

THE AMERICAN ARCHITECT

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LANDSCAPE ARCHITECTURE—AN OPPORTUNITY and an OBLIGATION

BY P. H. ELWOOD, Jr., Professor of Landscape Architecture, Iowa State University

GENERAL DIAZ, upon a recent visit to the United States of America, said, "Is it not paradoxical that the Italians who have been considered for centuries an emotional, idealistic people, should, during the great crisis of the World War demonstrate such practical tendencies while so-called materialistic and commercial America should give to the world one of the greatest demonstrations of idealism ever known?" It is a comfortable and encouraging thought, but after all how true is it throughout our country as a whole in every walk of life from year to year and decade to decade? Are we not inconsistency itself? We fight for ideals and practice selfish-

ness with little concern for the common good.

It has been said so often, it may become a platitude that we are fast becoming a nation of followers and imitators rather than creators and leaders, particularly within the realm of the arts and crafts. However, here and there are most hopeful signs and evidences of progress and original thought. Our architecture and our landscape architecture for the most part, based as they are on classic, medieval and Renaissance precedent, often emerge above the confusion of styles and schools into a freer, more human and above all, a more vital expression of our daily needs. Our greatest architectural contribution, as recognized



THE MILL POND, ESTATE OF WM. H. MURPHY, BIRMINGHAM, MICH.
WM. PITKIN, JR., AND SEWARD H. MOTT, LANDSCAPE ARCHITECTS

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by the best European architectural opinion is not the skyscraper, but our domestic architecture which seems to express more truly our every day requirements. Our landscape architecture is not known abroad by the grand gardens it has produced so much as by the beautiful country, parks, playground systems, and landscape cemeteries. In fact American landscape architecture occupies an enviable position wherever its major projects are known and its merits are understood.

If our designers create with a breadth of understanding and with originality of style both in architecture and landscape architecture, and the two professions are so often inseparately linked,



MUSIC PAVILION, EDEN PARK, CINCINNATI, OHIO
GEORGE E. KESSLER, LANDSCAPE ARCHITECT

they will be inspired by the great open country, the place supreme. This new spirit of expression as in the past will be initiated by those living in close contact and in full sympathy with the soil and nature's forces and resources. If future precedent is to emanate from the country and the rural dweller, then is it not important that the foundation for the future generations be

laid with thoroughness and the utmost care?

One avenue of approach or means toward this end would seem to be by liberalizing our technical college courses, incorporating more of the humanities, by lengthening them and by extending the training into every remote hamlet. Appreciation



AIRPLANE VIEW OF MINEVILLE, N. Y. A SPLENDID OPPORTUNITY LOST FOR LACK OF A PROPERLY DEVELOPED PLAN

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courses may be just "paper flowers" as Lewis Mumford says, but if every college student in the land, and in these days every last Tom, Dick and Harry is sent to college and too infrequently is allowed to remain there,—if all these are instilled with respect for beauty in any form, learn to recognize the good and are infused with the ideal of service to their community, what form of education will be more productive and fruitful in years to come?

It is the purpose of these discourses to discuss the opportunities for and responsibilities of landscape architecture in our country, endeavoring to direct attention to its most potent influence



STREET SCENE, BOURNEVILLE

upon the usefulness and welfare of the individual. Charles W. Eliot says, "Of all the fine arts, landscape architecture, with the exception of music, is most productive of health and happiness." This recognizes unmistakably the essential bearing this art has upon life.

To many, landscape architecture has seemed a luxury, a toy and an idle pastime for the wealthy. In the past throughout the ages,

when correctly expressed, it has been the powerful ally and instrument of imperialism, and the apparent antithesis of democracy.

A single modern illustration of this will suffice: On the shores of one of New York's most



AIRPLANE VIEW OF BOURNEVILLE, SHOWING THE EFFECT OF WELL CONSIDERED PLANNING AND A PROPER REGARD FOR THE LANDSCAPE TREATMENT

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beautiful lakes, a public picnic ground and boat landing were absorbed into a large estate. Many permanent local residents and thousands from nearby villages and the countryside soon found their approach to this beautiful sheet of water severed completely and the rapidly growing border plantation about the "private grounds" obscured from their view the lake itself and finally the encircling wooded hills beyond. Landscape art, it is true, created for this selfish owner a beautiful lawn, and a charming and finished setting for a splendid residence as well as vistas and pictures of great interest and unusual beauty. But at what a sacrifice! Had a more human spirit of tolerance and co-operation prevailed, it could have been otherwise. This is happening in all parts of the country where choice bits of native landscape exist. What would Louis Sullivan be today had he not known and lived with the great ash tree, the brooks and groves of South Reading? These were not the work of the landscape architect, to be sure, but no other profession is so vitally concerned with preserving and utilizing nature's materials and forces for the use and benefit of all. It is the great need and the universality of the art that I wish to emphasize. Landscape architecture will not have realized its fullest measure

of service until not a soul is untouched by its enriching, and at the same time stimulating and invigorating spiritual appeal, or as Arthur J. Pentty says, "If any art is to survive it must be the common possession of the whole people."

Of prime concern is the fact that our native landscape in all its inherent glory has passed into the hands of comparatively few to such an alarming extent that now more than half of our people are city dwellers and many are virtually unaware of the character of the country in which they live. This urban movement has caused the actual abandonment of 20,000 farms and 25,000,000 acres of farm lands in the United States. Something besides science and economics is needed to stem this tide.

Our cities are growing, swelling, and bursting and spreading their frayed, tattered and untidy remnants over the fair face of the surrounding territory until one has to travel miles to catch a glimpse of nature unadorned or "undeveloped." Thanks to the motor car and modern transportation, it is becoming less difficult to reach the open country though rapid transit so often in reality aggravates and accentuates the possibility for greater concentration and congestion at the center.

Added to these depressing circumstances is the



GARDEN SEATS, ESTATE OF HENRY A. HOFFMAN, BARRINGTON, R. I.

OLMSTED BROTHERS, LANDSCAPE ARCHITECTS



TERRACE STAIRWAY WITH BAY TREES, ESTATE OF JOHN D. ROCKEFELLER, POCANTICO HILLS, N. Y.
WELLES BOSWORTH, ARCHITECT

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fearsome wake left by civilization in the open country itself. Mining isn't all done underground, would that it were; we have mined most prodigally our forests, our soil, drained our swamps drying up our streams and water courses and wherever possible we have speculated upon and capitalized and vulgarized our native beauty and resources in a thousand ways. Witness our barren and bleak cross country high roads bestrewn with signboards, large and small, urging us to eat, drink, smoke or otherwise gorge ourselves or our motors for the miles of sunswept pavement beyond. Only in rare instances where large scale projects under skilled and talented guidance or where nature is guarded, protected, and preserved by law, is there such a thing as a beautiful, finished countryside in America. The usual is the unkempt, the untidy, the haphazard growth whether it is an agonizing growing city or a disheveled farmstead.

Some optimist will come forward announcing that the country estate in America has reached its height and is disappearing and that landscape architecture is reaching more people continually. Only a few days ago, he may add, several large holdings in the Berkshires and on Long Island were acquired from private ownership to be held for later public use. Anyone familiar with suburban conditions surrounding our metropolitan centers knows that the large country estate is in reality losing ground. The small farm of twenty-five to fifty acres or even less with perhaps two to five acres devoted to park and gardens is the more prevalent and popular even among the well-to-do.

But the causes bringing about this change are largely economic coupled with the ever present and increasingly difficult servant problem in a country with practically no servant or peasant classes. Deery as we may our machine bound civilization and our worship and dependence upon things mechanical, what would be done without both servants and machines?

Must we admit that as our population increases, the undeveloped recreational domains will grow smaller until our landscape will become largely humanized, controlled and moulded by human contacts, and need we despair of the results? We may look to France and Belgium for encouragement.

With every acre bearing its abundant share has there been a loss in beauty? Is the charm of England due to its landed estates? By no means, for who questions the dominance of the little cottage and its garden above all other cherished memories and pictures of that beautiful island? As for the vast stretches of natural landscape, with its dense population Continental Europe

has nearly as large a percentage as have we.

There is no need to dissertate or expostulate over the indispensability of beauty and outdoor life and activity for the physical well being of the individual and few will question the essential character of attractive outdoor environment upon the mind especially the creative and productive spirit whether it be the artist or the tired workman homeward bound or in his little garden paradise.

But it is a regrettable fact that still we must approach the average American with an economic brief. Mr. Selfridge, the wealthy American merchant, who has recently enlarged his beautiful London establishment, was severely criticized by prominent British architects for insisting that beauty pays. He had simply forgotten he was on the other side of the Atlantic where that primitive stage has in a large measure given place to higher standards. But it unfortunately represents a too prevalent criterion for comparison.

Another amusing case in point; a wealthy American traveler in the Cathedral at Parma, Italy, after merely glancing at the marvelous Correggio frescoes, remarked to the reverent and highly intelligent guide, "What it must have cost to install this lighting system!"

When the aim of great manufacturing units is to limit a man's work to "one thing with a single movement," what a tremendous responsibility it places upon both architect and landscape architect to provide that man, that human automaton with life and soul saving environment and recreation. Shall we give him a cell among cells in long rows upon a narrow, hot, leafless street? If he is to live as a normal human being, he must have an attractive cottage, similar perhaps to his neighbors but possessing some individuality. This house must have space about it, a setting of growing things that he too may grow and he and his children must have play. Think, one-third of the hours of our lives should be spent in play, recreation if you please, of some sort. Not many are able so to order their daily habits for want of adequate facilities.

With attractive outdoor home working environment, ample opportunities and contacts with nature for play, the individual will become a thoroughly stable citizen, proud of our great cities of industry and our commercial supremacy, but endowed with an enduring affection and love for that greatest of all institutions, the home.

The illustrations shown on page 383, top of 384, 386 and 387 are reproduced from Professor Elwood's book "American Landscape Architecture" by permission of the publisher, The Architectural Book Publishing Co., Inc.



PETER B. WIGHT

Fellow of The American Institute of Architects—1866

Born 1838, died September, 1925

A BRIEF announcement of the death of Peter B. Wight appeared in our issue of October 5. This venerable man and great architect lived to an age far beyond the usual span. And in all the years he graced the profession of architecture, each was filled with the most constructive effort, each marked by a usefulness to all mankind that may only occur when effort is directed by a great mind and an untiring body.

Mr. Wight's first contribution to the architectural press was in the pages of *THE AMERICAN ARCHITECT*, and as Arthur Woltersdorf, F.A.I.A., aptly states in his letter which is printed herewith, it is extremely fitting that his "last contribution to the world" should also appear in this journal.

Mr. Woltersdorf writes us:

In this morning's mail I have a letter from Miss Meeker of Pasadena, California, niece of the late Peter B. Wight. She encloses a letter found in Mr. Wight's safety deposit box addressed to me and to her which I feel I have no right to look upon as a private matter. The letter bears the date of April 28, 1917. I enclose a typewritten copy of this letter to you, feeling that it is a document deserving of publication and because of the last sentence in that document *THE AMERICAN ARCHITECT* seems to be the right publication to give it to the world. Your journal, Mr. Wight contributed to at its birth in 1876, so it seems fitting that this document found in his safety deposit box, his last contribution to the world, should likewise appear in *THE AMERICAN ARCHITECT*.

Mr. Wight wrote, as follows:

Chicago, April 28, 1917

If anyone should be interested enough to know the main facts in my life in which I think I con-

tributed something to the welfare of my fellow men as well as incidentally to my own, they are these:

1. In 1862 I made the design for the National Academy Building at 4th Avenue and 23rd Street, N. Y. which was the first building erected in

America of carefully studied Italian Gothic of its best period. I was then 24 years of age. I never designed any more buildings following that style.

2. I was at that time also the architect for the U. S. Sanitary Commission and designed for it the first army field hospital, which was built in Washington and was the model for all the other field hospitals built during the Civil War. In 1864 as architect for the Sanitary Commission I designed and built (contributing my services without compensation) the Union Square Branch of the New York Sanitary Fair, of which I was a member of the Men's Executive Committee. It

covered all the vacant ground at the north end of the square from Broadway to 4th Avenue. The cost was disbursed by the Sanitary Commission under my drafts. I was made "Executive Officer" of that branch of the fair and gave my whole time to it until it closed.

3. In December 1871 I moved to Chicago and took a very large part in the rebuilding of the burned city as architect.

4. In 1881 I designed the first "grill" foundation of railroad iron and concrete that was ever used, and reduced the weight of I-beams and hollow tile filling for floors to 30 lbs. per square foot, making it possible to erect ten story buildings such as the Montauk that was then built, of which I was consulting architect with Burnham and Root.

5. In the same year I gave up my profession for ten years following, my last building (the great stables for the American Express Company



PETER B. WIGHT, F.A.I.A.

(From a painting by Allen E. Philbrick now in the Architects' Club of Chicago)

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at New York) having been completed. During those years, with my partner, I executed contracts in which my inventions of improved methods of fireproof construction were used to the extent of more than \$3,000,000. During this time I invented and introduced the salt glazed lap joint, drip edged wall coping which is the standard article throughout this country to the present time.

6. In 1891 I resumed my architectural practice, having offices downtown and on the grounds of the World's Columbian Exposition at Chicago where I was engaged for two and one-half years in private practice when I designed

several buildings and supervised many more.

7. From 1895 to 1897 I worked with the architects of Illinois in framing the first Architects' License Law adopted in this country, and from 1897 to 1914 was a member of the State Board and its secretary, treasurer and executive officer when I was superseded by another appointment under a new State Administration.

Now I am only contributing to the architectural journals as I have been doing since 1876, when THE AMERICAN ARCHITECT was founded by J. R. Osgood.

(Signed) PETER B. WIGHT



BUILDING OF NATIONAL ACADEMY, NEW YORK

PETER B. WIGHT, F. A. I. A., ARCHITECT

This building, the illustration of which is reproduced from THE AMERICAN ARCHITECT of November 24, 1894, was originally erected on the Northwest corner of Twenty-third Street and Fourth Avenue, was razed and in part re-erected as a Catholic church on upper Manhattan Island. The original site is now occupied by the Metropolitan Life Building. It is interesting to note Stanford White's Madison Square Garden tower, surmounted by St. Gaudens' Diana, just above the roof of the Academy Building at the right. It is of further interest that Wight's Academy Building and White's Tower, soon to be erected at University Heights as a part of the new group designed by McKim, Mead & White, architects, so completely stood the test of criticism and became acknowledged as, among New York's most dignified architectural landmarks that they were both re-erected on new sites thus to preserve them for all posterity. Such an excellent example should be followed in every city in this country.

AVON, OLD FARMS

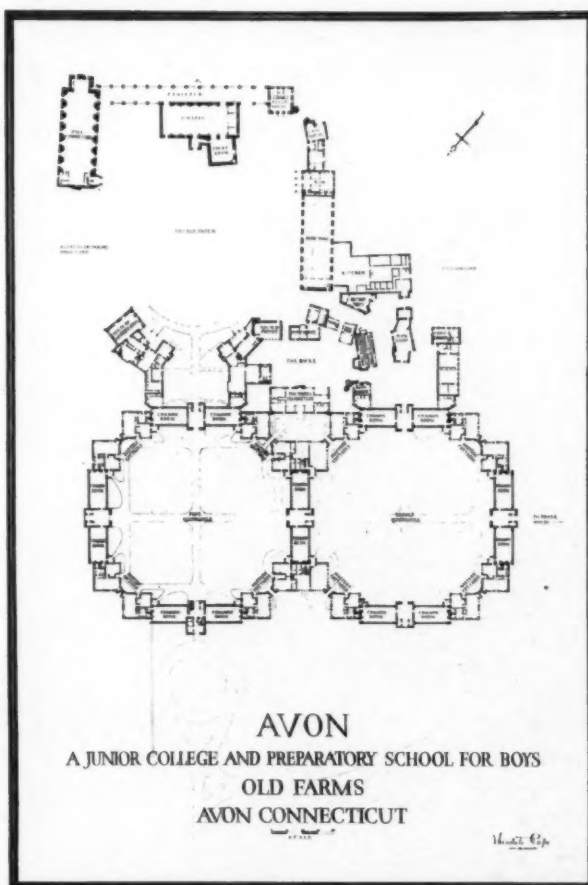
A SCHOOL FOR BOYS *at* AVON, CONN.

THEODATE POPE, Architect

THE American boy as a subject of fiction is passing. Mark Twain and Hamlin Garland have written of the boy in a way that grown-up boys can readily understand. Tom Sawyer and Huck Finn are real personalities and men who read of them renew the recollection of their boyhood days. There is unfortunately a decided tendency away from the farm and its healthy and good habit-forming association. Sophistication has taken the place of that simple, direct mental attitude that is the result of daily association with the big out-of-doors. City bred boys become city bred men. They may seek by a university education to secure accepted standards of knowledge, and while they may attain a certain mental growth, they will lack that sturdiness of character that comes from close contact with nature. Just now the purely materialistic phase is the one that counts for most. And in our preparation for lifework, we lay the foundation for a habit of short-cuts to fulfillment, the time-saving methods that are the rule in every walk in life. There is less joy in the work and an obsession to reach a conclusion in the quickest possible way, with consequent lack of thoroughness.

If we are going to save the present younger generation from the nerve-wracking and health-destroying scramble that is present everywhere, we must give them a foundation of education that will teach them to know the out-of-doors and lead them to a choice of life vocation that will best suit their abilities and serve their future success. Elbert Hubbard truly said, "Blessed is that man who has found his work," and it is an old and accepted adage that "As the twig is bent the tree is inclined." It is at a school such as Avon, Old Farms, that boys may be trained with a proper physical and mental foundation. And it is in a group of buildings such as are briefly shown in the accompanying illustrations that they will imbibe a respect and strong affection for their school that will not be dimmed by the larger and more stately universities they will later attend.

Avon, situated twelve miles from Hartford, Conn., and easily accessible, is in the center of a rural community of New England farms and far away from the hustle and bustle of the city. Avon, Old Farms, a junior college and preparatory school for boys, is an original architectural crea-



tion conceived to meet the particular needs of the present day boy. The college buildings, thirty in number, form the small village of Old Farms and are built on a bluff which overlooks 2000 acres of forest and farmland, all of which is the school's property.

Grouped about the Village Green are the library and gallery, cloister, chapel, guest house, gate house, bank, refectory and the houses of the master and provost. Cottages for the faculty and seven stone dormitories and common rooms form two quadrangles known as the Pope Quadrangle and the Brooks Quadrangle. The infirmary and the power house are conveniently located. The farm buildings, including the smithy and carpentry shop, form a group apart.

The buildings are of a brown stone quarried on the place and are surfaced by the old English peen

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THE VILLAGE GREEN

hammers. The masons lay the stone without plumb or level, making their patterns as they go.

Heavy slate is hung on split oak saplings which have been cut in the school's forest. The saplings are split and barked and the slate is set in cement.

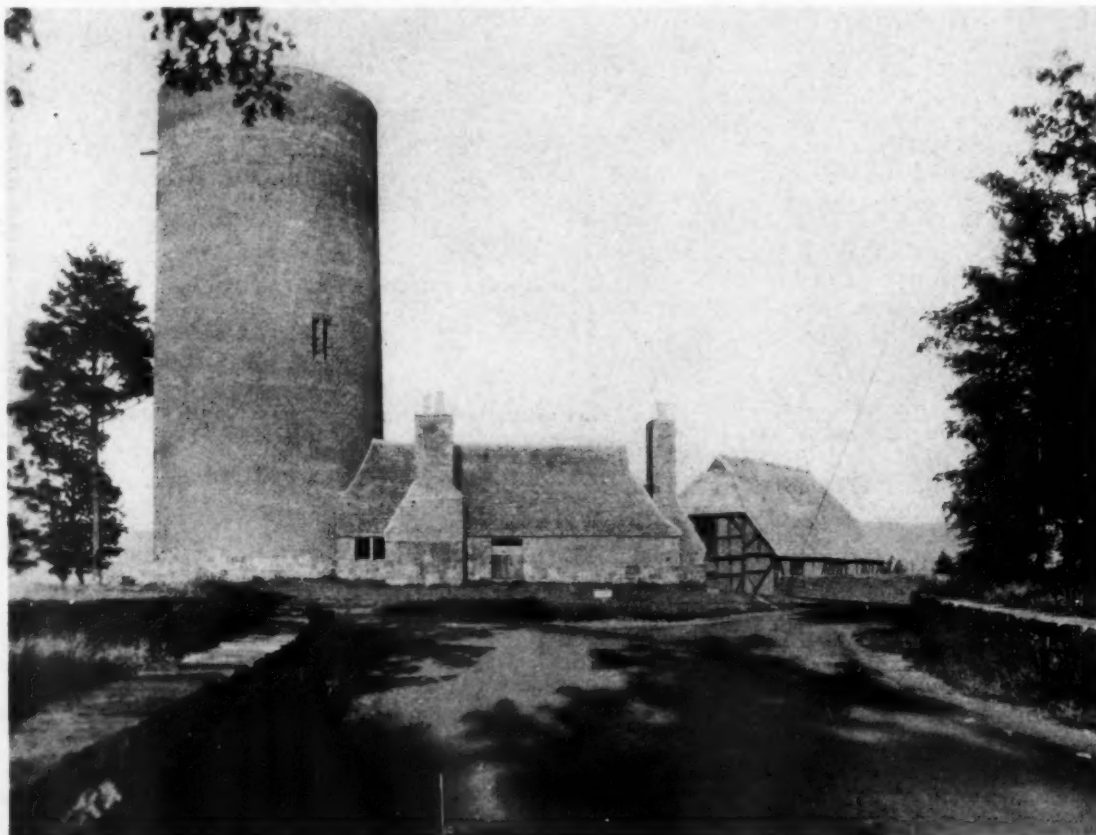
The timbers are hand-hewn. All of the woodwork used in the construction of the buildings has been turned out by a mill on the estate.

As no trades are taught at this school, which is a purely cultural institution, the usual facilities and buildings in purely trade schools, are omitted.

A CORRECTION

IN our issue of September 23, Plate No. 252 showing the garden of the Wilkins' house at Rockville, Md., no mention was made of the fact that this landscape effect was the work of Robert B. Cridland, landscape architect, of Philadelphia.

We regret this unfortunate failure to give the proper credit to Mr. Cridland and we wish this to serve as a formal means of rectifying this omission.



FARM GROUP, COMPRISING WATER TOWER, SMITHY AND CARPENTRY SHOP
AVON, OLD FARMS, A SCHOOL FOR BOYS, AVON, CONN.

