only in the great war-industrial towns is there any construction of any kind. It is in these latter towns such as Essen and Kiel that there is any present shortage of houses. The war has depleted the population of Berlin and Hamburg so that now they do not suffer even though they have less and poorer accommodations than formerly. So Germany has the spectacle of industrial towns packed to the point of discomfort, while her great cities are partly filled. In Aix la Chapelle 1 house in 12 is idle; in Barmen, 1 in 15; in Berlin, 1 in 16; in Hamburg, which, with its shipping and export trade was a rapidly expanding hive of industry before the war, over 6 per cent of the houses are absolutely vacant; in Bonn, 4 per cent are idle; in Frankfort on the Main, 5.3 per cent. No new houses are built and the old ones wear out, but the population is being depleted faster than the houses.

But while these cities stagnate workmen are packed in the great munition cities. Less than 1 per cent of the dwellings are idle in eight of the cities where war industries thrive. Among these cities are Essen, Erfurt, Kiel, Lubeck, Stettin, Brandenburg, Konigsberg and Magdeburg. Conditions at Kiel are particularly deplorable. Only 1 house in 500 is vacant and the number of uninhabitable places is normally higher than this.

Building Not to Be Discouraged

That a ban has been put on dwelling house construction by Mr. McAdoo is now retracted in the following statement by the secretary himself. His precise attitude toward this question was given in response to an inquiry from a committee of retail lumbermen who recently visited him. He states:

"I have your letter advising that I have been reported in the public press as having 'appealed to property owners not to construct any homes or buildings during the war.' This is entirely erroneous. I have said that building operations which are not required to protect the health or provide for the comfortable needs of our people or to supply facilities necessary for the proper conduct of business essential to the successful prosecution of the war should be postponed.

"As you know I have no authority to direct that building operations be curtailed. I have merely suggested that unnecessary building of that kind be postponed until after the war. Such postponement, I am sure, would help win the war, but every patriotic man must be determined by his own conscience in the matter and must decide for himself if he can postpone the erection of a contemplated building until the war is over.

"Compliance with this suggestion may cause some inconveniences which are greatly to be deplored, but such inconveniences are an unavoidable incident to the war. The situation must be viewed from a national and not from a local standpoint."

A Rebate Plan for Housing

A plan has been suggested, states the Newark, N. J., *Call*, by which the Federal Government might stimulate housing.

This scheme comprehends a subsidy by the United States Government in the shape of a cash rebate of a certain percentage of the cost of building materials, used in the erection of certain classes of houses within certain specified zones.

The percentage of discount allowed should be determined by a conference with builders and architects.

Such a Government rebate on the cost of building materials, states the *Call*, would produce completed houses, which, with land, labor and builder's profits, would amount to an investment of many times the rebate. Thus, if the rebate amounted to, say, 20 per cent of the building cost, every thousand dollars advanced by the Government would result in five thousand dollars' worth of building operations.

Under such a scheme the Government would be advantaged in two ways—the amount of money it would pay out would be much less than the amount that would be lost by direct Government ownership, and by a housing scheme of this kind carried out on lines satisfactory and attractive to the workers, and with homes within quick and convenient access, the Government would expend far less in such subsidies than it would have to pay

out in higher wages as compensation for workers having to spend time and money on long and tedious trips getting to and from their homes.

To finance such a scheme the Federal Government could underwrite the building and loan associations, giving them borrowing credit for a generous portion of the mortgages held by them by means of a plan similar to that carried out in the Federal Reserve Bank.

Another and an immense advantage of this method would be that the builders of all nationalities could be induced to build each in their own section the class of houses required. Each man would be made contented by being able to live in congenial surroundings.

War Labor Board Appointed

The creation of a National War Labor Board to adjust all labor disputes for the period of the war was announced on April 9 by President Wilson. The members are the same men who recently framed the labor policy of the Government for the remainder of the war. The board is headed by former President Taft, selected by employers, and Frank P. Walsh, selected by employees representing the public.

Massachusetts Organizes Company to Construct Homes for Workers

Realizing that the ownership of a home makes for better citizenship, the state of Massachusetts has entered upon the business of building and selling workmen's homes on the installment plan. The Massachusetts Homestead Commission was created by the State Legislature for this purpose. The finishing touches are being put on the first homes at Lowell built under the plan, whereby it is hoped the biggest problem of the laboring man will be solved.

A plot on which there is space for about fifty homes was chosen. The Legislature appropriated \$50,000 for the demonstration. On the success of the project depends the size of future appropriations.

The desire of the Homestead Commission is to accommodate, as far as possible, citizens with families now living in crowded tenements and receiving only about \$14 a week. It was the belief of the commission that a suitable house with four to five rooms and with a small garden could be provided for about \$2,000, with as small a cash payment as possible and a regular installment of \$15 a month. These terms are based on a 9 per cent gross income from the property.

It is planned that the tenants shall be given expert instruction in the care of the home and the garden. The Homestead Commission will directly supervise and provide this instruction.

Every purchaser is to be held rigorously to his obligations to take proper care of his property.

Boston's Great Terminal

Work will shortly be begun on the new "National Terminal" in South Boston, planned to take care of much of our wartime traffic with Europe. The main storehouse, 2400 ft. in length, will be, perhaps, the largest single building in the world. It will be possible for six steamers of eight thousand to ten thousand tons each to load at the dock at the same time. It is planned that when the terminal is in full operation 5000 tons of supplies will leave the pier every day. The storehouse will be of modern factory construction so that it can be easily transformed into factories after the war. There is, however, a possibility that it will be the base for the emergency fleet when peace is declared. The railroad plans call for the establishment of two immense yards in South Boston. Double tracks will be run along the edge of the pier, to enable unloading from cars to ships direct; double tracks will run between pierhead and storehouse; and there will be three tracks along the land side of the storehouse. There will be a supporting yard with a capacity of 300 cars, and a much larger classification yard on made land.—*Scientific American*.

Board of Appraisers Constituted

TO FIX VALUATION ON COMMANDEERED PROPERTY

By direction of the President there has been constituted in the War Department a board of appraisers, composed of Lieut. Col. John S. Dean, National Army, and Lieut. Col. R. H. Montgomery, National Army, with additional members to be appointed from time to time as the public service may require. Any appointee to this board shall be commissioned an officer in the National Army with appropriate grade.

The duties of this Board consist largely in determining the valuation of property commandeered by the Government and in fixing the compensation for it. This is to cover property of all kinds—real, personal and mixed. In addition to this, the Board of Appraisers is to advise and recommend terms upon which further contracts shall be based, and shall act in a judicial capacity in all problems of this sort arising during the war.

THE AMERICAN ARCHITECT

Works of Art Costly

WAR MILLIONAIRES OF EUROPE ARE SAID TO BE
COMPETING FOR MASTERPIECES

Europeans, as well as Americans, according to the *New York Times*, have made money out of the war, and it is these new millionaires of Europe who are partially responsible for record-breaking prices for works of art, said Edward Robinson, director of the Metropolitan Museum of Art, recently, in speaking of the difficulties of keeping a museum in wartime up to a normal state of efficiency.

Not only are prices of such works of art as find their way into the market high, but there is a remarkable scarcity of good works of art of any kind, a fact which is a great surprise to buyers who believed that the result of the war would be to throw art treasures of many kinds on the market at bedrock prices. On account of these conditions and the general high cost of living which affects museums as well as individuals, Mr. Robinson finds this is a season of many difficulties.

The museum shows a reduction in the increase in the number of new exhibits not only from the difficulty in purchasing, but because of the danger of transportation, and all its purchases of the last few years on the Continent are being held and also the result of the museum's excavations in Egypt. Funds are also cut down because of the increased cost of maintenance, with no additional appropriation from the city.

American Troops Quartered in Quarries

Some of the American troops in the Chemin-des-Dames sector are having an experience of cave life behind the front trenches, their billets being deep underground quarries and natural recesses beneath the surface, writes a correspondent from the front. The correspondent, on a visit to this sector, found them thus quartered, occupying positions held by the Germans less than a year ago. Most of the Americans, however, are living in the trenches and accompanying dugouts. The front line trenches here have been cleaned, strengthened and improved and are well protected with barbed wire entanglements.

The underground billets, some of them old limestone quarries and others partly natural in formation, and improved through blasting operations by the Germans, who occupied them for nearly three years, are variously named. One of them is called the "Pantheon." It accommodates a thousand men. The correspondent found French and American sol-

diers living together there in perfect harmony.

The living quarters of the Americans in this cave are 72 ft. underground. The cave consists of long galleries, with cement ceilings. Fresh air is supplied by large air pumps. The cave is in part electrically lighted. Elsewhere acetylene lamps and oil lanterns are employed. The men usually remain in this cavern from four to six days each, a company being assigned a certain portion of the excavation. The men are not permitted to roam about at will, for fear of their being lost, or to go outside except on duty, lest they be detected by enemy airmen.—*Stone*.

Change Office Hours to Relieve Street Congestion

The City of Washington has been so overcrowded with Government workers that street car lines in that city have been taxed entirely beyond their capacity. A recommendation to relieve their congestion has now been made by John F. Beeler, traffic expert for the Public Utilities Commission in the District of Columbia, whereby office hours for Government pursuits be shifted to obviate the necessity of all workers using the cars at the same time, mornings and evenings. Thus some of the departments may open at 8, some at 8.30, others at 9, and the rest at 9.30, in each case ending their official day 7½ hours after opening. This would distribute the crowd and eliminate much of the confusion now borne.

W. H. Merrill Appointed Chairman of Fire Protection Board

W. H. Merrill, president of the Underwriters' Laboratories, Chicago, has been appointed section committee chairman of the newly organized Fire Prevention Section of the War Industries Board of the Council of National Defense. Mr. Merrill is now in Washington to assume the duties of the new position for the period of the war.

Part of the work of the new section is the securing of information on the conditions as to fire hazards existing in plants manufacturing munitions, and providing adequate protection where surveys show plants working on Government contracts to be poorly guarded against possible fire loss.

An important service to be rendered is that of giving prompt and correct information and advice to all Government departments on fire-prevention problems.



PLATE 154

GENERAL VIEW

OFFICES OF EASTMAN, GARDINER & CO., LAUREL, MISS.
F. A. COLBY, ARCHITECT

THE AMERICAN ARCHITECT

VOL. CXIII, NO. 2210

MAY 1, 1918

FLOOR PLAN
OFFICES OF EASTMAN, GARDNER & CO.,
LAUREL, MISS.
F. A. COLBY, ARCHITECT

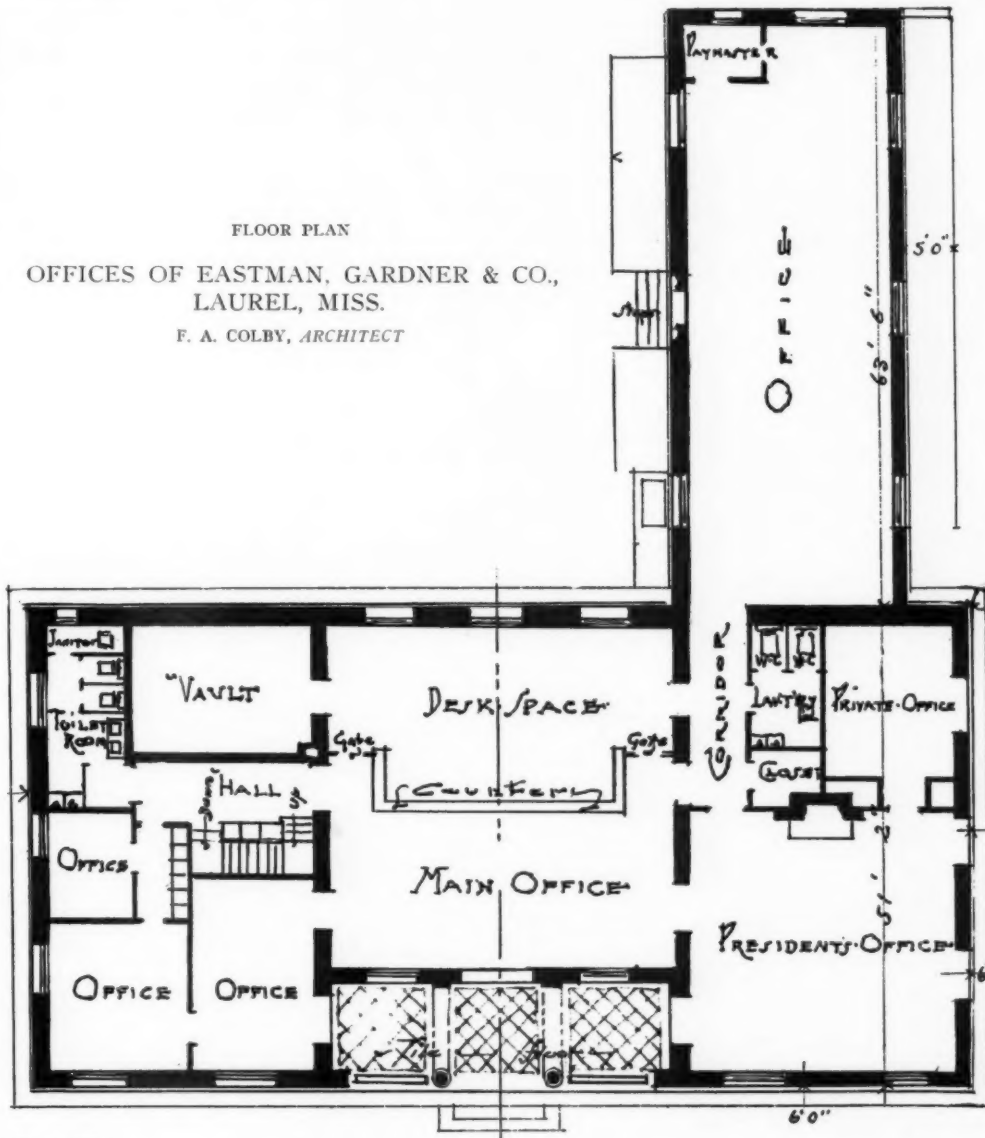


PLATE 155

TABLE 1

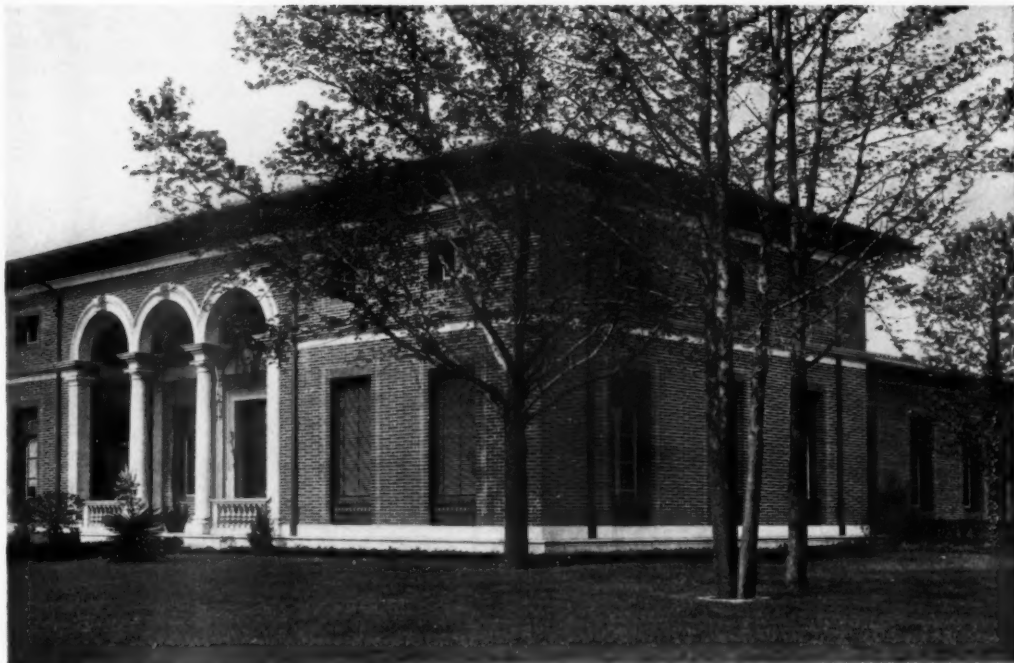
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ENTRANCE LOGGIA

