



THE AMERICAN ARCHITECT



FOUNDED 1876

THEATRE FOR YALE UNIVERSITY, NEW HAVEN, CONN.

BLACKALL, CLAPP & WHITTEMORE, Architects

THE Department of the Drama is a function of the School of Fine Arts of Yale University. The University Theatre is a part of the School of Drama and an adjunct to the teaching and administering of all of the arts connected with the drama and the theatre, including everything from the writing of plays to the actual production thereof. It is not a public theatre in any sense, but is more like a laboratory, for a selected audience, and everything that takes place in the theatre being a part of the work of the Department. But being a laboratory theatre, it is arranged and equipped to give actual working conditions under which plays would be mounted and presented. It is in no sense a place for amateur performances, though such may be given, but it is a serious establishment of absolute standards in stagecraft.

The exterior of the building is designed in a Gothic style intended to be in harmony with the Harkness Memorial, the more recent Harkness dormitories and the proposed Yale library, being carried out in combinations of cast stone of a warm buff color, Weymouth seam-faced granite with weathered faces and Holland brick of dull red and brownish yellow tones. The relative amounts of stone and brick vary from nearly all brick in rear to nearly all stone on the front. The photographs published show the building in its condition at this time, March, 1927. The drawings, however, show the front as it will be when completed during the coming Summer, the additional work consisting of a porch on the left of the facade connecting to a lateral cloister leading to the administration rooms, also including an archway on the right of the front connecting the theatre facade to the enclosure of the adjoining Chapter House which is in the same style, and also including niches to relieve the simplicity of the front and some incised ornament around the central portal. All of this additional work was con-

templated when the building was contracted for, but the actual execution was deferred until the final cost could be definitely determined. The mass of the tower which marks the portion over the stage is entirely of brick with the exception of a few slight bands and capping stones. The small turret at the corner of the stage tower encloses a 10,000 gallon sprinkler tank and is a practical necessity which is utilized to cover up the severeness of the stage tower. The low portions of the building on the left of the front are occupied by the administrative offices, the dressing rooms, etc. The entrance to the theatre is through the central portal on the front and through the porch on the left, the entrance to the offices being through the porch and cloister. The stage entrance is toward the rear on the side passage. The Yale Dramatic Association, an undergraduate organization entirely distinct from the School of the Drama, but with a notable history of its own, has quarters at the rear on the left with separate entrance.

The main entrance from the street gives into a small vestibule with ticket offices on each side. Beyond the vestibule is the main lobby extending across the front with stairs to the balcony at each side. The lobby is finished with a very simple plaster wall treatment, an arched, beamed ceiling and stairs of concrete with iron railing. The floor is of linotile in tile patterns, the whole being kept very quiet and simple. Beyond the lobby is the auditorium consisting of a parquet and a single balcony with total accommodation for 700 seats. The seats are from 20" to 24" wide and the rows from front to back are spaced 34", giving very liberal accommodation. No provision is made for orchestra, the seats being carried right up to the stage front. The interior of the auditorium was intentionally kept very simple and there is almost a complete absence of anything like an architectural treatment. The walls are plain plaster: almost the only woodwork consists of

the balcony front, which is of light oak, and the only decoration is afforded by some large Persian-Chinese tapestries, donated by Mr. Harkness and hung on each side of the proscenium. But there is no proscenium properly so called; there are no mouldings at all around the stage opening, and the



SIDE ENTRANCE

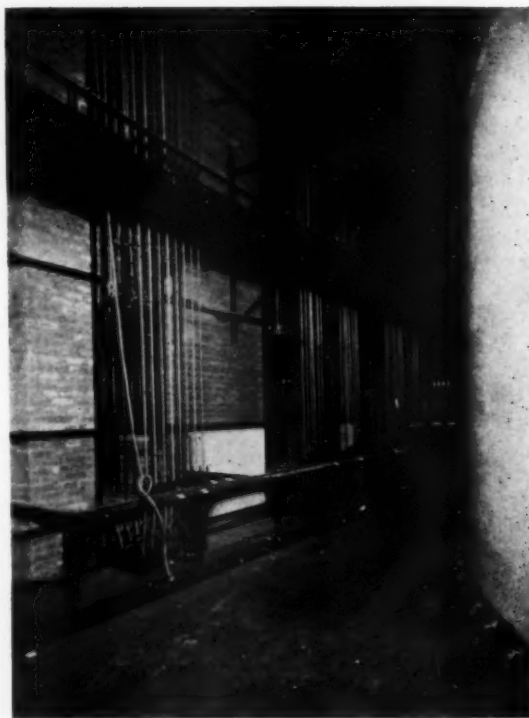
ceiling beams which traverse from side to side are kept as simple as possible, only a slight amount of cornice being carried around the side walls. It was intended that nothing in the auditorium should compete with or detract from the presentation on the stage, all the interest being concentrated in the play, even the sight lines being arranged so that the two sections of the house above and below cannot see each other. If only a small audience is present, as on some occasions, they could fill the entire floor without being conscious of the emptiness of the balcony seats, and the audience would count simply as spectators and in nowise detract the attention from the stage.

The stage curtain is of silk velvet unrelieved by any ornamentation, hung in simple, heavy folds and is of a dark, rich plum color, almost black in ordinary light, this particular shade having been chosen after repeated experiments with different colors of light. It is the only strong note in the auditorium. The curtain will lift up as a whole, loop back partially for curtain calls or loop back on the sides wholly if desired. The tormentors and the teasers are of the same material so that they go with

the curtain as a unit instead of competing with it. The colors in the auditorium are light, warm plaster tones, with stippled surface on the walls, light warm-colored oak on the front of the balcony and a dull glazed gold very deep in tone over the whole of the ceiling and the ceiling beams, this same tone being carried down over the slight cornice work on the side walls. The carpet in the aisles is a gray heather tone; the woodwork of the seats is a gray walnut and the upholstering of the seats is a neutral brown so that the whole effect is very quiet and unobtrusive, with no accent except the main curtain and the two tapestries.

The lighting of the auditorium is by fixtures of dull bronze hung close to the ceiling, arranged with lights to throw up for indirect lighting and some exposed lights for direct work. There are no brackets and no lights to shine in the eyes of the spectators.

Each of the beams across the ceiling is hollow, contains a runway accessible from the upper portion of the stage and is equipped with numerous pockets



COUNTERWEIGHT SYSTEM—STAGE

for spot lights to throw illumination on the stage at different angles. At the rear of the balcony there is a compartment which will be used as a moving picture booth when desired, and also serves as an observation stand for Professor Baker from which he can see the stage and be in telephone communication

with the stage manager. Also spot lights can be thrown on the stage from this booth. In addition to this the front of the balcony contains a continuous trough with outlets at frequent intervals in which connections can be plugged for spot lights to be placed on the front of the balcony and to illuminate the stage.

The stage is 40 feet deep from the curtain line to the back wall and the full width of the house. The curtain opening is 34 feet wide and 24 feet high. There is a clear height from the stage floor to the

gridiron of 75 feet with ample space above that to arrange the rigging, etc., and the usual ventilating skylight in the roof. There are no fly galleries. The rigging is carried down to the stage level with a counterweight system controlling border lights, the drops, etc., all operated directly from the floor, the curtain likewise operating from the stage level. On the left of the curtain opening is the stage switch-board. The stage floor throughout the central portion is built in sections, any one of which can be moved as desired for stage settings. On each side of



MAIN LOBBY

the proscenium beyond the curtain is a small door connecting directly to the stage and with the auditorium, intended to be used in the giving of Elizabethan plays when the actors pass in review in front of the curtain. At the rear of the stage is the scene dock and carpenter shop connected to the stage through a wide opening so that additional depth can be given to the stage when desired, to a total depth of about 70 feet. The scene dock and carpenter shop is equipped with a very complete set of wood-working machinery and has on one side wall a large paint frame which slides down into the basement in a wide slot and carries up to the roof of the second story, permitting the mounting and painting there-

in the main auditorium, this experimental theatre is available as a coat room or foyer, and in close proximity thereto are the public lavatories for men and women.

The space under the stage of the main auditorium is utilized as a rehearsal room. It has no special fittings, simply an undivided space available for this purpose.

The stage entrance is on the side street giving into a hall, with a custodian's office and stairs leading up and down, this hall leading directly to the rear of the stage. The Department of the Yale Dramatic Association also opens from this corridor. Adjoining this toward the front of the building is a Green



THE GREEN ROOM

on of any desired size of scene. Opening from one side of the scene dock is the electrician's room and property room, and in the rear on one side is a large room used for instruction and for the making of stage models. The stage manager also has an office at the rear of the scene dock.

In the basement under the main auditorium reached from the main lobby is what is known as the experimental theatre, used for rehearsals, try-outs, etc. It is equipped with a stage with the same curtain opening as the main stage but very much lower. This stage has as complete an electrical equipment as the space will allow and has a background arched overhead and rounded in plan to serve as a cupola horizon. The audience room would seat about 250 people. When performances are given

Room, a place of reunion for the students and the artists, equipped with comfortable chairs and tables. This Green Room connects directly with the stage and also toward the front connects with the business office of the Department, this business office also being reached from the cloister on the front. Professor Baker's private office adjoins the business office.

In the basement under the Green Room is a large recitation room used by the Department. In the rear under the Model Room is a complete cafeteria kitchen equipment which furnishes meals to the students, the tables being set in the rehearsal room under the stage. The balance of the basement under the carpenter shop is used for storage. The ventilating apparatus is located in a portion of the space under the main stage.

In the second story along the side are several private offices for the teaching force of the Department. Toward the rear is a library for the use of the students and beyond that are arranged the wardrobe rooms, costume rooms and a complete dye establishment, a large chorus room for women and one for men, and a number of individual dressing rooms with the necessary toilets, etc. Each dressing room is for two persons and has a bowl with hot and cold water, a steel make-up table, two mirrors and the necessary illumination. The walls of the dressing rooms are of terra cotta painted; the floors throughout are of concrete stained and varnished.

The construction of the building is fireproof throughout in strict conformity with the requirements of the Building Department and with the best usage in such constructions. The framework is of steel, the floors of reinforced concrete.

There is a complete system of heating and ventilation supplying fresh, warmed air to all public portions of the house and removing the air from the auditorium and the experimental theatre, the balance of the building being heated by direct radiation. Steam is taken from the University plant located at some distance from the theatre, brought to the building under pressure into a room under the porch. A tunnel is carried entirely around two sides

of the building for distribution of pipe, etc., and also to give access for supplies to future buildings which are contemplated in the rear. Electricity is taken partly from the City supply with an alternating current, and partly from the direct plant of the University. There is a stage switchboard for the experimental theatre and an unusually complete board for the main stage. The lighting of the stage, in addition to the projection lights previously described in connection with the auditorium, includes footlights of the X-ray type and tormentor bridge with almost unlimited capacity for attachment of spot lights, with tormentor lights on each side, also the usual provision for border lights overhead. There are also floor pockets on each side and in the rear. The total capacity for electricity in this theatre is more than the total capacity of all the rest of the buildings of the University put together, it being found desirable to provide for any desired amount of illumination in connection with the stage settings, though at no time would all of the lights be put on.

The building was erected by Sperry & Treat Co., builders, of New Haven, Conn., from the plans of Blackall, Clapp & Whittemore, architects, under the immediate superintendence of D. W. Clark, Jr., of the said firm.

THEATRE FOR YALE UNIVERSITY, NEW HAVEN, CONN.

By PROFESSOR GEORGE PIERCE BAKER, *Director of the University Theatre*

ONE of the chief problems in planning the Theatre for Yale University was the proper placing of five or six units more or less intimately related so that both in the equipping and the placing, the most could be accomplished with the least expenditure of time and labor. There must be, for the faculty of the Department, offices close together with ready access to all other parts of the building, yet protected from noise or anything else likely to disturb the work of the teaching staff. The entrance to the Department of Drama at the end of the lateral cloister, is faced by the general office. Students of the Department are not allowed to use this entrance, entering the building by the stage door on the side of the building at the left. Visitors seeking general information about the school may find it at the general office. All messages for students and all guests of students are sent from the general office to the stage entrance. Persons who wish to see members of the faculty either pass into Professor Baker's office from the general office, or upstairs to the other offices of the faculty by a special staircase. That is, faculty members may enter or leave the building without being intercepted by students, and only persons who

wish to see members of the teaching staff can reach them. From a small lobby between the outer and the inner door of the entrance to the Department, a door opens into the theatre, and another leads by a stairway to the rehearsal rooms in the basement. As both of these can be opened by keys only in the hands of the faculty, the control of this part of the building is perfect and insures the greatest possible quiet.

In similar fashion, the Yale Dramatic Association, an undergraduate organization which for a generation has had a distinguished history of its own, has its quarters,—its separate entrance from the side street leading to an office and a Green Room on the first floor, a rehearsal room and storage space in the basement. Doors from the Green Room and the storage space make it possible for this organization, when it gives its occasional performances in the University Theatre, to go almost directly on stage from the Green Room, and to pass its scenery easily from its storage room through a trap at rear stage.

Students of the Department, entering through the stage door, may go directly ahead on stage, and so to workshops at the rear of the stage; may turn

right, by the information booth to the Green Room, the central gathering place for all students; may pass downstairs to the rehearsal room, or upstairs to the library, the costume department, and the dressing rooms. That is, as far as possible, all departments in which the students are immediately interested are controlled by this door.

Just behind the stage, the design room where scenery is planned adjoins the carpenter shop and the paint frame so that within a few square feet the designing, the making and the painting of the sets

partment, just at the left at the head of the staircase; on the right the storage room, on the left the office of the instructor opening into the large room for design which, in turn, opens into the dye room. This costume work was placed where it is because the dressing rooms, in a corridor by themselves, connect with the corridor which passes the costume department.

Two much used places, the Green Room and the library, have been placed, the Green Room on the first floor and the library on the second, between the



PROFESSOR BAKER'S OFFICE

take place. When the scenery is ready, two large iron screens between the stage and the back stage space may be raised, and the scenery pushed immediately on stage. At one end of the carpenter shop adjoining the stage, is a room for small properties and a room for electrical supplies other than the large apparatus. Beneath these workshops is the large storage space from which whatever is desired may be brought on stage through a trap. That is, only the work in costuming has been separated from the other work in stagecraft.

Upstairs from the stage door, is the costume de-

partment and the faculty units because they must be used frequently by both groups.

At the present moment, six one-act plays and one long play are in active rehearsal, with four different producers. With a view to making this possible, rehearsal space was carefully arranged, and everything has been done to make comfortable the work of the producer. Not only may the main stage and the experimental stage be used for rehearsing, but also, of course, the rehearsal room under the main stage where the work may be done to the scale of the stage

(Continued on page 365)



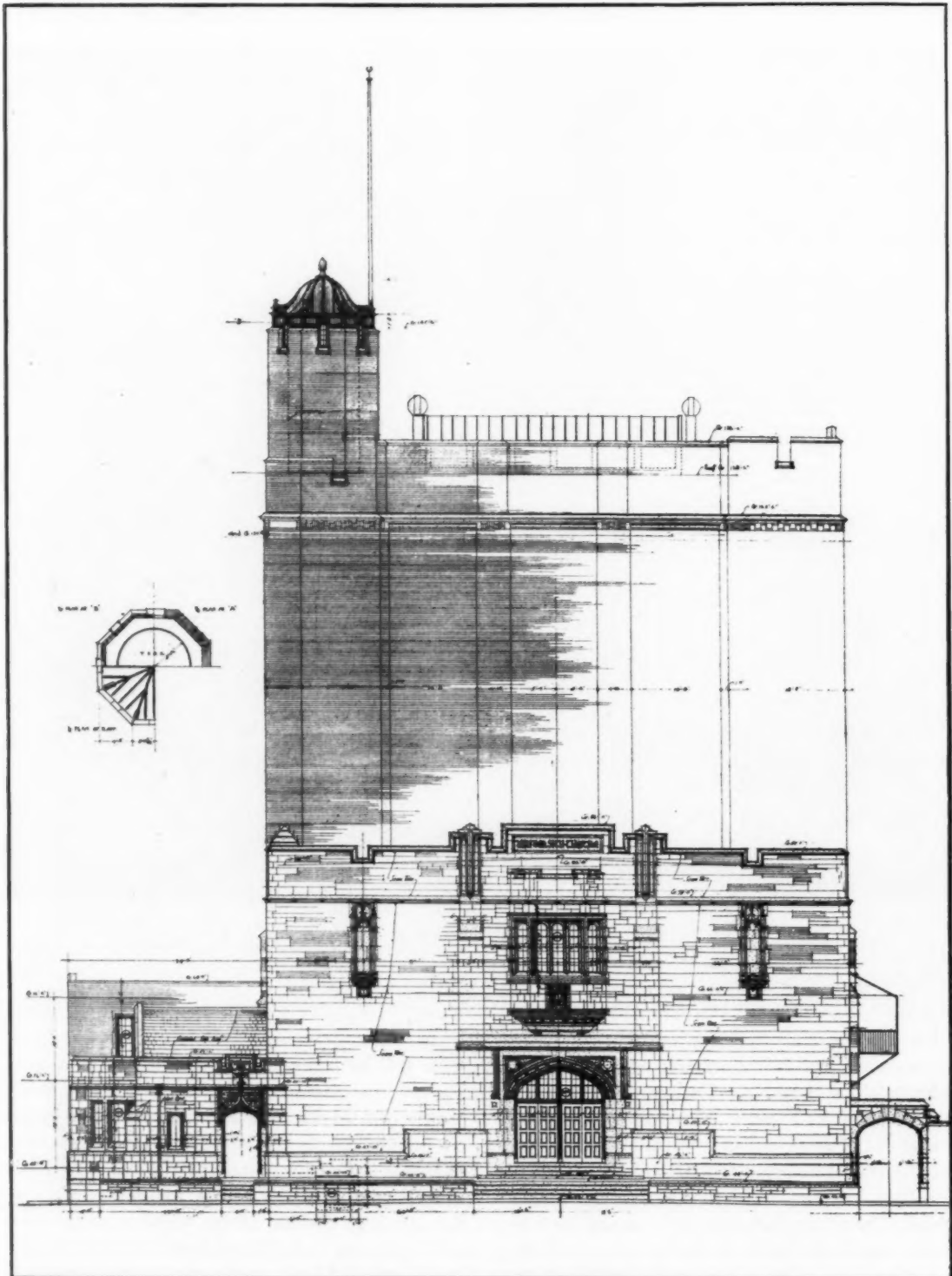
THEATRE FOR YALE UNIVERSITY, NEW HAVEN, CONN.

BLACKALL, CLAPP & WHITEMORE, ARCHITECTS

(See detail on back)

THE exterior of the building is designed in a Gothic style intended to be in harmony with the Harkness Memorial, the more recent Harkness dormitories and the proposed Yale library, being carried out in combinations of cast stone of a warm buff color, Weymouth seam-faced granite with weathered faces and Holland brick of dull red and brownish yellow tones. The relative amounts of stone and brick vary from nearly all brick in rear to nearly all stone on the front. The photographs published show the building in its condition at this time, March,

1927. The drawings, however, show the front as it will be when completed during the coming Summer, the additional work consisting of a porch on the left of the facade connecting to a lateral cloister leading to the administration rooms, also including an archway on the right of the front connecting the theatre facade to the enclosure of the adjoining Chapter House which is in the same style, and also including niches to relieve the simplicity of the front and some incised ornament around the central portal.



THEATRE FOR YALE UNIVERSITY, NEW HAVEN, CONN.

BLACKALL, CLAPP & WHITEMORE, ARCHITECTS

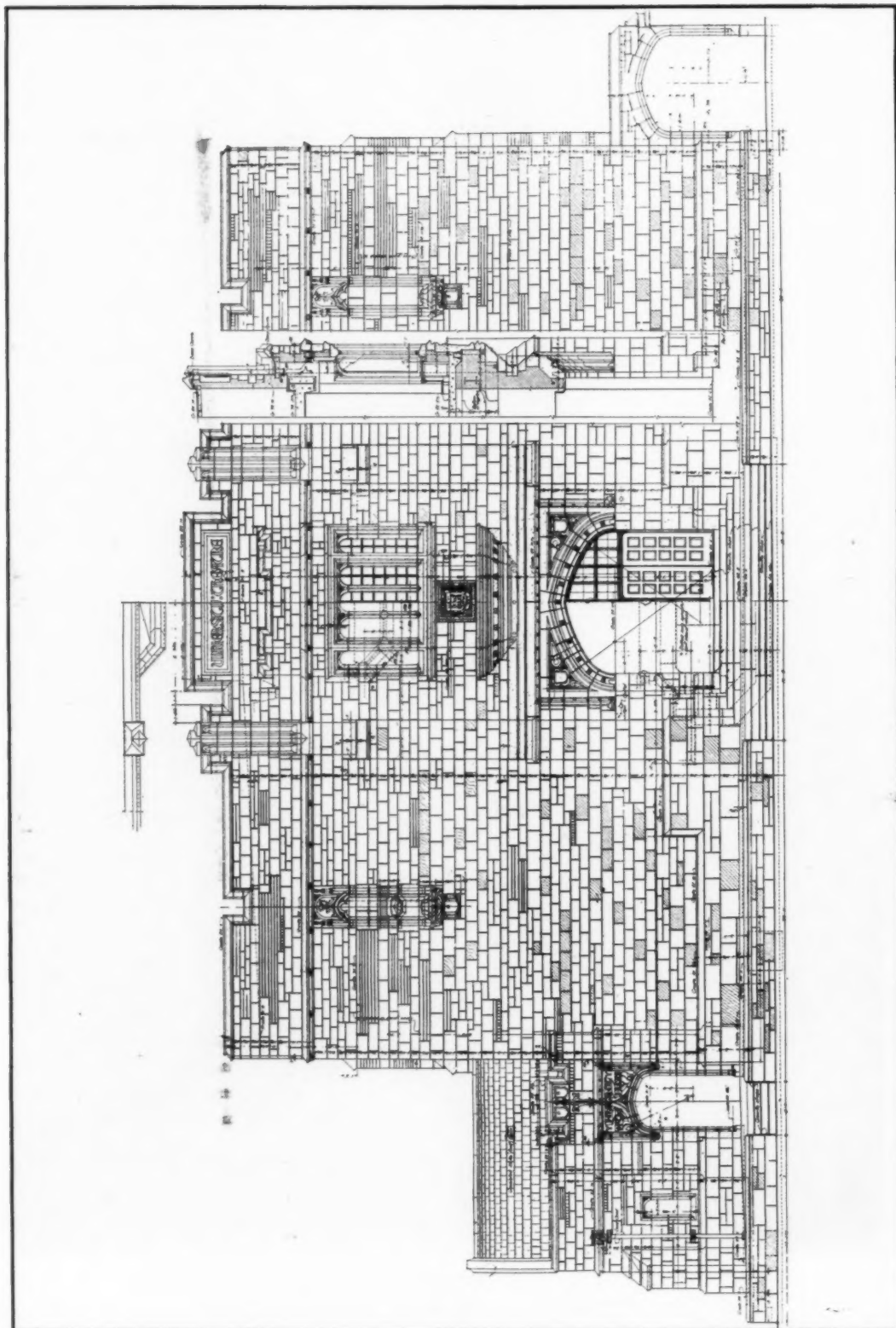


SIDE VIEW

THEATRE FOR YALE UNIVERSITY, NEW HAVEN, CONN.

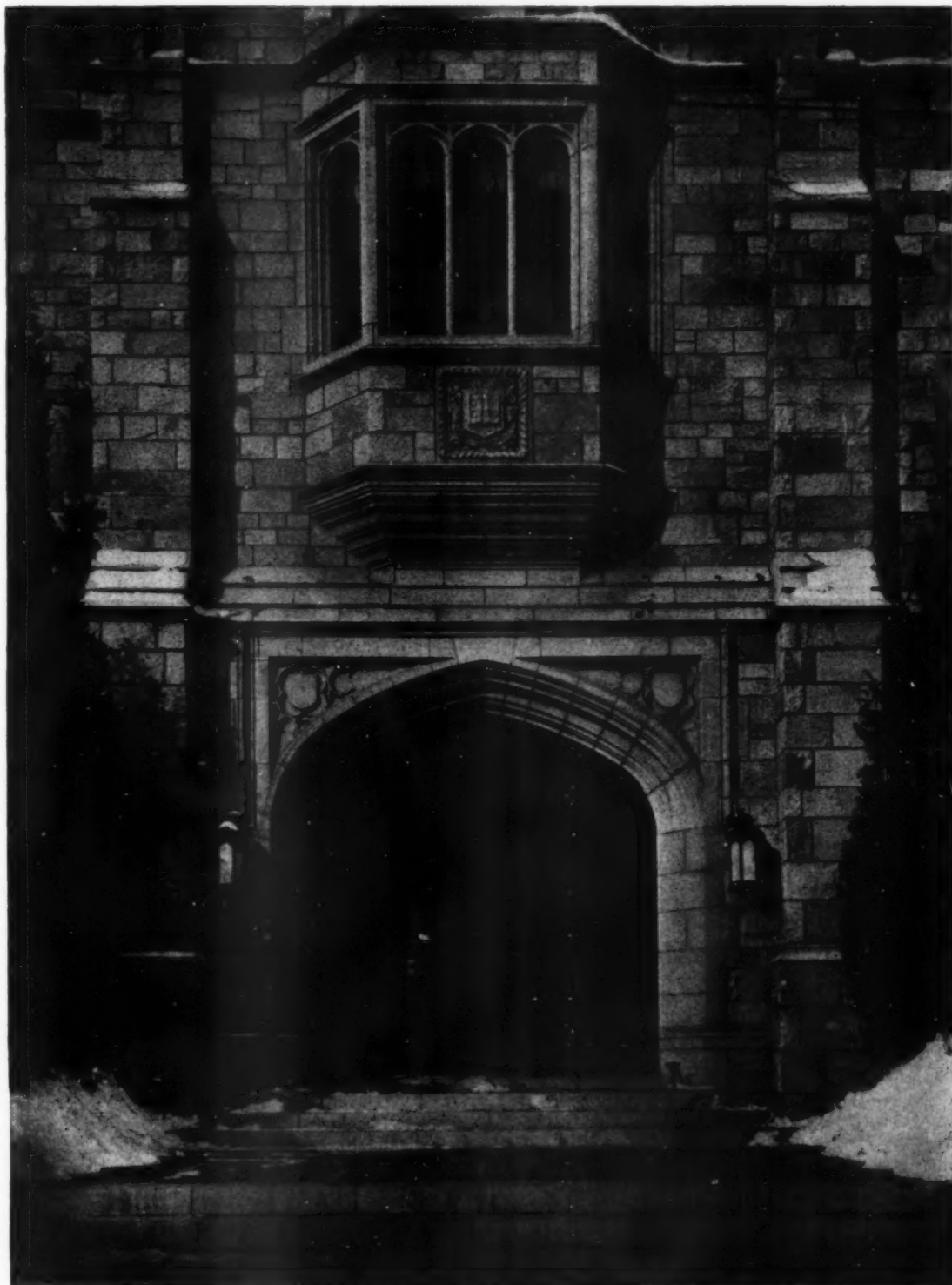
BLACKALL, CLAPP & WHITEMORE, ARCHITECTS

(See detail on back)

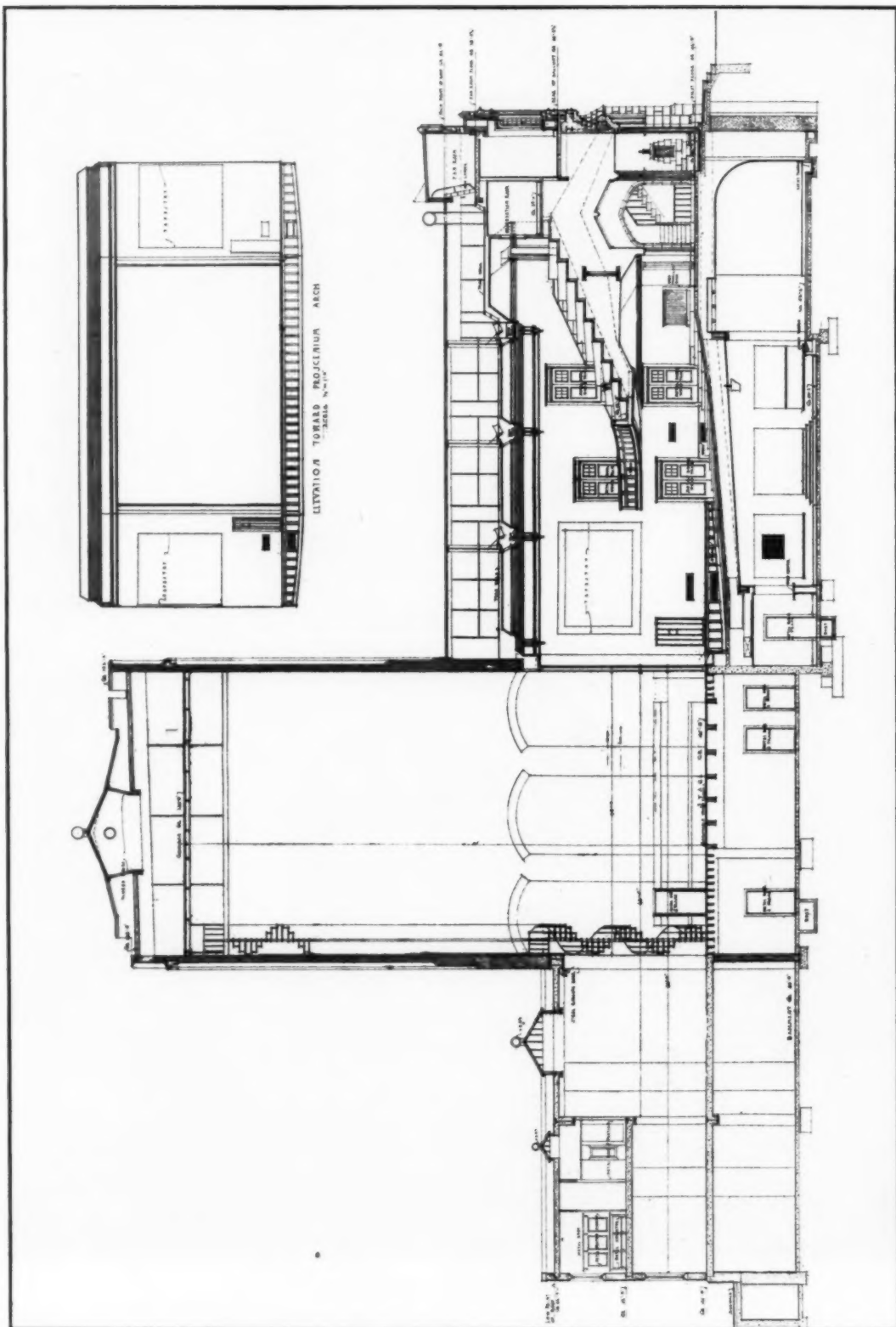


THEATRE FOR YALE UNIVERSITY, NEW HAVEN, CONN.