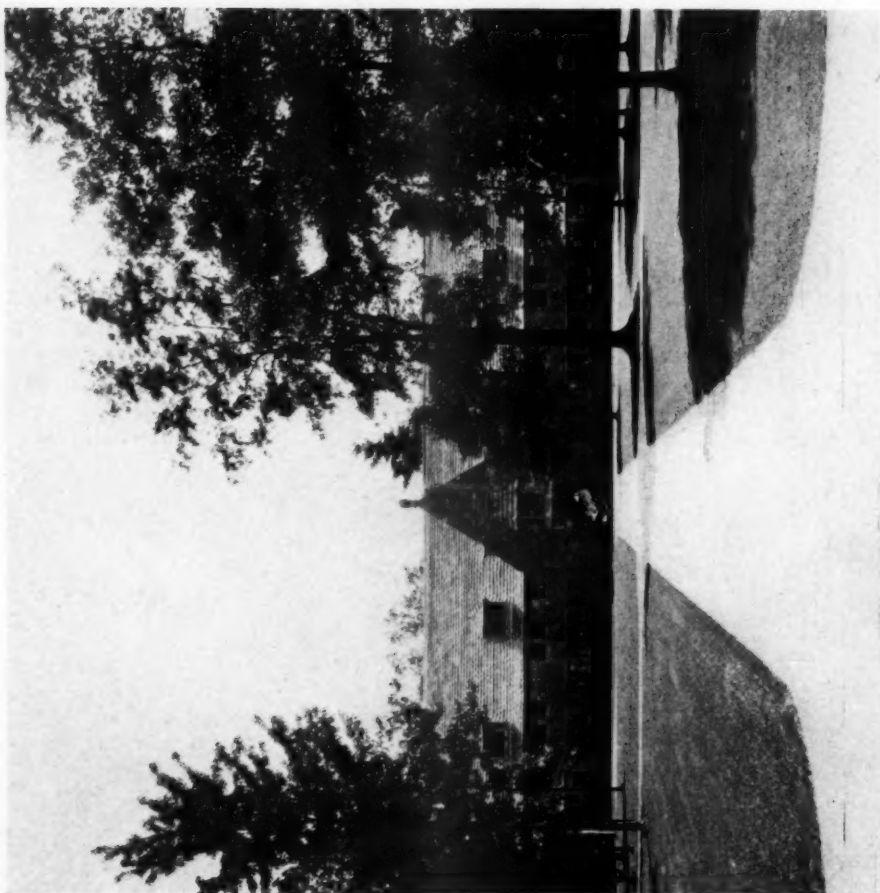
THEODATE POPE, ARCHITECT



MAIN ENTRANCE

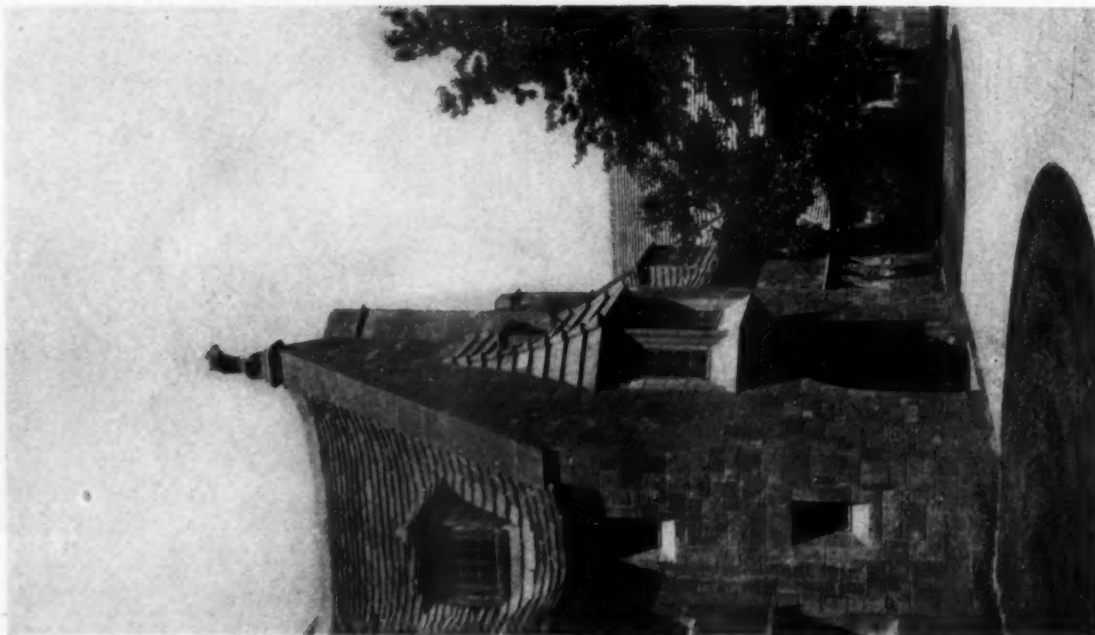
AVON, OLD FARMS, A SCHOOL FOR BOYS, AVON, CCNN.

THEODATE POPE, ARCHITECT



ABOVE:—ONE OF THE DORMITORIES AS VIEWED FROM ACROSS THE QUADRANGLE

AT LEFT:—DETAIL OF DORMITORY FROM INSIDE THE QUADRANGLE



AVON, OLD FARMS, A SCHOOL FOR BOYS, AVON, CONN.
THEODATE POPE, ARCHITECT

EDITORIAL COMMENT

"THE REMAINING PORTIONS of Warwick Priory have been sold at what is described as a 'highly satisfactory figure' to an American and are to be taken down and transported stone by stone to America for rebuilding there. The portion so dealt with includes the Saxon wing, the sixteenth century part with a stone front and the Georgian wing.

"Such transactions as this are pure vandalism and do not reflect credit on either the purchaser or seller. The seller is, for money, parting with a building of historic associations here and nowhere else. The purchaser does an even more foolish thing. He spends his money on securing the reerection of a building in a locality in which it has no association or connection. The action, in a word, shows greed on the part of the seller and vanity, ostentation and bad breeding on that of the purchaser."

The foregoing, clipped from our contemporary, *The Architect*, of London, meets our unqualified approval. It is difficult to understand how a man who has accumulated sufficient means to undertake a transaction so expensive, should be willing to enter upon it.

Seriously, there are opportunities in this country to donate money toward the preservation of the few remaining landmarks that have escaped the speculative builder's wrecking crews. Opportunities are constantly presented, where some rich and patriotic citizen could perform a fine public service by furnishing the money to preserve a house full of historical associations but slowly crumbling to decay.

Small wonder there is prejudice in Europe against the American "art amateur."

* * *

THE EDITOR OF *The Washington State Architect*, the official journal of the Washington State Society of Architects, is perturbed to learn that heading the list of architects in the Seattle classified telephone directory is the name of a man who is not a licensed architect and who under the excuse of a paid advertisement is set forth to the world as "the leading designer and builder of fine homes."

We have not before us a copy of the Washington licensing law, but it seems safe to assume that it prevents any man advertising himself as an architect who has not duly passed the board. If this assumption is correct, it would seem as if there was a ready means to make the gentleman withdraw his advertisement. Whatever his abilities may be as an architect, he evidently is a keen business man and knows the value of well directed advertising. Architects may ethically advertise.

The Institute withdrew its objections some years ago. The men in Seattle can, if they like, beat this interloper, if he is indeed such, at his own game. Why do they not do it?

* * *

ARCHITECTS IN ENGLAND are beginning to realize that something ought to be done "to bring the art (of architecture) into closer relation with modern life."

To recount the various phases of apathy in Great Britain toward architecture, would be but a repetition of the often made complaints of architects in this country. The conditions are exactly alike. As one writer aptly puts it: "More attention is drawn to a new play than to a new cathedral and a successful novel always takes precedent of a building."

A number of remedies have been proposed, but no general plan to offset the condition as it now exists, has been adopted. It is urged that the larger daily journals should have architectural editors and devote space such as is given to the other arts. In this country there have been certain attempts made to exploit building—not architecture—but the presentation has been so poor and with such a wide lack of knowledge of architecture as to be practically worthless as propaganda.

We are inclined to the opinion that it is through the medium of the Sunday editions of the larger newspapers that most could be accomplished. But to have value, it should be conducted by architects and in such a manner as to arouse public interest and respect. Certain efforts in this direction were put forth a year ago, but no result was reached.

It seems that among the big things that The American Institute of Architects could undertake for the general good would be the appointment of an important committee to take up this question of publicity and report a method to the next convention. We shall probably be written to by some reader, directing attention to the existence of a "Committee on Public Information" of the Institute. We know all about that, for it was really at the suggestion of this journal a number of years ago, that such a committee was formed.

But the lack of real results can only be compared to those of the American Scenic Preservation Society whose work in suppressing billboards along our highways has not been very remarkably successful.

* * *

THE ADDRESS DELIVERED by H. Van Buren Magonigle, F. A. I. A., before the Massachusetts Institute of Technology Architectural Association, and printed in the Institute

THE AMERICAN ARCHITECT

Journal for October, is one of the most scholarly things that has appeared in the architectural press for a very long time. Mr. Magonigle is as interesting and brilliant in his impromptu speeches as he is in his writing—a rare combination. The *Journal* heads this address, "The Hairy Frog, A Repercussion."

Mr. Magonigle referred at some length to the symposium that was conducted by him at the 1924 convention. As will be recalled, that meeting was the outstanding feature of the convention. The symposium dealt with precedent. In his address before the Architectural Association he amplified and explained in the most delightful way the main points of the addresses that composed that symposium. One thing Magonigle did, and did it thoroughly, was to place before his hearers the clearest explanation of precedent we have ever heard or read. He said:

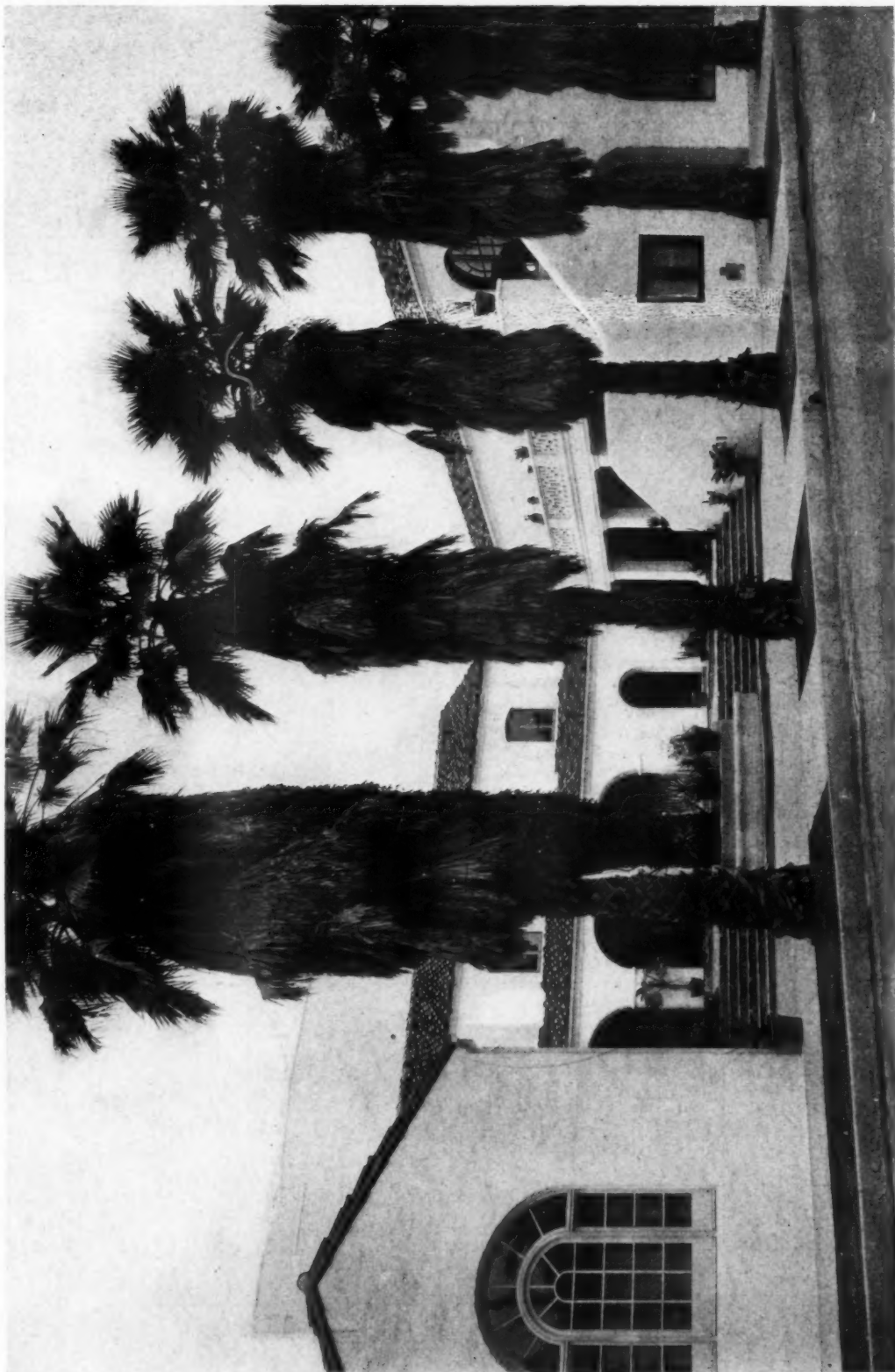
"In the first place I should like to get rid of period art, strip off all the labels—Greek, Roman, Gothic, Adam, Colonial, and call it all just architecture. I remember being very cross with a friend back in 1895 who said that such a thing would be all right if one wanted to do Tuscan architecture—and I appealed to high heaven and

the restaurant to tell us why any one should wish to do Tuscan architecture or any architecture except that of our own day and time. I have not changed my mind, although I confess my practice has not always conformed to my deep-seated conviction—a little fact which I feel gives me the right to criticize present-day practice. Having removed the labels, I should like to consider voids, solids, walls, openings, columns, piers, mouldings, ornament, merely as parts of speech to use and combine for the expression of architectural ideas, just as the parts of speech we use today are those used by Shakespeare, but which we employ to express our own thoughts. We do not plagiarize when we use the words 'not', 'question', 'be', 'to', 'that', 'or', 'the', 'is'. These parts of speech are the common heritage of our race. But if we were to combine them thus, 'To be, or not to be, that is the question,' and attempt to pass off as our own this combination of those simple parts of speech in which the riddle of life is profoundly interrogated, we should not only be guilty of plagiarism but of being extremely silly besides."

And, further referring to conventions, why not have another symposium in 1926? We feel sure this suggestion will meet general approval.



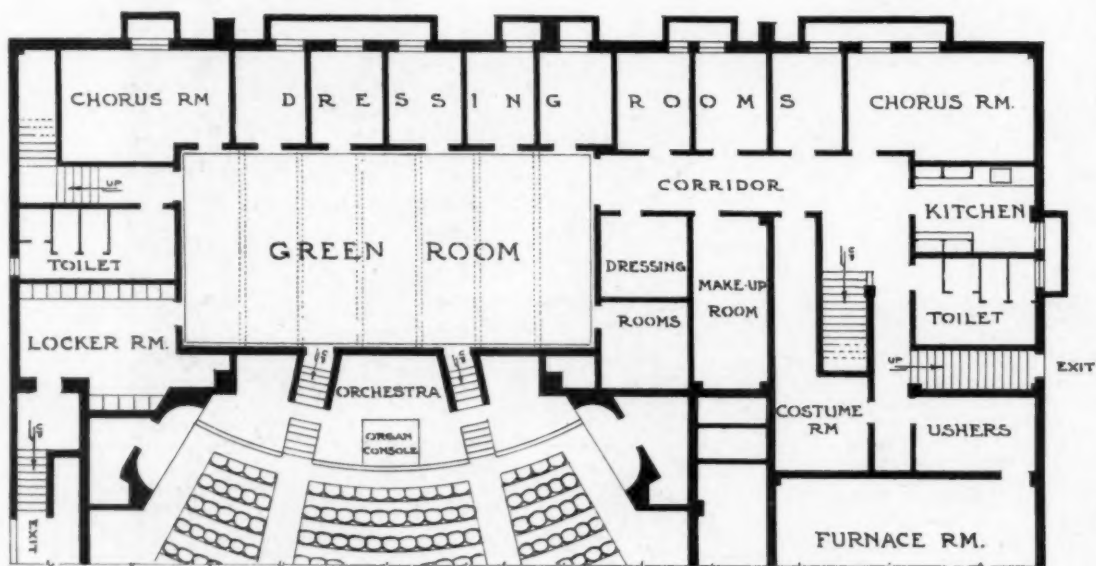
LA ACADEMIA, AVILA, SPAIN
DETAILS OF SPANISH ARCHITECTURE



COMMUNITY PLAYHOUSE, PASADENA, CALIF.

ELMER GREY, ARCHITECT

(See plan on back)



BASEMENT PLAN

COMMUNITY PLAYHOUSE, PASADENA, CALIF.

ELMER GREY, ARCHITECT

A. DWIGHT GIBBS, ASSOCIATE ARCHITECT FOR THE INTERIOR

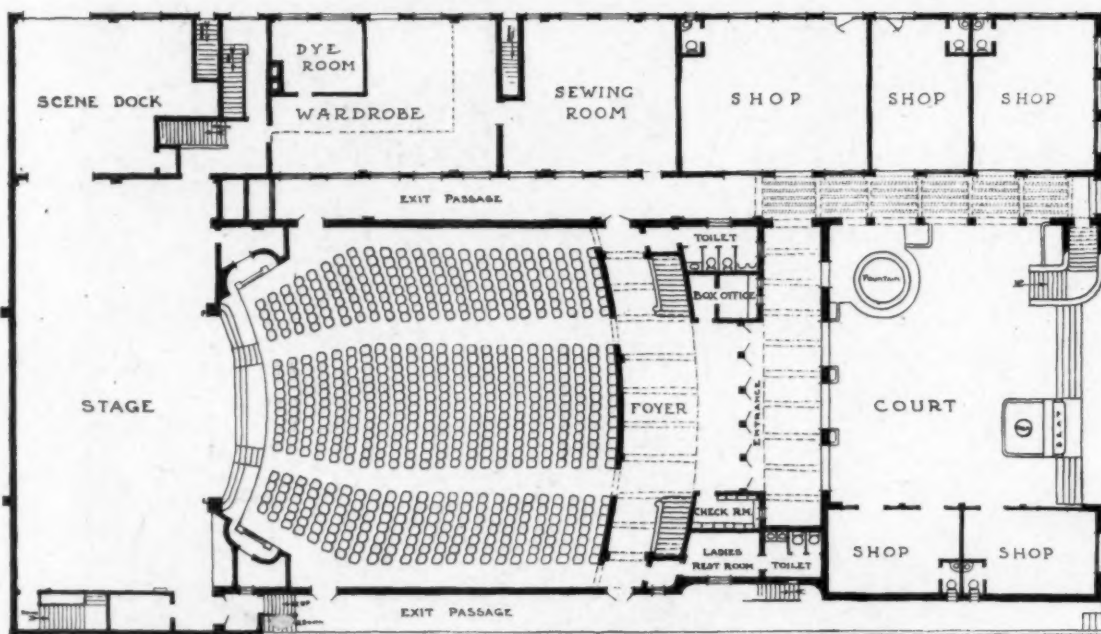


COMMUNITY PLAYHOUSE, PASADENA, CALIF.

ELMER GREY, ARCHITECT

(See plan on back)

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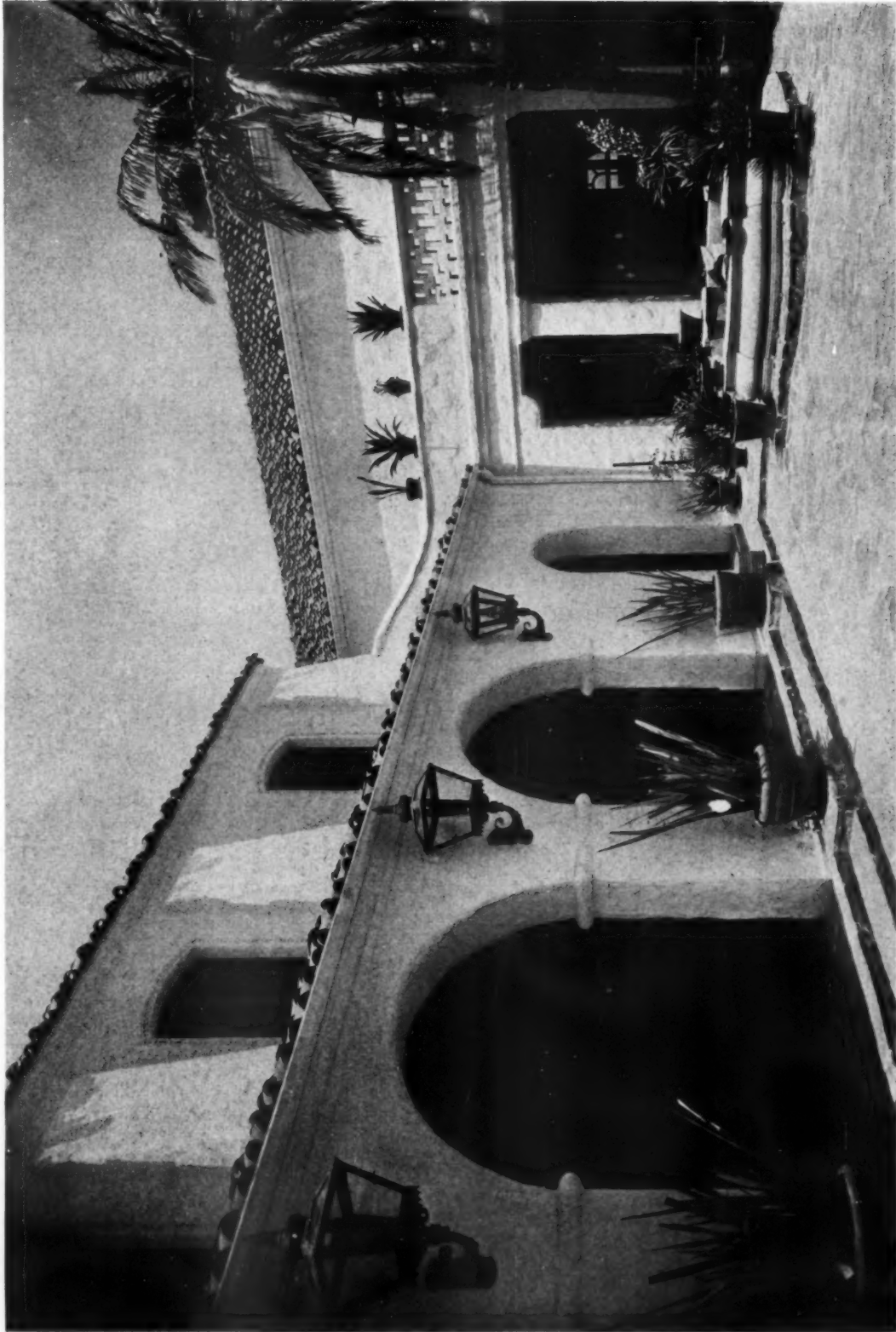


MAIN FLOOR PLAN

COMMUNITY PLAYHOUSE, PASADENA, CALIF.

