

THE AMERICAN ARCHITECT

FOUNDED 1876

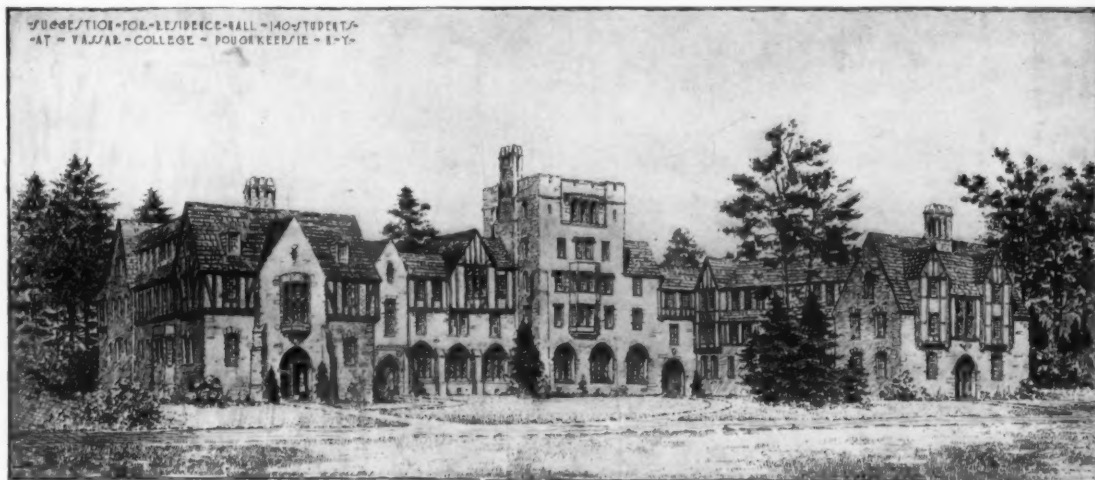
SELLING PHIDIAS ET AL. TO THE TRUSTEES

By THOMAS E. TALLMADGE, F.A.I.A.

I HAVE in mind a university of the first class in an unsurpassed location, its campus shaded by immemorial oaks and reflected in azure waters, its extent a veritable domain that would have been envied by an English lord. It was founded by devoted men in the days when the university was regarded as a handmaiden of the church; when a university president was a minister of the Gospel and a traveller in the "realms of gold," with the Bible in one pocket of the linen duster and Chapman's Homer in the other; when a student wore side whiskers, shovelled off the snow and tended furnaces for his livelihood, and when after four years of sacrifice and hard work he went out to conquer the world, Homer, Virgil and Euclid rode beside him as his esquires; a university founded long before the days of stadia, schools of com-

merce and campus plans. That the latter is true is especially evident.

But let us walk about among the oaks, and if we tire of brick and mortar we can watch the impudent squirrels, the gulls wheeling overhead, or, better still, the raft of ducks securely riding the combers on the lake. Against this gentle ridge the icy waters of a glacial lake broke and roared some 25,000 years ago, and from behind the ancestors of these oaks painted Pottawottamies watched on the blue waves the devoted Marquette and the dashing La Salle bent on their salvation to the glory of God and of Louis XIVth. But let us return to our architecture. Here before us is the oldest building. It is one of the few really beautiful examples of the Victorian Gothic anywhere in the land. Its walls are of Joliet limestone, leading up



RESIDENTIAL STUDENTS' HALL, VASSAR COLLEGE, POUGHKEEPSIE, N. Y.

ALLEN & COLLENS, ARCHITECTS

(From the original sketch by Charles Collens)

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to a cupola or spire of a remarkably graceful and original form. It was located doubtless by some fine old gentleman who had driven out from the nearby metropolis in his Victoria, walked through a mile or two of mud in his polished leather boots, and who stuck his gold-headed walking-stick through the decaying oak leaves into the soft loam and said, "Build it here."

The next building to appear was of frame, but of the rival contemporary style, the French mansard roof effect with the attendant cupola. Its donor or dean had picked out the next best location.

The third was a dormitory, built of Milwaukee brick. This building made no architectural pretenses at all, but some one had found a fine location for it in an "oak opening" somewhat nearer the water and a little behind the other two.

Other buildings followed as the years and styles rolled by, each selecting always the best site that was left. A woman's college, French mansard and Milwaukee brick; a science building, Romanesque, red pressed brick; a theological building, Romanesque red brick; an observatory, Romanesque Joliet limestone; a library, Classic of the World's Fair type of Bedford stone; a school of speech, Tuscan, light yellow brick; a great gymnasium of the "Chicago Style," Bedford stone; an engineering building, also of secessionist style and of the same material.

About this time, however, the university suddenly awakened. The fact was evident that while its campus might afford an illuminating and even an amusing history of American architecture in the

flesh, as it were, yet an architectural *potpourri* was not the goal, and that some order both in arrangement and style would be necessary. So a great architectural competition was held and a distinguished architect prepared a beautiful plan and the Collegiate Gothic chosen as a style. I should like to record that the old eclectic system of style and location was immediately thrown into the lake conveniently near at hand, but this was not to be, for the next building appeared in a garb of Roman Classic, and was located directly in front of the old college hall in a place reserved on the plan as an open sward. The futility, almost fatality, of this *faux pas* has brought home apparently the absolute necessity of adhering to the prearranged general plan. Therefore, when several groups of dormitories by the winner of the competition and a beautiful group for the theological seminary were built, they followed in general in location and style the adopted plan. Now a great group of buildings in a distant location and groups of dormitories for men and women adjoining the campus are being built in conformity with the university architectural policy.

Now what is the lesson of all this? It is hardly fair to expect that a university founded in the early fifties, with an endowment of ten thousand dollars and an enrollment of ten students, should have laid out a plan with all the various departments of a great university of five thousand students, all carefully related and connected with cloisters, quads, axes, vistas, circulation, etc., worked out with twentieth-century knowledge and sophistication. Nor is it fair to expect that the



ALLEN & COLLENS, ARCHITECTS

(From the original sketch by Charles Collens)

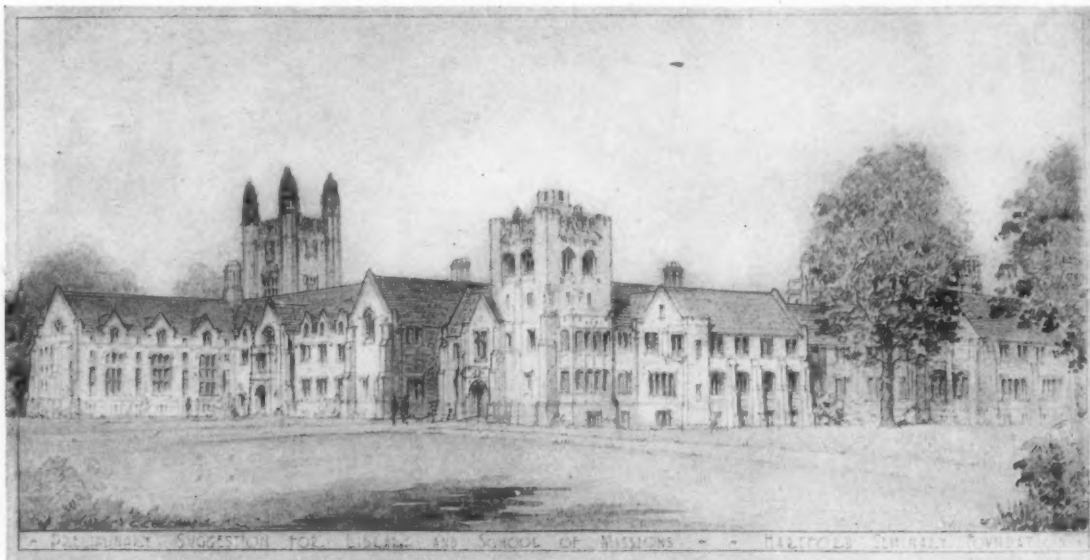
clergymen and merchants of the prairies should have perceived the sham of the mansard style or revolted at the barbarism of the Victorian Gothic. Nor is a collection of buildings in which one can trace the changing fashions in architecture or the popularity of successive architects uninteresting or even unimportant. One would not wish to reclothe the Sheldonian Theatre with a cloak that would match its venerable neighbor, Christ Church, or Gothicize old South Middle at Yale. No, for the sins that have been committed up to at least the World's Fair in 1893, which certainly made plain the virtues of orderly arrangement, we can weep but we cannot condemn. The lesson lies in its example for the present and the future, and this is so obvious that any trustee or college president should react correctly to it in any psychology department's mental alertness test. This lesson is, of course, the disaster that awaits ignorance or opportunism in the material development of a great university, and the salvation that lies in following an intelligent and comprehensive prearranged plan for the disposition and appearance of future buildings. Many a hardened old sinner of a university is, as I write, hitting the sawdust trail, but whatever his reformation may be, he'll bear the signs of his architectural sins as long as he lives. Full many a student has been ousted from the college halls for some minor prank while Alma Mater was getting away with architectural murder, and many a collegian has had moral precepts dinned into his ears by solemn professors who had just voted to let Mr. Croesus dictate

the site, the material and the architect for the new building. No greater precept in beauty or morality can a university offer than in the well ordered ways of an Addison's Walk or a Harkness Quad, and in the steadfast policy and enlightened love of the beautiful that makes them possible.

Perhaps—who can tell?—a college president or a board of trustees, having been persuaded that order in arrangement and beauty in appearance are necessary for the economical administration and popularity of their institution, might suddenly perceive that a love and appreciation of beauty are also necessary in the development of the young souls in their care and, such being the case in these lovely fabrics of brick and stone and carven wood, in these cloistered ways and pensive citadels, might give to every one the gospel of beauty and teach each the laws of the great arts that are exemplified about them!

The universities are not oblivious to the great Renaissance of architecture just beginning in the country, but they are blind to the great part they can take in it, particularly in spreading this awakening throughout the wide realm of art.

The purpose of a college education, it seems to me, is to give the opportunity to each student to make his life more interesting to himself and thus more inspiring to the community. The butter and egg business, even against the background of a college degree, is not sufficient for the purpose. One can see on every hand the almost pathetic efforts of the college-bred business man to relieve the boredom of constant routine. Golf, bridge, the



PRELIMINARY SUGGESTION FOR LIBRARY AND SCHOOL OF MISSIONS
HARTFORD SEMINARY FOUNDATION
ALLEN & COLLENS, ARCHITECTS
(From the original sketch by Charles Collens)



BROWN MEMORIAL TOWER, UNION THEOLOGICAL SEMINARY, NEW YORK

ALLEN & COLLENS, ARCHITECTS

THE ORIGINAL GROUP WAS ERECTED IN 1908, AND OCCUPIES THE DOUBLE BLOCK
BOUNDED BY 120TH-122ND STREETS, BROADWAY AND CLAREMONT AVENUE

radio, the automobile, are his recourse, but his surcease should be the arts, and if he were properly educated they would be. Unfortunately the muses seldom get pass the campus gates. Instead he hears, even in the college halls, the patter and jargon of business—"selling," "publicity," "efficiency," "service" (for a price). Very evidently, to use his jargon, Phidias, Michael Angelo and Beethoven have not "sold themselves" to the trustees. Universities might well take heed of the rising resentment against the commercializing and brutalizing of our institutions of learning. College coaches paid more than professors of mathematics, a swimming teacher given the title of professor, schools of commerce more richly endowed than the liberal arts—all give us pause. The ideal university of the past, a deal table with Mark Hopkins on one side and a student on the other, will give place, if we are not careful, to a mahogany counter with a one hundred per cent go-getter on one side who can raise twenty-five million dollars, and on the other a bewildered faculty and ten thousand fox trotting, embryonic salesmen. If we may not join with John Keats in his pagan rhapsody on the identity of Beauty and Truth and their all sufficiency for life, we must go with him a little way into the vales of Arcady. We must admit the necessity of beauty in any scheme of an interesting and vivid existence. We must admit that a youth who cannot be "teased out of thought" by the beauty of a Grecian urn is not educated. The well planned campus and the beautiful building are, therefore,

far more than a matter for the mutual satisfaction of the architect and the trustees. The fabric of the university must be a worthy textbook from which the student should be required to learn.

And every young man and young woman leaving a university with a sheepskin in his hand should carry in his head a definite knowledge of the role that art has played in civilization, and in his heart an appreciation of and a longing for the beautiful.

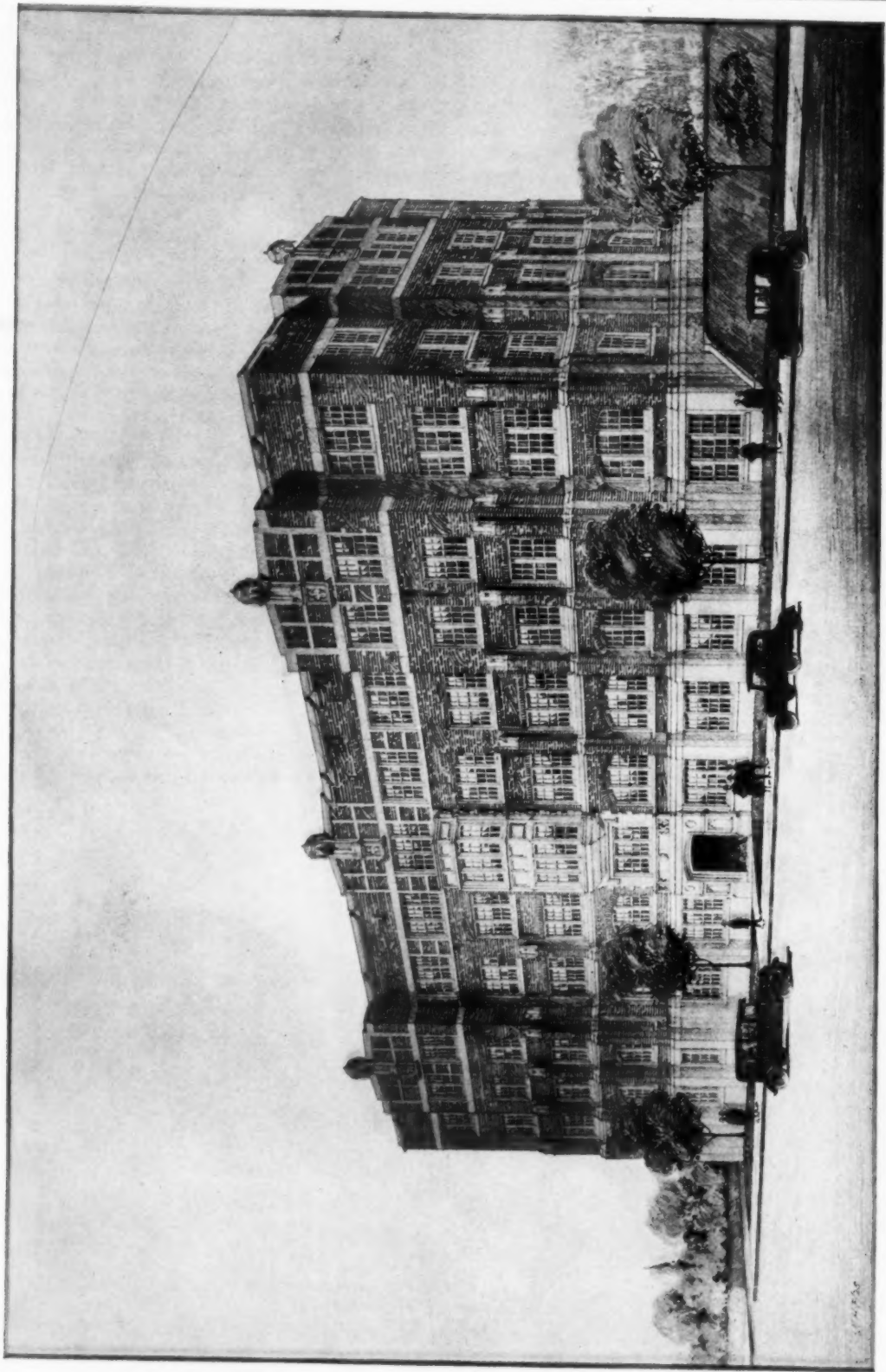
ART AND INDUSTRY

SEVERAL visits to the recent exhibition in Paris of Modern Decorative and Industrial Art convinced us, states *The Builder*, London, of the value of the quality of tradition retained—unconsciously, no doubt—in many of the English exhibits. We are inclined rather to measure back the steps we have trod in criticism of English work, when it is seen in juxtaposition with Continental design—and it seems to us that the very title of "new art" is very misleading. Design, or any other application of art, relates itself to the good of any other time, though adding its own personal contribution, and such a provision as that it shall not show any traces of older periods is very theoretic and probably mischievous. This is not to say that originality in design is undesirable, but we are more likely to reap the benefit of being ourselves and growing on our own roots than in reaping the assumed benefits of progressive Continental developments, which we confess to think of a poorer artistry than our own.



PRELIMINARY SUGGESTION FOR SCHOOLS OF PEDAGOGY AND MISSIONS
HARTFORD SEMINARY FOUNDATION
ALLEN & COLLENS, ARCHITECTS

(From the original sketch by Charles Collens)



ANATOMY BUILDING, UNIVERSITY OF TENNESSEE, MEMPHIS

JONES & FURBRINGER, ARCHITECTS

(Reproduced from the office rendering by M. H. Furbringer)

A PRELIMINARY STUDY FOR ST. MARY'S COLLEGE GROUP, OAKLAND, CALIFORNIA

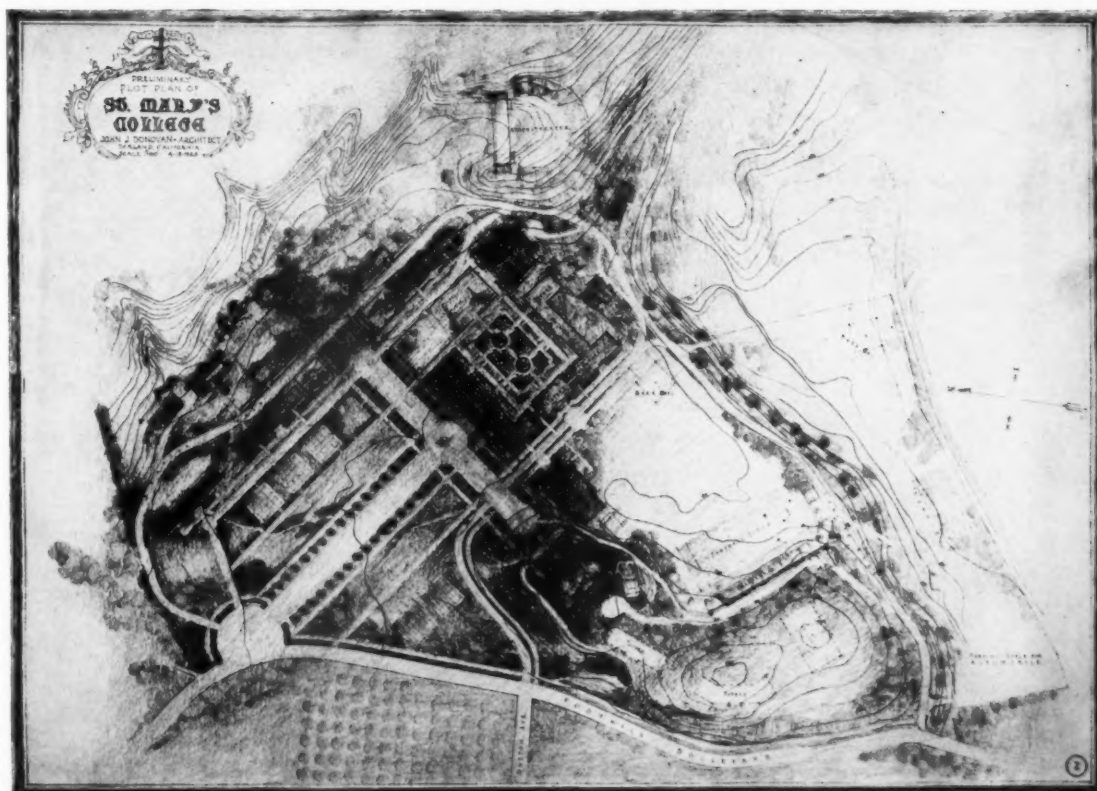
By JOHN J. DONOVAN, Architect

ST. MARY'S COLLEGE was founded in San Francisco in 1863 and was later transferred to Oakland, in 1889. It is one of a chain of colleges governed by the Christian Brothers, religious teachers, founded by St. John Baptist de la Salle in the seventeenth century, and this teaching congregation has spread rapidly through all parts of the civilized world, until it numbers today some 20,000 Brothers, and about 12,000 of these are engaged in educational work in the United States and its territories. Manhattan College, New York City, is one of the colleges built and maintained by the Christian Brothers. The object of the college is to give liberal education under the most approved methods and in an environment which recognizes the safeguard of moral training. It is essentially sectarian, but very non-sectarian in its enrollment and choice of studies. One of the pleasant outstanding features of the records of the institution is that they have never turned a boy away from their doors desirous of receiving an education, regardless of his indigence or inability

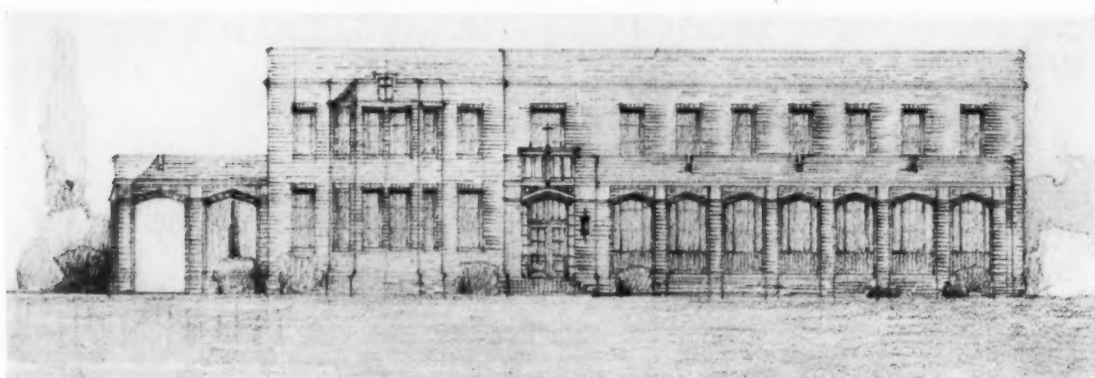
to pay tuition, his creed or nationality. The fine American spirit which there prevails has made it a great pleasure to develop these preliminary drawings for St. Mary's College and to study the problem with the Brothers.

It was first intended that the new college plant should also provide for secondary or high school boys, but a more far-reaching decision has been made, namely, to make the college as now planned an institution for college work. The high school will be located in another tract. The buildings here shown will provide for 1,500 to 2,000 students by constructing more dormitories. It is necessary to take a broad view in planning educational institutions for American communities and cities because of the spirit of education prevalent in this country and which is often akin to a deep religious fervor.

