THE SOUTHERN ARCHITECT AND BUILDING NEWS

VOL. LI. NUMBER 3

CONTENTS FOR MARCH, 1925

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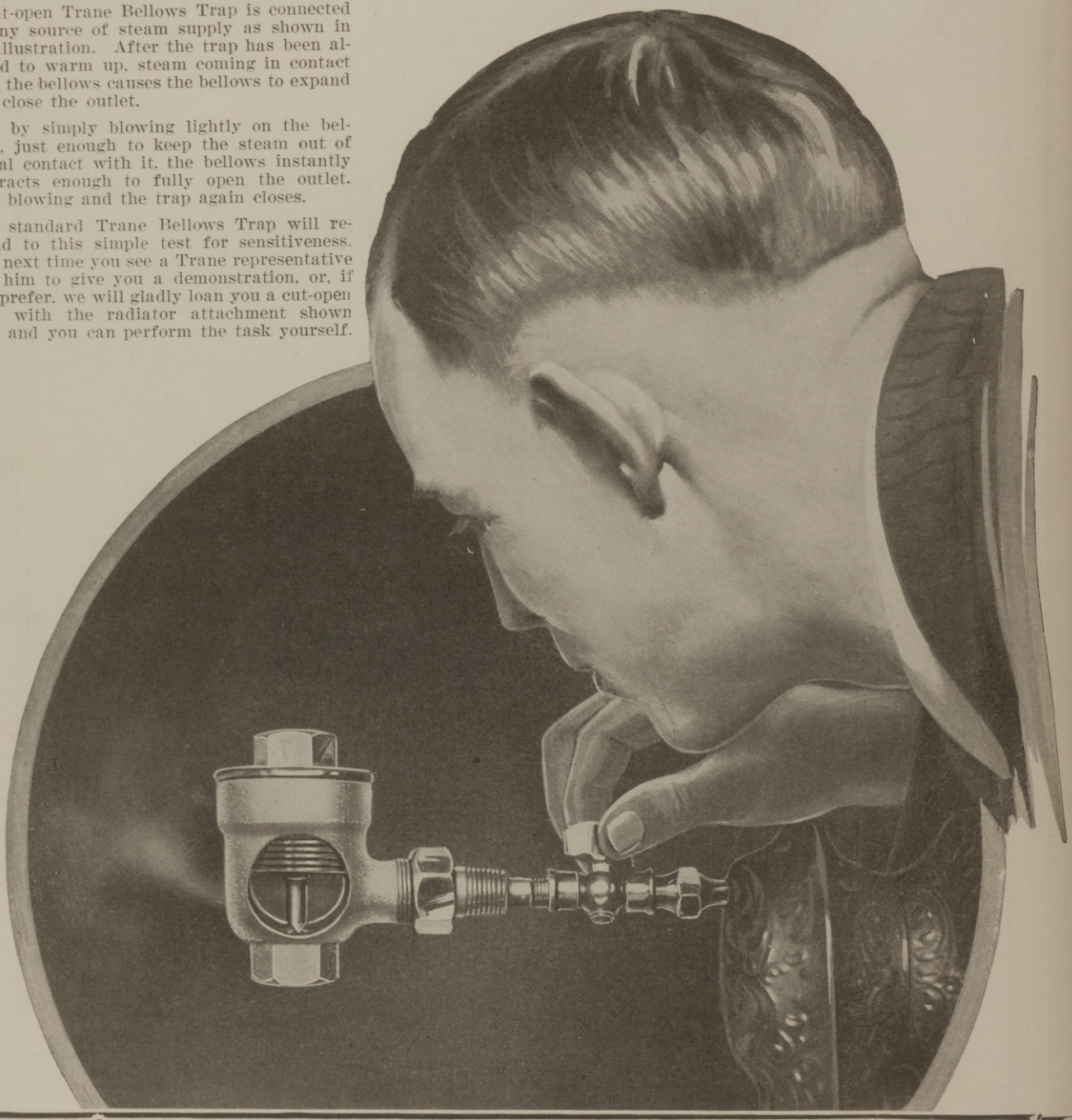

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EDITORIAL COMMENT

REMODELING OLD HOMES.

In many of the older cities of the United States one of the most marked and interesting phases of home-making at present is the reconstruction and modernization of old homes. It is not only a salvaging process of much economic value but an educative enterprise having no little civic value in that it is restoring whole rundown neighborhoods, bringing back real estate values and is preserving hundreds of the charming specimens of the architecture of the period preceding the civil war. It is almost invariably found that these solid homes of our forefathers were so well built that any structurel defects that have developed have been due to the settling of walls and foundations rather than to any weakness of material or poor workmanship. Recently a 200-year old house on the New England sea coast was restored. It was found that the softwood under-floors, put down so long ago, were as sound as the day they were cut and so much hardened by age that when dressed they made excellent top-flooring.

In the smaller and also in the newer towns and cities of the country there is just now being developed a systematic drive to rebuild houses of a comparatively recent period. It is well understood that dwelling architecture was at a low ebb in the last part of the nineteenth century and the first part of this. For nearly a quarter of a century a small home that was not an eye-sore from the day it was built was rare and a majority of the large homes were atrocities perpetrated on defenseless eyes. Many of these houses are lumber-built and contain so much sturdy material that to wreck them is apt to be sheer waste. So everywhere we hear of men who, having grown into larger means and better taste, are examining their old homes with a view to improving their architecture by alterations and extending them to meet new requirements. Thousands of people who hate to let the old home go are finding that simple external alterations and additions transform an ugly edifice into a home of beauty and that the additional room required may be secured at lower cost by additions and rearrangements than by erection of a new house. In the cities, unfortunately, hideous architecture appears to have been accompanied frequently by "jerry-building" during the period of architectural twilight, so that there it does not always pay to reconstruct a house of the first or second generation back. The good materials in such structures do not have the "salvage value in place" which is realized in the building of careful workmanship. Rebuilding or altering are often excellent investments even where unnecessary from the utilization point of view. Selling values thus gained are frequently out of proportion to the expense.

PROTEST AGAINST STANDARDIZED DECORATION.

The American housewife has, until recently, been the victim of "delicatessen" decorators, according to C. W. Cousens of the Interior Decoration Service Bureau of New York. These mushroom decorators succeeded in standardizing interior decoration to such an extent, he said, that you can almost buy it in cans.

A "delicatessen" decorator, be it known, according to Cousens' definition, is one of those young lady stenographers who have taken a three months' course in decorating by some mercenary, and not always responsible, decorator, and have been forthwith transformed and foisted on the gullible public as decorators.

"There are many capable women in the decorating business," said Cousens, "women who have studied their profession and know it from the ground up. I have no quarrel with women of this class. They have done much for the decorating business. But I do very much resent the type of decorator who knows nothing more than to prescribe a plain taupe floor, pearl gray wall, gay cretonne hangings and an orange vase, and calls herself a decorator. This is what I call standardized decoration. You can almost buy it in cans. But the public is getting wise to itself, and the days of the delicatessen decorator are numbered.

"In the mean while, however, their activities have wrought havoc with the old school, confident and thoroughly reliable decorators. The best job of decorating is on ethat most truly reflects the personality of the owner and at the same time great resourcefulness on the part of the contractor. Standardization is a worthy thing in the engineering and construction world, but decoration never can and never should be standardized."

These remarks were made at the Annual Convention of the International Association of Master House Painters and Decorators of the United States and Canada at Des Moines, Iowa. The speaker said that it was during the early Wilsonian period of decoration in the United States that the flood of delicatessen decorators went forth upon our fair land, and you began to be unable to tell Bill's house from Tom's.

DETAIL OF TERRACE ELEVATION
SOUTHERN PINES COUNTRY CLUB, SOUTHERN PINES, N. C.
AYMAR EMBURY, II, ARCHITECT.

THE
SOUTHERN ARCHITECT
AND
BUILDING NEWS

VOLUME LI. MARCH, 1925 NUMBER 3

The Southern Pines Country Club

AYMAR EMBURY, II, *Architect.*

THE significance of the Southern Pines, North Carolina, Country Club cannot be fully appreciated without understanding something of the handicaps under which its designer had to work in producing what we consider the most charming small country club house in America.

Mr. Embury says himself, "The job I did with most pleasure and feel is my most successful work, from the standpoint of pure design, is the new clubhouse at Southern Pines."

The little town of Southern Pines is geographically situated in the central portion of the state on the main line of the Seaboard Air Line Railroad from Columbia, South Carolina, to Raleight, North Carolina. Geologically, the outlying territory is a natural rolling country. This region is locally known as the Sand Hills.

Not less than fifty years ago this section was a virgin forest of stately pines. Lumbermen, realizing the value of this forest, made a few log cart roads into the woods and in less than twenty years had completely cut away practically every stick of timber, leaving the whole country a barren wilderness of drifting sand. The soil being poor in producing qualities could only revegetate itself with seedling pines and scrub oaks. However, barren and unattractive as this section was, its delightful climate, soft, dry air, and moderate year round temperature soon attracted people from the north who desired to locate in a region not so far away from their native cities yet in a section where the winters were mild and pleasant breezes would greet them in the summer months.

The first of the Sand Hill towns was Pinehurst not so very far away from Southern Pines. Mr. Tufts, its founder, discovered it necessary to establish his own building material yards and warehouse and today the local builders in the section must go to this warehouse for supplies other than sand and lumber. And there only stock pieces may be found.