BLACKALL, CLAPP & WHITTEMORE, ARCHITECTS



DETAIL OF MAIN ENTRANCE
THEATRE FOR YALE UNIVERSITY, NEW HAVEN, CONN.
BLACKALL, CLAPP & WHITEMORE, ARCHITECTS
(See section on back)



BLACKALL, CLAPP & WHITEMORE, ARCHITECTS

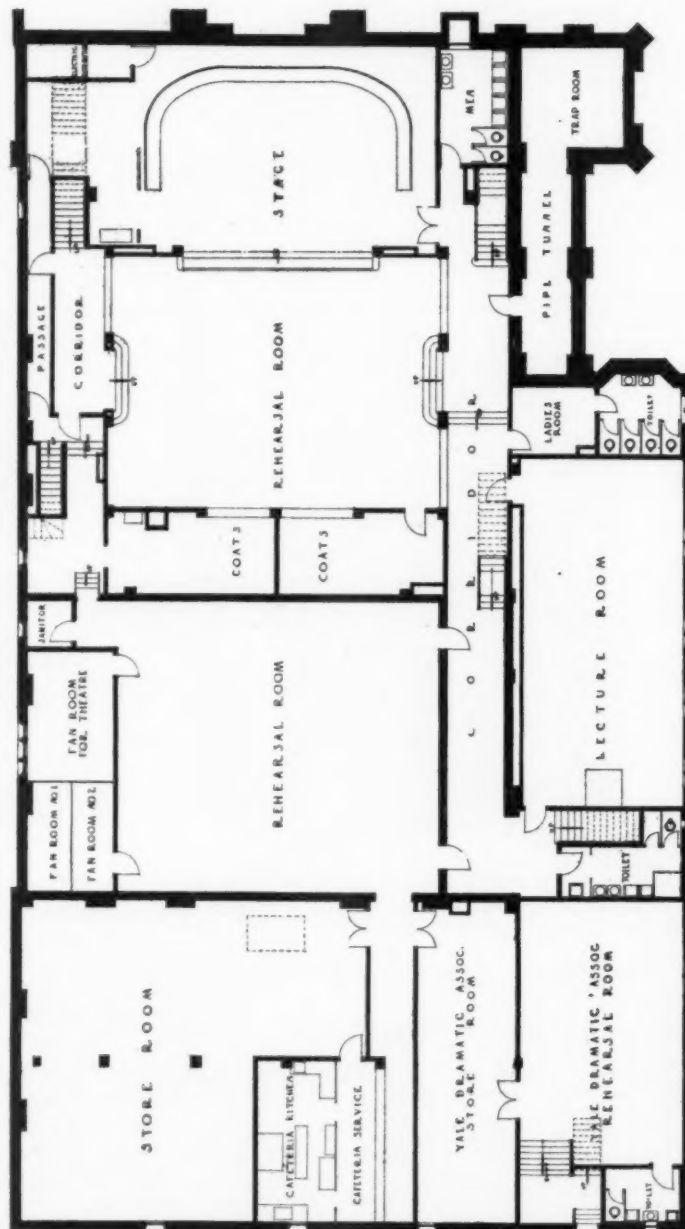


SIDE DOORWAY

THEATRE FOR YALE UNIVERSITY, NEW HAVEN, CONN.

BLACKALL, CLAPP & WHITEMORE, ARCHITECTS

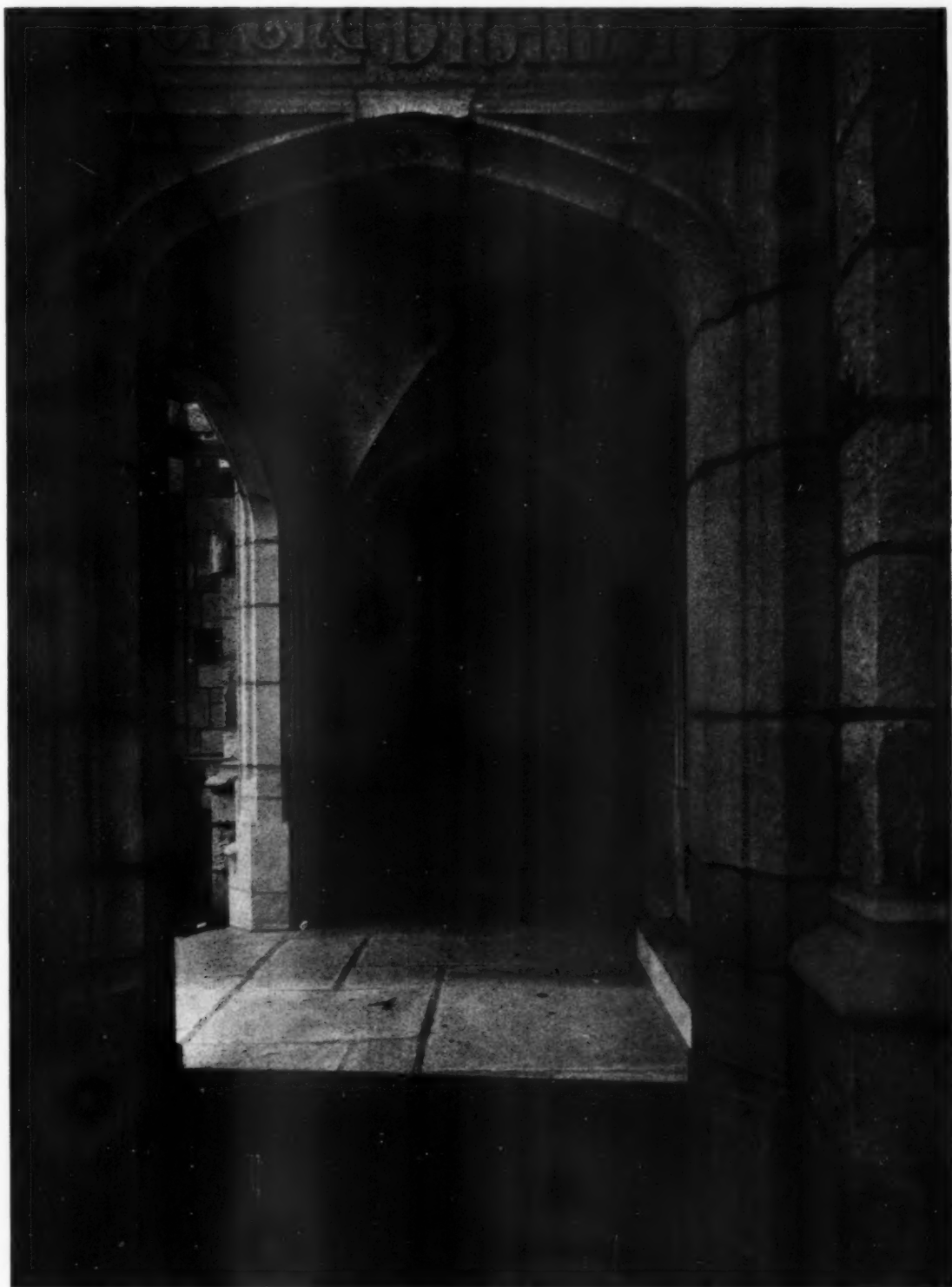
(See plan on back)



BASEMENT PLAN

THEATRE FOR YALE UNIVERSITY NEW HAVEN CONN

BLACKALL CLAPP & WHITEHORE ARCHTCLCS

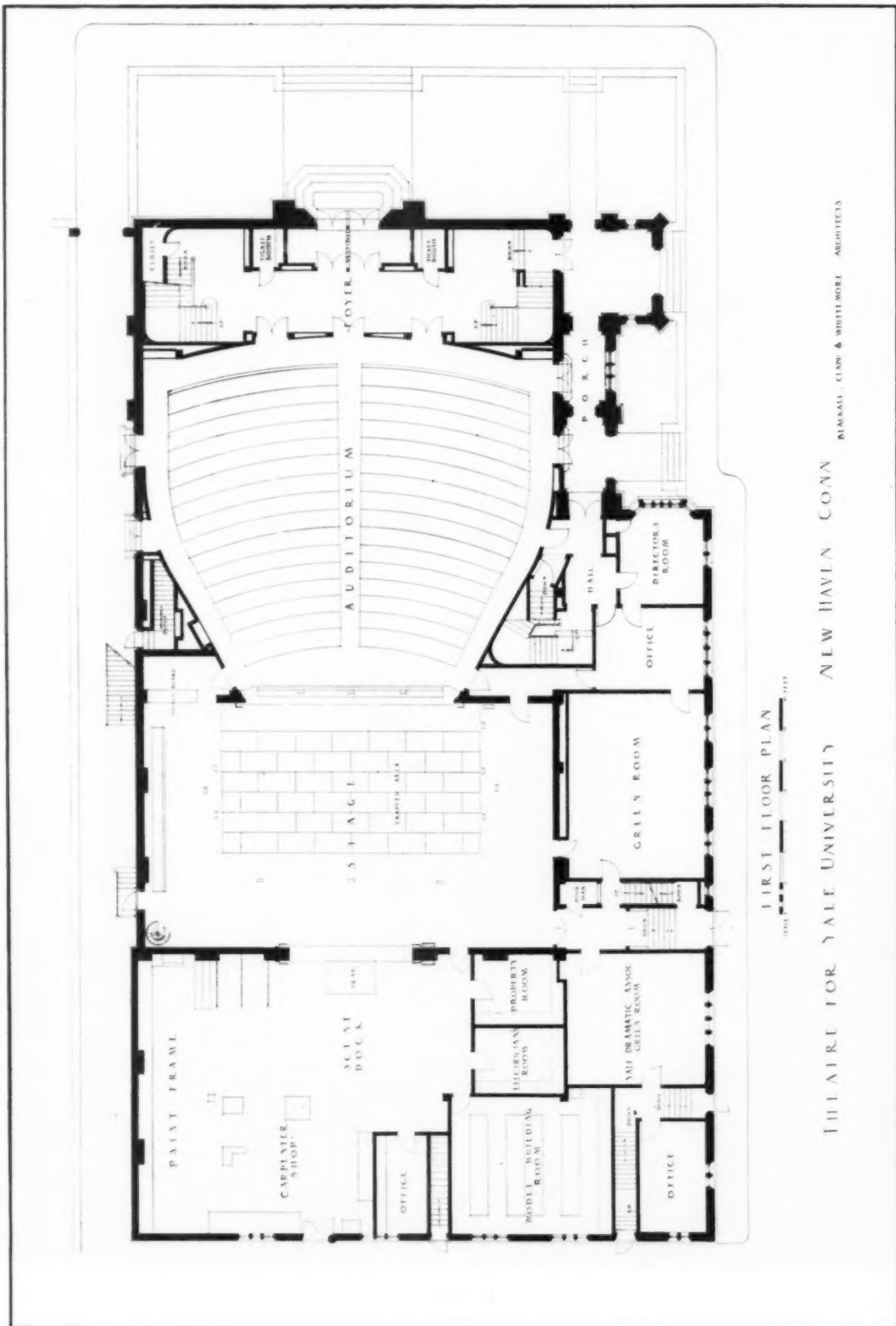


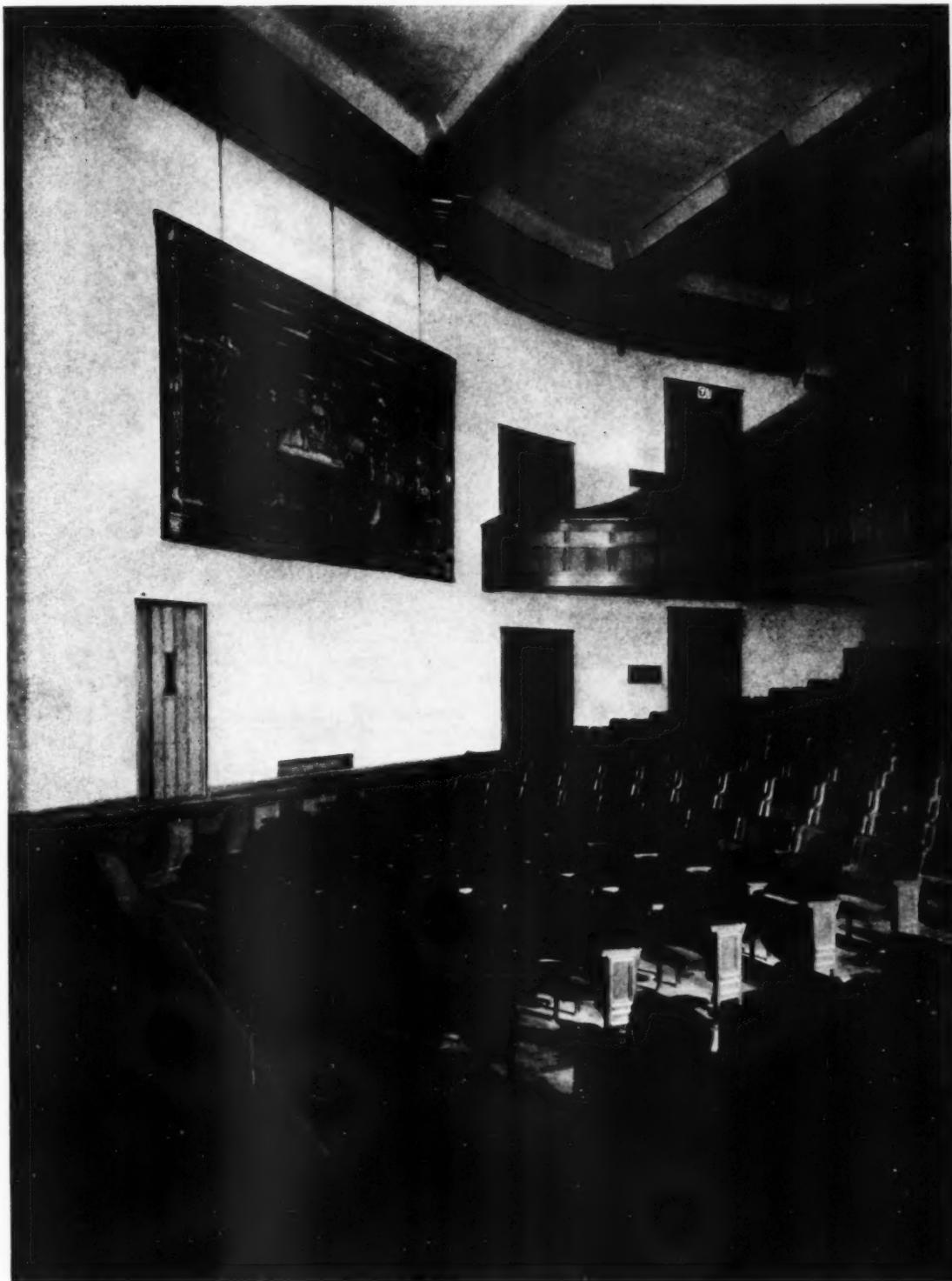
CLOISTER

THEATRE FOR YALE UNIVERSITY, NEW HAVEN, CONN.

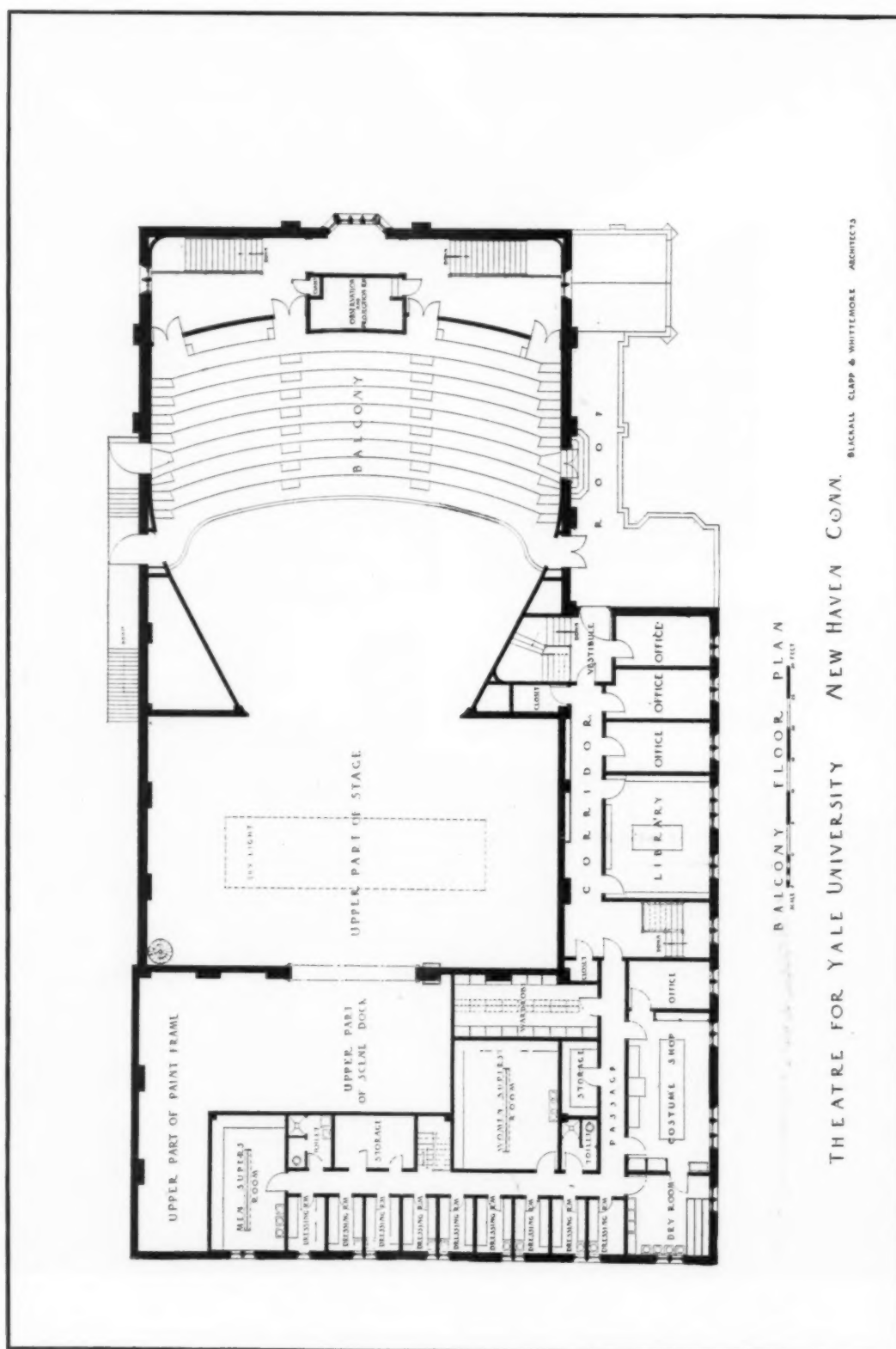
BLACKALL, CLAPP & WHITEMORE, ARCHITECTS

(See plan on back)





INTERIOR OF AUDITORIUM
THEATRE FOR YALE UNIVERSITY, NEW HAVEN, CONN.
BLACKALL, CLAPP & WHITEMORE, ARCHITECTS
(See plan on back)



(Continued from page 352)

above. In addition, it is entirely possible to rehearse in the lecture room. All these places are so close together as to make it easy for actors wishing to go from one rehearsal to another, and also for producers.

In the main auditorium, a portable house telephone which may be fastened to the back of any seat has been provided. When this is plugged in at either the right or the left side of the auditorium by means of a long cord, a producer may reach back stage or any part of the building without interrupting the actors and halting the play. From a booth

at the back of the balcony, intended ultimately to hold two motion picture machines, a producer may watch a performance through a window which exactly frames the stage, and by a house telephone ready to his hand, may quietly communicate with any part of the building, particularly the stage, at will.

In brief, the architects have so satisfactorily met the problem of the necessary units that it is possible to do the necessary work of the Department with half the labor that has been accepted as necessary in the past, with at least equal effectiveness and twice the speed.

ELECTRICAL LAYOUT OF THE YALE THEATRE

By S. R. McCANDLESS, *Instructor in Lighting*

A THEATRE, from the structural point of view, is a specially designed instrument for dramatic production. Intelligent planning of the building will allow for special features which help eliminate the tremendous physical limitations that are imposed on the use of light as dramatic medium. The inevitable compromise between the fixed structural features which we specify today, and what we shall want tomorrow, can only be justified by the broad application of the principle of flexibility. Unencumbered space of ample proportions into which temporary structural features can be built, and portable equipment that can easily be replaced by later developments, are the elements of flexibility that are required in the theatre today. A university theatre is essentially a laboratory which is built to last for some time, and as such, it must be built for the future much more than the professional theatre, where experimentation and perpetuity are, of necessity, somewhat limited.

Like all buildings of its class, the Yale Theatre has a well planned auditorium and a stage on the main floor. The stage room is somewhat deeper and higher than the average, and the auditorium is plain and unassuming, so that its architectural treatment will be in harmony with almost any style of production. The proscenium arch, in its simplicity, blends into the setting, or acts as definite picture frame, depending upon the production. In the basement, under the auditorium, as an aid to experimentation, there is a small stage and auditorium which can be used to try out plays and effects which are not ready for the larger stage. Here, due to the low head room, a plaster dome-horizon has been installed. Its possibilities and limitations, as a possible equipment for little theatres where overhead space is at a premium, can be studied and the difficult matter of the necessary lighting instruments determined. These two stages, the work rooms, and the store room, comprise the experimental elements of the building

where the students work out the principles laid down in the class room. And what is most fundamental, they learn through their work on performances what can be done in production. The little stage, with its limited space, inspires ingenuity, while the large stage allows for breadth of expression in the technical features of production. The unhampered space adapts itself to the use of a great number of built-up forms and light patterns. The permanently built-in part of the lighting equipment is reduced to a minimum. The switchboard is set flush with the front wall of the stage to the left of the proscenium. Just back of the teaser is a movable light bridge, and all over the stage, in the scene dock, in the beams of the ceiling of the auditorium, on the face of the balcony, and in the footlight trough are outlets for plugging in the lighting units. The outlets are grouped in fours so that the four color system can be used when desired; however, no units are fixed, all are portable, so that any type of unit, in a number of different positions, can be used. Flexibility of space and equipment, within reason, has been the aim so that not only the immediate problems of production can be met with greatest ease, but also those of the future.

The local lighting company furnishes alternating current for lighting the stage and the building, while the University power plant furnishes direct current for the power apparatus and the arc pockets. There is a house communicating telephone which connects with the observation booth, two places in the auditorium, both sides of the stage and all the various important rooms in the building. The prompt board, located on the curtain line at the right of the proscenium, has a call-and-answer cue board with extension so that the scene dock, the gridiron, both sides of the stage, the switchboard, and the curtain lines can be signalled from any place within twenty-five feet of the board itself. An act call button which rings chimes in the lobbies, the lounge, the green

room, and the dressing room section, is mounted above the signal control. And next to this is a dressing room call board with electric answer drops which connects with each of the dressing rooms. Around the building, where extra lights of large capacity might be used for experimental purposes, such as the paint frame, the design room, the costume room, the lecture room, and the lighting instructor's office, large plug outlets have been installed.

THE EXPERIMENTAL THEATRE

The problem of handling an exterior scene on a stage with low head room where masking pieces or borders are not desired seemed to indicate that a full fledged dome-horizon should be used. Therefore, a plaster dome of special shape, laid out by Munroe Pevear of Boston, has been installed. At the base of the dome is a light pit for four color light strips. It is so arranged that the dome is lighted from below and from the front, thus allowing scenery to be built up to within eighteen inches of the ceiling and mounted even as far back as two feet from the vertical walls without casting a shadow. The surface is spattered with yellow, magenta, and cyan-blue. In the ceiling are mounted six plugs which fit smoothly in sockets flush with the surface so as not to be visible when pulled up, and from which can be suspended a flat ceiling in case a box set is called for. Laid out according to the designs of the head of

the astronomy department, so as to be in proper arrangement and size, are some sixty minute star openings in the surface of the dome. The strip lights at the base of the dome can be controlled in three sections so that sunset effects can be obtained.

The stage floor has four, four-pocket outlet boxes; adjacent to the proscenium opening are six pockets; at the front of the dome are two four-pocket outlet boxes; over the first border are two more four-pocket outlet boxes and pipe battens for hanging instruments. The footlight trough is merely a metal lined trench with removable traps and steel shields. Into this can be placed three sections or less of a special direct-indirect four-color footlight strips, which are interchangeable with the main stage. The trench is wired for three sections of four colors each. Just in front of the proscenium in the ceiling of the auditorium is a long sliding spotlight box with two four-pocket outlet boxes. Thus light can be projected to the stage from a number of positions for one scene and an entirely different layout of units can be used for the next. No instruments are fixed.