OFFICES OF EASTMAN, GARDINER & CO., LAUREL, MISS.
F. A. COLBY, ARCHITECT



SOUTHWEST VIEW



REAR COURT

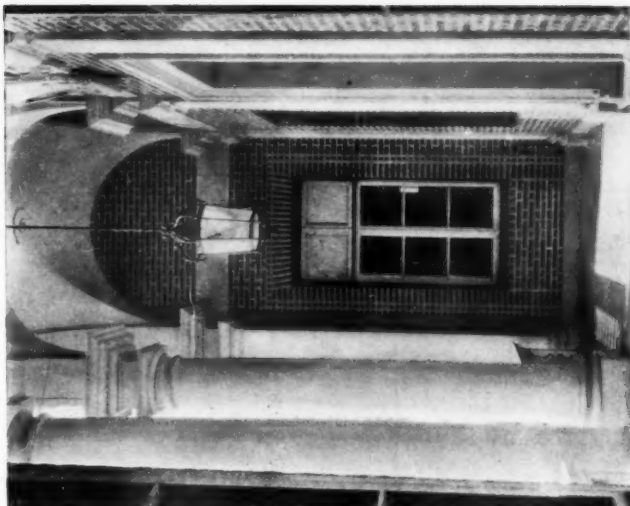
PLATE 157

OFFICES OF EASTMAN, GARDINER & CO., LAUREL, MISS.

F. A. COLBY, ARCHITECT



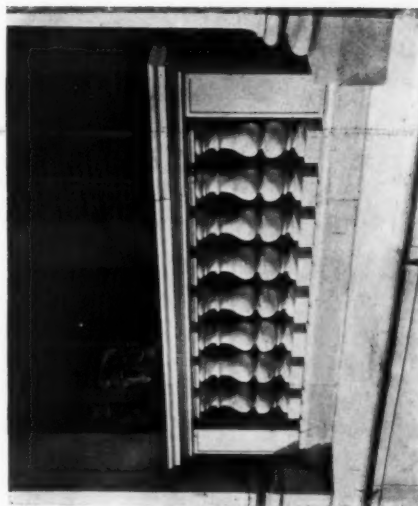
PRESIDENT'S OFFICE



DETAIL OF LOGGIA

OFFICES OF EASTMAN,
GARDINER & CO., LAUREL,
MISS.

F. A. COLBY, ARCHITECT



DETAIL OF LOGGIA

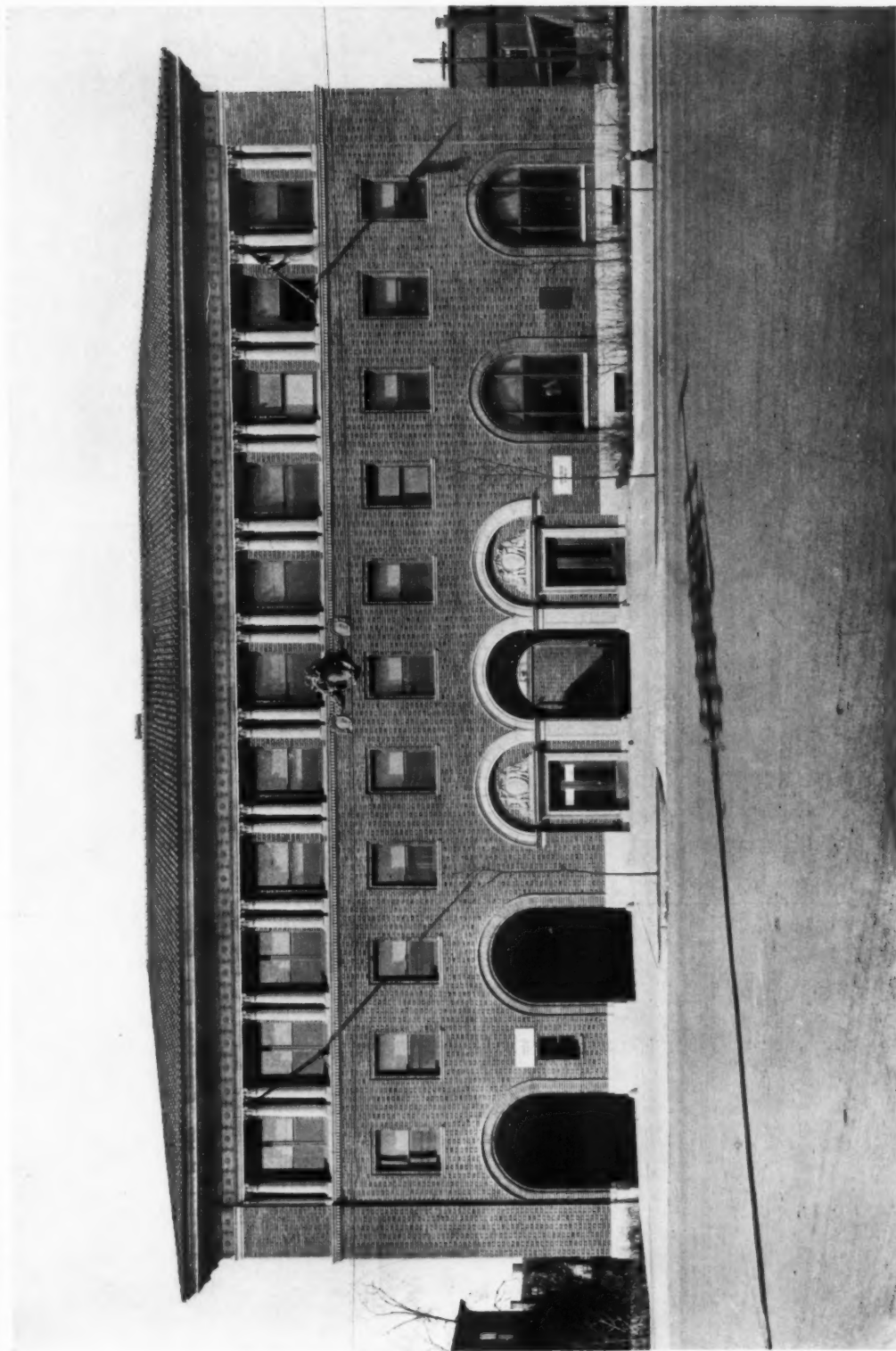


PLATE 159

FIRE AND PATROL STATION, 22D STREET, PHILADELPHIA, PA.
SIMON & BASSETT, ARCHITECTS

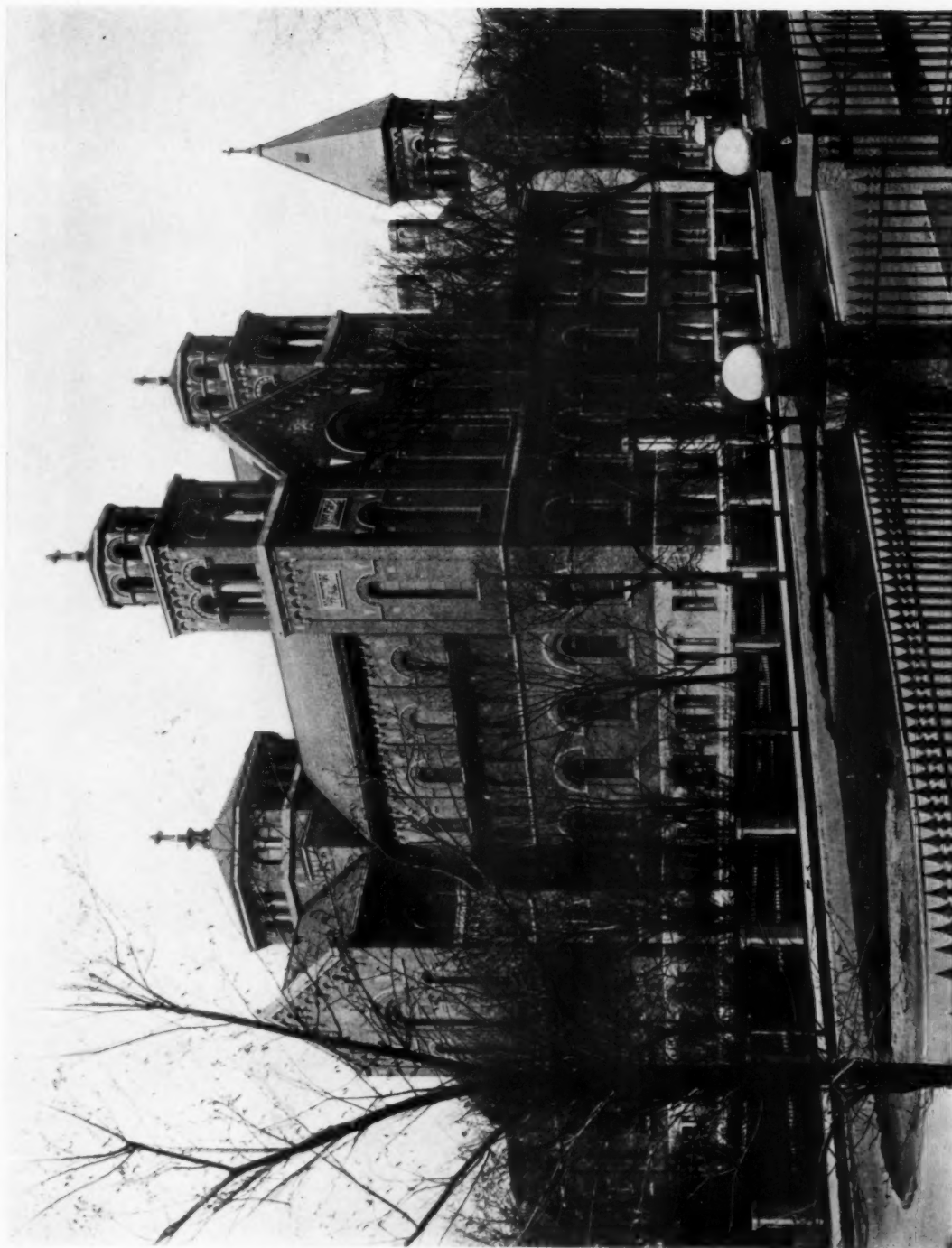


PLATE 160

ST. JOSEPH'S CONVENT CHAPEL, MILWAUKEE, WISCONSIN

BRUST & PHILIPP, ARCHITECTS





PLATE 161

ST. JOSEPH'S CONVENT CHAPEL, MILWAUKEE, WISCONSIN

BRUST & PHILIPP, ARCHITECTS

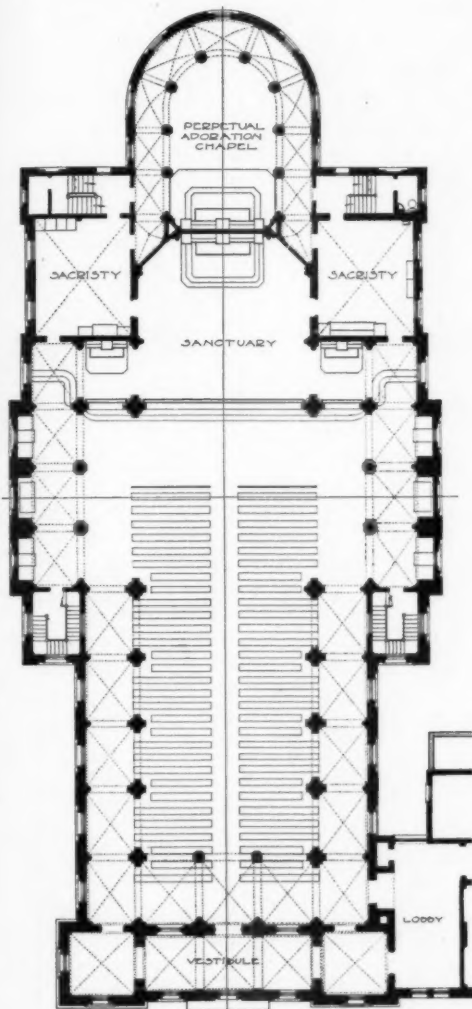
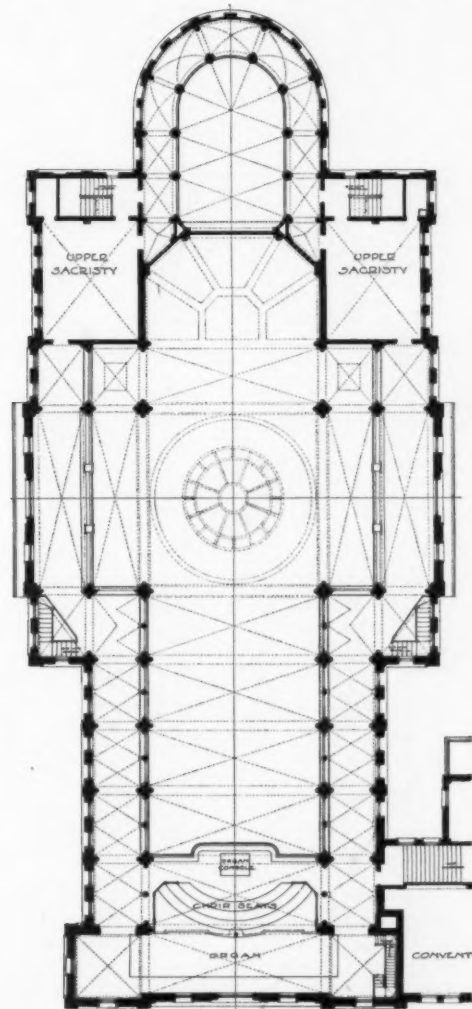