The property is located at the base of the bay side of the foothills of the Coast Range, at the outskirts of Oakland, about five miles from the center of the city. The tract of land embraces 255 acres



PRELIMINARY PLOT PLAN



INFIRMARY BUILDING

which extends up and over the top of the hills.

The plot plan shows that the entire scheme is "L" shape in form. The axis of the main approach coincides with the center of the "S" curve in the Foothill Boulevard and leads to the administration and educational buildings. Knolls to the south and north terminate the transverse axis, and on these knolls are located the Brothers' building and the chapel, each thirty feet above the lower levels as shown on the plot plan.

The gymnasium at the southwest of the administration building is at one corner of the athletic field, which is sufficiently large to contain three football fields of regulation size and to provide

for four baseball diamonds. The refectory and recreation building terminates a court formed by the educational buildings and the dormitories.

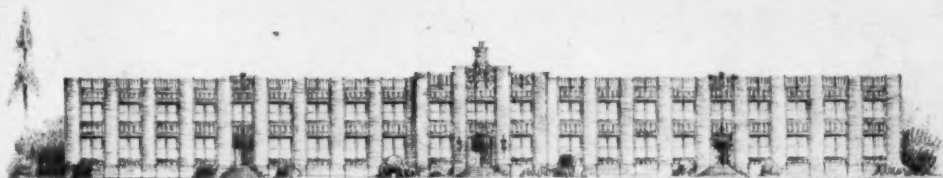
The dormitories are located on the side of the hill to the north to obtain advantage of the topography.

The infirmary, also located to the north, is away from the buildings, but easily accessible to the dormitories.

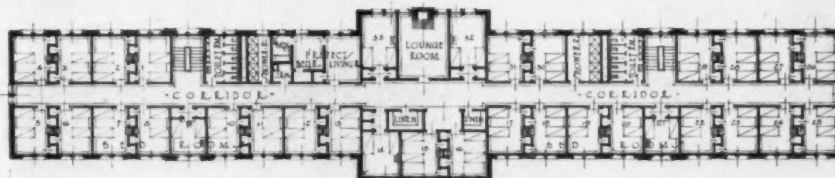
To the east is a natural amphitheatre, which, when built, will seat six to seven thousand people. While the preliminary drawings show the stage and dressing rooms on either side, it is not at all unlikely that future development will later modify



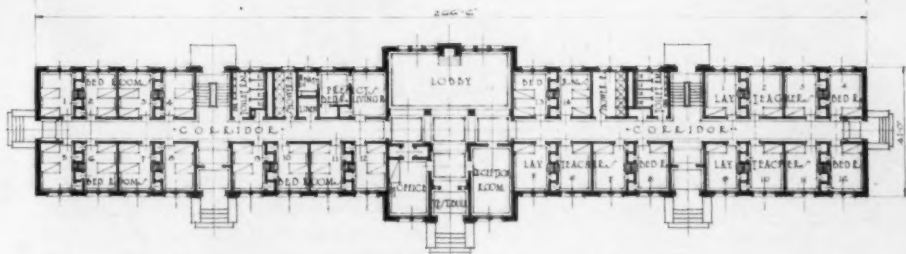
CHAPEL



"FACADE"



"SECOND AND THIRD FLOOR PLAN"



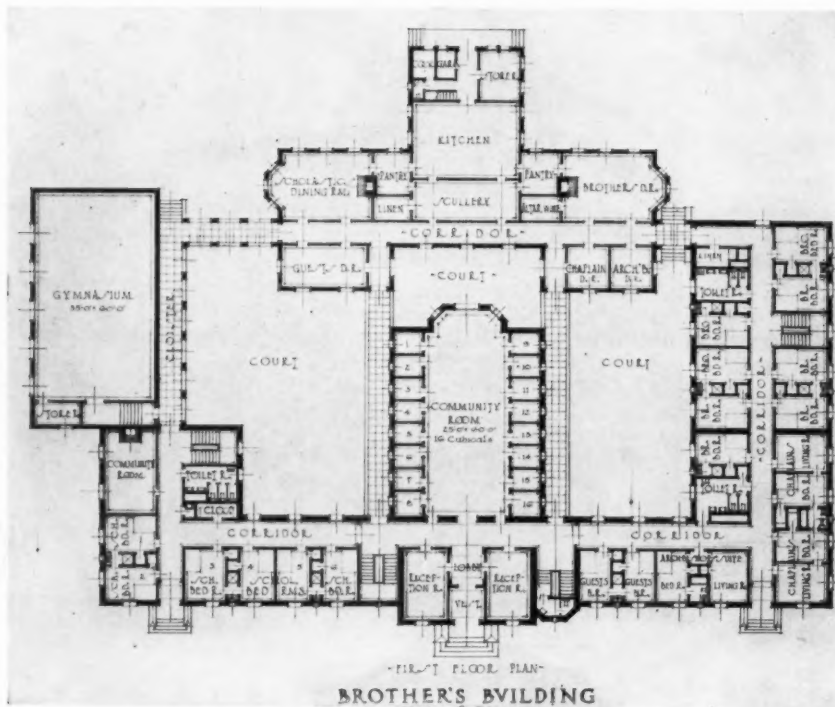
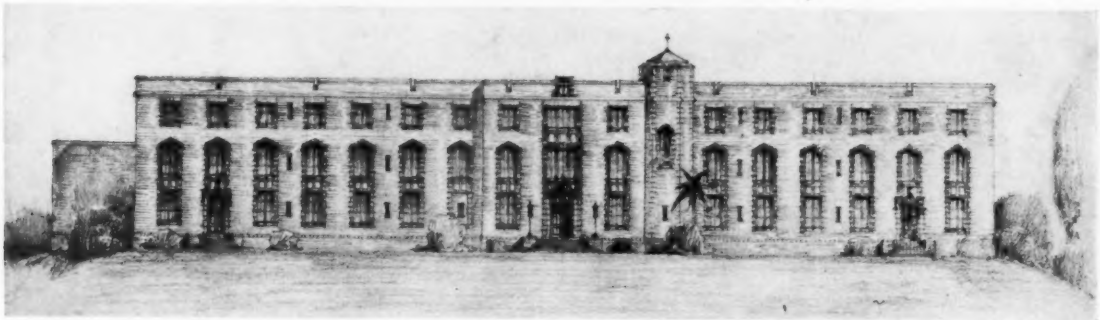
"FIRST FLOOR PLAN"

COLLEGE STUDENTS HALL
- ST. MARY'S COLLEGE -

JOHN J. DONOVAN - ARCHITECT.
OAKLAND, CALIFORNIA. APRIL 15, 1925.

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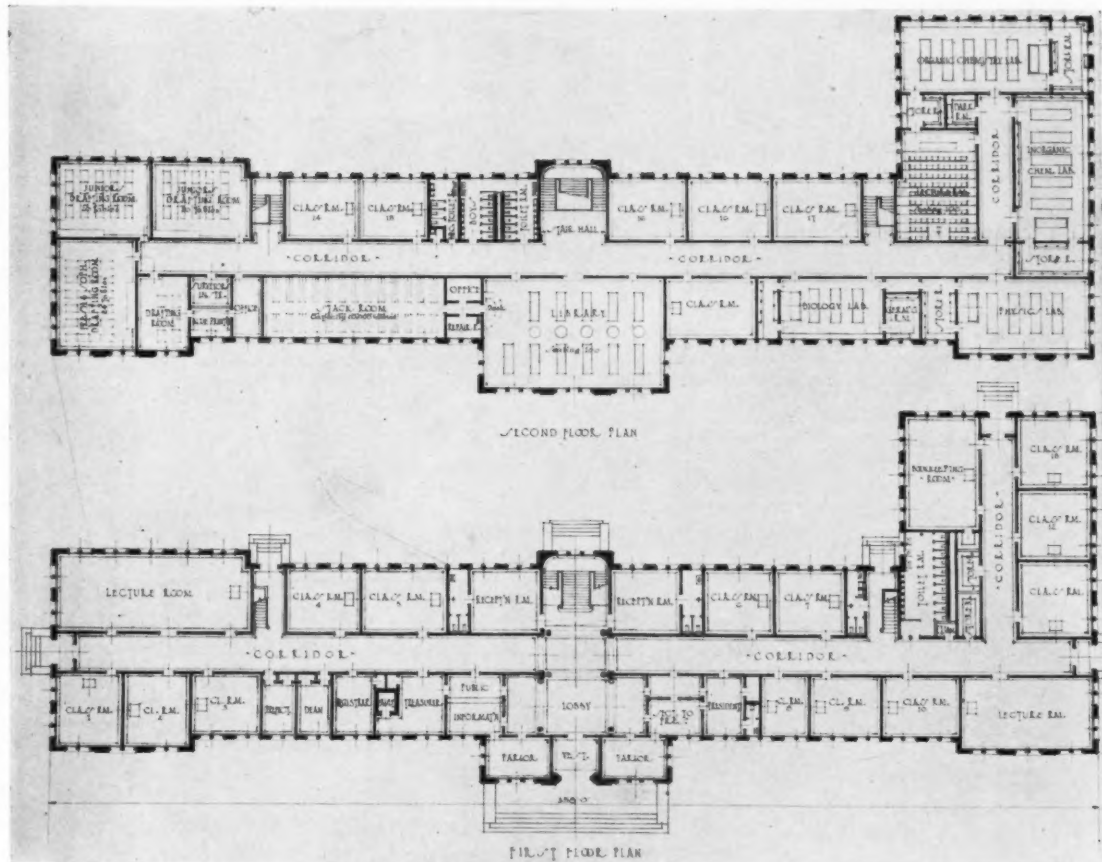
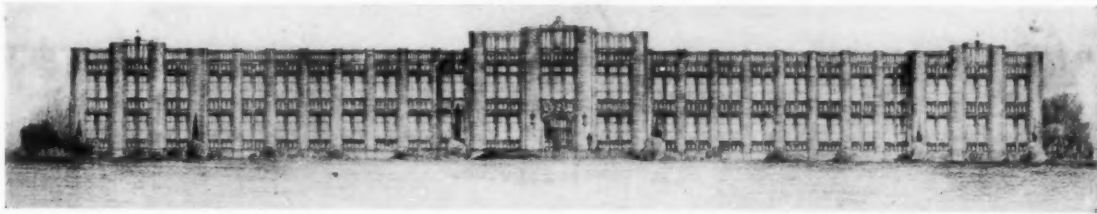
PROVIDE FOR 150 BOARDERS. TWO (2) STUDENTS TO ONE ROOM, EACH ROOM WASH BASIN, MEDICINE CLOSET, CLOTHES CLOSET. PROVIDE FOR TWELVE (12) SINGLE ROOMS FOR LAY TEACHERS. PREFECTS' SUITES WITH SHOWERS, ETC. TRUNK ROOMS IN BASEMENT. TOILET ROOMS, SHOWERS, LINEN AND BEDDING ROOMS. CHUTE FOR SOILED LINEN, RECEPTION ROOM



PROVIDE FOR 35 BROTHERS AND 20 SCHOLASTICS. 35 BEDROOMS EACH WITH SHOWER, WASH BASIN AND TOILET COMPLETE, ALSO CLOSET. 1 ROOM WITH TWO (2) BATH TUBS FOR USE OF ELDER BROTHERS. LINEN ROOMS—CHUTES FOR SOILED LINENS. COMMUNITY ROOM—20 CUBICALS OR LESS, 7'x8'. CENTRAL CONVOCATION SPACE CARING FOR 30 TO 35. SPIRITUAL LIBRARY, SAME ROOM WITH BOOKCASES ON WALL. THIS SUITE PREFERABLY ON SECOND FLOOR. SMALL LIBRARY ADJACENT TO THIS COMMUNITY ROOM. SMALL BROTHERS' CHAPEL SEATING 60, DISTINCT FROM LARGE CHAPEL

ST. MARY'S COLLEGE, OAKLAND, CALIF.

JOHN J. DONOVAN, ARCHITECT



EDUCATION AND ADMINISTRATION BUILDING

ADMINISTRATION BUILDING

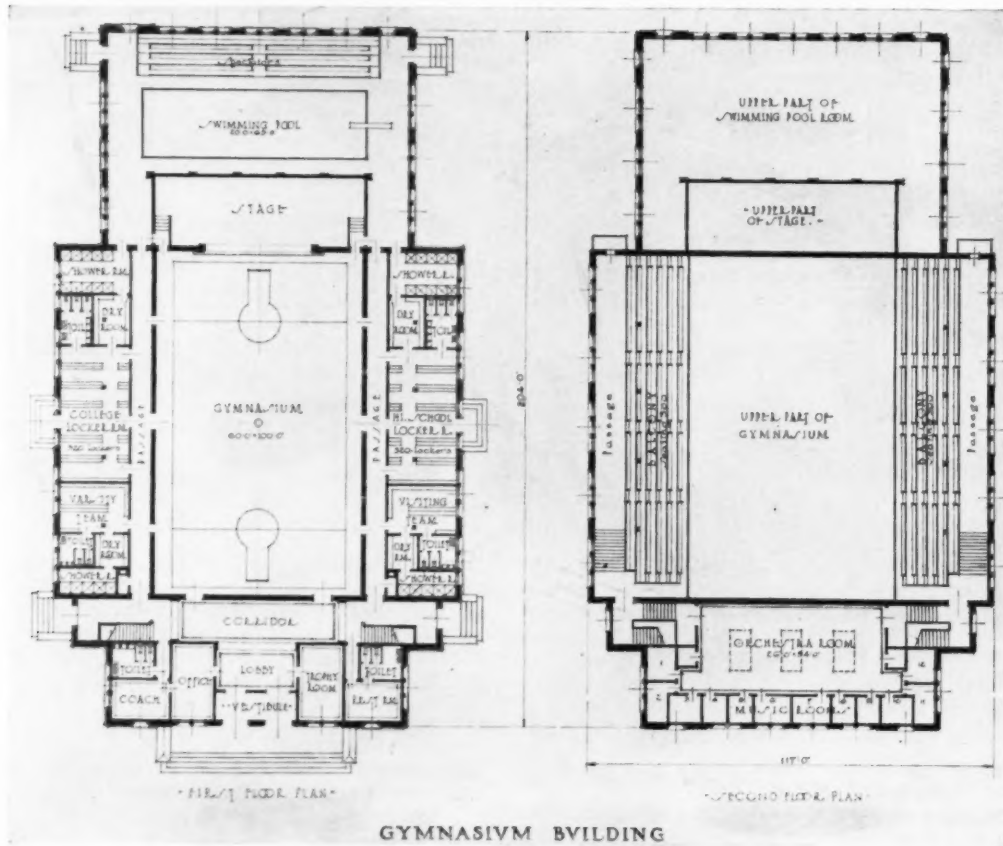
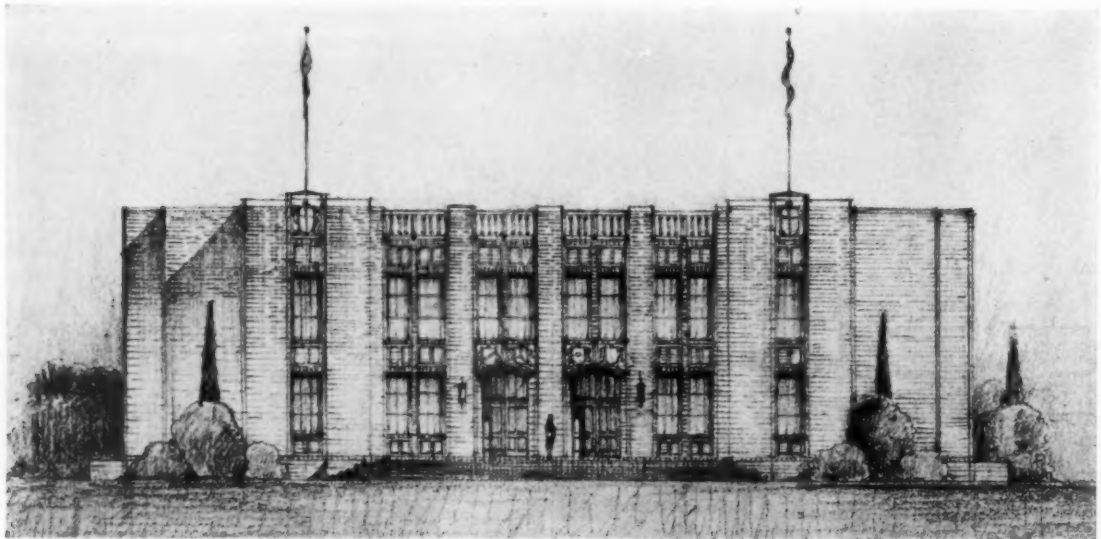
LARGE RECEPTION ROOM—(50 TO 60)
FOUR (4) PARLORS
PRESIDENT'S OFFICE
PRESIDENT'S SECRETARY'S OFFICE ADJACENT
TREASURER'S OFFICE—VAULT
REGISTRAR'S OFFICE—VAULT
TELEPHONE ROOM—SWITCHBOARD AND COMPLETE SYSTEM
DEAN OF COLLEGE OFFICE

ADMINISTRATION DEPARTMENT

PRINCIPAL'S OFFICE
WAITING ROOM
TOILET AND LAVATORY
RECEPTION ROOM
TOILET—(LADIES)
BOOK AND STATIONERY DISTRIBUTING ROOM—23'0" X 15'0"
STUDENTS BUY BOOKS AND STATIONERY AT THE SCHOOL
AND IN THIS ROOM
SHELVES AND CABINETS

ST. MARY'S COLLEGE, OAKLAND, CALIF.

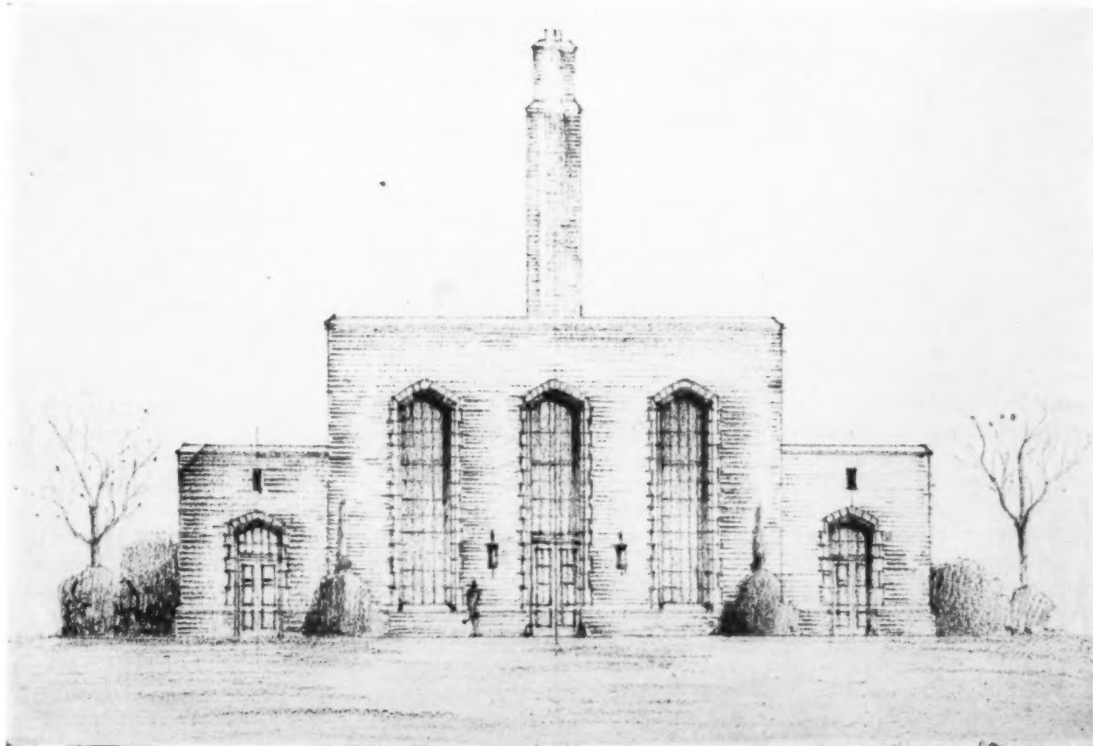
JOHN J. DONOVAN, ARCHITECT



GYMNASIUM BUILDING

ST. MARY'S COLLEGE, OAKLAND, CALIF.

JOHN J. DONOVAN, ARCHITECT



POWER HOUSE

this to include the stage in a building serving as a School of Art, Dramatics and History in close proximity to the amphitheatre.

At present the educational and administration building includes the engineering department. Ultimately, a science building, engineering building and laboratory shops for the engineering department will be erected as separate units.

In the Brothers' building, it is planned to house both the Brothers and Scholastics (those in the Novitiate). The community room in the center is the room where the faculty meet as a community, and the small offices to the right and left are intended for the work rooms of the different members of the faculty, particularly the faculty Brothers. To the left of the community room is the section assigned for the Scholastics and to the right is the Brothers' section.

The educational and administration building

has established the character of the other buildings, with the possible exception of the chapel and Brothers' building. Through the use of buff brick, mottled in color, and terra cotta trimmings of a color harmonizing with the brick, these buildings will be given sufficient similarity to make them conform to the group as a whole.

Before beginning the preliminary studies in the drafting room, an analysis and statement of the problem were made which recorded both present and future requirements. Conferences with the faculty, involving almost daily meetings from two to six hours and over a period of eight weeks, were held. This proved to be time very well spent. From the statement prepared it was a relatively simple matter to obtain a logical solution of the problem, and to plan and execute the buildings systematically. This method of procedure has also been successfully followed in other projects.





EDITORIAL COMMENT



CORRESPONDENTS in the English architectural press are outspoken in objections to the location along the roadside of undesirable types of buildings. The dissatisfaction largely centers on the filling stations. We have similar conditions in this country and, judging by reports received from friends who recently toured in England, we in the United States are the worst sufferers. The filling station is usually the central point about which are grouped repair stations and refreshment booths. The stations are hideous in themselves, architectural blots on the landscape, and the surrounding buildings the most unsightly makeshifts. If there is a way to abate this nuisance, something should be speedily done, for aside from the æsthetic aspect of the matter, there are present conditions that are positively revolting, and in the highest degree unsanitary.

We published some time ago a photograph made at Sleepy Hollow, in New York, that was then, and is now, typical of filling stations and their surroundings. There at a point of historic and literary interest, at the very spot where Irving tells us Ichabod Crane fell afoul of the headless horseman, an enormous tire sign blocks a beautiful view, while directly across the road stands a filling station with its blatant vermilion tanks and dependent structures, all accompanied by a general air of untidiness.