ELMER GREY, ARCHITECT

A. DWIGHT GIBBS, ASSOCIATE ARCHITECT FOR THE INTERIOR

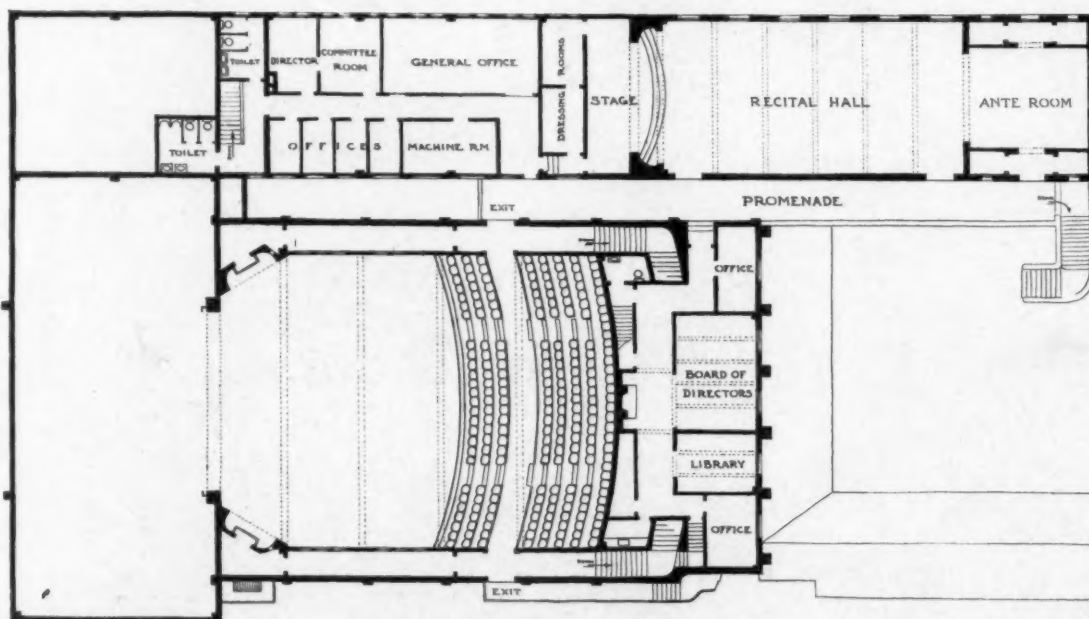


COMMUNITY PLAYHOUSE, PASADENA, CALIF.

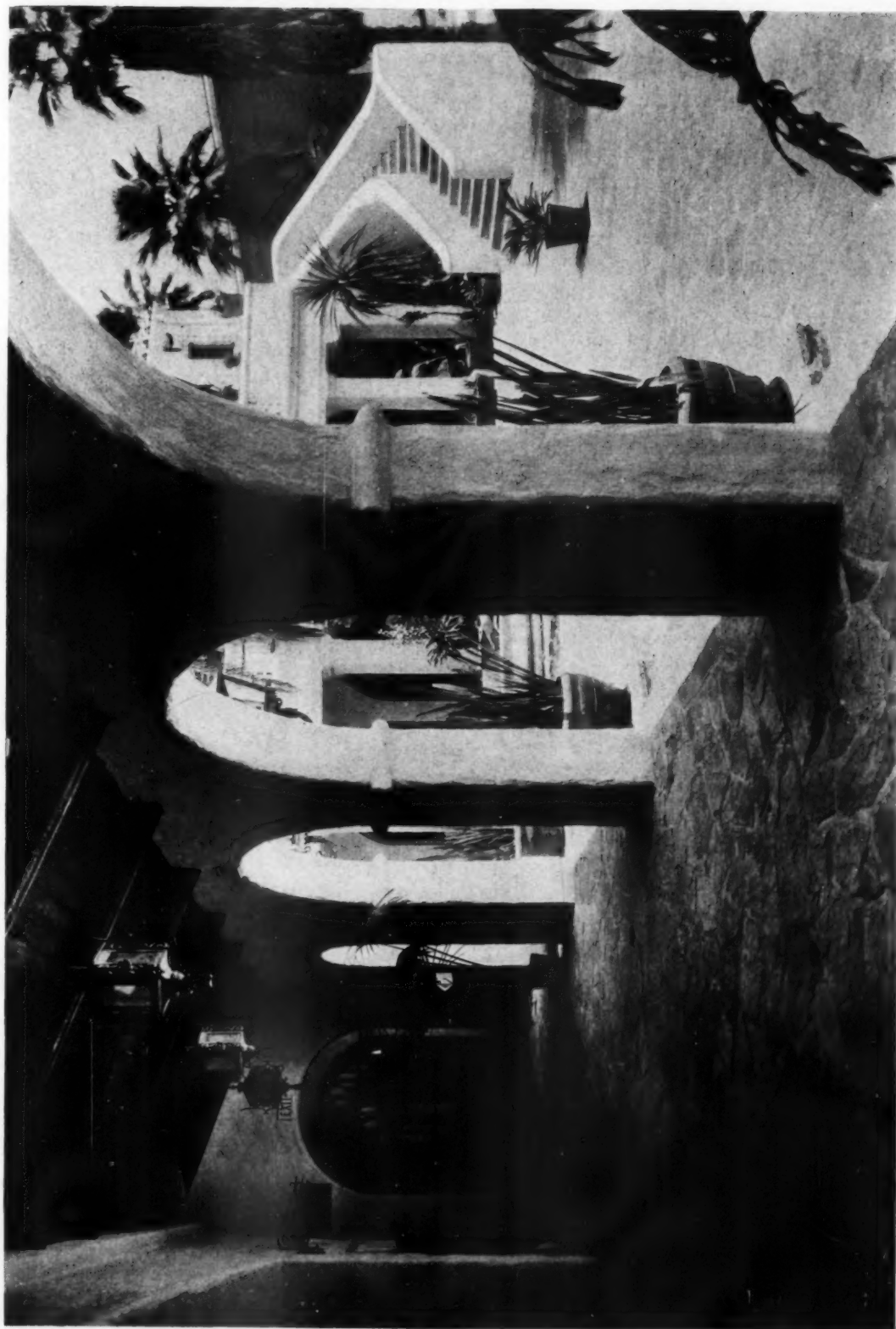
ELMER GREY, ARCHITECT

(See plan on back)

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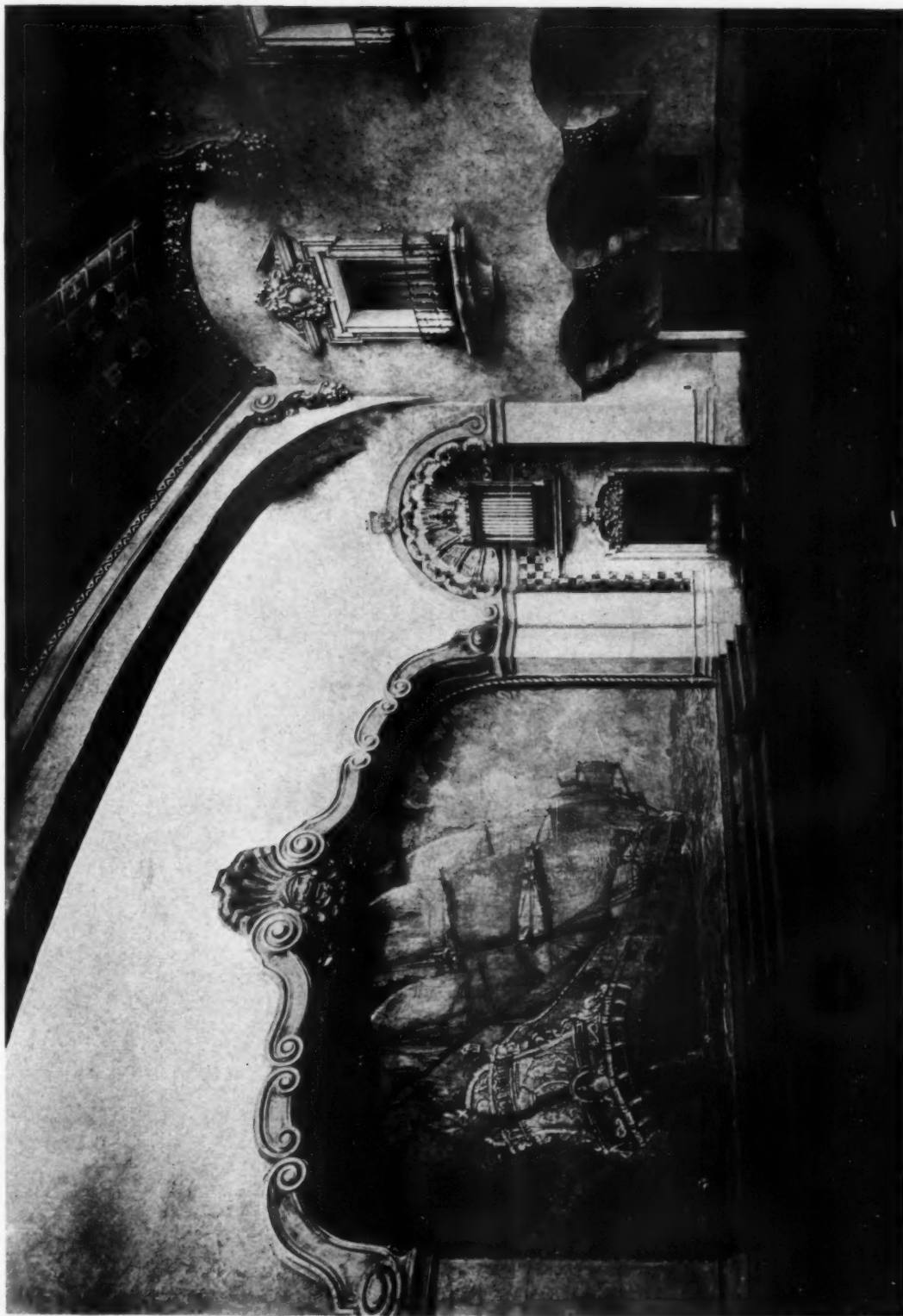
SECOND FLOOR AND BALCONY PLAN
 COMMUNITY PLAYHOUSE, PASADENA, CALIF.
 ELMER GREY, ARCHITECT
 A. DWIGHT GIBBS, ASSOCIATE ARCHITECT FOR THE INTERIOR



COMMUNITY PLAYHOUSE, PASADENA, CALIF.

ELMER GREY, ARCHITECT

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COMMUNITY PLAYHOUSE, PASADENA, CALIF.
ELMER GREY, ARCHITECT—A. DWIGHT GIBBS, ASSOCIATE ARCHITECT FOR THE INTERIOR

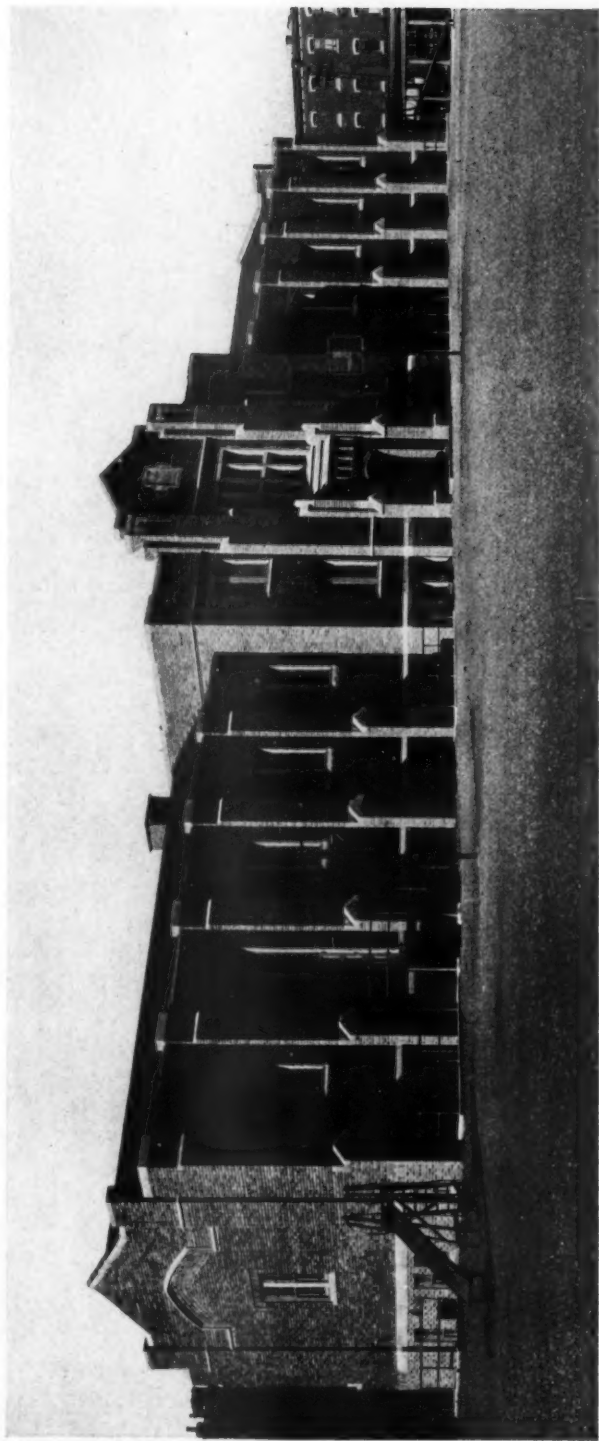
THE AMERICAN ARCHITECT
November 5, 1925. Plate 392



COMMUNITY PLAYHOUSE, PASADENA, CALIF.

ELMER GREY, ARCHITECT—A. DWIGHT GIBBS, ASSOCIATE ARCHITECT FOR THE INTERIOR

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COPPIN RECREATION CENTER, PHILADELPHIA, PA.

KARCHER & SMITH, ARCHITECTS

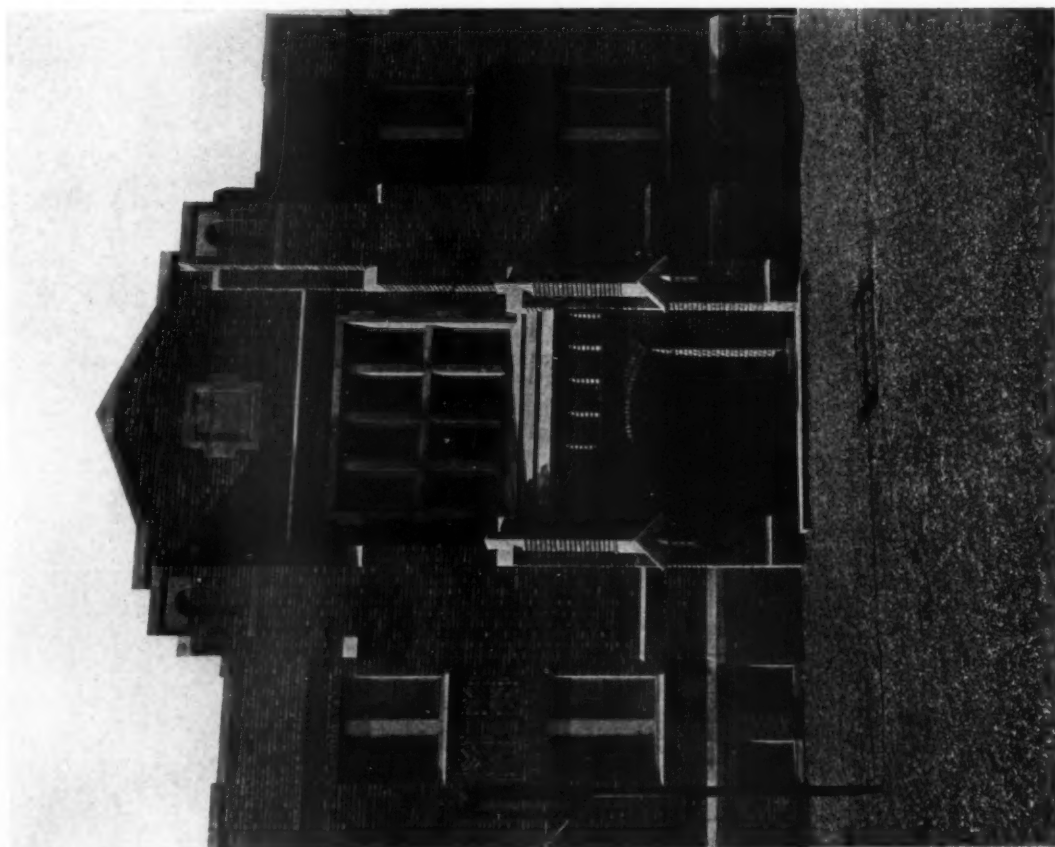
THIS building was erected in 1923 at a cost of 46¢ per cubic foot, including heating, plumbing and electrical work. It is of masonry construction with steel roof trusses. Roof is covered with tin with upright seams. Exterior walls are of buff colored brick with limestone trim. First floor, reinforced concrete slabs. Upper floors of maple treated with a preservative. Partitions in basement, hollow tile; upper floors, stud. Interior trim and wainscoting, wood. Vapor heating system; porcelain enamel plumbing fixtures; indirect electric lighting. A white enamel brick finish was used in basement and in gymnasium. Moving picture fixtures in auditorium. Building was designed to work in conjunction with the playground in which it is located.

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COPPIN RECREATION CENTER,
PHILADELPHIA, PA.

KARCHER & SMITH, ARCHITECTS



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INTERIOR ARCHITECTURE

Billiard and Pool Rooms in Private Houses

THE proper function of a billiard and pool room is so dependent on equipment and its specified arrangement that the purpose of the room must ever be the outstanding consideration in working out its design. On account of certain limitations which are thereby placed on its design, and the extent to which its equipment controls the use of its floor space, the billiard and pool room, more than probably any other room in the house, is a room of one purpose. Its standardized equipment, even the placing of a greater part of which is definitely established, is so distinctly its own and so inadaptably to any other use that the room cannot possibly serve any purpose other than that for which it is primarily intended, ex-

cept, perhaps, as a lounge for those who watch the progress of a game. In the light of these facts, the design of a billiard and pool room requires accurate knowledge of the game, how it is played and familiarity with the rules which govern its equipment. For example, the table—a vital adjunct in the furnishing of a billiard and pool room—is standardized in every dimension and in a greater part of its construction. In addition, it must be placed in the room, and other pieces placed accordingly, so that the players are afforded a free and clear space all around the table to permit them to take necessary positions in making certain shots. Thus, at the very outset, definite limitations are put on the problem of designing



A SPECIALLY DESIGNED TABLE IS THE FEATURE OF THE BILLIARD AND POOL ROOM IN THE HOUSE OF EDWARD FISHER, DETROIT, MICH. THE WALLS OF SOLID WOOD PLANKS ARE RELIEVED BY CARVED ORNAMENT WHICH MAKES THE SETTING FOR THE TABLE MORE HARMONIOUS. NOTE THE EMBLEMS OF SPORT ON THE WALLS

RICHARD H. MARR, ARCHITECT

THE AMERICAN ARCHITECT



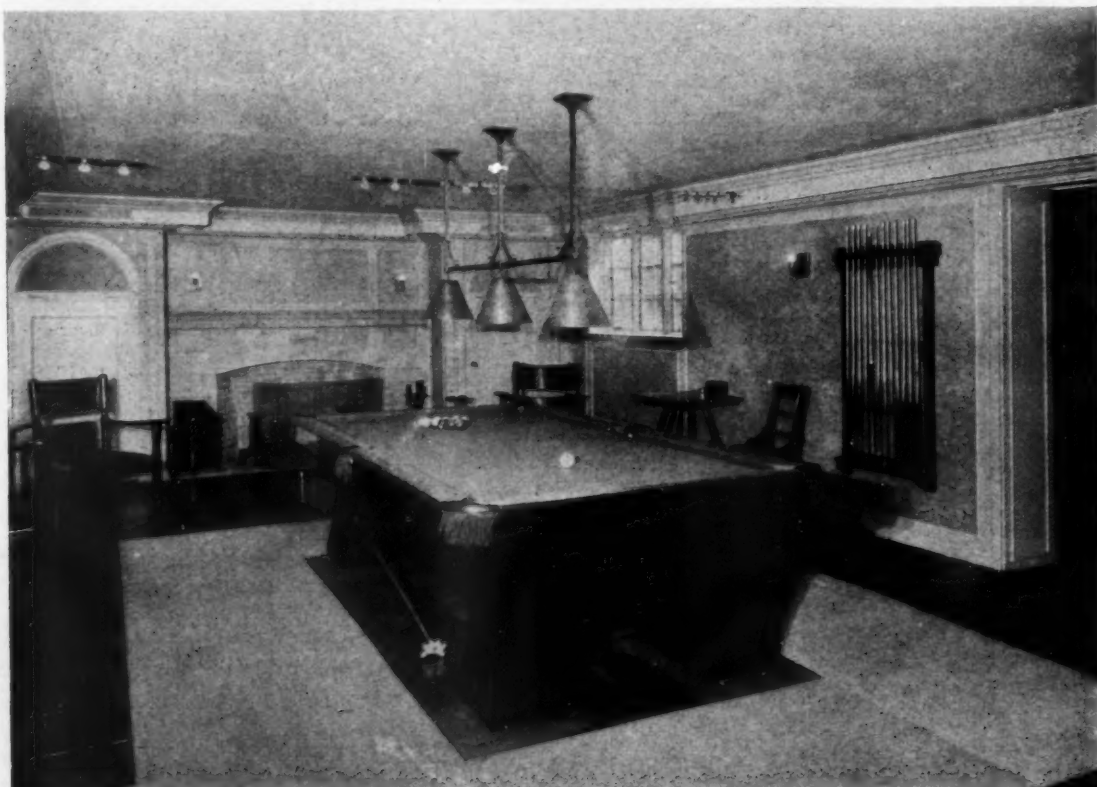
BILLIARD AND POOL ROOM IN THE HOUSE OF CLAUDE H. BOETTSCHER, DENVER, COL.

MAREAN & NORTON, ARCHITECTS

the room and the opportunity for expression of creative ability is consequently greatly reduced. Mr. Wm. Roger Greeley, in an article entitled

"Architecture as a Social Complex," which recently appeared in *THE AMERICAN ARCHITECT*, speaking of the regulating by law of the proportions of story heights, windows, doors, and rooms; and their effect on creative design, said that such regulations "affect the problem of design, but rather as a special set of conditions to be met than as a governing principle. It is impossible to define or recognize any law of proportion that is not subject to scale, style, propriety and sincerity."

It often seems to be more generally considered, especially by the amateur and the inexperienced, that a problem stands much nearer final completion, and thus can be more readily solved, when certain of its conditions are definitely established. The road seems to them to be much shorter, and the battle already half won. That is a mistaken idea. The road may be shorter, but it is also considerably narrower, and therein does the problem become more difficult. As regards architectural design, the field of selection is materially reduced. In studying a plan, for example, the architect finds it much more intricate when he must acquiesce to his client's demands to include a bath-



THE BILLIARD AND POOL ROOM IN THE HOUSE OF A. M. WARD, SHAKER HEIGHTS VILLAGE, OHIO, IS LOCATED IN THE BASEMENT. THE NECESSARILY HEAVY CORNICE CONCEALS THE HEATING PIPES, AND THE WALLS OF ANTIQUE PLASTER, GLAZED IN TONES OF YELLOWS AND BROWNS, ARE PANELLED WITH WOOD PANEL STRIPS. A STOCK DESIGN TABLE IS INSTALLED. A BILLIARD AND POOL ROOM FIRST AND LAST

BLOODGOOD TUTTLE, ARCHITECT

THE AMERICAN ARCHITECT

room on the first floor, or a fireplace in the main bedroom. Or a decorator must give much more thought and research effort to devising a scheme that will include certain pieces of old furniture in their present coverings—they are heirlooms and cannot be parted with. Standardized equipment, standardized furniture, standardized arrangement of the greater part of the furniture and equipment, standardized lighting facilities, (in part, at least) make the problem of designing a billiard and pool room that shall have genuine personality and characteristic individuality one that requires considerable talent and ingenuity to solve successfully.