On the side of the stage near the proscenium opening is a large company switch to which the portable switchboard is connected. All the circuits to the various outlet boxes around the stage are run to a junction box on the stage right proscenium wall. Here they are connected to long flexible pigtailed wires which are racked, and lettered as to the position they lead to,



EXPERIMENTAL THEATRE

over the plug pockets on the portable board. By simply inserting the plug at the end of the pigtail into any pocket on the portable board that circuit is furnished with current and controlled by a switch and a dimmer. The lights of the auditorium are controlled by a dimmer mounted at the end of the portable board. Inasmuch as 15 amperes is normally the maximum that is carried on one circuit, pin-connectors of that capacity are used for the plugs and the pockets. All the outlet pockets are equipped with tyrex cable pigtails with 15 ampere female pin-connector ends on both the experimental and main stages. This allows for standardizing the leads from the lamps to the pockets by using pin-connector ends. The only exceptions are the arc pockets which have the regular 50 ampere spring plug receptacles.

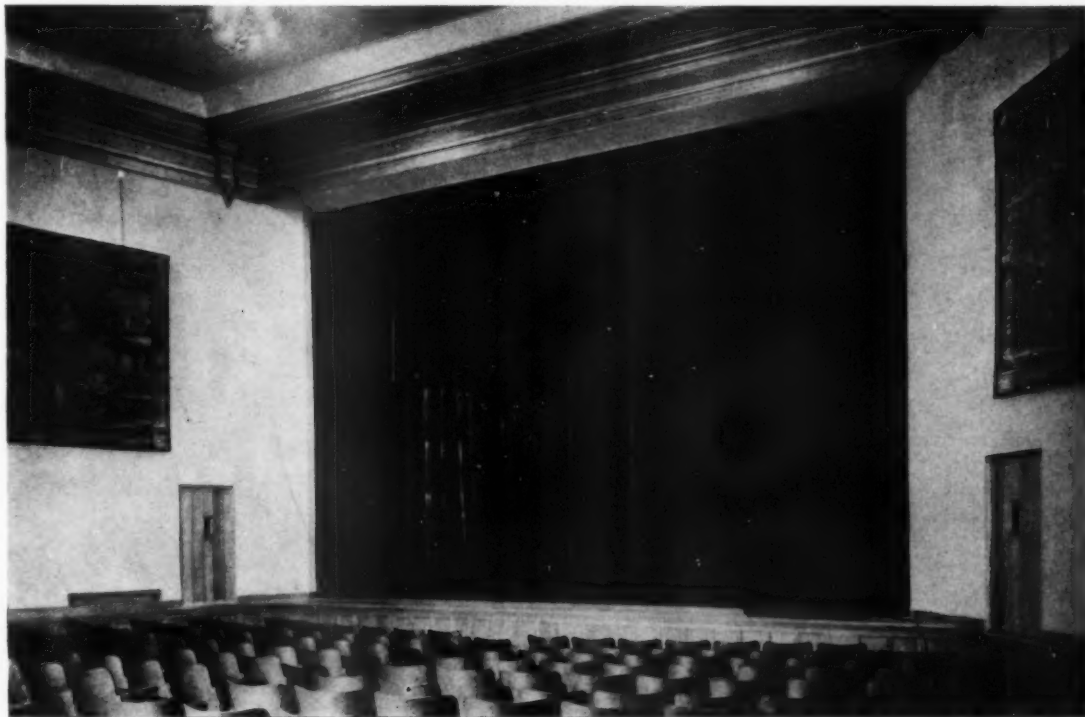
THE MAIN THEATRE

In place of a dome-horizon, on the main stage a three-color spattered linen cyclorama 48x90 feet is suspended from the gridiron in a broad sweep across the back and down each side. This can be raised or lowered by the counterweight system so that in the scene changes large set-pieces can be rolled under it.

The three beams of the auditorium ceiling are equipped with removable slides, on the stage side, across their entire width so that spotlights mounted on battens in back of the openings can be used to light the acting area at suitable angles. The observation booth is equipped with projection service and

two independent arc pockets. The top of the balcony rail is hinged so that spotlight boxes can be hung and connected at any position along its face. The house lights are arranged with direct and indirect circuits in each fixture so that when desired colored lamps can be used in the indirect to tone the auditorium in harmony with the lighting on the stage. The fixtures are designed so that no large lamps appear in the line of vision and they are mounted close to the ceiling in order not to interfere with the rays of the spotlights in the beams. The footlights are arranged the same as those for the experimental stage except that the trench is longer. The stage floor has nine four-pocket outlet boxes and two two-pocket arc outlets. Each side of the proscenium has ten pockets mounted on the wall within easy reach. A long movable bridge hangs just back of the teaser and is equipped with four four-pocket outlet boxes, two arc pockets, and battens and stands for mounting lighting units. The first border batten has three four-pocket outlet boxes and the second and third one four-pocket outlet box each. On either side of the gridiron are two pockets. The cyclorama lights are fed by six thirty-ampere circuits. In the scene dock, just back of the large door to the stage are two arc pockets that can be used for projection purposes. These numerous positions for lighting have been installed to allow for the greatest flexibility in directing light rays.

The switchboard is virtually a multicapacity,



PROSCENIUM

interplugging, distribution board. It has been designed to be as compact and easy to control as is possible using stock equipment. At the top of the board are the fuse panels behind self-closing doors. Then in the center are four dimmer handles which control the direct and indirect circuits in the house lights. At the end of this row is a master interlocking handle. Ranked on either side are six arc pocket switches and eight double-throw, parallel-series, color group-master switches. There are four banks of dimmers back of the metal face of the board. Each plate has a disconnect switch and spring stops at the ends of the throw of the arm. They are mounted four inches on center, but are controlled in two rows at the face of the board by handles placed two inches on center. Each control now is split into two sections and mastered by a master interlocking lever and a contactor pilot switch mounted in the central control panel. The dimmers in the top control row are grouped according to capacity in fours with a master plate which can be used in series with the four, or in parallel as an individual plate, depending upon the throw of the master double throw switch. Mounted as a unit with the dimmer control handle, which can be interlocked on the master lever shaft, is a double throw, single pole switch and a pilot light. The capacities of the plates run from 250 watts to three 6000 watt dimmers, which are generally used to control the cyclorama lights. The neutral side of all the branch circuits running to the various pockets about the stage is run through solid. The hot side, on the other hand, must be connected to a dimmer and a switch to get current. Thus, just below the lower control row is an interplugging

panel with four rows of female pockets which are fed by the upper and lower throw of the two rows of the individual double throw switches. Each four pockets in the above rows are placed vertically directly below the switches which control them. In this same panel, but below the female pockets, are four rows of male pockets which are the ends of the branch circuits that run to the various pockets about the stage. Current can be carried to these male pockets by a portable jumper with a male plug on one end and a female on the other. The board thus becomes a sort of telephone switchboard with which almost any combination of controls can be used. The final feature of the board is a cross-control, slow motion wheel which operates the master interlocking levers. It is obvious that a new set-up of the plugging section is necessary for each performance and great care must be taken to plug in a certain wattage lamp on a like capacity dimmer. One must be thoroughly acquainted with the board and its possibilities to get the best possible control out of it. For a school where flexibility and long use are essentials, it seems to follow the right principle, but it could hardly be recommended for a professional or hired theatre, where operators are changing every few days.

The science and art of stage lighting are developing so rapidly that any fixed equipment is apt to become a liability rather than an asset for the best means of obtaining dramatic effect. Therefore, the entire lighting layout of the theatre has been designed to permit flexibility and control of equipment in order that the problems of tomorrow may be met as easily as those of today.

THE BOULEVARD HAUSSMANN

THE President of the French Republic recently opened the completed portion of the Boulevard Haussmann, in Paris, named for the great Prefect of the Seine under Napoleon III, who planned it in 1857.

Upon the opening of this connecting link with the famous grand boulevards, a new east-to-west thoroughfare, nearly three miles long, running in almost a straight line from the Place de la Republique to the Place de l'Etoile, is given to Paris.

When American visitors arrive next Spring and Summer they will find that the completion of the boulevard has created a new center in the heart of Paris, for the highway construction required the demolition of large blocks of ancient structures, upon the site of which have risen large hotels and office buildings. One of the hotels, said to be the largest in Europe, has 600 rooms and baths and is modeled on American lines. Many new structures give the section a decidedly American appearance.

It was Baron Haussmann, famous as a pioneer in city planning, who was responsible for making Paris one of the most beautiful of national capitals, and the ceremony attending this occasion marks the completion of the finest system of boulevards in the world and the realization of the Baron's dream of seventy years ago.

At the same time the first four-track subway in Europe was opened, running from the new thoroughfare's intersection underneath the grand boulevards to a point near the Place de la Republique.

TO SAVE A CASTLE

ANOTHER well known European castle is in danger. The Italian Castle of Canossa, where Emperor Henry IV of Germany humiliated himself before Pope Gregory VII in 1077, has fallen badly into decay. Countess Matilda, its last owner, abandoned it. Mussolini has given orders that the castle be restored and preserved as a historical monument.



FROM THE ORIGINAL SKETCH BY PAUL GMELIN, A. I. A.



ST. PETER'S, ROME

FROM THE ORIGINAL PENCIL SKETCH BY WALTER F. BOGNER,
40TH HOLDER, ROTCH TRAVELING SCHOLARSHIP

THE STEEPLE OF THE CHURCH OF VILLEMOMBLE

GO to see the new church of Rethel, study the new foundations of the Cathedral of Rheims and you will understand that architecture, from the point of view of structure, is the work, not of architects, but of concrete."

This prophecy that one reads in the charming and interesting book of Gaston Rageot, entitled "Sens Unique," is more easily realized, and appreciated more quickly than it can be thought, since the book and the building of the campanile at Villemomble appear simultaneously the work of the architect Tournon and the sculptor Sarrabezolles.

Father Klein, priest of Villemomble, the old pastor, has done indeed a miracle, a miracle of modern invention which has already attracted foreigners.

The church of the Villemomble was copied from the Roman basilica in stone, for the region was very



THE CHURCH AT VILLEMOMBLE AND THE TOWER IN COURSE OF CONSTRUCTION

much in need of a tower. The people were humiliated, and justly so, to see their house of God in such a condition, as one might say, "Without a Hat." The priests preceding had long promised to build it



PART OF UPPER SCAFFOLDING

but had always failed to keep their word. "We will never see the tower," the people said. Father Klein did not fear to risk all for all. Heroically he began to work after waiting for a century to pay respects to Providence, and to the faithful people in the parish.

A hazard immediately presented itself to locate a young architect with new ideas to complete an enterprise so up-to-date. He suggested to design the entire height of the structure by means of more than twenty figures, each seven meters high. To cut in stone such colossal figures would cost millions. The parish was not important enough for such an outlay. Here came the idea for concrete! We ask your attention:—This idea, which since then has become a reality, has made the letter "A" of a new alphabet. There is no doubt it will be imitated in all parts of the world, if at one time or another. Sculptor Sarrabezolles appears to execute a work so gigantic and seemingly impossible as that which was brought about at Villemomble.

Sarrabezolles is destined to great deeds. If the monument which he has achieved in the earth of Africa, built by his vigorous hands, a formidable Athenian palace, which all decorated, dances its dance in the studio of the sculptor, then what will it mean in such a beautiful place as Paris, in commemoration of the heroes of the Great War?

It is only natural that an artist enamored with

power as he, could have attempted the task which was demanded at Villemomble. This struggle with the difficult material, both artistic and technical, was no trouble to him; in fact, quite the contrary.

In order to work in concrete, it must not be dry or hard before he applies the chisel. Sarrabezolles had only, therefore, eight hours of work for each saint before him. After that it was impossible. To tell it correctly, he did not work on one figure at a time, but was forced to proceed by various positions, executing all the feet at once, then all the robes, then all the heads, as the scaffolding was raised to different heights. What ability he must have possessed to work in this manner! Supported by a scaffold, in rain or shine, the artist without designs, inspired in the belief of his success, went bravely to his task. I watched him on his aerial platform all alone, small in relation to his surroundings, cutting with the impulse of his art and responsibility. What a battle! He is the conqueror. The church and the people respect him.

Twenty-eight carved figures were made by his hands. There are sixteen saints, and four saintesses; four seraphs and four evangelists. The sixteen saints

have not been chosen without difficulty. They are the first two founders of Christianity, the apostles Peter and Paul; two state church saints, Louis, king of France, and Saint Genest. The rites of the church are represented by a pope, Saint Gregory, seventh; the Christian education by John, the Baptist; the missions by Saint Francis Xavier; the Fathers of the church by St. Augustine; theology by St. Thomas Aquina; religion by Saint Benoit, Saint Bernard, Saint Francis de Assisi, Saint Ignace; charity by St. Vincent de Paul; the rules of perfection by St. Francis de Sales; and finally pastoral life by Cure d'Ars. The female saints, in minority, for the feminine figures do not appear so high so near the sky as on the ground, are St. Madeline, St. Agnes, St. Theresa d'Avila, St. Clotilde, the Christian mother.

Thus the history of Christianity, from its beginning until the present time, is represented on the campanile of Villemomble. Concrete, subtly ennobled, reaches out toward the sky as a calendar of a glorious religion.

The foregoing article and the accompanying illustrations are reprinted from L'Illustration of Paris.



THE SCULPTOR, M. SARRABEZOLLES, AT WORK ON THE HEAD OF ONE OF THE FIGURES



THE GREAT SCALE WHICH PERMITS THE HIGHEST FIGURES TO BE SEEN



EDITORIAL COMMENT

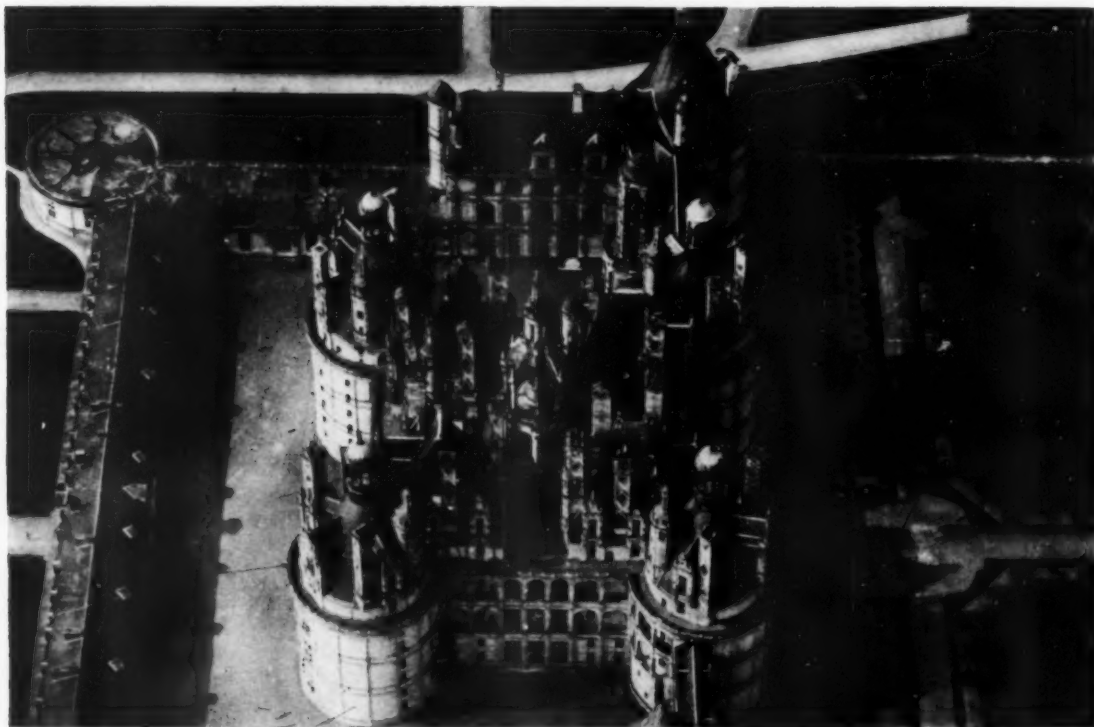


THE practice of architecture has grown in complexity and to all appearances continues to grow in this direction until one wonders just when and how the end will be reached. After the work of any office has reached a certain point, the carrying on of the office is beyond the capacity of the average man to handle alone and he finds it necessary to share much of his responsibility with others. But whether the office be large or small to meet the needs imposed upon it, the office, its organization and work must be systematized and co-ordinated. Many "short cuts" must often be used and information must be immediately available if a minimum amount of time is to be expended in trying to obtain data that one can hardly be expected to remember in so vast a field. That this has been recognized by the profession not only in the United States but abroad as well, is demonstrated by the readiness with which architectural offices have subscribed to the Standard Construction Classification of The American Institute of Architects. This classification was designed as a means of enabling architects to file the enormous amount of trade literature—much of it of great value in practice—that daily reaches their desks. Through the systematic filing of this material, information is immediately available. The Standard Classification was prepared and distributed to Institute members and to others upon request, a relatively few years ago. No particular efforts were made to have it generally accepted. It was one of those peculiar things that go round in a circle, for its adoption depended to some extent upon the assistance of producers in printing the proper file number on their catalogs. This in turn depended upon the general use of the system by architectural offices. Today the secretary of the A. I. A., Scientific Research Department, replies to hundreds of requests for copies of the Standard Classification and we understand has sent hundreds of copies by specific request to architects in Canada, Australia, New Zealand and the British Isles. The Standard Classification has been an outstanding achievement of the A. I. A. in a practical way that is of great benefit to the profession as a whole. The work of the Institute is often viewed as being too greatly concerned with ethics in practice and the aesthetics of architecture to the exclusion of matters that may be classed as practical. There are many ways in which the Institute can help the profession along practical lines. The success of the Standard Classification is very good evidence of what can be done.

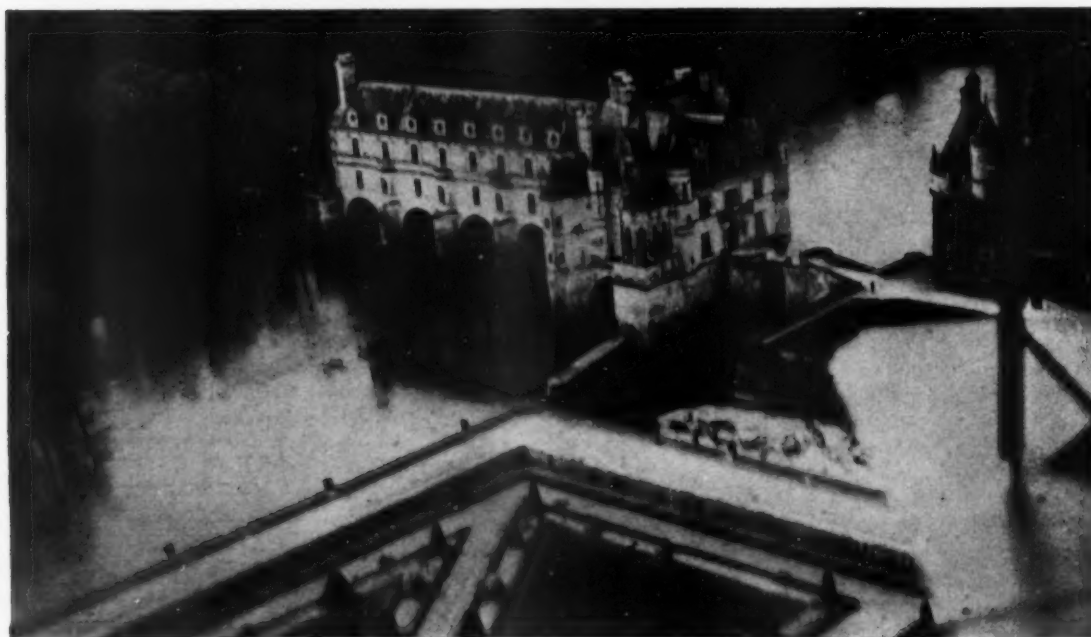
ONE of the most interesting features of the recent exposition of architecture and allied arts, held under the auspices of The Architectural League of New York, was the display of various details demonstrating the present tendency of architects to introduce more color in design. The American tourist visiting Italy and Spain, for example, would come home with much fewer pleasant memories if the architecture of these two countries was shorn of its color. Color appeals to our mentality, and the prospect of a greater use of color in this country will tend to arouse a greater interest of the public in architecture, a condition that has long been desired. The truth of the matter is that the layman today is almost as versed in the subject of color in architecture as is the architect himself. He feels free to express his opinion on the subject and to criticize.

And that brings us to the point that architects would welcome more criticism from the public,—their clientele. There have been recently certain discussions relative to this very subject, due to the fact that one architect in particular felt that he had been unjustly and severely criticized by the writer of an article in a popular magazine, claiming that the criticism was not constructive and was merely intended to ridicule the architect. What we do need in this country is constructive criticism, written by authorities, by those who are capable of criticizing, and written in such a way that the public can understand. Such criticisms will have a tendency to awaken a greater interest by the public in architecture, will encourage expressions of opinion on the part of the public and will educate to a greater appreciation of architecture. And above all else it will result in greater efforts on the part of architects to escape such criticism.

There have been many attempts to educate the public to a greater appreciation of architecture. Except, perhaps, as regards skyscrapers and spectacular types of buildings, the public has shown an apathetic attitude toward architecture as a construction and nation-building effort. Every one engaged in educational work knows that it is impossible to get very far with a student who is not interested in the topic. Similarly, we must first interest the public in architecture as it affects the building of a city as a whole, and not only in its spectacular presentation. Carefully applied color in buildings will not only create greater interest on the part of the man on the street, but will also educate him along architectural lines, in color as well as in form.



CHATEAU DE CHAMBORD, LOCATED NEAR THE VILLAGE OF CHAMBORD, NINE MILES FROM BLOIS



CHATEAU DE CHENONCEAUX, LOCATED NEAR THE VILLAGE OF CHENONCEAUX, ON THE RIVER CHER, ABOUT EIGHTEEN MILES FROM TOURS

FRENCH CHATEAUX AS SEEN FROM THE AIR

(Reproduced by courtesy of Greville Rickard, Architect)

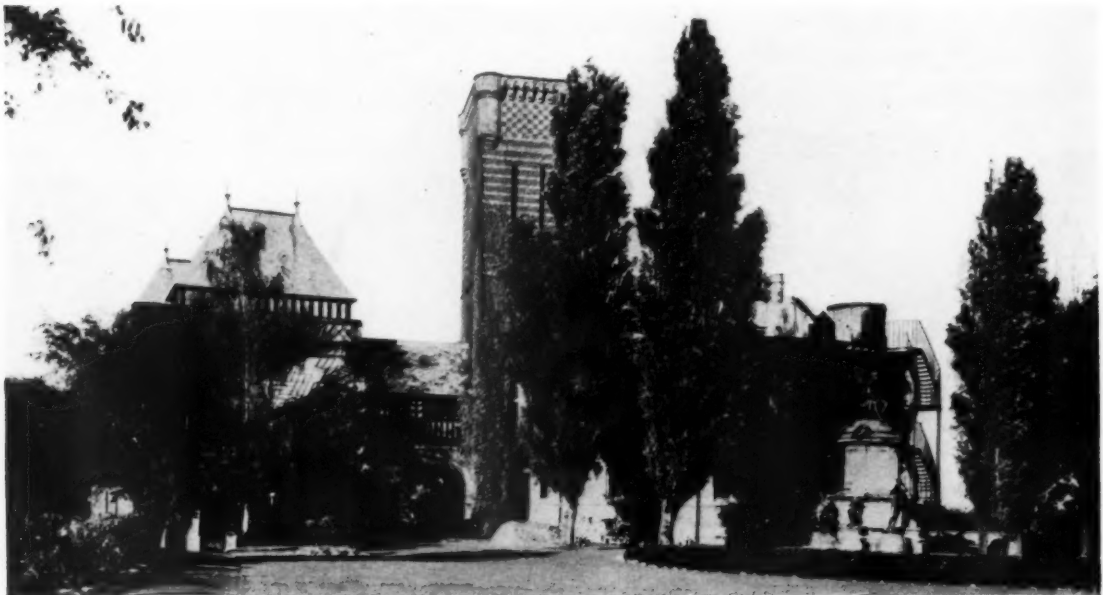
THE NEW SHAKESPEARE MEMORIAL THEATRE AT STRATFORD-ON-AVON, ENGLAND

AMERICAN ARCHITECTS ARE INVITED TO PARTICIPATE IN THIS INTERESTING EVENT

THE competition for a design for the new theatre at Stratford-on-Avon, to take the place of the structure destroyed by fire last year, provides an interesting problem for the architects of the British Isles, Canada and the United States, to whom the invitation to participate is issued.

Hundreds of thousands of visitors from all over the world find their way to Stratford every year. Here is to be found the only National theatre which exists solely for the purpose of keeping green the memory of the world's greatest dramatist by the constant reproduction of his plays upon the stage.





VIEW OF GALLERY AND THEATRE AFTER THE FIRE



VIEW OF THE RIVER AND CHURCH, FROM THE PICTURE GALLERY

STRATFORD-ON-AVON

WHEN IT IS REMEMBERED THAT STRATFORD ITSELF IS AN OLD WORLD TOWN OF LESS THAN 10,000 INHABITANTS, CONTAINING NO HIGH BUILDINGS AND MANY VERY BEAUTIFUL HALF-TIMBERED ELIZABETHAN HOUSES OF GREAT HISTORIC INTEREST, IT WILL BE EVIDENT THAT IT IS NO EASY MATTER TO DESIGN SO LARGE A BUILDING AS THE THEATRE WHICH WILL FIT INTO THESE SURROUNDINGS. ONE PRACTICAL DIFFICULTY EXISTS: THE SITE IS NOT ONLY CLOSE TO THE RIVER BUT WITHIN A FEW FEET OF RIVER LEVEL



VIEW OF THE THEATRE, TAKEN FROM A POINT OF THE RIVER WHERE THE NEW BRIDGE WILL CROSS



STRATFORD-ON-AVON—VIEW SHOWING THE WHOLE SITE

Distinguished Americans are on the Board of Governors and a very large number of Americans make up the audience which attends the festivals during the summer months. It is natural, therefore, that the Governors wish that American architects shall help to solve this interesting problem. There is much talk about "hands across the sea," but by recommending an invitation to American architects the Royal Institute of British Architects has made a practical friendly gesture, which means more than a great deal of talk.

Competitors will find a three-fold interest in the competition. An opportunity is afforded of bringing about a great town planning improvement in this ancient town by the removal of a number of unsightly buildings. By building the new bridge across the Avon, to carry the ever increasing motor traffic, the beautiful old fifteenth century bridge built by Sir Hugh Clopton can be preserved intact for future generations as this can be reserved for pedestrians only. By this general improvement the view of the site to be occupied by the new theatre will be opened up. The theatre will stand out clearly visible from the roads approaching Stratford-on-Avon from Kennilworth, Warwick, Oxford and London on one side, from the river and public recreation grounds across the river on the south, and from the church where Shakespeare lies buried on the west.

When it is remembered that Stratford itself is an old world town of less than 10,000 inhabitants, containing no high buildings and many very beau-

tiful half-timbered Elizabethan houses of great historic interest, it will be evident that it is no easy matter to design so large a building as the theatre which will fit into these surroundings. One practical difficulty exists: the site is not only close to the river but within a few feet of river level. A considerable height is necessary in a theatre for manipulating scenery, and in this case it is difficult to eliminate that height by constructing a great deal of the building below ground.

A large auditorium is not asked for but one which will seat about 1,000 people. It is, however, essential that people shall be able to see and hear well from every seat.

The stage and storage room for costumes and scenery must be ample, for here it is the definite policy of the Governors to present as many as seven or eight different plays in one week.