Here's an opportunity for State Chapters to arouse a spirit of civic pride in the residents of small towns and show them why this marring of the beauty of the roadside is something that very seriously reflects on the dwellers in the communities where such things occur. And there is also an opportunity to suggest types of buildings that would serve as filling station groups and at the same time become a desirable architectural feature.

IN THIS connection it is interesting to read an address to students, made by the president of the Royal Institute of British Architects. Commenting on some of the architectural evils from which we are suffering today, Mr. Guy Dawber gave out the impression that one reason why the disfigurement of the English country roadside was being accomplished is that "the function of criticism is not being effectually exercised, and that in the realm of architecture, charlatans flourish with none to expose their charlatanry."

There are several aspects to this matter of criticism that will bear discussion. First, it is unfor-

tunately true that there is a tendency to regard criticism as in the nature of fault finding, that it displays a hypercritical attitude, and smacks of the "common scold." Further, criticism may be open to such an attitude of thought unless it is constructive. We may not tear down unless we are prepared to build something better in place.

Just why criticism by an architect of some other artist's work is bordering on an unethical attitude, we are unable to understand. But it seems to us, and President Dawber apparently is of like opinion, that failure to criticize when criticism is justified is to show a lack of professional duty. Because a filling station or a disfiguring building is the work of some architect should not render it immune from criticism by architects.

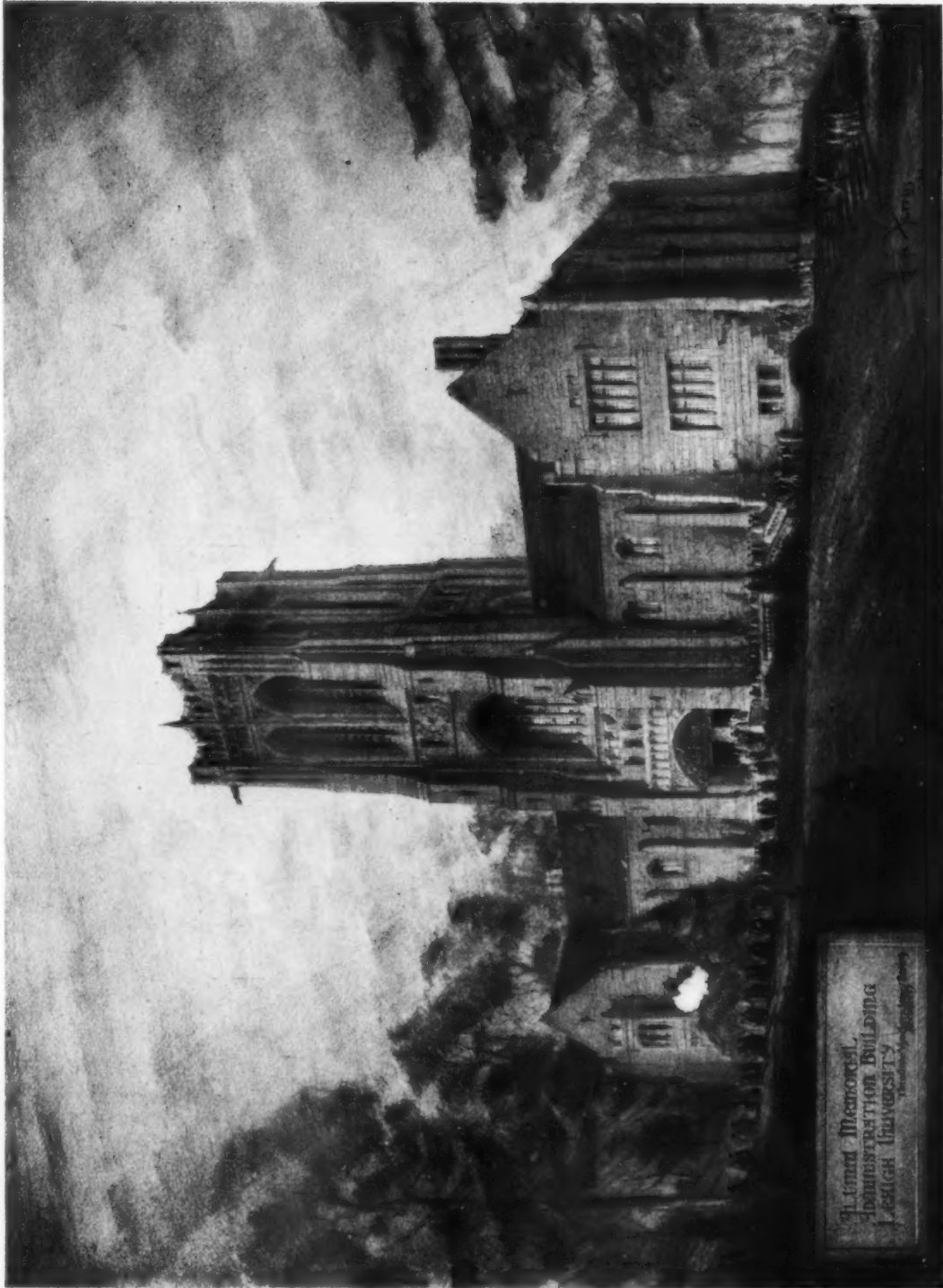
In every other profession, particularly that of letters, criticism is carried to a great extent. We have literary critics, art critics, and even the reverend gentlemen are prone to express their dissent or disapproval of some other reverend brother's attitude, particularly as to a certain constitutional matter now being warmly discussed.

Perhaps if we had more and better tempered criticism by architects,—publicly expressed,—we would be spared some of the architectural evils that beset us, and the cause of good architecture would materially profit thereby.

A PERSON, writing over the pen name of "Astragal," contributes to each issue of *The Architects' Journal* of London a running fire of comment on current news. In a recent issue, he writes:

"For non-committal yet forceful criticism, I take a certain Californian for my guide. I was at the Lyceum in a crowded house. Standing in the passage beside me was a great Californian, with a face which flamed like the Californian sun and with a beard of Californian gold. He kept his eyes glued to the stage. In the first act the heroine is married to the man she doesn't love. Her friends arrange it and the law allows. 'Waal, I'm hanged!' says the giant Californian as the curtain falls. In the second act the girl is missing from the honeymoon boat, and a torn cloak is found flying from the davits. 'Waal, I'm danged!' ejaculates my friend. In the third act the missing woman is discovered alive and in London with the man she loves. The curtain falls amid the plaudits of all. I turn inquiringly to my Californian to learn his final impression of the piece. 'Ef that ain't a corker!' he says, and turns to go."

Either Astragal has never visited this country, or so long ago as to have forgotten. Perhaps he has taken Dickens' style as a model. Dickens is said to have regretted his misrepresentation of American types, and we are wondering if Astragal will not eventually regret his.



ALUMNI MEMORIAL ADMINISTRATION BUILDING, LEHIGH UNIVERSITY, BETHLEHEM, PA.

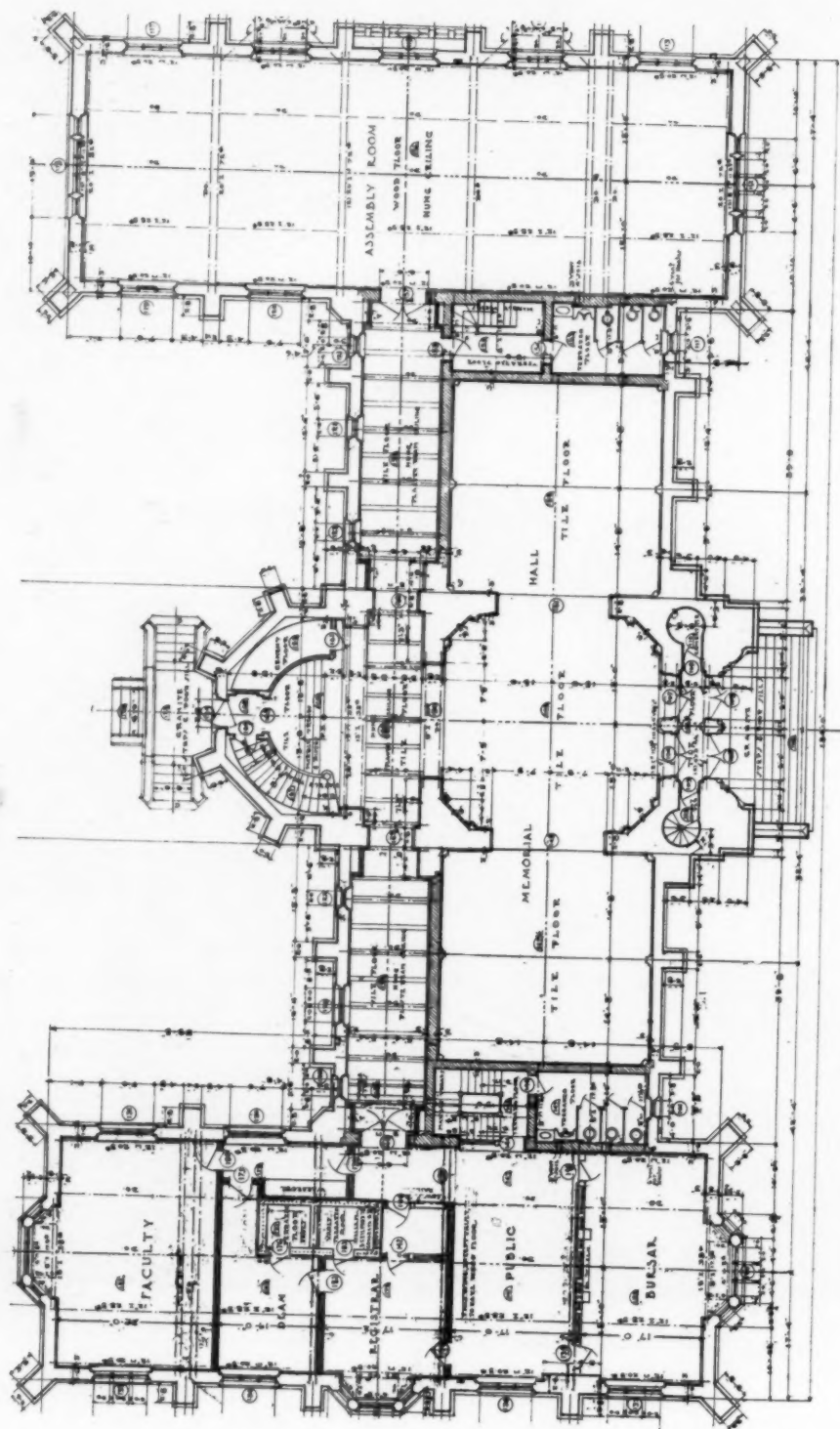
THEODORE VISSCHER AND JAMES BURLEY, ARCHITECTS

(From the rendering by Hugh Ferriss)

(See plan on back)

THE AMERICAN ARCHITECT

May 5, 1926 PLATE 89



ALUMNI MEMORIAL ADMINISTRATION BUILDING, LEHIGH UNIVERSITY, BETHLEHEM, PA.

THEODORE VISSCHER AND JAMES BURLEY, ARCHITECTS



DETAIL OF PRINCIPAL ENTRANCE

ALUMNI MEMORIAL ADMINISTRATION BUILDING, LEHIGH UNIVERSITY,
BETHLEHEM, PA.

THEODORE VISSCHER AND JAMES BURLEY, ARCHITECTS

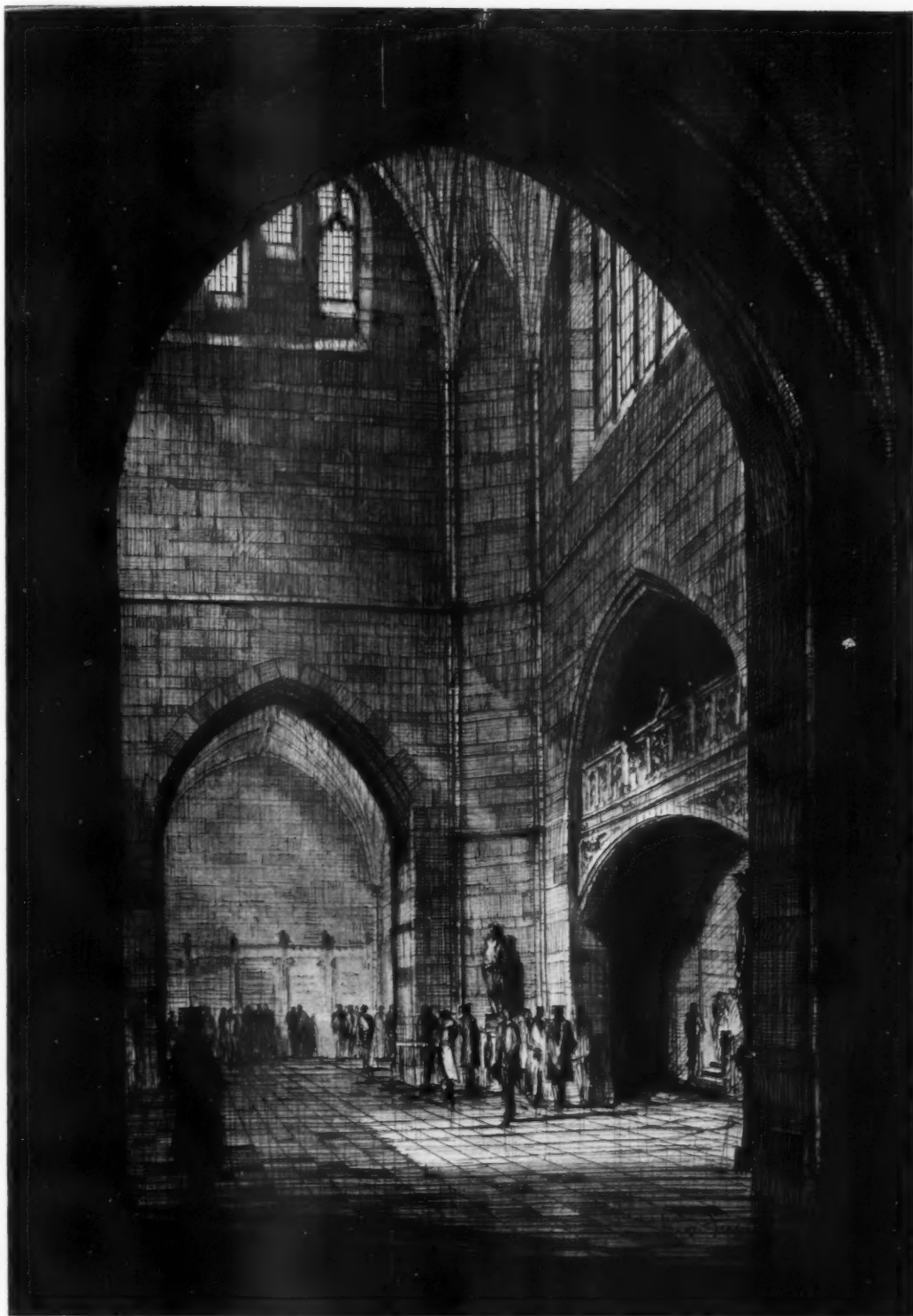
THE AMERICAN ARCHITECT
May 5, 1926 PLATE 90



ALUMNI MEMORIAL ADMINISTRATION BUILDING, LEHIGH UNIVERSITY,
BETHLEHEM, PA.

THEODORE VISSCHER AND JAMES BURLEY, ARCHITECTS

THE AMERICAN ARCHITECT
May 5, 1926 PLATE 91



ALUMNI MEMORIAL ADMINISTRATION BUILDING, LEHIGH UNIVERSITY,
BETHLEHEM, PA.

THEODORE VISSCHER AND JAMES BURLEY, ARCHITECTS
(From the rendering by Hugh Ferriss)

THE AMERICAN ARCHITECT
May 5, 1926 PLATE 92



ALUMNI MEMORIAL
ADMINISTRATION BUILDING,
LEHIGH UNIVERSITY,
BETHLEHEM, PA.

THEODORE VISSCHER
AND
JAMES BURLEY,
ARCHITECTS

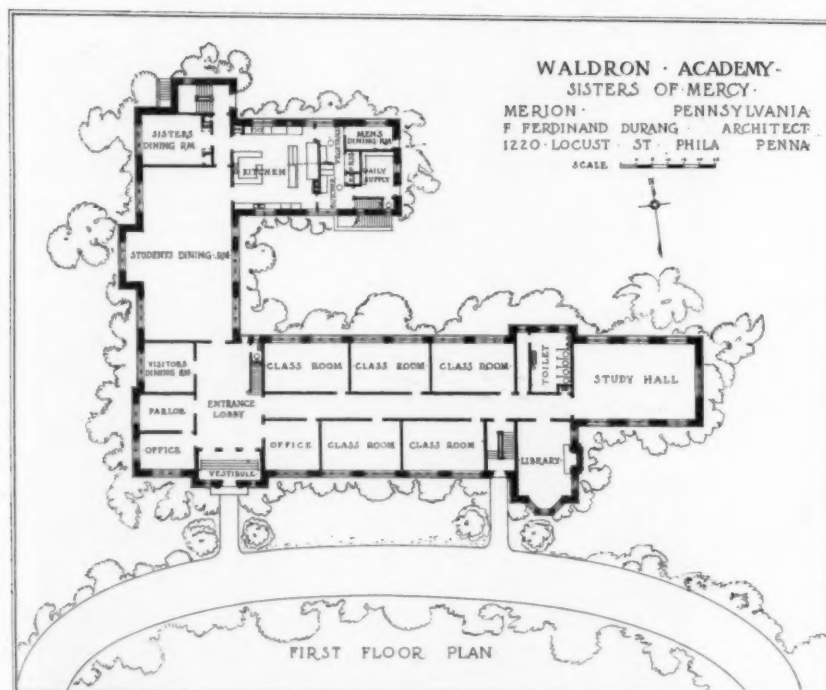
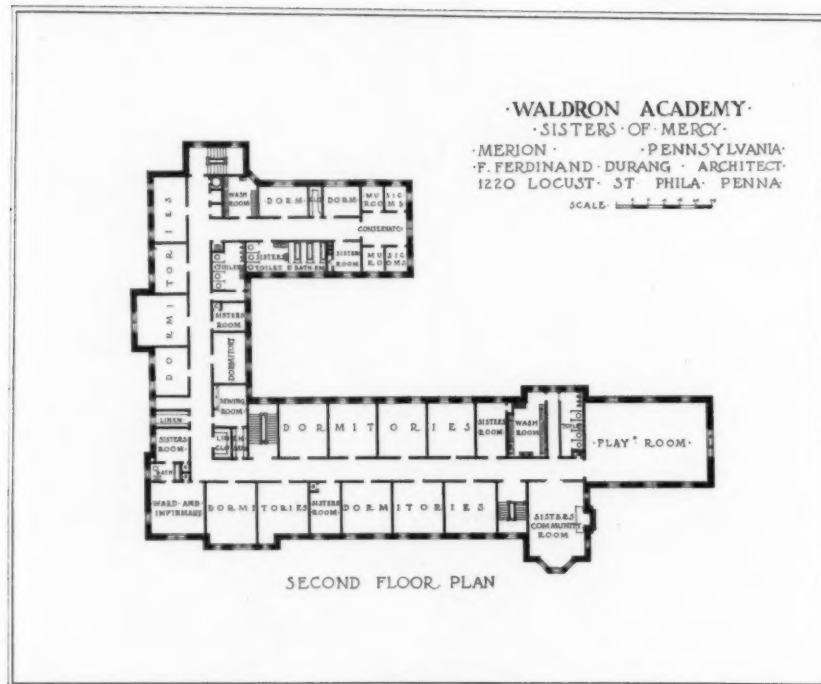
THE AMERICAN ARCHITECT
May 5, 1926 PLATE 93





WALDRON ACADEMY, MERION, PA.
F. FERDINAND DURANG, ARCHITECT
(See plans on back)

THE AMERICAN ARCHITECT
May 5, 1926 PLATE 94





WALDRON ACADEMY, MERION, PA.

F. FERDINAND DURANG, ARCHITECT

THE AMERICAN ARCHITECT

May 5, 1926 PLATE 95



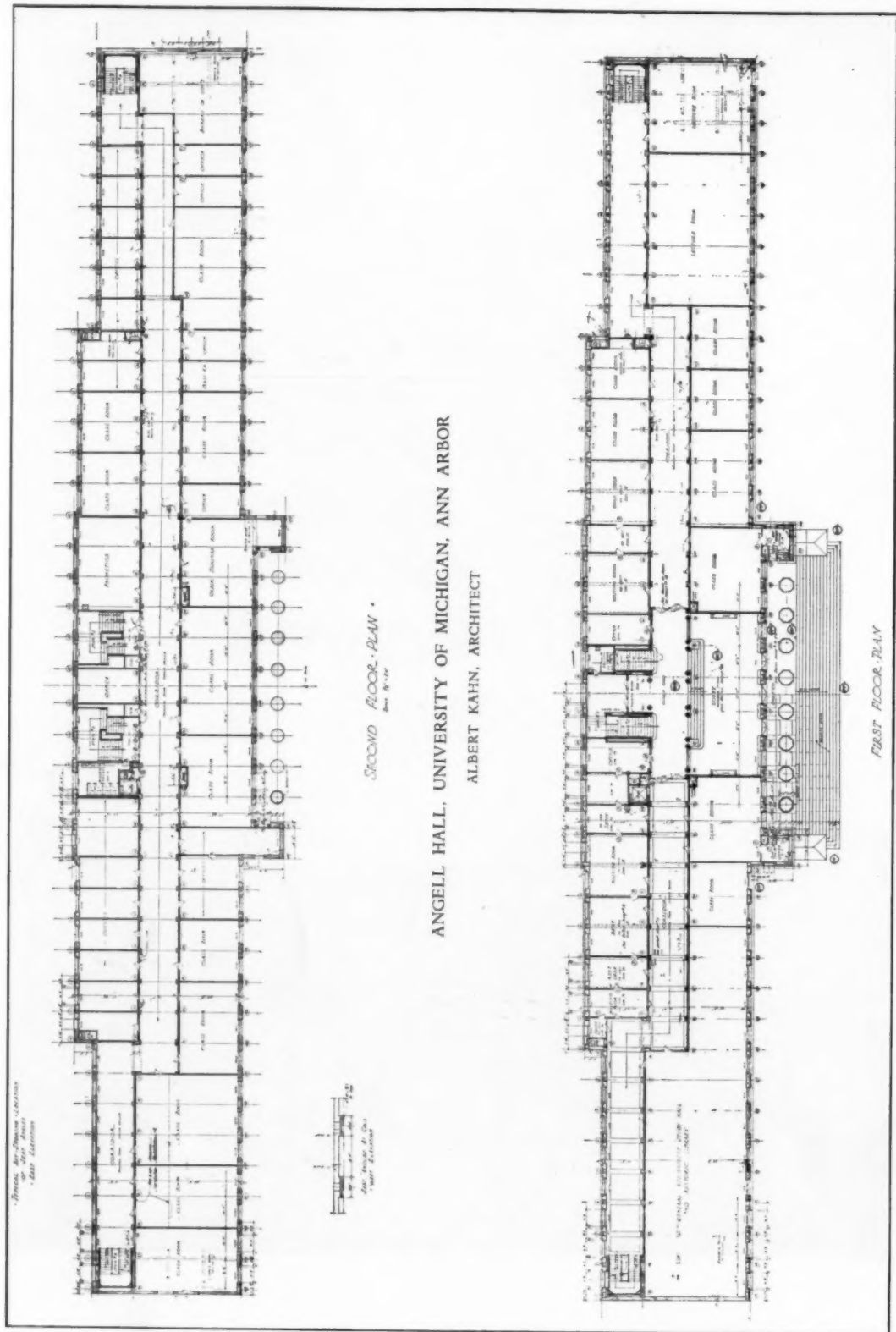
WALDRON ACADEMY, MERION, PA.