PLATE 162 MAIN FLOOR PLAN



GALLERY PLAN

ST. JOSEPH'S CONVENT CHAPEL, MILWAUKEE, WISCONSIN

BRUST & PHILIPP, ARCHITECTS



PLATE 163

DETAIL OF MAIN ENTRANCE

ST. JOSEPH'S CONVENT CHAPEL, MILWAUKEE, WISCONSIN

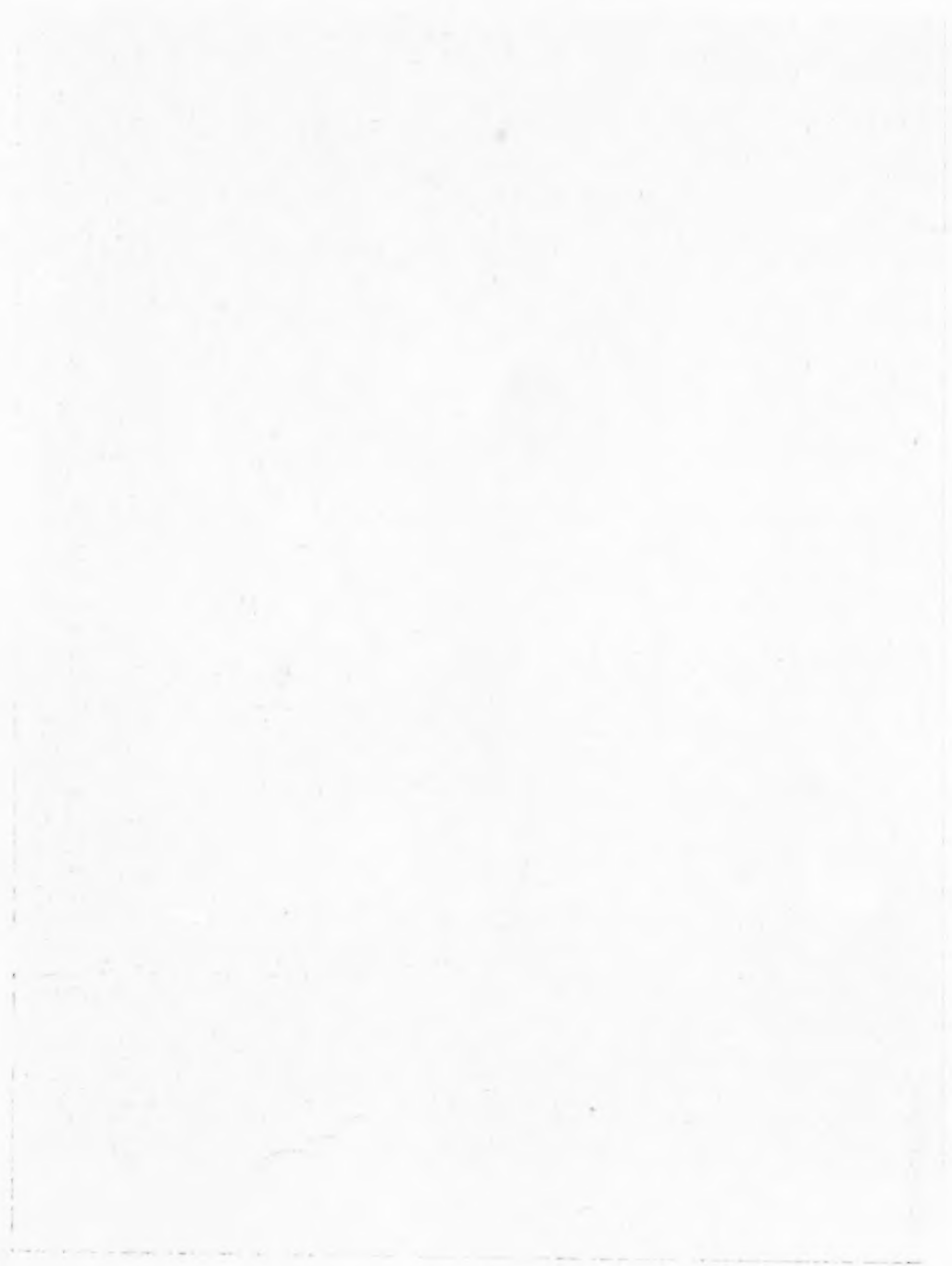
BRUST & PHILIPP, ARCHITECTS



PLATE 164

ST. JOSEPH'S CONVENT CHAPEL, MILWAUKEE, WISCONSIN

BRUST & PHILIPP, ARCHITECTS



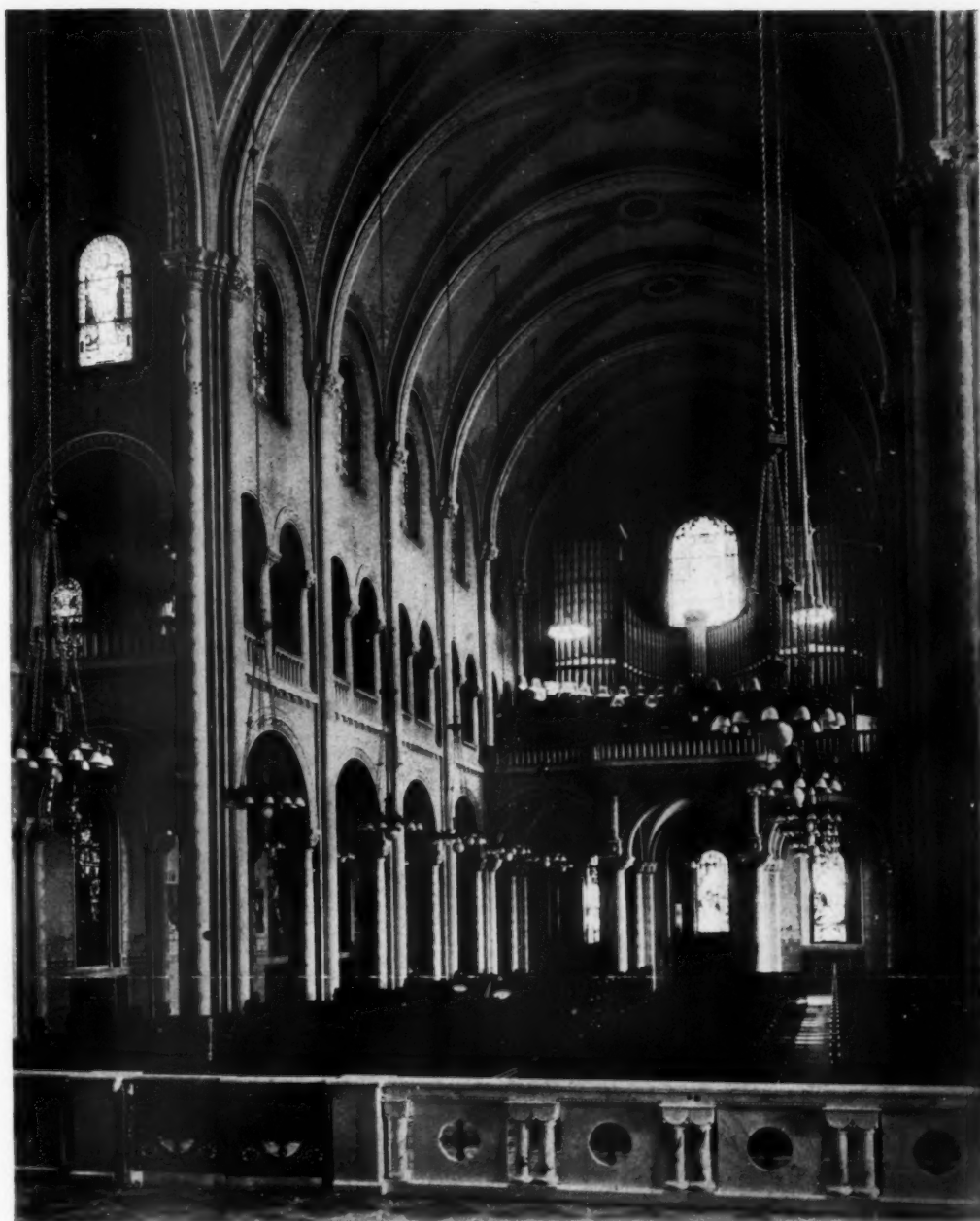


PLATE 165

VIEW FROM SANCTUARY, LOOKING TOWARD CHOIR GALLERY

ST. JOSEPH'S CONVENT CHAPEL, MILWAUKEE, WISCONSIN

BRUST & PHILIPP, ARCHITECTS



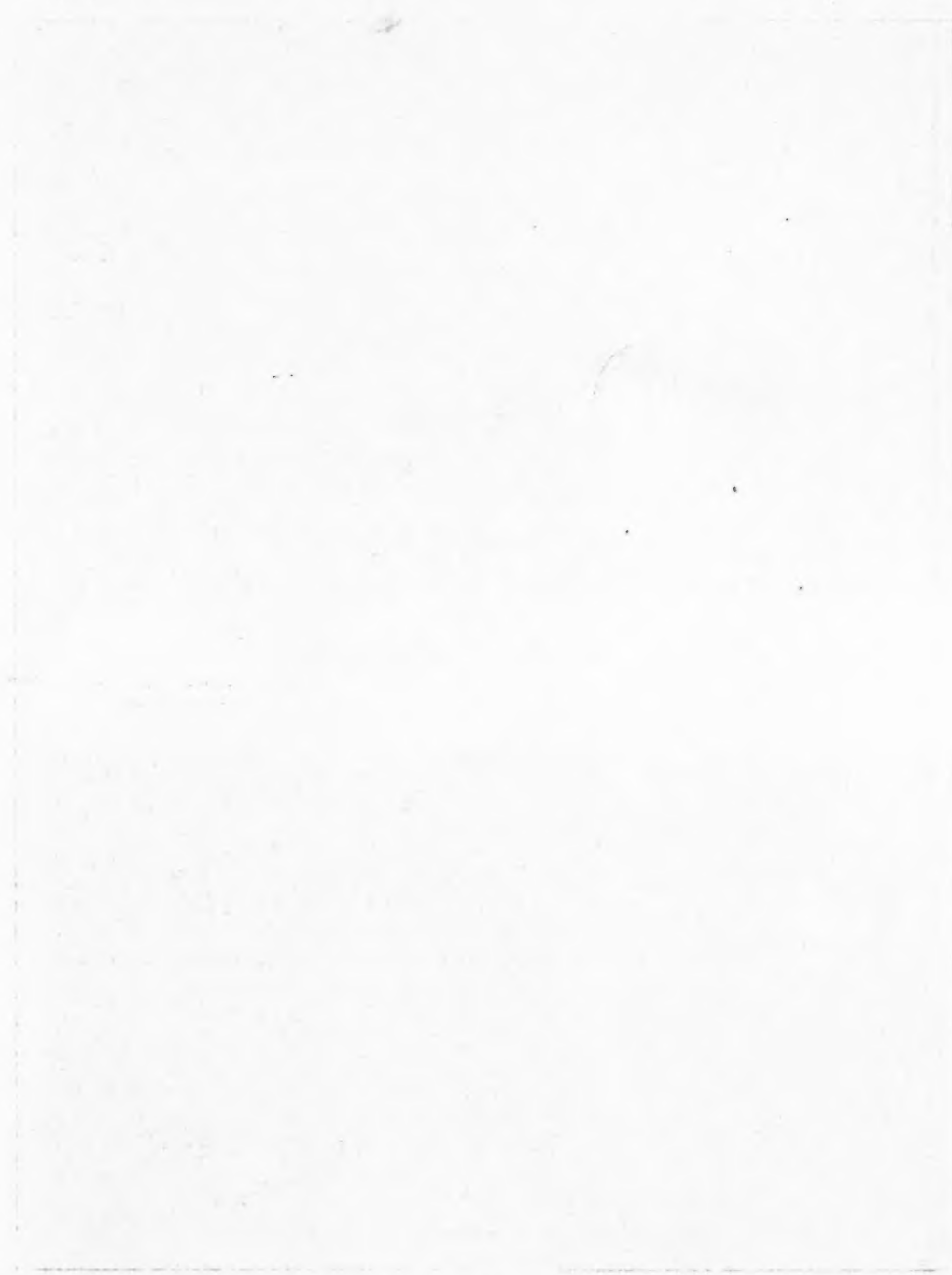
PLATE 166

VIEW FROM LEFT GALLERY, LOOKING TOWARD REAR

ST. JOSEPH'S CONVENT CHAPEL, MILWAUKEE, WISCONSIN

BRUST & PHILIPP, ARCHITECTS

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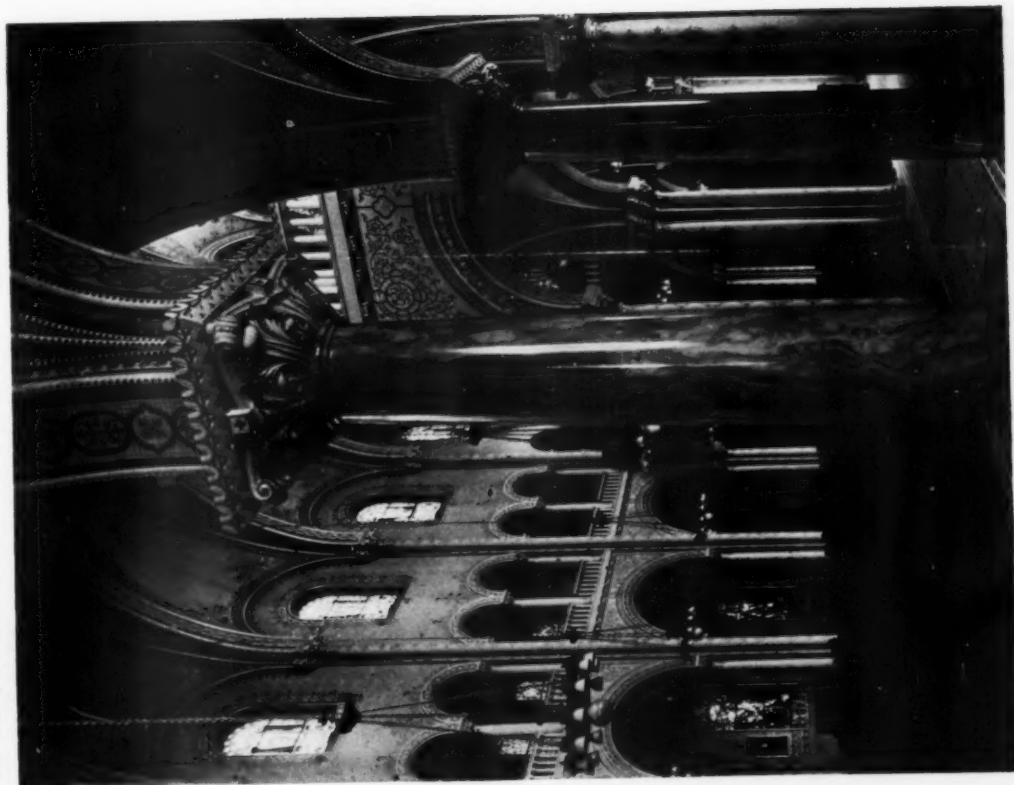
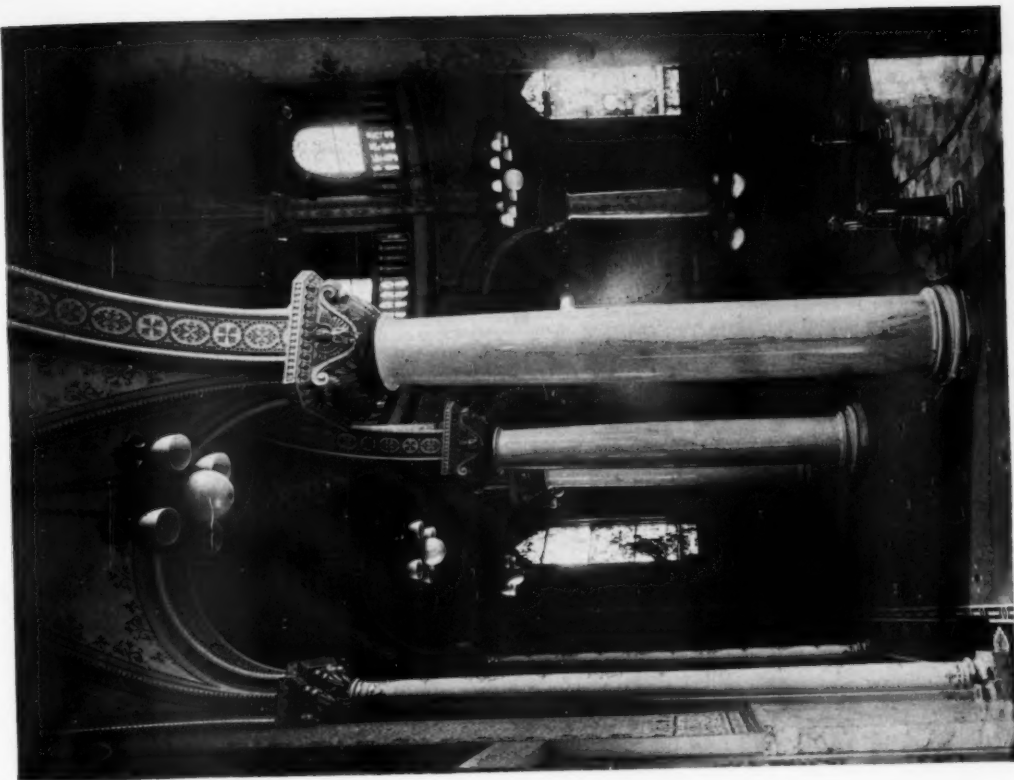