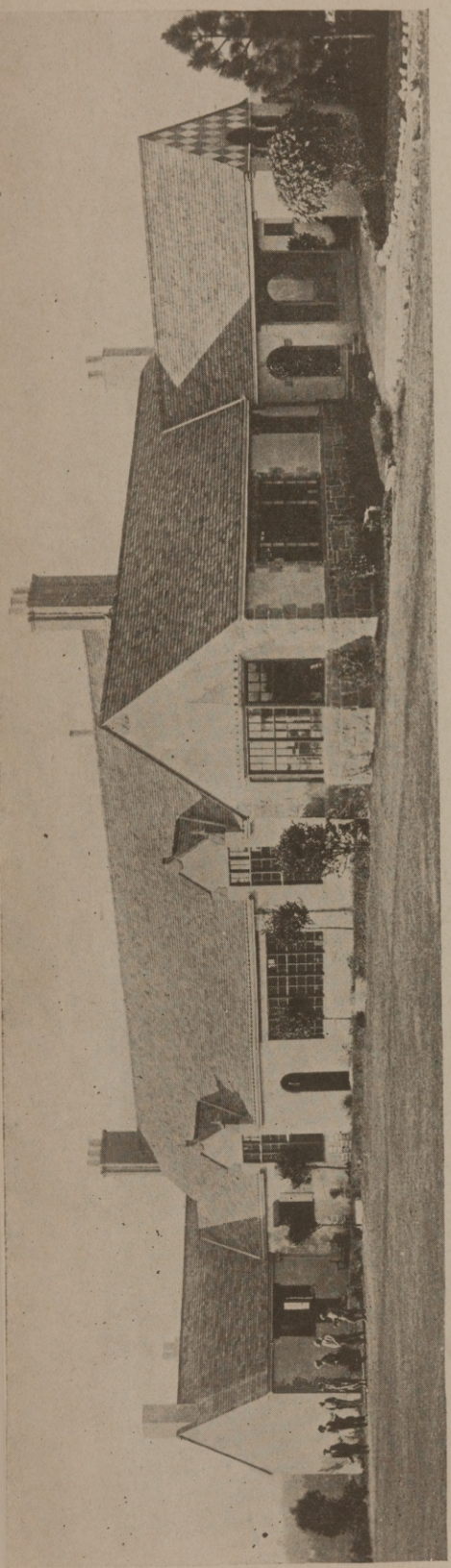
The development of Pinehurst soon opened an avenue for the establishment of another town and it was Southern Pines that took its place as the second Sand Hill community. In 1911 Mr. Embury did his first piece of work in the section. Native labor was scarce, untrained, and knew nothing of executing what we consider ordinary good construction. There were few, if any, mechanics that could read plans intelligently and full size details were a curiosity. When we consider that Mr. Embury's first work, the Highland Pines Inn, a hotel with a hundred bedrooms, thirty baths, its own plant for heating and generating electricity, a laundry and servants' quarters, was built for less than sixty thousand dollars, we can begin to understand and appreciate more fully the real significance of his later work.

Everyone is familiar with the Country House Architecture of Mr. Embury, which has brought to him distinction as a specialist in this line of work. Whatever admiration we might have for his

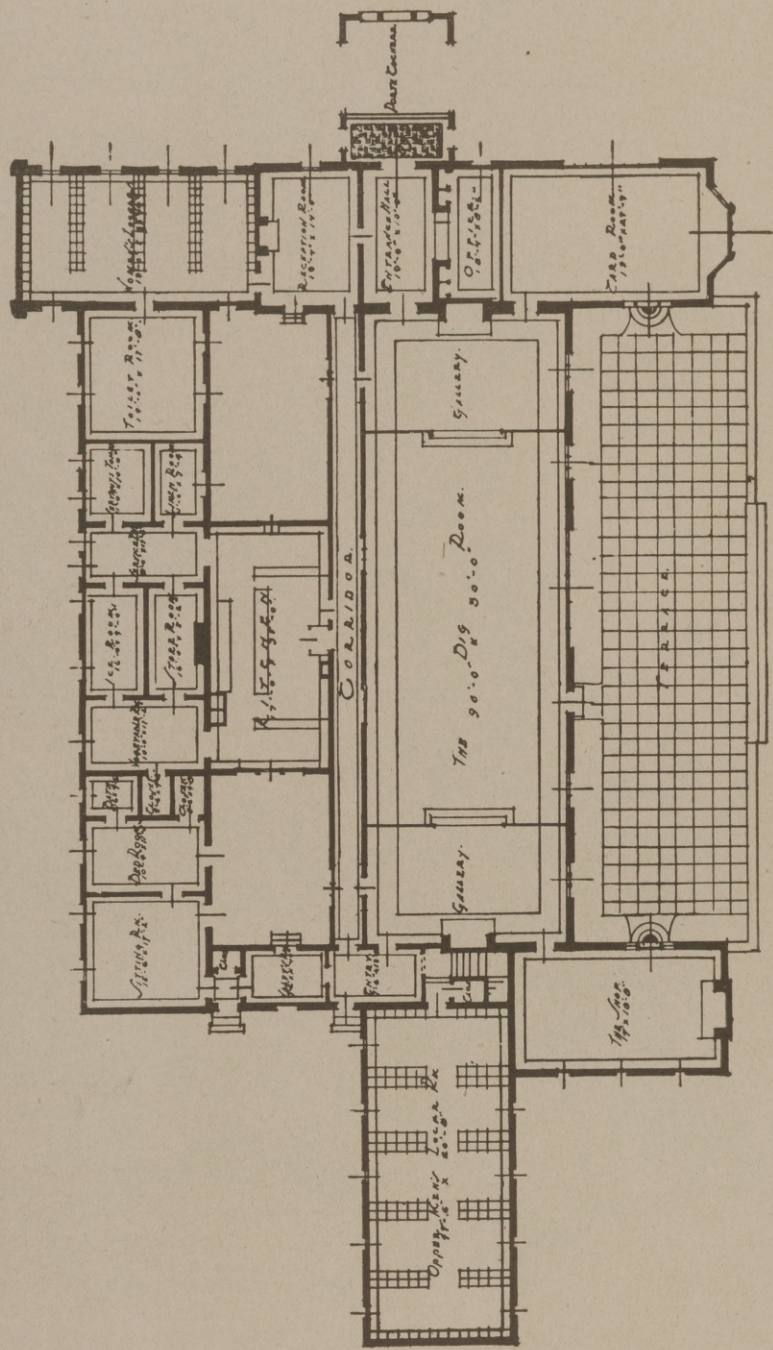
country houses we must even admire him more for the freedom and informality which characterizes the Southern Pines Country Club, which is a distinct departure from his regular line of work. He is not a designer of art nouveau houses, but shows in all his work full knowledge of precedent without exact adherence to it; and at the same time there is a distinct local flavor. In the Southern Pines Country Club there is that little personal touch which distinguishes it from every other building that has come under his study.

To the Country Club at Southern Pines no definite precedent can be assigned, although it is loosely derived from the English cottage source. Set on a treeless, barren, sandy hilltop it was necessary to do a building that would carry itself. The photographs unfortunately do not show its excellent color scheme which gives it an air of joyousness even its barren situation cannot take away. The stucco is a sandy buff color, relieved at various points by red sandstone and brick. The metal cornices and cheneaux, the tin roof of the bay windows and the doors are blue with a light glaze of green over them. The blinds are a strong but quiet green, the woodwork is stained brownish gray and the roof is mottled brown, blue and gray. This color scheme naturally required an excellent piece of design to carry it, and a skillful superintendent to see that just the proper values were obtained. These needs were satisfied, as the finished work attests.

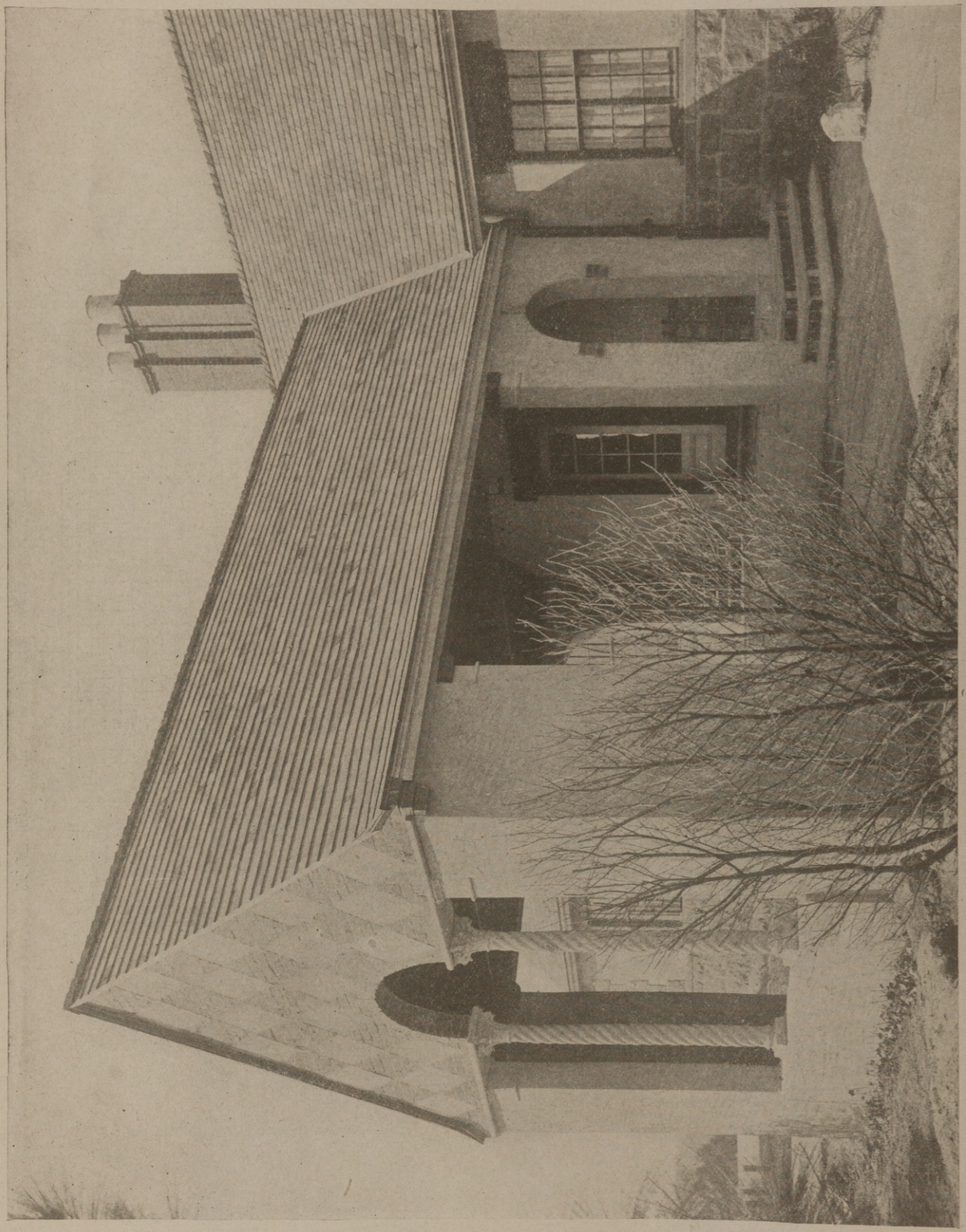
DETAIL OF CARD ROOM GABLE
SOUTHERN PINES COUNTRY CLUB, SOUTHERN PINES, N. C.
AYMAR EMBURY, II, ARCHITECT.