The size and placing of the table present the most serious obstacles to the architect and decorator, and,



THE BILLIARD AND POOL ROOM IN THE HOUSE OF EDGAR F. LUCKENBACK, PORT WASHINGTON, L. I., N. Y., IS THE ROOM OF A BILLIARD AND POOL ENTHUSIAST AND ALSO A LOVER OF THE SEA, AS IS VERY EVIDENT

P. W. FRENCH & COMPANY, DECORATORS



A DECORATIVE TILE FIREPLACE AND AN ELABORATELY PAINTED BEAM CEILING TEND TO DETRACT FROM THE LESS DECORATIVE TABLE AND OTHER EQUIPMENT IN THE BILLIARD AND POOL ROOM OF HIRAM E. MANVILLE, PLEASANTVILLE, N. Y. ITS SECONDARY PURPOSE AS A LOUNGE IS THUS STRENGTHENED BUT NOT TO ANY DISADVANTAGE OF THE ROOM AS A BILLIARD AND POOL ROOM. THE LIGHTING FIXTURE IS INTERESTING

DONN BARBER, ARCHITECT

THE AMERICAN ARCHITECT

therefore, require first consideration. The exact dimensions of the standard house size billiard and pool table are five feet by nine feet two inches, and in order to allow of what might be called comfortable playing space, the room should be at least fifteen feet by twenty feet. That allows a clear space of approximately five feet all around the table, and leaves no room for furniture, except, perhaps, in the corners, where, being on the angle, the space is slightly greater. In a larger room, then, a space of approximately fifteen by twenty feet in the center must be reserved for the table and the players, so that unless the room is of unusual size, there cannot be a great deal of floor space allotted to furniture not classed as equipment. In its construction, too, the billiard and pool table is not open to much variation. Its heavy slate top must be supported so that it is insured of being level to the smallest fraction of an inch. That is stipulated by the rules of the game. Manufacturers of standard equipment for the billiard and pool room have devoted their time and ability in perfecting the

construction of the table to establish and maintain this accuracy rather than in making an attempt to improve its design architecturally to its mechanical and scientific disadvantage. That is natural and as it should be. Architects, however, in facing the problem of designing billiard and pool rooms, have frequently made suggestions which they would like embodied in the design of the table, tending, perhaps, to introduce more style, as one might say, into its design, and to reduce the scale of the design of the average and more common stock patterns. For owing to the great weight which the legs and framework of the table are called on to carry and support, it is the heavy scale of the details, more than its bulky dimensions which make the table of stock designs awkward and even out of place in rooms of private houses. As a result, certain manufacturers have occasionally produced specially designed and specially constructed tables which have a more decided architectural value. But in size and in scale, aside from certain visible characteristic features of its construction, the billiard and pool table can still



FAIENCE HAS BEEN USED WITH INTERESTING RESULTS IN THE DESIGN OF THIS BILLIARD AND POOL ROOM, INTRODUCING COLOR AND ORNAMENT IN THE WALLS AND FLOOR TO OFFSET THE SEVERITY OF THE TABLE AND OTHER EQUIPMENT. THE CONVENTIONAL CHARACTER OF THE ORNAMENT IS APPROPRIATE

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never be confused with an ordinary library or living room table. This only emphasizes the point already made that a billiard room is first and last a billiard room, and any attempt to sham or conceal its foremost feature—the table—is to ruin its purpose and fail in its design by a lack of honesty and sincerity that is necessary to successful architecture.

Even the selection of the floor covering, or that part of it which directly surrounds the table, to be more exact, is governed to a certain extent by the rules of the game. They call for some material, as rubber, cork, linoleum, etc., which will afford the players a footing on which there is no possibility of slipping. This strip must needs extend about three feet six inches from the base of the table. But underneath the legs of the table itself a material with any elasticity whatever would tend to disturb its level. A floor covering of any description is generally dispensed with there, allowing the table to rest on the struc-

tural floor where it is more apt to remain level and steady owing to the solidity of its construction.

The lighting facilities for a billiard and pool table resolve themselves into a problem to cast light of equal intensity over the entire playing surface, and so arranged that no shadows are visible from any conceivable angle. Two, and sometimes three, clusters of lights are used, hanging directly over the center of the table parallel to its long dimension. In its application, it has been found to be most satisfactory to the players when the units of light are hung between two feet four and two feet six inches from each end of the table, and, if three units are used, the additional one placed directly between the two, or in the center of the table. The height of the lights, or the distance between the table top and the units of light, depends somewhat on the type and size of shade used. It is absolutely essential, however, that no direct rays of light ever meet the eyes of the player. Moreover, the shades must serve also as reflectors,



IN THE HOUSE OF CHARLES T. FISHER, DETROIT, MICH., THE BILLIARD AND POOL ROOM IS NINETEEN FEET BY TWENTY-SIX, AND SPACE IS THEREFORE ALLOWED FOR FURNITURE BEYOND THE STANDARD EQUIPMENT. BOOKCASES ARE BUILT INTO THE WALLS OF TWO SIDES OF THE ROOM, AND THE GAME IS THUS INJECTED INTO THE LIVING QUARTERS WHERE IT IS EVIDENTLY RESPECTED. THE TABLE IS, OF COURSE, SPECIALLY DESIGNED

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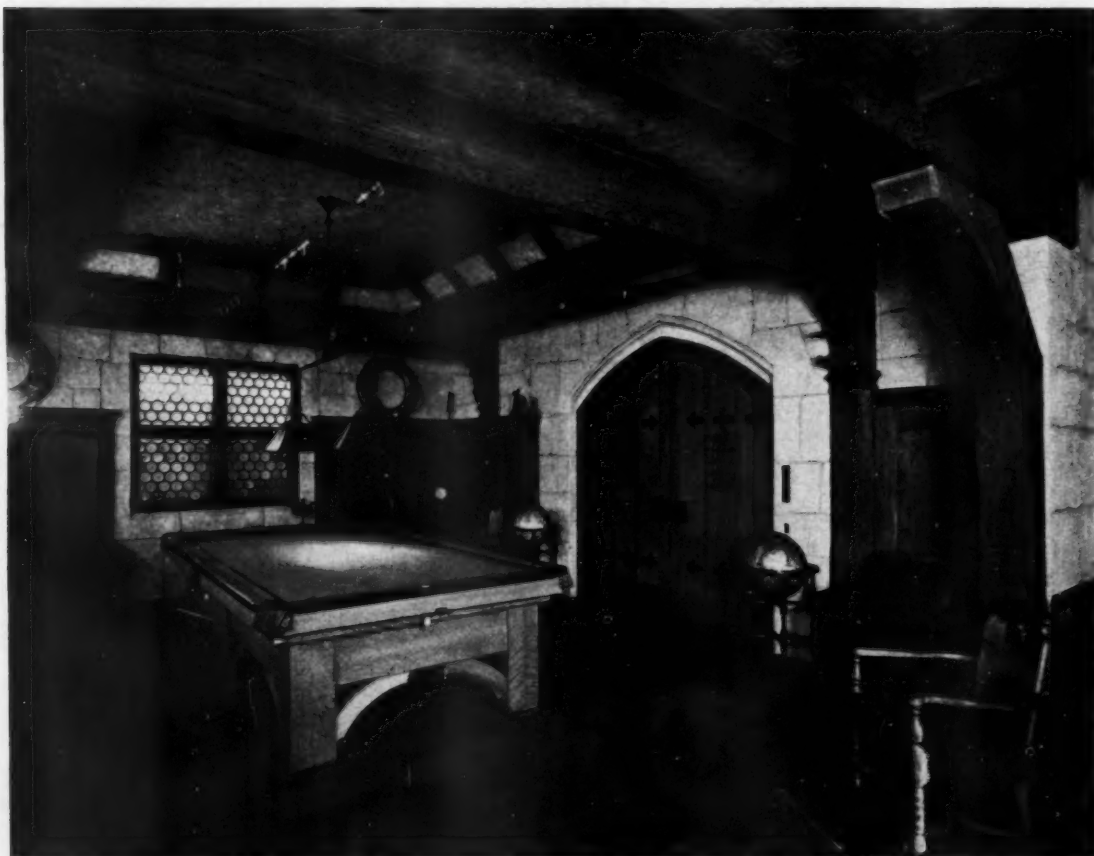
thereby intensifying the light on the playing surface, and if they are of opaque material, all glare is entirely eliminated and the light on the table becomes that much more intense by contrast.

It is often not desirable to introduce the high seated chair into billiard and pool rooms of private homes. Its purpose, of course, is to allow the occupant of the chair to command a view of the balls in play on the table. In houses where the game is taken more seriously than as a mere pastime, the principle on which these chairs are designed might be introduced to advantage.

The architectural design should reflect in its every detail the sporting purpose of the room. The game as played in the private house is a recreation, a clean, wholesome sport, and the character of the sportsman offers unusual opportunities for the designer endowed with original creative ability. On several different occasions, the idea of introducing more personality into architectural design has been stressed and perhaps some little criticism has been aroused in the suggestion that architecture and decoration can and should be

the embodiment of character and personality. The character of the client serves as the inspiration; in the interpretation of that inspiration in architectural expression, is seen the personality of the designer. The several illustrations of billiard and pool rooms in private houses shown on these pages demonstrate in no uncertain terms the embodiment of character and personality in design. One can feel the character of the true sportsman back of the design of the room in the house of Edgar F. Luckenback; in the billiard and pool room in the house of A. M. Ward, there is discernible the billiard and pool enthusiast, a lover of the game; in the house of Charles T. Fisher the room suggests that the owner holds the game more sacred, considers it more a part of his life than a mere accessory. Yet these, and the others, are all rooms of the sportsman. In their peculiar and characteristic manner of expression, the several architects have shown their personality.

Acknowledgment is made to the Brunswick-Balke-Collender Co. and the Batchelder-Wilson Co. for supplying certain illustrative material.



ANOTHER VIEW OF THE BILLIARD AND POOL ROOM IN THE HOUSE OF EDGAR F. LUCKENBACK, PORT WASHINGTON, L. I., N. Y., IN WHICH EMBLEMS OF THE SEA ARE USED TO DECORATIVE ADVANTAGE

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THE AMERICAN ARCHITECT



"WORKING PHOTOGRAPHS"

ONE OF A SERIES MADE IN ENGLAND BY JOHN RUSSELL POPE, F. A. I. A.

THE AMERICAN ARCHITECT



COMPTON WYNYATES MANOR HOUSE, WARWICKSHIRE, ENGLAND

"WORKING PHOTOGRAPHS"

ONE OF A SERIES MADE IN ENGLAND BY JOHN RUSSELL POPE, F. A. I. A.

ENGINEERING and CONSTRUCTION

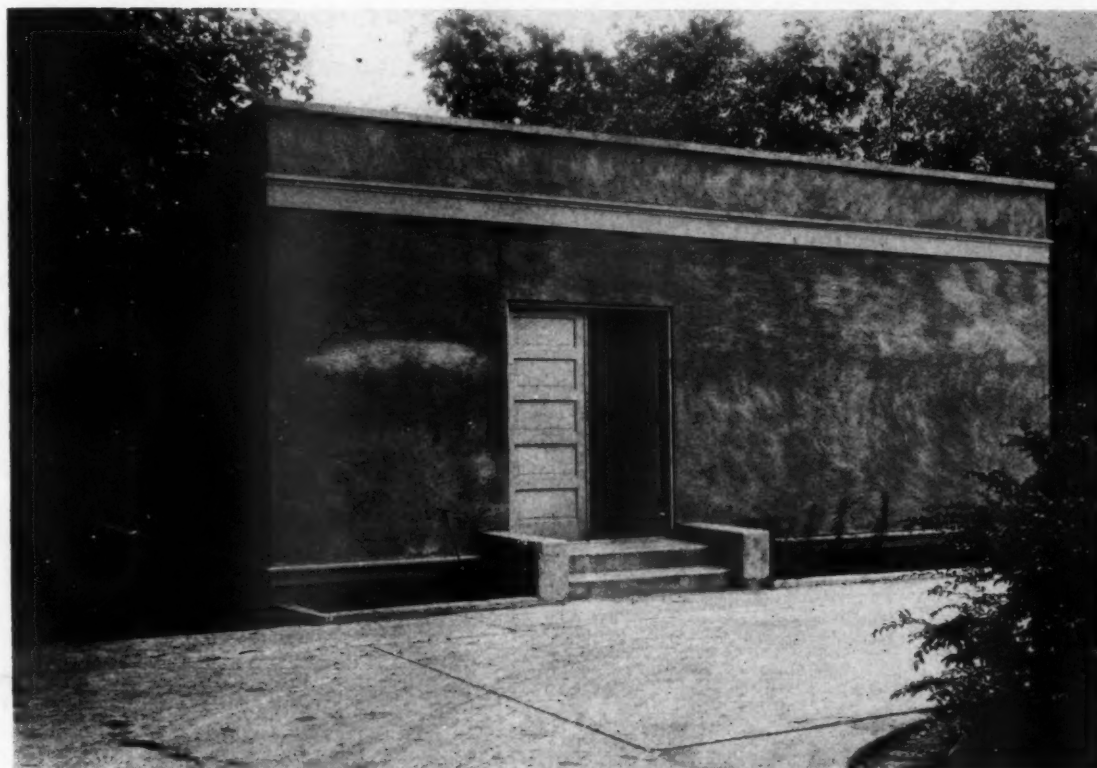


FIG. 1. THE SOUND LABORATORY OF THE NATIONAL BUREAU OF STANDARDS OF THE U. S. DEPARTMENT OF COMMERCE, WASHINGTON, D. C.

The SOUND INSULATING PROPERTIES of PARTITION WALLS (Chiefly Lath and Plaster)*

BY E. A. ECKHARDT and V. L. CHRISLER

WITH the increasing concentration of human life in centers of population and the development of fireproof structures, the problem of sound insulation has become one of acknowledged economic and social importance. In the construction of apartment houses, hotels, office buildings and hospitals the choice of building materials now always involves consideration of the acoustic properties of these materials. In this consideration the architect and builder have been and still are handicapped by the lack of reliable information. Some data are available**,

but the making of sound transmission measurements is at best a laborious and time-consuming process. New building materials and methods of construction are being developed very much faster than their sound insulating properties are being determined. Only a large scale and rapidly executed program of sound transmission measurements could overcome such odds.

The present paper outlines the method devised at the Sound Laboratory of the Bureau of Standards for doing such work expeditiously, and states the results thus far obtained. Budget limitations have not permitted a volume of work sufficient to meet the requirements. The problem is still growing faster than its solution.

This paper covers a program of sound trans-

*Published by Permission of the Director of the National Bureau of Standards of the U. S. Department of Commerce.

**F. R. Watson, *Acoustics of Buildings*, Wiley, 1923.

F. Weissbach, *Bauakustik*.

P. Sabine, *THE AMERICAN ARCHITECT*.

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mission measurements made on thirty-four panels of partition wall construction, a large number being types now in general use. In the framing and the carrying out of this program the Bureau has had the active aid and co-operation of the Gypsum Industries, Inc., Chicago, Ill., and of the National Lime Association, Washington, D. C.



FIG. 2. VIEW OF THE REAR OF THE SOUND LABORATORY OF THE NATIONAL BUREAU OF STANDARDS, WASHINGTON, D. C., SHOWING THE CONSTRUCTION OF THE PANELS FOR TEST TO THE SIDE AND REAR OF THE CHAMBER

SOUND CHAMBER

The sound chamber is a laboratory specially constructed for sound transmission measurements. Two photographs indicating its character are shown in Figures 1 and 2, the latter showing also the construction of panels for test to the side and rear of the chamber. Figure 3 shows a vertical section. *S* is the source or transmitting room. It communicates through the panel window in the ceiling with the receiving room *R*₁ above, and through the panel window at the right with the receiving room *R*₂. In the figure test panels are shown in place at both windows. The panels form the only mechanical tie between the transmitting and receiving rooms. The walls of concrete are 6 inches or more thick and any sound not transmitted by the panel has an alternative path of two six inch concrete walls separated by a three inch air space. In practice the ceiling opening into *R*₁ has been used to test panels which are light enough to be built in the yard and to be moved into the receiving room and laid into the opening for test. This procedure permits the seasoning of the panel to be carried on elsewhere and also allows the prompt removal and replace-

ment of a panel after completion of a test. Maximum availability of the panel opening for testing purposes is thus provided for.

The vertical opening into *R*₂ has been used primarily for panels which are too heavy to move. These are erected in place, and must season there for a period of two or three months before it is desirable to make measurements on them.

It has been found that the transmission of a panel varies considerably during the first two months of its history. After three months the changes are much less and depend somewhat on the state of dryness of the panel. For this reason panels have always been kept in a dry place for the last two or three weeks prior to making measurements on them.

In practice, any material to be subjected to measurements of sound transmission is made to fill a window between two rooms. A source of sound is operated in one room and intensity measurements are made on both sides of the panel. In the particular method to be discussed here the source of sound is operated continuously, and the average steady-state sound intensity is measured in both rooms. The room containing the source will be referred to as the transmitting room, and the other will be referred to as the receiving room.

EXPERIMENTAL DATA

Transmission measurements on the panels tested were made over four frequency bands (pitch ranges) well distributed over the audio-frequency range*. Reference to Figure 4 which presents in graphical form the data for thirty-four panels for the four frequency bands indicates the importance of making transmission measurements at more than a single frequency. Many examples can be picked out in which the advantage indicated by a comparison at one frequency is reversed when the comparison is made at another. For example panel No. 28 is a better insulator than panel No. 42 for the two high frequency bands, but for the two low frequency bands panel No. 42 is decidedly the better insulator. If the labor involved were not forbidding it would be well to make the tests over more than four frequency bands.

It is well recognized that the sensation of loud-

*A frequency of 250 cycles per second corresponds to a note near the upper limit of the bass voice; 1000 cycles to a high soprano note. The higher frequencies, up to 3000 cycles, are present in the voice as overtones, giving the sensation of differences in quality and contributing to the clearness of articulation.

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ness produced in the ear is by no means proportional to the energy of the sound wave. As the energy of the wave increases the response of the ear fails to keep pace with it. This gives us two scales of intensity, the physical scale and the ear scale. These scales are connected by the following

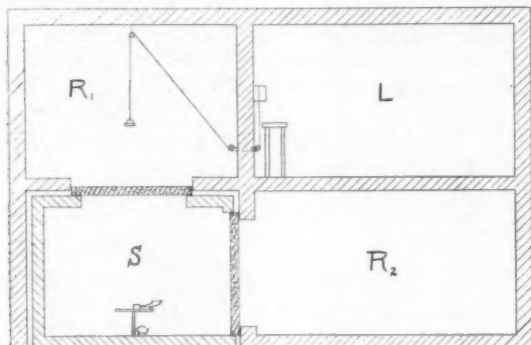


FIG. 3. A VERTICAL SECTION THROUGH THE SOUND LABORATORY

empirical relationship: The sensation of loudness is approximately proportional to the common logarithm of the intensity of the sound producing it.

A sound barely perceptible to the sense of hearing is naturally regarded by the ear as of very low intensity, nearly zero; but because still feebler sound waves may exist, the physicist calls the sound at the limit of audibility unity, while on the ear scale it would be rated zero, which is the common logarithm of unity. A sound so loud as to be painful may have an intensity of a million units on the physical scale, while on the ear scale this loudness would be rated as 6, since 6 is the common logarithm of one million.

If two rooms, A and B, are separated by an open window and a sound source is operated continuously in room A, the average intensity in room B is less than that in room A. If a partition-wall panel is used to seal the window, there is a further reduction of intensity in room B. The ratio of intensities in rooms B and A with the panel absent divided by this ratio with the panel present gives the "reduction factor" referred to in Tables I and II, on page 408.

Since sound insulation has for its purpose the protection of the ear, the transmission results are most naturally expressed in the ear scale, that is, logarithmically. This has been done in present-

ing the results. Referring to Figure 4, the logarithm of the reduction factor for panel No. 28 for the high frequency band is 6. This means that the reduction factor is 10^6 , or one million, and that the panel transmits one millionth of the incident sound energy of this frequency. The similar number for panel No. 6 is nearly 3; this means that the reduction factor is 10^3 , or 1000, and the panel transmits one thousandth of the incident sound energy.

If the source of sound is loud enough to be painful to a listener close by, a panel whose reduction factor is 6 will reduce this sound until it is barely audible, while a panel of factor 3 will reduce it to approximately the intensity of an ordinary tone of voice.

In utilizing the data here presented it should be remembered that the reduction factor measured is that of the panel construction proper. In designing rooms one must take into consideration the breaks in the bounding walls in the form of doors and windows which necessarily involve clearance spaces in their operation. Where such breaks occur in partition walls the differences in the table are likely to be insignificant in comparison with the effects of doors and windows themselves.

In Table I the data have been arranged in accordance with the numerical sequence of the panel numbers. The specifications from which the panels were constructed are given in the appendix. In Table II the panels are arranged in the general order of their insulating properties, the best in-

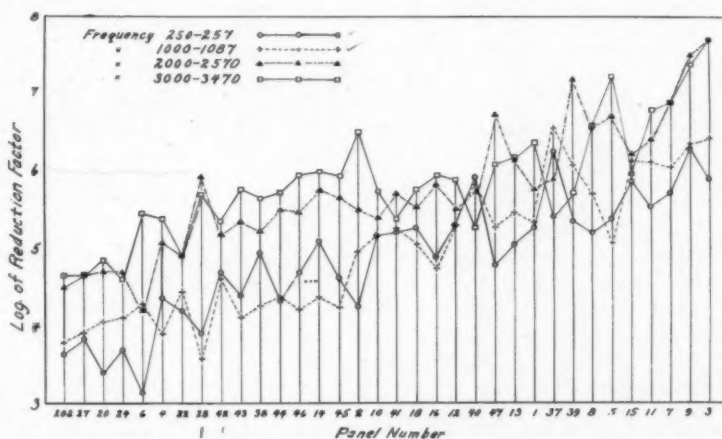


FIG. 4. GRAPH OF THE DATA FOR THIRTY-FOUR PANELS WITH FOUR FREQUENCY BANDS, SHOWING THE IMPORTANCE OF TRANSMISSION MEASUREMENTS FOR MORE THAN A SINGLE FREQUENCY

ulators being at the lower end of the table. The arrangement of data in Table II is shown graphically in Figure 4.

It is to be mentioned that the intention of the Bureau is to retest certain panels after a lapse of one year for seasoning.

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A study of Table II, together with the specifications and descriptions of the various panels, shows that the most important factor in determining transmissivity in panels is the material of the stud. Wood gives better results than either metal or clay tile. It is evident that the transmission through the interior of the panel must take place largely through the stud, and that the more rigid materials will be likely to transmit sound more readily.

A less important factor is the nature of the

will be ready for publication in the near future.

GENERAL SPECIFICATIONS FOR THE CONSTRUCTION OF THE TEST PANELS

1. **ERECTION OF WOOD STUDS:**—Cut three pieces 2x4, each 7' 1½" long. Place them in the frame parallel to each other and 17" on centers, in such a way as to divide the frame into four compartments, each 7' 1½" long by 15" wide by 4" deep. Toe-nail each piece securely to the top and bottom members of the frame.