The specification which has been drawn up under the guidance of the Royal Institute of British Architects sets out the requirements fairly fully. The competition will be in two sections: The first for sketch designs only, followed by the final competition, limited to six designs to be selected by the jury from among the preliminary competitors. The Royal Institute of British Architects has appointed its President, E. Guy Dawber, F. R. I. B. A., and Cass Gilbert, President of the National Academy of Design of U. S. A., to act as honorary assessors, and Robert Atkinson, F. R. I. B. A., Director of Education of the Architectural Association, to act as assessor.



THE CHURCH, STRATFORD-ON-AVON, AS SEEN THROUGH THE ARCHWAY OF THE GALLERY AND THEATRE

A CHURCH, A BRIDGE AND A FARMHOUSE

ISOLATED AND UNSUNG TREASURES IN THE VALLEY OF THE RHONE

By SAMUEL CHAMBERLAIN

Illustrated with Pencil Sketches by the Author

ONE is tempted to toss caution to the winds when speaking of the country around Avignon, and to make the rash statement that no similar area in France offers so many rich excursions for the inquisitive and impassioned architect.

This wind-swept plain which embraces the mouth of the Rhone is not as cold and dreary a place in the month of January as might be imagined. A breath of Mediterranean warmth has seeped past the shore line and removed the chill from the air. However, the gale which rushes down the river valley, gaining velocity as it whizzes over the rocky prairies, assumes an uncomfortable violence. It is no longer a wind; it is a "Mistral," and as such, endowed with enough force to retard the activities of the whole region. Man's feeble efforts to balk it have availed but little. Endless rows of closely knit cedars have been set up across the path of the wind to offer some protection to the fields. Almost all of the farmhouses are built on an L-shaped plan to provide at least one outside corner where the wind

will not raise havoc. But when the despotic Mistral is blowing, outside pursuits are fairly well suspended.

This sparse and under-populated area, so little altered by this devastating 20th Century, is rich in the most primitive of landscapes and the purest and most varied of architectural monuments. The glory of Rome is reflected in Arles, in Orange, in St. Remy and a dozen lonely spots. The purest of Romanesque art flourishes at St. Trophime, at St. Gilles and Le Thor. Les Baux, besides offering a ghostly apparition of a mountain stronghold, is rich with the most perfect of Renaissance ornament. Aigues Mortes, Tarascon and Avignon itself give an impression of feudal might and majesty quite as imposing as anything in France, Carcassone included.

But these are the obvious towns which can be excavated from the guidebooks. The thrill comes in being able to uncover something which the Guide Bleus and Baedakers have ignored, some forlorn and isolated and unsung treasure, sunning itself in neg-



THE BRIDGE AT PERNES

THE BRIDGE AT PERNES



DOORWAY OF THE CHURCH AT LE THOR
FROM THE ORIGINAL PENCIL SKETCH BY SAMUEL CHAMBERLAIN



THE TOWN GATE. LE THOR

FROM THE ORIGINAL PENCIL SKETCH BY SAMUEL CHAMBERLAIN

lected nonchalance, with scant hope of being rewarded even with mention in a regional pamphlet.

A few such rare morsels were upturned recently by your correspondent in a visit to the outlying corners of the region, with the resultant acquisition of



SIDE PORTAL OF THE CHURCH
LE THOR

SIDE PORTAL OF THE CHURCH, LE THOR

the sketches here reproduced and a pair of wind-blasted eyes. With some hesitation they are submitted as fairly unheralded finds.

The first is a sunny little church, visible from the flat, cedar-lined road which leads from the ramparts of Avignon to Vaucluse and its miraculous source, (which is rather more inspiring to a hydraulic engineer than anyone else). Vaucluse was the retreat of Petrarch and the setting of his romantic adventure with the lovely Laure. His sixth centenary, incidentally, is to be celebrated in the City of the Popes next April, amid much pomp and elocution. The aforementioned church has lingered for centuries in the compact little village of Le Thor, hemmed in by shivering sycamores, and is worthy of nearly as many superlatives and fine phrases as have been squandered upon the two Romanesque headliners of the region, St. Trophime in Arles and the facade of St. Gilles. The tower of the church at Le Thor is a bit squat and hump-shouldered, as though it were cringing from the frequent fury of the wind. The stonework is superb, the carved detail above reproach. A fine old wrought iron cross silhouettes

itself against the cavernous black of the main portal, and a badly disjointed sundial sprawls above it. The enclosed sketches may give some faint impression of the loveliness of the doorways. The town gate in Le Thor is no rose from the point of view of pure design, but it is gay and quite impressive in a little town, and typical of dozens of town gates scattered between Avignon and Aix-en-Provence.

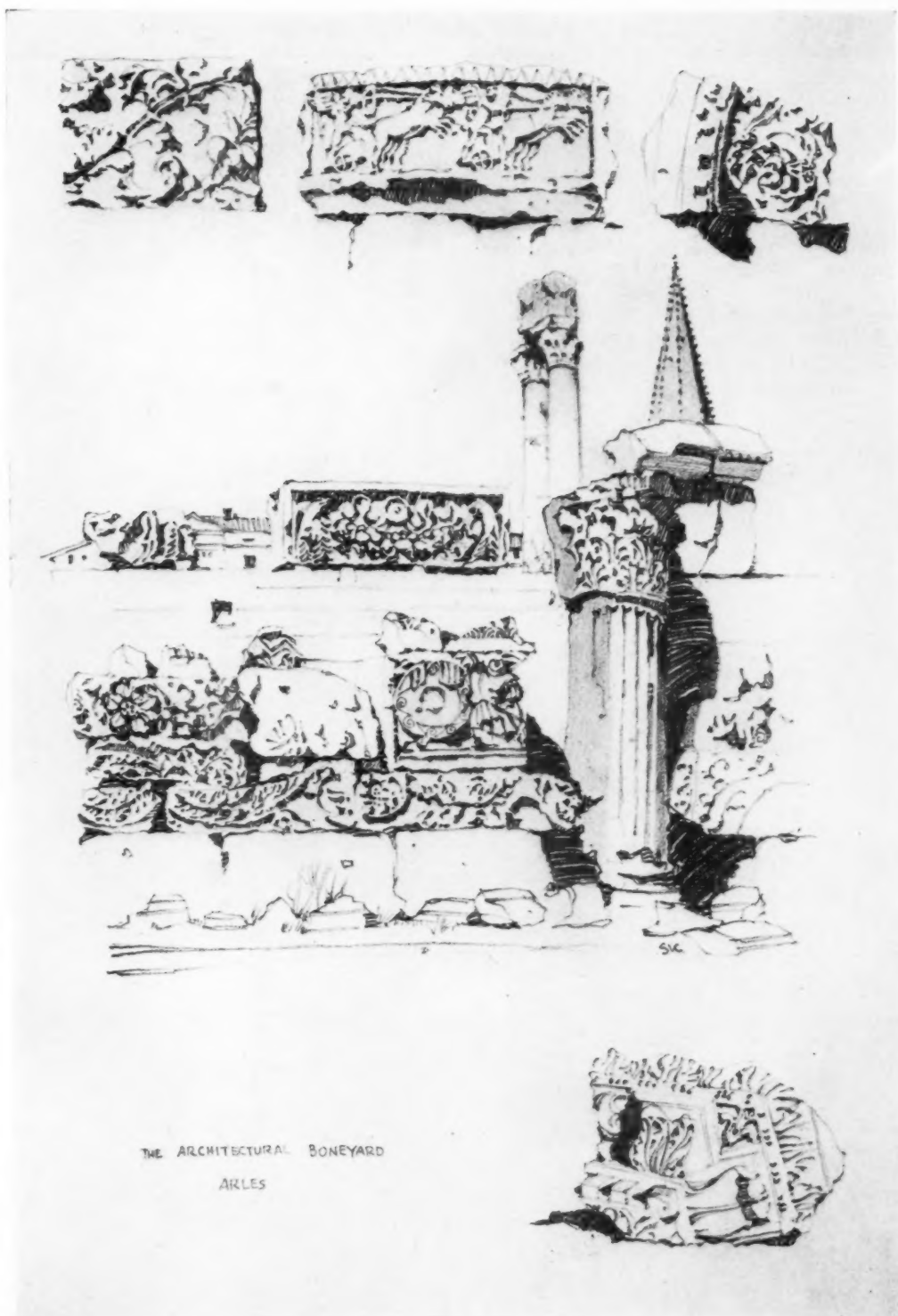
Le Thor is an adventure not soon to be forgotten, but the neighboring village of Pernes harbors a curiosity even more exciting. The bridge in this once-fortified town belongs to the category of picture-book conceptions, the sort of thing one expects



DOORWAY OF A FARMHOUSE
NEAR ST. GILLES

DOORWAY OF A FARMHOUSE NEAR ST. GILLES

in a book by Kay Nielson or Arthur Rackham. It seems almost unreal. As a movie set for our dashing Douglas Fairbanks it is not incongruous, but one can hardly believe that a neglected bit of the Middle Ages could come down so matchlessly preserved. A bridge, a bijou of a chapel, a perfect feudal gateway and a delicate little covered shelter all in one, framed in a pattern of glistening nude sycamores! The bridge seems to have eluded mention in the books on Provence. I am under the impression that it even escaped the vigilance of William Emerson when he scoured the country in search of material for his memorable volume on "Old Bridges of France." The stream has shrunk into a narrow rivulet which



THE ARCHITECTURAL BONEYARD
ARLES

THE ARCHITECTURAL BONEYARD, ARLES
FROM THE ORIGINAL PENCIL SKETCHES BY SAMUEL CHAMBERLAIN



THE CHURCH, LE THOR

FROM THE ORIGINAL PENCIL SKETCH BY SAMUEL CHAMBERLAIN

is content to slip silently under a single one of the three arches. The others have long since been filled in, and what was once the river bed is now a bowling alley for the Sunday afternoon idlers.

The third exhibit is on the dead and deserted road which skirts the swampy plain between Tarascon and the dreary St. Gilles. On a gentle slope is a roomy and prosperous farmyard, silhouetted against a mournful regiment of black cedars. This is no ordinary farm, as the facade immediately testifies. Two fine old three story habitations are on either flank, and in the center is a twelfth century chapel, a bit neglected and fallen in disrepair, but shorn of none of its splendor. The centuries of Provencal sunlight have baked and ripened the stone until its glorious patine resembles the mad splashing of the red end of an artist's palette. The chapel is simple and severe, bolstered by lithe, slender buttresses and pierced by a doorway of irreproachable grace. One can only guess how long it has been since those rusty hinges have pivoted. Inside this one-time shrine the horses swish their tails at the flies and a handful of sheep let forth melancholy blatts while two farmhands laboriously hoist a new load of hay into an impoverished upper floor. One cannot suppress the conjecture of what a treasure this fine old remnant would be, were it standing on American soil, rather than in the wind-swept remoteness of a too-rich Provence.

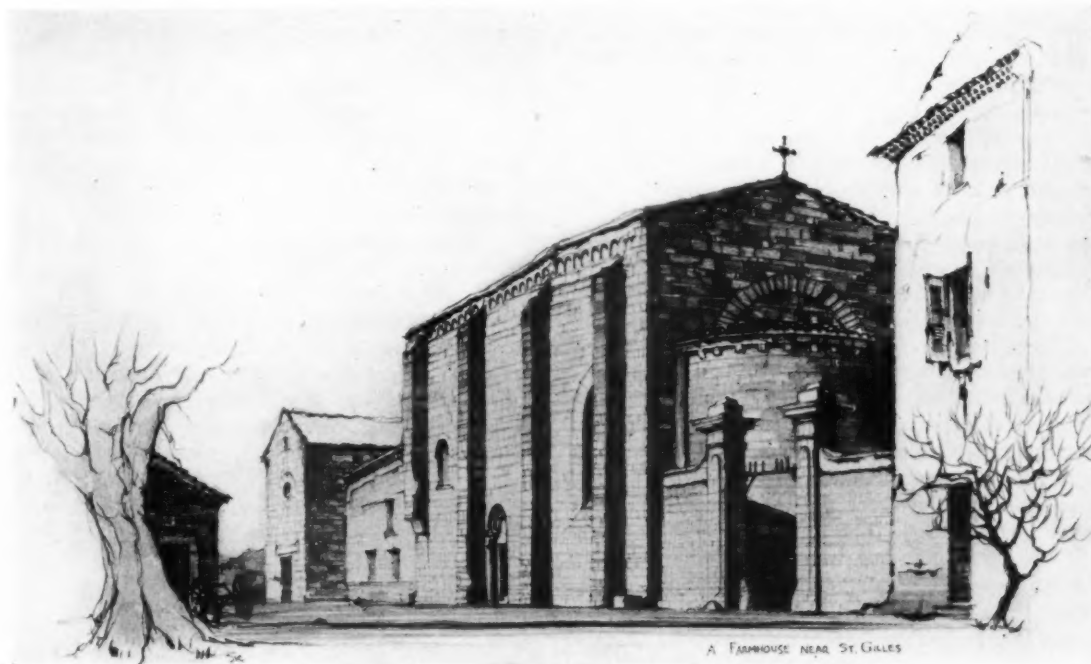
One more spot in this neighborhood is too idyllic to be overlooked, although it lacks the virtue of be-

ing either unknown or unvisited. This is the grassy plot in Arles, dotted with rainwashed blocks of carved Roman marble, which was once the classic amphitheatre. There is a serenity about the two slender shafts of delicately tinted marble which still stand, and there is an incalculable beauty to the blocks of carved stone which group themselves sociably about the enclosure. Carved in the hardest of white marble, rainwashed to a shining spotlessness, they catch the bright rays of a Provencal sun and coin the most jewel-like of shadows, gold and deep blue and flaming orange, patterned over the blue-whiteness of the stone. The architectural boneyard in Arles is a Paradise, and probably the most restful spot in all Provence.

ITALY TO LAY BARE MORE ANCIENT CITIES

ALONG with the recent announcement that the Italian Government is considering renewal of the attempt to excavate the Roman City of Herculaneum, which was destroyed in A. D. 79 by an eruption of Mount Vesuvius, various other plans for adding to Italy's archaeological treasures were announced.

Other points being considered for renewed excavations are Capri, where the ruins of the palace of the Roman Emperor Tiberius are; ancient Cumae, where the oldest Greek colony in Italy once stood, and more extensive excavations at the ruins of Pompeii, sister city of Herculaneum, which was buried under the same lava flow.



A FARMHOUSE NEAR ST. GILLES

SKYSCRAPERS AND TRAFFIC CONGESTION

SYNOPSIS OF A DEBATE BY HARVEY WILEY CORBETT, F. A. I. A., STEPHEN F. VOORHEES, F. A. I. A., AND HENRY H. CURRAN OF THE CITY CLUB, HELD AT THE ARCHITECTURAL LEAGUE'S EXPOSITION OF ARCHITECTURE AND THE ALLIED ARTS

HARVEY WILEY CORBETT presided over the discussion of the New York skyscraper and he and Stephen F. Voorhees defended it, while Henry H. Curran of the City Club insisted on its being controlled, and very differently from any control attempted as yet, in a brilliant debate on the subject.

"The skyscraper is an old thief of light and air," said Mr. Curran. "Especially in New York, where skyscrapers are crowded so closely together in certain sections, they have been stealing light and air for thirty years. God gave these things to the whole world, but they are taken from the rest of us by the man rich enough or venturesome enough to appropriate many times his share.

"It is the uncontrolled skyscraper or that controlled as badly as we now make efforts to do it, which causes so much trouble. And getting to and from these causes New York's congestion difficulties. In the last year alone we built enough new skyscrapers to add 150,000 people to New York's working population. That means that the occupants of these new skyscrapers alone would fill five of the six subway tracks we have just as full as they would hold trains for at least an hour of the rush period morning and night. What are the rest of the workers who travel in the subway to do?

"The real question is how to control the tall building. If we would only space our skyscrapers and leave space around them for light and air, building perhaps one or two to a city square, we would have a series of beautiful towers, of towers which might be made beautiful. Give the skyscrapers a chance, of course, but give the people a chance, too."

"Very well," responded Mr. Corbett, "then let's zone the city and concentrate the different kinds of business in certain sections. I freely admit that the skyscraper imperatively needs control, direction, supervision; but the trouble is that so many of the remedies are very impractical of themselves. But there is something good in each, probably—let's combine their good points.

"Concentrating large masses of people in a small area always brings congestion. It doesn't matter about the size of a building in this regard. Every single building of any size built anywhere in New York adds to the street congestion. The more lower buildings are spread out, the worse the congestion. London is a seven-story city, and those of us who have tried to do business there have found ourselves spending most of our day in taxicabs and busses.

"The city is an organic thing and growth is absolutely essential to its life. We must meet this by increasing the capacity of our streets—even double-decking, as Chicago is doing, or even carrying the multiple-level idea further than that."

"The term skyscraper is relative," said Mr. Voorhees. "In some parts of New York, thirty stories do not make an exceptionally high building, while in others and in other cities, six or seven stories make a skyscraper. The skyscraper is a machine—just as definitely as is the typewriter or the printing press—a mechanism man has produced to serve a certain purpose. The functions are support, which makes possible the use of the upper stories; security, which has to do with the walls that protect from weather and observation; transportation, by which passengers are elevated from the sidewalk; comfort, which includes the conveniences and services of the building; and beauty. The last is of very real service in any community. One purpose of any building is to make people happier when they look at it. No client ever asked one of us architects to plan an ugly building.

"It is only when we come to the quantitative phase of the skyscraper problem that we get into difficulties. Speaking generally, man lives and works on a horizontal plane, and the builder must consider area just as truly as the farmer. The units of useful area within the structure must be brought together to serve their highest usefulness. The business may grow and instead of employing 6 people, may require 6,000.

"We might spread our building, or buildings, over enough space to give each person 100 square feet—but imagine the difficulties of communication in this nineteen-acre farm. How much easier to pile up nineteen stories on a single acre. The group instinct in man is no new thing; it's as old as man himself; and we must meet it.

"The question of cost enters more largely into skyscraper construction than most people imagine. I mean the question of the economical use of money. Elaborate studies have demonstrated that the most practical way to build is in one lump, going up into the air—but not too high. How high is largely a matter of area. Above a certain height the cost begins to mount all out of proportion to return. But the economic factor is too strong to attempt to limit any city in America to seven stories, or anything like it.

"We cannot give up the skyscraper, but we must arrange a better street balance. It is the result of an age-long process of pushing buildings up into the air as fast as improving building methods that made this feasible. The tall building in its proper place is a splendid thing, an American thing; and let us be sure that, in rearranging it, we are acting for the benefit of the public as a whole and not to carry out some idea of levelling off the city. High buildings are not the cause of all our traffic problems, not by a good deal.

"And don't forget their advertising value. Skyscrapers for advertising purposes aren't new. Cheops got some of the best advertising in history out of the Pyramids."

"Skyscraper or no skyscraper," said Mr. Corbett, "the traffic congestion would be the same. In the Wall Street district the buildings are the highest and the streets are the narrowest of any section in the world, yet the traffic on the streets is much less than up in the roaring forties where the buildings are but seven and ten stories high, in some places. The reason is not because the business man does not want to drive in his car downtown or because he can't use it during business hours. The reason is because the traffic is vertical instead of horizontal. People communicate with one another in compact areas and do not have to jump in a taxi and travel five or six blocks to do business. If we took Mr. Curran's suggestion and levelled the entire island out to seven or perhaps ten stories, what would happen? Business would spread. Everybody would be rushing about twice as fast in order to reduce travelling time in inter-office communication. Traffic on the streets would be quadrupled and taxis would be almost useless, so terrific would be the congestion.

"If every single foot of floor space in Manhattan were covered, the city would still continue to grow. Congestion would stop temporarily, perhaps, but would come back again worse than ever. The only remedy, it seems, is to stop New York from growing. That being impossible, double-decked streets, undercrossings, enormous skyscrapers and gargantuan buildings must come. The remedy, I believe, is to have regulated growth. There could be a zone devoted to factories, one for business, finance, pleasure. Thus the traffic congestion would be greatly reduced. Business in each of these zones would be done by men in the immediate vicinity. People would travel to adjacent buildings on foot. A man walking takes up less than ten square feet of space. An automobile going only fifteen or twenty miles an hour takes up four hundred square feet of space, while an automobile standing still occupies one hundred square feet.

"Skyscrapers do not cause congestion. They cause less than if their proportionate occupancy were spread out. In London the buildings are not over six stories high at the most, yet one spends the greater part of the day in a taxi, tram or bus trying

to get about and on streets whose congestion is abnormal in the extreme.

"The skyscraper will never die. It is a living organic thing, with its inhabitants flowing through its veins like the corpuscles in the blood. You cannot stop normal growth; the only way to stop a tree is to kill it.

"Traffic is bad in New York but it is worse in other cities where the average building height is far less,—Detroit and Los Angeles, for instance. But Detroiters put the blame on the automobile, where it belongs. They will not, however, stop building automobiles and we will not stop building skyscrapers as long as both continue to perform a vital function in our lives.

"The subway is another serious problem. The backers of the 'Down With the Skyscraper' campaign point out, and with some truth, that as soon as new subways are built, there are new skyscrapers to be filled and the congestion is just as great as it was before. But is that any reason why we should stop building subways to the congested districts? Daniel Turner, engineer to the Transit Commission, has suggested a bright solution. He thinks we might start subways from points where nobody is and carry them out of the city to places where nobody wants to go. Then we would see the end of the straphanger. The skyscraper is here to stay. Its present development is by no means ideal. It has received much abuse. But concentration of tall buildings in certain sections is bound to occur in one form or another. Architects and engineers and city planners must see to it that it grows intelligently and rationally, taking advantage of all that science has taught. Then subways and motor traffic will slowly be adjusted and conform to demand and common sense."

"All our traffic trouble is due to skyscrapers," said Mr. Curran. "They draw the automobiles and the people in the rush hours and throw them on the streets again at night. There are too many of them in clusters. If they were placed sensibly I would approve of them, but the lack of control in their destination is our most serious cause of congestion. Enough skyscrapers go up in New York in one year to house 150,000 people. Just think what that means in the subway when the time comes to go home. Why, right now the city is spending nearly every nickle it can get its hands on for the new Eighth Avenue subway, hoping that when it is finished traffic will be relieved. But it won't. Just as fast as the subway is completed, up goes another skyscraper along Eighth Avenue. We will be just where we left off at when this thing is finished.

"The most brilliant jewel in Mr. Corbett's diadem of arguments in defense of the skyscraper, is his statement that skyscrapers really decrease congestion instead of increasing it because they take unto themselves such an enormous amount of vertical human traffic and thus relieve the streets from the horizon-

tal traffic. Mr. Corbett says that 'in downtown New York the business man consults his broker, eats his lunch, sees his lawyer, buys his wife a box of candy and gets a shave, all in the same building.' Perhaps he does. There may even be a manicure there and a haberdasher and bootblack as well. This is an entrancing picture of 'home, sweet home', in the skyscraper. But how does the business man get into the skyscraper? Is he born there? Does he live and die there, or is his home somewhere else so that he has to leave early in the morning and crush his way into the subway to get to work? And how about lunch hour? Does he always eat lunch in the same skyscraper? The iridescence of Mr. Corbett's imagination includes the assumption that a skyscraper is a man's whole world and that he lives and dies inside of it, just as immovable as though he were the inner stem of an obelisk.

"In New York we are trying to get the 800,000 people who come to work every morning in Manhattan's skyscrapers to stagger their working hours so that they will not all arrive at the same time," said Mr. Curran. "But if we can do this, it will only be court-plaster. It will not cure the disease. Not even the telephone has cured the disease and it keeps more people off the streets than all the candy-box skyscrapers in Christendom.

"Is it true or not that a 50 story building fully occupied holds five times as many people as a 10 story building of the same size fully occupied? If

you clump together several hundred huge buildings, each of which is four or five times as high as the buildings of a generation ago, it is perfectly sure that you will create a local congestion that cannot possibly be taken care of by the existing sidewalks and roadways and can never be satisfied by subways, no matter how many you build.

"My proposal is not at all to abolish skyscrapers, to kill them off, as Mr. Corbett assumes. My proposal is, on the contrary, to keep them but control them. At present they are utterly out of control. They grow like weeds in the wrong place and too many together. The question is one of density of human occupation of any given cube of air resting on the earth, and that is all there is to it.

"Is the skyscraper beautiful? Is a cigar label? The most beautiful skyscraper I know of is the Woolworth Building and right next to it springs up the ugliest shoebox I have ever seen. The Transportation Building, they call it, and up it goes trying to get near the top of the Woolworth Building. It fails and on top of it they stick an aerial chicken coop! Beauty! Never, not in a hundred years. The city should re-zone this town and keep down the level. Mr. Corbett has given us a beautiful thing in the Bush Building, but then up springs some kind of piano emporium next to it to mar its beauty! America's zoning law is a back stair type of architecture!"



GROSVENOR ATTERBURY, ARCHITECT

STOWE PHELPS AND JOHN TOMPKINS, ASSOCIATED

(Forty-second Annual Exhibition, The Architectural League of New York)



ST. JAMES M. E. CHURCH, CHICAGO, ILL.

TALLMADGE & WATSON, ARCHITECTS

(See description on back)

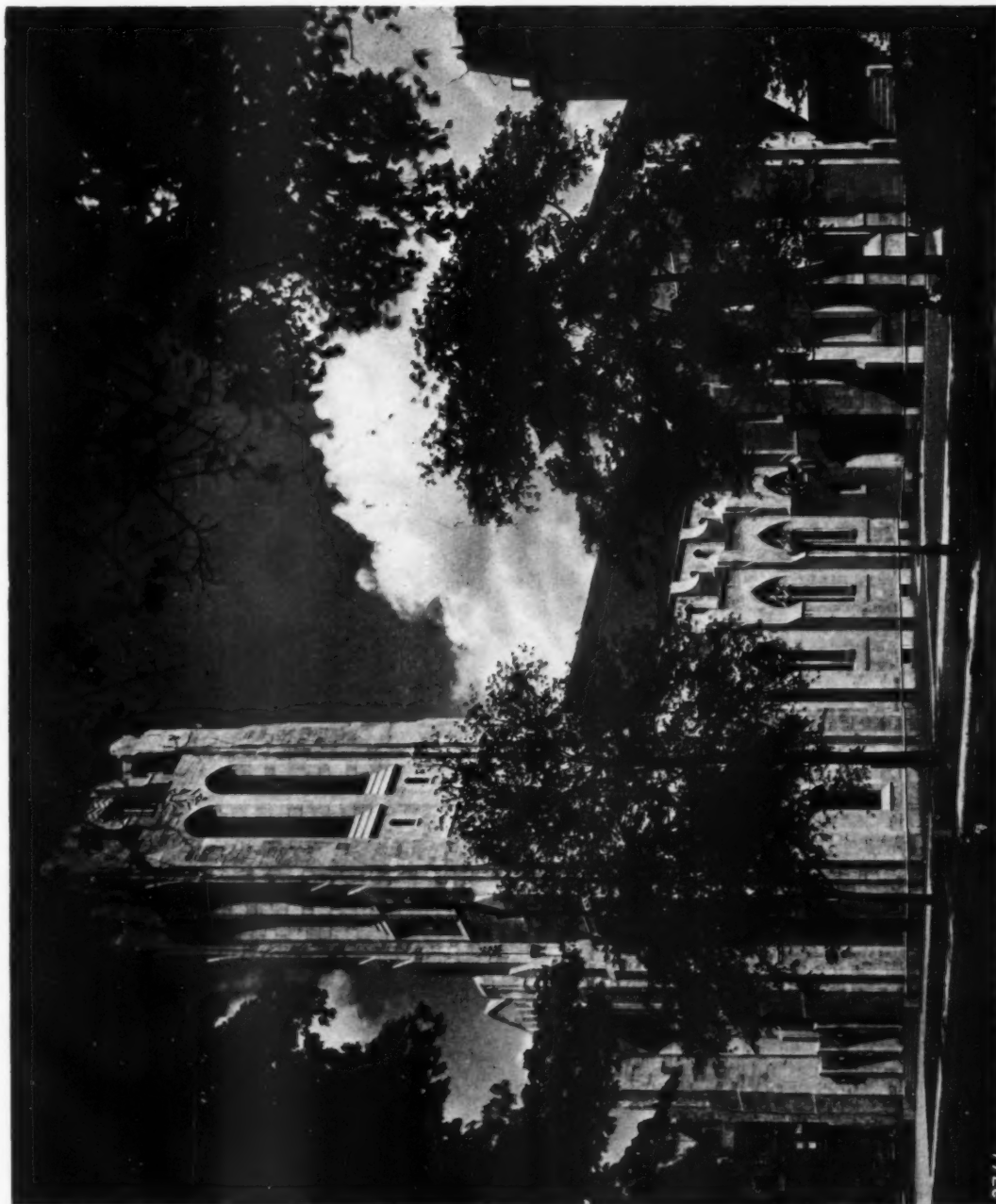
ST. JAMES M. E. CHURCH, CHICAGO, ILL.