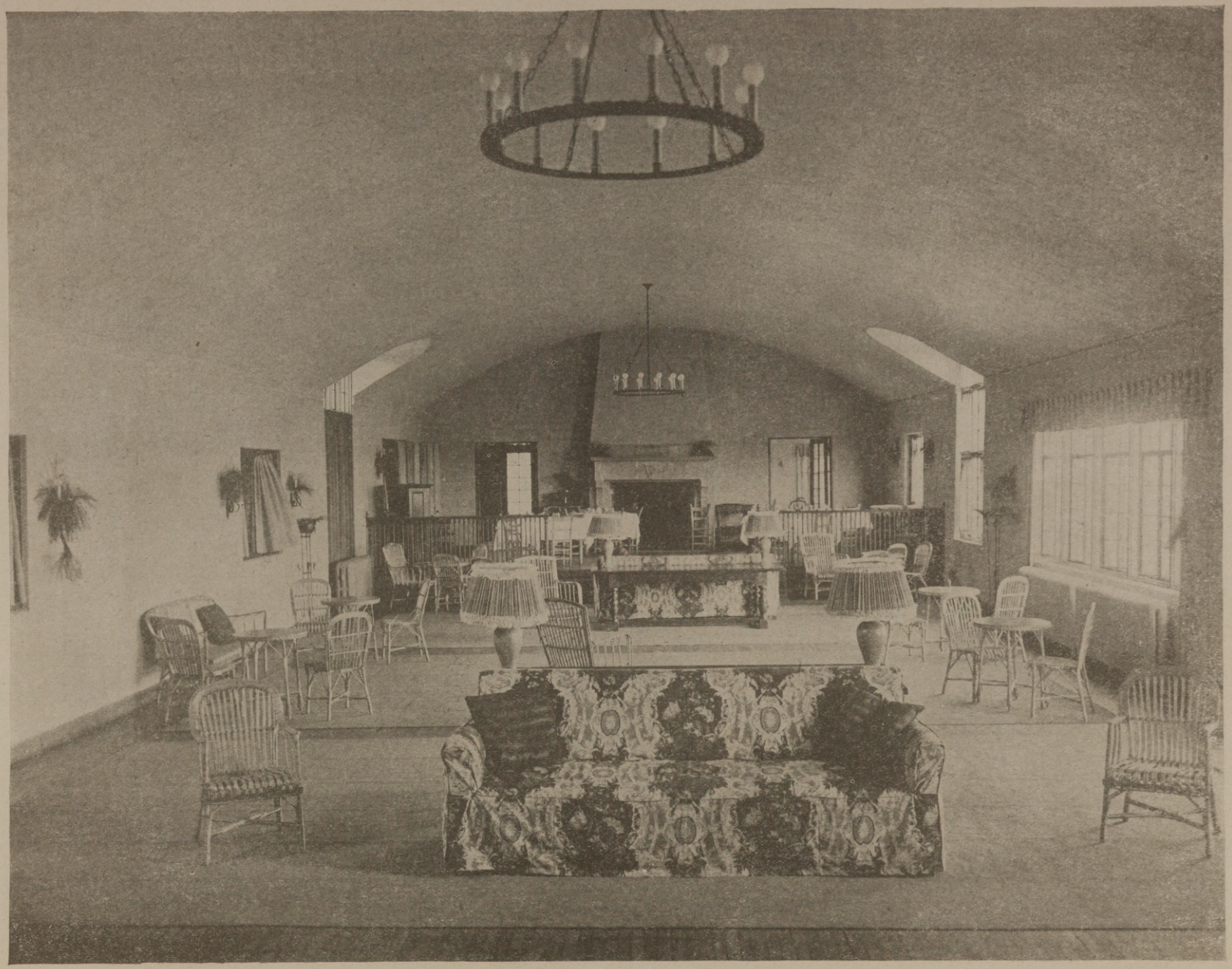
MAIN FACADE



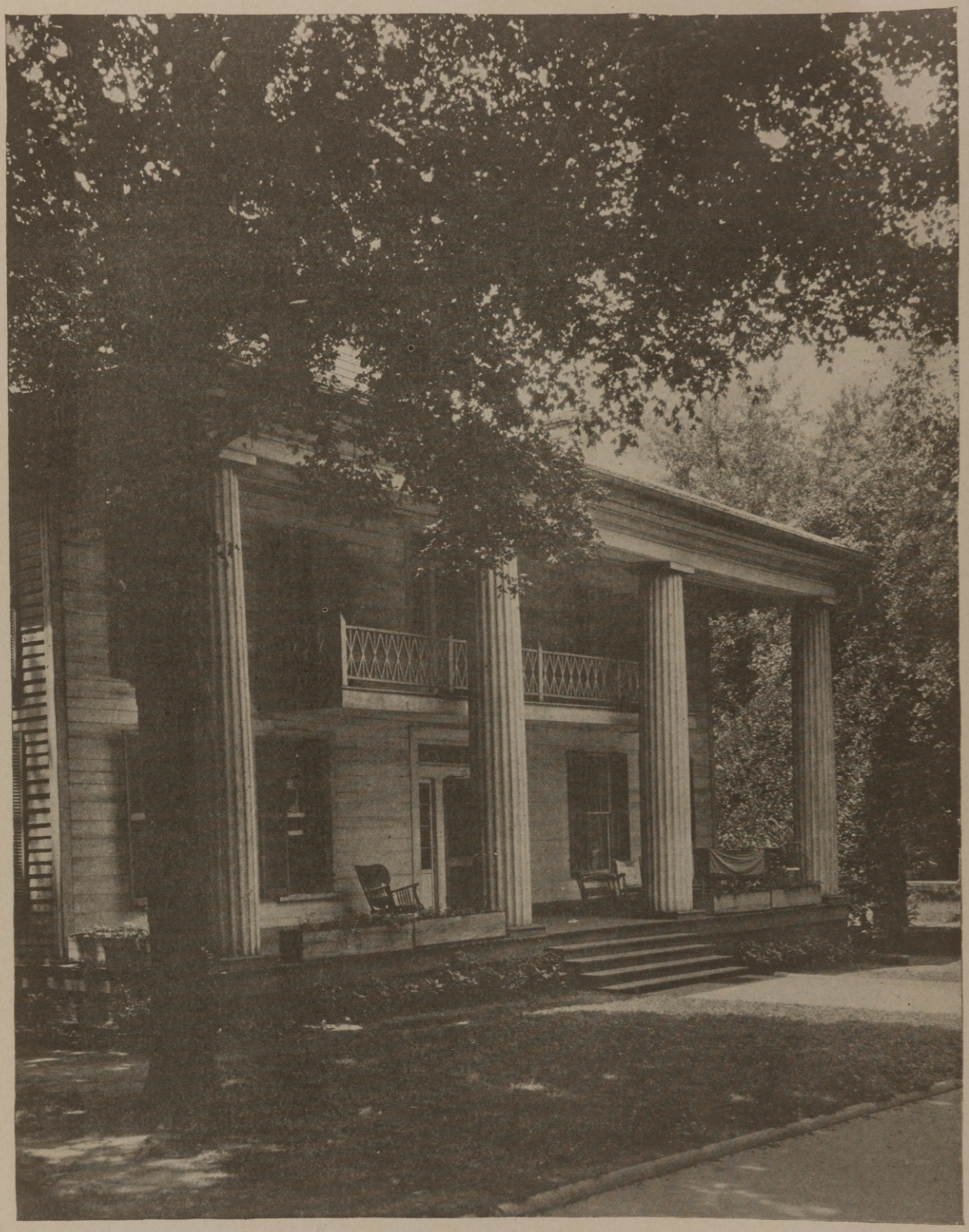
FLOOR PLAN
SOUTHERN PINES COUNTRY CLUB, SOUTHERN PINES, N. C.
AYMAR EMBURY, II, ARCHITECT.



PORTE COCHERE
SOUTHERN PINES COUNTRY CLUB, SOUTHERN PINES, N. C.
AYMAR EMBURY, II, ARCHITECT.



THE BIG ROOM
SOUTHERN PINES COUNTRY CLUB, SOUTHERN PINES, N. C.
AYMAR EMBURY, II, ARCHITECT.



BROUGHTON PLACE, LAGRANGE, GEORGIA

Sometimes wood was used in the place of masonry. It is interesting to note that the columns in this house incline out instead of in, a mistake made in several houses in LaGrange.

The Greek Revival in the South

By Albert A. Chadwick, A. I. A.

A FRIEND wrote me from New England, "The houses here have only a small front entrance with the porches on the side; I like them so much better than Colonial." I told her that those houses were the best of Colonial, and she exclaimed, "Why I thought Colonial houses all had big white columns." My friend is not alone in thinking big columns the hallmark of Colonial, many architects today use the term Colonial just as loosely. Colonial had very few big columns, was not purely classical. Greek Revival on the other hand used the two story columns very largely and was generally strict in preserving the exact classical proportions.

We as Americans but more especially as Southerners should know more of this style, because it may almost be called our own peculiar heritage. It was only in the United States that the Greek Revival was used in residential work. England and France used it in public buildings, but between 1790 and 1850 it was our popular style being used for all classes of buildings, but probably for residences more than any other.

But, you will ask, what is the Greek Revival? It should be more properly called the Classical Revival, as many of the earlier buildings use Roman instead of Greek detail. The best definition I can find is, the Greek Revival is the adaptation of the classical temple form to modern buildings. This takes several forms, the most prominent being a two story columned portico surmounted by a pediment (gable); in the South especially; the pediment was often left off, using either a flat roof with a parapet or a hipped roof; then again sometimes square columns (antae) were used. We of the South see examples of these various types in almost any of our towns or cities; stately dignified old houses that give one the feeling of days when people had time to be cultured; houses set in fenced yards and surrounded by magnolias, crepe myrtles, jasmine and roses. They may be slightly pompous, slightly stiff, but they are replete with atmosphere. One of them is worth a whole street of builder's monstrosities or bungalows.