PLATE 167

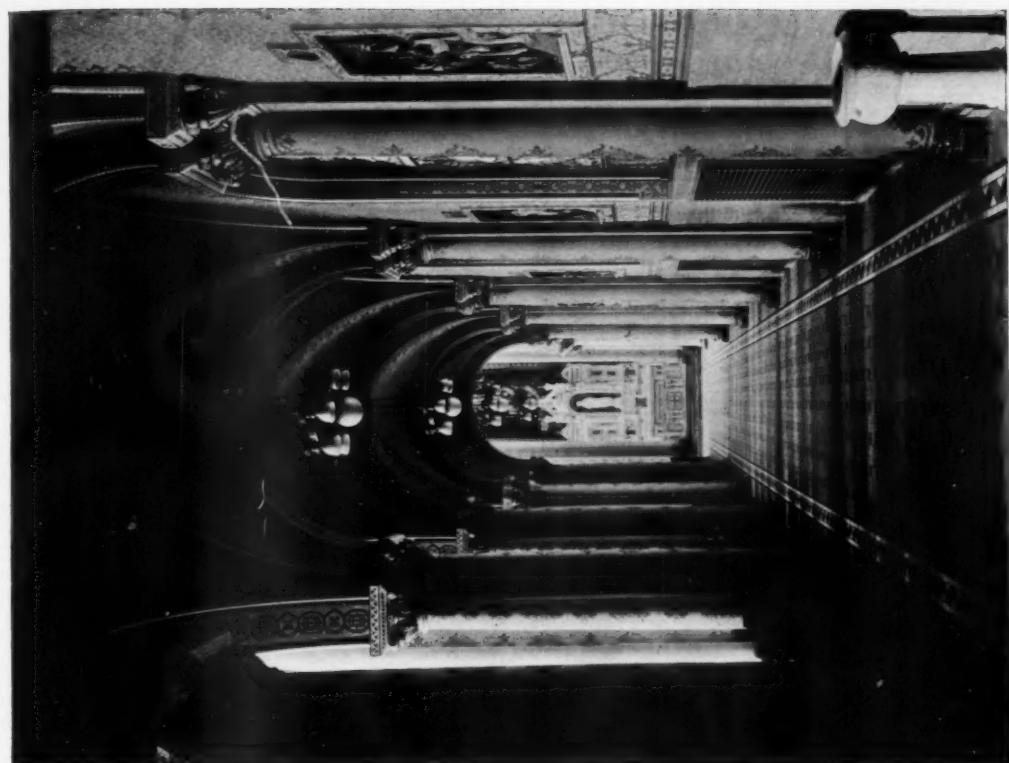


ST. JOSEPH'S CONVENT CHAPEL, MILWAUKEE, WISCONSIN
BRUST & PHILIPP, ARCHITECTS





PLATE 168 VIEW FROM LEFT GALLERY, LOOKING TOWARD ALTAR



VIEW IN RIGHT AISLE, LOOKING TOWARD ALTAR

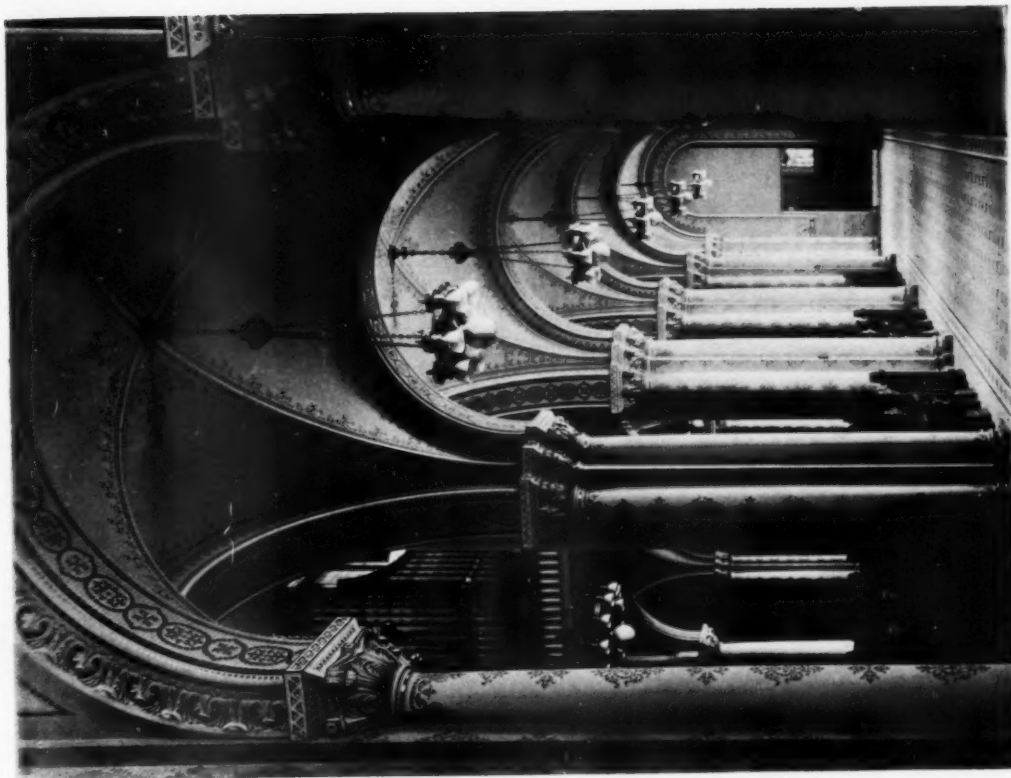
ST. JOSEPH'S CONVENT CHAPEL, MILWAUKEE, WISCONSIN

BRUST & PHILIPP, ARCHITECTS



LOOKING TOWARD ALTAR

PLATE 169



VIEW IN LEFT AISLE

ST. JOSEPH'S CONVENT CHAPEL, MILWAUKEE, WISCONSIN
BRUST & PHILIPP, ARCHITECTS

Beaux-Arts Institute of Design

DIRECTOR OF THE INSTITUTE, LLOYD WARREN

DIRECTORS OF DEPARTMENTS

ARCHITECTURE, FREDERICK A. GODLEY

SCULPTURE, LLOYD WARREN

MURAL PAINTING, ARTHUR CRISP

SECOND LOEB PRIZE

A Prize Competition in Memory of Morris Loeb.

This prize, offered for excellence in the treatment of decorative subjects, is the gift of Mrs. Morris Loeb.

FIRST PRIZE—\$50.00 SECOND PRIZE—\$25.00

(For conditions governing this Prize Competition, see Circular of Information, Article VIII—Paragraphs 3 and 4.)

PROGRAM

The Committee on Architecture proposes as subject for this competition:

"A BAPTISMAL FONT"

Following the precedent of the churches of the Early Christian Era and of the Renaissance, as is shown at Ravenna, at Florence and at Pisa, a large Catholic church has built a baptistry separated from the church itself. In this baptistry it is proposed to place a baptismal font, which is the subject of this program. It should be treated in a decorative manner as is demanded by its important position. The competitors are left free as to the form that this font is to take, the only condition being that the font itself should not exceed 15 feet in its greatest dimension in plan.

SECOND LOEB PRIZE COMPETITION

JURY OF AWARD: F. A. Godley, W. Lamb, W. L. Bottomley, R. M. Hood, L. E. Smith and J. C. Levi.

PROGRAM: A Baptismal Font.

Number of Drawings Submitted: 17.

AWARDS

FIRST PRIZE, \$50: W. G. French, Cornell University, Ithaca.

Placed second (disqualified for prize).—W. H. Livingston, University of Pennsylvania, Philadelphia.

Placed third (disqualified for prize).—R. Bailey, Cornell University, Ithaca.

Placed fourth—Second Prize, \$25.—E. E. Weihe, Atelier A. Brown, Jr., S. F. A. C., San Francisco.

Placed.—Y. C. Lu, Cornell University, Ithaca.

Placed.—F. J. Kuchler, University of Pennsylvania, Philadelphia.

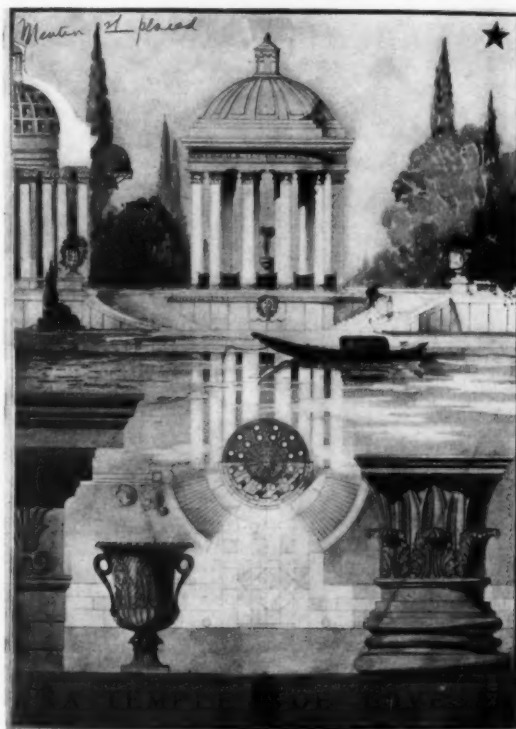
PROGRAM

CLASS "B"—IV ANALYTIQUE

The Committee on Architecture proposes as subject for this competition:

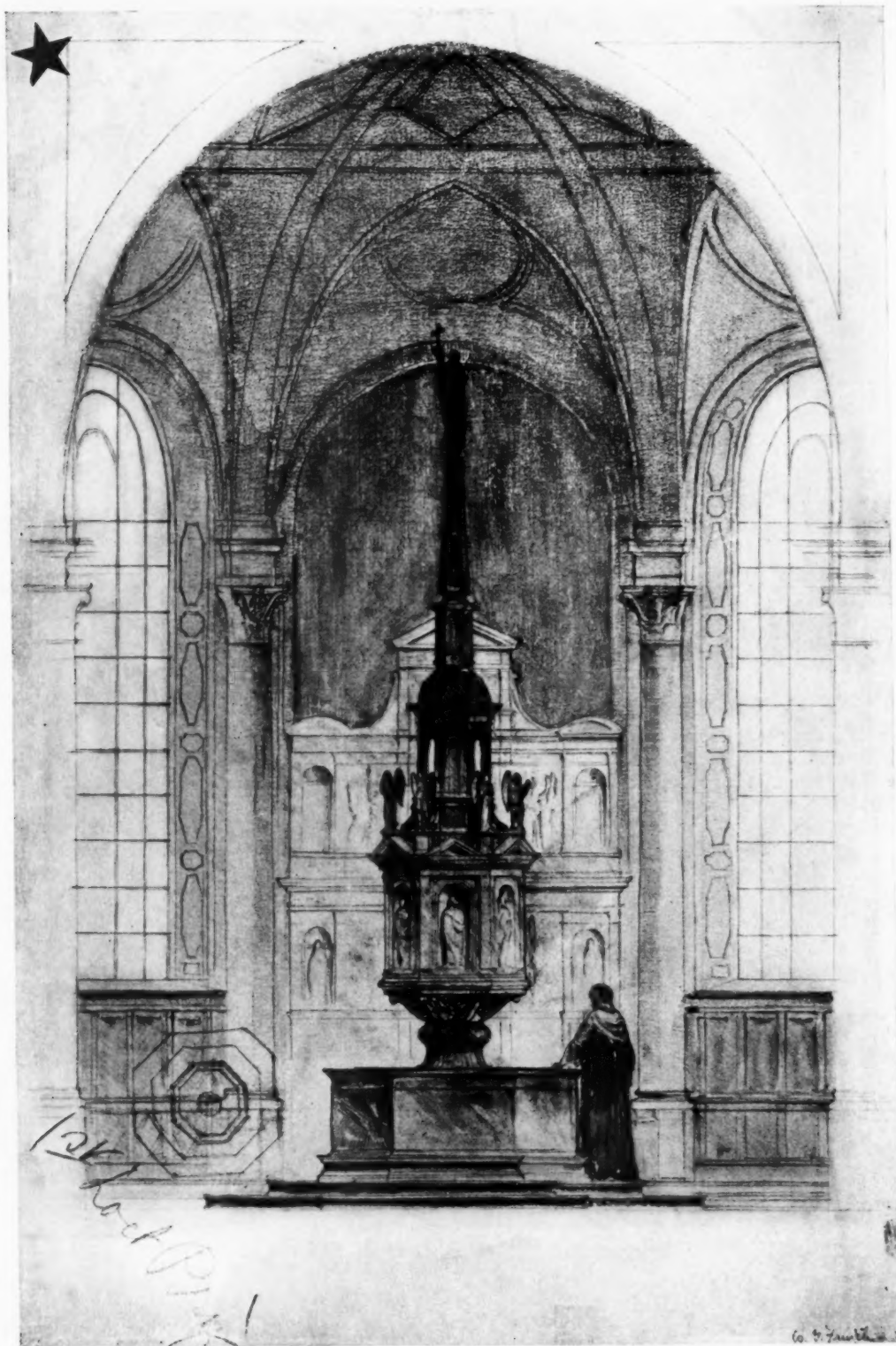
"A TEMPLE OF LOVE"

The greatest gardens of the time of Louis XIV had as one of their minor features a small building or pavilion, usually found at the point of convergence of several roads or paths, which they called a "temple d'amour" or temple of love. It consisted of an open circular colonnade either single or double and, roofed by a dome, it enshrined a



FIRST MENTION PLACED—G. ROTH, COLORADO UNIV.