TALLMADGE & WATSON, ARCHITECTS

THIS church is entirely of unselected sawed Bedford stone and the joints were struck as the stone was put up. There is no re-pointing. The ashlar came in random lengths and were cut on the job by the stone masons.

The church seats one thousand, and is fully equipped for all institutional and modern Sunday School training and recreation. It has an assembly room (with a stage) which will accommodate five hundred and it has a gymnasium which is especially large and fine. There is also a chapel which seats two hundred.

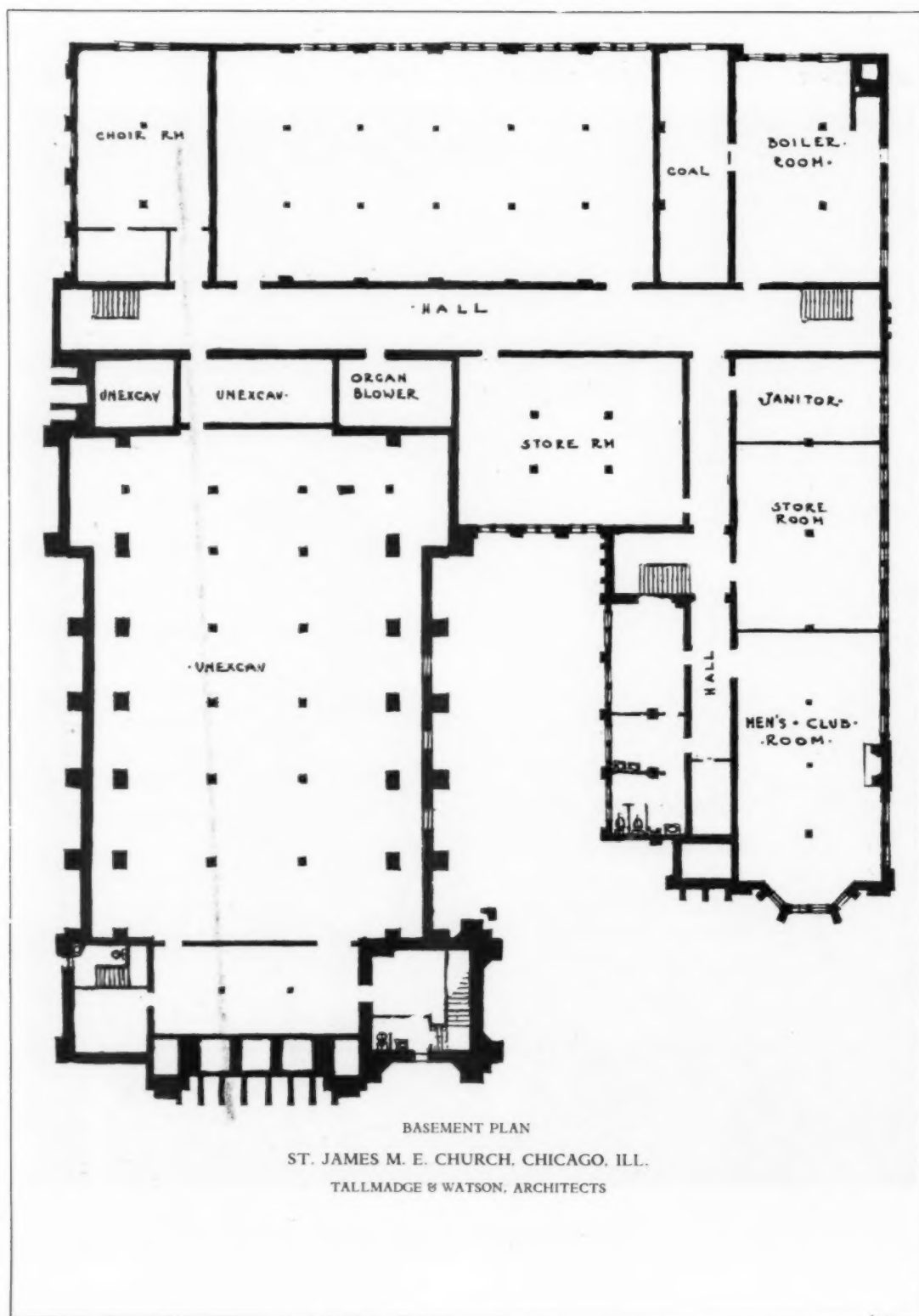
The church cost, including the organ and the leaded glass, \$435,000.00. The organ is by Cassavant Freres and the glass by Montague Castle. Schmidt Brothers of Chicago were the general contractors and they built the church under the Landis Award. The sculpture is by Miss Hester Bremmer of Chicago.

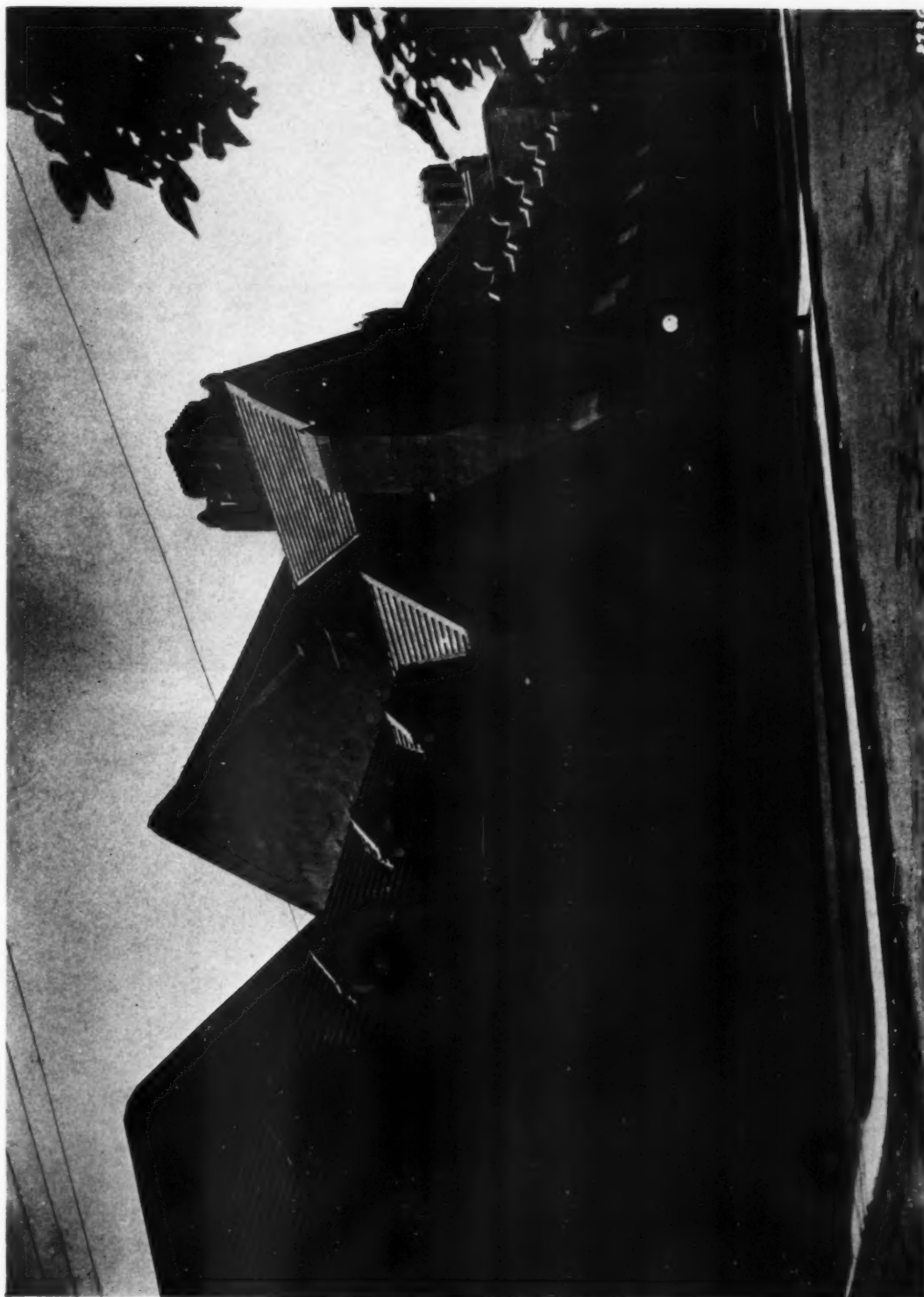


ST. JAMES M. E. CHURCH, CHICAGO, ILL.

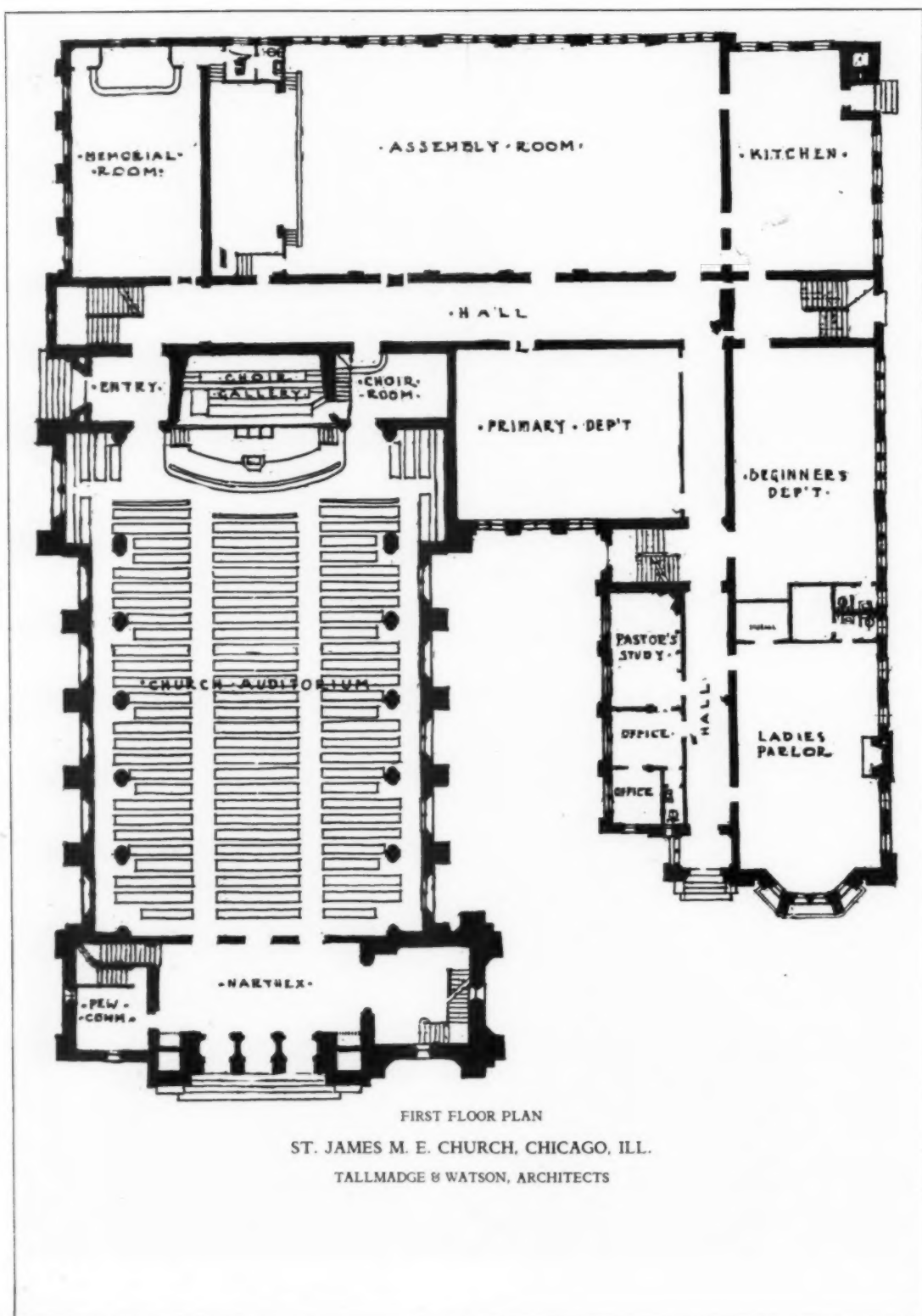
TALLMADGE & WATSON, ARCHITECTS

(See plan on back)





ST. JAMES M. E. CHURCH, CHICAGO, ILL.,
TALLMADGE & WATSON, ARCHITECTS
(See plan on back)

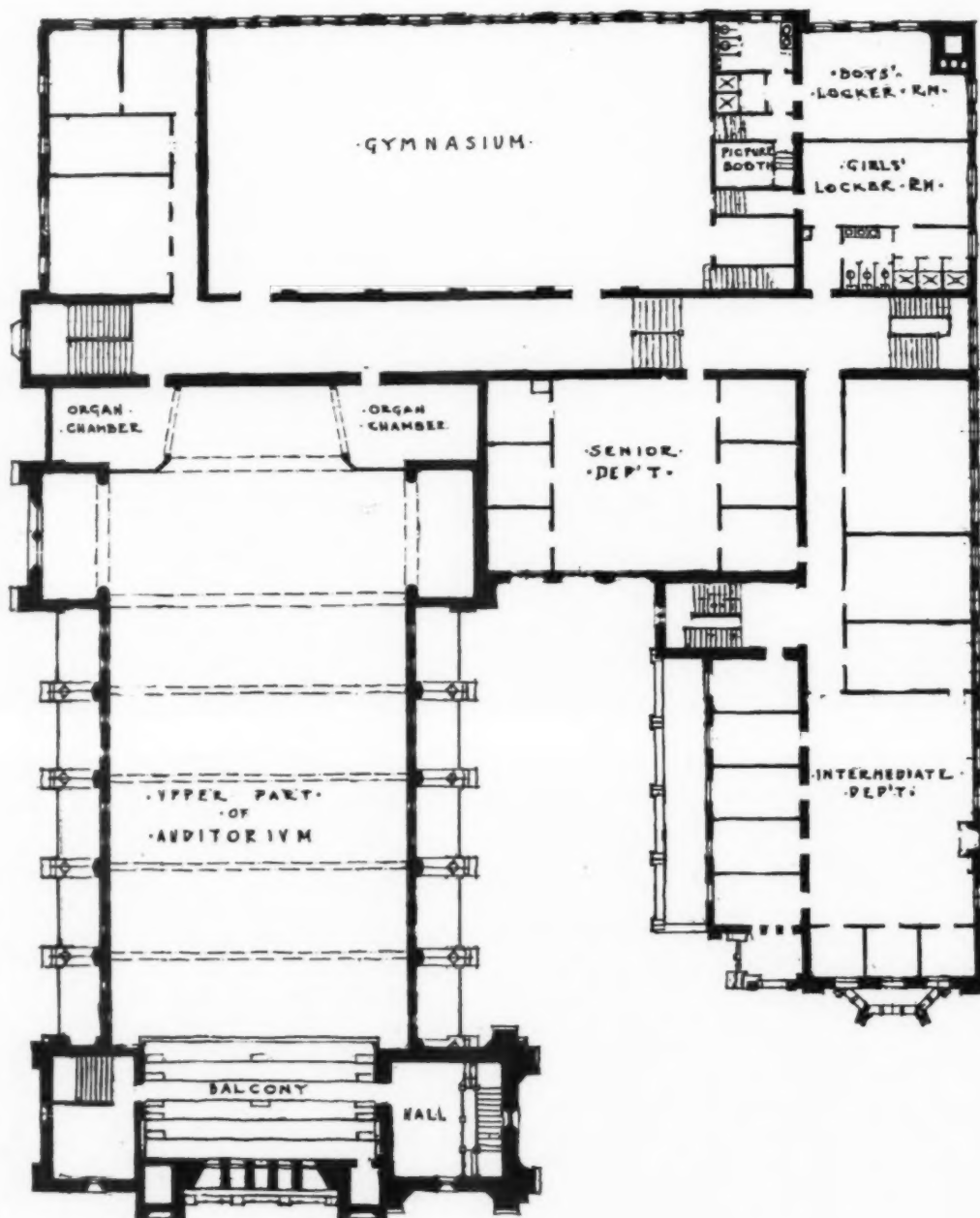




ST. JAMES M. E. CHURCH, CHICAGO, ILL.

TALLMADGE & WATSON, ARCHITECTS

(See plan on back)



SECOND FLOOR PLAN

ST. JAMES M. E. CHURCH, CHICAGO, ILL.

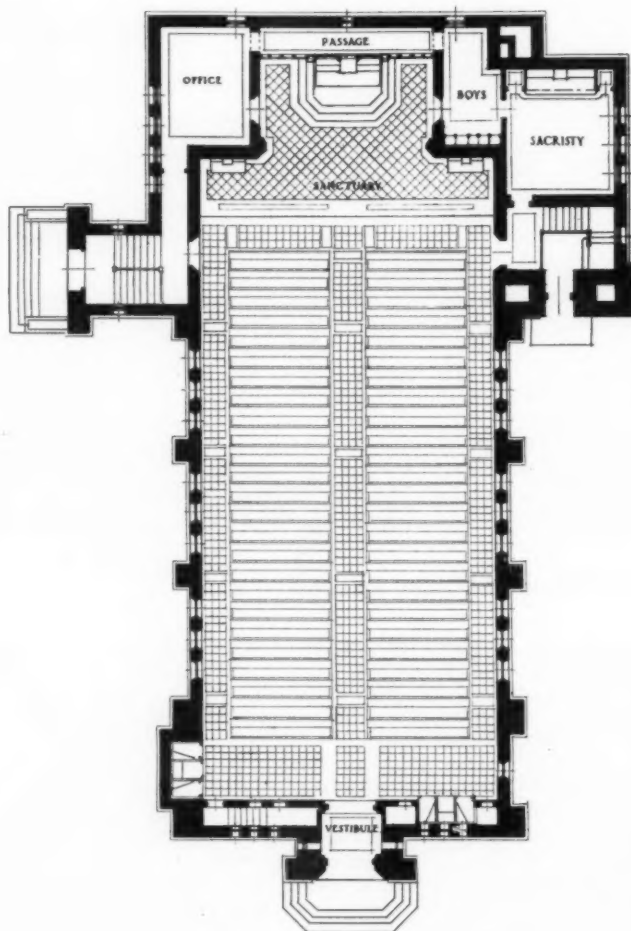
TALLMADGE & WATSON, ARCHITECTS



ST. DOMINIC'S CHURCH. PROCTOR, VT.

MAGINNIS & WALSH, ARCHITECTS

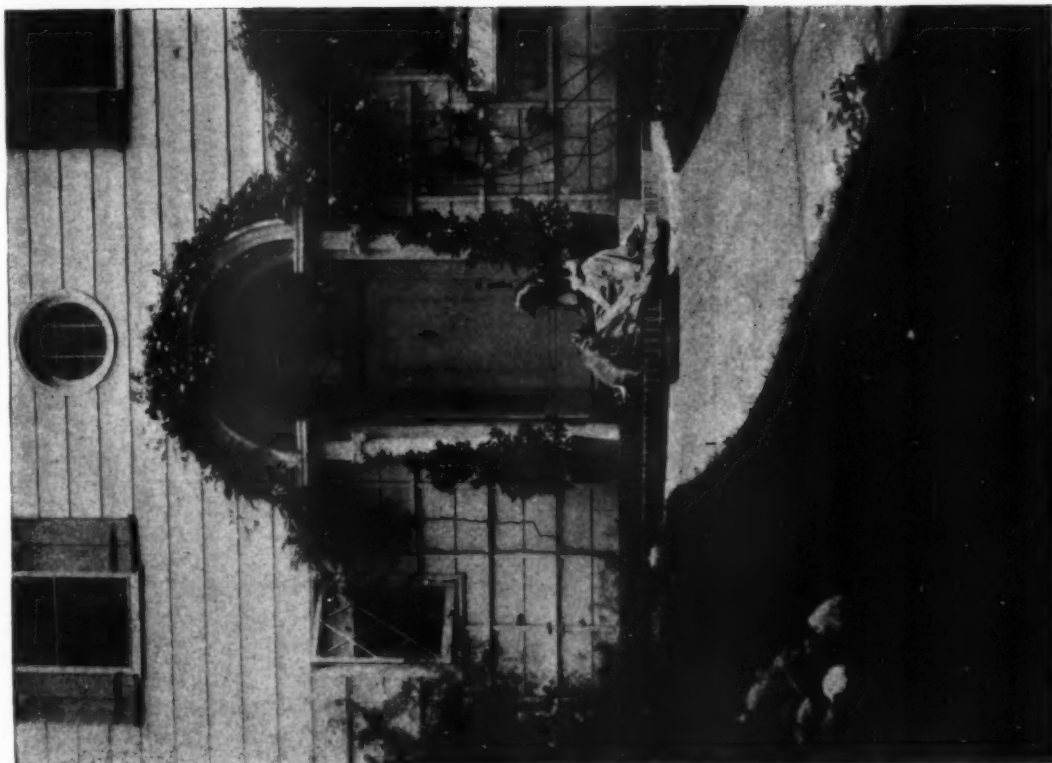
(See plan on back)



PLAN
ST. DOMINIC'S CHURCH PROCTOR, VT.
MAGINNIS & WALSH, ARCH'TS.



HOUSE OF W. W. SIEBERT, GREAT NECK, L. I., N. Y.
FRANK J. FORSTER, ARCHITECT
(*Forty-second Annual Exhibition, The Architectural League of New York*)



ENTRANCE DETAIL
HOUSE AT IDA GROVE, IOWA
(*Forty-second Annual Exhibition, The Architectural League of New York*)



AN ARCHITECT'S HAPPY HUNTING GROUND

By LANSING C. HOLDEN, JR.

Illustrated by Sketches by the Author

I DO not hesitate to say that life on a dahabeah on the Nile is as near the architect's happy hunting ground as he will ever reach before death, or indeed even after death, unless he be a particularly worthy, competent and highly moral architect.

Picture this blissful scene: Here you are, an architect, dead tired, of course, stretched out in a deck chair, an awning above, the swish of water close below, the vivid green shores of the Nile slipping by. Always there is something of interest on the banks, with the eternal processions of natives, camels, donkeys and water buffalo, and the tireless shadoofs, "the unchanging system in an unchanging land." Frequently a felucca barely escapes being sliced in two as she tacks across

our bow, boats that resemble pale butterflies folding and unfolding their graceful wings in the radiant sunshine. Sometimes when we were all lolling under the awning the good ship "Chonsu" came to a sudden, abrupt and disconcerting halt. Immediately from below sounded a bedlam of weird noises. If you were an Egyptian you would have known that the crew was merely cursing its luck in having run on a sandbank. Since the boat drew only two feet of water, it seemed impossible that any crew could emerge from quarters below the water line. But

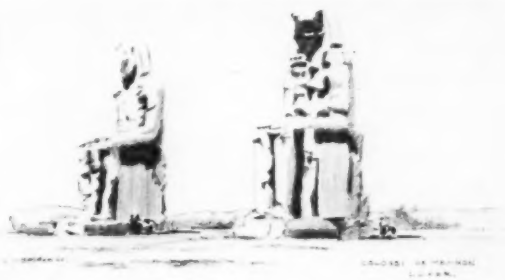
strange to relate, we soon discovered that there was a crew of at least thirty men aboard, who popped out of a dark hole and leaped into the water. Their cries settled into a steady rhythm as they chanted a boat song in time to their polling and pushing. The

time which you remain on a mudbank varies considerably, depending on how hard you struck the bank, how sticky the mud is, and principally on how much baksheesh you give the crew. But since you usually hit the banks pretty hard and the mud is nearly always sticky, it boils down to how well the crew has been tipped. Eventually the boat slipped off, backed down stream, and the pilot tried another channel. One might well ask why an old Nile riverman does not learn

the channel, but the Nile is a shifty enemy and changes its channel every month. Consequently the passing boats are always hailing each other to ask how the mud lies just ahead.

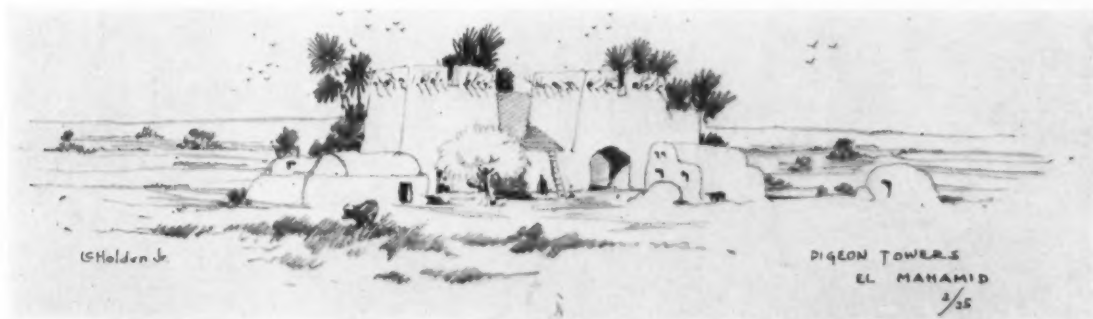
Days on the Nile slip by with alarming rapidity, and one begins to understand why Egypt's history is such a long one. It is all explained by the fact that in Egypt time goes much faster than anywhere else in the world.

On we steamed up the river, each night tying to the bank to be greeted by a crowd that for density,



THE COLOSSI OF MEMNON

IN LONELY GRANDEUR THE TWIN COLOSSI LIFT THEIR PROUD SCARRED HEADS ABOVE THE EMERALD PLAIN. AROUND THEM RISES THE ETERNAL HUM OF EGYPTIAN LIFE.—MEN, CAMELS, OXEN AND DONKEYS LABOR IN THE FIELDS UNHEEDING, WHILE TOURISTS FROM THE UTTERMOST ENDS OF THE EARTH MARVEL AT THE CHANGELESSNESS OF THIS AMAZING LAND



PIGEON TOWERS

MINIATURE FEUDAL FORTRESSES, BUILT TO HOUSE THE MYRIADS OF PIGEONS WHOSE LIME IS USED AS FERTILIZER. THESE PICTURESQUE BUILDINGS CLUSTER IN THE SHADE OF PALM GROVES, KEEPING WATCH OVER THE MUD HUTS OF THE VILLAGE

smelliness, and unintelligible chatter is equalled only by that in New York's subway at Forty-second Street. The dirtiest and most objectionable of these natives tries to sell you "Leetle Moses in the Bool-rushes," while the next dirtiest begs you to buy scarabs fresh from the potteries of Berlin. Blue-green statuettes of Ta, Isis, Osiris, etc., snow-white alabaster vases, glittering scarves, and strings of cheap bright beads are waved before your irritated eyes. Then at last the crowd dwindles away as the light fades, and even M. de Silhouette himself never imagined the blackness of these silhouettes against the blood-red Egyptian sky.