F. FERDINAND DURANG, ARCHITECT

THE AMERICAN ARCHITECT
May 5, 1926 PLATE 96



ANGELL HALL, UNIVERSITY OF MICHIGAN, ANN ARBOR
ALBERT KAHN, ARCHITECT





INTERIOR ARCHITECTURE



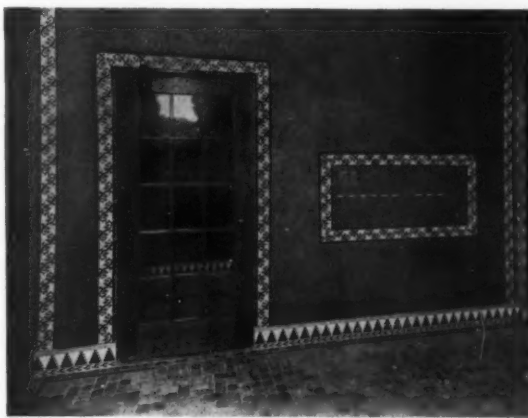
THE DECORATIVE AND STRUCTURAL VALUE OF CERAMIC PRODUCTS

AS ARCHITECTS and designers come more and more to realize that form and design arise logically from structure, and that decoration—in its true meaning, architectural ornament—is purely an element of architectural design (two facts which the articles of this department continually emphasize), they seek materials in which to express their ideas which have decorative as well as structural value. In the prevailing tendency to introduce more color into architecture—a tendency which, it is to be hoped, will gain impetus as time goes on—no material, perhaps, serves this double purpose better than that produced by the art of the ceramist. In the history of decorative art there is found a precedent for the use of ceramics in the work of the master-designers of

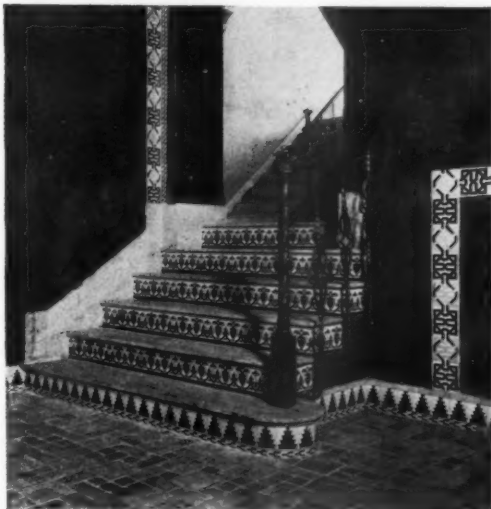
Spain. It is unquestionably the peculiar value that is conceded anything of Spanish origin today, and the influence which the ideas of Spanish designers exert on our minds that has revived an interest in this art which can be traced back through so many

centuries. Perhaps the earliest written suggestion of tiles is found in a book of the Roman, Pliny the Elder, about 50 A.D.: "Cinyra, son of Agriopa, devised tiling and slating in houses first." Its history goes back so far, to days when machinery was in its infancy, that a ceramic is generally considered more as a natural than as a manufactured product.

On account of the success with which the Spanish made use of decorative tiles, it is only natural that, in adapting certain of their ideas in architectural design



ENTRANCE HALL IN AN APARTMENT HOUSE AT JACKSON HEIGHTS, N. Y.
ANDREW J. THOMAS, ARCHITECT
ORNAMENTAL TILE USED TO EMPHASIZE THE STRUCTURAL FEATURES OF THE DESIGN



ENTRANCE HALL IN AN APARTMENT HOUSE AT JACKSON HEIGHTS, N. Y.
ANDREW J. THOMAS, ARCHITECT
ARCHITECTURAL MOTIVES ACCENTUATED BY THE USE OF ORNAMENTAL TILE



IN THE RESIDENCE OF THE LATE MRS. JACK GARDNER AT BOSTON, MASS.
GUY LOWELL, ARCHITECT
ORNAMENTAL TILES PROMINENTLY USED TO STIMULATE THE ARCHITECTURAL DESIGN



REPRODUCTION OF AN OLD SPANISH MANTEL WITH A
PANEL OF DECORATIVE TILES

MARION SIMS WYETH, ARCHITECT

to our modern needs and requirements, we should consider the use of a product which added so much charm to their work and gave to it such a distinctive and original accent. It is not surprising, therefore, to see in houses in this country, which include in their design so many of the traditions of Spain, a free use made of tile as floors, wainscoting, borders, friezes and so forth, introducing both color and ornament into the structural treatment, at once emphasizing its architectural lines and adding to its decorative value. The various practical properties of tile products give to them a structural value that is immediately appreciated by architects. Their decorative quality is, however, only secondary to their structural value, for their method of manufacture allows of any type of ornamentation in both line and color. Few products, as has already been suggested, combine so successfully structural and decorative properties, so that at a time when the selection of materials is determined by the manner in which they combine just such qualities, rather than serving one purpose without any regard to the other, it is logical that ceramic products should be favorably considered.

Structural and the decorative advantages are both evident in a tile floor. It is durable, sanitary and fireproof on one hand, and allows of color and ornament, creating, on the other, a pleasing setting for rugs and furniture. Ideas on architectural de-



AN INTERESTING TILE FOUNTAIN IN THE PATIO OF THE RESIDENCE OF STERLING POSTLEY AT PALM BEACH, FLA., FEATURING AN ORIGINAL OLD AFRICAN PANEL—MARION SIMS WYETH, ARCHITECT

sign are so often guided by precedent that a decorative tile floor immediately suggests Spanish influence, and the modern designer considers it bad architecture if other elements of the design do not also adhere to Spanish customs and traditions. Such a stand is evidence of narrow-mindedness and does not speak well for development and progress in American architecture. Of far greater moment is the fact that decoration is an element of architecture, and, like architectural design, is based on structure. It is much more important to remember and practice that construction should be decorated, and that decoration should never be purposely constructed, than that arched openings and rough textured walls must complement a tile floor. As a wall base, a decorative tile is desirable for practical and æsthetic reasons. It gives value to that line which demarks the plan of the room, crisply and cleanly. As a dado, it separates sharply the lower wall from the upper, just as the Pompeiians did so successfully with color by means of paint. Or, as a wainscot, tiles may be used to advantage by adding ornament and color in suitable design. Decorative tiles are also of great value to emphasize or accentuate various other architectural motives in the design. An arch opening or semi-circular headed doorway in a rough textured wall, without trim, may be made doubly interesting and given far greater value in the architectural treatment by inlaying a



STAIRCASE, WITH TILE RISERS, LEADING TO THE OFFICE OF THE ARCHITECT

MARION SIMS WYETH, ARCHITECT



IN THE PATIO OF THE RESIDENCE OF STERLING POSTLEY AT PALM BEACH, FLA., IN WHICH A TILE FOUNTAIN IS PROMINENTLY DISPLAYED—MARION SIMS WYETH, ARCHITECT



TILE USED TO STRUCTURAL AND DECORATIVE ADVANTAGE IN THE ENTRANCE TO THE "LITTLE RESTAURANT" IN NEW UNION STATION, CHICAGO
GRAHAM, ANDERSON, PROBST & WHITE, ARCHITECTS

border of ornamental tiles in the wall following the lines of the opening. As stair risers and fireplace facings, the structural value of tile is evident, while through ornament and color it creates interest in a structural element of the architectural design which otherwise would have no decorative value.

The illustrations herewith were selected in that they show various uses of tile when serving a combined structural and decorative purpose. In the entrance halls of an apartment house, on one page, decorative tile is used as a base, a door trim, a wall border, for stair risers, and for the floor. A more ornamental design of tile is used for the floor of a room in an architect's own house in Palm Beach, Florida, and it is interesting to note that, in spite of its Spanish flavor (the small ornamental tiles are known as "alhambrillas," for the reason that they are reproductions of tiles in the Spanish Alhambra), the architect has chosen several pieces of furniture which are of decidedly French origin in design. The effect is somewhat unusual, and even startling in these days, and, although it might be criticised by the conscientious student of architecture, according to the ethics of contemporary art, it is perfectly permissible and justifiable. In another illustration, an entire staircase—treads, risers and string—is of tile; a tile floor, and tile wainscot, tile window boxes and tile grilles are prominent, and interest in the design is thereby greatly enhanced. Two other illustrations show the use of decorative tiles as fireplace facings. They tend to center interest on an architectural element that should logically be made the center of interest in the room,



TWO OF THE THREE FOUNTAINS FROM WHICH THE ARCHITECT'S HOUSE TAKES ITS NAME, TRES FONTAINE, PALM BEACH, FLA.—MARION SIMS WYETH, ARCHITECT

and thereby allow for greater decorative value to be given to other elements without losing its place in the scheme. The fact that the figured rug, furniture coverings and draperies do not at all detract from the interest of the mantelpiece proves the correctness of the application of this principle.

Architects do well to consider seriously the use of tile as an element of architectural design, for by its use a greater interest is imparted to the various architectural or structural motives, in which lies the very heart of architecture itself; ornament is given a structural value, and brilliant color is introduced where it serves to best advantage. Tile appeals to the architect who realizes, first, that color and decoration have their root in construction; and, second, that the purpose of color and decoration considered as architectural ornament is to stimulate the lines and proportions of the architectural motives, which, in their turn, are based on structure. A greater regard for these principles by designers of interiors is urged. A corresponding interest in tiles and all manner of ceramic products will logically follow. Acknowledgment is made to the following firms for their courtesy in supplying illustrative material: Batchelder-Wilson Co., The Robert Rossman Co.

Some of the most interesting of Spanish ceramics are being made in the Zuloaga potteries at Segovia, and the illustrations on this page are reproduced from photographs which were used as illustrations to an article concerning the studies of this famous family, written by Alfred C. Bossom, which appeared in a recent issue of *Arts and Decoration*.



CUPBOARD OR PANTRY IN THE ROOM USED FOR DINING ROOM IN THE SPLENDID ZULOAGA STUDIOS IN SEGOVIA, SPAIN

(From *Arts & Decoration*)



THE NAVE OF THE OLD CHURCH IN SEGOVIA IS USED AS A LABORATORY FOR THE ZULOAGA POTTERIES

(From *Arts & Decoration*)



ORNAMENTAL TILE FACINGS MAKE THE MANTEL THE CENTER OF INTEREST IN THE BEDROOM



DECORATIVE TILES ARE USED TO ADVANTAGE IN THE DESIGN OF THE LIVING ROOM MANTEL
IN THE RESIDENCE OF FRANK BANNERMAN, SCARSDALE, N. Y.—JULIUS GREGORY, ARCHITECT



SCHOOL OF MUSIC (SAGE HALL), SMITH COLLEGE, NORTHAMPTON, MASS.

DELANO & ALDRICH, ARCHITECTS
(See description on back)

THE AMERICAN ARCHITECT
May 5, 1926 PLATE 97

SCHOOL OF MUSIC (SAGE HALL), SMITH COLLEGE, NORTHAMPTON, MASS.

DELANO & ALDRICH, ARCHITECTS

THIS building combines the actual school with its lecture rooms, practice rooms, library, etc., with an auditorium holding five hundred and seventy people. The character of its design conforms to that of the other buildings of the College, being of a New England Colonial type.

Special study was given to the acoustics of the auditorium. The devices formerly used to produce good acoustics, both in designing new buildings and in correcting old ones, read now like tales of witchcraft—the useless wires, for instance, strung across a hall with exactly as much effect on the sound waves as they would have on waves of incoming surf. The invention and the use of various absorbent materials on the walls and ceilings of lecture halls, churches and theatres have, however, now abolished the misfortunes caused by echoes, dead spots and confusing resonance. In designing a music hall, however, it is not sufficient to obviate these defects and deaden the reverberation. In order to attain the greatest possible sonority and fullness of musical sound, a certain amount of reverberation in the hall is necessary, and this must be studied, not only for times when the concert hall is full but also for times when the audience is small and scat-

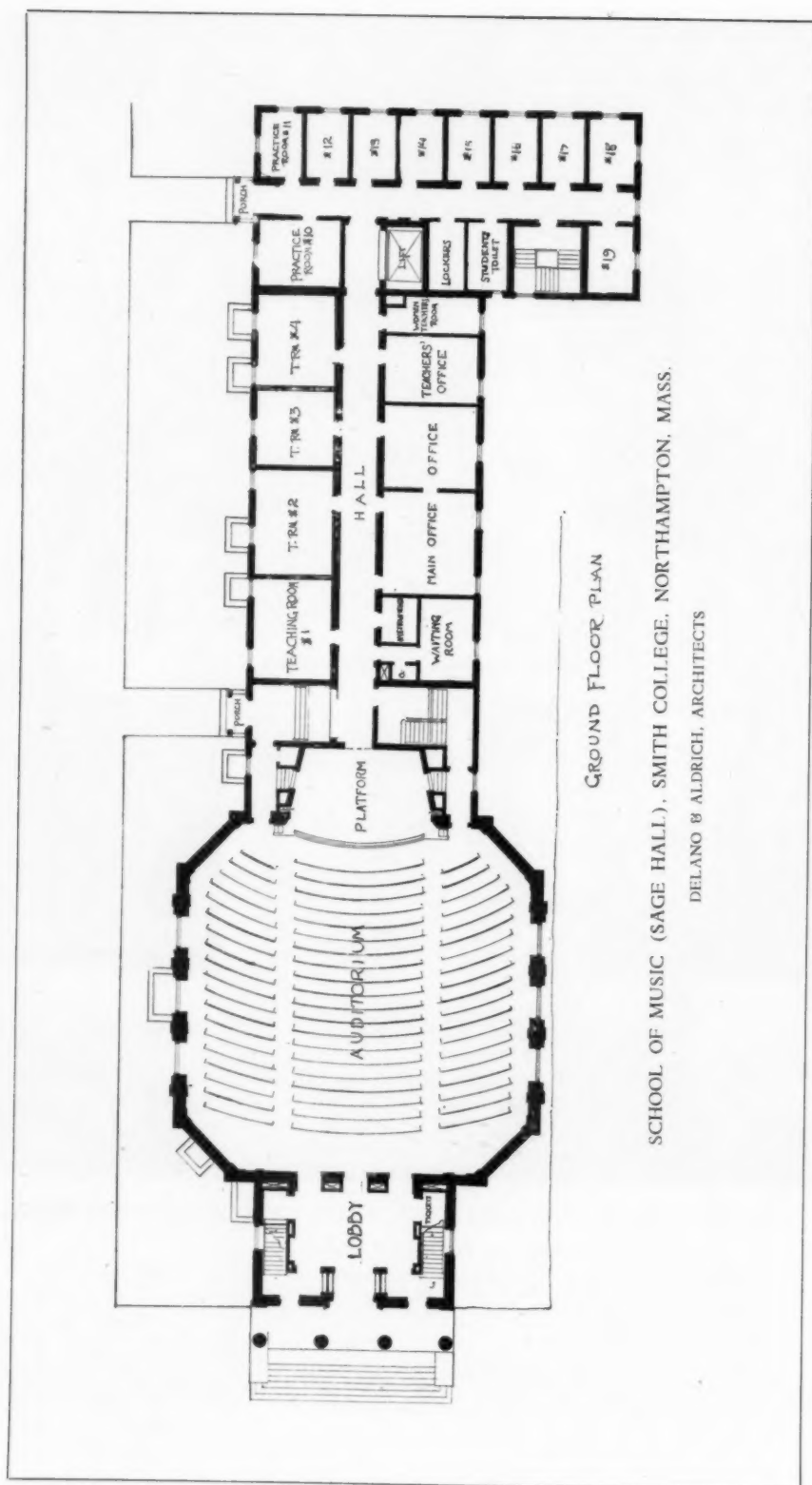
tered. In Sage Hall these questions of reverberation and sonority, as well as the more negative ones of avoiding echo and interference, were thoroughly worked out beforehand. The effect of the octagonal plan, the additional reverberation and fullness of sound given by the air in the spherical dome, all these were taken into account in the calculations worked out on Professor Sabine's lines. Absorbent material was used in certain places, such as the lining of the dome, the flat places, of the ceiling, the frieze around the room, etc., and the proportion between these absorbing surfaces and the resonant ones specially studied. The Flonzaley Quartet, who gave the first concert in the hall, expressed to the architects their complete satisfaction with the result, which has been continually approved since then.

In the interior an effort has been made to form a background appropriate in form and color to the special audiences usually assembled there, something clear, delicate and somewhat feminine in character. The interior of the auditorium is painted a light yellow with hangings by Fortuny of Venice which are of blue and yellow.



SCHOOL OF MUSIC (SAGE HALL), SMITH COLLEGE, NORTHAMPTON, MASS.

DELANO & ALDRICH, ARCHITECTS
(See plan on back)



GROUND FLOOR PLAN

SCHOOL OF MUSIC (SAGE HALL), SMITH COLLEGE, NORTHAMPTON, MASS.

DELANO & ALDRICH, ARCHITECTS

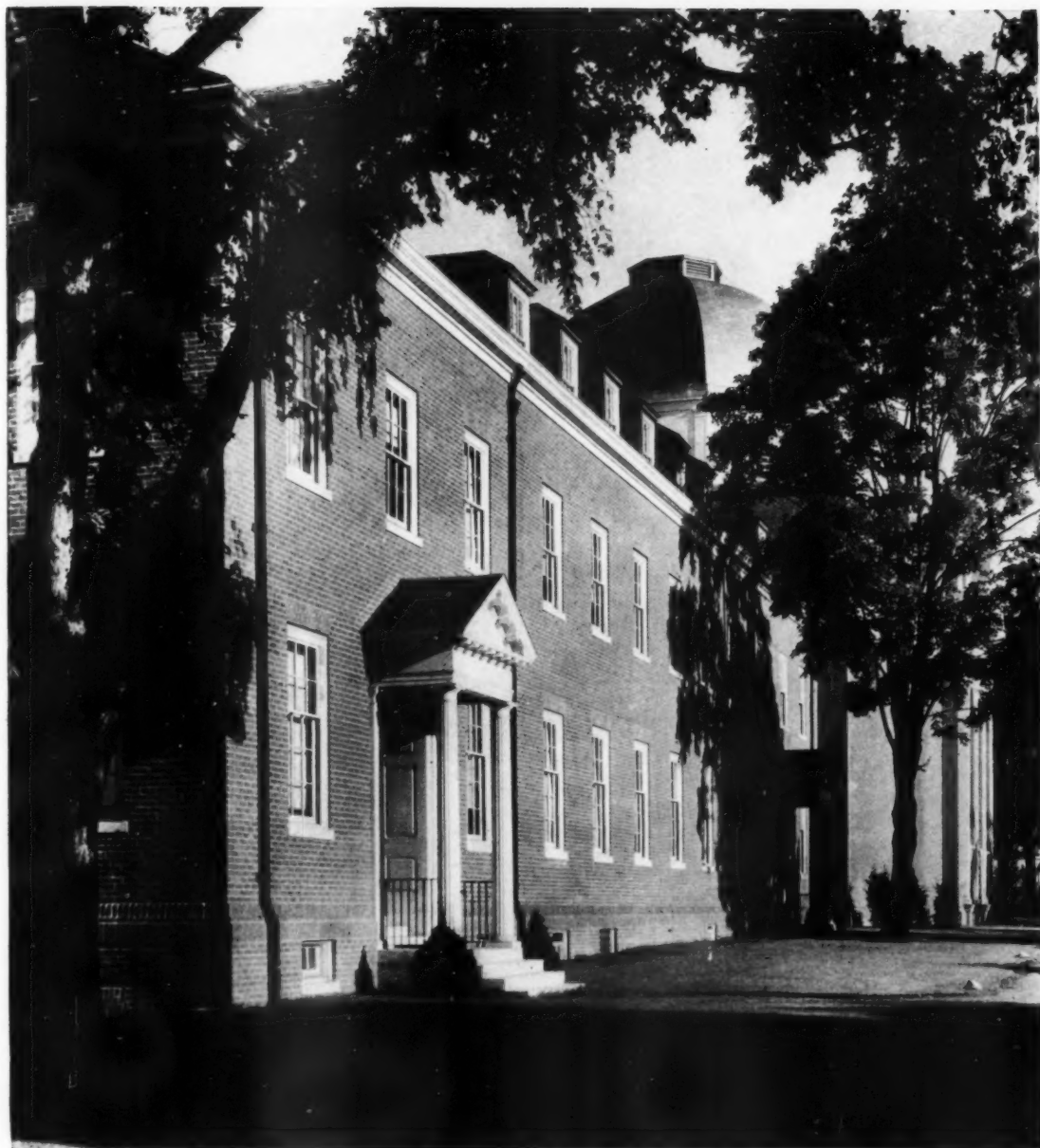


SCHOOL OF MUSIC (SAGE HALL), SMITH COLLEGE, NORTHAMPTON, MASS.

DELANO & ALDRICH, ARCHITECTS

THE AMERICAN ARCHITECT

May 5, 1926 PLATE 99



SCHOOL OF MUSIC (SAGE HALL), SMITH COLLEGE, NORTHAMPTON, MASS.

DELANO & ALDRICH, ARCHITECTS





SCHOOL OF MUSIC (SAGE HALL), SMITH COLLEGE, NORTHAMPTON, MASS.

DELANO & ALDRICH, ARCHITECTS

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BRIDGES HALL OF MUSIC, POMONA COLLEGE, CLAREMONT, CALIF.