CLASS "B"—FOURTH ANALYTIQUE



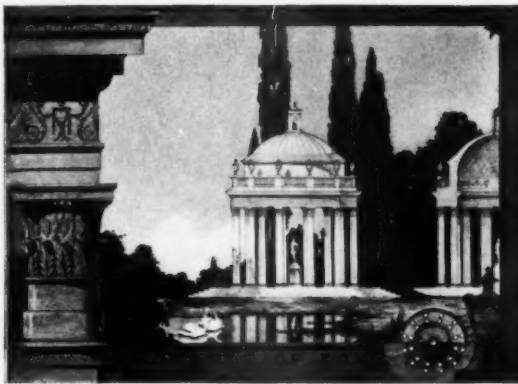
PLACED FIRST—W. G. FRENCH, CORNELL UNIVERSITY
 SECOND LOEB PRIZE—A BAPTISMAL FONT
 STUDENT WORK—BEAUX-ARTS INSTITUTE OF DESIGN

THE AMERICAN ARCHITECT

statue to the God of Love. Such a temple is to be seen in the Gardens of Versailles.

The Temple of Love which forms the subject of this program is to be of the type described above. A double row of columns of the Corinthian order surmounted by an entablature will support a dome of stone either with or without an intermediate drum. The summit of the dome will be open and crowned by a lantern of stone which will form part of the general composition. The exterior of the dome may be covered by tiles of bronze or lead. Care should be taken that the thrust of the dome will be sufficiently neutralized. The only dimension given is the diameter to the outside of the columns, which shall not exceed 35 feet.

The next analytique will be an order problem applied to the façade of a building.



FIRST MENTION PLACED—F. B. POST, COLORADO UNIV.
CLASS "B"—FOURTH ANALYTIQUE

CLASS "B"—FOURTH ANALYTIQUE

JURY OF AWARD: R. M. Hood, L. Warren, G. A. Licht, H. R. Sedgwick and A. Ware.

PROGRAM: A Temple of Love.

Number of Drawings Submitted: 71.

AWARDS

FIRST MENTION PLACED.—F. B. Post and G. Roth, Columbia University, N. Y. C.; A. Witschard, Atelier Wynkoop, N. Y. C.

FIRST MENTION: A. T. Terrell and S. Minoli, Columbia University, N. Y. C.; A. P. Herman, Carnegie Inst. of Tech., Pittsburgh; J. V. Snellback, Atelier Licht, N. Y. C.; O. Jenkins, University of Oregon, Eugene; R. W. Craton, Jr., George Washington University, Washington, D. C.

MENTION: H. Sweeny, Jr., Atelier Brazier, Chester; P. J. Bittermann, Jr., K. C. Chang, H. G. Anderson, G. P. Hritz, F. R. Schreyer, W. A. Engeman and Florence Wingate, Columbia University, N. Y. C.; M. Vera Kellett, A. K. Sabine, L. H. Rank, W. J. Erdner, A. P. Lamore and G. H. Goodwin, Carnegie Inst. of Tech., Pittsburgh; W. H. Nash, Catholic University, Washington, D. C.; A.

R. Nelson, R. Mackey, E. Babitsky and B. Hunsicker, John Huntington Polytechnic Institute, Cleveland; G. A. Stauch, Atelier Licht, N. Y. C.; S. Oxhandler, 1013 Bryant Avenue, N. Y. C.; J. W. Meyer, Jr., care of Warren & Clark, N. Y. C.; T. J. Logan, Portland Archtl. Club, Portland, O.; C. Grieb, E. R. DeShaw, G. H. Spohn, M. V. Dittmar, B. M. Dawson and J. W. Ayars, Syracuse University, Syracuse; H. A. Clervi, Atelier A. Brown, Jr., S. F. A. C., San Francisco; R. Goldberg, "T" Square Club, Philadelphia; C. V. Rueger, E. Granstrand, W. S. Chinn and W. A. Streng, University of Washington, Seattle; I. G. Smith, H. Foulkes, H. Johnston and L. J. Ellis, University of Oregon, Eugene; L. F. Soxman, W. M. Icenhower, Julia Carman and J. L. Benson, University of Kansas, Lawrence; T. F. Price, Atelier Wynkoop, N. Y. C.; H. C. H. Murphy, Atelier Hirons, N. Y. C.; E. C. K. Schmidt, "T" Square Club, Philadelphia.

PROGRAM

CLASS "B"—IV PROJET

The Committee on Architecture proposes as subject for this competition:

"A SMALL MEMORIAL ART LIBRARY AND MUSEUM"

A patron of Art in a small city has left to the community a sufficient sum to build a memorial to house his library of books on art and architecture, and for the exhibition of his small but valuable collections of paintings, sculpture and examples of the minor arts. This building, while a memorial to the donor, is to be free to the public, especially to students.

The land on which this building is to be built is 120 x 180 feet with the short side facing an important street. Less important streets surround it on the other three sides.

The ground floor will contain:

A vestibule, with a curator's room and a room for the superintendent.

A staircase or staircases leading to the floor above.

The library suitably fitted with large reading tables and with shelves for the accommodation of large and bulky volumes. This room may extend through two floors and be lighted from the top. It should have an area of 2000 sq. ft.

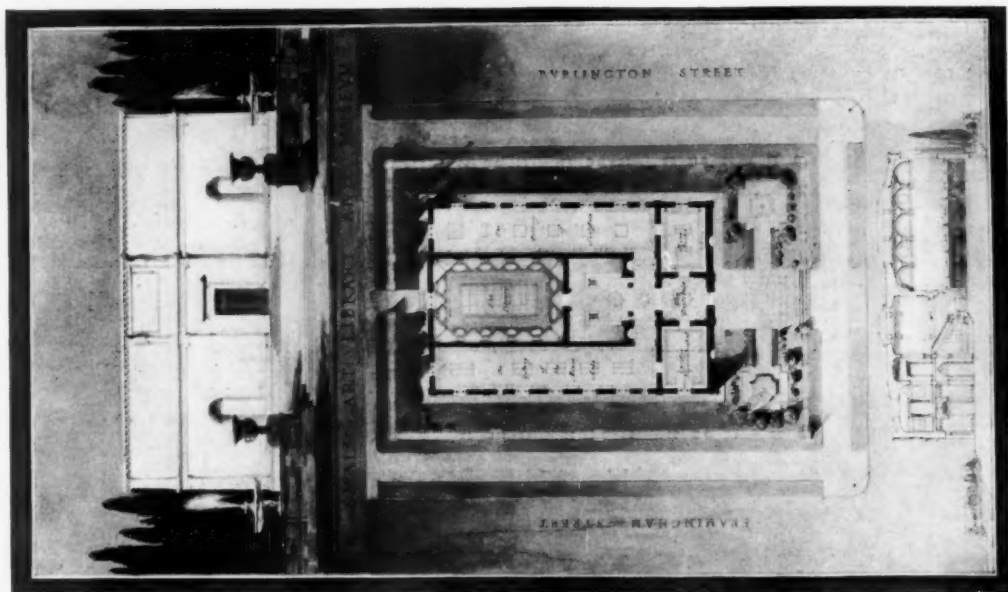
The galleries for the exhibition of sculpture and the minor arts. These galleries should be lighted from side only and should have a total area of approximately 3000 sq. ft.

The second floor will contain:

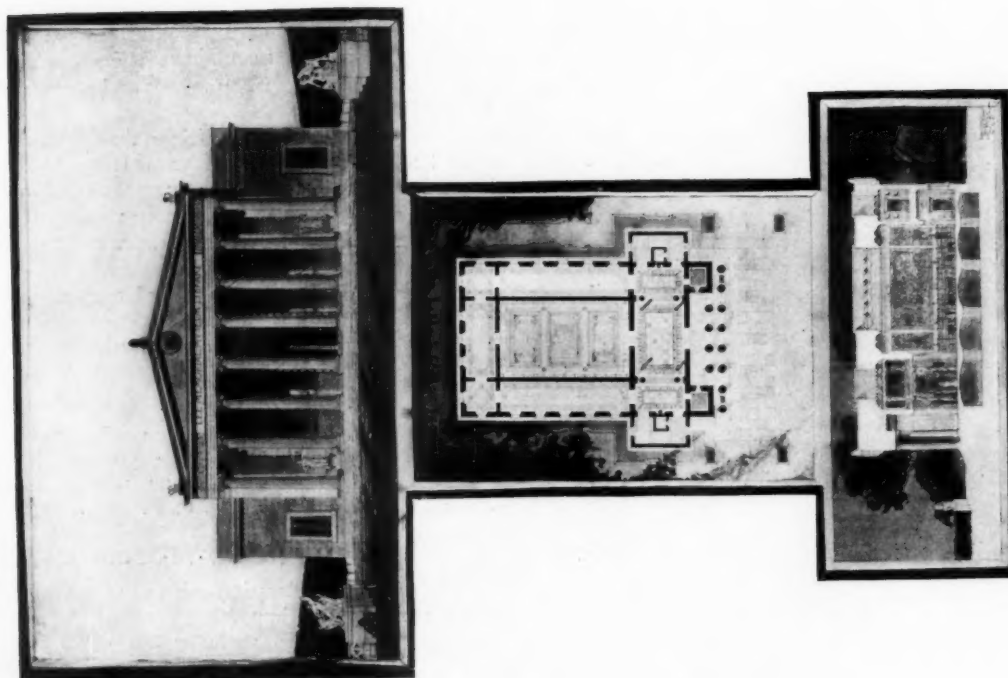
The galleries for the exposition of paintings, tapestries and other things of that nature. These galleries should have top light. Their area is not determined, but should be as great as is consistent with the design.

The treatment of the grounds about the building should be given consideration owing to the location of the property on the important street of the town.

The next *projet* will be A Small Building or Group in the Country.



FIRST MENTION PLACED—L. WILLIAMS, COLUMBIA UNIVERSITY

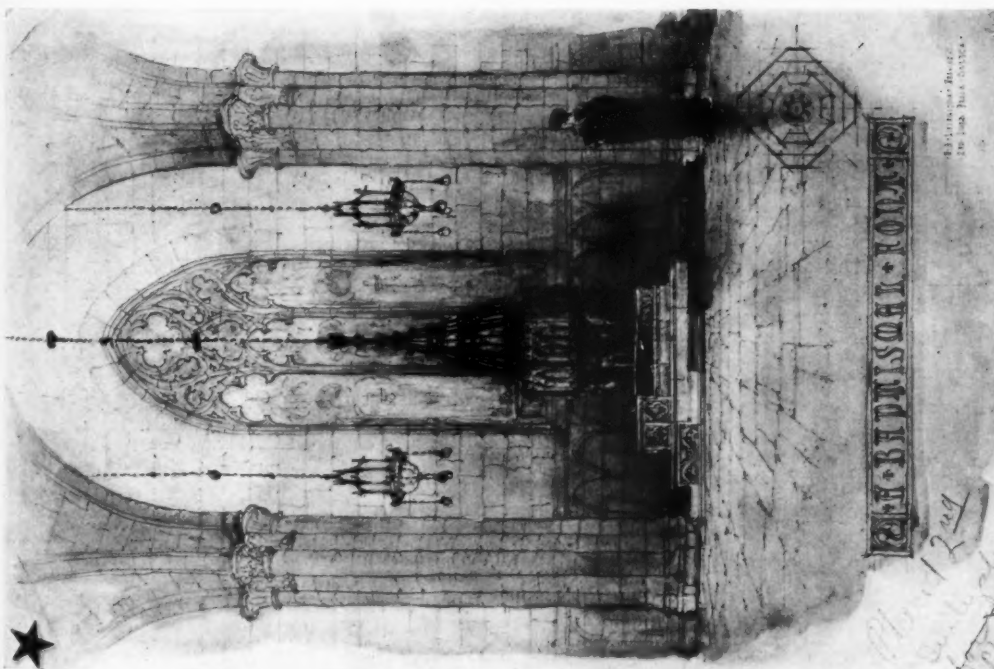


FIRST MENTION PLACED—E. VON OSTHOFF, ATELIER HIRONS

CLASS "I"—FOURTH PROJECT. A SMALL MEMORIAL ART LIBRARY AND MUSEUM

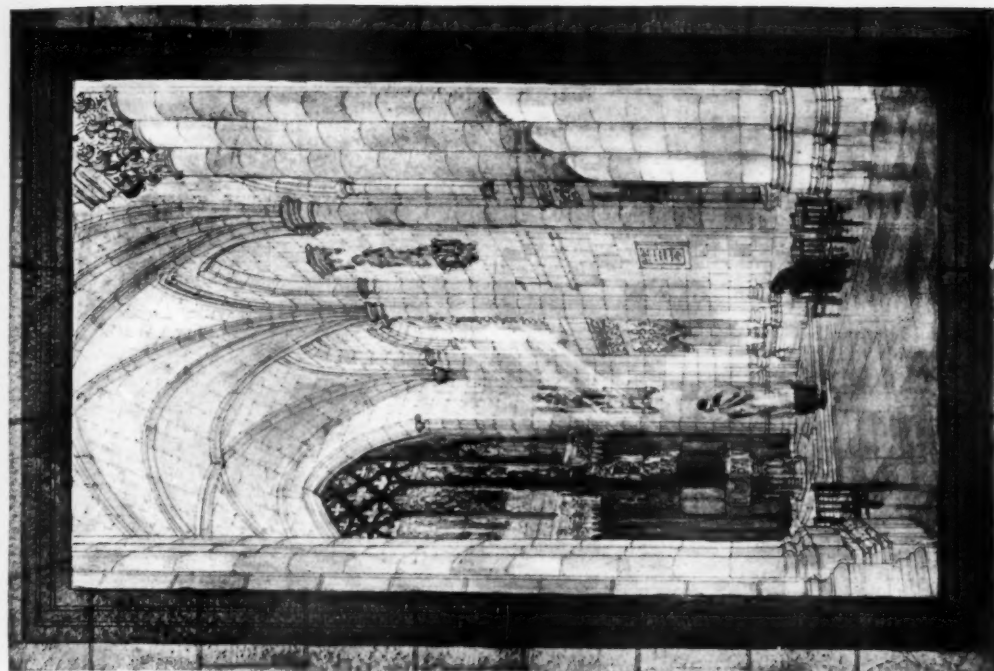
STUDENT WORK—BEAUX-ARTS INSTITUTE OF DESIGN

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PLACED SECOND—W. H. LIVINGSTON, UNIVERSITY OF PENNSYLVANIA

SECOND LOEB PRIZE—A BAPTISMAL FONT
STUDENT WORK—BEAUX-ARTS INSTITUTE OF DESIGN



PLACED THIRD—R. BAILEY, CORNELL UNIVERSITY

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CLASS "B"—FOURTH PROJCT

JURY OF AWARD: F. A. Godley, W. Lamb, J. F. Harbeson, H. W. Corbett, W. L. Bottomley, E. V. Meeks, J. C. Levi, H. Hornbostel, L. H. Burnham, W. F. Hitchens, M. B. Stout, L. E. Smith and F. C. Hiron.