When noon with its stifling heat had come and gone, we would arise refreshed from our siesta, and our dragoman Shaia, the old bandit, would give orders to tie up to the bank.

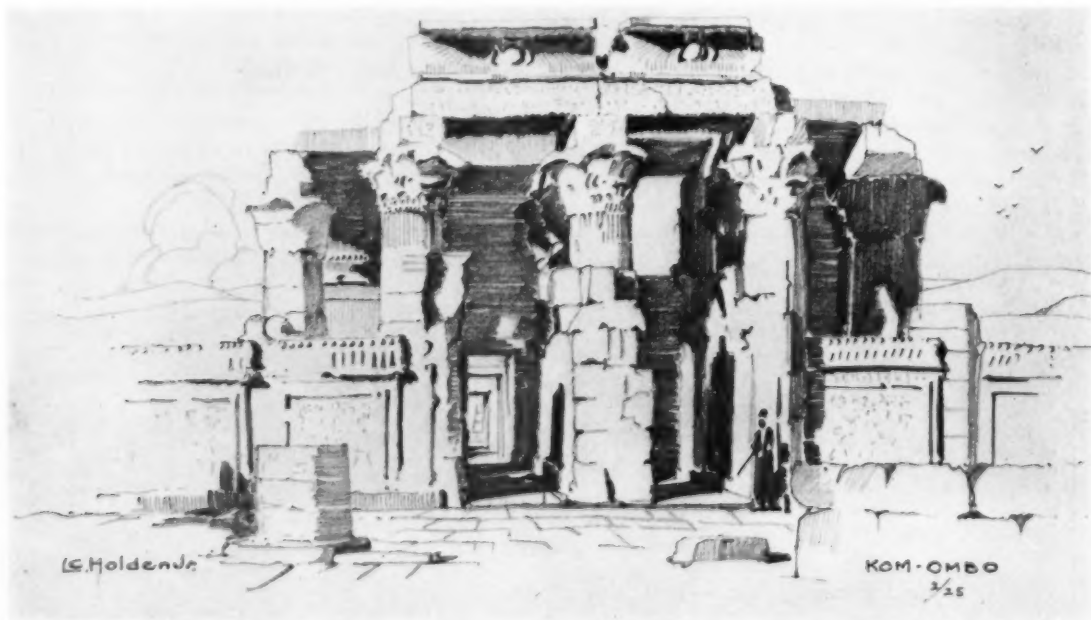
Reaching the landing stage, we would climb on donkeys to ride a short way through the fields of lush clover to the edge of the desert, there to find the temple of Abydos, (let us say) one of the most exquisite of all the temples. The walls of the seven sanctuaries are covered with reliefs on which the color is well preserved, and at the risk of punning, I'll say it was a relief to sit in their cool shadows, and as the eye became accustomed to the semi-darkness, enjoy the grace and purity of line in which the Egyptians excelled. This day was typical of many other days. As we rode home the sun was setting at our backs, and the cliffs on the further banks of the

Nile were painted a burnished gold. Admit, you men who have ridden days on blighted Spanish railways, or toiled up endless hills in search of a choice bit of architecture, that the Egyptian way is the better way. Like a snail, your house is always with you. True, a dahabeah rivals a snail in speed, but in Egypt it seems criminal to think of hurrying.



GATEWAY OF EUERGETES, KARNAK

THIS GATE STILL STANDS IN ITS IMPOSING GRANDEUR. THOUGH ITS FLANKING PYLONS HAVE LONG SINCE BEEN QUARRIED AWAY BY THE NATIVES. THROUGH IT PASSED THE PRIESTS OF AMON, ROBED IN SPOTLESS WHITE, BEARING THE FABULOUS TREASURE OF THE GOD, AND LEADING THEIR HUMAN SACRIFICES



KOM OMBO

IN THE RUINS OF THIS TEMPLE WERE FOUND THE MUMMIES OF THE CROCODILES ONCE WORSHIPPED THERE. AND ON THE WALLS CAN STILL BE SEEN THE FIGURE OF CLEOPATRA, HER BEAUTY CONTRASTING STRANGELY WITH THE HIDEOUS HEAD OF SOBEK, THE CROCODILE GOD

And how often it happens that carefully laid plans for a sketching tour are spoiled by a sudden rainy day. Not so in Egypt. The sun smiles ever on the man with a pencil searching for dazzling bright walls and deep purple shadows. But although the rain, which has stopped many a sketching trip in Europe, will never bother you in Egypt, Nature sends myriads of flies to try the nerves of the most ardent sketcher. Of course, if you are a good Mohammedan you will not mind flies, and will



GATEWAY OF MEDINET HABOU

TWO LONELY AND MAJESTIC COLUMNS FLANK THE PORTAL WHICH LED TO THE HAREM OF THE KINGS. HERE FROM BARRED WINDOWS THE WOMEN LOOKED DOWN ON THE PALACE GARDENS, AND OVER THE ENDLESS REACHES OF THE NILE VALLEY. ON THE WALLS THEIR STORIES ARE TOLD IN MASTERFUL RELIEFS, AND GHOSTS OF FAR-OFF FORGOTTEN HAPPINESS STILL SEEM TO HAUNT THE RUINED CHAMBERS

allow them to gnaw peacefully at every exposed bit of anatomy, including your eyes. But having neither the stoicism nor the horny skin of Arab or Nubian, I was about to give up in favor of the flies, when my wife came to the rescue with the offer to act as a royal slave, and switch flies off me. Thus we sat in a broiling sun, and the switch kept time to the groaning of a sakiyeh, and for once the flies were baffled in their desire for a living sacrifice.

There is one Egyptian word that no matter how inept one may be at learning Arabic, he can never forget,—the first word that every Egyptian learns as his eyes open to the light of day, "baksheesh,"—money. So often did I hear it that one day as I was walking far from the ever-present mob of natives, a little lamb bleated as I passed, and instinctively my hand dove into my pocket as the first fatal syllable rang in my ears,—"ba-a-a-a-sheesh."

Somewhere in this meandering article I intended

to complain about the heat of Egypt, but as I sit sweltering on a Summer night in a New York apartment, I long for what now seem like the frosty nights on the Nile. It is wonderful, the effect one can get with a little faked perspective, and the memory of a Tom Collins on the Terrace at Shepherd's.

For us the curtain had rung down on the pageant of the Nile. Six dreamy weeks had slipped by. Our impressions of this country, the cradle of the world's civilization, were inarticulate. It didn't seem possible for us to crystallize our feeling, or to put into words the effect which the monuments of this stupendous age had wrought upon our minds. But someone asked our eminently practical and thoroughly efficient English valet what he thought of the great temples of Egypt. His answer contains all the wisdom of the Sphinx itself, for it was,

"Well, sir, it all seems so unnecessary, sir."

1927 ANNOUNCEMENT, ROTCH TRAVELLING SCHOLARSHIP COMPETITION

PRELIMINARY examinations for the Rotch Traveling Scholarship will be held this year on Monday and Tuesday, April 4 and 5. Candidates must be citizens of the United States and under thirty years of age on May 1 of the year when they present themselves, and must have had experience in professional work during two years in Massachusetts in the employ of a practicing architect resident in Massachusetts, or with one year in a Massachusetts architectural school approved by the Scholarship Committee. The Boston Society of Architects has yearly offered a prize of \$100.00 which has been awarded to the candidate placed second on the recommendation of the Committee. The candidate chosen under the conditions of the competition will be awarded the Scholarship for a term to be determined by the Committee, but not more than two years. The scholar will receive \$2,000 for one year term, or \$3,000 for two. For further information, apply to C. H. Blackall, Secretary, 31 West Street, Boston, Mass.

RUINED CITY DISCOVERED IN MEXICO

THE discovery is announced of the ruins of a large ancient city covering an area of more than 60 acres, in the mountains, 12 miles from Tonalá City, in the State of Chiapas. The discovery was made by the Mexican Government expedition, whose members report the existence of large buildings, temples of great beauty, many handsomely carved and monoliths standing in the center of groups on esplanades or platforms. All the platforms are built of gigantic quadrangular blocks of granite. The preliminary examination of the hieroglyphics on the monuments suggests a low type of civilization, it is reported.



VIA MIZNER, PALM BEACH, FLA.

WORKING PHOTOGRAPHS—SERIES II

FROM THE ORIGINAL NEGATIVE BY DWIGHT JAMES BAUM, ARCHITECT



WHAT ARCHITECTS SHOULD KNOW ABOUT STEEL INSPECTION

By ELWYN E. SEELYE, *Consulting Engineer*

THE purpose of this article is to bring out the essential points to look for when inspecting a steel frame. It is assumed that the structure has been properly designed and that the shop work has been properly executed. It should be emphasized that shop inspection is very important. If the work is properly inspected in the shop it will arrive on the job with the sections called for on the plans. It will fit when erected and the shop work will have been properly performed. The field work will be lightened and no field changes should be required. It also avoids certain errors of fabrication that are not apparent after shop assemblage. Mill inspection is less important but has value, where steel is being rolled and some

orders are being inspected, for preventing rejected material being unloaded on the purchaser who does not have inspection.

Assume that the steel has been shipped in perfect order and is arriving on the site. The inspector should first look for material damaged in shipment. These will generally appear as bent plates or members and should be rectified by straightening, and, if necessary, by reinforcing, before the erection is allowed to proceed. If damage is serious an expert should be called in to pass on it. Where no shop inspection has been made, the field inspector should go over the shop riveting and also see that surfaces in direct bearing are milled and in contact.



AN ALTERATION TO AN ELEVEN STORY BUILDING TO PROVIDE FOR ADDITIONAL BAYS THAT REQUIRED UNUSUAL ENGINEERING FEATURES. STRUCTURAL WORK OF THIS ORDER REQUIRES THE MOST EXACTING INSPECTION FROM MILL TO BUILDING TO SECURE ACCURACY AND SAFE CONNECTIONS. ORIGINAL BUILDING CONSISTED OF THE THREE BAYS AT THE LEFT. THE ADDITION HAS PROVIDED THE TWO BAYS SEEN AT THE RIGHT



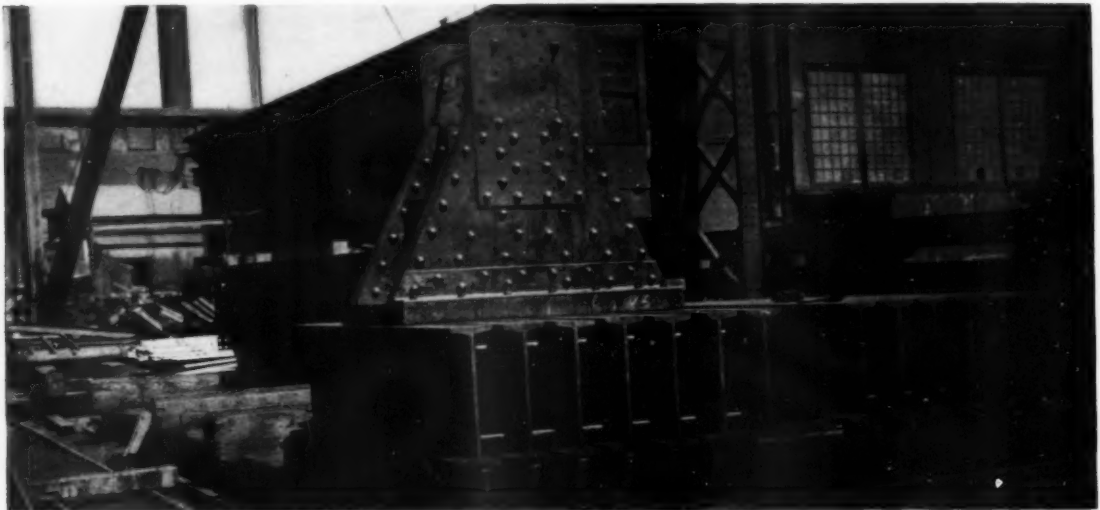
THE ERECTION OF A TALL BUILDING BETWEEN PARTY WALLS INVOLVES INDIVIDUAL ERECTION PROBLEMS, ONE OF WHICH IS THE SHORT GUYING OF DERRICKS. HEAVY CONNECTION PLATES OF THE STEELWORK INDICATE THAT LOADS ARE INVOLVED THAT PRODUCE LARGE STRESSES IN THE MEMBERS. INSPECTION OF RIVETING IN SUCH CONDITIONS IS OF UTMOST IMPORTANCE

Anchor bolts must be cemented into the foundations and must be accurately set and as they are difficult to change it is advisable to check their location. Column base plates and other milled surfaces should

be inspected to see that there are no burrs along the edges. In the erection of bases, consisting of grillages, steel plates or cast iron, it is important to see that they are properly grouted. This can best be done by pouring the grout into a funnel raised high enough to produce hydraulic pressure. The space between the concrete foundation and the iron should also be rodded to eliminate voids. Bases should be set on steel wedges. Do not permit wooden wedges to be used. It is very important that the bases be set level, faced on the top and that the column be faced to provide a full and even bearing between the bottom of the column and the base. In unimportant columns a discrepancy may be wedged with thin steel wedges, but in important work the full bearing without wedging should be insisted upon. This facing or milling can be done accurately and its omission on bearing surfaces is sufficient cause for rejection of the member.

When the erection starts the inspector should keep in mind the functions of the connections and the way the stress is carried from one member into another. This will enable him to check the work in a practical manner. For instance, he will notice that some steel beams rest upon seats which were riveted in the shop. The additional rivets are for the purpose of holding the beam in place and not to take a load. Other connections will be directly from the beam through the connecting angles to the column or girder by means of rivets. It will readily be seen that the rivets in this last connection are much more important and should be more carefully inspected than the field rivets in a seat connection.

Bear in mind that a rivet is supposed to hold by its shearing and bearing values, but that it also performs a very important function if tight, by hold-



A COLUMN GRILLAGE AND STUB SECTION AT THE MILL READY FOR SHIPMENT. CAREFUL SHOP INSPECTION ON WORK OF THIS KIND MUST BE FULLY RECOGNIZED

ing the two surfaces together and producing a large frictional resistance between the plates. It should also be remembered that the process of riveting induces a certain amount of internal tension in the shank of the rivet and thereby renders the rivet unreliable for additional tensile strains, and, therefore the writer prefers that bolts with lock nuts should always be substituted for any rivets that are supposed to act in direct tension. A request to use field bolting instead of riveting is often made. In deciding this question remember that the advantage of rivets is that they fill the hole and act together while bolts do not. A hand driven rivet, however, is apt to be poor and should be given little preference over the holding power of a bolt.

Having pointed out the essentials of having a tight rivet, the question is how to get it. It is absolutely necessary to inspect steelwork before riveting and see that the holes in the plates are concentric, for if a rivet be driven with $\frac{1}{8}$ " eccentricity, while it may be tight, and therefore impossible to detect after the riveting is complete, it may be a very poor rivet. The writer recommends that all differences of eccentricity of over $\frac{1}{16}$ " should be reamed, although this practice might be made less rigorous on unimportant rivets. The way to correct such a condition is by reaming and driving a larger rivet. The use of a drift pin to make the holes concentric by forcing action is to be condemned. In the same way the cutting of extra holes by means of an electric or other torch should not be permitted. Having inspected the joints and found, or made, the holes concentric, the riveting may proceed. If the rivet is tight and the head full, it should be passed, but if it is loose it should be cut out. The riveting should be closely watched, as a rivet may be inadequately tightened

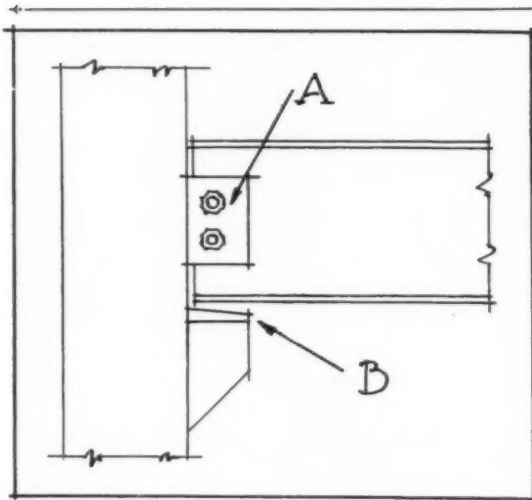


TOWER BUILDINGS MAKE THE MATTER OF WIND BRACING CONNECTIONS OF UNUSUAL IMPORTANCE. COLUMN BEARINGS, ALWAYS IMPORTANT, TAKE ON RENEWED IMPORTANCE IN BUILDINGS OF THIS TYPE. THE ABOVE ILLUSTRATION INDICATES THE STRUCTURAL PROBLEMS INVOLVED IN SETBACK STRUCTURES. INSPECTION PRINCIPLES ARE THE SAME FOR TOWER BUILDINGS AS FOR OTHERS

up by what is known as calking, which consists of the use of a hammer and chisel to wedge the rivet head. The rivet may have the fault of too short a stock and the heads will be flat. This should not be



A THIRTY-SIX FOOT COLUMN SECTION WEIGHING NINETEEN TONS IN THE SHOP YARD READY FOR LOADING ON CARS. AN INSPECTOR'S MARK IS SEEN ON THE UPPER PART OF THE COLUMN SECTION



CAST IRON COLUMN CONNECTION FOR STEEL BEAM. CAST IRON LUG A IS TOO HIGH TO PERMIT THE BEAM TO REST ON BRACKET B. AS A RESULT CAST IRON SHELF DOES NOT SUPPORT THE BEAM AND THE EFFECTIVENESS OF THE CONNECTION DEPENDS ENTIRELY UPON THE SUPPORTING VALUE OF THE CAST IRON LUG

confused with heads which are purposely flattened or countersunk for clearance. Another method of ineffectually tightening the rivet heads consists of raising the plate surface under the rivet by driving the rivet snap sideways against the plate. Where the

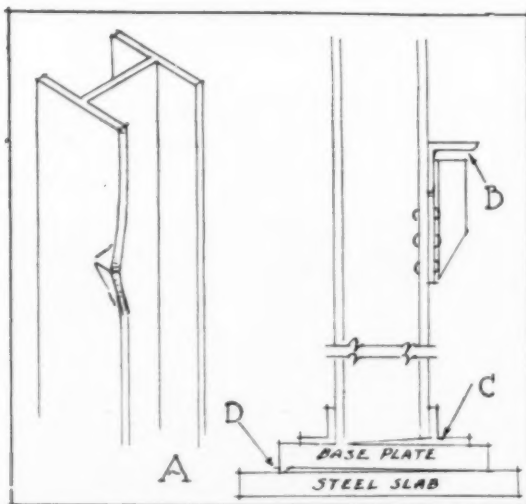
plate has been injured or shows a ridge around the rivet the rivet should be cut out. Cold hammering of heads should never be allowed. It is easy to detect this because a smaller snap is used on a head when cold hammered.

The testing of a loose rivet can best be done with a small hammer. Strike the rivet head several good blows with the hammer to see if it can be "floated" or moved up and down. Then place the finger on the opposite side of the head to see if there is any jar.

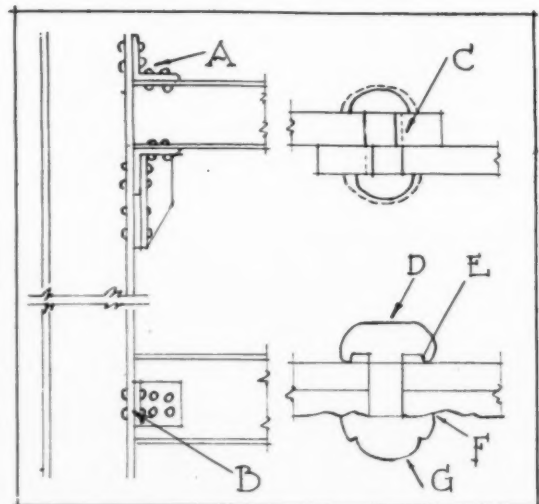
A small tile hammer with an initial die cut in the head by annealing it soft and hard again will serve the purpose of surely marking defective rivets. Defective rivets are usually marked with chalk. Rivets inaccessible for driving should be replaced by reamed holes and turned bolts, *i.e.*, bolts machined to fit.

See that the size and weight of beams called for on the plans are furnished. Owing to sizes being made in a number of different weights, the flanges should be carefully measured to detect any substitutes. However, where shop inspecting has been properly performed this check of sizes is not as essential. Where a beam or girder rests upon a wall, care should be taken to see that it is amply supported by the masonry and securely anchored.

Painting is a very important matter in the preservation of steelwork, and all portions where paint has been removed by shipment should be repainted before erection. The field coat should be of different



- A. AN H COLUMN WITH FLANGE DAMAGED IN TRANSIT OR UNLOADING. DAMAGED MEMBERS OF THIS KIND SHOULD BE STRAIGHTENED BEFORE BEING ERECTED IN PLACE. IF DAMAGE IS BEYOND CORRECTING AT THE JOB, A NEW MEMBER SHOULD BE ORDERED
- B. BEAM SHELF AND BRACKET SHOWING CONDITION WHERE BRACKET ANGLES HAVE NOT BEEN RIVETED TIGHT TO THE SHELF ANGLE AND AS A RESULT HAVE PRACTICALLY NO SUPPORTING VALUE
- C. BASE OF COLUMN SHOULD BE MILLED AND SET SQUARE AND LEVEL. COLUMN SHOULD BE SET PLUMB. CONDITIONS SUCH AS THAT SHOWN ARE DANGEROUS



- A. RIVETING OF THIS CONNECTION IS OF MINOR IMPORTANCE
- B. RIVETING OF THIS CONNECTION IS OF UTMOST IMPORTANCE
- C. THE HOLES OF PLATES NOT IN ALIGNMENT SHOULD BE ENLARGED AS SHOWN AND A LARGER RIVET USED THAT WILL FILL THE HOLE
- D. A RIVET WITH FLAT HEAD INDICATES THAT THE RIVET STOCK IS TOO SHORT
- E. CALKING TO MAKE THE RIVET TIGHT IS BAD PRACTICE
- F. DRIVING SNAP SIDWAYS AGAINST THE PLATE TO TIGHTEN THE RIVET IS NOT GOOD PRACTICE

color from the shop coat. See that all steel is free from rust, scale, dry and do not permit painting in freezing weather.

The preservation of the steel in exterior walls is most important. The specification should call for all exterior wall steel to be parged with neat cement.

Cast iron members should be carefully inspected for visible defects. All cast iron columns should have at least two holes drilled in the column for the purpose of checking the thickness of the column. Often the core is displaced in pouring, rendering the column thinner on one side than the other. A discrepancy of more than twenty-five per cent in thickness due to core displacement should be cause for rejection on the job.

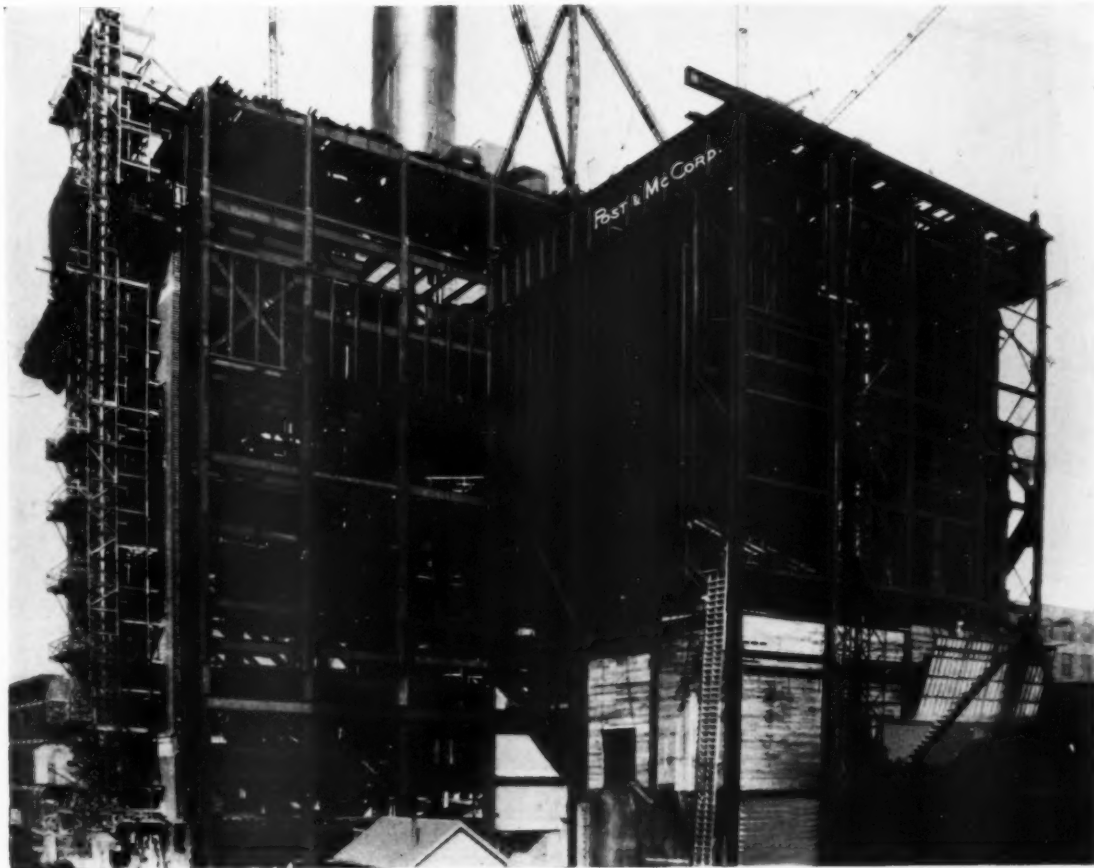
All bearing surfaces in cast iron should be milled. Columns that are crooked should be rejected. The cast iron beam seats should slope down outwards to make the beam bear as close as possible to the column and eliminate flexure in the seat. A double lug generally engages the web of a beam through which a single bolt is passed. On one job these bolts held the beams up off the seat and necessitated field changes.

All steel should be marked for identification in the field and the shop inspector's mark should also appear. The most intelligent field inspection can be made by a representative from the designer's office, as he will be able to follow the designer's intent.

The inspector should co-operate with the erector in safeguarding the structure from accidents during erection. See that the derrick base is secured from the horizontal thrust of the boom in any direction. The steel carrying the derrick should be strong enough and have sufficient connections for the erection stresses involved. Warn the erectors against such dangerous practices as lifting too heavy a load for the strength of counterweights of the derrick, booming out too far, and the splicing of booms.

Guying and bracing steel in the process of erection against wind pressure is important. In this case it is well to remember that serious accidents have occurred through the shrinkage of guy ropes when wet. To sum up, see that:

1. Steel is inspected by a competent bureau in the shop.
2. Column bases have a proper masonry contact.



STEEL FRAMED INDUSTRIAL BUILDINGS OFTEN INVOLVE LARGE LOADS AND RESISTANCE TO VIBRATION. THE IMPORTANCE OF PROPER INSPECTION FROM MILL TO ERECTION CANNOT BE OVERESTIMATED

3. Columns bear directly on bases with full bearing; that columns bear directly on columns with full bearing and that all stiffeners are milled to bear.
4. Steel members are repaired and straightened where injured during shipment.
5. Direct tension connections are made by bolts.
6. All rivets are tight and driven in concentric holes.
7. All steel is protected by a two-coat paint job, and that wall steel is parged.
8. Beams have proper wall bearing and secure anchorage.
9. Cast iron is inspected for workmanship, flaws, and eccentric cores.
10. Erection is safeguarded against accidents.
11. Errors in design, which may be apparent in the field, are corrected.
12. Alignment is secured in accordance with American Institute of Steel Construction standards.

Acknowledgement is due Post and McCord for the photographs used to illustrate this article. Various structural engineers were responsible for the design of the steelwork of the buildings illustrated.