MYRON HUNT, ARCHITECT
(See plans and section on back)

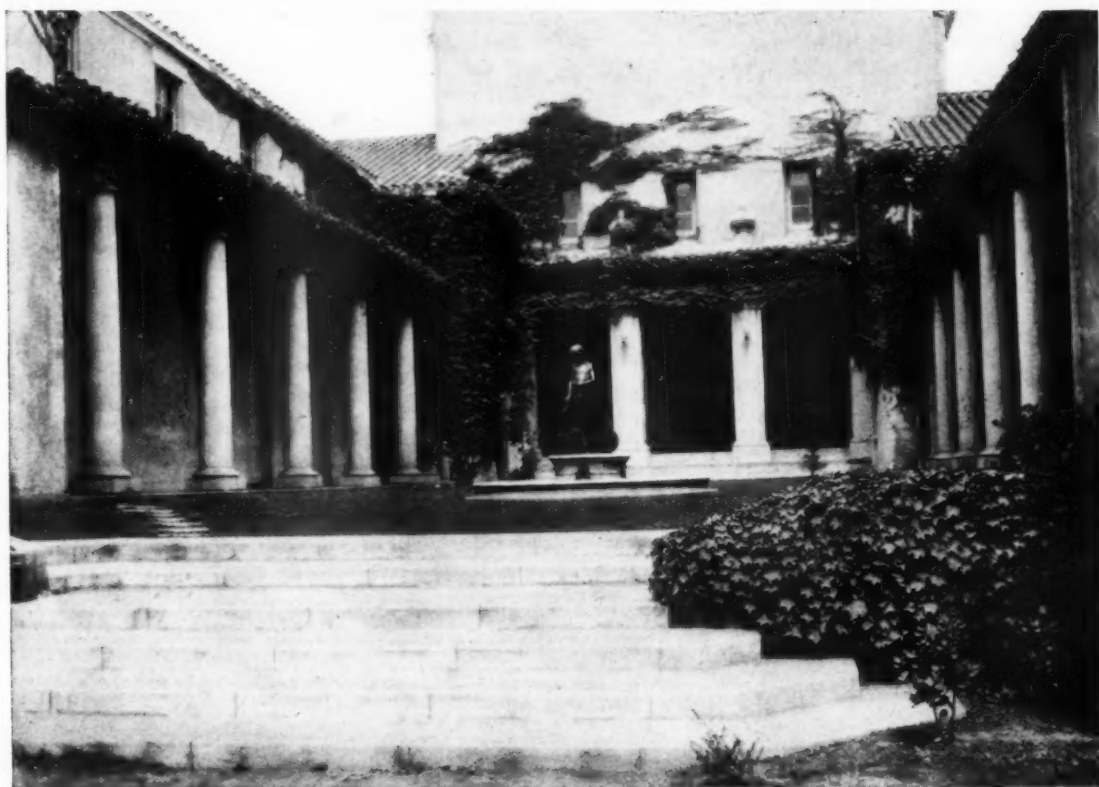
THE AMERICAN ARCHITECT
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BRIDGES HALL OF MUSIC, POMONA COLLEGE, CLAREMONT, CALIF.

MYRON HUNT, ARCHITECT

THE AMERICAN ARCHITECT
May 5, 1926 PLATE 103



BRIDGES HALL OF MUSIC, POMONA COLLEGE, CLAREMONT, CALIF.

MYRON HUNT, ARCHITECT

THE AMERICAN ARCHITECT

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ENGINEERING AND CONSTRUCTION



BAKER LABORATORY OF CHEMISTRY, CORNELL UNIVERSITY, ITHACA, N. Y.

GIBB & WALTZ, Architects—DAY & KLAUDER, Associate Architects

By ARTHUR N. GIBB

The following general description of the mechanical features and equipment of the Baker Laboratory of Chemistry is in continuation of the general description of this building, which appears elsewhere in this issue.—THE EDITORS.

IN ADDITION to the purely structural and equipment plans and details for the Baker Laboratory of Chemistry there were developed in our office and under our supervision separate complete engineer's plans and details covering the following installations: electrical, laboratory plumbing, direct heating, mechanical ventilation, hood exhaust, telephone and distilled water systems.

Under the basement corridors, encircling the entire building, there is a large tunnel which contains the main drainage pipes, return steam pipes, main supply pipes and electrical conduits. From this tunnel all pipe supplies are carried up vertically at the four corner corridor intersections in shafts accessible at each floor level. In the case of the main steam supply this is carried to the attic, where

it encircles the entire building with branch supplies down to the radiators and returns back to the sub-basement tunnel, branch supplies being taken off in the attic for vent stacks.

At each ceiling level gas, water, air and high-pressure steam are taken from the four sets of risers and make a complete circulation of the building, valved on each side of each riser. From these horizontal loops the final group branches extend through the floors to the tables as required. All branch groups are likewise valved. This system of valving makes it possible for any part of the supply system to be cut out of use for repairs, replacement or alteration. The telephone conduit system from the main station to all parts of the building follows practically the same system. Similarly the electric service entering the building at the northwest corner, far below grade, after passing through the transformers and the main control switchboard in the superintendent's office, is carried in conduits in the tunnel and thence vertically at the four cor-

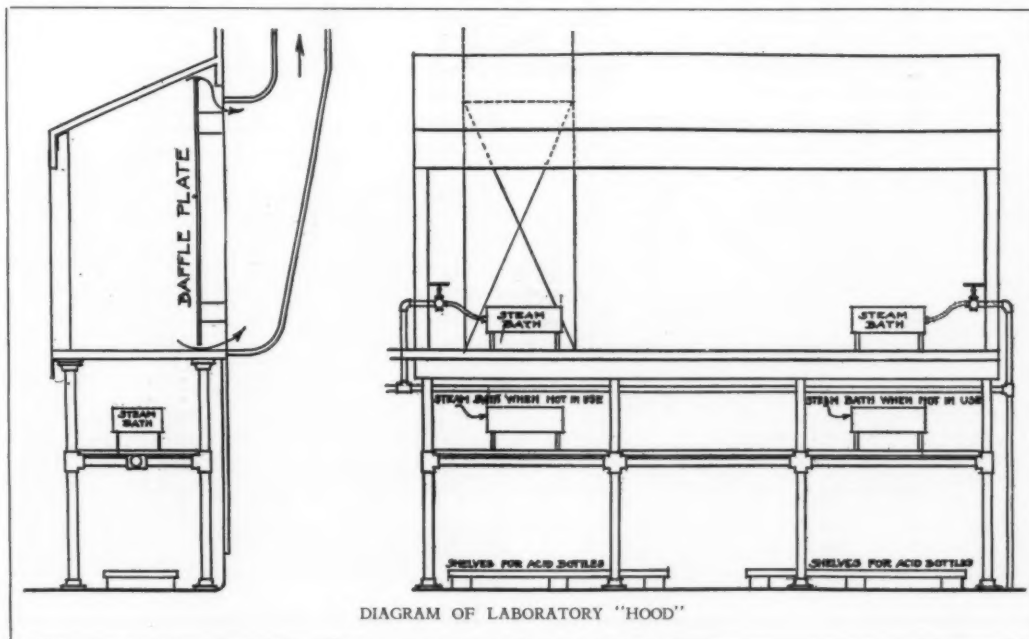


DIAGRAM OF LABORATORY "HOOD"

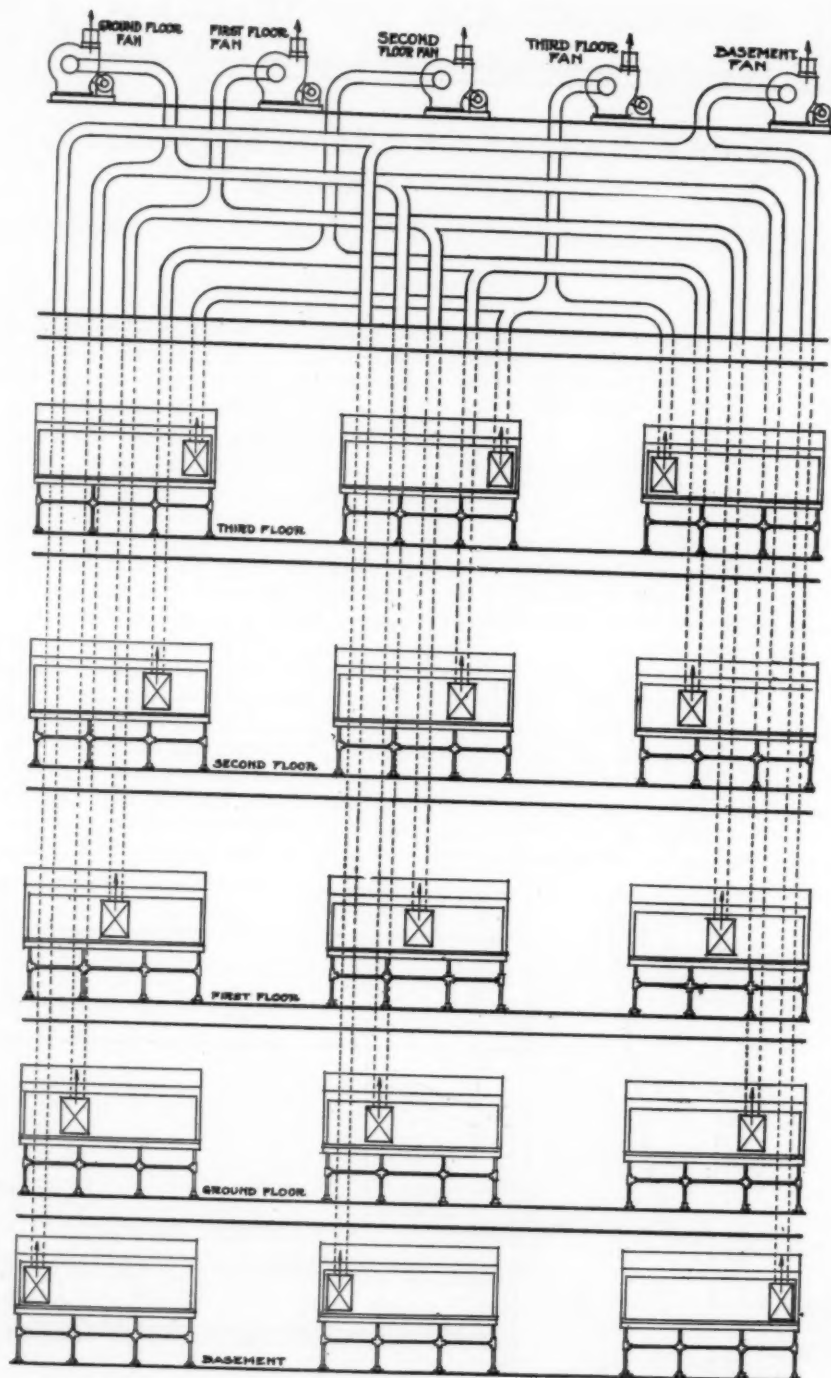
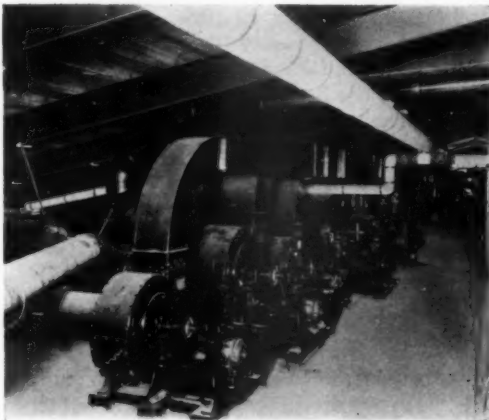


DIAGRAM OF HOOD EXHAUST



PART OF EXHAUST FAN INSTALLATION



LABORATORY FOR GAS ANALYSIS

ridor intersections, through four sets of distribution panels on each floor to the entire building.

Throughout the designing of the building and its equipment we were at all times instructed by the Department of Chemistry to use only standard commercial materials and fittings unless absolutely unavoidable. These instructions are far-reaching in their results and demand the most serious consideration as a practical measure not only of original but of continuous administrative economy.

Distinctive color marking is used on all piping throughout the building for obvious reasons.

The waste system throughout is direct and simple, as few traps being used as are absolutely necessary. This applies particularly to the laboratory waste system, the sanitary plumbing being installed under the usual practice.

The plumbing system, both sanitary and for laboratory desks, is everywhere thoroughly exposed so that every foot of waste, supply, and vent piping may be repaired or replaced at any time.

Another item of prime importance is the distilled water system without which no laboratory can

successfully operate. The piping for this from the stills to the supply outlets in each room has to be of the purest block tin obtainable and has to be supported and protected for its entire length in wood casings.

The distilled water system, the stills being in the attic, follows a reverse order and supplies all rooms downward.

The electrical installation for lighting, power and experimental work is of equal importance with the general air, water, gas, high pressure steam and other piped supplies to working and lecture tables. The location of point of entrance of general supply conduits and mains, transformers, main switch-board control, general system of distribution and intermediate control panels, branch supplies and outlets, location and adoption of lighting units, power and experimental systems, both direct and indirect, storage battery systems for emergency lighting and experimental work occupied the attention and close study for many months of the department staff, the electrical engineers in charge and the architects.



GENERAL VIEW OF MAIN LECTURE ROOM AND REAR VIEW OF LECTURE TABLE

Of electrical conduits buried in the building construction there are not less than 75 miles, and if exposed conduit runs for tables, hoods, etc., be added, the total conduit mileage certainly runs well over 100 miles.

Nine blower fans provide fresh air to the building, while the hoods are taken care of in groups by 51 exhaust fans. All these fans are located in the attic, the hood fans having remote control by switches at the hoods. This feature of fan control *at the hoods* is of the greatest importance, and together with the carefully studied grouping of the hoods and fans is a measure of great economy and a preventative of excessive and wasteful use of power. Special blower and exhaust fans for various purposes make a total of 66 fans of all kinds in use in the building.

The style and efficiency of the "hoods," the keynote of every laboratory, and necessary for the positive removal of dangerous fumes, underwent the most minute investigation. Hood design and exhaust systems in use in other laboratories and in the laboratories of the Bureau of Standards at Washington, D.C., were examined and the faults developed noted.

Finally experimental hoods were constructed by the Department of Chemistry and operated under actual working conditions, altered and re-altered as required until as nearly a perfect "hood" as seemed possible was obtained. The size of exhaust flue, maximum hood length per flue, materials of construction, location of "baffle plates," and size of top and bottom exhaust slots, location on outer walls of elementary laboratories and inner walls of all advanced and research laboratories having been determined, fixed at the same time the wall construction and thickness and dimensions of all hood walls.

In a laboratory of chemistry where hood exhaust failure under certain conditions spells death,

their positive action at all times is of paramount importance; consequently the general system of heating and ventilation is inevitably closely coordinated to the hood problem. A double system of heating was adopted, *viz*: a direct system of vacuum steam and an indirect system of air supply drawn down from the roof by blower fans located in the attic at the four corners of the building, forced down vertical shafts and thence distributed horizontally at each story to every room. The sub-division of the air ducts to provide balanced air supply to rooms with and without hoods was carefully studied and worked out by the engineers in charge.

The permanent furniture equipment plans involved fully as much work as did the structural plans, for they not only showed the exact location of every item of equipment from working tables to filing cases, but showed the kind and location of every supply outlet, locker arrangements, table gutters, sinks, shelving, etc. Every individual type of equipment was not only located on plan but detailed to larger scale, numbered and card indexed for quick reference.

All hoods, table tops, table gutters and sinks, table shelving and shelving in dangerous chemical storage are of soapstone, about 150 tons of this material being used. On the working tables throughout there are approximately 10,000 supply outlets.

In all working laboratories the cement floors are finished with a special acid-resisting mastic, and elsewhere generally with linoleum and corrugated rubber.

Equipment installations of a laboratory of chemistry are largely different from those required by any other type of building. The successful solution of this particular laboratory may be traced directly to the close co-operation between the architects and the head and staff of the chemistry department.



LABORATORY OF INORGANIC CHEMISTRY



LABORATORY OF CHEMICAL MICROSCOPY

ACOUSTICAL TREATMENT IN SMALL AUDITORIUMS

By WALLACE WATERFALL

PRESENT day college courses usually consist of lectures supplemented by class room and laboratory work. In the lectures, students are required to take rather complete notes and it is necessary that they be able to hear well and as accurately as possible. In turning to the blackboard behind him to illustrate some point, or in the demonstration of some equipment on the lecture room table, the professor's words are sometimes not very distinctly spoken and it is difficult to catch them all. Anything that can improve conditions in the room is therefore a help to both professor and student.

Almost every building on the college campus contains at least one lecture room. In addition to the lecture rooms, there are usually a chapel and one or two small auditoriums which are used for student and faculty gatherings. In all of these rooms used for speaking or music, acoustical conditions should be as correct as possible.

The interiors of these rooms are generally plain; and even in the auditoriums there are seldom carpets, upholstered seats, draperies, or other furnishings. The hard interior surfaces have little ability to absorb sound energy, and reflections continue back and forth for several seconds before the sound finally loses its strength and becomes inaudible. Following each syllable of speech there is a trail of sound that overlaps the succeeding syllable and makes hearing difficult. This fault, caused by what is usually called "excessive reverberation," is the

most common acoustical difficulty encountered and can be controlled.

The usual procedure of the acoustical engineer in analyzing hearing conditions of a room which is yet on paper, begins with an estimate of the volume of the room and of the areas of different materials making up the interior surfaces. Each type of surface has a certain ability to absorb sound energy and thus to decrease the reverberation in the room. One square foot of surface which has total absorption, such as an open window, is taken as the unit of absorption. The coefficient of absorption of any material is the relative absorption of one square foot of the material based on this unit. Summing up the areas of plaster, wood, concrete, etc., and multiplying by the respective coefficients give the total absorption of the room. To this natural absorption of interior surfaces must be added the absorption of seats and the audience. The last factor, the absorption of the audience, has a considerable influence on results and so calculations of conditions are usually made for various sized audiences. Knowing the volume of the room and the units of absorption present, the familiar formula developed by Professor Wallace C. Sabine makes it possible to determine the periods of reverberation or length of time that a sound of standard intensity will last in the room with various sized audiences. Sufficient absorbing material must then be added to bring the reverberation to



ASSEMBLY HALL, NORTH SIDE JUNIOR HIGH SCHOOL, WALTHAM, MASS.
CHARLES G. LORING, ARCHITECT

the most acceptable value as determined by experiment in existing rooms.

After studying a large number of lecture rooms and auditoriums of the types found in colleges, the writer has arrived at some simpler methods of analysis which are quite accurate and will furnish the architect satisfactory guidance in the selection of the proper amount and kind of acoustical treatment.

Two years ago Dr. Paul E. Sabine showed that the total absorbing power of an empty room of normal interior finish could be considered as a function of the volume of the room. This relation between volume and absorbing power has been checked in numerous cases and found to be closely true in each. Figure 1 gives the information in graphical form. The absorbing power of the empty room is plotted directly against the volume for convenience in figuring. Individual cases will, of course, show some variation, but the absorption of the room itself is small compared to the total absorption of room, audience, and acoustical treatment, and the variation is negligible. Practically all college assembly rooms, with the exception of large gymnasiums and auditoriums, will be found to fall within the limits of the curve.

In order to determine whether acoustical treatment is necessary in a room and, if so, what quantity is required, another graph is needed. The information in this case comes from Professor F. R. Watson and is given in Figure 2. This curve is similar to the first one in the units in which it is plotted. The amount of absorption given for a room of any volume is found to produce best conditions of reverberation for speaking and general assembly purposes.

The use of the two graphs is explained as follows. Figure 1 gives the absorption of the empty

room. Figure 2 gives the absorption required for best results. The difference between the two must be made up by the absorption of the audience and whatever additional absorbing material is necessary. An example will serve to illustrate the method of calculation.

Assume a lecture room with floor dimensions 50 feet by 80 feet and an average height of 30 feet. The volume of the room is 120,000 cubic feet. Assume the seating capacity to be 600 persons. The average number of persons present can be taken as 400, or two-thirds of the seating capacity. According to Figure 1, a room of this volume should have about 700 units of absorption when empty. The absorption of a person, due largely to the clothing, is generally taken as 4.5 units. That is, 400 persons will furnish 1800 units of absorption. Adding 1800 units to the 700 units already in the room, gives 2500 units. According to Figure 2, the room should have about 4400 units for best results. Then 1900 units should be added as the necessary correction.

There are several acoustical materials on the market with an absorbing coefficient of about .55. This means that these materials have .55 units per square foot and so it would take about 3450 square feet to give the 1900 units needed. The floor area of the lecture room is 4000 square feet. The ceiling is probably separated into panels by beams and there may be a skylight. Let us assume that there is just room for 3500 square feet of treatment.

The example above is typical of many rooms found in college buildings and the correction outlined would be found to be a good one. It is usually safe to correct a room for a two-thirds audience, as was done in this case. Thus the best condition of reverberation is reached with about

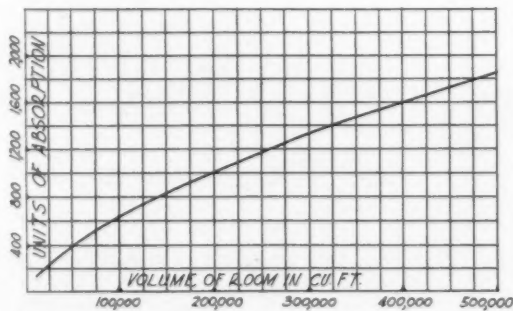


FIGURE 1

Absorbing power of empty rooms of normal interior finish. Chart based upon relations established by Dr. Paul E. Sabine and published in THE AMERICAN ARCHITECT June 18, 1924

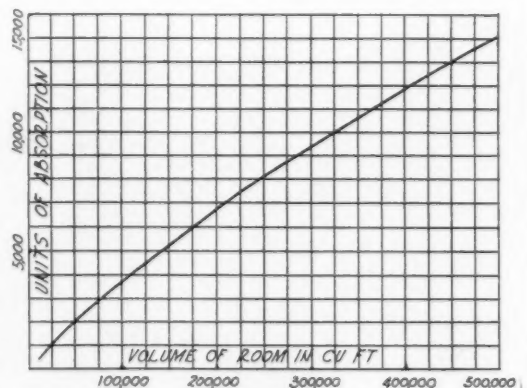


FIGURE 2

Absorption required to produce best conditions of reverberation. Chart based upon data determined by Professor F. R. Watson

400 persons present. With only a few persons, however, hearing conditions will be very good, and with a maximum audience, there will be no bad effects caused by too much treatment.

This method, in its simplest form, applies mainly to plain rooms, but it is easily adapted to more elaborate interiors and some of the customary variations might be mentioned.

A word of caution should be given about curved wall and ceiling surfaces. Curved surfaces tend to concentrate sound in the same way that a flashlight reflector focuses light. In an auditorium an even distribution of sound is desired and any concentrations of sound energy at various points may cause peculiar and undesirable effects. The worst conditions are usually found where the center of curvature of a ceiling surface comes on or near the floor line. Where a vaulted ceiling is thought necessary to produce the proper architectural effect, this is a point worth bearing in mind. Obviously, one way of preventing curved surfaces from causing sharp concentrations is to cover the surfaces with acoustical material having a high absorbing coefficient. High absorption means correspondingly low reflection and, where curves are necessary, such treatment will minimize the concentration effects.