PROGRAM: A Small Memorial Art Library and Museum.

Number of Drawings Submitted: 58.

AWARDS

FIRST MENTION PLACED: L. Williams and W. L. Uhl, Columbia University, N. Y. C.; N. Baum and E. von Osthoff, Atelier Hiron, N. Y. C.

FIRST MENTION: I. Safier, Columbia University, N. Y. C.; R. Fisher and C. E. Silling, Carnegie Inst. of

Tech., Pittsburgh; P. W. Strickland, University of Kansas, Lawrence.

MENTION: M. B. Loewy, A. Catsanos, P. Binger, Jr., H. K. Coffroth, D. A. Fletcher, J. Y. Moo, R. H. Sandeford and H. R. Kaplan, Columbia University, N. Y. C.; W. N. Holmquist, R. Finkelhor, I. S. Stark, O. R. Olmsted, H. A. Obert, B. Bocchicchio, N. D. Kutchukian, E. T. Benham, C. E. Trent, C. LeR. DePrefont and R. C. Bowers, Carnegie Inst. of Tech., Pittsburgh; Y. C. Lu, E. L. Howard, C. D. Lewis and Helen Palmer, Cornell University, Ithaca; J. J. Myers, Catholic University, Washington, D. C.; T. Shimura, Atelier Hiron, N. Y. C.; H. Logemann, Milwaukee Archtl. Club, Milwaukee; B. L. Hagberg, R. E. Martins, H. H. Davis, L. Yu, K. A. Snow, R. L. Waldorff and H. J. Hambrecht, Syracuse University, Syracuse; B. Laub, "T" Square Club, Philadelphia; W. R. Brown and E. Pickering, University of Kansas, Lawrence; W. G. O'Toole, University of Louisville, Louisville; E. T. Mock, George Washington University, Washington, D. C.; M. Rice, H. I. Feldman and G. H. Del Grella, Yale University School of the Fine Arts, New Haven.

H. C.—R. Bailey, Cornell University, Ithaca; H. A. Horn, Atelier Wynkoop, N. Y. C.

Minutes of the 116th Regular Meeting, Southern California Chapter, A. I. A.

The regular monthly meeting of the Southern California Chapter, A. I. A., was held April 9, 1918.

As guests of the Chapter were present: Mr. P. H. Adams, architect, of London, England; Mr. John Bakewell, Jr., president of the San Francisco Chapter; Mr. Sylvain Schnaittacher and Mr. J. C. Newsum, both of San Francisco, and Mr. Samuel Storrow, engineer, of Los Angeles.

Under the head of "Committee Reports" Mr. J. E. Allison, chairman of the Committee on Public Information, reported that the committee had taken up with the secretary of the State Board of Architecture the violation of the State law by a certain individual of Los Angeles who is advertising himself as architect.

The chairman of the City Planning Committee reported that the city planning ordinance had been before the Council, had been seriously considered and discussed by the members, but definite action on the same was finally postponed until after July first.

Mr. A. C. Martin, chairman of the Committee on Ethics and Practice, reported that several members of the Chapter had received invitations from the Board of Education to submit sketches for the proposed East Seventh Street school. After a discussion on the subject it was moved, seconded and duly carried that a resolution be drawn up recommending that the School Board continue with the services of the architects who had been employed

by the previous board as architects for this school, and that the secretary present the resolution to the board.

The secretary presented a resolution with reference to amending Section 13 of the Canon of Ethics, American Institute of Architects. It was moved by Mr. Walker, seconded by Mr. Krempel and duly carried that this resolution be adopted by the Chapter and appended to the minutes of the meeting.

Under "Papers and Discussions" the president introduced Mr. Samuel Storrow, who spoke entertainingly on the advantages of establishing a terminal station at the Plaza, and the conservation of city streets from a traffic standpoint.

The guests of the evening were then introduced and each discussed at certain length the State law of licensing architects, with suggestions for amending and approving the same at the next meeting of the Legislature.

Following is the resolution with reference to amending Section 13 of the Canon of Ethics, A.I.A.:

"Be It Resolved, that we, the members of the Southern California Chapter, A. I. A., petition the Board of Directors to present to the Philadelphia convention in April for its consideration the proposition of amending the Canon of Ethics to this effect: that Section 13 be revised to read as follows:

"It is permissible, and every member is recommended, to display upon every building designed by him, while under construction, his name with Institute rank, upon a board in the form of a directory, the size and shape of which shall be uniform in each district, the dimensions being determined by each Chapter."

Department of Architectural Engineering

A Substructure Replaced Without the Use of Shores

ALBERT B. GROVES, *Architect*

ALBERT A. AEGERTER, *M. Am. Soc. C. E.*

THE Century Building, in St. Louis, for which Raeder, Coffin & Crocker were the architects, was erected in 1896. It occupies the half block on the west side of Ninth Street between Olive and Locust Streets. On the west of the building was an alley dividing the block, and on the

tion, the exterior walls of which are faced with Georgia marble. In the southwest corner of the building was a theater extending along the alley from the Olive Street side. This was 67 ft. 6 in. by 200 ft. in size, the auditorium proper being 67 ft. 6 in. by 145 ft. in size. This auditorium con-

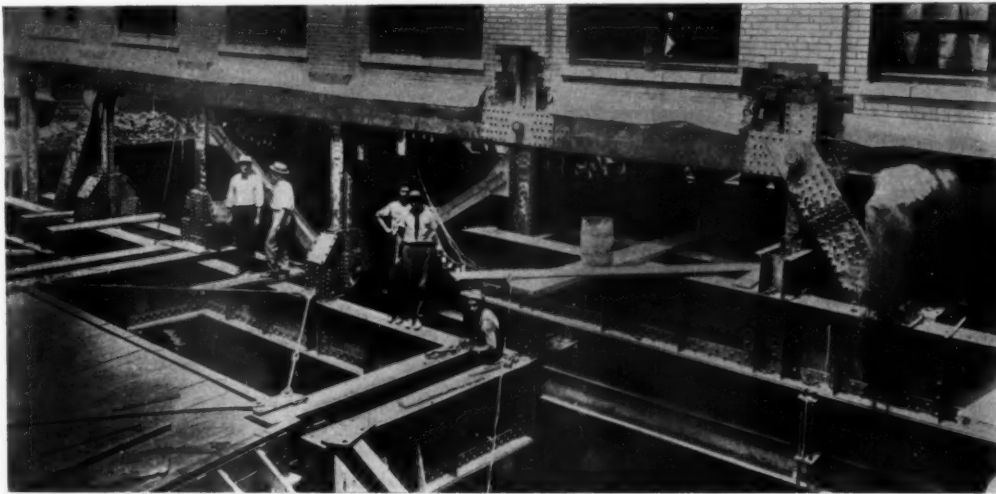


Figure 1. VIEW IN THE COURT

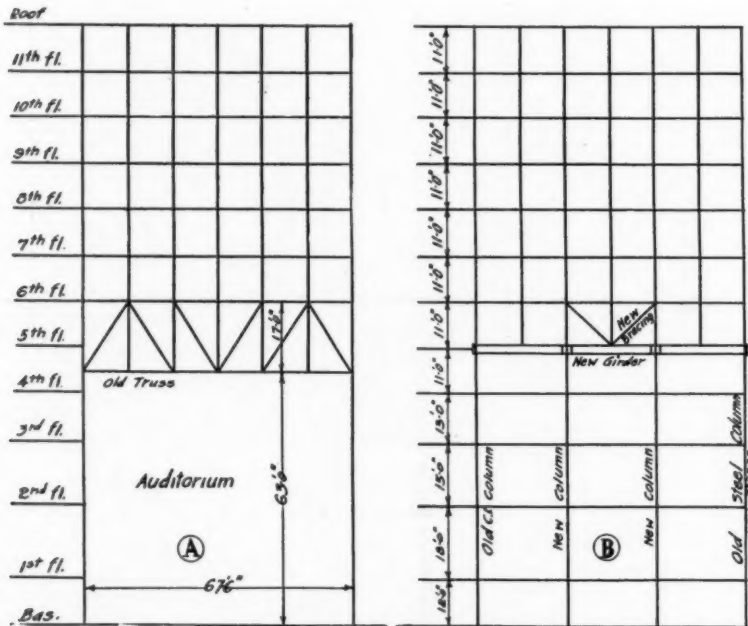
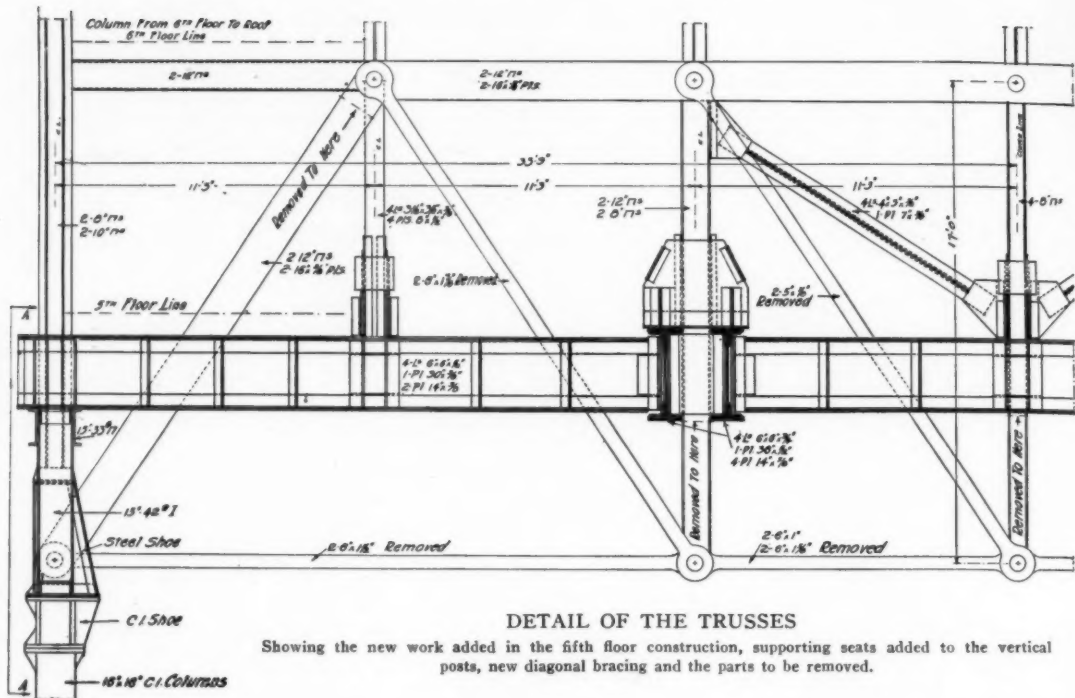
Showing the court walls above the truss, fifth floor framing, diagonal bracing and the inclined end chord cut and being removed.

western half of the block the Syndicate Trust Building was erected later. The lower floors of the latter building are occupied as a department store and to extend the capacity of that store the Century Building was acquired and remodeled for the new occupancy.

The Century Building is an eleven-story and basement store and office building of fireproof construc-

tion, the exterior walls of which are faced with Georgia marble. In the southwest corner of the building was a theater extending along the alley from the Olive Street side. This was 67 ft. 6 in. by 200 ft. in size, the auditorium proper being 67 ft. 6 in. by 145 ft. in size. This auditorium con-

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Section "A" represents the auditorium before the alterations were made and shows the office floors over and supported by the trusses. Section "B" represents the same section as "A," showing the new columns, floors, fifth floor construction and the new diagonal bracing in the remaining parts of the trusses.

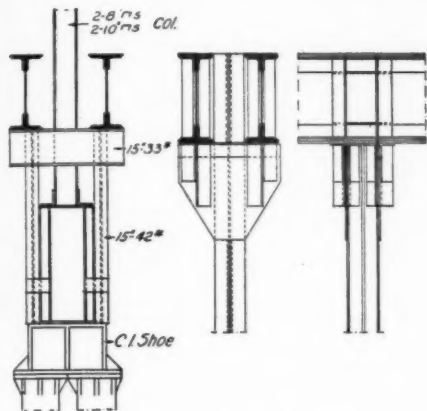
west or alley end by two 16-in. by 16-in. cast-iron columns 63 ft. long, and the eastern end supported by a built-up steel column. Each truss carried a load of 550 tons.

To extend a department store into and through a theater was the commission given to the architect and engineer to execute, and it was successfully completed in 1913. The manner of reconstructing this portion of the building is here described and illustrated.

The first survey of the proposition was based on shoring up the columns supported by the six trusses, removing the trusses and installing the new floors with their supports. The lowest shoring bid amounted to \$80,000, and it was apparent that the elimination of this expense was a very desirable

THE AMERICAN ARCHITECT

thing to do. Shoring, as such, is not an integral part of a completed structure, but serves as a means to accomplish an end, hence its exclusion is a gain.



DETAIL OF THE TRUSSES

Showing the end of elevation of the trusses on the line "AA" and the column caps supporting the new longitudinal girders in the fifth floor.

The removal of the trusses was necessary, as the lower chord passed through the new fourth story about 5 ft. above the floor line. The new first to fifth floors inclusive were framed with girders, beams and sway bracing supported on steel columns and with a floor construction consisting of an 8-in. concrete slab. The new columns were spaced 22 ft. 6 in. centers in the transverse direction and 25 ft. centers in the longitudinal direction to conform to the requirements of a retail store.