As has already been said the Greek Revival is not confined to buildings using Greek detail, but covers all that use the temple form, such for instance as St. Michaels in Charleston, with its Roman doric columns and detail. A good many of the earlier buildings, we perhaps might call them transitional, were of this type. However, Greek detail soon superseded the Roman in popularity for several reasons. First, in the last of the eighteenth century several books were published giving carefully measured drawings of the Greek orders and Greek buildings, and these enjoyed a large circulation. Then, during the first part of the last century, the Greek had a decided vogue in France, and we deeply sympathized with France in her struggle for liberty and went to her for a great deal of our inspiration. In 1821-27 occurred the Greek struggle for independence from Turkey, our sympathies were all on the side of Greece and this added the final impetus that lasted till the resurrection of the Gothic in 1850. All these influences affected us but there was another; American's especially the better classes in the South, were making money. They lived on a somewhat more pretentious scale than in the colonial days and they needed houses that would match their mode of life. The Greek Revival, with its roomy columned porches, its large high ceilinged rooms, its general feeling of spaciousness and culture fitted perfectly.

It is especially the style of the South, for it was the man who could almost be called the patron saint of the South, who might as aptly be termed the father of the Greek Revival. Thomas Jefferson, amid all his political worries, all his affairs of state, was intensely interested in architecture and designed many buildings. Among others he planned in 1775 the capitol at Richmond that was built sometime later; afterwards a governor's mansion to be built at Williamsburgh and a professor's house at the University of Virginia. These all used nearly the pure temple form though they used the Roman rather than the Greek detail, in fact, Jefferson never used the Greek. These are the first of the style but they were followed by myriads of others.

Leaving out the earlier or transitional work, there were three well defined periods, the doric, ionic, corinthian. The doric period lasted till 1817 and as its name suggests, the doric columns and intablature was used almost exclusively during this time. The Deering residence at Athens, Ga., is a good example. In LaGrange, Ga., are two or three houses that use wooden doric columns. These are very slender in proportion and like all Greek doric columns they were made to incline towards the in-

THE PRESIDENT'S HOUSE, UNIVERSITY OF ALABAMA, TUSCALOOSA, ALA.
The Ionic Period at its best, a fine old stucco house with unusually interesting cast iron rails.

THE KURD RESIDENCE, MACON, GEORGIA
At times square columns or Antae replace the more conventional round columns.

THE DEERING HOUSE, ATHENS, GEORGIA
An interesting example of the Doric Period and also of the Southern Type with flat roof and the porch on three sides.

THE CUSTOMS HOUSE, SAVANNAH, GEORGIA

This belongs to the last or Corinthian Period. Though the capitols from the Temple of the Winds are unusual.

ST. MICHAELS CHURCH, CHARLESTON, S. C.

"The Greek Revival should be called the Classical Revival." St. Michaels is an example of the earlier work of the period.

side, but the builders set them all so that they incline outward, an interesting example of how a good design may be ruined in execution. The ionic period occurred from 1817-1833, one of the best examples of this period with which I have come in contact, is the president's house at the University of Alabama, Tuscaloosa, Ala., a fine old stuccoed house with big stuccoed brick columns. The last period was from 1833 to 1850. The type most commonly used during this time was the order as used in the Choragic monument of Lysicrates. The state capitol at Montgomery, Alabama, is a fine example. However, there were exceptions to this rule, the customs house at Savannah uses the order from the tower of the winds. This is one of the most interesting buildings of the period, more nearly like a modern building than most of those in its day.

The material most commonly used was brick, stuccoed. Even the columns were built of brick, then stuccoed and the flutes run in the stucco. However we find many instances, such as the houses mentioned at LaGrange, where wood was used. Cast iron was a favorite material for rails, grilles, column caps and bases, and even in some instances for ornamental lintels over windows. Peculiarly good examples of such cast iron work are to be found at Montgomery, Alabama. Bricks and stone were used to some extent but not so much. The object was to reproduce a stone building as nearly as possible, but cut stone was hard to get and expensive, it was a long ways to the quarries, and so, stucco was used, generally marked off to imitate cut stone. This stucco in spite of the fact that they had only lime, is remarkably good and has generally withstood the test of time.

In the Southeastern states, Georgia, Alabama, Mississippi, we find many fine examples of the Greek Revival and in nearly all of its variations. Of these states only Georgia was settled during the colonial period, and that only on the outskirts, but in the early part of the last century settlers flowed in in large numbers, wealth grew rapidly, there were large plantations and thriving towns. Here we find a type of house almost unknown further north, the house being entirely surrounded or surrounded on three sides by a columned porch, and with a flat or hipped roof. Such buildings were especially adapted to the climate, one could find a shady spot on the porch at any time of the day in summer, and the shaded rooms with their large win-

dows and high ceilings were comfortably cool. These windows often extended to the floor and were generally made with a pocket in the bead for the lower sash. These houses were built sometimes of stuccoed brick, often of wood. However, they cannot be called typical because we also find houses with the pediment suppressed, but only a portico in front; houses with the portico in front and a pediment; smaller houses with only a columned entrance.

Such was the Greek Revival. It was superseded by many monstrosities, the Gothic so called, mansard roofs, Swiss Chaletes and now we are adding to the general polyglot, English and Italian, Colonial and Spanish, the bungalow and other nondescripts, and I rather wonder at times whether we are making a mistake, whether these various styles are not so foreign to our culture, our climate, our landscape, that they can never be really acclimated, made to look as though they were part and parcel of their surroundings. Could we revive the Greek Revival, the style of our fathers and make it fit our present day life? Certainly, if it could be done, the South would regain a great deal. Now our cities, even our country, is losing in character, becoming nondescript, one would hardly know whether he was in Alabama or Ohio, Georgia or New York. Perhaps that is as it should be. Architecture after all infallibly represents the people who build it. However we strive to the contrary, the imprint of our character will be there. At the present time we are fast losing sectional feeling, sectional differences; a man in New England is little different from the man in Florida, and so perhaps it is right that there should be no great difference in their houses.

However, there is one thing we might well do. These old houses are fast disappearing, either through neglect or because they must give place to more modern buildings. It would be well to preserve them for future generations by both photographs and measured drawings. This might well be the work of our Architectural Schools of the South, it would certainly be a work of great merit.

GREENWOOD, THOMASVILLE, GA.—BUILT 1835.

SOME RESIDENCE WORK

of W. DUNCAN LEE, *Architect*
RICHMOND, VA.

ENTRANCE DETAIL
HOUSE OF C. C. SAMPSON, ESQ., HARRISBURG, PA.
W. DUNCAN LEE, ARCHITECT.

FRONT FACADE
HOUSE OF C. C. SAMPSON, ESQ., HARRISBURG, PA.
W. DUNCAN LEE, ARCHITECT.

FRONT FACADE
HOUSE OF GROVER C. DULA, ESQ., RICHMOND, VA.
W. DUNCAN LEE, ARCHITECT.

REAR FACADE

END FACADE

HOUSE OF GROVER C. DULA, ESQ., RICHMOND, VA.

W. DUNCAN LEE, ARCHITECT.

Fontainebleau School of Fine Arts

The Fontainebleau School of Fine Arts, devoted to the study of Architecture, Painting and Sculpture, with its sister school, the Fontainebleau School of Music, opens each year on June 25th for a three months' term ending September 25th. These schools, conceived by M. Maurice Fragnaud, *Sous-Prefet* or Governor of Fontainebleau, have functioned now for several years and have achieved a great success. They are under the direct patronage of the French Government through its Minister of Fine Arts, and are located in the Palace itself. Their Professors are chosen from among the most distinguished French artists and architects.

The Fontainbleau School of Fine Arts does not duplicate any course of study that now exists in France or America. It is a summer school only and is designed as a sort of post-graduate school for advanced students, who, under an intensive system of instruction, can benefit by their unique surroundings. The studios and drafting rooms are in the Palace itself—a palace completely furnished and justly considered one of the very finest in Europe, in which the pupils may study at their leisure the various styles and decorative features that have served as the inspiration of artists for centuries. We now possess in America every opportunity for technical training in the Fine Arts, but this school aims to supplement this and widen the artistic horizon of its students by travel and by contact with the artistic and historic tradition of an older civilization.

For Painters and Sculptors: Atelier work in the Palace Studio, specializing in the study of the arts of Mural Decoration and the study of Ornament. Special work in Tempera and Fresco. Frequent trips to Paris and elsewhere to study the work of the older and the modern masters.

For Architects: Atelier work in the Palace drafting-room. Specialized study of French Archecture, past and present, and of its allied arts. Study trips to places of architectural interest, covering a wide area.

Two prizes are to be awarded in the Department of Architecture; one of one thousand fracs, given by the Massachusetts Institute of Technology; the other of 600 francs given M. J. P. Alaux.

For all: Lectures on the History of Painting, Sculpture and Architecture; on the French styles; classes in French and French History, etc. Excursions by motorbus, under expert artistic guidance, to chateaux, churches and other monuments of interest in the neighborhod of Paris.

The School is under the eminent directorship of M. Victor Laloux, Membor of the Institute, Inspector-General of the National Monuments of France. The Resident Director is M. Jacques Carlu, Grand Prix de Rome, and the Faculty includes M. M. Bray and J. P. Alaux (Architecture); A. F. Gorguet, Jean Despujols (Painting); Baudouin, St. Hubert (Fresco); Saillens (History), besides other distinguished visiting professors and lecturers.

The American organization is concerned solely with the recruiting of students. It has been placed, by the French authorities, in the hands of Mr. Whitney Warren for the Department of Architecture and of Mr. Ernest Peixotto for the Department of Painting and Sculpture. They, in turn, have organized the committees that are aiding them in making the schools known in America and in selecting its students. All parts of our country have been represented in the student body, and for this reason the American Committee is working in connection with the heads of our leading art schools and colleges. It feels that it is offering a unique opportunity to American students.