A stage presents no unusual problem in most cases and unless it is exceptionally large compared with the size of the auditorium, its volume can be figured in with the volume of the main room and a proportional amount of the acoustical treatment, if any is required, can be placed in the stage house. If the stage is small, placing acoustical treatment in the auditorium alone will usually be sufficient to assure good acoustics.

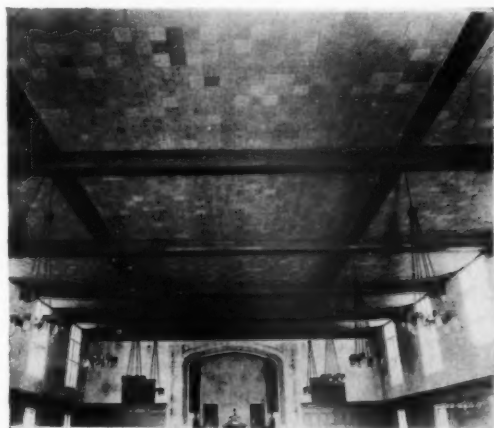
The effect of upholstered seats is interesting. Upholstery is quite absorbent and some seats have an absorbing power as high as two units each. It is usually considered that when a person sits on

an upholstered seat he covers part of his own absorbing area as well as part of the area of the seat, so that a seated person and the seat together have little more absorbing power than the person alone. This makes few changes necessary in the method of figuring. For heavily upholstered seats, it is suggested that the maximum audience be taken in the calculations instead of two-thirds audience. With small audiences, the empty seats will furnish a large amount of absorption and reverberation will not be excessive.

Balconies do not make much of a change in the method. They reduce the volume a little and add to the seating capacity. This makes the audience furnish more absorption and decreases the amount of acoustical material needed to make up the required total. In spaces beneath balconies, where the depth is unusually great for the height of the opening at the front, good hearing conditions cannot be expected in the back rows of seats.

The proper location of absorbing material often causes some apprehensions. Professor Wallace C. Sabine early made the discovery that the period of reverberation in a room is almost independent of the position of the absorbing material. So if acoustical material cannot be placed on the ceiling because of ceiling lights or the proposed decorative scheme, it can be placed on the walls. The effect of curved surfaces, however, should be remembered and carefully considered.

The selection of the proper kind of absorbing material is, of course, open to discussion. Occasionally furnishings, such as carpets or drapes can be used to make up the absorption required. This is sometimes done in elaborately decorated theatres but, to reach the best correction in this manner, the "cut and try" method must be resorted to, unless it is possible to determine accurately the absorbing power of the materials before they are installed. It is usually found best to specify a defi-



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HENRY C. HIBBS, ARCHITECT



AUDITORIUM, NORTH SIDE HIGH SCHOOL,
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CHARLES O. PFEIL & GEORGE W. AWSUMB, ARCHITECTS

nite quantity of some acoustical material, the absorbing power of which is predetermined and definitely known.

The selection of the acoustical material to be used will depend on the way in which the architect balances the qualities of each. First of all, he should definitely know the absorbing efficiency as determined by some reputable authority. In considering the physical characteristics, he should think of the acoustical treatment as a part of the interior finish, the same as the floors, doors, or walls. He should remember that the acoustical material is to be a permanent part of the building and must be able to be cleaned and redecorated at intervals at the least possible expense, without loss of efficiency.

In this article an attempt has been made to show a simple method of arriving at the proper acoustical treatment to be used in college lecture rooms, gymnasiums, and other auditoriums which

have no unusual features. In such rooms, reverberation can be considered as the only really important factor in influencing hearing conditions. For large auditoriums and for those which depart from the usual proportions, no rules can be laid down which will cover all cases. On special problems, an independent authority or the manufacturer of an acoustical material can be consulted. When this is necessary, he can and should demand the facts and that they be presented in such a form that he can be sure of their accuracy.

The following references are given for the use of readers who may desire more extended discussions of various points referred to in this article:

Coefficients in absorption of various building materials. See "Acoustics of Buildings," by F. R. Watson.

Absorbing power of empty rooms. See article by Dr. Paul E. Sabine, "Acoustics in Auditorium Design," published in THE AMERICAN ARCHITECT, June 18, 1924.

"Optimum Reverberations in Auditoriums," by F. R. Watson.



AUDITORIUM, SOUTHWESTERN UNIVERSITY, MEMPHIS, TENN.—HENRY C. HIBBS, ARCHITECT

ARCHITECTURAL ACOUSTICS

THE Department of Commerce, Bureau of Standards, Circular 300, recently issued, contains a statement of the fundamental principles governing the construction of an acoustically successful auditorium. A typical example is worked out, showing the practical application of these principles to the planning of a new auditorium or to the curative

treatment of one that has proved to be unsatisfactory.

The circular was prepared by Paul R. Heyl, Senior Physicist, in charge of the Sound Laboratory, Bureau of Standards. Circular No. 300 may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., for five cents.

BAKER LABORATORY OF CHEMISTRY, CORNELL UNIVERSITY, ITHACA, N. Y.

GIBB & WALTZ, Architects—DAY & KLAUDER, Associate Architects

By ARTHUR N. GIBB

IN WORKING out the general plans and details of a great university laboratory of chemistry, where, as in the case of Cornell University, all branches of chemistry are to be taught and research work is to be carried on, certain fundamentals of grouping, the co-ordination of elementary and advanced work, proper traffic circulation, delivery of supplies and such matters had to be considered in about the following general order:

Grouping:

- Elementary student laboratories
- Advanced and research laboratories
- Stock rooms to supply laboratories
- General storage to supply stock rooms
- Museum and lecture rooms
- Library and reading rooms
- Administration rooms
- Staff offices and private laboratories
- Special research laboratories
- Toilet and cloak rooms
- Ventilation and heating systems

Details:

Adoption of standard table dimensions and spacing, (a) for elementary work, (b) for advanced and research work. Adoption of a definite system of piping, wiring, etc., through the building to and on each table. Adoption of a definite heating and ventilating system. Adoption of a definite system of "hoods," their design, adequate exhaust and location of "hoods" in elementary and research laboratories.

With the foregoing matters at least tentatively settled, the general plan, type and construction of the building were taken up. This may seem like putting the "cart before the horse," but our study of the great laboratories already constructed here and abroad showed that they had apparently been designed with but little regard for the technical installation, a fault that seriously affected their later successful operation.

The hollow square plan adopted at the time our early studies were made in 1910, and adhered to in the preparation of the final plans made during the years 1919-21, was by no means an arbitrary selection.

"H," "U" and "L" plans and innumerable modifications were tried and found inadequate. The large elementary laboratories wherever placed in these plans either blocked future extensions or became of necessity traffic highways; nor did these types allow for the proper co-ordination of advanced and elementary laboratories in any satisfactory degree.

The following fundamental conditions were laid down from the beginning.

The great introductory laboratories must be grouped one above the other, lighted from both sides, accessible from both ends. The allied advanced laboratories must be adjacent to the corresponding elementary laboratories so that both may be under close control by the professor in charge. There should also be adjacent stock rooms for the prompt delivery of supplies to students and staff. All stock rooms should have direct elevator connection with the store rooms in the basement.

The museum should be an attractive entrance feature and should be closely connected by means of elevators with the preparation rooms of all lecture rooms.

The library and reading rooms should be in a quiet sector of the building, preferably on the main floor near the entrance.

The administration and business offices should be provided with modern equipment and should also be located near the main entrance.

Adequate toilet and coat-room equipment for staff and men and women students should be provided on all floors.

Minor recitation rooms, dark rooms, constant temperature rooms, etc., dropped into place naturally as the plans developed. General storage rooms for glassware and chemicals with space sufficient for a two years' supply were placed in the basement, and the plans were also to be so drawn as to make possible large additions to the building without disturbance of the original unit.

The spacing and width of working laboratory tables both for elementary and advanced work, demanding as they do entirely different student working space and locker arrangement, determined at once a basic unit dimension for fenestration and floor construction, the former to provide uniform lighting of tables, the latter to provide for the passage of piping groups for table supplies. The working space required for each student and the number of students to be provided for determined the floor area necessary for each type of laboratory room.

It might be mentioned here that there are two main schools of ideas as to the proper grouping of students in laboratory classes, especially as regards elementary work. One believes in subdivision into small classes in small laboratories, each supervised by a member of the staff. The other, the system believed best and adopted as such by the Department of Chemistry at Cornell University,



DETAIL OF PRINCIPAL ENTRANCE

holds that the greatest efficiency in work and economy of administration can best be obtained by providing large laboratory rooms which can easily be supervised by the staff member in charge.

The window area required for adequate daylight being very large, and window leakage being a very serious source of destruction to air balance, an air-tight steel casement was found and used throughout, except in a few places where this requirement was not necessary.

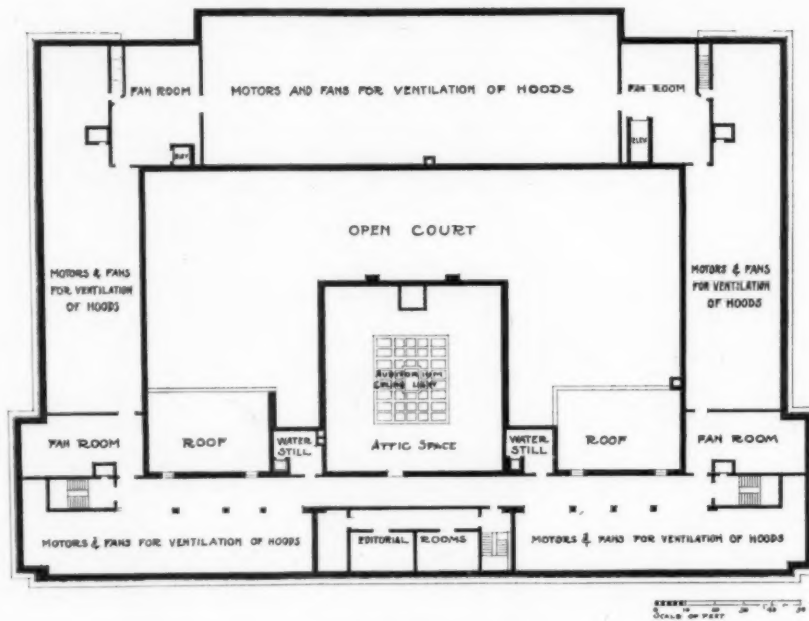
Until practically all equipment details were at least tentatively settled, definite accurate progress on the working plans of the building itself was

impossible. As these were worked out, co-ordinate floor plans showing the location of equipment, such as tables, sinks, hoods, cases, reagent shelves and the thousand and one pieces of miscellaneous equipment, were prepared and kept constantly in agreement with the latest decisions. Without these equipment plans, correct working drawings are an impossibility owing to the necessity of adjusting the construction very accurately to the necessities of equipment.

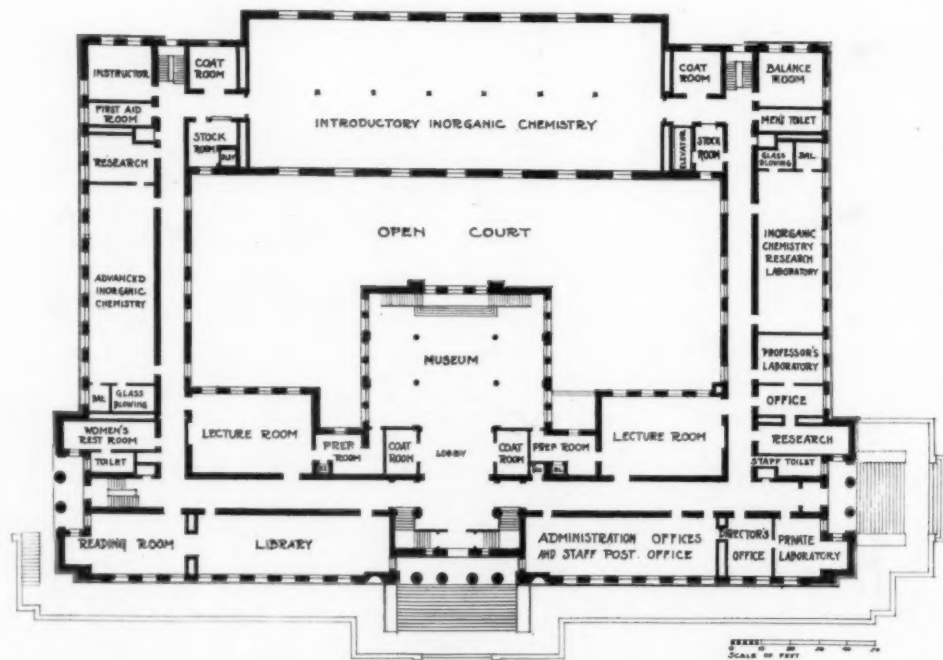
The building itself has a frontage of 268 feet and a depth of 191 feet; with the terraces a total of 307 feet by 217 feet. It is 75 feet in height,



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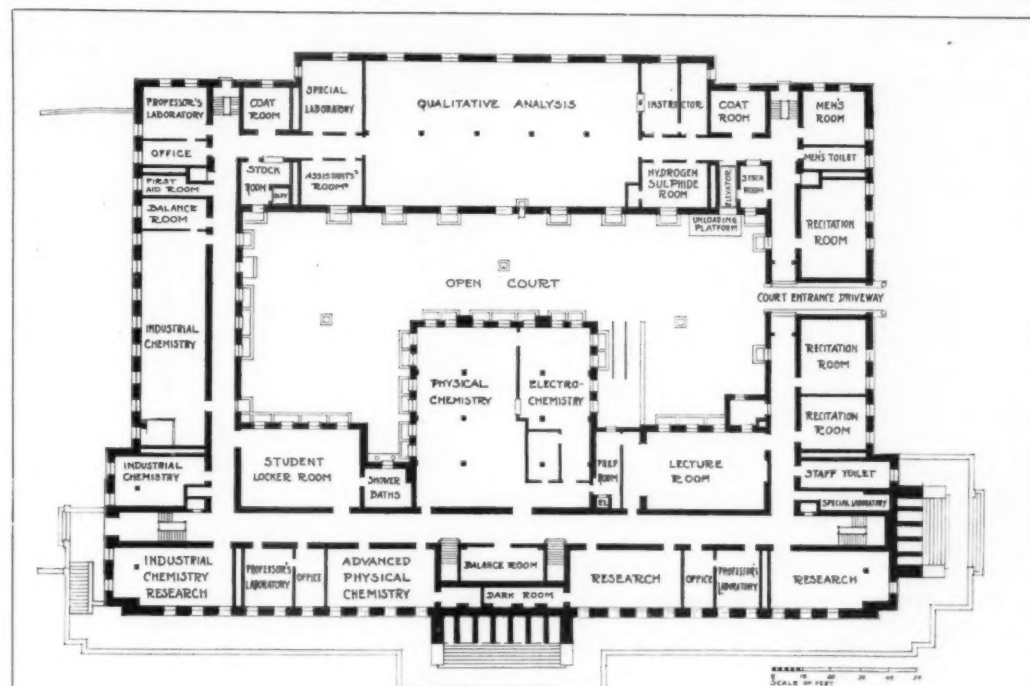
ATTIC FLOOR PLAN



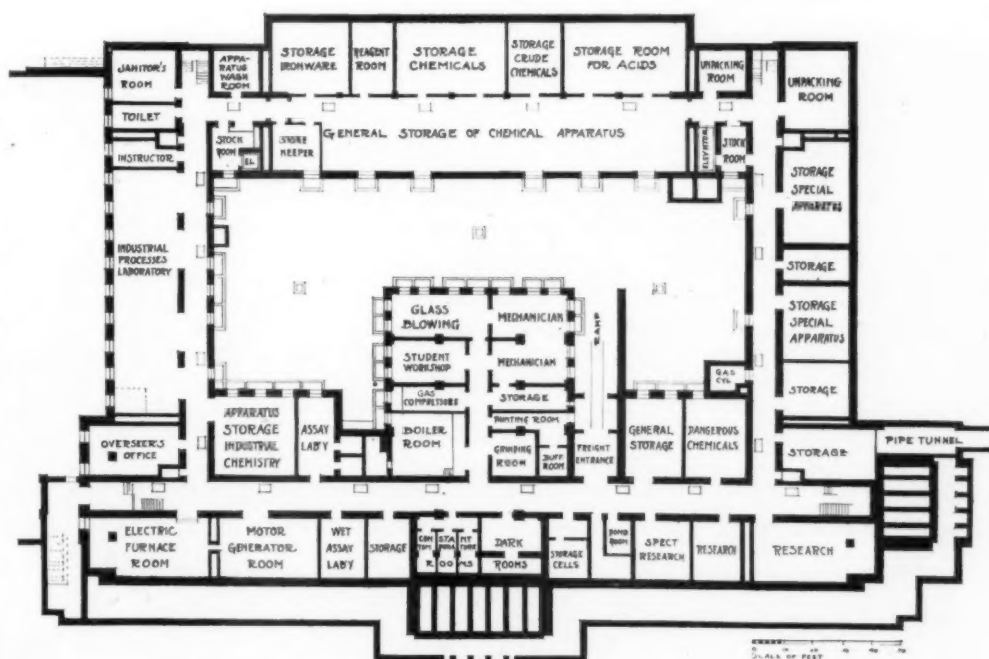
FIRST FLOOR PLAN

BAKER LABORATORY OF CHEMISTRY, CORNELL UNIVERSITY, ITHACA, N. Y.

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GROUND FLOOR PLAN



BASEMENT PLAN

BAKER LABORATORY OF CHEMISTRY, CORNELL UNIVERSITY, ITHACA, N. Y.

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including five working floors and an attic used entirely for blower and exhaust fans and the distilled water apparatus. It is entirely of fireproof construction. The exterior is of local stone and Indiana limestone; interior walls are of brick, hollow tile and gypsum.

Steel frame construction is used only for entrance hall, museum, auditorium, elementary laboratory sectors and roof, and is thoroughly protected. The floors throughout are of reinforced concrete joist and slab construction with gypsum block fillers. The spacing of floor joists corresponds to the standard table spacing adopted, namely 9' 4" from center to center of table, thus allowing a 4' 4" table top with 5' 0" aisle. This spacing also governed the window spacing throughout and the column spacing in the elementary laboratory sector.

In keeping with the building's function as a working laboratory, no attempt was made at architectural embellishment of the interior, except in the main entrance and stair hall, the museum and main auditorium where simple classical detail is carried out in plaster work of columns, pilasters and cornices.

The main lecture room, seating 500 and located on the second floor directly above the museum, is probably the most completely equipped room of its kind in any laboratory. The lecture table is 26 feet long, and is so fitted up that the lecturer has at his command every kind of supply used in the building, including direct exhaust at the table top. The lecturer also has control of the room lighting and of the darkening shutters at all windows and of the central skylight. These shutters are of the rotating vane type operated by electric motors, and have proved entirely satisfactory. They are practically instantaneous in operation. The same type of shutters is also used in the secondary and minor lecture rooms where the lecture tables are equipped similarly to that in the main lecture room, though not so elaborately.

In the main lecture room the electrical controls provided at the lecture table are repeated at the rear of the room. The room is provided with a complete moving-picture installation, the screen being above the blackboards behind the lecture table.

The entire top of the lecture table, and, of course, the picture screen, are in full view from every seat, the furthest seat being at a distance of not over 65 feet. The main lecture room and also the secondary lecture rooms are, through their respective preparation rooms, directly connected with the museum by two automatic elevators for the transportation of specimens, apparatus and supplies.

The administration office is probably unique in a building of this character, as its arrangement is similar to that of a small bank with metal and glass counter screen, service wickets, rear compartments and a vault. In this office every detail of department administration is handled. The office and private laboratory of the head of the department adjoins the business office.

Among the many laboratories assigned to different uses in the building, that used for chemical microscopy on the north side of the building on the third floor, is one of the most interesting. It contains the most perfect and extensive equipment of its kind in existence. Its special table equipment is, we believe, nowhere duplicated.

In the basement, industrial chemistry has space provided so that complete industrial processes may be set up and changed as required.

The building has a cubic contents of 2,446,511 cubic feet. The total cost, including equipment, was \$1,509,058.56.

Structural cost per cubic foot	45.57c
Equipment cost per cubic foot	16.11c

Total cost per cubic foot	61.68c
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As finally computed, the total cost was less than the original estimate.

This article may not be concluded without expression of appreciation of the work of Charles Z. Klauder of the architectural firm of Day & Klauder, who were in direct contact with us as associate architects for this particular purpose, and to whom credit is due for the exterior of the building.

EDITOR'S NOTE: A further article by Mr. Gibb, particularly referring to the architectural engineering features of this building, will be found in the department of Engineering and Construction in this issue.