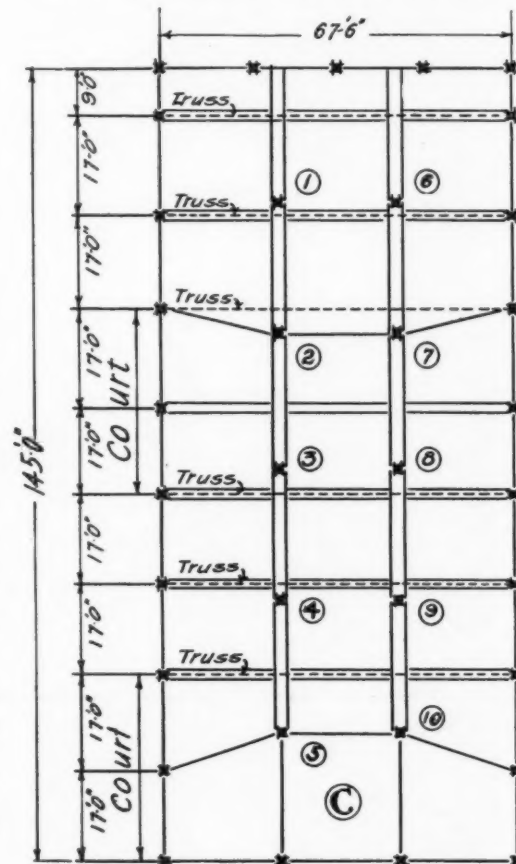
The fifth floor framing consisted of two lines of longitudinal girders, each made of two plate girders and so separated as to pass the vertical posts located at the third points of the truss. These girders are supported on the new steel columns numbered 1 to 10 inclusive. The transverse girders are framed into and supported by the longitudinal girders. Each consists of two plate girders placed so that the truss is between them. By this arrangement of girder framing there is a girder on each side of the vertical posts of the trusses. To these vertical truss members were framed and attached new steel seats which rest on the new girders.

After the foundations for the columns 1 to 10 inclusive were built, the columns, floor framing and concrete slabs for the first to fourth floors inclusive were erected in place. The fifth floor framing was then erected and the steel seats above referred to, placed in position.

The plan indicates the location of the trusses, the new columns 1 to 10, the double transverse and longitudinal girders, the court and office portions over the old auditorium. The diagram section "A"

illustrates the old auditorium spanned with the trusses which support the superimposed office floors and also indicates the relation of the new fifth floor which intersects the truss. Section "B" illustrates the same section as "A," showing the new columns, floor beams for the first to fourth floors inclusive, the new fifth floor double girders and the new cross bracing in the center bays of the old trusses.

The detail drawing indicates the old trusses as built, the parts that were removed, the new girder framing for the fifth floor, the seats attached to the vertical truss members and the new diagonal bracing in the center panels. The details also show the



FRAMING PLAN OF THE FIFTH FLOOR

Showing the trusses that were removed, the new columns, the fifth floor framing and the court and office portions over the auditorium.

elevation of the truss ends as indicated on line "AA" and the caps on columns 1 to 10 inclusive which support the longitudinal girders.

Figure 4 shows the truss between columns 1 and 2 with the longitudinal and transverse girders in place, the longitudinal girders supported on the

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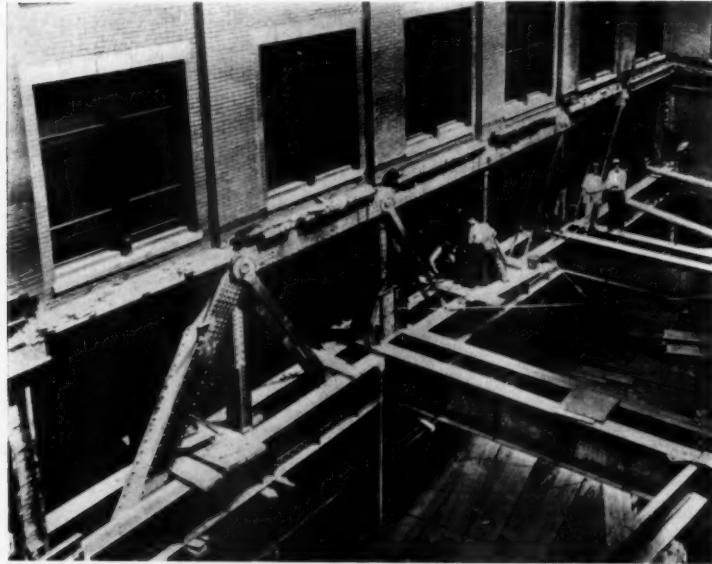


Figure 2. VIEW IN THE COURT

Showing the fifth floor framing in place and the court walls above the truss.



Figure 3. OLD TRUSSES REMOVED

Showing the same view as Fig. 1 with the portions of the truss removed and the new diagonal bracing in place.

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new steel columns appearing immediately back of the truss. The seats on the vertical truss posts are in process of construction. The men are standing on the new fourth floor and illustrate clearly the obstruction of the lower chord in the fourth story.

Figure 3 is the same view as Figure 4 with the trusses cut away. The lower portion of the vertical posts and the diagonal and horizontal eye-bars have been removed. The latter can be seen on the floor below the truss.

near the point of support. This chord consisted of two 6 in. by 1½ in. steel eye-bars. Each bar was cut alternately and a small cut made at each application of the torch. As the load was not entirely taken up by the new fifth floor framing the member was still in tension. When the bars were cut about 5 in. they both snapped with a loud report, and the load was entirely transferred to the new frame.

The remaining trusses were first cut at the ver-

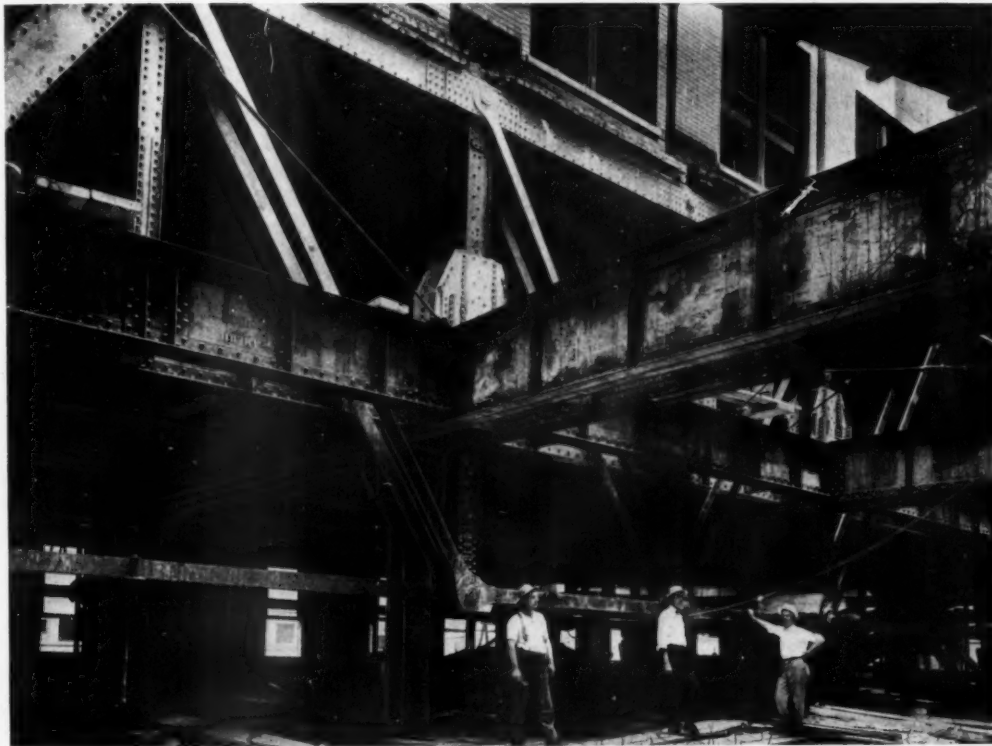


Figure 4. OLD TRUSSES IN POSITION

Showing the new fifth floor construction in place and seats attached to the vertical posts of the truss.

Figure 2 is a view of the same truss looking down into the court, showing the fifth floor framing, the court wall supported by the truss and truss steel intact.

Figure 1 is a view of the truss between columns 4 and 5, also showing the court wall and the fifth floor framing with sway bracing. The inclined top chord at the right is shown cut through and in the process of removal.

The cutting of the old truss members was accomplished with the use of an oxy-acetylene torch. In removing the first truss the lower chord was cut

tical struts and just below the fifth floor framing; when sufficiently cut the remaining metal crushed and the load was gradually and gently transferred without shock and with the resulting loosening up of all the tension members.

The removal of these trusses and the transferring of the six upper floors to the new system of supports was accomplished without cracking any of the masonry or interfering with the easy operation of the windows; these two points always show the slightest disarrangement of levels. The total cost of this operation was \$337,000.

Relation of Hot Water Service Heating to Various Types of Buildings*

By HAROLD L. ALT

IN TWO PARTS—PART I

THE question of proportioning hot-water supply is one upon which a great deal has been said and published, yet when a final decision is made it is more a matter of common sense and judgment than of any deep engineering calculation. Undoubtedly the reason why more authentic data is not on record in the Society's publications relating to this is because the hot water tank comes pretty close to the jurisdiction of the sanitary engineer—whose fixtures are supplied therefrom—and who should furnish the heating engineer with the maximum number of gallons of hot water required per hour and the temperature rise expected. From this the heating engineer could readily calculate the pounds of steam condensed per hour or the pounds of coal to be burned.

For those who desire to make their own estimates, however, or who wish to check the designs of others, the following data may prove a help as a basis on which to compute within a fairly close approximation.

The consumption of hot water in a building may be most accurately determined from a knowledge of the number of occupants, length of occupancy and use of building. A building occupied 24 hours per day and in which laundry and culinary operations are carried on will probably run about 25 gal. per day per person. Without laundry work, this would drop to about 15 gal., without cooking to about 10 gal., without bathing (showers, baths, etc.) to about 5 gal., or even less.

Owing to the number of occupants being often an unknown quantity, it has become quite customary to estimate hot water consumption entirely on the basis of the number of fixtures installed and, as these figures vary in the amount of use received, their actual consumption will vary also. From this has developed the scheme of figuring the maximum consumption possible and taking a percentage of water as based on the percentage of maximum use likely to be encountered in the building in question. Under such a method the following is used as the maximum consumption:

Fixture	Gallons of Hot Water Each Use	No. of Usings per Hour	Maximum Gallons per Hour
Lavatories	1	× 20	= 20
Baths	20	× 2	= 40
Showers	30	× 5	= 150
Slop sink	10	× 2	= 20

Under ordinary conditions on a large building the *operating* maximum use will seldom exceed 33 1-3 per cent of the *possible* maximum, so that for fifty lavatories the consumption will be as follows:

$$50 \times 1 \times 20 \times 33 \frac{1}{3} \text{ per cent} = 330 \text{ gal. per hour.}$$

For ten showers, the consumption will be:

$$10 \times 30 \times 5 \times 33 \frac{1}{3} \text{ per cent} = 500 \text{ gal. per hour.}$$

The figures can be applied to any building with proper judgment; of course, in a school where a whole class comes in and takes a shower after gymnasium practice, the showers must be figured at 100 per cent, and the same for wash bowls in a shop where every one washes up in fifteen to thirty minutes at quitting time. The percentages for the general classes of buildings are as follows:

For hospital use	33 1-3 per cent
For office buildings	20 per cent
For shops	100 per cent
For schools (except showers)	33 1-3 per cent

In a recent shop installation involving over thirty wash rooms the hot water was figured as follows:

- ½ gallon per employee for use in washing.
- ¼ gallon per employee to remain in tank.
- ¼ gallon per employee allowed for tank, pipe, and bowl losses.
- 1 gallon per employee total.

This one gallon per employee was stored in a storage tank and the tank was given three hours in which to heat. Thus for 300 men, a 300 gal. tank is used and sufficient heating surface put in to heat $\frac{300}{3}$ or 100 gallons per hour from 50 to 150 deg. Fahr. This resulted in small coils, large tanks and a small heating load.

*Paper read at the annual meeting of THE AMERICAN SOCIETY OF HEATING AND VENTILATING ENGINEERS, New York.

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For apartment houses, by the fixture, the maximum amounts are as follows:

Lavatories	2 gal. per hour
Baths	25 gal. per hour
Slop sinks.....	15 gal. per hour
Showers	30 gal. per hour
Wash trays	10 gal. per hour

The maximum reduces to about one-half to one-third in actual practice, giving 25 to 30 gal. per hour per family.

The proportion of storage to heating capacity may be varied; where the hot water is used practically continuously throughout a period of hours a large storage tank is useless. As a general rule it may be said that the heating capacity should equal the constant load and the storage capacity should be sufficient to carry over the peak, plus 25 per cent to be retained in the tank. Thus for average conditions, if 300 gal. per hour is the maximum possible to use in the fixtures, one-third or 100 gal. would be average use and would therefore be the heating capacity, and one-third or another 100 gal. should be allowed for a temporary peak load. Then retaining 25 per cent in the tank, there is 100 gal. heated per hour plus (100-25) 75 gal. available from storage, or a maximum of 175 gal. for an hour of peak load. $175/301 = 58$ per cent maximum operating load, which is amply safe for any ordinary installation.

Where a hot water load is constant practically throughout the day, a very small storage capacity is required, but a heating capacity in safe excess of the assumed constant load should be used. Thus a bathhouse where the showers might operate at a maximum for several successive hours would require a large heating capacity, but storage would be practically useless.

Another thing sometimes forgotten in determining the hot water tank size is the matter of circulation. In large buildings the circulation loss may run up nearly as high as the hot water consumption, depending on the piping system. No storage tank will help this, as it is a *constant* demand and must be supplied by an increase of heating capacity.

Thus if a building required a theoretical maximum of 1000 gal. per hour, the total outside surface of the hot water mains should be computed, the loss (at 2 B.t.u. per degree difference in temperature between the water and the surrounding air) 40 per cent of this being taken (to allow for a covering efficiency of 60 per cent) and this divided by 1000 B.t.u. to reduce it to equivalent gallons of heating capacity, since 1 gallon raised 50 to 180 deg. =

$$1 \times 8 \frac{1}{3} \times 130 = 1083 \text{ B.t.u., or approximately}$$

1000, in which 8 $\frac{1}{3}$ represents the number of pounds of water in one gallon.

Supposing this loss to equal 250,000 B.t.u., then $\frac{250,000}{1000} = 250$ equivalent gallons. So for 1000 gal. theoretical maximum the storage should be one-third of 1000 = 333 gal., the heating capacity should be one-third of $1000 + 250 = 583$ gal. per hour.

It is almost always advisable to use a standard stock heater where moderate price and quick delivery is desired. Most multi-tube heaters have a much larger heating capacity than they have storage. One manufacturer's sizes are as follows:

Storage Capacity	Heating Capacity	Sq. Ft. of Brass Coil	Steam Conn. In.
25	100	6½	1
50	200	13	1
75	300	19½	1½
100	400	26	1½
125	500	33	2
150	600	40	2
190	750	49	2½
250	1000	67	2½
375	1500	100	2½
425	1750	117	3
500	2000	133	3
640	2500	167	3
700	3000	200	4
860	4000	286	4
1150	5000	333	5
1500	7500	500	6

So for this service in question, involving a storage of 333 and a heating of 583 (or a total of 916 gal. per hour), the 190 storage heater with 750 heating capacity would be the nearest stock size, the total capacity of this heater being $190 + 750 = 940$ gal. per hour.