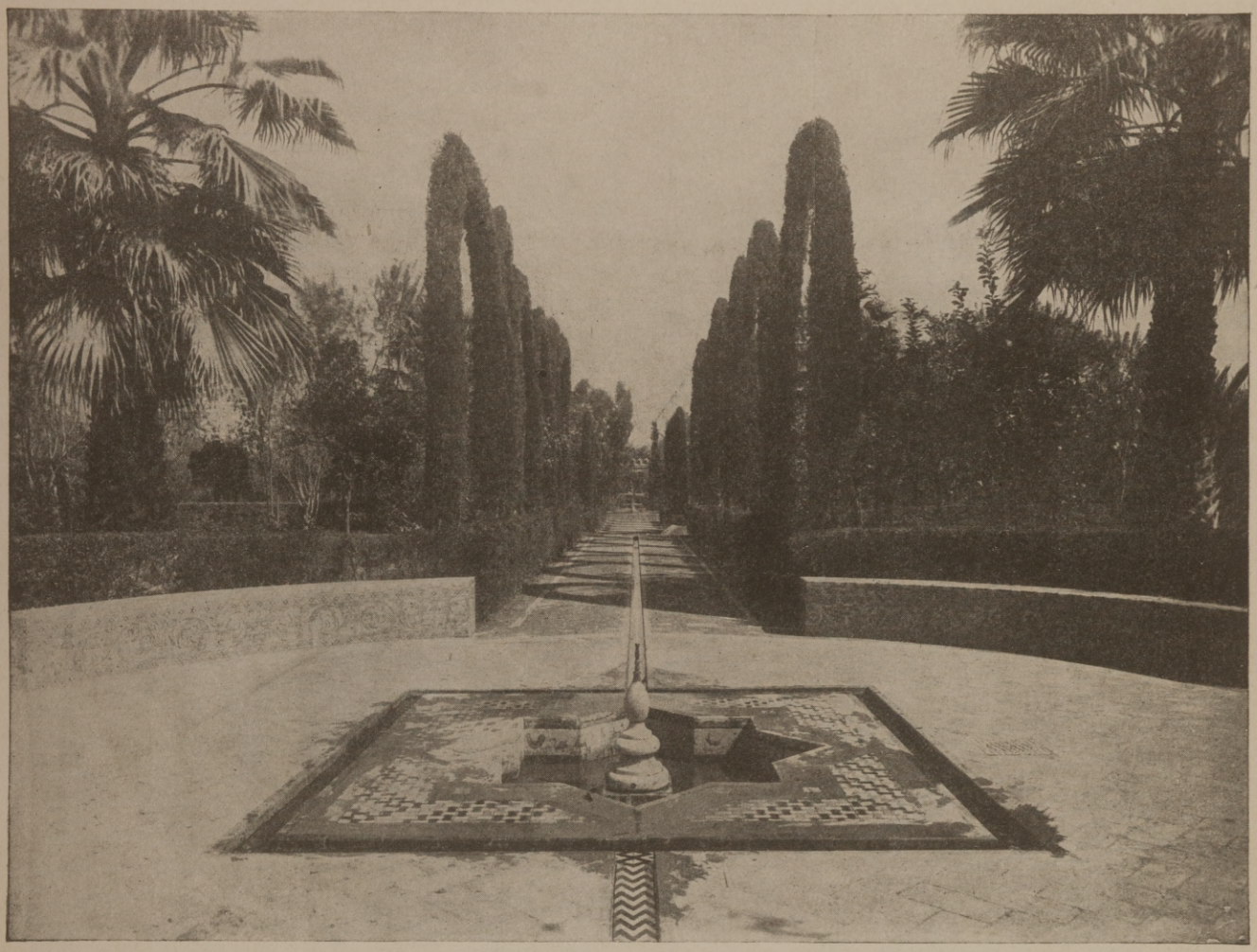
The number of students in the School of Fine Arts is limited to one hundred. All applications for admission should be accompanied by a note, clearly stating where, with whom and for how long the candidate has studied: and this note must be supplemented by a letter of recommendation from the director of the school, or the artist, sculptor or architect with whom the candidate has studied or worked; with two other references, as to character, from responsible people.

All applications should be made: for architects, to Mr. Whitney Warren, and, for Painters and Sculptors, to Mr. Ernest Peixotto, eare Fontainebleau School of Fine Arts, National Arts Club Studios, 119 East 19th Street, New York.

By reason of the low cost made possible by the French authorities, the summer session of the Fontainebleau School of Fine Arts is brought within the reach of most students. Board, lodging and tuition fees, with the trips by motorbus included, are 5,000 francs for term of three months, payable in advance at the New York office. The registration fee is $10. Thus with minimum rates on steamers obtainable through the school, $500, at the present rate of exchange, should represent the entire cost of a summer spent at the School.

It is hoped that ateliers, architectural clubs, schools and colleges will found scholarships of $500 each, to be awarded to their most promising students. As the Fontainebleau School of Fine Arts is an effort on the part of France to render a real service to America, the American Committee feels that a knowledge of this rare opportunity should be clearly brought before every student who might wish to profit by it.

Current Architectural Publications



PARQUE DE MARIA LUISA, SEVILLE
Brick rotunda adorned with tile

SPANISH GARDENS AND PATIOS. By Mildred S. Byne and Arthur Byne. Published by J. B. Lippincott Co. Price $15.00.

The unique decorative possibilities of Spanish design are just beginning to be realized by architects and garden builders in this country. Not only in Fiorida and the southwest, where there is already a Spanish tradition to maintain, but wherever a summer home demands a garden, there is inspiration for a new and striking beauty in Spanish garden architecture.

Nor is this all. A more and more important detail of modern country-house planning is the outdoor living-room, a delightful invention whereby the American family, as much as possible, lives an outdoor life under shelter. Long, long ago the Moors, in a similar intent to draw outdoors indoors, evolved the patio, at once an indoor garden and an outdoor salon. Today it is coming into its own as a very practical solution in house planning and a unit that offers unlimited suggestions for decoration.

More than this, garden lovers and devotees of beauty will find the characteristics of the Spanish garden a study of fascinating historical and artistic interest.

The true Spanish garden is of Asiatic derivation; it harks back to Persia during her splendor under the Sassanids—the garden the Arab took when he conquered her. Then when Spain, too, had been added to the Mohammedan conquests the Moors carried the pattern to the sunny slopes of Andalusia. Conforming to Moslem tenets, the Spanish garden has little in common with the vast English or French park, or the highly architectonic

villa garden of Italy. Not recreation or grandeur, but privacy, shade, fragrance, repose are the desiderata.

To us, with our English traditions, a garden primarily implies flower beds, green lawns with fringes of bloom. To the Arabs and Moors, a garden was a fundamentally artificial production, a man-made design that permitted nature to play a small part, nothing more. More important than nature's gift of bud and leaf was man's contribution of glazed polychrome tiles. These, even more than the scant use of flowers, make the Spanish garden unlike others of Europe. Let no one dream of possessing a Spanish garden or patio who is hostile to the wholesale use of tiles in fountains, pools, benches, steps and walks. In mosaics of geometric and floral designs they give a colour to the garden that is brilliantly effective against its background of white stucco wall.

An important accessory of the Spanish garden, second only to the glazed polychrome tiles (azulejos), are flower pots of earthenware, glazed and unglazed. Garden walks are edged with them, flower beds are designed with them, parapets are crowned with them. Generally they are terra cotta, but often they form part of a decorative scheme and are painted to take their part with the polychrome tiles in the colour layout. In these pots are displayed the greenery and flowering plants of the general concentric design.

But an even more indispensable part of the garden design than plants themselves is water, seen and heard. In arid Spain a little had to be made to look like a great deal. There could be no prodigal pools or artificial lakes. A decorative benefit must be squeezed from every drop through the special designing of fountains and basins. Wherever water has to be "used with due regardful thrift" the Andalusian method is worth studying. In our own southwest, where it costs more to water the garden than to heat the house, it offers a valuable suggestion.

As has been indicated, the patio is an indoor garden, with growing plants and vines in its open centre; an outdoor parlor, with chairs and tables and vargueno cabinets and pictures under its roofed arcades. With stucco and tile wainscot, painted wooden ceilings and panelled door giving access to the various rooms opening from it, the patio is an institution of graceful charm and adaptability.

Since the monastery has always been and still is a very prominent factor in Spanish life, no collection of Spanish gardens and patios would be complete without it. There have therefore been included in this volume a few old Andalusian cloisters because they represent the kind of arcade and court that served as prototype for the early missions built by Spanish priests and monks in America.

A word as to the illustrations offered. In presenting Spanish gardens it would be a pleasure to show, as might a garden book dealing with any other country, charming old plates engraved in the eighteenth century. Spanish archives, however, yield no such treasures. At a time when all over Europe it was the ambition of everyone who owned a fine garden to have it engraved, the Spaniard kept his garden for his secret delight. The illustrations of this volume, therefore,—photographs, sketches and plans—were made first-hand. It thus becomes a rare and valuable collection, comprehensive, authoritative, not to be duplicated in any other book on garden architecture. It includes the finest examples of gardens and patios in Cordova, Seville and Granada, with the special types of Majorca, the gardens "Del Rey Moro," Ronda, and Las Ermitas, Sierra de Cordova, with detailed study of the Generalife, the Alhambra and Alcosta Garden, Granada, and the Alcazar Gardens, Seville. Landscape architects will be particularly interested in measured drawings of important gardens.

Similarly, there has been little written on Spanish gardens and nothing complete or comprehensive up to this time. From a long residence in Spain and sympathetic acquaintance with the country and its people, the authors have had unusual opportunity of studying both garden design and tradition. Theirs is the first authoritative work on the subject.

This exclusiveness is in complete accord with the Andalusian's conception of a garden. His garden is not a sentimental spot with old-fashioned flowers running riot; no "sweet confusion"; none of the picturesque beauty of the English St. Catharine's Court. It is, essentially, just a small, retired spot, not costly, yet very sure of its place among gardens and proud of its ancient lineage, for it was created when the rest of western Europe was still semi-barbarous.

AMERICAN HOMES OF TODAY. By Augusta Owen Patterson, New York: The MacMillan Company. Cloth, 9x11½", 420 pages, numerous plates. Price $15.00.

A casual perusal of the plates of this book will certainly impress the fact that from coast to coast distributed over this country, there are many magnificent residences, which are probably unequaled in design, appointments and setting elsewhere in the world. England has the reputation for fine estates and has the advantage of long development, but the progress that has been made in this country in the last quarter century is of a nature to awaken the interest of any student. This is not a book of small

homes, it is a well coordinated study of the finest types of residential architecture, both in town and country. The authoress has approached her subject with a breadth of vision which to our knowledge is not presented in other similar works. The subject matter is 20th century development. The background leading to that development is very well sketched in. Nineteenth century American architecture, particularly during the latter half of the century, was experimental. Accumulated wealth sufficient to produce fine estates was in the makings. The demand had really not been created. Disregarding the side issues of architectural atrocities, the bold work of Richardson and the revival of the Classic and Renaissance by a number of capable architects were the outstanding features. Really it is only with the beginning of the 20th century that we find the conditions right for such an architectural development as is evidenced by the magnificent collection of illustrations in this volume.

The first chapter, 'The Historic Background," gives a brief resume of prior conditions. The following chapter, "The Aesthetic Problem," and the chapter of Definitions, generally define the seven styles which dominate the present day design. The illustrations of the first three chapters are selected with particular pertinence to the subject matter and with the interesting collection of airplane views which the authoress has seen fit to apologize for as not being related directly to her immediate topic really greatly assist the reader.