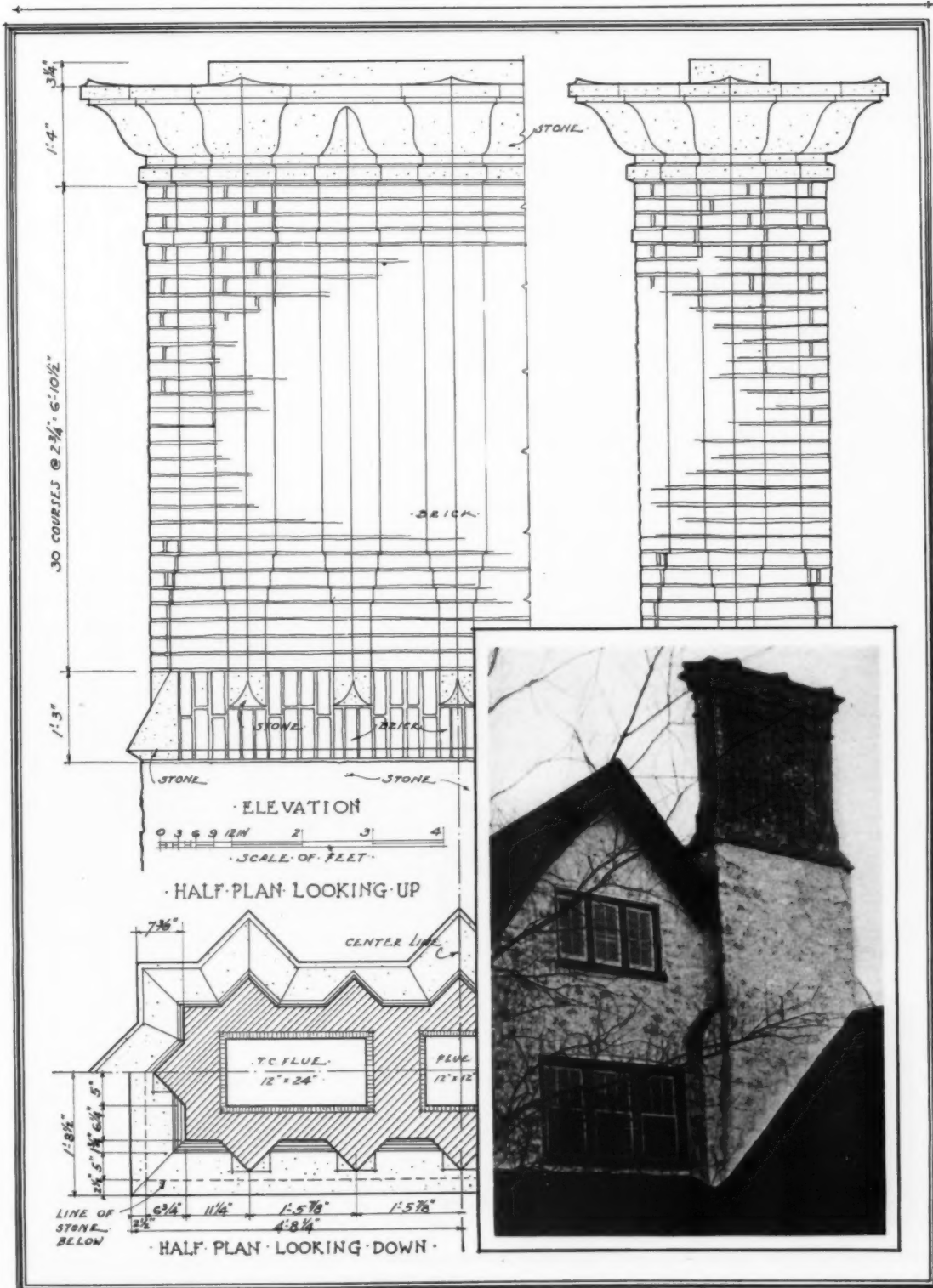
A NORTH WOODS LODGE AT DUCK LAKE, MICHIGAN

THE ROOF IS OF METAL FORMED TO THE SHAPE OF SPANISH TILE. THE METAL TILES ARE PAINTED IN SHADES OF BROWN, BLACK, YELLOW AND SLATE-BLUE WITH CLAY RED COLOR PREDOMINATING. THE EFFECT PRODUCED BY CLAY ROOFING TILES WAS OBTAINED BY FIRST PAINTING THE ENTIRE ROOF CLAY RED AND THEN RECOATING THE TILES AT INTERVALS IN VARIOUS COLORS

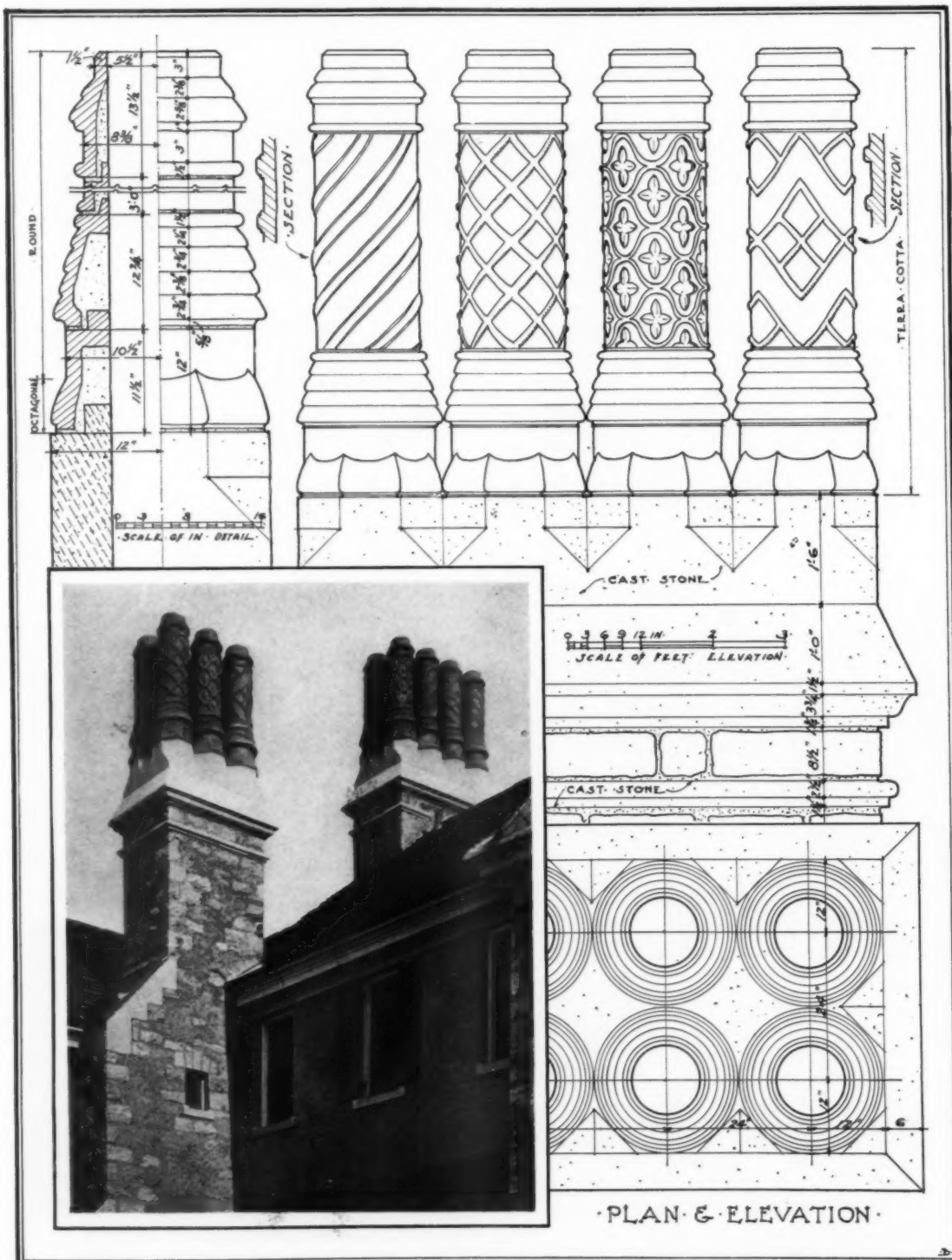
PAINTING SPECIFICATIONS

THERE is observed a tendency on the part of manufacturers to furnish architects with the information they require in a form convenient for their use. As an example there may be mentioned "Architectural Specifications" recently issued by the Architectural Division of E. I. DuPont De Nemours & Company. The book is bound with an index tab cover indicating the proper A. I. A. file number. Sub-index tabs permit ready reference to the specifications for

house paint, metal paint, shingle stain, wall paint, floor paint, enamels, and wood finishes. Concise specifications for each type of paint are printed on white paper. Descriptions of the various paints are printed on yellow paper and wherever possible color cards are included. General conditions for use in connection with the painting specification are included. This is a commendable piece of producer's literature that may well find a place in the office files. Its arrangement is convenient and practical for the use of specification writers in architects' offices.



DETAIL OF CHIMNEY TOP AND CAP
CONSERVATORY OF HOUSE OF RICHARD SELLERS, BELLEVUE, DEL.—PRENTICE SANGER, ARCHITECT



DETAIL OF CHIMNEY TOP

HOUSE OF WALTER ROTHSCHILD, WHITE PLAINS, N. Y.—TAYLOR & LEVI, ARCHITECTS



INTERIOR ARCHITECTURE



FORM AND COLOR AS APPLIED IN FURNISHINGS

By HUGER ELLIOTT

Director of Educational Work, Metropolitan Museum of Art, New York

THIS address was delivered by Mr. Elliott at the conference held under the auspices of The Architectural League of New York, at the Grand Central Palace, February 24th. Mr. Elliott forcefully states the very principles which the articles appearing regularly in this department strive to emphasize and explain. The chairman of the conference at which this paper was read was H. Van Buren Morgan, F.A.I.A. Other papers presented appeared in our March 5th issue.—EDITOR'S NOTE.

THE part allotted to me in this symposium—in which we are asked to discuss, in the various fields, "the simple (Heaven save the mark) the simple problem of disposing the elements of light and shade and color in such a manner as to produce a beautiful thing"—concerns those objects which still remain to be considered after the building has been built, its grounds laid out, its walls enriched with mural paintings and its pediments or pedestals equipped with sculpture: that is, chairs and tables, hangings and rugs, lighting fixtures and movable ornaments. Truly, "simple" is the inescapable word: the "simple problem" of creating beauty with these.

First—what inclusive name are we to give these objects? I cannot refer to them collectively and comprising the "decorative arts" as I consider (as of course do you) painting and sculpture also most eminently decorative. We find the term "allied arts" used. Allied to what?—certainly to architecture: but is it sufficiently definitive? The words "industrial arts" are in common use—but although such objects are produced by the industries we classify as artistic, dress and jewelry must also be included in such a category. "Minor arts" I cannot subscribe to—since so often one finds a bit of brocade or a Rhodian platter which stirs one's enthusiasm while many a painting or piece of sculpture moves it not at all. To label these "major arts" and those "minor" is to flatter one group and discriminate somewhat contemptuously against the other. Let us, for the time being, call them furnishings.

My task, therefore, is to discuss the furnishings of the building: the choice and placing of these so

that they produce harmony—in form and color—and have the added beauty of being adapted to their use.

Is this a problem which may be discussed in general terms? We can stress the fact that we desire unity in the resulting effect; that chair, table, carpet and curtain must each play its part in the symphony of the whole. And immediately the questions arise—what chair, which table, what type of floor covering, what kind of curtain?

Such questions must always have confronted the artist, but never can they have been so distracting as at present; never has the range of available material been so great. In the seventeenth century the designer had to decide whether he would choose green or gold, for instance; he did not have to weigh the relative merits of furnishings in the Greek or the Gothic, the Jacobean, the Georgian or the General Grant manner. Are we to be classic or Colonial—shall we think in fifteenth century Italian modes or be strictly of the twentieth century? The researches of the archaeologist, the invention of photography, the marvellous development of the power-driven machine—these have so changed, so complicated the conditions under which we work that we wander distracted amidst the multiplicity of the resources at our command.

We are being told on every hand that we must express our own time: this period of mechanical wonders—the automobile, the aeroplane, the motion picture, the radio. Why, the critics say, do you not produce something new, something different? Wireless telegraphy is new—flying is new; give us, we pray, something new in your line. We might with justice reply—we will give you a new form of chair when you give us a new anatomy. Until that time it must keep the general characteristics which it had in the time of Rameses. Shapes and sizes of tables and bedsteads must continue to be determined by the shape and articulation of the human body. The critics indicate the "skyscraper" as an expression of our age—saying, go thou and do likewise; but fail to note that these towering structures of steel have been developed to meet a new need. The soaring masses of the Woolworth Building or the

Shelton Hotel show what the genius of our architects can accomplish in meeting new conditions. But are there, within these buildings, new needs insofar as furnishings are concerned? None whatever. The cry for novelty is based not on any necessity for the novel but on the desire for something different merely for the sake of being different. These gentlemen seem to tremble lest we do not live up to our opportunities; they fear that we are not expressing ourselves—as though self-expression were desirable in itself, regardless of what is expressed. It is the curse of our self-conscious age—this dragging into the limelight of every little talent which may be discovered and bidding it express itself merely that the newspapers may have another headline with which to joggle the jaded sensibilities of the readers. We must have startling headlines, whether there be adequate reason for them or not. So we must be different—the desirability, the value of the novelty is a matter which need not be considered.

Let us have done with these demands that in our furnishings we express our age. The creative spark will not burst into flame fanned by the "hot air" of the self-conscious seeker after the unusual. On such flashes-in-the-pan we must "turn the hose of common sense." Neither will the spark burn, as we all know, when fed only with the dry husks of archaeological data. We must plod on, learning from the mistakes of the past as well as from its achievements—taking thought that what we make be beautiful and suited to its purpose, and let a new expression come of itself—as it surely will when new needs present themselves.

Still, there remains the problem: what table—what type of rug? But need we care, so long as the objects are beautiful? We have outgrown the limitations of the "period room" era. We ask for harmony, not historical accuracy. We have all the ages from which to choose; but we now choose as masters, no longer accept like slaves. Though we may not have evolved—at least, in as yet recognizable form—a new style, we *have* achieved taste. Can the critics ask more than that? Even at the beginning of the century we were still somewhat uncertain of our judgment and therefore sheltered ourselves behind the unassailable dicta of authority. "This is pure Adam"—(those good young men); "this unquestioned Louis Quinze." We must walk in step with Owen Jones, else we stumble. Now, however, thanks to our architects, we walk upright and unafraid: we step out, assured that through the cultivation of our sense of fitness, of beauty, we need no longer the leading-strings of the past. Nor are we to be beguiled by the eccentricities of self-constituted leaders of one fad or another. We go quietly ahead and common sense is our guide; what comes will come, and we have done our best so long as we have been deeply sincere in our search for the best.

We do not need to be distracted by the multiplicity of the resources at our command. Rather, our achievements can be just so much finer because we have all the beauty of all the ages to choose from. The necessity of clear thinking, of high standards, of impeccable taste on our part is greater than ever before—for this very reason our work will have a beauty of which man has not as yet dreamed.

The furnishings of France and Italy, England and Spain which we study and adapt, graced the halls of kings. In our adaptations, by means of the lessened costs which come through quantity production, we offer the simple citizen of modest means the opportunity of living amidst surroundings more tasteful than those of royalty in former days. And in spite of many authoritative voices to the contrary—in spite even of the "comic strip"—I do not hesitate to say that in this new era in which the arts, as well as the governments, of all the world are slowly, but inevitably, joining forces for the common welfare, we shall achieve artistic standards higher than any the world has yet known.

It is obvious that the basic form of the chair must remain fixed—that tables and cabinets have but limited range so far as structural variations are concerned. And as soon as we cease to ask to what period a piece belongs and substitute the questions—is it logical in construction, is it fine in line and color—we have, when these questions have been answered in the affirmative, all the knowledge we need. What matters it if it be Jacobean or Georgian (these are points which should interest only the dealer in antiques) or in the least self-conscious mode? We, concerned with creating beauty in an interior, demand only that it be suited to the harmony we have visualized. The dealer in antiques has always been with us—although in mediaeval times he dealt in saintly relics instead of Chippendale chairs—and I suppose always will be. But his gains will be greatly decreased when we grow courageous enough to say that an old piece is of no more value than a new, if they be equal in beauty. We have no further use for "period" furniture, as such—even though we may not have improved on it.

When we turn to lighting fixtures, we see what can be accomplished when our designers are confronted by new conditions. From the moment when the primeval torch was lighted until the invention of the electric bulb, fixtures were so designed that the flame should burn vertically—because, of course, it would burn no other way. When electricity was first introduced tradition was too strong for the designer and he placed—and still places—his bulb in a vertical position, as though from necessity. Slowly, however, it began to dawn upon him that the bulb would give light without reference to its position. So he began to vary the forms of his wall brackets and chandeliers—we must still so name

them, "electroliers" being an impossible term—and we now have lighting fixtures which are at once beautiful and logical, being designed with a clear understanding of their possibilities. That they are often fashioned in supposed conformity to an historic style is merely an indication of how loath some of us are to think for ourselves.

The basic principles of weaving have not changed in spite of the almost uncanny accomplishments of the Jacquard loom. Upon it we can reproduce the old patterns of those which express our times—if any such can be found. Have you, in this connection, seen the printed dress-silk which pictures the not-universally-accepted statement that "Gentlemen prefer Blondes?" It is not so to be recognized at first glance: it is clever and quite decorative. When, or if, worn, it should serve the wearer as the white-washed coal did the resourceful hostess: "it makes conversation," she remarked. Usually, however, we wish to have fabrics whose beauty will give pleasure rather than those whose oddities will excite comment.

In the field of textiles we have, save in two cases, structure which lends itself to almost any type of design we may desire. Therefore, fabrics afford a wide field for experimentation, and some of the novelties are interesting and may lead to worth while results. An unfortunate development of the present-day craze for the antique is the manufacture of damasks and brocades with what purport to be worn spots woven into them. The fabrics are, it is true, quite effective; but the logical mind is dismayed by such false quantities. The practice seems almost more reprehensible than the shooting of worm-holes into new-made furniture or the placing of hammer-marks upon silver which has been stamped out by a machine.

Two types of textiles have, so far, defied the almost miraculous imitative powers of the Jacquard loom: the rugs of the Nearer East and tapestries. In these two groups we find those particular qualities which may be given, it would seem, only by the brain and hand of the craftsman. The variations of color introduced by the weaver as the spirit moves him; the irregularities which give life to the repeated pattern: these subtle expressions of the personality of the artist have not, so far as I know, been successfully reproduced. The power-driven loom has, however, been made to do so many astounding things that I dare not affirm that the glory of fifteenth century tapestries or sixteenth century rugs will never be successfully imitated.

So numerous are the objects which may be grouped under the head of movable ornaments—glass, ceramics, cast or wrought metal—that one despairs of marshalling them into any semblance of an orderly array that they may be passed in review and their qualities commended or adversely criti-

cized. General statements are not possible; detailed discussion impractical; time is lacking for comment on the variations to be found in hand or machine-made wares. They must perforce be passed by without notice.

To some it seems necessary to praise the qualities to be found in the article made by hand and to refer somewhat contemptuously to the machine-made product. Such critics evidently forget that the machine is but an inanimate tool—doing what it was created to do. Mistakes have been made in demanding of the machine that which it was not fashioned to produce. The machine is not to blame. The fault lies in the man who created it to do one job and then expected it to do another. It is the designer who does not comprehend his tool—its limitations as well as its possibilities—who is at fault. We must still—must ever—train the designer. We hear much mournful talk of the passing of the craftsman. He is still with us—only with new and wonderful tools at his command: machines which can increase his output a thousandfold. But no machine can make a creative artist. The help the designer needs must come from those who train him.

Among those who have trained him none has been more helpful than the architect. For he is both artist and business man, at once the dreamer of dreams and the practical man who gives reality to his dreams. Not without reason did Reginald Blomfield give the title "The Mistress Art" to a book on architecture. Dealing with an abstract, not an imitative art, the architect points the way to clear thinking—and though the sister arts clothe themselves with familiar trappings or sublime imagery, they must, to survive, be founded upon the principles established by the mistress art. In structural truth, in the logical adaptation of the means to the ends desired, in the conventionalization of nature-forms that they may harmonize with the building, architecture sets the standards.

These principles, therefore, you must keep before the craftsman. Architects should be on the board of every school where the crafts, as well as the other arts, are taught. Don't be deterred by diffidence; where you find a board lacking an architect, see that one is placed on it. It is also your duty to see that in training of the rising generation of architects a sympathetic knowledge of the artistic crafts is given. The students in the architectural schools need not hammer iron or cut and lead the glass for windows; they can, however, learn something of the limitations and the possibilities of the crafts which will play so important a part in the effect of their future productions. See that they get what Professor Ware of blessed memory used to give us at Columbia: an understanding of and love for all the arts.

Mr. Magonigle asked me to discuss the problem of disposing of light and shade and color in furnish-

ings in such a manner as to produce a beautiful effect. I have spent much time talking about the furnishings themselves but have said nothing about the problem which I was asked to consider.

The reason is obvious: I can find no theories generally applicable. I can repeat the obvious statement that we desire unity of effect—but each room is a problem in itself. The color and form of the individual pieces and the composition of these in the given space for the desired uses are matters which call for special and not general discussion. Is it a

banking room or a boudoir; is the ceiling high or is it low; is the chief entrance at the end or on the side? Until these and forty other facts are known, nothing can be said—save that we intend to create beauty.

Isaac Newton, on being asked how he had made his discoveries, replied: "By always intending my mind." That is the mental attitude we must have if we are to create beauty: the intention—the fixed determination always present—that, whatsoever we do, beauty is the result.

INTERIOR DESIGNERS AT THE ARCHITECTURAL LEAGUE

ONE of the features of the Architectural and Allied Arts Exposition, held recently under the auspices of The Architectural League of New York, was the exhibition of interior architectural products and house furnishings in booths in the form of completely decorated and furnished rooms. These rooms attracted an unusual amount of interest from the visitors, as they showed so capably how various products of both structural and decorative values might be incorporated into the design of an interior. Many of the booths presented original ideas in interior architectural design, while the traditional "period" room was, as ever, very much in evidence.

The booth occupied by THE AMERICAN ARCHITECT was designed to demonstrate in a practical

manner the relationship of structure to architecture and decoration, and to prove that the furnishings of an interior should take their place as components in the finished composition. There was noticed in the design of a majority of the other booths also a tendency to emphasize this close relationship of architecture to furnishings. The so-called "modern room" was represented by the exhibition of Wm. Baumgarten & Company, Inc., although we feel that this style interprets more the spirit of modern France than of this country. The room exhibited by S. Karpen & Brothers, while modern in the sense of the word that it bore no decided period influence, was designed purely on simple architectural lines, with specially designed furniture in harmony with the architectural treatment.



TWO VIEWS IN THE BOOTH OF THE AMERICAN ARCHITECT IN THE FURNISHING OF WHICH THE FOLLOWING FIRMS COLLABORATED: EDGEWATER TAPESTRY LOOMS, KANTACK & COMPANY, PERSIAN RUG MANUFACTORY, SHAW FURNITURE CO.



G. E. WALTER'S BOOTH FEATURED A MODERN PRODUCT WHICH AFFECTS PLAIN AND CARVED WOOD



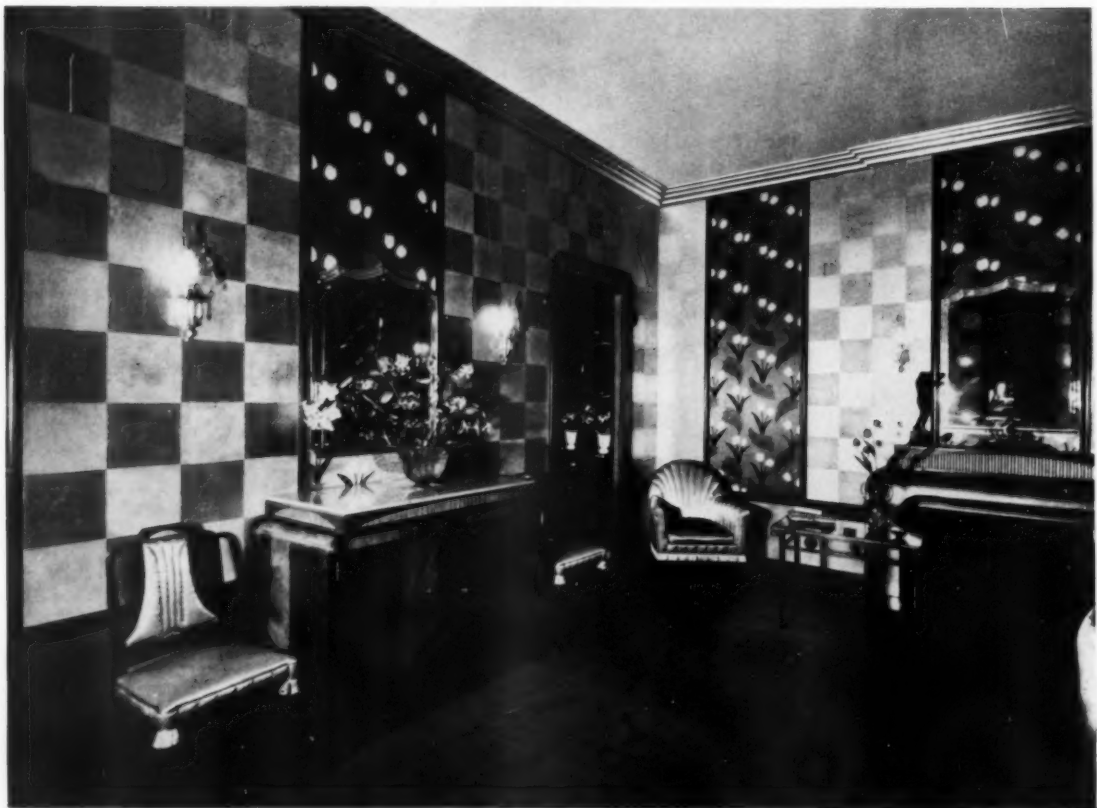
MORENE PRODUCTS COMPANY FEATURED ROUGH TEXTURED WALLS IN THEIR BOOTH



A GENUINE OLD FRENCH PANELED ROOM WAS EXHIBITED BY CARLHIAN OF PARIS, INC.



THE ROOM EXHIBITED BY S. KARPEN & BROTHERS WAS THOROUGHLY ARCHITECTURAL



ROOM IN THE MODERN FRENCH STYLE DESIGNED BY WM. BAUMGARTEN & COMPANY, INC.

"Thirty-five Years of Experience Proves The Value of Copper and Brass"

 **STONE & WEBSTER**
INCORPORATED
147 MILK ST. BOSTON
DIVISION OF CONSTRUCTION AND ENGINEERING
Boston, Mass., January 8, 1927.
REFER TO EXECUTIVE

American Brass Company,
Waterbury, Connecticut.

Dear Sirs:

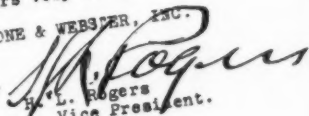
Our standard specification calls for the use of copper for flashings, counter-flashings, skylight construction, etc., and it is our practice to use brass or copper pipe for hot water supply systems in office buildings and similar locations.

In power house design copper alloy is invariably used in hot water heaters, and in the condensers through which raw water is pumped.

Our experience covering a period of more than thirty-five years has proved the value of copper for sheet metal where it is to be exposed to the weather and for copper or its alloy in piping where permanence against corrosion is the controlling feature.

Yours very truly,

STONE & WEBSTER, INC.

By 
H. L. Rogers
Vice President.

THE dependability of Anaconda Copper, Brass and Bronze is safeguarded by the guaranteed purity of Anaconda mined and refined metals, and the hundred years' experience of The American Brass Company in manufacturing copper, brass and bronze products.