For kitchen and laundry use, separate heaters operated at higher water temperatures are desirable. Although 180 deg. water has been mentioned in the preceding discussion, it is probable that a thermostat would be used on the tank to keep the temperature down to 120 to 150 deg. Culinary and laundry work, however, demand high temperatures and 180 deg. is the figure usually contemplated.

A kitchen, pot, vegetable or other culinary sink when in active use can easily consume 60 gal. of water per hour, but their use would hardly ever extend over two hours. A laundry requires about 1 gal. per hour for each piece handled per day.

Thus a heater to supply three culinary sinks and a laundry turning out 500 pieces per day would be computed as follows:

Three sinks at 60 gal. = 180 gal. per hour, or 360 gal. for two hours with four hours to heat, or: 360 storage and $360/4 = 90$ heating capacity.

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In the laundry, $500 \times 1 = 500$ gal. per hour. If this is drawn off at 30 minute intervals the storage should be $500/2 + 250/4 = 250 + 62 = 310$ gal. (250/4 being the 25 per cent to be retained in the tank).

If the laundry used this water at 15 minute intervals then the storage capacity would be as follows:

$500/4 + 25$ per cent of 125 = $125 + 31 = 156$ gal. In both cases the heating capacity would be 500 gal. per hour.

and 600 heating capacity would be the proper combination to use.

In Fig. 1 is shown a graphic representation of the tank just calculated. The line representing the gallons used for the sinks is plotted at the lower portion of the drawing while the heating capacity per hour allowed is plotted directly above. Running diagonally across the diagram almost from corner to corner is the line representing the quantities of water used in the laundry, and directly above this

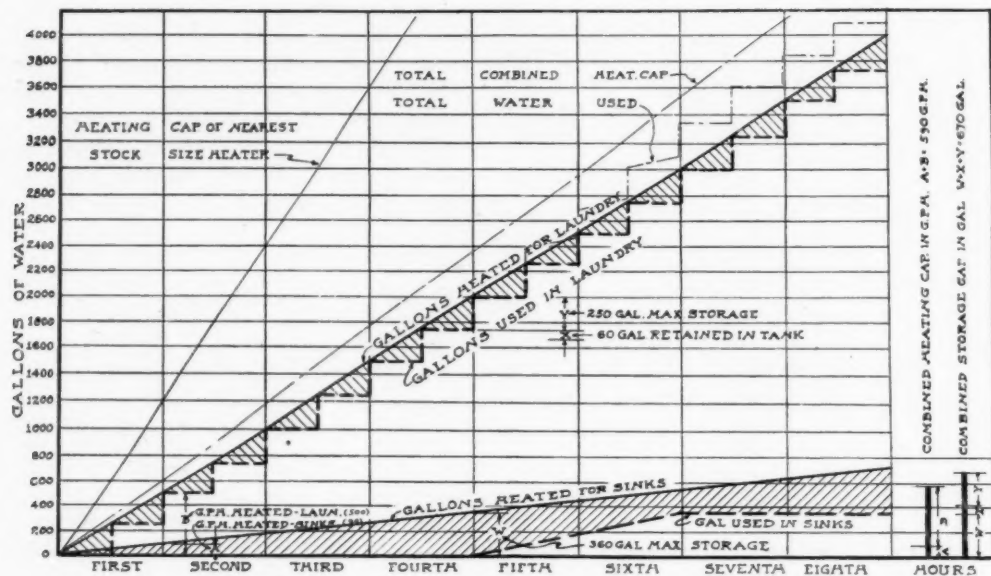


FIGURE 1

Should the kitchen and laundry heaters be combined into one (at 30 minute intervals for the laundry) the capacity should be as follows:

	Storage Capacity	Heating Capacity
Kitchen	360	90
Laundry	310	500
	<u>670</u>	<u>590</u> = 1260
Nearest standard heater.....	250	+
		1000 = 1250
		total hourly capacity

This is a case where a standard heater will not do, as it can be seen if the laundry draws off 250 gal. at the end of a 30-minute period the tank would be exhausted and the last of the water would be cold. Therefore a heater of about 600 storage

the line indicating the quantity estimated to be heated for laundry uses. Still above this are two lighter lines showing the sum of the other two for water used and water heated.

The uppermost diagonal shows the heating capacity of the nearest stock size heater—which, however, is deficient in storage and therefore not usable in this particular case. Close inspection of the diagram will show that while the heating of the water goes forward in a constant progression the utilization of the water is liable to be intermittent or a progressive use at intermittent intervals. Therefore, the water to be stored in the tank may be found by the difference between the water heated and the water used, this difference being cross hatched in Fig. 1 and the quantity so stored at any particular time is read over the proper hour or fraction thereof as noted along the bottom.

Industrial Information

Trumbull Cheer

Trumbull Cheer is the snappy house organ of the Trumbull Electric Manufacturing Company, Plainville, Conn. It lays claim to being "a magazinette, published each month (if it's lucky) in Plainville, Conn., with a hunch for Trumbull material and a fond desire to be cheerful."

Within its pages are to be found a wide variety of interesting things—bits of war verse, really funny jokes, as well as more serious things in the way of editorial matter. A double page is given over to a description of Trumbull "Safety Service" switches, some externally operated knife switches and some motor starting switches. A number of cuts are shown, and the four points to be noted in this connection with these switches are presented as follows:

1. Box cannot be opened when switch is in contact.
2. Switch cannot be closed when box is open.
3. It is therefore impossible at any time to come in touch with a live closed switch.
4. Box can be locked and sealed when switch is in open position.

Concrete Bath Tubs

Concrete bath tubs, made in stock sizes and to order, are manufactured by the Economy Concrete Company, New Haven, Connecticut. This type of bath tub marks a more or less radical departure from the conventional—but it is not so radical as the steps which introduced the first stationary tubs in this country. In this connection, the Economy Concrete Company prints a statement, "Speaking of Bath Tubs," as follows:

Adam Thompson of Cincinnati was the first man in the United States to use a bath tub.

This was on December 20, 1842.

The installation of the bath tub in Mr. Thompson's home, and the actual use of it for bathing in winter, caused widespread publicity, and the newspapers devoted their columns to violent discussions of it.

Certain patriots stated that this type of bathing was a degenerate luxury, designed to corrupt

the democratic simplicity of the republic. The medical fraternity denounced it as "dangerous to health, and bound to result in phthisis, rheumatic fevers, inflammation of the lungs, and the whole category of zymotic diseases."

Legislation reflected the common feeling.

The Philadelphia Common Council, late in 1843, considered an ordinance prohibiting bathing between November 1 and March 15, and it failed of passage by only two votes.

During the same year the legislature of Virginia laid a tax of \$30 a year on all bath tubs.

Boston, early in 1845, made bathing unlawful except upon medical advice, but the ordinance was never enforced, and in 1862 it was repealed.

President Millard Fillmore installed the first bath tub in the White House in 1851.

This action broke down practically all prejudice, with the result that by 1860 every hotel in New York had one bath tub, and some had two and even three.

Waterproofing Products

The Zibell Damp Resisting Paint Company, 149 Broadway, New York City, has on the market a number of products designed to meet various waterproofing and dampproofing needs. These people are also consulting experts for this sort of work, and state in their literature that their staff of engineers is at the service of the investigator.

One of their products is "Alkacene," a powder for waterproofing cement, concrete and stucco. For a 1 to 3 mixture, 2 lbs. of this powder are mixed with one bag of Portland cement. Their "Alko Freez-Proof" is a substance which is said to render cement, mortar and plaster frostproof. It is also claimed that it increases the strength of the material by 50 per cent, and makes it 60 per cent impermeable by moisture.

"Protectorine," another of this company's products, is available in a number of forms. There is concentrated black "Protectorine," for use on roofs, foundations and footings; ordinary black for inside dampproofing; white "Protectorine" for use as a protection for ceilings and mural decoration; and a

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colorless variety for use as a concrete cement coating. Descriptive of this material, it is said that it is "made from a combination of highly elastic waterproof gums, is a viscid, leathery liquid, absolutely poreless, waterproof, windproof, frostproof and weatherproof. The colorless variety, as a concrete-cement coating, plugs up the pores, strengthens and hardens the cement, or other material, renders it waterproof, and sets as hard as porcelain."

There is a catalog, available upon request, which gives the particulars regarding the concrete waterproof paint manufactured by this company. This paint is made in colors.

A Soundproof Door

Irving Hamlin, 716 University Place, Evanston, Ill., is the inventor and patentee of a door which is claimed to be soundproof, odorproof, dustproof, lightproof, weatherproof and airtight. It is offered to the public as a practical solution of the sound nuisance, wherever it is desired to retard transmission of sound between rooms.

It is said that urgent necessity was the mother of this invention, where, in a music studio building, with many voices and instruments simultaneously sounding, interfering and intruding noises were a serious detriment to the work of teacher and student.

The door was invented and first used at the School of Music of Northwestern University, Evanston, Ill., where it has been in successful and constant use ever since 1910; and subsequent installations in other schools and music studios and in hospitals have amply demonstrated its value.

While, of course, no practical door could be absolutely soundproof, this door, it is claimed, is relatively so, and is a great comfort both to the user and to the non-user of the music studio.

Closing the joints between the door and its frame and threshold was the expedient resorted to. This is accomplished simply, in one operation, and without any visible evidences of mechanical defacements.

The mechanical details of this construction are given in the bulletin of the Evanston Soundproof Door, which is available on application to the inventor.

Portfolio of Colored Plates

The National Lead Company of New York, Boston and other principal cities, has issued an elaborate portfolio of colored plates, showing decorative schemes and suggestions both for interiors and exteriors. "The House Owner's Paint Book" accom-

panies these plates, and gives concise and definite information on points often questioned by the layman.

The plates themselves cover a wide variety of styles and arrangements, attractively rendered, particularly in the case of the interior designs. They should afford valuable suggestions to the architect and decorator.

Stage Lighting

A large and complete catalog of stage and studio lighting apparatus and electric effects is published by the Universal Electric Stage Lighting Company, 240 West Fiftieth Street, New York City. The publication of this book—Catalog H—marks the twenty-second year of activity of this company, and includes many new developments in stage lighting and effects. Among the accessories are spotlights, pockets and plugs, connectors, border lights, proscenium lights, disappearing footlights, act announcers, fire logs, reflectors, electric carriage calls, and Klieglight Lilliput and arc lamps, with accessories, for motion-picture photography.

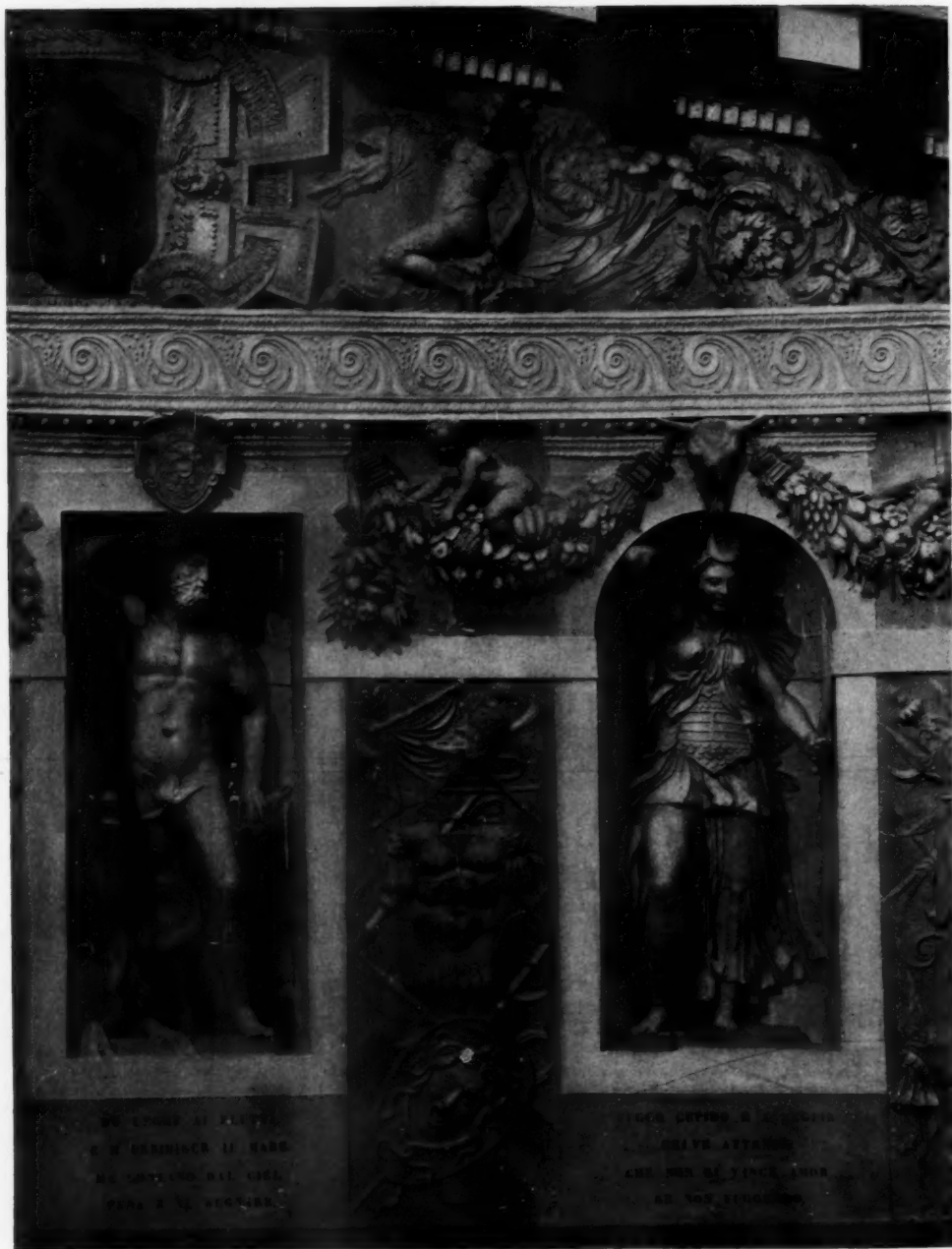
This catalog may be obtained by the architect upon request. He is also invited to submit his stage-lighting problems to this company, which has had a long and extensive experience to guide it.

Gas Water Heaters

The Humphrey Company, Kalamazoo, Mich., manufactures various types of gas water heaters. In their catalog descriptive of this product there may be found definite and valuable information regarding these numerous types of heaters. There are instantaneous heaters, storage heaters, coil heaters and tank heaters, in a variety of sizes and designs. Dimensions, capacities and prices are given in all instances, and the field of usefulness of each design pointed out. It is stated that special printed matter covering each of the different types may be had on request to the manufacturer.

Radiators

A wide range in types of radiators is shown in the radiator catalog of the Niagara Radiator and Boiler Company, North Tonawanda, New York. There are cuts showing varied designs in regulation radiators; radiators for corners, curves, bay windows, window seats and other special uses; there are circular radiators, dining-room radiators and plate warmers. Repair parts, as well as special fixtures and other sundries, are also illustrated in this catalog.



DETAIL, VILLA GIACOMELLI, PROVINCE OF TREVISO, ITALY

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