TABLE I

Panel Number	Wght. in lbs	Logarithm of Reduction Factor for Bands of Frequencies			
		250-257	1000-1087	2000-2570	3000-3470
1		5.27	5.32	5.77	6.37
2		4.26	4.97	5.49	6.51
3		5.89	6.42	7.66	7.66
4		4.37	3.93	5.07	5.39
5	655	5.38	5.06	6.70	7.20
6	665	3.14	4.29	4.21	5.45
7	540	5.72	6.04	6.84	6.83
8	560	5.21	5.70	6.53	6.55
9	840	6.29	6.32	7.47	7.33
10	800	5.17	5.17	5.39	5.75
11	880	5.53	6.10	6.39	6.75
12	800	5.31	5.31	5.50	5.89
13	670	5.05	5.46	6.14	6.17
14	670	5.10	4.39	5.75	6.00
15	915	5.87	6.13	6.16	5.97
16	1020	4.90	4.75	5.83	5.96
18	640	5.26	5.05	5.52	5.75
20	728	3.41	4.06	4.70	4.86
20 a	688	3.64	3.79	4.50	4.67
22	700	4.21	4.45	4.91	4.90
24	612	3.70	4.12	4.70	4.67
27		3.85	3.92	4.68	4.68
28		3.91	3.57	5.93	5.70
37	616	6.25	6.55	5.89	5.39
38	668	4.95	4.26	5.22	5.66
39	595	5.35	6.07	7.16	5.71
40	956	5.92	5.84	5.72	5.26
41	575	5.21	5.23	5.70	5.38
42	744	4.70	4.66	5.18	5.35
43	836	4.40	4.11	5.34	5.77
44	880	4.34	4.37	5.50	5.73
45	844	4.63	4.25	5.66	5.95
46	880	4.70	4.23	5.46	5.96
47		4.80	5.28	6.71	6.08

TABLE II

Panel Number	Logarithm of Reduction Factor for Bands of Frequencies			
	250-257	1000-1087	2000-2570	3000-3470
20a	3.64	3.79	4.50	4.67
27	3.85	3.92	4.68	4.68
20	3.41	4.06	4.70	4.86
24	3.70	4.12	4.70	4.67
6	3.14	4.29	4.21	5.45
4	4.37	3.93	5.07	5.39
22	4.21	4.45	4.91	4.90
28	3.91	3.57	5.93	5.70
42	4.70	4.66	5.18	5.35
43	4.40	4.11	5.34	5.77
38	4.95	4.26	5.22	5.66
44	4.34	4.37	5.50	5.73
46	4.70	4.23	5.46	5.96
14	5.10	4.39	5.75	6.00
45	4.63	4.25	5.66	5.95
2	4.26	4.97	5.49	6.51
10	5.17	5.17	5.39	5.75
41	5.21	5.23	5.70	5.38
18	5.26	5.05	5.52	5.75
16	4.90	4.75	5.83	5.96
12	5.31	5.31	5.50	5.89
40	5.92	5.84	5.72	5.26
47	4.80	5.28	6.71	6.08
13	5.05	5.46	6.14	6.17
1	5.27	5.32	5.77	6.37
37	6.25	6.55	5.89	5.39
39	5.35	6.07	7.16	5.71
8	5.21	5.70	6.53	6.55
5	5.38	5.06	6.70	7.20
15	5.87	6.13	6.16	5.97
11	5.53	6.10	6.39	6.75
7	5.72	6.04	6.84	6.83
9	6.29	6.32	7.47	7.33
3	5.89	6.42	7.66	7.66

plaster. The results here given appear to show a slight difference in favor of lime; but this may be outweighed by other considerations, such as cost and convenience.

The material of the lath appears to be of no importance.

The results given in the present paper are confined to transmission of sound only. It is of importance to architects and builders to know the reflecting and absorbing powers of different materials as well. As to absorption, much information is available from the work of Sabine, republished by Watson (*Acoustics of Buildings*, Chapter III, page 25; John Wiley & Sons, New York, 1923). The National Bureau of Standards is conducting work on reflection and absorption of the same panels and materials tested for transmission, and it is hoped that this work

2. **ERECTION OF WOOD LATH:**—Wood lath, to be approximately ¼" x 1½" x 48", straight, and free from knots and not planed. The laths are erected on both sides of the panel, parallel to each other and ¾" apart, and perpendicular to the direction of the studs. They shall be cut to such lengths that both ends of each lath shall come over a support. The end joints between laths shall be staggered every seventh lath. A space of ¼" shall be left between the ends of abutting laths. Each lath shall be nailed to each support it crosses, the nails being staggered along the length of the lath. (About 180 laths required per panel.) The laths are to be thoroughly wetted the day before the scratch coat is applied.

3. **SCRATCH COAT, LIME PLASTER:**—This coat is composed of one bag of masons hydrated lime, 2½ cu. ft. of sand, and 3 qts. of hair. The three

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ingredients are thoroughly mixed, first dry and again wet. Apply to the lath with sufficient pressure to force the plaster in between the laths to form a good key. The exposed surface should be reasonably true and should cover the face of the lath about $\frac{1}{4}$ ". When nearly dry, scratch the surface of the coat with an appropriate tool mak-

ing scratches about $\frac{1}{8}$ " deep by $1\frac{1}{2}$ " apart. Let set until it takes considerable pressure to break down the edges of the scratches when rubbed with the thumb.

4. SCRATCH COAT, GYPSUM PLASTER:—This coat is composed of one bag of retarded neat gypsum plaster, $11\frac{1}{2}$ cu. ft. of sand and 2 qts. of hair.

DESCRIPTION OF PANELS

Panel No.	Kind of Stud	Kind of Lath	Kind of Plaster	Paragraphs of general specifications, applicable to construction	Plaster Coats
1	wood	wood	lime	1, 2, 3	Scratch coat only
2	"	"	gypsum	1, 2, 4	" " "
3	"	"	lime	1, 2, 3, 5	Scratch and brown coats only
4	"	"	gypsum	1, 2, 4, 6	" " " "
5	"	"	lime	1, 2, 3, 5, 7	3 coat, smooth finish
6	"	"	gypsum	1, 2, 4, 6, 7	" " "
7	"	metal	lime	1, 8, 3	Scratch coat only
8	"	"	gypsum	1, 8, 4	" " "
9	"	"	lime	1, 8, 3, 5	Scratch and brown coats only
10	"	"	gypsum	1, 8, 4, 6	" " " "
11	"	"	lime	1, 8, 3, 5, 7	3 coat, smooth finish
12	"	"	gypsum	1, 8, 4, 6, 7	" " "
13	"	wood	lime	1, 2, 3, 5, 9	3 coat, sand finish
14	"	"	gypsum	1, 2, 4, 6, 9	" " "
15	"	wire	lime	1, 8, 3, 5, 7	3 coat, smooth finish
16	"	"	gypsum	1, 8, 4, 6, 7	" " "
18	"	plaster	gypsum	1, 10, 4, 6, 7	" " "
20	metal	metal	gypsum	11, 8, 4, 6, 7	" " "
20a	"	"	gypsum	11, 8, 4, 6, 7	" " "
22	"	"	gypsum	11, 12, 4, 6, 7	solid partition
24	"	plaster	gypsum	11, 12, 4, 6, 7	" " "
27	clay tile		lime	14, 13, 7	2 coat smooth finish
28	"		gypsum	15, 14, 7	" " "
37	wood	wood	lime & gypsum	1, 2, 3, 6, 7	Lime scratch, gypsum brown, smooth finish
38	"	"	"	1, 2, 4, 5, 7	Gypsum scratch, lime brown, smooth finish
39	"	"	"	1, 2, 21, 7	3 coat, lime & Keene's cement, smooth finish
40	"	metal	(1) lime	1, 8, 3, 5, 7	3 coat smooth finish
41	"	4 paper plaster board	gypsum	1, 10, 4, 6, 7	" " "
42	"	sheet metal	"	1, 8, 4, 6, 7	" " "
43	"	metal	(2) gypsum wood-fibered	1, 8, 4, 6	Scratch and brown coats only
44	"	"	(3) gypsum wood-fibered	1, 8, 4, 6	" " " "
45	"	"	(4) gypsum wood-fibered	1, 8, 4, 6, 7	3 coat smooth finish
46	"	"	(3) gypsum wood-fibered	1, 8, 4, 6, 7	" " "
47	"	"	$\frac{3}{8}$ inch thick gypsum wall board joints filled and surfaces decorated with wall paper.		

(1) The lime plaster for this panel was gaged with Portland cement in proportion of 3 parts of lime to 1 of cement, by weight.

(2) This plaster was used without any sand for both coats.

(3) The brown coat contained one part of sand, by weight, to one of gypsum wood-fibered plaster.

(4) The scratch and brown coats were the same as in panel 43.

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The ingredients are thoroughly mixed, first dry and again wet. Apply to the lath with sufficient pressure to force the plaster in between the laths to form a good key. The exposed surface should be reasonably true and should cover the face of the lath about $\frac{1}{4}$ ". When nearly hard, scratch the surface of the coat with an appropriate tool making scratches about $\frac{1}{8}$ " deep by $1\frac{1}{2}$ " apart. Let set until it takes considerable pressure to break down the edges of the scratches when rubbed with the thumb.

5. BROWN COAT, LIME PLASTER:—This coat is composed of 1 bag of masons hydrated lime and $3\frac{3}{4}$ cu. ft. of sand. The ingredients are thoroughly mixed, first dry and again wet. Apply to the scratch coat with sufficient pressure to force the plaster into the scratches. Build this coat out until the total thickness from the face of the studs to the face of the plaster is $\frac{7}{8}$ ". Rod, darby, and float to a true, even surface. Let set until practically air-dry.

6. BROWN COAT, GYPSUM PLASTER:—This coat is composed of 1 bag of retarded neat gypsum plaster to $2\frac{1}{2}$ cu. ft. of sand. The ingredients are thoroughly mixed, first dry and again wet. Apply to the scratch coat with sufficient pressure to force the plaster into the scratches. Build this coat out until the total thickness from the face of the studs to the face of the plaster is $\frac{7}{8}$ ". Rod, darby, and float to a true even surface. Let set until practically air dry.

7. SMOOTH FINISH COAT:—This coat is composed of one bag of finishing hydrated lime to $\frac{1}{2}$ bag of unretarded gypsum gaging plaster. The lime is made into a putty with water at least 24 hours prior to use, and stored under a damp cloth. A small amount of this putty is circled out on the plasterer's board. Some water is put into the circle, and gypsum equal to one-half the volume of the putty is dusted into the water. The whole is then mixed with a trowel, adding more water if necessary. Do not mix at one time more material than can be used in 30 minutes. Do not retemper this mixture, but start each batch with clean board and tools. Apply this plaster in a thin, even layer over the brown coat. Watch it carefully for the appearance of incipient crystallization. When this occurs, immediately trowel down to a smooth true finish, using considerable pressure on the trowel, and brushing the surface with water if necessary. This coat shall be as thin as possible without permitting the brown coat to show through.

8. ERECTION OF METAL LATH:—This shall be expanded metal lath, painted, medium weight (3.0 lbs. per sq. yd.). The sheets shall be attached to both sides of the panel, with their longer dimensions across the supports. A sheet of lath being 8' long, there will be no joints between ends of sheets. The joints between sides of sheets shall be lapped one full mesh and tied with No. 18 iron

wire once midway between each two supports. Each sheet shall be securely fastened to every support it crosses, the fastenings being spaced 6" apart across the width of the sheet.

9. SAND FINISHED COAT:—This coat is composed of one bag of finishing hydrated lime, $\frac{1}{2}$ bag of unretarded gaging plaster and $1\frac{1}{4}$ cu. ft. of fine, evenly sized, white sand. The sand is mixed with the hydrated lime when making the putty as described in paragraph 7. The mixing and application are conducted as described in paragraph 7, except that the final trowelling is done with a wooden float instead of a trowel.

10. ERECTION OF GYPSUM PLASTER BOARD:—These boards are 32" x 36" x $\frac{3}{8}$ ". Both sides of the panel are covered with these boards, erected so that the 36" dimension runs perpendicular to the studs. The boards are to be cut so that both ends of each board come over supports. The joints between ends of boards are staggered every row. A space of $\frac{1}{4}$ " is left all around each board. Both ends of each board are fastened to the supports once every 8", making 5 fasteners for each end. Each side (the 36" dimension) of each board is fastened to each support it crosses. The joints between boards are staggered on the opposite sides of the panel.

11. ERECTION OF METAL STUDS:—Metal studs are lengths of $\frac{3}{4}$ " steel channels. They are cut 7' 2" long and sprung into holes drilled in the top and bottom members of the frame. These holes must be of such depth that the studs fit tightly, but are not noticeably bowed. The studs are spaced 17" on centers, and the common center line of the studs is midway between the two faces of the panel. The bottom of the channel is parallel to the faces of the panel.

12. ERECTION OF SOLID PARTITIONS:—The metal studs are erected as in paragraph 11. One layer of metal lath or gypsum plaster board is attached to the bottoms of the channels, as specified in paragraphs 8 or 10 respectively. The lime or gypsum scratch coat is applied to that surface of the lath which is fully exposed, as specified in paragraphs 3 or 4 respectively. Before this scratch coat has set, another scratch coat is applied to the opposite side of the same lath, in between the studs. After the two scratch coats have been scratched and become reasonably hard, the two brown coats are applied as specified in paragraphs 5 or 6, except that the two will be of different thicknesses. The thickness from the exposed surface of the finished brown coat to the nearer face of the studs is $\frac{5}{8}$ " on both sides of the panel. The finish coats are applied to both sides as specified in paragraph 7.

13. LIME SCRATCH COAT ON MASONRY:—This is proportioned as specified in paragraph 3, except that the hair is omitted. It is mixed and applied as specified in paragraph 3 except that it is rodded,

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darbied and floated to a true and even surface. Both sides of the panel are plastered. The thickness of this scratch coat is such that the distance from the exposed surface of the plaster to the nearer surface of the masonry is $\frac{5}{8}$ ".

14. GYPSUM SCRATCH COAT ON MASONRY:—This is proportioned as specified in paragraph 4, except that the hair is omitted. It is mixed and applied as specified in paragraph 4 except that it is rodged, darbied, and floated to a true and even surface. Both sides of the panel are plastered. The thickness of this scratch coat is such that the distance from the exposed surface of the plaster to the nearer surface of the masonry is $\frac{5}{8}$ ".

ENGINEER OPPOSED TO TIED-TYPE COLUMN DESIGN

MEMBERS of San Francisco section, American Society of Civil Engineers, who have visited Santa Barbara since the recent earthquake, have been asked to submit individual reports, and one of the most interesting ones has been written by Alfred J. Krafft, Assoc. M. Am. Soc. C. E., of J. E. Krafft & Sons, architects and engineers, of San Francisco. Mr. Krafft offers the good advice that "unless our structural designs are intelligently carried out in the field we cannot expect structures to stand safely."

After careful inspection of the Santa Barbara buildings, Mr. Krafft makes the following deductions:

"There is nothing to indicate that present methods of good engineering design and construction will not suffice, but to the writer's mind one of the methods of reinforced concrete column design permitted by the building laws of some of our large cities, namely, the tied-type with ties widely spaced, is entirely unfit as a structural member. This kind of column, as would be expected, failed due to shear on diagonal planes as a result of direct compression, to diagonal tension as a result of bending and to splitting of the concrete as a result of vertical steel buckling. The resistance to these stresses in such columns is exceedingly small; the ties and vertical bars offering practically no resistance to the lateral movement of the part above the plane of rupture with relation to the part below.

"There should be no disagreement among well informed engineers that for relatively tall structures a properly designed structural steel frame where provision is made for direct and bending stresses in the members and connections due to vertical and horizontal forces, is superior to any other type of construction.

"For medium height structures the reinforced concrete building properly designed for direct and bending stresses due to vertical and horizontal forces with continuous and intelligent supervision

15. ERECTION OF CLAY TILE:—The clay tile are to be two-cell, 4" x 8" x 12". They are laid in mortar composed of 1 part Portland cement, 1/5 part masons hydrated lime, and 3 parts sand by volume, to form a 4" wall. The surfaces to be plastered shall be reasonably true and free from dirt or loose material. The joints shall be flush with the surface.

16. Coats of lime and Keene's cement shall be proportioned, mixed, and applied as specified in paragraphs 3 and 5, except that one-fourth of the volume of the lime shall be replaced by an equal volume of Keene's cement.

in the field, would be equally as substantial and more economical than the structural steel frame building. A combination of structural steel and reinforced concrete would, in many cases, be advisable.

"For low buildings structural steel or reinforced concrete can still be built to advantage, but masonry and timber structures of good material and construction, well anchored, tied and braced, may here be used with confidence and economy.

"With well designed structures in any materials properly used and with intelligent supervision in the field, structures can be safely and economically constructed to resist earthquakes of the severity of that felt at Santa Barbara."—*The Architect and Engineer*, September, 1925.

SEASONAL OPERATION IN THE CONSTRUCTION INDUSTRIES

A REPORT of the results of the movement to stabilize building activity during the year, covering the period since the publication of the report in August, 1924, has been prepared for submission to the committee of the President's Conference on Unemployment which has sponsored this study.

An examination of statistics relating to building contracts awarded and movements of various building materials leads to the conclusion that building activity held up better during the late Fall and early Winter of 1924 and got under way sooner during the late Winter and early Spring of 1925 than during the three previous years.

The report indicates that, while no major revolution has yet been effected, substantial improvement may be looked for if the subject is kept before the construction industries and the public. The movement has made undeniable progress during a number of years, and would undoubtedly continue to make headway from purely economic causes, but its progress can be hastened by the activities of the division of building and housing and the co-operation of private organizations with which it has contacts.

ARCHITECTURAL AIDS

BUILDING construction is complicated with the use of an unlimited number of materials and appliances of equipment and in addition there are the essential co-ordinate elements of real estate, law and finance. The architect, then, who properly controls the correct designing of buildings, is of necessity compelled to delegate certain investigations and decisions to others. This condition existing in the practice of architecture is the result of the tremendous, and often revolutionary, strides taken by the industry within practically twenty years.

The investigation, digestion and assemblage of building knowledge has been taken over by organized groups of professional men and of manufacturers. The conclusions and recommendations of these organizations are available to architects and are a safe guide to construction procedure. In addition to these sources of information, there are the various experimental laboratories maintained by American and Canadian universities.

In these days of better production and selling methods the element of bunk has been entirely eliminated by the best and most successful class of producers. They have realized that misrepresentation, either ignorantly or honestly made, always reacts disastrously. Today, the producer has a definite knowledge of his product and aims to exploit that knowledge in a manner consonant with the best ethics of selling. It is then to this knowledge, acquired and published for his benefit, that the architect can turn with confidence.

The professional national organizations confine their work largely to the theory and the natural laws that underlie the science and art to which they are devoted and a recording of the more important executed works. These organizations are not financially interested in any product or process but they are devoted to the acquisition of knowledge for the benefit of their members and the world. Three organizations of this class are, to a large extent, producers of information pertaining to building construction and equipment and they occupy a commanding international position. They are the American Society of Civil Engineers, the American Society of Mechanical Engineers and the American Institute of Electrical Engineers. They are among the oldest of American technical organizations and are considered to be the founder societies.

Another class of organizations is made up of scientific research men, producers and manufacturers. In these, every interest that is associated with the product, except possibly the consumer, is represented. All interests are represented in the committees and the reports and recommendations are approved by the membership of the organization. The leading organization of this kind is the American So-

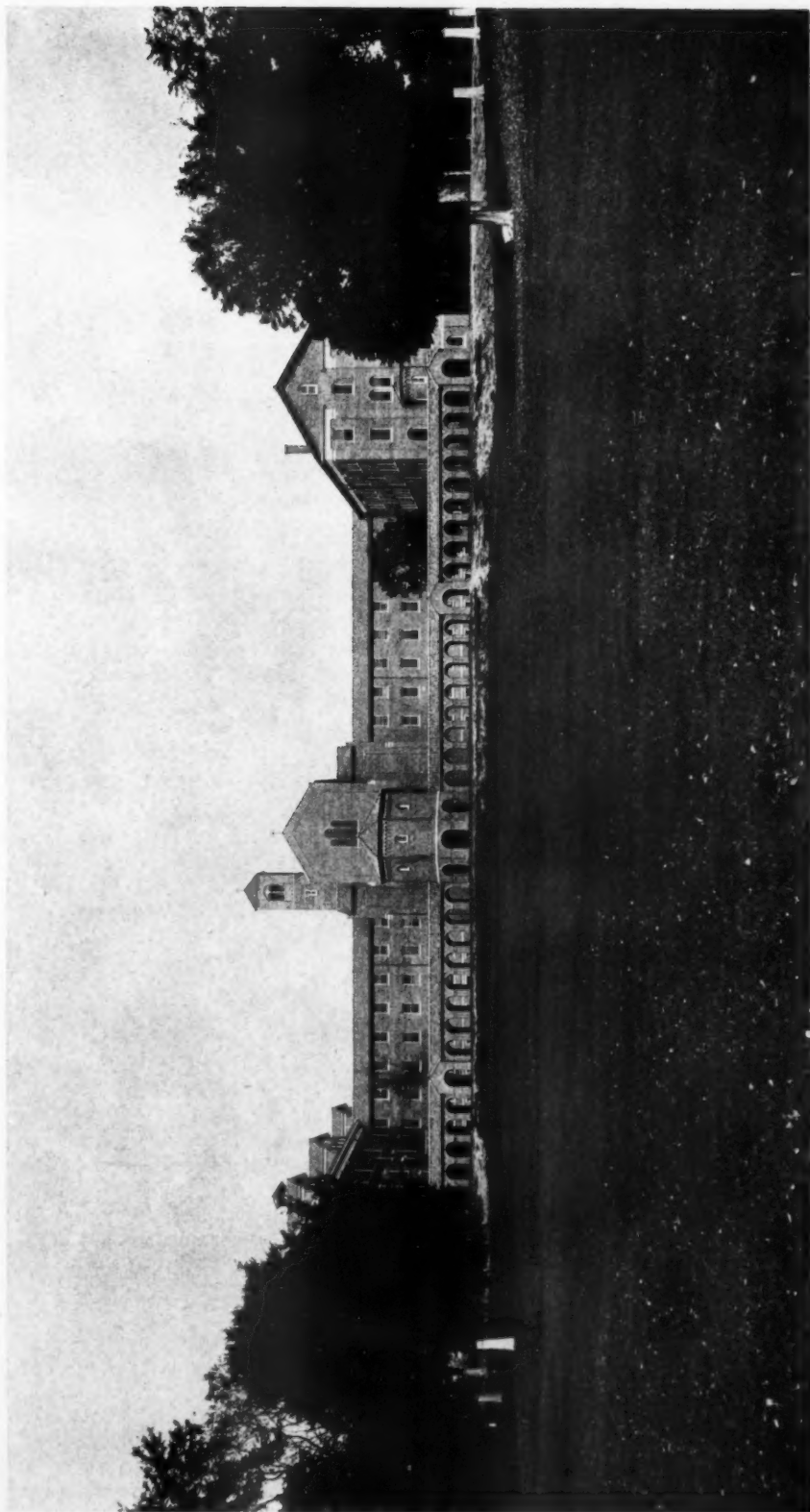
ciety for Testing Materials which is preparing standard specifications for all materials used in construction and manufacturing. The National Fire Protection Association is organized with a similar membership but restricts its work to the prevention of fire, which is one of the most important elements of building construction. In this particular field of fire prevention a valuable service to the architect is rendered by the Underwriters' Laboratories, Inc. The work of this organization is restricted to the testing of materials and manufactured articles to determine their resistance to fire, and to test appliances designed to extinguish and detect the presence of fire. Materials and articles which have a certain standard of merit are approved and so labeled by the Laboratories.