Eight conveniently located mills assure dependable coast-to-coast service. And mill-trained representatives stationed in many cities are at the service of architects in all matters relating to the use of copper, brass and bronze.

THE AMERICAN BRASS COMPANY

General Offices: Waterbury, Connecticut

Mills and Factories: Ansonia, Conn., Torrington, Conn., Waterbury, Conn., Buffalo, N. Y., Hastings-on-Hudson, N. Y., Kenosha, Wis.

Offices and Agencies: New York, Chicago, Boston, Philadelphia, Providence, Pittsburgh, Cleveland, Detroit, Cincinnati, St. Louis, New Orleans, San Francisco.

Canadian Mill: Anaconda American Brass Ltd.,
New Toronto, Ontario

ANACONDA COPPER

BRASS ANACONDA BRONZE



Specifications of most products advertised in THE AMERICAN ARCHITECT appear in the Specification Manual

THE LAW AS TO ARCHITECTURE

By CLINTON H. BLAKE, JR., of the New York Bar

OUR discussion this month is concerned more closely perhaps with the practicalities of the architect's practice in some particulars than it is with the strictly legal side of his practice. Any legal advice nowadays, however, which looks merely to the letter of the law and disregards the practicalities is not likely to be overhelpful.

Many recent cases which have come to my attention have emphasized anew the problem which is presented to the architect when a client fails to make the installment payments which come due as the work of the architect progresses. In such a case, the architect must decide whether he will let the overdue payment run along, in the hope that it will ultimately be taken care of, or whether he will press the client for payment before proceeding further with his services. It is entirely understandable how an architect will hesitate to press his demands for payment in the fear that by so doing he will alienate a valuable or potentially valuable client. In this respect, he is faced with the same problem as confronts the lawyer, the physician and practically all other professional men. I have become entirely convinced, however, that the course of wisdom in the great majority of cases is for the architect to insist on payment of past due installments, before getting more deeply involved. The first point at which this issue is presented, ordinarily, is the point at which preliminary studies have been completed. The one-fifth of the fee thereupon falls due. In repeated cases, the client, either through an oversight or purposely, disregards the architect's bill rendered to him at this stage of the proceedings.

The architect is called upon to decide, therefore, whether he will proceed with the working drawings, leaving the bill for the sketches outstanding and unpaid in the meantime, or whether he will delay any real work on the working drawings and specifications until the client has settled the obligation which he has already incurred. In altogether too many cases the architect will decide to take a chance and will proceed with the working drawings and specifications, in the expectation and hope that the client will ultimately pay the bill already rendered. In many cases, these expectations will be realized and the bill paid and no harm will result. It is where this happy result is not attained, however, that the architect runs into real difficulties and is severely penalized.

Every practicing architect knows how quickly a substantial amount of money may be expended in the preparation of specifications and working drawings. He will be extremely foolish, if he proceeds with this additional expense, while his prior bill remains unpaid, unless he has every reason to believe

that the client will take care of his obligations, without quibbling or difficulty. Of course, where the work is being done for a client of established responsibility and with whom the relations of the architect are such as to give the architect a reasonable assurance that the client will not attempt to take advantage of the situation and indulge in any sharp practice, the architect is taking only an ordinary business risk in proceeding with the work. A very different position is presented, however, when the client in question is a new client for whom the architect has not previously worked, or a client with whose business stability and conscience the architect is not well and favorably acquainted. In any such case, the wise course most certainly is to request payment for the work already done, before incurring new expense and laying out additional time and services on the next succeeding stage of the job.

This rule applies equally to architects with large practices and to architects with small practices and of limited means. It is perfectly true that the large architectural office can afford to carry outstanding accounts, where the small office cannot afford to do so. On the other hand, the amounts involved on the jobs handled by the larger offices, are far more substantial and the losses, if suffered, far more serious in dollars and cents, although perhaps not in comparison with resources, than in the cases of the smaller practitioners.

In the last analysis, the architect is presented with the same problem, whether he preside over a large and successful office or is substantially a beginner in the practice of the profession. He will, I am convinced, be foolish to proceed with additional services and risk loss in time and money as a result, without insisting on payment for services already performed, in substantially every case where he has any reason to doubt the fairness or financial stability of the client. The argument that, by pressing for payment of a past due account, the architect may alienate the client sounds reasonable, but, when applied to cases of this character, is in reality unsound. If the client is honest and responsible, he will not object to the payment of an account which has become due and which represents money to which the architect is entitled for work already performed, in accordance with the terms of the agreement under which the work has been done. If the client is of a different calibre and of the type which is prone to take advantage of a situation, or one who is not inclined to deal fairly with those whom he employs, the architect will do well to learn this fact at the earliest possible date and not after he has piled up a heavier load of office expense, overhead and time.

It will be far better for him to have a show-down

SERVICE TO BUILDERS AND ARCHITECTS



THIS institution, founded in 1882, renders a service alike to the investing public, the builder, the architect and the community.

In the course of our development into a nation-wide organization we have built up a large, thoroughly trained and thoroughly equipped organization which passes on every plan submitted to us.

This organization, through constructive suggestions and exceptional technical knowledge, has often proved of practical and substantial benefit to architects and owners.

LOAN DEPARTMENT

S.W. STRAUS & CO.

Established 1882

Investment Bonds

Incorporated

STRAUS BUILDING
565 Fifth Ave. at 46th St.
NEW YORK

STRAUS BUILDING
Michigan Ave. at Jackson Blvd.
CHICAGO

STRAUS BUILDING
79 Post Street, SAN FRANCISCO



The Straus Hallmark on a bond stamps it at once as *the premier real estate security.*

immediately than to fool himself, by treating as good, accounts which may be uncollectible, and, which is far more serious, piling up additional expense and obligations on the strength of these accounts and on the assumption that a client who has not paid the first bill rendered to him will nevertheless promptly take care of future bills.

I have in mind, as I write, a number of specific instances—some applying to very large architectural firms, and some to extremely modest practitioners, which emphasize the soundness of the foregoing conclusions. A surprising number of cases come to me where the architect would never have experienced the difficulties which he has, if he had insisted upon reasonably prompt payment when it fell due, and had not elected to gamble on the responsibility or honesty of the client. Neither the architect of large means nor the architect of small means can, as a business proposition, afford to do this. Both from a legal point of view and from the point of view of sound business, he will do far better to insist that the client for whom he works abide by the terms of the contract between them, just as the architect abides by them. The architect agrees to give his services and does give them unreservedly as called for under the contract. There is no reason why the client should expect to have more license granted to him in observing the terms of the agreement or why the architect should feel it necessary, except in exceptional cases, to grant to the client a latitude in observing the contract which the client will not grant to the architect and which the architect will not seek.

LEGAL DECISION

UNDER the laws of the State of Pennsylvania, the County Commissioners were not authorized, without additional approval by other bodies, to enlarge or alter public buildings. The Commissioners made a contract with an architect to provide plans for and to supervise the work of construction involved in the alteration of a public building. On suit by the architect for his fees, the Commissioners pleaded that they were not authorized to make the contract. It also appeared, in connection with a claim by the architect, that at his suggestion the material for the building was changed from sandstone to granite, which involved an extra expense of something over \$50,000. It was testified to by the Commissioners in this connection that the architect strongly urged the change and, as an inducement to its adoption, stated that he would reduce his commission on the extra cost to 2% or to 2½%. The witness was not clear which was the correct amount.

The court held that, as the Commissioners could not legally enlarge the building without proper additional authorization, they could not make contracts for that purpose, without similar authorization, and that the agreement with the architect to provide plans for the alteration of the building, etc.,

and supervise the work was just as much an agreement for a portion of the enlargement of the building as would be any other work or material performed or furnished in connection with such enlargement. The court further held that the agreement of the architect to reduce his fee, in consideration of the adoption of the granite, was based upon a good consideration, and that he would be held to this agreement: that, inasmuch as the witness could not testify whether the architect agreed to accept 2% or 2½%, however, on this additional expense, the architect was entitled to have the doubt resolved in his favor and to receive 2½% accordingly.

The court further held that the cost of removing existing buildings and of testing steel, both of which operations were necessary in the work of construction, were properly part of the cost of the whole improvement, and these expenses should be included in the total cost, upon which the architect's fee was based. A claim by the architect for other services was held to be barred by the statute of limitations, inasmuch as action to enforce it had not been begun within the time limited by the statute.

Osterling v. Allegheny County, 272 Penn. 458.

30

TENPENNY NAIL'S NAME GOES BACK TO DAYS OF IMPERIAL ROME

MANUFACTURERS of nuts, bolts, screws, nails and other mechanical appliances in their efforts at standardization of names, numbers and sizes of their products have often been puzzled to account for the name or other designation identifying a particular thing. Often these names bear little or no apparent relation to the idea they are supposed to express. It would seem to be a matter of etymology rather than of business. Nails, for instance, are made and sold in various sizes under the designation of "pennies." It is a far cry from a penny—a piece of money—to a nail. There is apparently no relation between the two except, of course, in the matter of price, a general relationship applying to all articles bought and sold.

The penny system of designating the size of nails comes to the west by way of England. There are two explanations of its origin. One goes beyond early Saxon England to Imperial Rome. The Romans had a coin, the denarius, the abbreviation for which was "d." This abbreviation came into use in Britain for the pound weight. The "d" also is the modern abbreviation for the English penny. Its use in connection with nails is traced through the belief that in early days in Britain one thousand tenpenny nails—that is, nails of a certain size—weighed ten pounds. The other explanation is that one hundred nails of a designated size cost sixpence, one hundred of another size, tenpence, hence the names sixpenny, tenpenny nails and so on.



JEWELERS'
BUILDING
Chicago, Illinois

Carney Cement
was used for all
the mortar in this
project.

Architects—GIAVER & DINKELBERG,
Contractors—STARRETT-DILKS Co.,
Chicago, Illinois.

REPRODUCED FROM THE ORIGINAL RENDERING THROUGH
THE COURTESY OF MESSRS. GIAVER & DINKELBERG.

VERY often, we find members of the profession under the impression that Carney Cement is a specially prepared or patented bricklayer's mortar cement. This is not the case. Carney Cement is a refined mineral of extreme adhesive and plastic qualities, found only in the vicinity of Mankato. Nothing is added to Carney Cement during refinement—nothing but sand and water need be added to Carney Cement at the mortar box. For more than forty years, the effectiveness of this simple mix has been demonstrated by use in the world's largest projects.

THE CARNEY COMPANY

DISTRICT SALES OFFICES: CLEVELAND, CHICAGO, DETROIT, ST. LOUIS, MINNEAPOLIS

Specifications:
1 part Carney Cement to 3 or 4 parts
sand depending upon quality of sand.

CARNEY CEMENT
for Brick and Tile Mortar

Specifications of most products advertised in THE AMERICAN ARCHITECT appear in the Specification Manual

BOOK NOTES

THE STUDY OF ARCHITECTURAL DESIGN*

WITH SPECIAL REFERENCE TO THE PROGRAM OF THE
BEAUX-ARTS INSTITUTE OF DESIGN

BY JOHN F. HARBESON, A.I.A.

THIS is a very timely and very valuable book, not that it presents new material so much as it tells the student and the architect how to use his material, where to find it and what are the procedures which will help him to use them right. It is founded on the Beaux-Arts method, but for a book so committed to precedent, it is quite free from the prejudices which every Beaux-Arts student has to discard sooner or later if he is to practice in this country, and Lloyd Warren's introduction where he urges the student not merely to take what is set forth in the volume, but to read between the lines, is indicative of the spirit in which the whole book is edited. The chapter on Time Schedule is excellent, though anyone who is familiar with the actual methods of the Beaux-Arts will remember how seldom the boys in the studios ever got their drawings done on time. Then there is a very fruitful chapter on the use of documents, though the books referred to are mostly the French standard volumes, excellent in themselves but books probably least referred to by the American architect. I venture the statement that our architects today find more in the McKim books, and especially in the current work as shown in *THE AMERICAN ARCHITECT* and other publications, than we ever do in Letarouilly or Vignole. We solve our problems better than the French. The best architecture in the world today is in this country and if our architects are able to handle the real problems as successfully as they do, not a small part of their success is due to the fact that they have been so generally grounded in the methods of the *Ecole des Beaux-Arts*, even though these methods do not apply directly to our own problems. This fact is recognized in the volume in question when they mingle with the purely academic problems some of the eminently successful solutions of real design which have taken shape here. The actual work of the *Ecole* as far as relates to drawings and design is no longer wholly applicable to our methods. It is safe to say no Grand Prix plan ever made was ever practicable, however we may twist that term, but our buildings must be practical. In no period of the world's history has there been such a freedom of choice and variety and bewildering reach of possibilities as in the American architecture of today; consequently with the *Ecole* training as a background in methods of thought and with our own precedent to guide us, American architecture has gone ahead enormously while French architecture is all the time held back and trammelled by tradition.

*Published by The Pencil Points Press, Inc., New York. Price \$7.50.

We have better libraries, better periodicals, wider range of vision, quicker response to new ideals, but that does not lessen our debt to French methods and French training which are really at the base of all of our development, and there is no one book which shows so clearly how these methods can be applied to American architecture as does this volume by Mr. Harbeson. The chapter on planning, on the methods of the atelier, the various ways in which studies can be presented, and finally the very praiseworthy chapter on Psychology of Success deserves special mention. It is a unique topic but treated in a perfectly usable, practical manner and ought to be read by everyone who is interested in good architecture. The book is not a compendium of architectural design so much as a perfectly straightforward, successful and complete presentation of architectural methods in design, and is to be thoroughly commended.

C. H. BLACKALL.

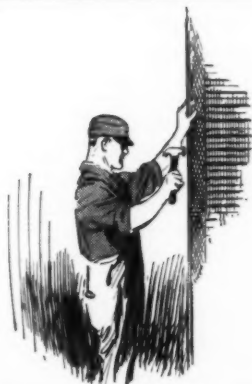
30

ORIGINAL VIEWS OF LONDON AS IT IS, BY THOMAS SHOTTER BOYS, 1842*

WITH DESCRIPTIVE NOTES BY E. BERESFORD CHANCELLOR

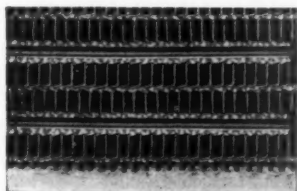
THERE has been a very marked revival of interest in the last few years in lithographs of the early part of the last century. This revival has been felt in our architectural illustrations. The work of men like Eggers has in many ways reproduced the quality, the relation of halftones and the incident lights and shadows in much the style that was worked out so satisfactorily by Haig and many others of that period. Lithography itself is coming back as a pastime of some of our best architects, and one of our most prominent architects recently made the general statement that if he were to begin his career again, he would elect the style of rendering which is so marked a feature of the old lithographs. To anyone who cannot possess the originals this reissue of the complete set of the scarce and valuable delineations of London will be highly appreciated. The present generation hardly knows Boys even as a memory. He was a most prodigious workman, starting in the early years of the 18th century, establishing very speedily a reputation as a draftsman and accomplishing a perfectly extraordinary amount of work, mostly in the line of lithograph drawings for publication. In 1842 he was at the height of his powers and collected together these twenty-five views of London and vicinity, all of them lithographs, most of them in color, and exhibiting an ability as a draftsman and as an artist, which gave his work a very strong character. The reproductions in this volume are on a smaller scale than the originals, are all in black and white, but have preserved a very

*Published by The Architectural Press, London

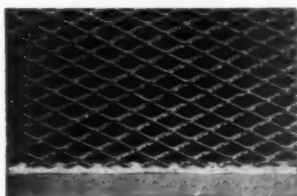


"Expansion" Corner Beads save time and insure straight, permanent corners. Milcor Stay-Rib metal lath is a great plaster saver.

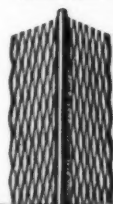
Stay-Rib Metal Lath No. 1



Netmesh Metal Lath



Expansion Corner Bead No. 1



Expansion Casings



IMPREGNABLE

Plastering on MILCOR Metal Lath
Made from **ARMCO** Ingot Iron
is impregnable to attacks that ruin ordinary plastering.

MILCOR METAL LATH for SAFETY



GIANT-LIKE

FINGER GRIPS!

PLASTERING on a base of Milcor Stay-Rib Metal Lath, holds with a giant-like, never-let-go grip. Through the strong, rigid network of this supreme metal lath the soft mortar oozes and then hardens into myriads of adamantine "fingers" that permanently lock every inch of walls and ceilings to the lath. Plaster thus reinforced can't loosen or crack. It retains its original beauty, protects against fire, and remains safe permanently.

Nearly 6000 firm fingers in every square yard of plaster get an everlasting grip on the metal strands of Stay-Rib Lath. Above is shown the back surface of the lath locked in the grip of these plaster "fingers".

Safeguard your clients. See that Milcor Stay-Rib or Netmesh Metal Lath and allied products protect them. Samples on request—no cost or obligation.

MILWAUKEE CORRUGATING COMPANY, Milwaukee, Wisconsin
Chicago, Ill. Kansas City, Mo. La Crosse, Wis.

MILWAUKEE CORRUGATING CO.
Milwaukee, Wis.

Please send your technical data book—"The Milcor Manual"—on firesafe construction.

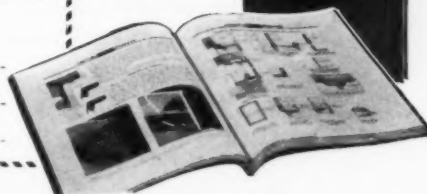
☐ (Check here if you want samples, too.)

Name

Address

City & State

Send for this
book—use the
Coupon



Specifications of most products advertised in THE AMERICAN ARCHITECT appear in the Specification Manual

considerable part of the charm of the originals and form a most interesting collection of views of London as it was seventy-five years ago. The accessories, the human beings, the vehicles and the street life are worked in quite in the vein of the old lithographers, and besides being a very unique collection of architectural documents, they have a social interest in that they reproduce very faithfully the customs of the times and constitute a fine presentation of early Victorian society.

C. H. BLACKALL.

PRACTICAL STRUCTURAL DESIGN

ERNEST McCULLOUGH, consulting engineer, is the author of an engineering volume that, as the title states, is a book on practical structural design. A third edition, following the editions of 1917 and 1921 of this work, has recently been issued. This book on timber, steel and concrete structural design has been prepared especially for the use of architects, builders, engineers and draftsmen. The author, an engineer of experience, has brought every chapter of the book up to date in the revised edition, extended various chapters and added two new chapters, one on miscellaneous data and one on reinforced concrete. The illustrations are clear and sufficient in number to support the text, which is written in a style simple and understandable to the average man.

Practical Structural Design in Timber, Steel and Concrete. By Ernest McCullough. Third edition, 416 pages, 224 illustrations, size 6 x 9 inches, bound in cloth. Published by Scientific Book Corporation, 15 East 26th Street, New York. Price, \$4.00 net.

DESIGN OF CONCRETE STRUCTURES

A SECOND edition of Urquhart and O'Rourke's *Design of Concrete Structures* has recently been issued. L. C. Urquhart is professor in charge of structural engineering, Cornell University. C. E. O'Rourke is assistant professor of structural engineering, Cornell University.

This widely used text book has been thoroughly revised. We learn from the preface that the chapter on plain concrete has been amplified and that the chapters on columns and continuous beams and building frames have been entirely rewritten. Illustrative problems have been revised or new ones have been added to conform to the higher working stresses now frequently allowed in specifications. The illustrations used throughout the book are clear and well drawn. The text is written in a clear and understandable manner and covers the design of concrete structures thoroughly.

Design of Concrete Structures. By L. C. Urquhart and C. E. O'Rourke. Published by McGraw-Hill Book Company, Inc., New York City. 501 pp. Illustrated. Size 6 x 9 1/4 inches. Price \$4.00.

BUILDING MECHANICS

BOOKS treating on the subject of mechanics or the science of forces and their effects as applied to building structures are often based upon the supposition that the reader has made a thorough study of mathematics and physics. A sound foundation in these subjects is highly desirable. For those lacking such training and for those who do not have occasion to apply their knowledge of mathematics and physics constantly, literature on building mechanics written in a manner easily understood is highly desirable.

A volume of this type, entitled *Building Mechanics*, has been written by W. G. Sheppard, formerly lecturer at the London County Council School of Building, Brixton. The work is based upon the author's lectures to elementary students. As a result, the text, which is written in language simple and easily understood, forms an excellent introduction to the mechanics of structures. The book contains thirteen chapters and three appendices. Among the various chapters covering the subject of the mechanics of structures are those on concurrent forces; framed structures; stress, strain and elasticity; bending and shearing in open-work beams; eccentric loads and stability; struts; and rivets.

Building Mechanics. By W. G. Sheppard. 264 pp. Illustrated. Size 5 1/2 x 8 3/4 inches, bound in buckram. Published by the Oxford University Press, American Branch, New York. Price, \$4.00.



SAINTS AND SERAPHS GROUPED AROUND THE GLOBE AND THE CROSS AT THE TOP OF THE CHURCH AT VILLEMOMBLE

(See article on Page 371)

705 v.131 pt.2
THE PUBLISHERS' PAGE

WANT to direct attention to two sections in this issue—Topical Architecture, and Buildings of Moderate Cost. Neither is a new feature. In fact, as time as to age is measured in this country, Topical Architecture is now quite a quarter century old. Up to about 1906, and beginning about 1900, the publishers of THE AMERICAN ARCHITECT issued monthly a magazine with a minimum of text and a maximum of illustrations. The feature of that publication was that each issue presented but one topic; hence the name, Topical Architecture.

No one will know better than the editors and publishers of an architectural magazine the changes that occur in the subscriber's point of view. Where at one time, even the man practicing in small cities and towns was as insistent on the presentation of the same monumental buildings that more seriously interested his brethren in the large cities, the same reader now demands all of that,—and something more. He feels that if he is to keep in step with the progress of his profession, he should also have something more nearly in line with his own normal practice. But it is not in the mass that he is so directly interested, but in the details of design.

Undoubtedly that feeling as to the true mission of an architectural magazine was present in 1900 when Topical Architecture was first published. And during the elapsed quarter century, after many incursions into other fields, the majority of readers of architectural magazines require practical exemplars of the trend of modern detail to an even greater degree than they do planning and designing. Believing these things to be true, the publishers renew in this issue, the feature of Topical Architecture, be-

gun in 1900. The publishers also believe that this section will be of great practical value. The usual magazine will in future carry the designation of Part I. Topical Architecture will be called Part II. It will consist of a four page insert. No issue will be complete unless it carries both Parts I and II.

The topic presented in this issue is Stairways. April 20th will deal with Casement Windows; May 5th with Interior Doorways and May 20th with Mantels. Subsequent topics will be announced later.

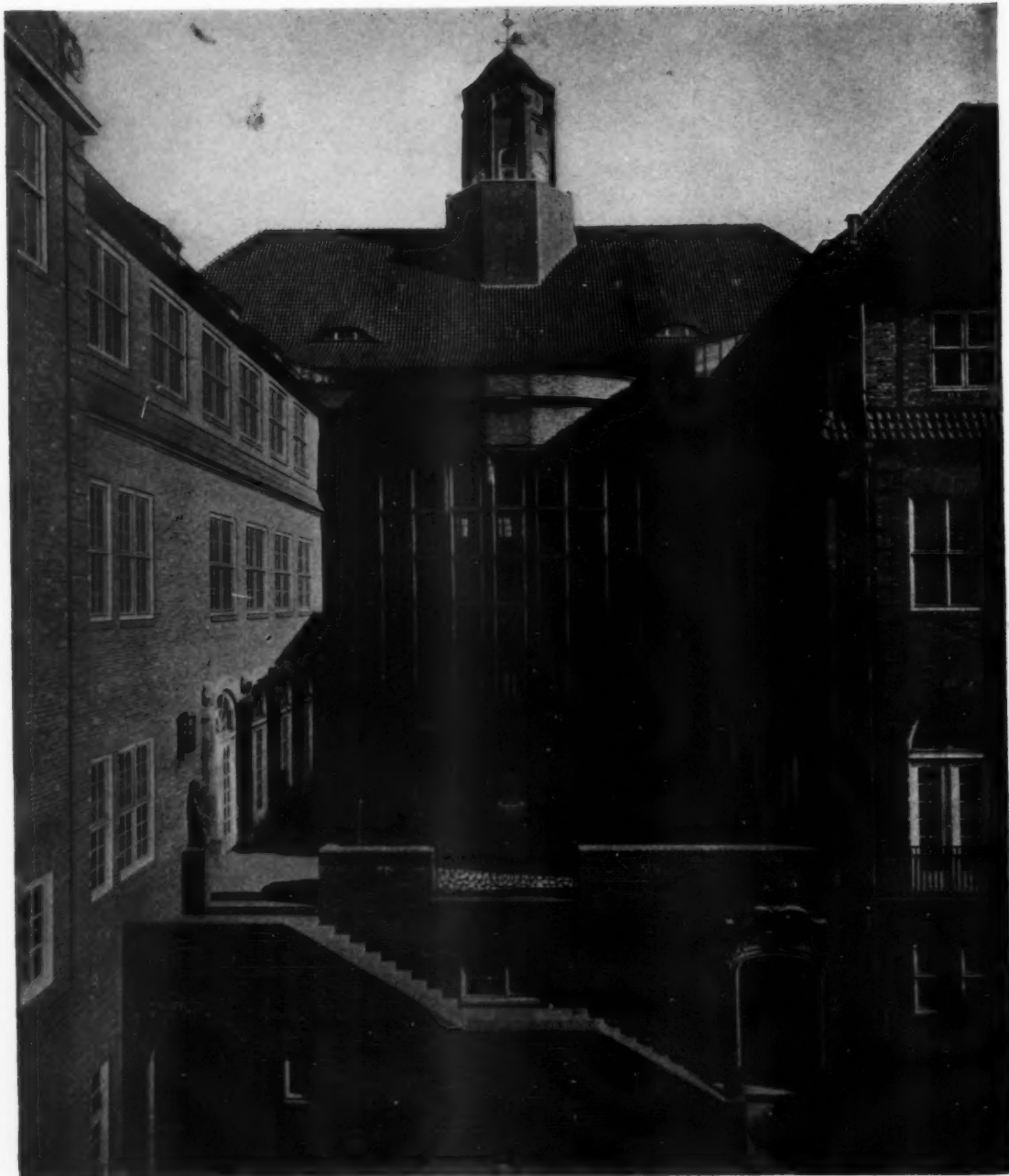
39

The second feature referred to, Buildings of Moderate Cost, is also not a new one. It was first begun in this journal some two years ago. That the idea was a good one was proven when our esteemed contemporaries immediately copied it, and in one instance actually appropriated the name we gave this section. If our ideas as to features are so really good, we do not very seriously object to their being copied. The ethics of journalism, considered broadly, demand that when one publication copies another, it make due note of the source. If our contemporaries, in this instance and others we could cite, would add a line, "as originally suggested by THE AMERICAN ARCHITECT," we would be quite content.

As first put forth by us, Buildings of Moderate Cost was not intended as a feature of every issue, but because of the interest in this section, it is now decided to make Buildings of Moderate Cost a feature of each issue, thus, as we said before, keeping every phase of architectural practice in every issue and thus serving every subscriber to the fullest extent.



HOUSE AT "WOOD ACRES," NEW ROCHELLE, N. Y., ESTATE OF HON. FREDERICK WALDORF



COURTYARD IN HISTORICAL MUSEUM, HAMBURG

EVERY DOORWAY, CARVING, METALWORK, ETC., IN THIS BUILDING CAME FROM SOME OTHER STRUCTURE BEFORE IT FOUND ITS RESTING PLACE HERE

THE AMERICAN ARCHITECT
JANUARY 1930
HAMBURG