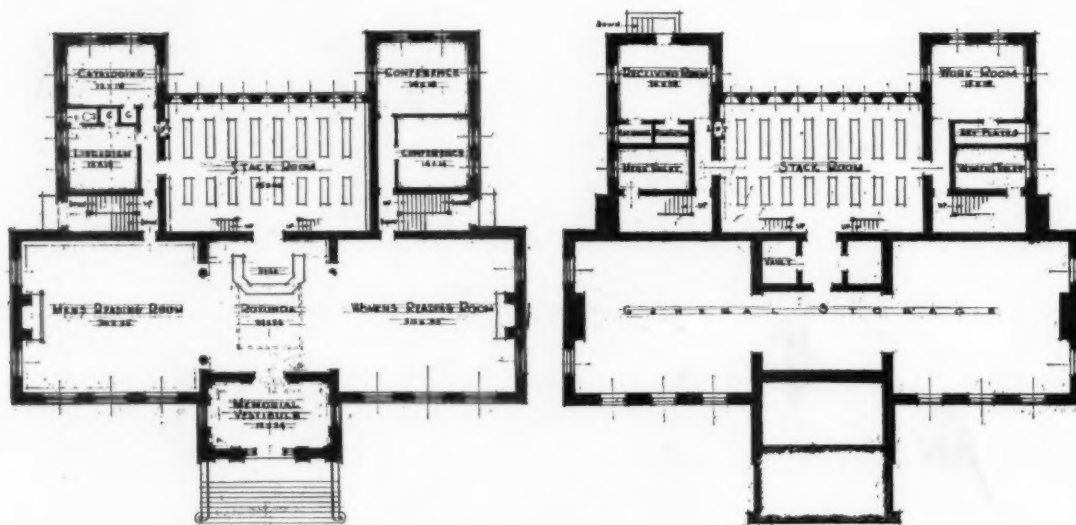




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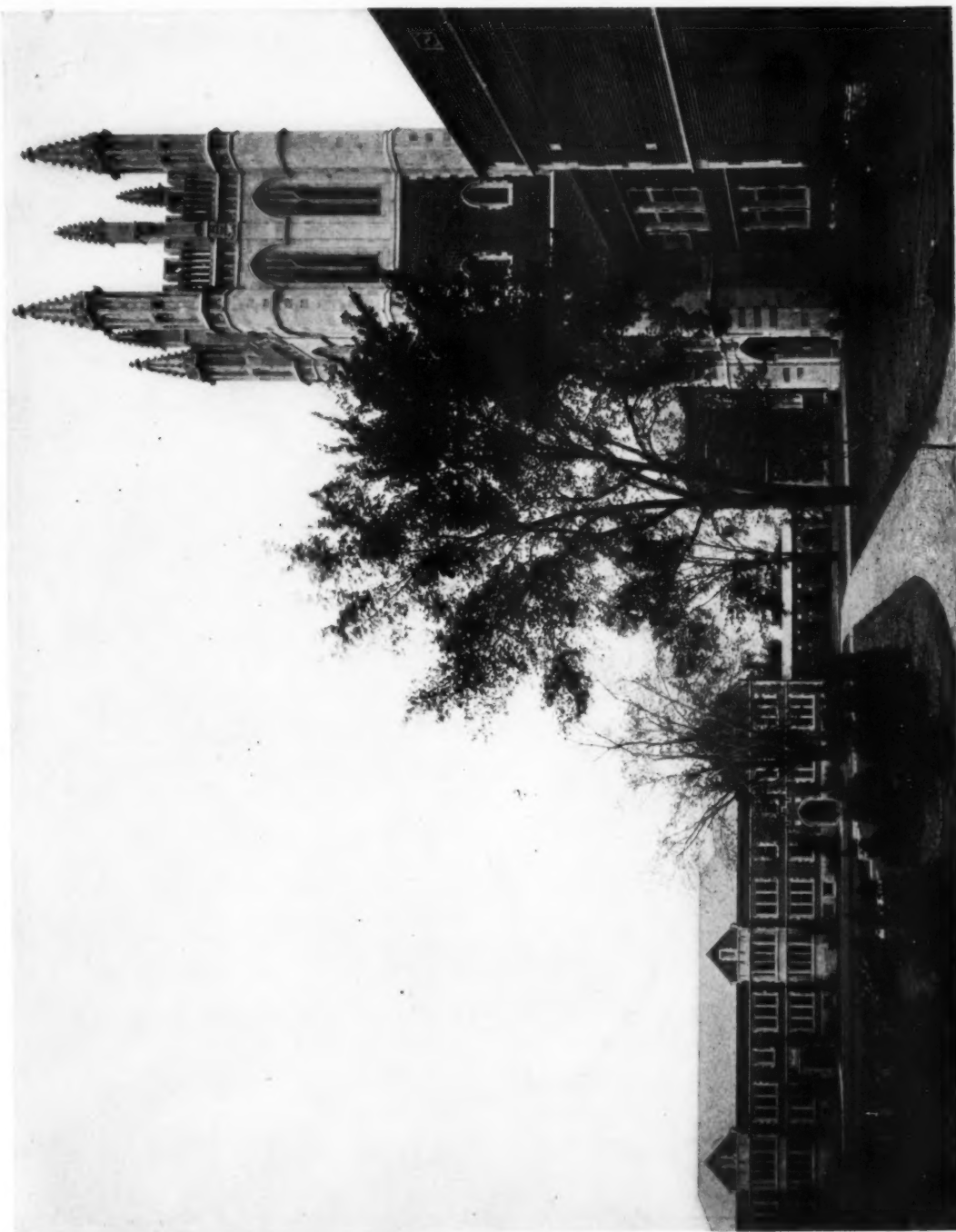
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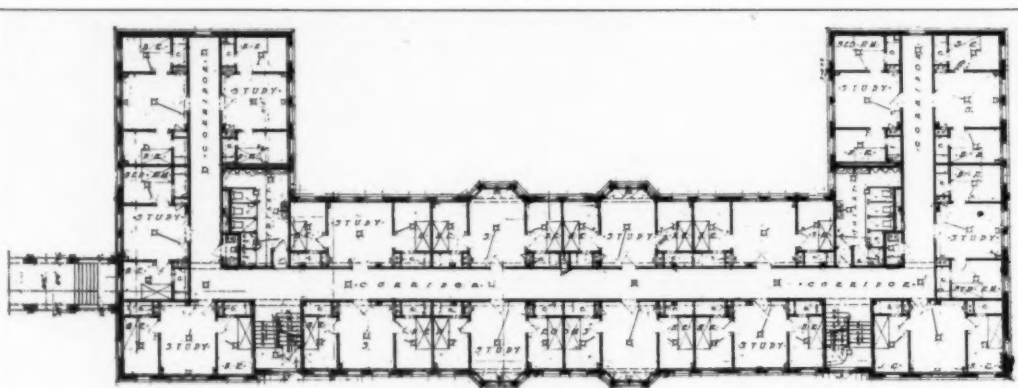
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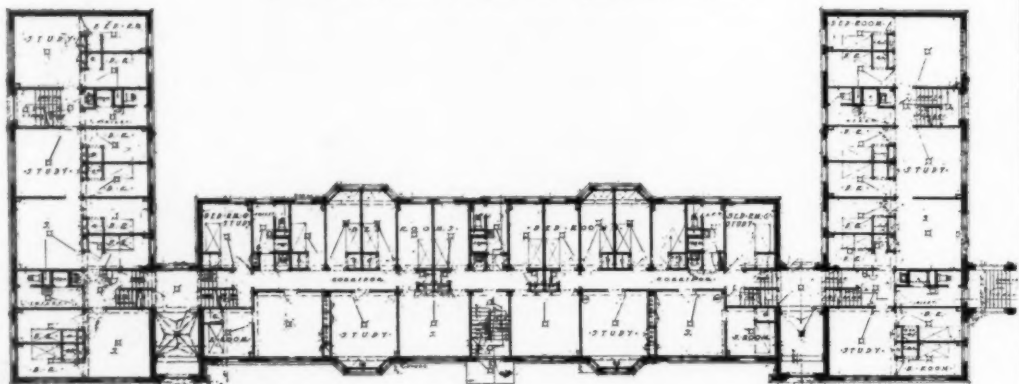


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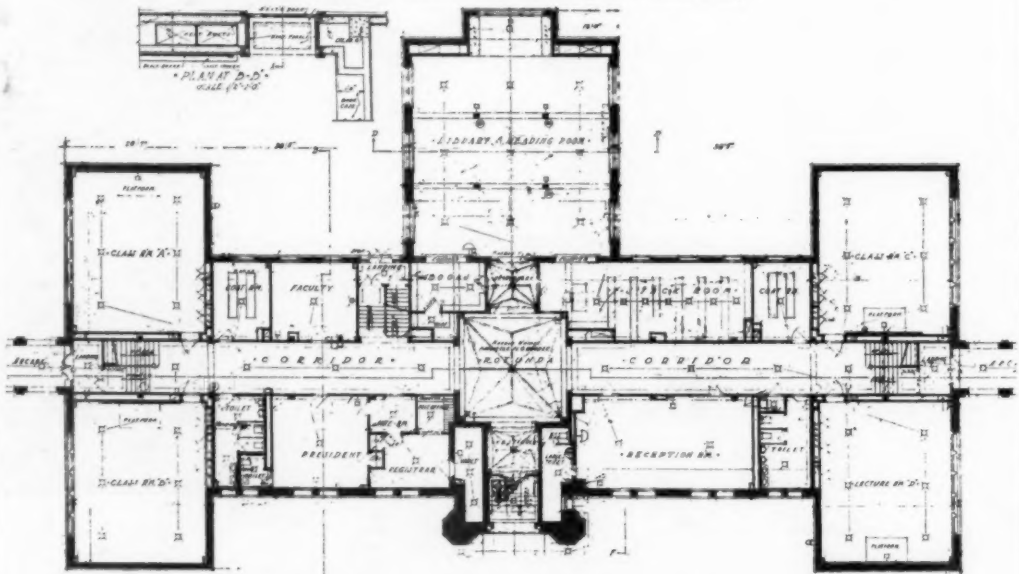
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FIRST FLOOR PLAN, ADMINISTRATION BUILDING

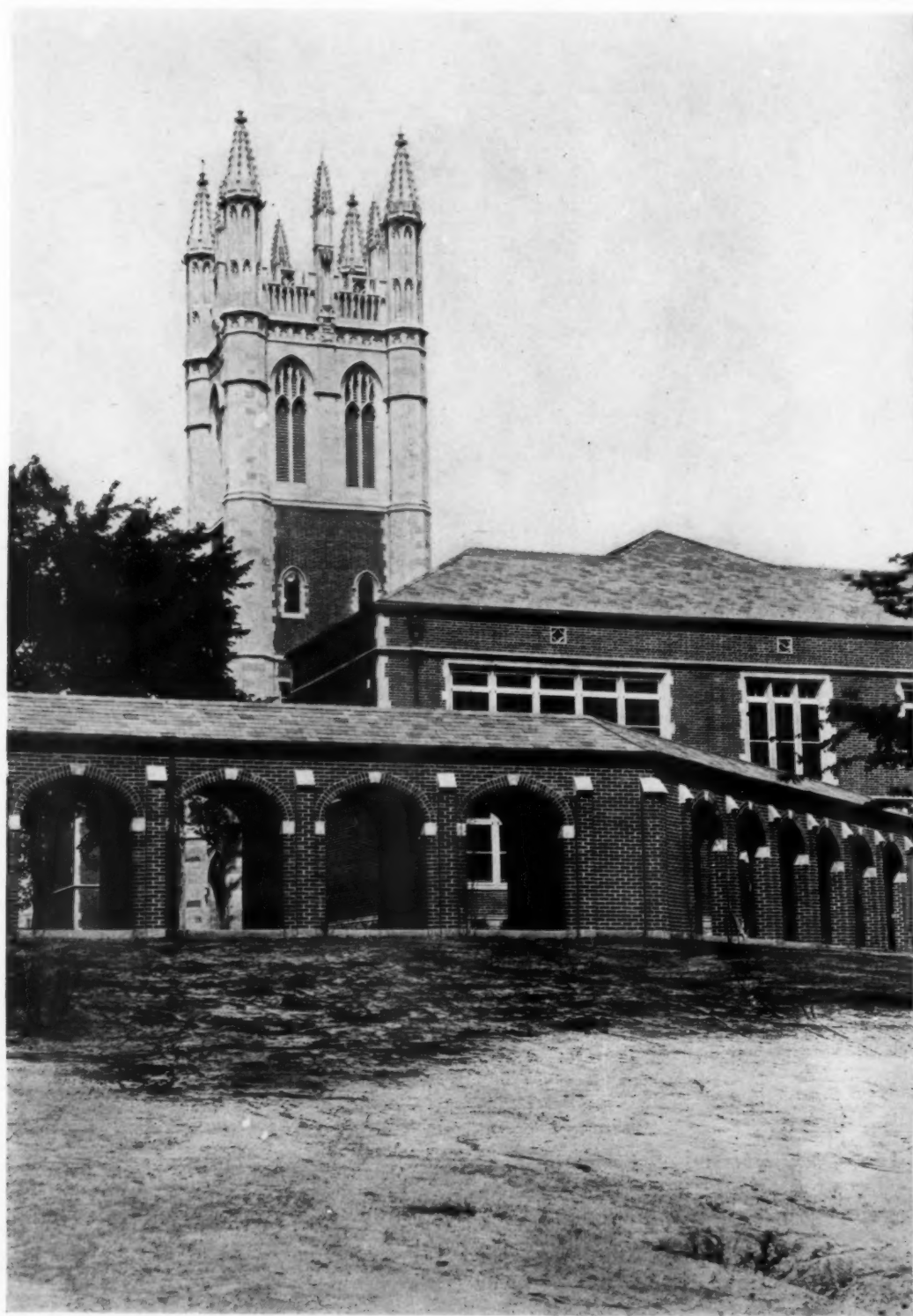
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HOUSE OF R. C. PROCTOR, RYE, N. Y.
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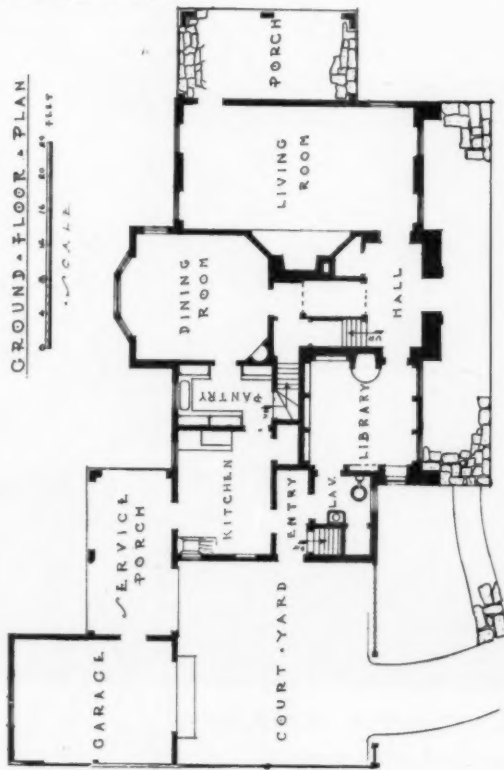
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HOUSE OF R. C. PROCTOR, RYE, N. Y.

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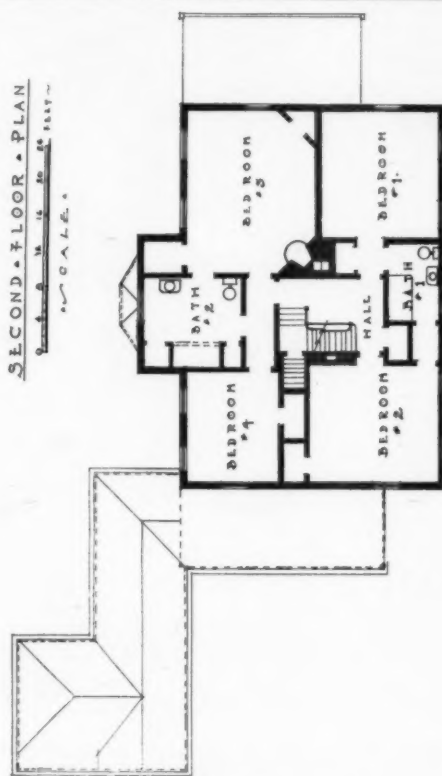
GROUND FLOOR PLAN
SCALE



This house was built in 1922 at a cost of \$27,000, or approximately 50 cents per cubic foot.

It is of frame construction, the exterior walls covered with shingles.
The roof is wood shingled.
Sheet metal, copper. Sheet glass.
Doors and windows, wood.
Color scheme, white with green blinds.

SECOND FLOOR PLAN
SCALE



Partitions, wood studs.

Wall surfaces, plaster, sand finished.

Floors, wood, linoleum in kitchen and tile in bathrooms.

Trim, wood.

Hardware, wrought iron and brass.

Heating, warm air with temperature control.

Plumbing, sewer connection. Public water supply. Piping, wrought iron.

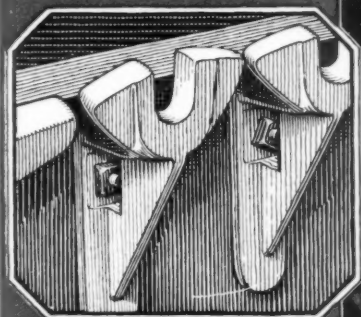
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THE TRANSPORTATION OF ANCIENT HOUSES

By A. R. Powys, A. R. I. B. A.

IN ENGLAND the trade in antiques is becoming a danger to buildings of historic beauty.

For a long time there has been more or less harmless exchange in old furniture and old paintings; harmless, because these works of art were designed to be moved easily, to be enjoyed in almost any house in any country; yet harmful to some extent or at least a little shameful because the desire to own these pieces had its origin in the desire to get the social "kudos" that accompanies their possession as much as because they are loved for their beauty and workmanship; and, further, it is a trade that is definitely discouraging to the development of the arts, for this cult for the antique has a deadening effect on modern painters and cabinetmakers. Most of us have at one time or another taken part in this trade either as purchaser or salesman, and on the whole the world is little the worse for it. It is fairly certain, however, that if any harm does follow, it does not befall either pictures or furniture, but has its effect on the moral qualities of the devotees.

The desire to possess antiques has now reached a scale that threatens works of art that were designed for one particular position or purpose. It has thus become a positive evil, damaging not to a passing generation of men, but to those of all times. Such trade is truly blasphemous against the Goddess Art. Moved from their settings, these ancient and beautiful things lose value, as so often do sentences lifted from the sequence of a play, a poem, or an essay. The whole of humanity suffers for the satisfaction of single individuals who may either be ignorant of the damage they do, or who, knowing the loss they cause, only regard their own whims and pleasures.

The English newspapers, often too ready to take advantage of uninstructed patriotism, wail hideously when a picture or a tallboy crosses the Atlantic,—pictures or furniture that may long have seen the last of the country in which they were painted or fashioned. These same newspapers, little realizing the truth that lies behind their muddle-headed outcry, print scare headings when such buildings as Warwick Priory or Agecroft Hall are bought by Americans and shipped to the United States. But these trans-shipments are to be condemned for quite other reasons than those which accompany the thoughtless national scramble for old pictures.

It is my object in this article to give the reasons why this trade should cease, and also to continue in your country a campaign that I have long helped to conduct in my native England, to prevent our people from befouling our countryside by like foolishness. It is my hope that all men, whether English, American or Latin, who may read these

words will not fail to take whatever opportunity may offer to expose the stupidity of trading in ancient buildings. It is a trade that must be condemned by any one who has the sensitive mind of an artist. Whether the transportation is for a few miles or for many, whether it affects whole buildings or only old materials—fireplaces, paneling, rafters, mullioned windows and such features taken as from a quarry—it is alike a sin against the artist and the craftsman. At the present time, perhaps, the concentration of wealth in the United States of America makes this trade in old buildings particularly tempting to both the architects and their clients in that country. It is not that these persons are any more inclined to mutilate works of art than those of other nations, but that there are more Americans who have the means to do so that makes *this appeal* particularly appropriate in *THE AMERICAN ARCHITECT*. There is ample evidence to show that the desire to live in antique rooms, to possess houses built of ancient materials is now worldwide. In England and among Englishmen it results in the demolition of many a beautiful barn, of many a delightful cottage. Here as elsewhere, ignorant or thoughtless people, architects as well as their clients, in their haste to appear *in the know* will order builders to procure old tiles, old stone slates, old oak timbers so that the new houses that they build may conform to the taste created by this nefarious craze. The builder because he follows his trade for business profits, because he desires to develop his practice, buys where he can these old materials. If he is asked to repair some dilapidated structure which may have added beauty through many centuries to some quiet village, this man will recommend that new dwellings take the place of old, that sheds be roofed with corrugated iron instead of ancient tiles; and this because he knows that through such advice he will not only take profit from the work, but also from the sale of the old materials thus torn apart. In this way a genuine work of art disappears forever that a fake may take its place; and the human race suffers twice. It suffers by the loss of an ancient, and by the missed opportunity for creating a modern, work of art.

This fashionably encouraged trade is very different from the changes that took place in old days. Then, for just economic reasons the owner of two neighboring barns, set in a country where only one was needed, repaired and enlarged the one, using material taken from the other rather than fell and convert trees, rather than dig, temper and fire the clay needed for these operations. Such proceedings have little about them that offends, they are the sane actions of a man contending with the real needs of life. Such practices are



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common in all countries. When in New York an old house makes way for a new apartment block, the old bricks are again made to serve, either broken as the aggregate for concrete, or cleaned and built into the body of the new walls. All materials which are no longer fit in one position are rightly used where they will again usefully serve. Common sense commends this practice, but sanity condemns self-conscious pandering to the semi-snobbish false knowledge of the followers of a degrading fashion.

If then among the infinity of conditions which must be considered in discussing this subject any general rule emerges, surely it must be:—"A work of art, whether a statue, a building or a picture which was designed to beautify a definite position, to stand on a particular site or to enrich the wall above a definite fireplace, should be preserved in that position, out of respect for its own beauty and in honor of the men, be they nameless or not, who designed and made it, and this with knowledge that divorced from that position such works will lose meaning, grace and value."

Having then noted the principle which underlies this rule, let us see how we may help to get it observed; how we can hinder if not prevent the destruction of art works, whether they are of the new or the old world.

In no profession do those who serve it so willingly sacrifice self-interest to their art as do architects. There are few who would not rather refuse to have any truck with a work that may offend our mistress, than carry it with added personal gain to an infamous conclusion. I do not expect nor should, any demand too great a sacrifice in our brothers. Each can see to it that he is not the one to give way, while he should remember in charity that bread and butter are as necessary to others as to himself. It is our duty to lead while we serve the public, to teach while we obey.

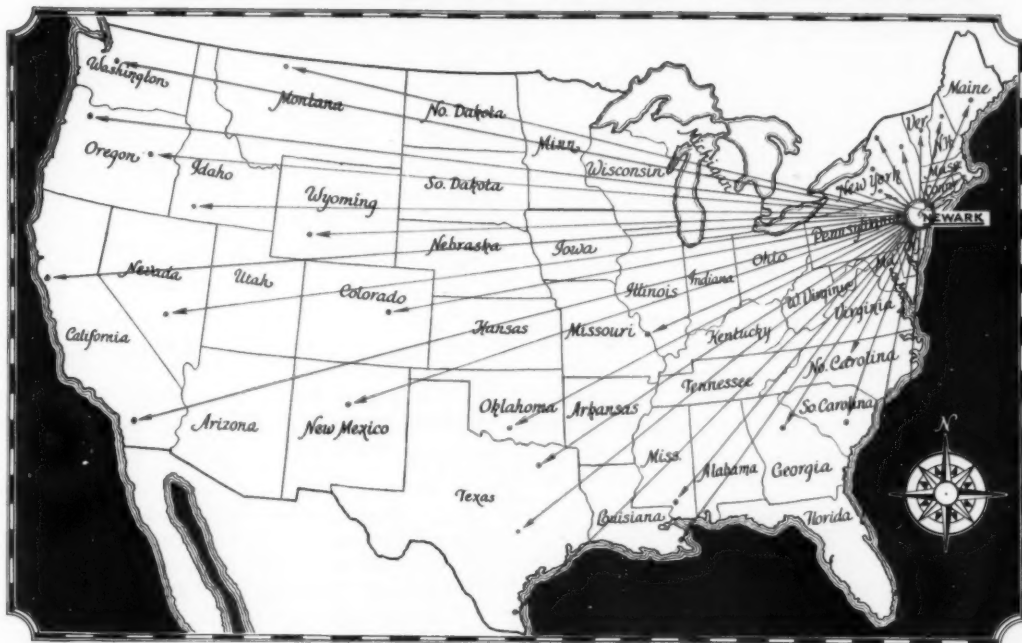
If in any part of the world there is less reason to indulge in a sentimental admiration of the past it is the United States of America, for those are countries where new conditions prevail, where life springs young, and a new architecture founded on a lively tradition should surely there develop vigorously. And that word *tradition* needs consideration; for recently it is often spoken when the right word would have been *revival*. A man will tell us that he is following a tradition because, having studied the arts of some past epoch, he more or less successfully reproduces, in some building of his own quite other age, the forms he has learned to admire. This is to speak falsely. Truly to build in a tradition is to use and to develop the practice that exists in the present day in the offices and the workshops of architects and builders. Thus grew the great works of the masters, thus rose the cottages of the peasants. Through these means, architecture has been, sometimes still is, and will certainly be again, the greatest of the human arts.