A group of organizations which recommend certain practices and specifications affecting building construction and equipment is composed of professional men, constructors and producers. Each one of them has attained a standing which merits the confidence of architects. Of these, the American Railway Engineering Association, the American Society of Heating and Ventilating Engineers, the American Society of Refrigerating Engineers and the Illuminating Engineering Society are the best known.

A large number of organizations of manufacturers have been organized. The scope of their activities is more broad than those mentioned because they not only investigate their products and materials but include the phases of production, marketing, transportation and legislation. They comply with the ethics of modern business demands and practices. Of these organizations the National Lumber Manufacturers' Association, the Southern Pine Association, the West Coast Lumbermen's Association, the American Institute of Steel Construction, The Gypsum Industries, The Common Brick Manufacturers' Association of America, the American Face Brick Association, The National Terra Cotta Society, the Indiana Limestone Quarrymen's Association, the National Building Granite Quarries Association, the Rail Steel Products Association, the Portland Cement Association and the American Concrete Institute are the best known.

The Federal government is rendering a service to the building industry through the Bureau of Standards, the Bureau of Mines and the Forest Products Laboratory. The work of these bureaus is comprised of the making of tests, summarizing them and drawing conclusions. Recommendations are unusual as selection and practice are left to the judgment of those most interested.

In all, the architects of America are to be congratulated on the large number of sources of information pertaining to building construction.

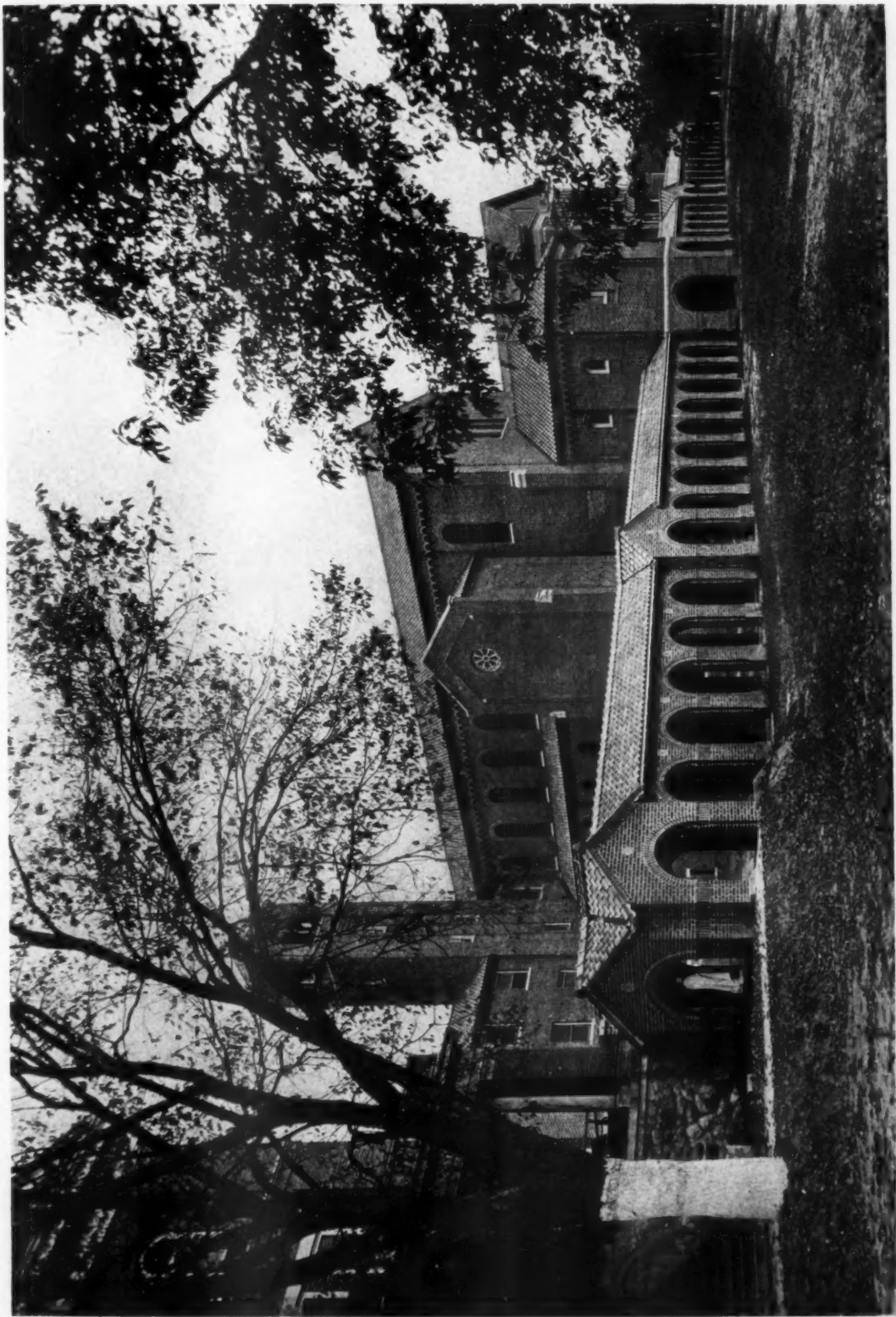


MONASTERY FOR REDEMPTORIST FATHERS, OCONOMOWOC, WIS.

ESCHWEILER & ESCHWEILER, ARCHITECTS

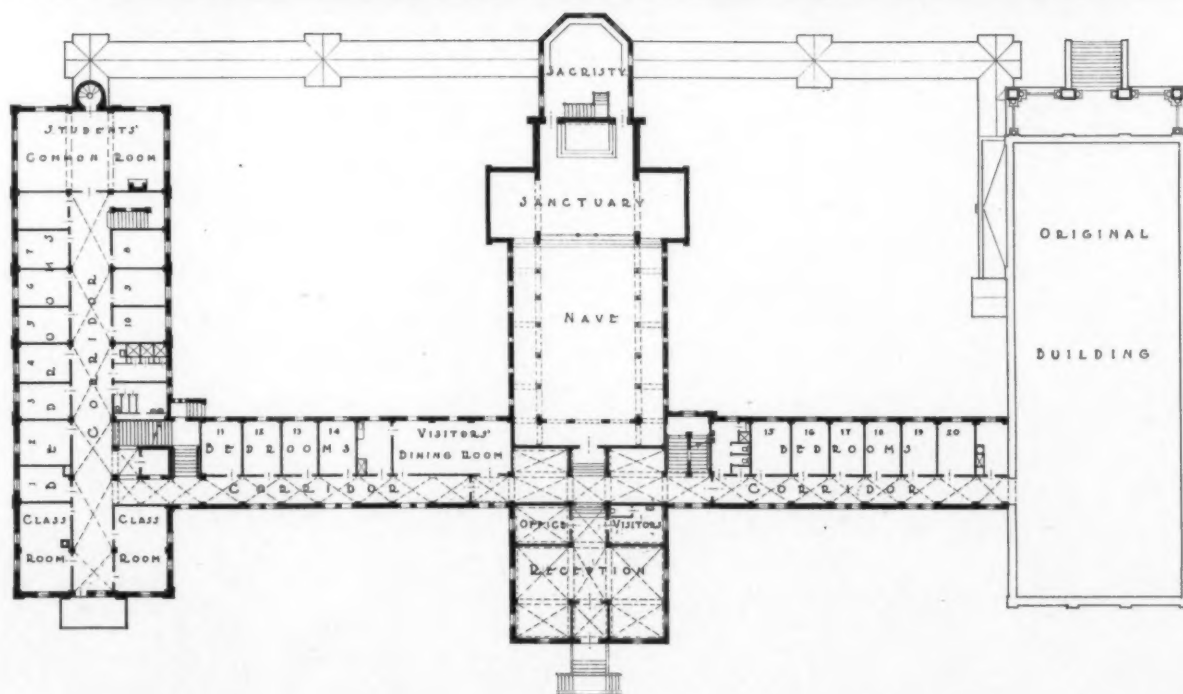
Exterior walls, brick and hollow tile. Steel trussed roof covered by tile. Interior trim, oak. In the refectory and the upper part of the chapel the walls were finished with a hollow tile which had the plaster scoring omitted and was cut in random sizes. This tile was furnished at the cost of ordinary load bearing tile and a soft and varied color texture was obtained. It was possible in this way to save the cost of plastering and any decorating giving a permanent finish to the walls of these two rooms. It also improved the acoustics. Cost per cubic foot was 25c.

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MONASTERY FOR REDEMPTORIST FATHERS, OCONOMOWOC, WIS.
ESCHWEILER & ESCHWEILER, ARCHITECTS

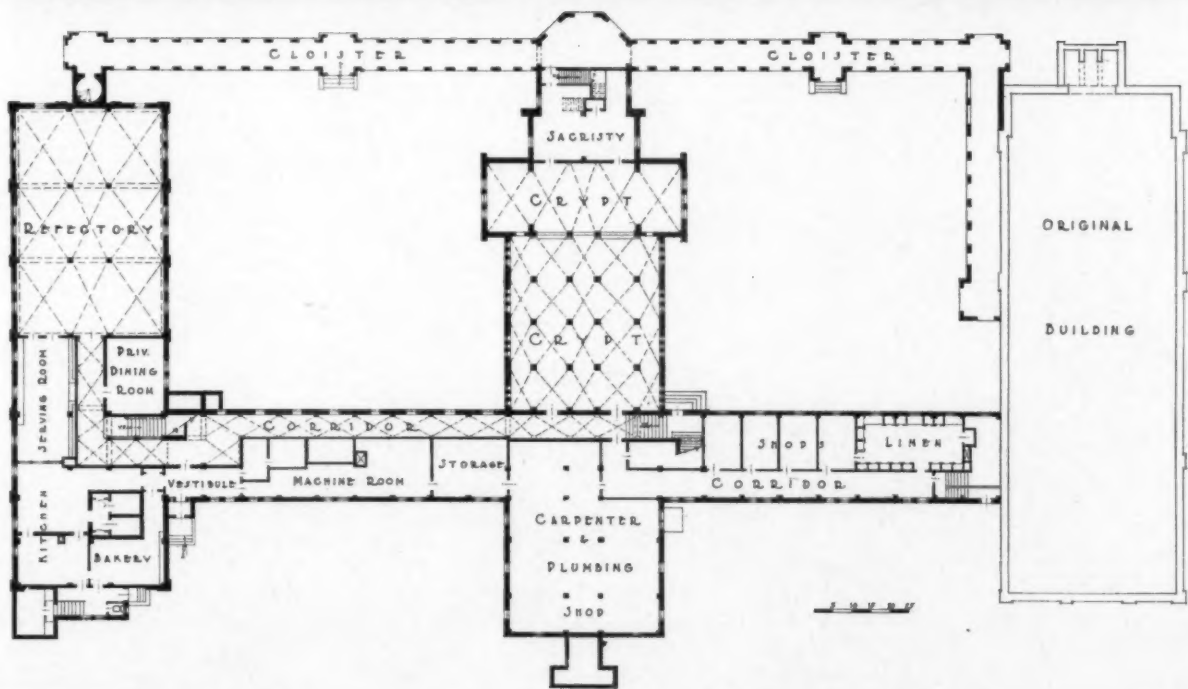
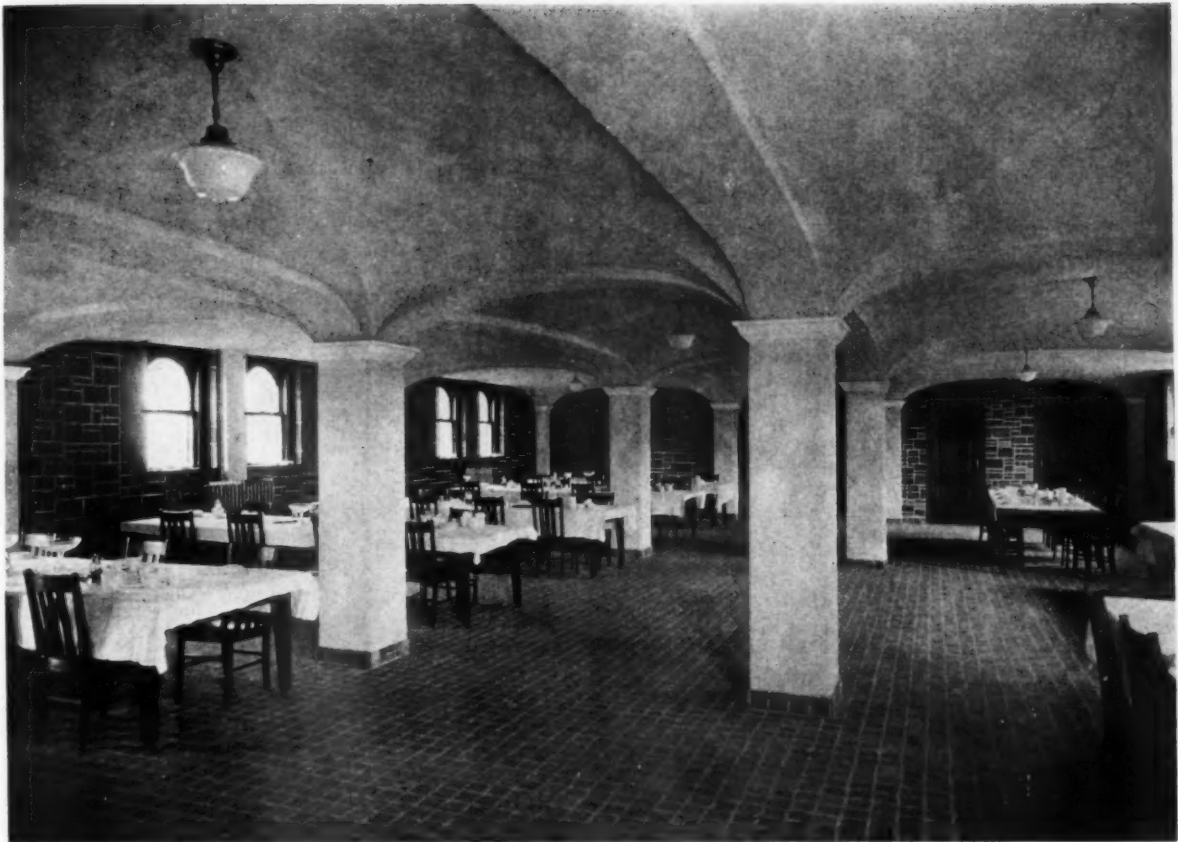
THE AMERICAN ARCHITECT
November 5, 1925. Plate 297



MONASTERY FOR REDEMPTORIST FATHERS, OCONOMOWOC, WIS.

ESCHWEILER & ESCHWEILER, ARCHITECTS

THE AMERICAN ARCHITECT
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MONASTERY FOR REDEMPTORIST FATHERS, OCONOMOWOC, WIS.

ESCHWEILER & ESCHWEILER, ARCHITECTS

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MONASTERY FOR REDEMPTORIST FATHERS, OCONOMOWOC, WIS.
ESCHWEILER & ESCHWEILER, ARCHITECTS

THE AMERICAN ARCHITECT
November 5, 1935. Plate 300



MEDICAL OFFICE BUILDING, SEATTLE, WASHINGTON

HOWELLS & ALBERTSON, ARCHITECTS

(See plans and description on back)

THE AMERICAN ARCHITECT
November 5, 1925. Plate 391

MEDICAL OFFICE BUILDING, SEATTLE, WASHINGTON

HOWELLS & ALBERTSON, ARCHITECTS

THIS building was designed and planned to meet requirements of medical doctors and dentists.

The exterior walls are of ivory brick, spotted with manganese; unglazed standard terra cotta trimmings with a background of ornament in polychrome. Base is granite.

Reinforced concrete jointed construction, removable tin-pan forma, metal lath ceilings. No beams exposed.

Maple was used for flooring in offices, marble in corridors. Terrazzo stairways; tile in toilets.

Partitions—Corridors, terra cotta partition tile; offices, partition gypsum blocks.

Roof—Sheet copper with architectural ribs.

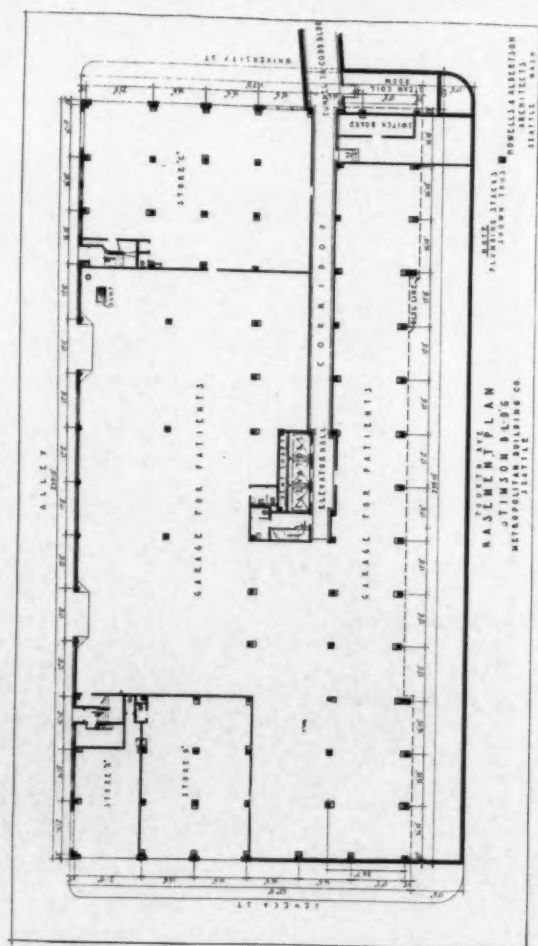
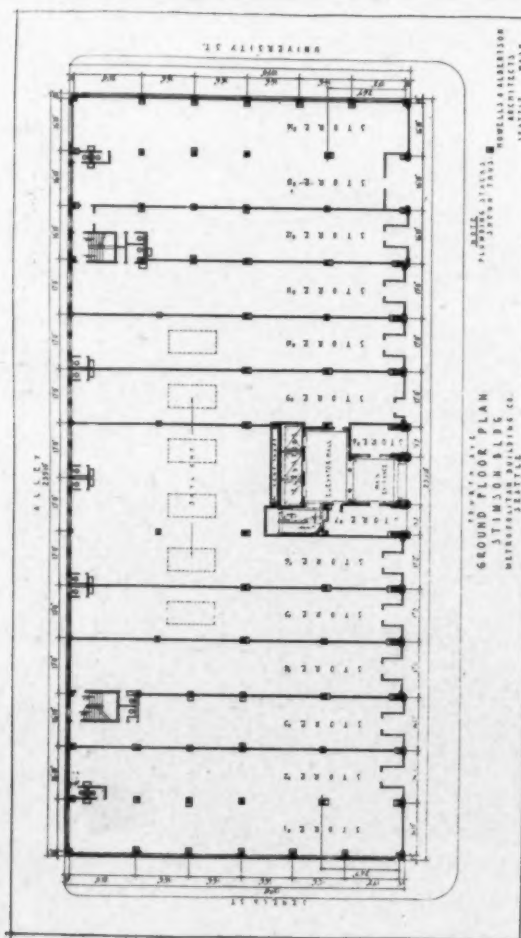
Trim—Bettam mahogany.

Heating—Direct radiation.

Lighting—Direct and indirect.

Elevators—Six hundred feet per minute, traction, multi-voltage control, pneumatic door control, Tyler baked enamel cabs.

Cost per cubic foot 50¢.





MEDICAL OFFICE BUILDING, SEATTLE, WASHINGTON

HOWELLS & ALBERTSON, ARCHITECTS

(See plans and description on back)

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November 5, 1925. Plate 302

MEDICAL OFFICE BUILDING, SEATTLE, WASHINGTON

HOWELLS & ALBERTSON, ARCHITECTS

THE ventilation in this building was very carefully studied. There is a compressed and vacuum air system, with direct and indirect current. The plumbing and electrical equipments are also of special types.

Some special features are:—

Plumbing stacks on nearly every column.

In basement, a man tunnel containing pipes.

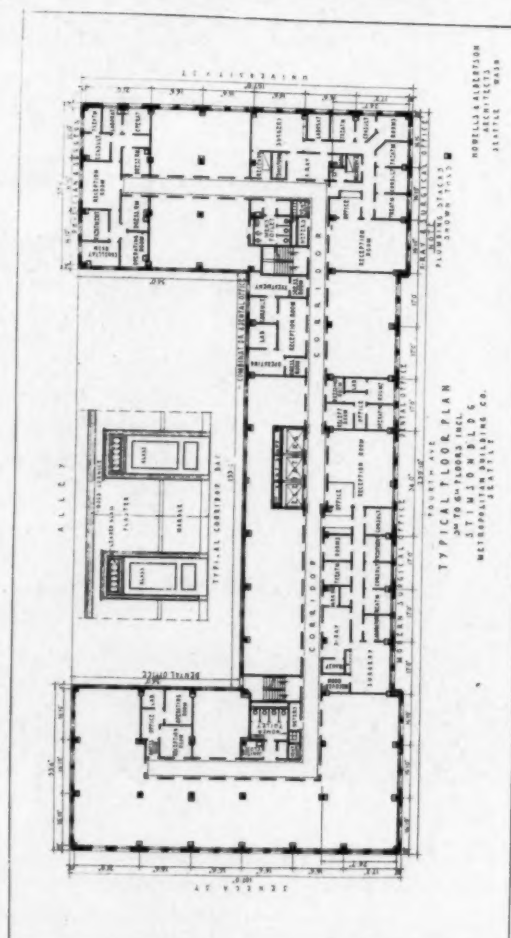
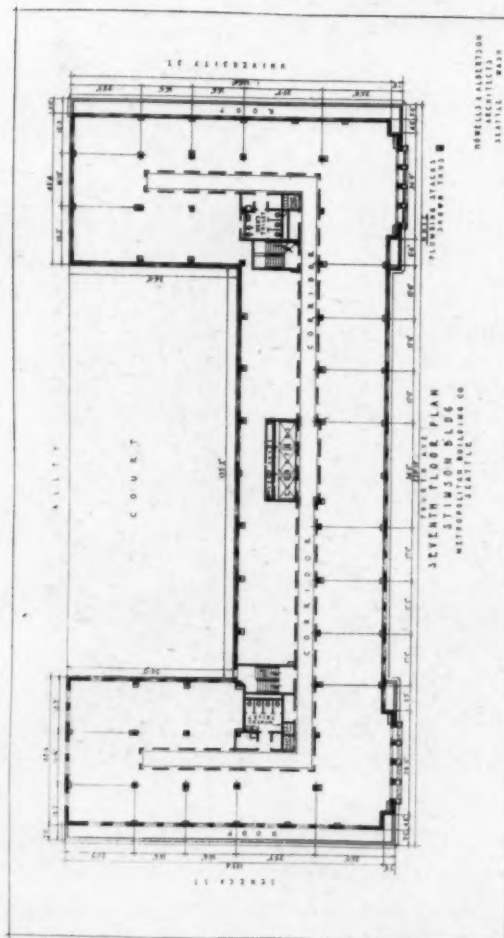
Two corridors to each bay.