The seven dominating styles treated in separate chapters are the Colonial, the English Manor, the Italian Derivative, the French style, the Elizabethan Picturesque, the Modern Picturesque and the Mediterranean Model. One point well driven home is that the day of the copyist is past. The modern house of the type under discussion is not a replica. It is designed to meet the modern needs in the spirit of some particular style. It has a freedom of expression and a development of mass which surrounds and gives proper setting to ornamental features which may or may not be actual reproductions of masterpieces of workmanship. Not infrequently either an original or a replica of a fine doorway, stairway, fireplace or even an entire interior is introduced into a modern building, but the point is that it fits, it is not stuck on. It is a proper part of the whole and is suitable in its surroundings. Each chapter on a style is appropriately illustrated by frequent plates through the text and by groups of plates following each chapter.

Other chapters of the book cover the garden, farm groups and incidental buildings, the city house and the decorative room which is frequently a feature in an expensive house whether purely as an adornment or as a setting for tapestries, paintings or other collections possessed by the owner. All may not agree with the viewpoint and criticism of the authoress, but the extensive collection of beautifully prepared illustrations lays the cards on the table as it were, and if dissatisfied the reader is at liberty to draw his own conclusions.

Statistics on Southern Prosperity

(Semi-Annual Survey, G. L. Miller & Co., Inc.)

Building in 138 Southern cities during 1924 gained 10.0 per cent over 1923, 25.0 per cent over 1922, and 100.0 per cent over 1921.

The estimated total building in sixteen southern states, both in cities and smaller towns, is placed at $1,000,000,000.

Actual statistics compiled from 148 cities and the suburbs of 30 cities reveal a total of $640,040,-750 for the year.

The last six months of 1924 gained 21.6 over a similar period for the previous year.

In point of relative gain, Florida led all southern states with 58.0 per cent. Alabama was second with 51.8 per cent.

Texas led all southern states in point of volume of building, amassing a total of $86,579,120. Florida was second with $71,518,326.

Baltimore topped the list of cities with $54,-925,260. Dallas led the cities of the farther south with $26,402,814. Birmingham led the southeast with $20,247,707.

The combined permits of Miami and Miami Beach aggregated $24,052,914, only slightly less than Dallas. Including the suburban developments, Miami exceeded all cities of the farther south.

In percentage of gain, Birmingham led the cities with twenty millions or over with 66.4 per cent; Miami led those over ten millions with 135.7 per cent; Spartanburg, S. C., those over two and a half million with 252.5 per cent; Clearwater, Fla., those over a million, with 338.0 per cent, and Union, S. C., those under a million with 386.0 per cent.

Approximately $85,000,000 was invested in new buildings for schools and colleges, of which one-fourth was in college buildings and another quarter was devoted to high schools of the most modern type.

The Duke Foundation, established by James B. Duke, a native southerner, will yield returns on a trust fund eventually to reach $80,000,000 for the benefit of colleges, hospitals and religious work in the Carolinas.

A total of $135,000,000 was invested in hotels which were finished, begun or planned during 1924. Many of these hotels range in cost from one million to six million dollars.

A total of $216,000,000 was spent in the sixteen states on improved highways.

Of this amount, $138,948,234 was spent by the state highway departments on trunk highways, of which 9,141 miles were completed and 7,694 placed under contract.

North Carolina ranked first in highway building, expending $21,231,399 on the construction of 1,029 miles, with 1,336 miles still under contract.

There are now 10,635 miles of hard surfaced highways laid down in the south, of which 5,811 miles are cement.

Hydro-electric plants in operation during the year have added 210,400 horsepower to the available power of the section. Developments now in progress will produce 726,850 horsepower additional.

Plans have been definitely formulated and permits secured or requested for power developments to generate a total in excess of 4,000,000 horsepower from southern streams.

A giant 100,000-horsepower steam generating plant, to be fueled with natural gas, was started at Sterlington, La.

Sixty per cent of all new railway lines laid down in 1924, the greatest railroad railroad building year for the country at large since 1919, was laid in the south.

Forty per cent of new signal installation was on southern lines. Many millions of new improvements to existing lines, shops and equipment were spent by the southern roads, several of which were the leading roads in the country in point of earnings during 1924.

More than $150,000,000 was invested in new industrial plants in the south during 1924, half of which was equally divided between textiles, iron and steel, and petroleum refining.

The total industrial development of the south, according to the last census, is over $6,000,000,-000 in investment and $9,000,000,000 in value of finished products.

There were 300,000 spindles and 10,000 looms installed in new textile plants or additions to existing plants during the year. Five new cotton mills were started in the state of Texas.

New England manufacturers continue to extend their holdings in southern textile mills. The Borden

mills moved 88,000 spindles and 1,960 looms from Fall River to Kingsport, Tenn.

Wtih more than a million and a half more spindles in place, the New England mills had three and a half millions less active spindles than southern mills during the summer. In active spindle hours, the south led New England by 100 per cent.

The Tennessee Coal, Iron and Railroad Company spent $10,000,000 in extending and improving its steel mills in the Birmingham district.

More than $15,000,000 was spent in enlarging the refining facilities of leading oil companies in the Texas petroleum fields.

The Ford Motor company established or enlarged seven large assembly or export plants in seven southern cities at a cost of $7,100,000.

Six immense Portland cement plants, having an annual capacity of 5,000,000 barrels of cement, were erected in various states during the year.

The growth of the paper-making industry in southern timber belts was emphasized by the erection of three new mills and the announcement of two very large new projects.

Business leaders and governors of federal reserve banks predict a more optimistic attitude in business during 1925, with general business becoming more active.

Money for legitimate development is found ample for southern needs. Northern investors are looking with greater approval on the possibilities of southern development than ever before.

The record building tide now in progress will continue during 1925, with good gains expected during the first of the year.

ANNOUNCEMENT

The Okonite Company has opened an office at 310 South Michigan Avenue, Chicago, and has taken over the sale of Okonite products in the western territory. Charles E. Brown, formerly Vice-president of the Central Electric Company, has been appointed vice-president in charge of the territory west of Pittsburgh and east of the Rocky Mountains of the Okonite Company, with headquarters in Chicago. A. L. McNeill, formerly manager of the railroad department of the Central Electric Company, has been appointed manager of the railroad department. E. H. McNeill, formerly railroad sales representative of the Central Electric Company, has been appointed sales engineer. Ray N. Baker, formerly railroad sales representative of the Central Electric Company, has been appointed sales engineer. L. R. Mann, formerly sales representative of the Central Electric Company, with headquarters at St. Louis, has been appointed manager of the St. Louis office. Joseph O'Brien, formerly railroad sales representative of the Central Electric Company, has been appointed sales representative, with headquarters in Chicago. C. E. Brown, Jr., formerly country sales manager of the Central Electric Company, has been appointed manager of the light and power department.

GEORGIA MARBLE SELECTED FOR $3,000,000 CAPITOL BUILDING AT SAN JUAN, PORTO RICO.

The Porto Rican Government is erecting a Capitol Building at San Juan, Porto Rico, the total cost of which will approximate $3,000,000 to $4.000,000.

The architect of the building is Raphael Carmoega, the architect for the Porto Rican Government, located at San Juan.

Competitive bids were received last July on American white marbles; the general contract for the building was awarded to Francisco Pons of San Juan. The contractor negotiated with certain Italian firms for supplying Italian marble for the building in lieu of the American marbles called for by the specifications, and received permission from the Porto Rican Government under conditions to substitute the Italian product. These negotiations proceeded to the point where it was practically decided to use the Italian product in order to effect a considerable saving in the cost, due to the low foreign labor cost. At this stage a member of the Georgia Marble Co. made a trip to Porto Rico and with the assistance of the Governor and Commissioner of the Interior succeeded in closing the contract for the use of Georgia marble for the entire exterior of the Capitol building.

The work on this contract is proceeding rapidly and shipments will commence about the last of March. The shipments of marble are to be completed in about a year.

The exterior of the building is to be finished in Georgia Marble from the grade to the top of the dome, requiring approximately 250 carloads of marble.

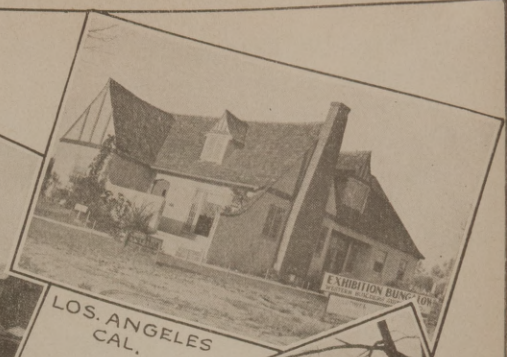
Shipments on this contract will be made through the Port of Jacksonville, Fla., where steamers will be loaded, sailing direct to San Juan.

OKONITE OPENS ST. LOUIS OFFICE.

In order to best serve the interests of their customers in the middle west, The Okonite Company, Passaic, N. J., manufacturers of Insulated Wires and Cables, have opened a sales office in St. Louis at 444 Frisco Building, with Mr. L. R. Mann in chrage.


CHICAGO, ILL.


CLEVELAND, OHIO.



LOS. ANGELES CAL.


CLEVELAND, OHIO


RIVER FOREST ILL


NEW ORLEANS LA.


INDIANAPOLIS, IND.

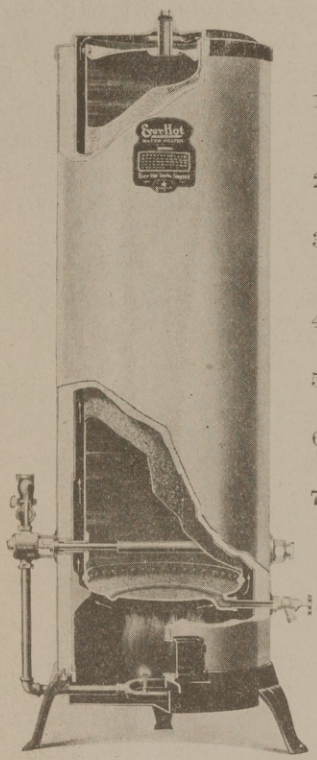
THESE

SEVEN MODEL HOMES

Are All Equipped with EverHot Automatic Water Heaters

It is a significant fact that Model Homes all over the country use the EverHot. It is a heater that no one hesitates to sponsor.