Let architects, then, resolve to explain the case to their clients, pleading with them not to move wholly or in part the works of the past, not to ape ancient styles, forcing them to fit modern conditions, but to enjoy the arts of old days, wisely preserving what they can for the future; nor fearing to live in the present and enjoying with a sense of pride the development of our own traditional methods. And in America men are particularly favored, for they are not loaded by the heavy though valued burden of long history. They are in the position of the Europeans of the twelfth and thirteenth centuries. They are free to make for their nation an architecture founded on the technique of the world, as did the Gothic architects from the methods developed under the Roman civilization. They are not hampered by too great a regard for the past. They are free to create great buildings worthy of a live people. There should be no desire among them to join forces with slow creeping time and help to destroy the ancient works of the older nations. To me it appears inevitable in these conditions that the Americans will lead mankind by further ennobling the greatest of the arts, architecture.

A WREN CEILING RESTORATION

ST. CLEMENT'S, Eastcheap, a Wren church which so far has been spared to us, has a rather handsome ceiling which the great little architect may himself have devised, states a recent issue of *The Architects' Journal*, London. At all events it is probably contemporaneous work. Naturally this ceiling became an object of particular solicitude when, some two years ago, redecoration of the church was begun. A calculation that the work would be finished in about six weeks was rudely upset when the discovery was made that the roof beams were completely riddled by the so-called death-watch beetle. As in the notorious instance of Westminster Hall, steel reinforcement had to be applied to the beams. It was consequently necessary that the ceiling should be taken down. In a day less considerate of the claims of art, this ceiling would have been recklessly torn down and ruthlessly scrapped; but in this instance it was removed with scrupulously delicate care, and subsequently restored to its original position and its pristine state; and this work was all done with such skill and precision as to revive respect for the craftsmanship of the modern plasterer, who, in fact, when he deigns to concentrate on his work, is as able an exponent as any member of his long line of ancestors—plastering, as everybody knows, being a peculiar hereditary craft. So the prestige of the plasterer is rehabilitated and restored as satisfactory as the Wren ceiling. Decadence in either would be indeed deplorable. And if a Wren ceiling is considered worthy of so much solicitude, there must still be room for hope for the Wren churches.

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HARVEY WILEY CORBETT ELECTED AN
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HARVEY WILEY CORBETT, B.S., A.D.G., M.Arch., A.I.A., F.R.I.B.A., has recently been elected an associate of the National Academy of Design in recognition of his outstanding achievements in the field of architecture. A few initials more or less at the end of Mr. Corbett's name possibly will not be necessary to convince the architectural world of his high standing in his profession or the ready recognition on the part of the allied arts of his valuable services to the arts. As an associate of the representative artist painters' organization in this country, Mr. Corbett is practically in line for further advance as a full Academician, which we predict he will achieve in due course.

THACKERAY'S HOUSE ON PALACE GREEN,
LONDON

THACKERAY'S old house on Palace Green has recently been sold, states *The Architects' Journal*, London. Probably this is the only residence in London which an author has erected for his own use. Authors are proverbially poor, but Thackeray was rather exceptionally lucky in having his genius recognized, and, as he himself said, he regarded his so-called Queen Anne mansion as a good investment for his children. When Thackeray acquired the site it was occupied by a dilapidated old house, and at first he thought merely to repair and improve it, but finally, he decided to erect an entirely new dwelling, for which he himself drafted the designs. He moved into it from 36 Onslow Square in February, 1861, and was found dead in his bed on Christmas Eve, 1863.

MUSSOLINI CREATES A ROYAL ACADEMY

ACTING on the personal recommendation of Premier Mussolini, the Italian Cabinet recently decreed the creation of the Royal Academy of Italy, an institution to be modeled after the French Academy with its "Forty Immortals." The Italian academy, however, will have a membership of sixty, who will be selected from among Italy's most illustrious intellectual and cultural leaders.

The academy will have its seat in Rome and will be divided into three sections, sciences, arts and letters, each to have twenty members. Members of Parliament will be included, since politics is one of the cultural activities to which it is intended to give representation.

The new institution will be liberally supplied with financial and other means to carry out its functions, which will include subsidizing individual artists, scientists, writers, inventors and thinkers in their projected works.

One announced purpose is to protect and encourage initiative of all kinds and to keep it free from bureaucratic methods and restrictions. The

academy will co-ordinate and encourage the work of various local academies of arts and sciences, of which many already are in existence.

The Ministry of Public Instruction will be closely allied with its work, but all other Ministries are expected to co-operate and place at the disposal of the academy part of their budgets whenever this is expedient.

TO RAZE HISTORIC HOTEL

AN OPTION of purchase on the Burnet House, historic hostelry and one of Cincinnati's noted landmarks, has been obtained by officials of a large insurance company, who announced that a nineteen-story office building would be erected on the site.

Built more than seventy-five years ago, the Burnet House was one of the finest hotels in the West, and was patronized by many celebrities, among them Abraham Lincoln, U. S. Grant and the Prince of Wales, who later reigned as Edward VII.

LEBRUN SCHOLARSHIP AWARDS

THE Jury of Awards has reported its conclusions in the matter of the LeBrun Scholarship Competition, recently held in this city, as follows:

First Place and the Traveling Scholarship to William Ferrari, New York City, nominated by John Mead Howells.

Second Place and First Mention to Rowland H. Crawford, Philadelphia, Pa., nominated by C. C. Zantinger.

Third Place and Second Mention to John Arnold Bower, Philadelphia, Pa., nominated by Harry Sternfeld.

Fourth Place and Third Mention to Clarence Dale Badgeley, New York City, nominated by Harry V. K. Henderson.

The following were commended for the work presented by them:

Allmon Fordyce, Elmhurst, L. I., N. Y.
Erik Kaeyer, Yonkers, N. Y.
Emil W. Klee, New York City
Walter Thomas Rolfe, Fargo, N. D.

The subject of the competition was a combined indoor and outdoor auditorium for a town of 150,000 inhabitants. The competition was open to any architect or draftsman between the ages of twenty-three and thirty who had at least three years of architectural experience.

The jury was composed of William Harmon Beers, Richard H. Dana, Lansing Holden, Egerton Swartwout and Julian Clarence Levi, chairman.



House for C. S. Cawthorne in Lake Bluff, Illinois. White & Weber, Chicago, Architects. T. W. Jackson, Builder.

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insulating houses and other buildings against heat and cold. But ordinarily insulation adds to the cost of construction. Now it need not be an extra expense, because Celotex is *lumber plus insulation*. Celotex also eliminates the use of building paper. It is waterproofed.

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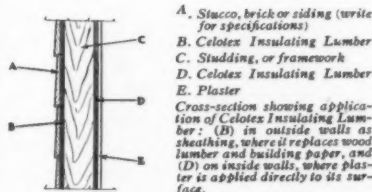
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THE KITCHENER MEMORIAL CHAPEL
IN ST. PAUL'S, LONDON

IF IT were nothing more, the Kitchen Memorial Chapel, which was dedicated at St. Paul's recently, would be at least a splendid monument to the spirit of association, writes *The Architects' Journal*, London. It is in effect the creation of many minds. The late Lord Plymouth, Sir Aston Webb, the late Sir Thomas Brock, Sir George Frampton and Detmar Blow evolved between them the nucleus of the idea, and no doubt it was felt by the Memorial Committee that a poet in stone was essential to the embodiment of their suggestions—to "turn them to shapes, and give to airy nothings a local habitation and a name." It was patent from several Royal Academy exhibitions that a sculptor of genius who could invest his work with some degree of imaginative fervor was Reid Dick. If that was indeed the feeling of the committee, it must be conceded that the artist has justified their confidence. The central feature of the monument, the beautiful pieta, in which Mary Magdalene is shown gazing with infinite love and pity and reverential awe on the body of Christ, as she raises it from the ground, is, at least technically, a truly noble work of art. If the stately figures of St. Michael and St. George, standing on guard, right and left respectively, of the recumbent effigy of Lord Kitchen, seem by contrast rather commonplace and conventional, that is the natural effect of juxtaposition. If, indeed, it be objected that the whole scheme is to some extent conventional, the reply must be that in the circumstances conventionality was inevitable, but that the pieta is conventional with a difference. No doubt the general verdict will be that not since Alfred Stevens wrought his superlative Wellington monument has St. Paul's housed anything comparable in art to the Kitchen Memorial.



IM-HOTEP COLONNADE FOUND AT SAKKARA

A COLONNADE, the work of Im-Hotep, first known architect, who afterward was deified and worshipped as the patron of wise men and scribes, is one of the finds at Sakkara, Egypt, where the Department of Antiquities is continuing the work of investigating the area surrounding the Zoser Step Pyramid there.

This Step Pyramid, the oldest stone building in the world and the tomb of Pharaoh Zoser of the Third Dynasty, is enclosed by a wall 500 yards long by 300 yards wide. Last year the temple, built to commemorate the thirty-year jubilee of Zoser, was brought to light, and now the colonnade found is to the south and west of that temple.

The colonnade, which is about eighty-five yards long, appears to have formed the main entrance to the pyramid enclosure and consists of forty-eight columns of white limestone arranged in pairs. The columns were originally over five meters high and are one meter in diameter at the base.

PERSONALS

Wesley Leshner Blithe, architect, announces the removal of his office to suite 726 Public Ledger Building, Independence Square, Philadelphia, Pa.

Harry Marshak, architect, formerly of Providence, R. I., is now practicing his profession at 205 Ferlita Building, Tampa, Fla. Manufacturers' catalogs and samples are requested.

Olof Z. Cervin and Benjamin A. Horn announce that William Stuhler has become associated with them for the practice of architecture, and that the firm name will now be known as Cervin, Horn & Stuhler, architects, Rock Island, Ill.

Mahood & Van Dusen, architects, Bluefield, W. Va., have opened a branch office at 244 Bass-Arcade Building, Orlando, Fla., where they would be pleased to receive manufacturers' catalogs and samples.

The partnership of Owen, Payson & Carswell, architects of Kansas City, Mo., and Fort Madison, Iowa, has been dissolved. Robin B. Carswell has taken over the Fort Madison office and will continue the practice of architecture individually at that place.

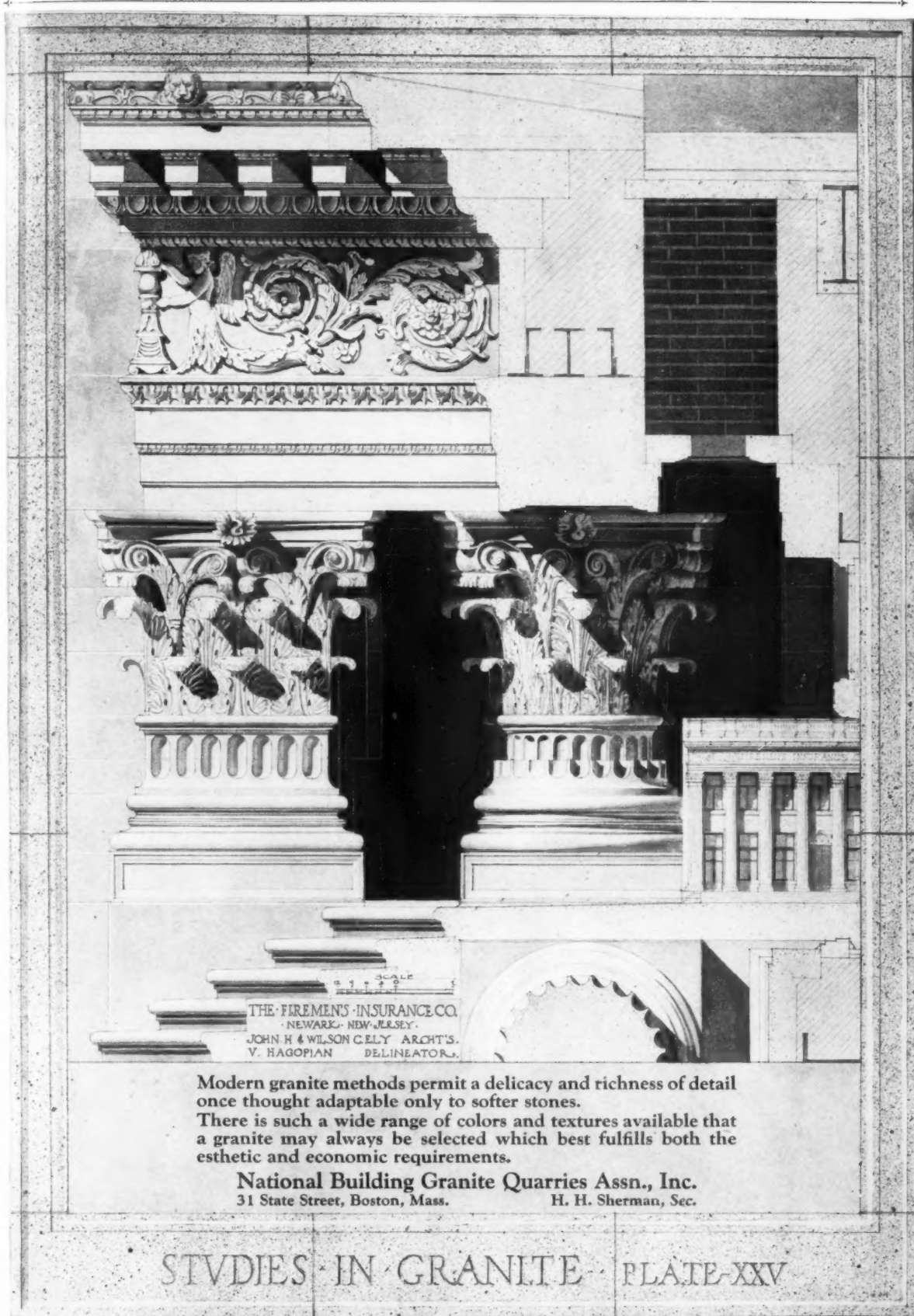
James E. Camassa, architect, general contractor and builder, has moved his office from 108 Shrewsbury Street, Worcester, Mass., to Miami, Fla., his new mailing address being Post Office Box 1829. Manufacturers are requested to send catalogs and samples.

Edgar Shelton announces a change in address from 903 Travis Building, San Antonio, Texas, to the Texas Technological College, Lubbock, Texas, in which city he has opened an office for the practice of architecture. Manufacturers are requested to send catalogs and samples.

Charles H. Ensign, architect and engineer, formerly of the firm of Ensign & Snow, engineers, has opened offices for the general practice of architecture and engineering at 501-505 Fidelity Mortgage Building, Cleveland, Ohio, where he would be pleased to receive manufacturers' catalogs and samples.

Felix P. McKenna, Jr., and Thomas H. Irving announce the formation of the firm of McKenna & Irving, with offices in the Park Row Building, 15 Park Row, New York City. Mr. McKenna formerly practiced his profession in partnership with Elliott Lynch, and Mr. Irving was managing the New York office of Emil G. Perrot of Philadelphia, Pa.

Announcement is made of the dissolution of the architectural firm of Rose & Peterson. W. W. Rose will continue in business at the old address, 432-440 Brotherhood Block, Kansas City, Kan. D. B. Peterson has opened offices for the practice of architecture with temporary quarters at 818 Minnesota Avenue, Kansas City, Kan., where he would be glad to receive manufacturers' catalogs and samples.

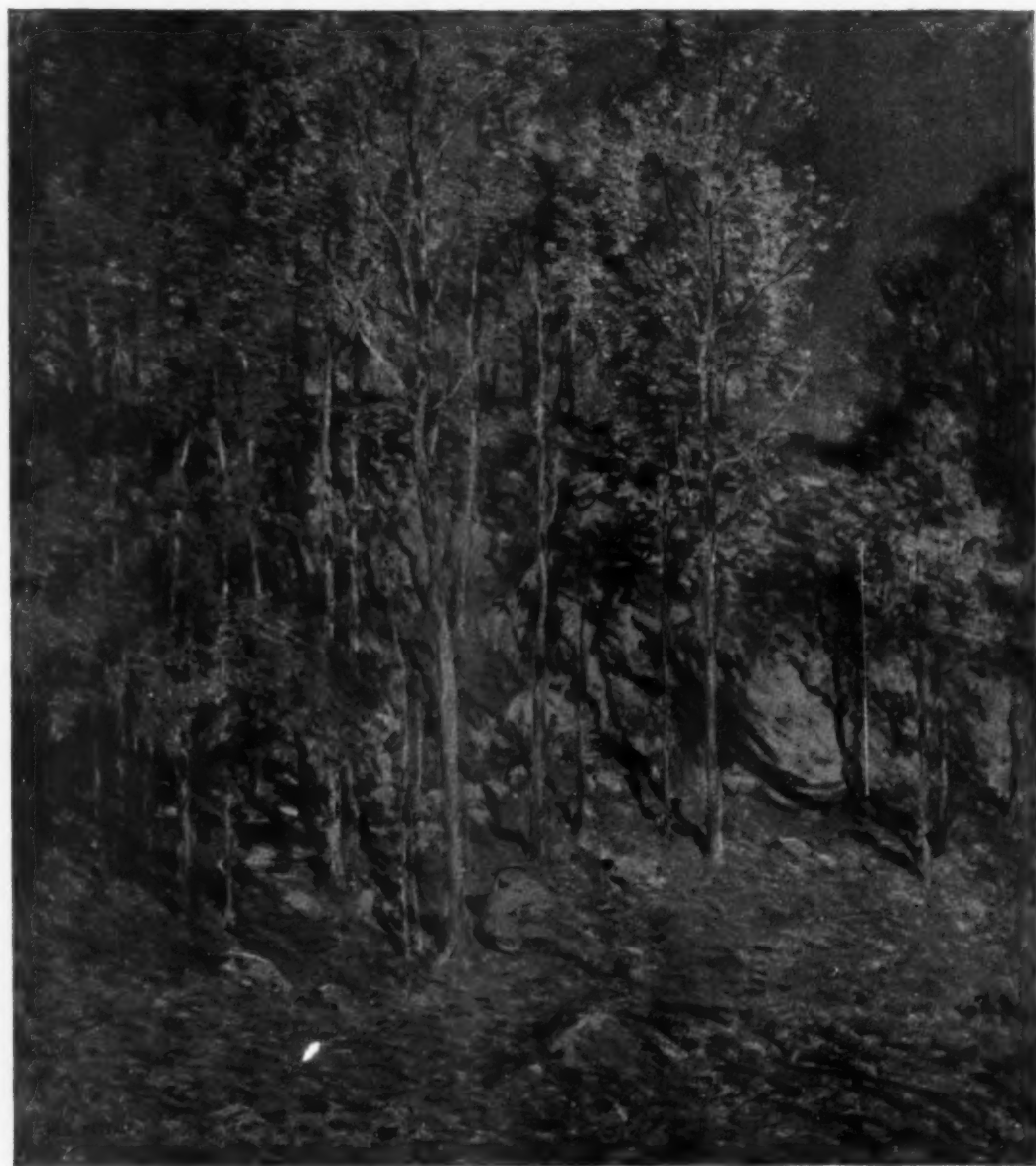


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November Sunshine by Willard Metcalf

THE PUBLISHERS' PAGE

IT IS probably safe to assume that every architect has experienced the handicap imposed on his efforts by public ignorance—ignorance of architecture itself, ignorance of the function of an architect and ignorance concerning the value of architectural service.

For years THE AMERICAN ARCHITECT has watched the effect on the practice of architecture of this lack of knowledge on the part of the public. It has seen owners entrust the expenditure of money to contractors and builders without plans, without specifications and with only the vaguest idea of their own requirements or the character of building they will receive for their expenditure. It has seen communities ruined architecturally by uncontrolled speculative development, and purchasers disappointed in their investments. It has observed the development of what may be termed "anti-architect propaganda"—sometimes deliberate, sometimes unconscious, but always detrimental to the good of both the public and the architectural profession. This propaganda has taken various forms, such as books of plans issued by manufacturers and individuals, plans published in popular magazines, home builders expositions, etc., all carrying the underlying thought: "Dispense with the architect and save his fee."

The acceptance of these suggestions has come about only because of ignorance—ignorance as to the economic value of architectural service. They can be corrected only by education of the general public. It was, therefore, gratifying in the extreme that at the recent convention of The American Institute of Architects, the question came up for discussion as to whether or not the architectural profession could or should embark upon a campaign of education employing the most effective means available today—that of using magazines of wide circulation to carry educational announcements regarding the value of architectural service to the public. It was suggested that such announcements might emphasize the following points:

First: Architectural service can be secured without increasing the total expenditure.

Second: Architectural service insures a more satisfactory structure in appearance and utility.

Third: Architectural service makes certain a return of full value in the structure for every dollar paid the contractor.

Fourth: The upkeep cost of structures employing architectural service is usually less than in other cases.

Fifth: Architecturally designed buildings have a larger resale value.

Sixth: It is better to retain an architect and build than to buy a speculative structure.

Seventh: The architect is a combination of designer, engineer, and business man who, with the knowledge, skill and experience his special training has given him, handles the whole complex business of building from foundation to finance in the interest of the owner.

Every speaker on the subject concurred as to the need of a better understanding of architectural service and its value. All agreed that paid educational announcements of an impersonal character would not violate any of the ethics of the profession. Only two questions of doubt arose during the discussion. One of these was the matter of financing such a program, and the other, the ability of all entitled to use the name of architect to deliver an adequate service.

THE AMERICAN ARCHITECT has given this matter consideration and study since the close of the World War. It was during this period that the increase of anti-architect propaganda has become so noticeable. It is convinced that unless steps are taken promptly to educate the public as to the economic value of architectural service, the profession is derelict in its duty to the public and negligent of its own interests. It further believes that such an educational campaign as suggested could be financed by the formation of an architectural organization for the sole purpose of carrying on this work under proper safeguards, and which would be open to all members of the profession whether or not members of other organizations. To provide funds, membership fees might be based, as in other associations for a common good, on the total volume of work done by each office. For example, if \$25.00 on each \$100,000.00 worth of work done were paid in to carry on this work, an ample fund would be available.

It is sincerely hoped that the discussion started will not die in committee, but that it will bear fruit in early action. Such an educational effort would unquestionably result in immeasurable good to the public and incidentally place the profession of architecture in its true position before that public.



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