Garage in basement for patients.

Ambulance approach to elevator through basement garage.

Net rentable area of typical floors is 76%.

Top story drop-back adopted to make building less commercial in appearance and more attractive to professional men.





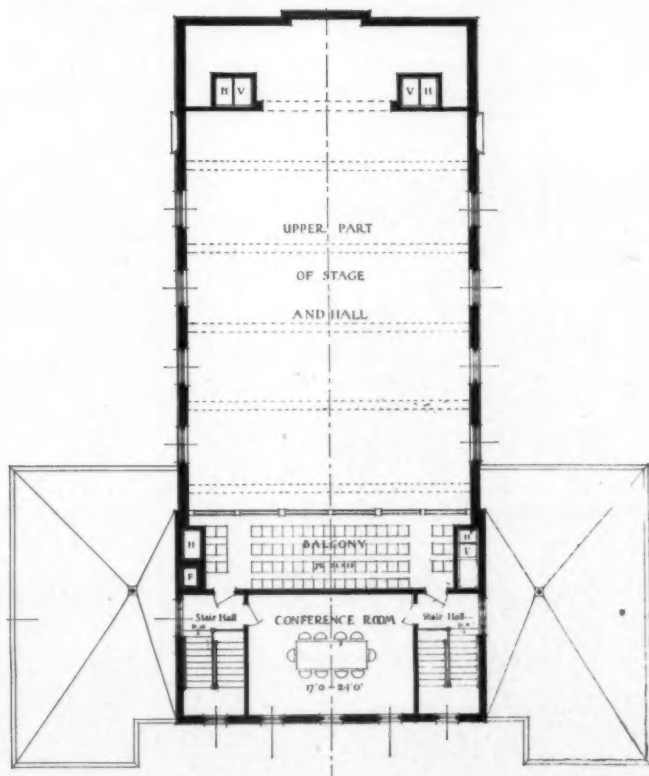
MEDICAL OFFICE BUILDING, SEATTLE, WASHINGTON
HOWELLS & ALBERTSON, ARCHITECTS

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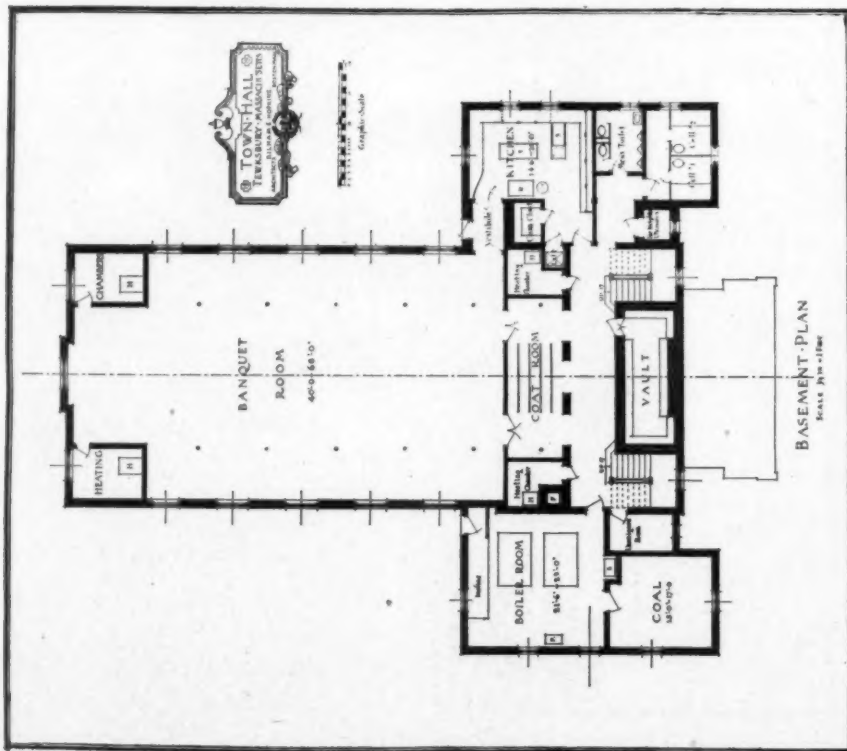
TOWN HALL, TEWKSBURY, MASS.

KILHAM, HOPKINS & GREELEY, ARCHITECTS

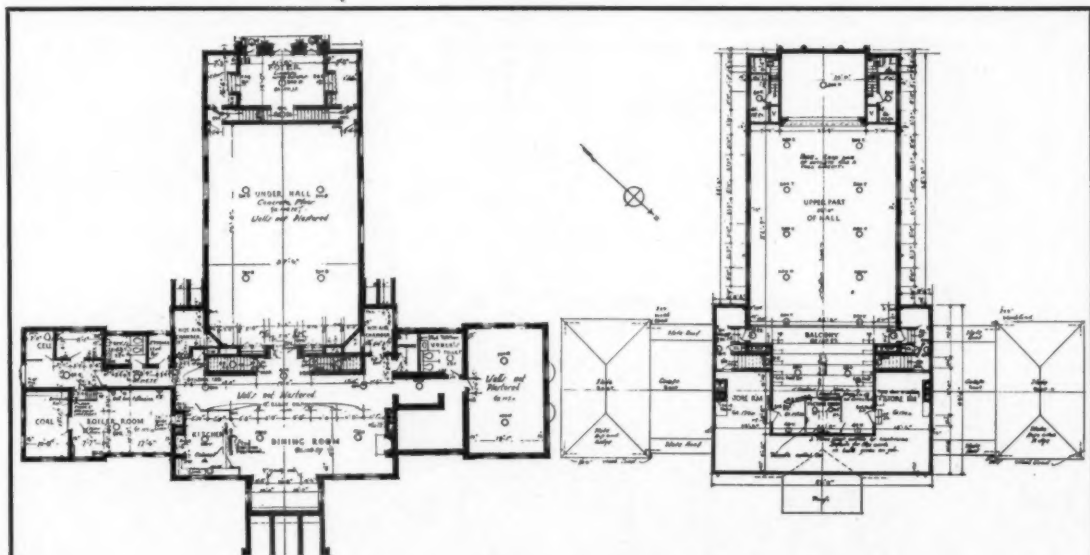


COMMUNITY life in the United States undoubtedly finds its best expression in New England. This town hall follows the architectural traditions of the Colony of Massachusetts, and is a source of patriotic satisfaction to the town in which it is located.

Exterior walls, brick and hollow tile. Roof, slate. Interior walls are plastered on wood partitions and painted. Trim, wood. Floors, concrete, linoleum and wood. Steam heated, with special ventilating apparatus; private electric generating plant in cellar. Building has dumbwaiters and a vault. Cost, 31¢ per cubic foot.



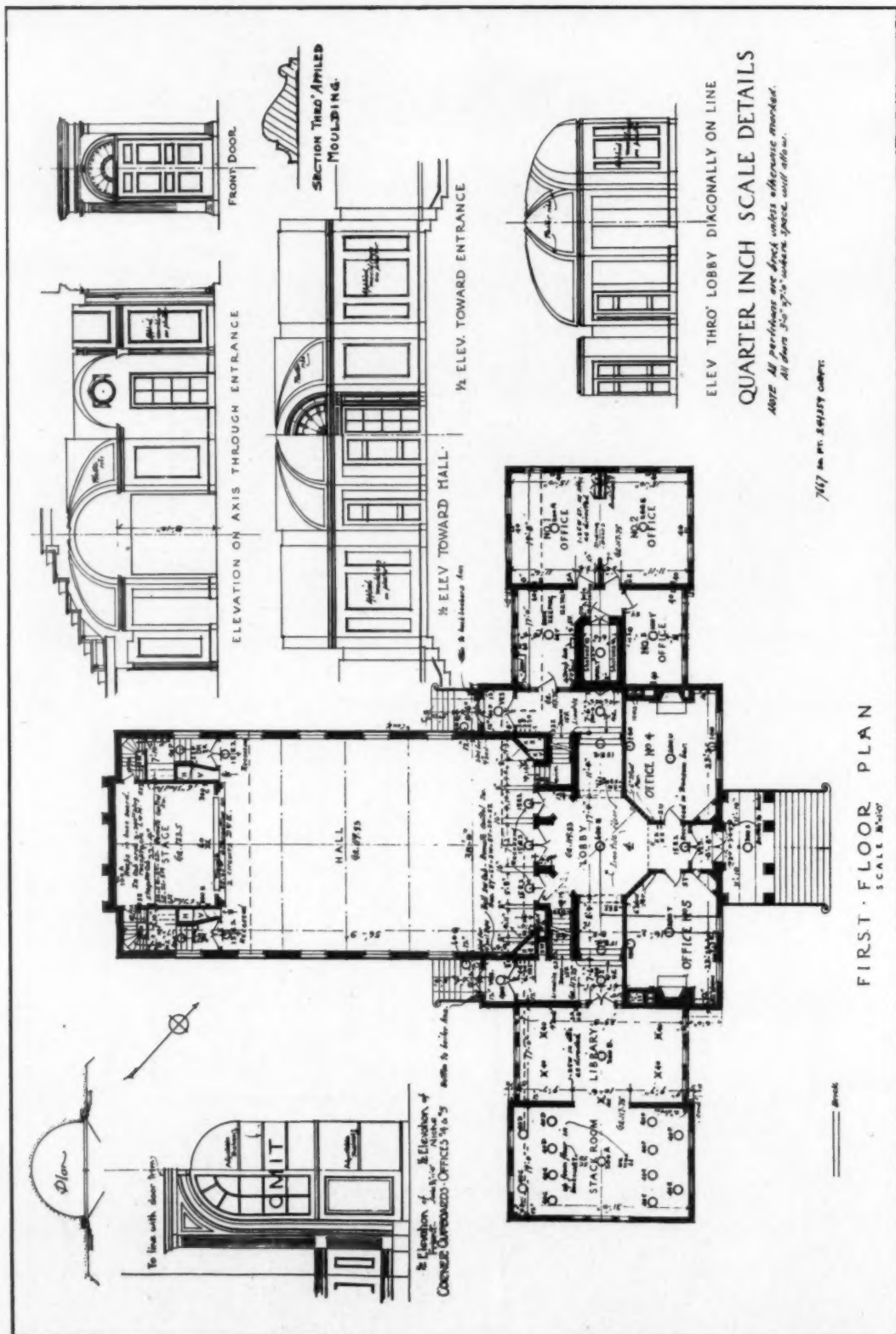
TOWN HALL, TEWKSBURY, MASS.
KILHAM, HOPKINS & GREELEY, ARCHITECTS



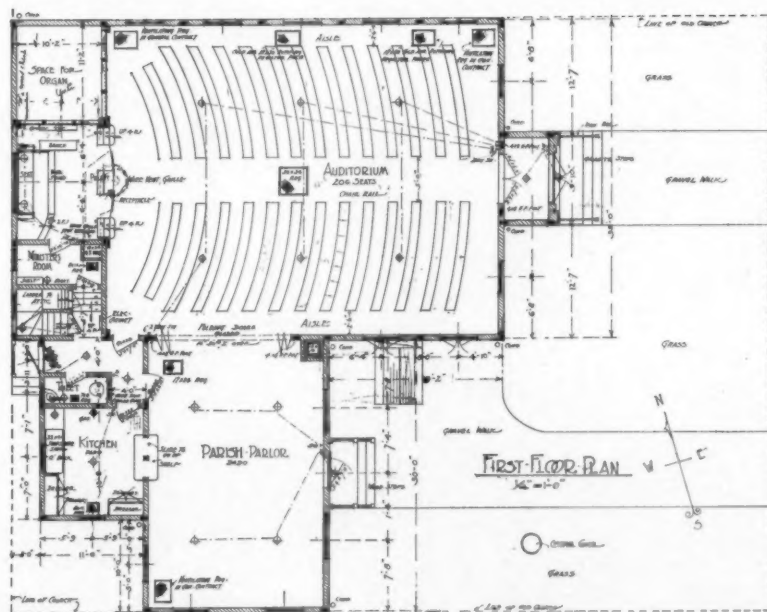
TOWN HALL AND LIBRARY BUILDING, DOVER, MASS.

KILHAM, HOPKINS & GREELEY, ARCHITECTS

Walls, brick; trimming, stone. Roof, slate. Interior walls, wood stud, plastered and painted. Floors, wood, rubber, linoleum and concrete. Steam heated. Plumbing, vitreous ware and enameled iron. Cost, 33¢ per cubic foot.



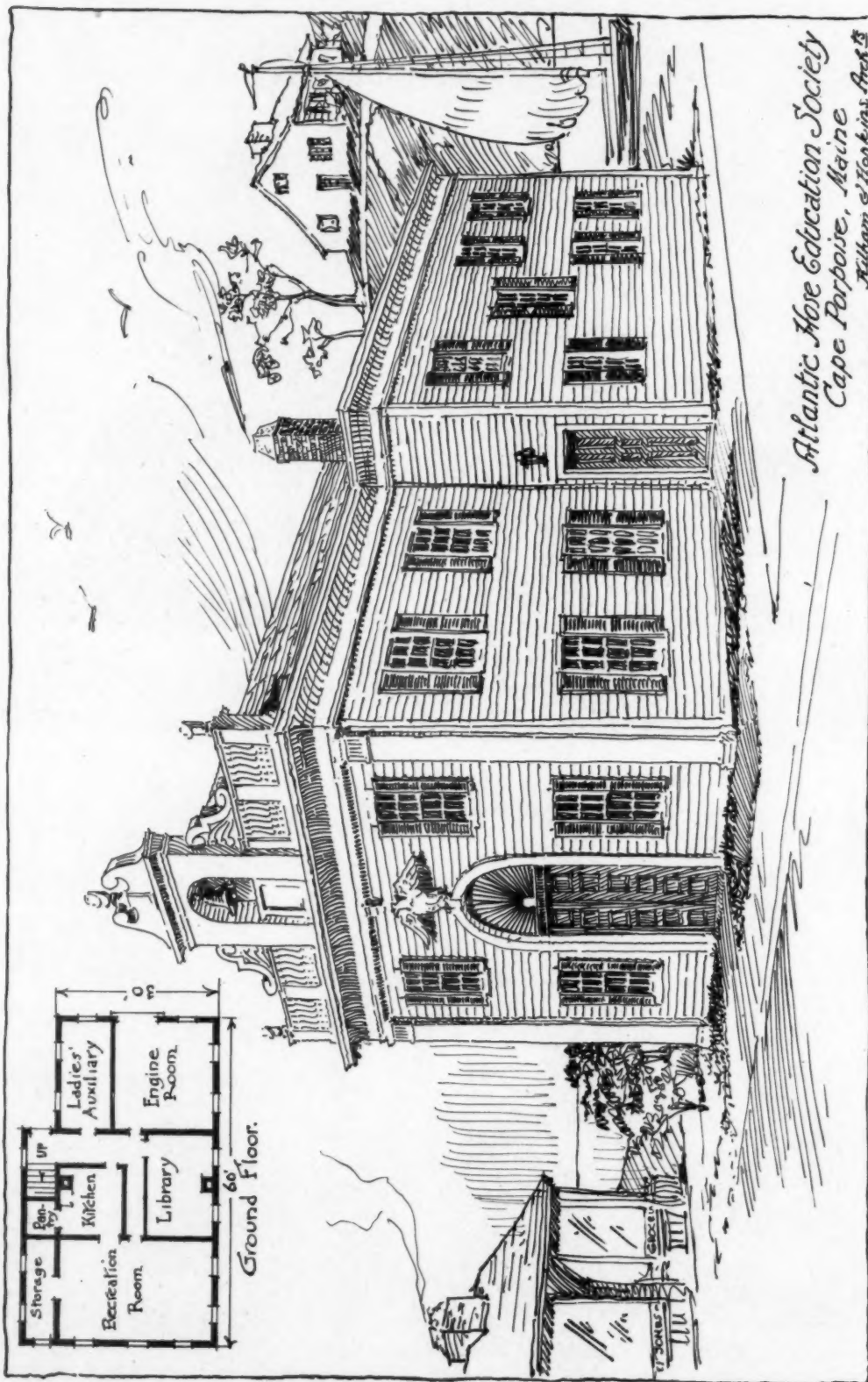
TOWN HALL AND LIBRARY BUILDING, DOVER, MASS.
KILHAM, HOPKINS & GREELEY, ARCHITECTS



CHURCH AT MARBLEHEAD, MASS.

KILHAM, HOPKINS & GREELEY, ARCHITECTS

THIS church in its every aspect is typical of the historic old town of Marblehead which was settled in 1629 by English emigrants. At one time Marblehead was the second in importance as a fishing port on the New England coast. The fine spirit shown by the people of the town has insured the preservation of many of the earlier buildings. The architects have admirably carried forward the spirit of those buildings in this new one, which is of frame construction, the exterior walls being covered with siding and the roof with wood shingles. Interior walls are plastered and painted.



*Atlantic Hose Education Society
Cape Porpoise, Maine
Kilham & Hopkins Architects*

RECREATION BUILDING FOR ATLANTIC HOSE EDUCATION SOCIETY, CAPE PORPOISE, MAINE

KILHAM, HOPKINS & GREELEY, ARCHITECTS

The LAW as to ARCHITECTURE

BY CLINTON H. BLAKE, Jr., of the New York Bar

ANOTHER case has been brought to my attention, emphasizing anew the danger of any estimates of cost by the architect unless it is clearly understood and agreed that he does not guarantee their accuracy.

The architect in the case referred to designed an apartment house. The apartment house was not erected, although the plans and specifications for it were complete. The client gave as his reason for a refusal to proceed with the work that the lowest bid received exceeded materially the preliminary estimate of the architect. On this same ground the client refused to pay the fee of the architect. The client also claimed that the preliminary estimate was used as the basis upon which he was to make his decision as to whether the proposition was financially practicable, and inasmuch as the lowest bid was materially greater than the preliminary estimate it followed that the proposition was not practicable financially and that the architect could not recover.

It appeared that no definite contract was entered into; that the preliminary estimate was made before the working drawings were prepared; and that the architect did not specifically guarantee the estimate, that is, he did not submit any guaranty to the effect that the estimate was correct. It appeared also that the client admitted that the plans were properly prepared and in accordance with his desires and directions and that he did not at any time state to the architect that he would refuse to pay the latter in the event that the lowest bid received should exceed the preliminary estimate. It also appeared—and this is of special importance—that the size of the building was increased after the preliminary estimate was received.

The fact that the architect did not submit with his estimate a guaranty of its correctness would not prevent a warranty of the substantial accuracy of the estimate being implied in the absence of circumstances which would negative such an implication.

Where a client asks for an estimate and the architect submits the estimate, it has been held that he cannot recover his fee unless the actual cost is reasonably close to the amount of the estimate. This was decided many years ago. If the cost exceeds the estimate to a slight extent only, however, the architect will be able to recover. It has been held in this connection that it is the province of the jury to decide whether the estimate submitted is reasonably close to the actual cost.

All of these rulings are in the absence of any provision in the contract to the effect that the

architect does not guarantee the estimate. If the contract contains a proper provision to this effect, the contract terms will, of course, control and the client will not be able to hold up the fee of the architect on the ground that the lowest bid, or cost, exceeds the latter's estimate. I have had occasion to point out before that the clause of the standard contract of The American Institute of Architects seems to me somewhat dangerous on this point, inasmuch as it provides merely that estimates are approximations only, and is, therefore, tantamount to a statement that the estimate shall be at least approximately correct. To protect himself the architect should insist on a provision to the effect that he does not in any way guarantee or warrant his estimates and that any inaccuracies in them shall not in any way affect his right to his fee.

The architect's rights in the present case will be saved, however, I think, by reason of the fact that the size of the building was increased after the preliminary estimate was made. It is well established in the law that if, after an estimate is made, the client directs alterations or additions to be made, as the result of which the cost is increased, the architect cannot be held responsible for the fact that the total cost, or the lowest bid received, is in excess of the original estimate. The client, having been responsible for the increased size and cost of the building, will not be allowed under these conditions to plead that, by reason of this excess cost, he is not responsible to the architect for the services which the latter has performed.

If the alterations or additions are such that the cost thereof can be readily ascertained and the general building scheme is not altered thereby, it may be that the client can still defeat the right of the architect to recover where the estimate of the architect is given without any safeguarding reservation. For example, if the owner directs that a one story addition to the building be added, which does not change the original plans, but merely adds this extra space, and the cost of the addition can be ascertained and the lowest bid received for all the work, exclusive of the addition, is far more than the architect's estimate, the owner will probably be able to resist successfully any recovery by the architect, unless the contract has provided that the estimate shall not be construed to be a warranty.

On the other hand, if the changes ordered by the owner are such as materially to affect the whole scheme and make it impossible to separate with certainty the cost of the scheme as prepared by the architect from the cost of the modified scheme embodying the changes made by the owner, the architect's right to compensation will not be affected adversely by the fact that the lowest bid

received or cost of the work materially exceeds the amount of the preliminary estimate furnished by the architect and based on his original layout.

If the contract contains a proper provision with respect to estimates the fee of the architect will not be endangered in either contingency. The wise architect will accordingly insert an adequate clause in the agreement, in the first instance, and thus avoid any cause for anxiety thereafter.

LEGAL DECISION

A CONTRACT for the erection of a building provided that it should be erected in accordance with specified plans and specifications which called for a certain type of foundation construction. The contract also contained the provisions that "the owner may make such alterations, changes or additions to the work as may be required, without invalidating the terms of the contract" and that the builder might "at any time during the progress of this work, make any additions to or alterations or deviations from the drawings or specifications, without invalidating this agreement."

An alteration was afterwards made, requiring a different kind of foundation and the substitution of piles for concrete. This resulted from the fact that the character of the ground rendered the change necessary, in order that a proper and safe construction might be secured. The sub-contractor for the foundation work entered into a contract with the general contractor, which required him to perform his obligations under the sub-contract in conformity with and with reference to any alteration in the plans permitted under the contract between the general contractor and the owner. The sub-contractor took the position that he was not required to undertake the change from concrete to pile construction, attempted to rescind his contract, and brought suit against the general contractor to recover for the work that he had

already done, on the theory of *quantum meruit*.

The court held that the alteration was not a violation of the contract, but was such an alteration as was distinctly contemplated by the contract, and that the contract contemplated not only the erection of a properly constructed building, but the construction of a suitable and safe foundation upon which it might rest; that the sub-contractor was bound to the general contractor to perform his contractual obligations under the changed conditions authorized under the main contract, and that a demand by the general contractor that he do so, and for such extra compensation as the contract provided should be paid to him therefor, was not a breach of the sub-contract by the contractor; that in the present case, it appeared, as a matter of fact, that the sub-contractor had notice that no guarantee was made with respect to the character of the ground, and that the soil conditions were not guaranteed; that it further appeared that test borings and samples of soil had been made and were subject to inspection of bidders; that irrespective, however, of these facts, the obligation of the sub-contractor would remain in force, even if at the time the contract was made there was nothing to indicate that changes would be made necessary by the character of the ground; that the alterations which were made were unexpected and that the sub-contractor was assured by the general contractor that these alterations would not be made.