Note the construction—boiler—heavier than double extra heavy range boiler—entire outside surface of boiler is heating surface—more heating surface in proportion to burner capacity than any heater made, therefore highly efficient—a trouble-free burner—a long, narrow, tapered flueway—thick rock wool insulation—combining simplicity, high efficiency and durability.



Addresses of Model Homes Reading from left—

1—The Chicago Daily News Model Home—Lunt Ave., near Pingree Ave., Chicago, Illinois.

2—Model Home at 1211 Cleveland Heights Bldvd., Cleveland, Ohio.

3—Western Builders' Supply Co.—Exhibition Bungalow, Santa Monica (suburb of Los Angeles), California.

4—Electrical League Model Home—11320 Lake Avenue, Cleveland, Ohio.

5—The Home Beautiful—River Forest (suburb of Chicago), Illinois.

6—Model Home—3511 Napolean Avenue, New Orleans, La.

7—Model Home of The Indianapolis Home Builders' Assn., 5133 North Capitol Avenue, Indianapolis, Ind.

Prices—Junior, $99.00; Senior, $160.00

The Technical Manual for Architects Will Be Sent Upon Request.

EverHot Heater Company

5231 Wesson Ave. **Detroit, Mich.**

Construction Notes

St. Augustine Votes $1,000,000—Will Build $600,000 Bridge.

St. Augustine, Fla.—By a majority vote of more than eight to one this city has voted bonds in excess of $1,000,000 for improvements, to include an ornamental steel and concrete bridge over Matanzas River to Anastasia Island, construction of a modern soft-water system and for taking up outstanding water bonds.

Plans for the bridge, estimated to cost $611,000, have been prepared by J. E. Greiner & Co. of Baltimore, and it is thought that construction bids will soon be invited. The structure will be 2460 feet long, including approaches, and 1545 feet between abutments. It will be of steel and concrete and will carry a 22-foot roadway and two 5-foot sidewalks.

Construction of the proposed water system is expected to begin when work on the bridge is started. E. C. Craig, water engineer, is handling preliminary details.

Construction of Big Terminal Approved.

Construction must begin by July 1 on the proposed $3,000,000 terminal improvements of the Pennsylvania Railroad at Little Creek, near Norfolk, Va., which were described some time ago in the Manufacturers Record. A report from Norfolk says that the Interstate Commerce Commission has authorized the work, but has stipulated that it must begin on the date mentioned and be completed within two and a half years. The Commission's report upon the plans states that the traffic to be interchanged with other lines is estimated at from 180,000 to 200,000 cars a year, that the improvements are designed to expedite traffic movement and to reduce expenses; the water haul across the bay to Cape Charles City will be cut from 36 to 24 miles. The actual cost of the entire project is estimated at $3,229,740, which comprises $942,500 for the land, $560,674 for track, etc., $229,000 for stations and offices, $1,332,477 for docks and wharves, and some other items.

New $1,200,000 Building for Asheville.

Asheville, N. C.—According to an announcement by H. L. Parker, connected with the E. W. Grove interests here, an arcade and office building to cost $1,200,000 will be erected by Dr. Grove on the plaza in the Battery Park development. Plans for the structure, which have been drawn by C. N. Parker of Asheville, call for a building 395 by 172 feet, two stories, with the exception of a 7-story tower, 60 by 60 feet. Arcades will extend north and south and east and west through the structure, those on the first floor to be 18 feet wide and on the second floor 60 feet. Stores on the second floor will be reached from the arcade and will be surrounded by balconies. A roof garden will be provided on top of the structure, and elevators installed to serve the tower.

May Build 24-Story Building at Houston.

Houston, Texas.—Details are being arranged by Mrs. Neils Esperson of this city for the erection of a 24-story office building here to contain a floor space of approximately 4,000,000 cubic feet. The structure will be of Spanish architecture, and will face 155 feet on Travis street and 151 feet on Rusk avenue. To add to the beauty of the exterior finish, it is planned to build a tower topping the 24th floor and surrounded by a roof garden. A feature of the building will be a large auditorium for the use of civic gatherings and business meetings.

The building will be equipped with eight high-speed elevators, artificial cooling system, radio broadcasting station and an intercommunicating telephone system. John Eberson of Chicago is the architect.

$3,000,000 Bond Issue by Jefferson Hotel Company.

St. Louis, Mo.—Stockholders of the Jefferson Hotel Co., of which Lyman T. Hay is president, have voted to issue bonds in the amount of $3,000,000, of which $1,400,000 will be used for the construction of an addition and the remainder for refunding purposes. The proposed refunding bonds will be issued immediately; those for construction will be issued when work on the addition has begun.

Plans for the new addition, as previously reported by the Manufacturers Record, are being prepared by T. P. Barnett & Co. of St. Louis, and call for two 13-story wings, west of the hotel on Locust and St. Charles streets, and a large banquet hall between them, this section to be three stories. A roof garden on the north wing will also be pro-

vided. With the completed addition, the hotel will contain nearly 800 rooms.

Planning $400,000 Theater at St. Louis.

St. Louis, Mo.—Plans have been announced by Joseph Oppenheimer, proprietor of the Garrick Theater here, for the erection of a new $400,000 theater, option having been secured on a site fronting 110 feet on 7th street and 135 feet on Chestnut. Tentative plans provide for a two-story structure with one balcony to provide a seating capacity of 1675.

Soon to Receive Bids on $350,000 Church.

Memphis, Tenn.—Plans have been distributed among contractors and bids will be received until February 24 for the new $350,000 building to be erected here for the Idlewild Presbyterian Church. The structure will be fireproof, of field stone construction, with entrances trimmed in cut stone. It will contain Sunday-school rooms for departmental work and main auditorium to seat 1500. Charles O. Pfeil and George Awsumb of Memphis are the architects.

Macon Plans to Build $1,000,000 Hotel.

Macon, Ga.—Tentative plans have been outlined by the Chamber of Commerce, Arthur H. Peavy, general secretary, for the erection of a $1,000,000 winter resort hotel on a 470-acre tract of land in North Macon which has been tendered for the purpose. There will be a golf course and other facilities for the convenience of tourists. Harry S. Strozier, A. O. B. Sparks and Wilbur Collins have been appointed an organization committee to form a hotel corporation and arrange for placing an initial stock issue.

It is understood that the Hockenbury System, Inc., will endeavor to raise $600,000, while $400,000 will be provided by the sale of bonds. The structure will have about 200 rooms and will be operated by the American Hotels Co. of New York.

Plan $3,000,000 Hotel Apartment Near Miami.

Details are being arranged by the Florida Cities Finance Co., M. C. Tebbetts, president, Miami, Fla., for the erection of an 18-story hotel-apartment building at Fulford-by-the-Sea, near Miami, to cost about $3,000,000. The structure will consist of three units, the central one to be 18 stories, with two wings, each of nine stories, to give a frontage on Fulford boulevard of 360 feet. The basement will provide space for billiard and pool rooms and bowling alleys, while a roof garden will be located on the ninth floor of one wing. The other wing will contain a ballroom 128 by 60 feet.

On either side of the main entrance there will be a porch 96 by 16 feet. The lobby will measure 96 by 40 feet. Herbert J. Aldwinkle, an English architect engaged by the Florida Cities Finance Co., designed the building. The company advises that it will be built by its own construction firm, work to begin in the summer.

$350,000 Addition to Kansas City Elevator.

Kansas City, Mo.—A $350,000 addition to the Murray grain elevator in North Kansas City will be built by the Chicago, Burlington & Quincy Railroad Co., A. W. Newton, chief engineer, Chicago. Contracts have not been awarded.

The addition, it is said, will comprise several new tanks of reinforced concrete construction, and will increase the capacity of the elevator from 1,600,000 to 2,600,000 bushels. It is leased by the Norris Grain Co.

New $1,200,000 Hotel for Kansas City.

Kansas City, Mo.—General contract has been awarded to C. O. Jones of this city for the construction of a new hotel to be erected here by the Armour Building Co. at a cost of $1,000,000 for the building and $200,000 for furnishings and equipment. The structure will be 50 by 142 feet, 16 stories, of concrete and brick, with concrete foundations. J. T. Bailey of Kansas City has been awarded contract for heating and plumbing, and the La Pierre Electric Co., also of Kansas City, for electrical work. Phil Drotts of this city is the architect.

$2,500,000 Theater and Office Building Planned for Kansas City.

Kansas City, Mo.—Plans are being prepared by Robert F. Gornall of this city for a 12-story theater and office building to be erected here at an estimated cost of $2,500,000. The building will be fireproof, of brick, with cut stone and terra cotta trim, 160 by 158 feet; the theater will seat 2500. It will be located at the southwest corner of Broadway and Valentine road, site being owned by E. J. Willett of Kansas City.

Plan to Build 340 Dwellings in Baltimore at a Cost of $10,000,000.

A development estimated to cost ultimately $10,000,000 has been undertaken in Baltimore by the Progressive Building Co. of this city, of which L. Schoenlein, Jr., is president and Joseph L. Kearney secretary. Property to be developed embraces about 14 acres, on which streets and grades are being built.

It is planned to erect 340 two-story brick dwellings, 1000 to be built this year. Mr. Schoenlein is the architect for the houses and E. J. Hecker is landscape architect. Construction will be handled by the company.

Miami Votes $1,500,000 of Bonds.

C. L. Huddleston, finance director of the city of Miami, Fla.. advises that Miami has voted $1,500,000 of bonds, which will be offered for sale after validation, about March 1. Proceeds will be used for the following purposes: Extending wharves and dock, $400,000; public parks, $400,000; water-works, $250,000; street railway extension, $75,000; incinerators, $50,000; public market, $75,000; city's share of sanitary sewers, $100,000; widening streets, $100,000, and municipal hospital, $50,000.

Knoxville Journal Plans Five Additional Stories.

Knoxville, Tenn.—Plans are being prepared by R. F. Graf & Sons of this city for five additional stories to the building of the Knoxville Journal for general office purposes. The present structure is two stories, with foundations sufficiently heavy to carry five additional stories. It has a frontage on Gay street of about 70 feet. Detailed plans and specifications are being prepared and estimates taken; the date of beginning construction has not been announced.

Ringling to Build $1,000,000 Hotel.

Sarasota, Fla.—A 12-story hotel to cost about $1,000,000 will be erected here by Charles Ringling & Co., according to a recent announcement. Plans for the building have been completed by Pringle & Smith of Atlanta, and work will begin as soon as possible. Construction will be handled by Adair & Senter, also of Atlanta.

Lakeland to Sell $728,000 of Bonds.