Morrow Transfer & Storage Company v. Wells Bros. Co., 26 Georgia Appeals 366.

Note: The above case is interesting as showing the extent to which courts will sometimes go in enforcing the provisions of the general contract with respect to sub-contractors, where the latter have specifically agreed that the terms of the general contract shall apply to them. It must not be taken as a holding that in any case the sub-contractor will be subject to any changes which the owner and general contractor may agree upon, but as applying only to those cases where the sub-contractor has specifically agreed to proceed with the work under the terms of the general contract and to carry out in the manner and upon the terms stated in that contract any alterations made by the owner and general contractor.



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RICHARDSON'S ALLEGHENY COUNTY JAIL

The Pittsburgh Chapter's, A. I. A., efforts to preserve a notable and valuable landmark

IT is a source of gratification to note the common sense and constructive attitude of the Pittsburgh Chapter, A.I.A., toward the proposed demolition of Richardson's Allegheny County Jail. The Chapter does not indulge in heroics, or aesthetic bemoanings, but it does show the proper artistic spirit. It does not revile those whose opinions of art are not sufficiently well founded, or those who are lukewarm toward the preservation of our artistic landmarks. But it does, in a practical, straightforward way, present the entire matter for consideration. Its suggestions are based on a common sense attitude, and are such that, if adopted, will accomplish to the fullest extent a much to be desired result and at the same time conserve all the architectural excellence of Richardson's fine building.

We have received from the Pittsburgh Chapter copy of a communication signed by its President and Secretary, and directed to the proper officials in Pittsburgh. This letter we print in full, not so much because it is an effort to preserve a venerated example of good architecture, but for the reason that in its general tone, it sets an admirable example for other architectural organizations when similar problems are presented.

The letter from the Pittsburgh Chapter is as follows:

The Pittsburgh Chapter of The American Institute of Architects has noted with concern the proposal to destroy the Allegheny County Jail Building. This organization has studied the subject with care and wishes to submit herewith certain specific and practical suggestions which are designed (1) to clear off some of the area now occupied by the jail structure, as a concession to traffic needs; (2) to make a modification of the present use of the structure; and (3) to retain the original and most interesting portion of the structure as a combined utilitarian building and architectural monument. Therefore, the Pittsburgh Chapter, A. I. A., submits the following recommendations, requests your serious consideration thereof, and bespeaks the favor of a specific comment and reply.

Recommendation No. 1—It is recommended that the present Allegheny County Jail Building be restored to its original area and exterior condition as designed by Henry Hobson Richardson, one of the greatest American architects; and that the interior of the original Richardson jail be remodeled to serve as a County "Hall of Records."

Recommendation No. 2—It is recommended that such a solution of the thoroughfare, bridge approach, and kindred city planning problems of the jail locality be adopted as will adequately meet the city's present and future traffic requirements and will not prevent the restoration of Richardson's architectural masterpiece as a neces-

sary, utilitarian, and dignified building. It is confidently asserted that this building will prove a credit to the municipality and an appropriate companion to both the adjacent public buildings and to the mercantile developments that will inevitably follow the completion of the Liberty Bridge.

With respect to these recommendations, the Pittsburgh Chapter of The American Institute of Architects desires to say:

- (a) The accumulation of public records has made the question of their safe and accessible housing in a "hall of records" an obligation not much longer to be neglected. The cost of acquiring an expensive site near the Court House together with the cost of erecting a suitable hall of records building might be expected to agitate the taxpayers if the present suggestion were not so pertinent and satisfactory.
- (b) To restore the jail building to Richardson's original design will necessitate the removal of the forbidding looking wall of the jail yard, the diagonal northeast wing, parts of the north wing and the east wing, and, perhaps, some other minor portions.
- (c) It is granted, of course, that the encroachment of the jail structure upon Diamond Street, should be corrected.
- (d) The Pittsburgh Chapter, A. I. A., is concerned to tender its services to public officials, in advisory capacity, during the development of the suggested alterations, so that a great architectural monument may not be unduly mutilated or destroyed; or this Chapter will undertake to promise, on behalf of its parent body, The American Institute of Architects, that an advisory committee will be appointed for the same purpose by the President or Board of Directors of the Institute.

The Pittsburgh Chapter has been careful to ascertain that a feasible plan, meeting the conditions of the Chapter's second recommendation, has actually been devised. No doubt this plan will be made public at the proper time by the City Planning Commission, inasmuch as that department of the city government is now engaged, by direction of the City Council, in developing general plans of which the plan here mentioned is a part.

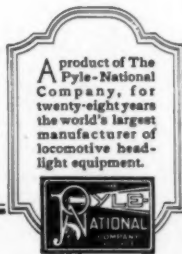
The subject matter of the present communication has been given very careful study by this Chapter and by a special committee appointed for the purpose. A formal resolution of the Chapter is, for your further information, quoted in full as follows:



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THE AMERICAN ARCHITECT

"WHEREAS the group of buildings known as the Allegheny County Court House and Jail has been for years recognized, in this and foreign countries, as an American architectural monument of outstanding merit; and its architect, Henry Hobson Richardson, who is placed among the greatest architects of this country, regarded this group as his best work; and

"WHEREAS recent serious proposals to destroy the jail portion of this masterpiece have been given considerable commercial publicity; and

"WHEREAS there appears to have been no serious attempt to reconcile the alleged objections to the present use of the jail building and various municipal requirements;

"THEREFORE BE IT RESOLVED that the Pittsburgh Chapter of The American Institute of Architects present to the proper public officials and to local civic bodies, the proposal to reduce the jail structure to its original extent and exterior condition and to remodel the interior to serve as a much needed hall of records, to the end that this architectural masterpiece may be conserved to future generations of Americans as an historic and cultural asset."

(Signed) HOWARD K. JONES
President
THOMAS W. LUDLOW
Secretary

ARCHITECTS' BUILDING IN NEW YORK PLANS EXTENSION

IN line with the rapid development of the Forty-Second Street section as a business center is the projected north wing of the Architects' Building at 101 Park Avenue, New York. Plans for the wing have been drawn by Ewing & Allen, although the builders have not yet been selected.

The new addition will occupy a plot 125 x 100 feet facing on Forty-First Street and is to have 120,000 square feet of office space. Six elevators will serve the seventeen stories.

The Architects' Building, of which this wing will be an integral part, was a pioneer in the centralization of business in the Forty-Second Street section. Thirteen years ago it was built by the present owners after two years of effort to get support. New York City business at that time was on Thirty-Fourth Street and further downtown. The city around Forty-Second Street was largely developed by hotels. Establishing an office building so far uptown was considered visionary.

The move was justified, however, by subsequent events. Architects and builders especially have verged toward this section in steadily growing numbers. It was for them and their allied interests that the Architects' Building was established and occupied by such leaders in the architectural profession as McKim, Mead & White; Donn Barber; Henry Bacon; Arnold W. Brunner; C. Grant La Farge; George B. Post & Sons; Post & McCord; Benjamin W. Morris; Ludlow & Pea-

body; H. Van Buren Magonigle; Kenneth M. Murchison; Charles A. Platt and Ewing & Allen.

These and other firms now occupy the whole of the Architects' Building. The new wing will be restricted to architects, builders, manufacturers of building materials and others in similar interests.

COMPETITION FOR RUSSIAN MODEL WORKERS' HOMES

THE following extract from a letter received from the Secretary of the Russian Information Bureau, 2819 Connecticut Avenue, Washington, D. C., is self-explanatory:

"Referring to my previous letter in connection with the competition for Model Workers' Homes in Russia, (printed on page 252, September 9 issue of THE AMERICAN ARCHITECT), I wish to inform you that we have received word from the U.S.S.R. Society for Cultural Relations with Foreign Countries, that the date of submitting plans for the Workers' Home competition has been prolonged until November 15, 1925."

RAMSAY MacDONALD ON ARCHITECTS

IN opening the recent exhibition of the Liverpool School of Architecture Ramsay MacDonald, among other things, said:

"Architecture is to the town dweller the most intimate of all the arts. The architect must surround people with influences that compel them to look upward. He must put beauty into the streets, and inspiration in the houses. The architect is not doing his duty by simply providing shelter.

"The training of the architect does not end with the knowledge of the composition of brick and stone. It must include a training to grasp the life and spirit of art and of people.

"No man can build a house for another unless he understands men. Domestic architecture consists in embodying the communal spirit."

Mr. MacDonald predicted the day when architects would "know their business; and in order that they might know it the public should give them sufficient encouragement."

COMPETITION FOR HOUSE BEAUTIFUL COVER DESIGNS

THE *House Beautiful* Cover Competition has been an annual event now for the past three years. The announcement of the Fourth Competition contains an addition to the usual quota of prizes. The First Prize is \$500, the Second Prize, \$250. In addition to these, this year, and in addition also to the possible purchase price of a design, is offered a Special Prize of \$100 with a Certificate of Merit, for the best design submitted by a student of any School of Art. The Competition closes January 29, 1926. Full particulars regarding it may be obtained from the Competition Committee, *House Beautiful*, 8 Arlington Street, Boston, Mass.

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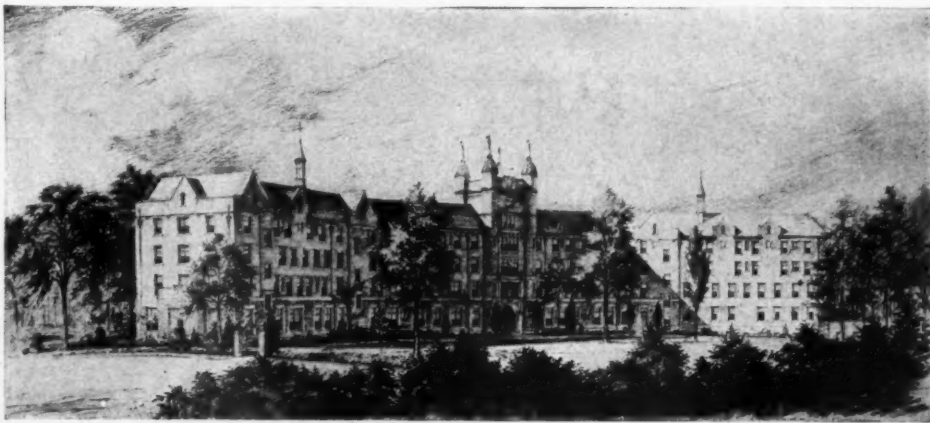
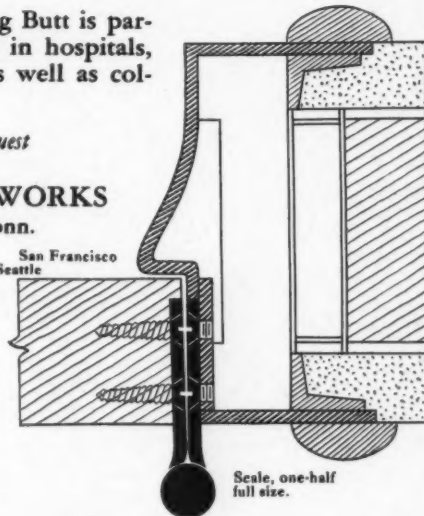
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THOMAS F. MANVILLE DEAD

THOMAS F. MANVILLE, chairman of the Board of Directors and former president of the Johns-Manville Company, died suddenly on 19 October. He was sixty-three years old. Mr. Manville's business career was marked by long, active and fruitful associations. He early became identified with the building industry, and it was through his knowledge of the industry's needs that he built up the large corporation and its collateral bodies, that have so markedly and practically stamped every product with reliability.

AIR MAIL SERVICE

MEANS of speedy communication are vital to the business world, and the recent installation of air mail service is the most useful and important measure of postal improvement since the adoption of the railway postal car system in the sixties.

The effect of the new air mail routes upon the postal service of the country as a whole should therefore be clearly understood by the business world.

Transmission of mails by air is effected in less than one-half the time required by train. Air mail letters despatched from New York today about 9 P. M. are delivered at their address in Chicago by first carrier delivery tomorrow morning; or if forwarded from Chicago by train to other points, will move by the first morning train instead of by a late evening train. The delivery of such letters in postal territory served from Chicago will thus be expedited by at least twelve hours and often much more.

A similar gain in time is made with respect to other air mail stations where mails are transferred to railroads for distribution in adjacent territory.

Thus, in a very wide zone on either side of the transcontinental air mail route, letters destined to any point within that zone may be expedited in delivery by several hours.

In many business transactions time is of much importance. The air mail service is of great value in all such cases. It supplies a very desirable facility, especially beneficial to business men and should be used by them for letters, the speediest possible delivery of which is desired. In the case of such letters, the extra postage charge is negligible.

INOFFENSIVE LETTERING

IT seems to be insufficiently realized, except by architects and by signwriters of the more studious sort, how important an item in the appearance of buildings is the lettering on shop fascias, states *The Architects' Journal*, London. Off and on, for many years, we have coupled with this contention the practical advice that, to be legible in the highest degree, lettering should occupy not more than one-third perpendicularly of the space on which it appears. Also there should be no dark lettering on a light ground, but

this coloring should be exactly reversed. A light ground befores the lettering which it should throw into prominence. These simple but important precepts, we notice with considerable interest, are being followed by certain great brewing firms with respect to the lettering they prepare for the public houses they supply. Prohibitionists will regret that it has been left to the brewers to set so good an example; but they must admit the pervasiveness of its influence. As the pictorial signs—many of them quite good art—have nearly all disappeared, it is some compensation that decorous lettering is taking their place. We regret to see that the lettering we have ventured to commend is mainly block lettering.

IVY ON BUILDINGS

IN a letter to a daily newspaper, says *The Architects' Journal*, London, a writer declares that, after repair by the Historic Buildings Branch of H.M. Office of Works, "the charm, character, and the spirit of the old work are all gone." To this, William Harvey retorts: "It would be lamentable if irresponsible criticism based upon affection for the ivy, and not upon love of the ancient architecture, should impede the work of preservation." While very few architects would care to contradict Mr. Harvey's main contention, there are others who may think that perhaps he goes just a little too far in attributing "irresponsible criticism to love of the ivy rather than of the ancient buildings." Truly it is difficult to conceive of such utter fatuousness as that which Mr. Harvey imputes; yet it is impossible to deny its existence, for the sentimental cult of creepers on new buildings, as on old, has wrought disfigurement, and has threatened ruin, to many a fine wall that needed no such alleged adornment, and that deserved more respect than that implied in yielding it to the deadly embrace of destructive parasites. Occasionally one rejoices to hear of a clergyman tearing away the ivy he finds on the walls of his church; but the action requires some courage to brave the vituperation of lovers of picturesque prettiness of the picture-postcard order, who would sacrifice soundness to sickly sentiment.

ALASKA TO BE SURVEYED BY AIRPLANE

THE Department of the Interior, through co-operation of the Navy, proposes to map the southeastern portion of Alaska by airplane photography. It is expected that sea planes will be used for the flying due to the lack of proper landing places on the mainland of Alaska. Although the proposed maps are to be made primarily in connection with the investigation of the mineral resources of Alaska by the Geological Survey, other bureaus such as the Coast and Geodetic Survey, the Forest Service, the General Land Office, and the Federal Power Commission expect to benefit by the survey and will assist as far as possible in the work.



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James Knox Taylor, Architect

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NEW YORK CHAPTER, A. I. A., MEETING

THE first Fall meeting of the New York Chapter, A. I. A., was held on October 14, 1925. The annual reports of the standing committees were presented and President B. W. Morris made the annual address after which the President-elect Lansing C. Holden was installed. The finances of the Chapter are in a satisfactory condition and no deficits resulted from the convention last Spring. The necessity of greater revenues for carrying on work of a public nature was stressed by President Morris. The growth of the Chapter in membership has been marked and it now constitutes about one-seventh of the entire membership of the Institute. This large and influential membership imposes burdens on the Chapter that do not accrue to the much smaller chapters, said President Morris. The past year has probably been the most active in the Chapter's history and much credit is due to President Morris and the Executive Committee for the splendid results obtained. The new President, Mr. Holden, has a comprehensive program before him and a united, active Chapter to work with. Important results are assured during the coming season's work.

AMERICAN CONSTRUCTION COUNCIL

THE annual meeting of the American Construction Council will be held in Chicago, November 18-21, 1925. This meeting promises to be one of unusual importance. Two days of the meeting will be devoted to a national conference on Better Building participated in by representatives of the various branches of the industry, including building investment, architecture, design, insurance, manufacturing, building, labor and public officials and all others interested.

The Council's General Committee on Better Building, under the able Chairmanship of Mr. Rudolph P. Miller of New York, has been preparing literature on this subject for national distribution to prospective home owners, as well as co-operating with loaning institutions and others in getting proper standards set up.

At other sessions the subject of the reduction of construction peaks and depressions will be considered and the concluding day will be devoted to a national conference on highway construction, as it relates to better building of highways.

This convention promises to be of the utmost importance to the construction industry and the record of its proceedings should be one of interest and value.

ATLANTIC TERRA COTTA

THE October issue of *Atlantic Terra Cotta*, the monthly house organ of the Atlantic Terra Cotta Company, is as usual informing and presents also, as usual, a good lot of suggestive material for the architect's files. The present number contains an article by Leon V. Solon on Studies in Polychromy and a carefully selected lot of reproductions of examples of the Romanesque. The mechanical excellence of this journal dignifies every subject it presents.

BOOK NOTE

THE TOUCHSTONE OF ARCHITECTURE*

BY

SIR REGINALD BLOMFIELD, R. A.

A SERIES of essays and addresses by the very eminent English architect treating with many points of view of architecture, whence the title. He admits that since the break-up of traditions, the arts have been ships without a compass, that they who have set an adventurous course, for classicism, for romance, for realism and symbolism sometimes find that for want of proper bearings they have missed their port in the end.

The expressed meditations of a man as eminent in the profession as the author are well worth careful consideration. His views are absolutely idealistic and not a hint is given of the tremendously exacting business that architecture has become,—in fact some portions of his discourses remind us of the established English custom of 5 o'clock tea, a custom which would seem so absolutely out of place in our American practice, but it is good to find in essays of this kind. We cannot but be glad that there is a remnant of the old guard who can think so idealistically and express it so clearly, even though it would be inadvisable for an American architect.

His chapter on "Famous Men of the R. I. B. A." is very instructive. His article on "Atavism in Art" is a very fair-minded statement of some of the things that we owe to our predecessors, and his account of Waterloo Bridge which he characterizes as "the best bridge on the Thames or across any river" is especially apropos now that there is an effort being made to preserve it from destruction.

He has also a chapter on Wren, that remarkable architect, one of the most distinguished the world has ever seen, who began life as a student and teacher and jumped into a large practice almost over night without previous training, with little opportunity for travel abroad and almost no knowledge of classic architecture, but by reason of the range of his imagination and his invincible resource, assimilated and acquired manner so completely as to make it a true vernacular and national art.

C. H. BLACKALL.

*Oxford—at the Clarendon Press \$3.00

HYDRO-ELECTRIC POWER IN SPAIN

IN 1904 the Spanish Ministry of Agriculture, Industry and Commerce, gave the installed power as 132,000 hp., in 1917 384,000 and the present estimate is placed at 1,000,000 hp. with 300,000 hp. additional now being installed. The province of Catalonia is especially well favored in that its rivers are estimated to be able to produce 800,000 hp., most of which is primary power made possible by the large storage reservoirs which are available in the mountains in the central and northern part of the province.

The PUBLISHERS' PAGE

THERE'S something more to the publication of a technical journal than the periodical production of attractive issues. Service does not end when an issue has left the press and gone broadcast all over the world. As a matter of fact, service—the real service—has but just begun. When from time to time, we have told our readers we were here to help, it was not merely a gesture, made to impress. We really desired to be helpful and we are always hoping for an opportunity to demonstrate not alone our willingness, but our ability as well.

Recently, some important things have come to us and they are so diverse in character as to illustrate just what we mean when we emphasize our desire to serve. A small New England city, desiring to arrange for the design and plan of a new city hall, has written us, asking how best to proceed. And just here we want to interpolate the statement of a fact, and that is the growing tendency of the smaller communities to secure the best types of public buildings and encourage the development of the highest class of domestic architecture. This town was settled almost at the very beginning of our Colonial history and its traditions, in which the citizens take much pride, should of course be suggested in its architectural development. We have laid all the facts before the authorities and we are gratified to be advised that the matter will proceed to the very best conclusion.

* * *

It is, of course, gratifying to receive such irrefutable assurance of our standing in the architectural profession from the point of view of the layman, but it is also a source of great satisfaction to know that our technical readers regard us with respect and extend their confidence to us.

The Bureau of Standards having completed a series of tests on the sound insulating properties of interior walls, it selected, without solicitation, *THE AMERICAN ARCHITECT* as the medium through which to bring the result of these tests before the architectural profession. This article appeared in our issue of November 5, and has been widely commented on, not alone by the technical press, but in two important instances by the daily papers.

* * *

While the editors of an architectural journal will naturally be interested in any discussion of sociological problems as affecting the home, it will not feel justified in following theories or in discussing cause and effect. But, while we may deprecate the tendency toward a slackening of the parental attitude and the loss of home in-

fluence, as so well set forth by President Coolidge in a recent address, we are more technically interested in the effect of these changing conditions on the modern methods of domestic life as shown in co-operative and 100% apartments. A subscriber in a Southern city, confronted with one of these problems, has sent us a "hurry call." He wants to know all about them,—not so much, perhaps, as to their plan and design, but their methods of financing, the various forms, contracts and deeds. We have been able to secure the co-operation of the highest authority in this country on these matters, and our subscriber is pleased to express in the most flattering manner what he describes as "perfect service."

* * *

We have enlarged on these three instances not to exalt our own merits, but to show by actual examples that we are prepared to give service in any direction that an architectural journal may with reason be called on to render.

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In an early issue, the Department of Engineering and Construction will contain an interesting report of an investigation conducted during the demolition of Madison Square Garden, New York City, to determine the condition of the materials used in this building, which was built in 1890. This investigation, participated in by various organizations and a representative of *THE AMERICAN ARCHITECT*, was originated by this journal with a view of determining the condition of materials and the value of making similar investigations in the future as other buildings are demolished.

Surgeons gain their knowledge of anatomy through many dissections and hundreds of operations. In like manner, architects and builders can increase their knowledge of building materials, their action, wear and endurance under actual conditions by carefully examining buildings that are being demolished. While the original Madison Square Garden was thirty-five years old, it is not rare in this country to find buildings whose lives are but twenty-five years and even shorter, being torn down to make place for newer structures. Most, if not all the materials used are yet in use under the same manufacturing control. Here are conditions of information for architects that cannot be excelled, and for the building material makers, sales arguments that by reason of their actual demonstration may not be refuted. In short, it seems that a source of reliable information is being generally ignored and should be more carefully considered.



LOOKING ACROSS THE NAVE
BARCELONA CATHEDRAL
(Clasé Arriu Mas)

THE AMERICAN ARCHITECT