Lakeland, Fla.—The City Commission of Lakeland plans to sell $728,000 of bonds and will receive bids until February 24 for $300,000 of sewer bonds and three issues of street improvement bonds aggregating $428,000. All issues are of $1000 denomination and are a direct obligation on the city, payable out of an unlimited tax. J. L. Davis is city clerk.

To Build Five Apartments at Cost of $800,000.

Washington, D. C.—Five apartments, to cost about $800,000 in the aggregate, will be built by Harry Wardman of this city at the intersection of First and M streets and New York avenue. The site contains more than 47,000 square feet. Each apartment will be four stories, of English and Tudor architecture and of Indiana limestone construction. Approximately 200 apartments will be provided.

Contract for $400,000 Section of University Library.

Atlanta, Ga.—General contract has been awarded to Griffin-Hodges Co. of this city for the new library to be erected here for Emory University. The building will be 170 by 75 feet, four stories, of reinforced concrete and finished in Georgia marble. It will cost $400,000 and has been so designed as to permit the erection of two wings in the future, the building complete to cost $1,000,000. Edward L. Tilton of New York is the architect; Ivy & Crook, associate architects.

Contract for $500,000 School Building.

Richmond, Va.—General contract has been awarded to Benjamin Pillow of this city, at $413,000, for the erection of the North Side junior high school here, which will cost approximately $500,000 completed. Contract for heating was awarded to the American Heating & Ventilating Co. of Richmond at $36,700. Work on the building will begin at once and it is expected to be ready for occupancy by the February term of 1926. Charles M. Robinson of Richmond is the architect.

New $1,000,000 Hotel for Jacksonville.

Jacksonville, Fla.—Negotiations have been concluded in the office of Patrick H. Odom of this city by a group of capitalists for the purchase of property at Pablo Beach, to be known in future as Jacksonville Beach, on which it is planned to build a $1,000,000 hotel. It is stated that the building will face the city park at the foot of Pablo avenue and will extend south to Shetter avenue, fronting on First avenue.

Why an Architect?

AN architect does more than build a house. He provides a setting for a personality. He interprets the occupants in terms of their dwelling. He puts four walls and a roof around the atmosphere of a family. Every client is an individual study. The architect sells not only experience and skill; primarily he sells service. He looks after the physical details of building; his roofs do not leak, his paints do not peel, his chimneys do not smoke. He also studies the habits and characteristics of his clients, and seeks above all to provide a home in which the owner will be comfortable, happy, satisfied. Beyond the technical side of his profession he will aim to produce these intangible values that make all the difference between a family barracks and a home in which a family will abide content.

To attain this result the architect draws on his expert acquaintance with building problems in all their multiplicity. Technical skill and artistic gifts combine to make the architect, and it would be strange indeed if a man possessing these qualities could not save his client from many mistakes of judgment and many unwise expenditures. He draws plans, prepares specifications, obtains bids, writes contracts, supervises construction, makes sure the owner gets what he pays for. When the completed building is "delivered" the owner may know that his materials are "right," his house well designed, his workmanship "sound." About one owner in three assumes the architect has no interest in the site, that the dimensions of the lot and the owner's limit of cost are all he cares to know. On the contrary, the architect studies the site. Often he has topographical surveys made with foot contours. He helps the owner place the building on the lot with reference to the views it may command, its distance from the street, the opportunity for lawn and gardens. He advises as to the style of architecture that fits the location and the suitability of the materials to be used, whether brick, stone or timber. He suggests the arrangement of rooms in terms of the site, so that vulnerable points will not be exposed to freezing blasts and living rooms will not be shut away from sunlight and outlook, so that the approach will be effective and the general arrangement convenient. Then the architect is ready for his rough preliminary drawings. After these have been studied he will make the final and complete drawings, the working plans and specifications.

Four in five times the owner tells the architect what he wants, and how much he will spend, and the architect replies that the two are not compatible. Whenever the owner fixes an absolute ultimate of expenditure the architect has no option but to help his client to scale the building accordingly. Here two facts usually emerge: that a small house is more difficult to design than a large one, if it is to be merely commonplace, and that an able architect can do remarkable things in the way of elimination and yet keep the essentials. Moreover, experience brings prescience so that the architect will help the owner to avoid those after-thought "extras" and those expensive deviations from the original plans that always run fast into money. He will try to locate every fixture and foresee every detail so that his first plans will direct all operations to the driving of the last nail.

Without an architect the owner is in the hands of his builder or contractor. Doubtless the average contractor means to be honest, but without supervision he is exposed to temptation and it is to his advantage to skimp. Unless the owner is an expert and has time to devote to supervision the builder may use materials below specifications and "get away with it." Are there pitchy knots in the lath? They mean yellow spots in the plaster after awhile. Punky framing lumber with many edges is not strong enough. Such terms as "shift" and "slash" mean nothing to the tyro, but if the wrong material is used the floors will splinter up. An owner noticed that his specifications called "only" for "extra" shingles, and added "No. 1." Therefore he roofed his house not with the best shingles, but with the worst. Shingles are graded down from "extra," or knotless; to "clear," with no knots in their exposed portions; and "extra No. 1," with knots anywhere. Flooring is "clear," "factory," and "No. 2;" which shall you choose? How shall you select your interior finish from the scores that will be urged on your attention? One famous building firm will employ only three crews of plasterers, men who are sure to build "for keeps," whose work will not be "all out" in ten years. Asbestos shingles may be laid in a half-dozen ways producing as many effects and corresponding differences in cost. A certain architect wrought patiently and tactfully to convince his well-meaning but deluded client that a house should have no clapboarding, but block siding; the owner since

has expressed his gratitude. An architect will avoid vexing delays. The plumbing and the heating may be in process of installation and the electricians at work before the carpenters finish. Competent supervision means both that the tradesmen shall be punctually on the premises and that the several crews shall not get into each other's way.

As the building business is organized today the contractor and the owner are bound by a standard form of agreement which provides that the contractor shall follow the architect's plans and fulfill the General Conditions of the contract. These General Conditions are also cast in the standard form of the American Institute of Architects. There are some forty-five articles in all, covering all manner of contingencies, defining carefully the rights and duties of all the parties, and treating of documents, drawings, claims, insurance, payments, liens, sub-contracts, corrections, and a hundred other topics. Contractors usually make estimates or submit competitive bids, and here again the owner may well accept the advice of his architect. For estimates vary greatly. Often the highest is really the cheapest. One bidder is accurate and careful; another merely takes a chance with no genuine knowledge back of his proposals; a third may be a shyster who intends to parcel out the job among a score of sub-contractors from each of whom he exacts a profit. Many large contractors today maintain extensive organizations and are well educated and efficient men. But they can hardly be expected to take such an individual interest as does the architect who first conceives the plan, then sketches his vision, and finally watches its development in terms of wood and stone.

The architect almost invariably saves his client the full amount of his fee. He avoids waste of space, time, and materials, and all three mean money. He is not merely a superior sort of watchman, yet he makes sure that what is done is well done. Work well done is permanent, vastly reducing the cost of upkeep.

Choose your architect with care. Then trust him. When he tells you that plain things live and gewgaws do not survive believe him. When your views differ he be willing to "be shown." Remember he is trained to apply skilled intelligence to achieve results that fit your needs.—House Beautiful.

"CONSTRUCTION AND CONSTRUCTION MATERIALS."

A Handy Summary of Facts and Figures on the Construction Industry Issued by the Department of Commerce.

The Department of Commerce announces the reprinting of the articles on Construction and Construction Materials from the Commerce Yearbook for 1923, in a separate pamphlet. The reprint includes a 24-page article on "Construction" and 19 pages devoted to certain construction materials, namely, lumber, cement, structural steel, burned clay materials, building stone, crushed stone, sand and gravel. The text contains twenty-five concise tables of basic statistics, and five diagrams to show principal tendencies.

"Construction" Defined.

The term "construction" is used "to cover the construction and alteration of buildings, roads, canals and locks, bridges, railroads, harbor works, subways, tunnels, water supply systems, and other work that produces a more or less fixed structure or alteration of the natural topography. The term is not used here to cover ships, railway rolling stock, or movable machinery.

"Construction activity is most properly measured in terms of employment of men and equipment and consumption of materials and supplies. Since figures covering these points are not now available, those showing contracts awarded and building permits, corresponding in a general way to statistics of sales in manufacturing industries, must be used very largely instead."

It is pointed out that actual building takes place after permits have been taken out or contracts awarded, so that great activity in building may continue for some time after a marked falling off in these indicators. The fact is also brought forward that according to the National Bureau of Economic Research from 8 to 12 per cent of the national income went into construction each year from 1909 to 1916, and the figure for 1923 was probably within this range.

Relation of Construction to General Conditions and Business Cycles.

"The degre of activity in construction bears a close relation to general business conditions. Extensive construction and equipment of new buildings results not only in large employment of building-trades labor but in active production of lumber, cement, iron and steel products, nonferrous metals, brick, stone, sand and gravel, lime, hardware, paint, electrical equipment, furniture, textiles, etc. If building falls off there is bound to be a slackening in many other lines of industry.

"Building activity is influenced both by the cost of the building and by interest rates. High prices, high wages, and high interest rates are likely to accompany each other in the business cycle, and when the feeling becomes general that they are due to decline, building operations ordinarily slacken.

When building activity is lowest, which is generally during a period of business depression, an upward tendency is likely to start before general business conditions show marked recovery. Low building costs are apt to bring into the markets home

builders and organizations that have saved up money. Municipalities can float bonds at low interest rates, and this tends to stimulate public works. Industrial building, however, appears to follow the requirements of expanding industrial activity and is more likely to be at peak when the cost of building is high.

"Periods of great building activity and of dullness are apt to follow in quick succession owing to the lack of coordination between selling and producing efforts which has characterized the industry.

"It happens not infrequently that local shortages of one or more building materials arise because of a demand greater than anticipated by dealers, on account of transportation delays, or because of difficulty in obtaining prompt shipments from producers, or perhaps from a combination of all three circumstances.

It is pointed out that the highest rate of building operations is reached in June, July, August and September. This fact was brought out in a survey of Seasonal Operation in the Construction Industry made by the Division of Building and Housing of the Department of Commerce. Although construction contracts and building permits are customarily higher in the spring months, the maximum employment of men and consumption of materials does not result until the summer.

In connection with the index numbers of building material prices and construction costs, it is pointed out that most construction is performed on the basis of contracts let at the start of the operation, and contractors in submitting estimates take into account anticipated changes in costs; hence no one index can represent exactly the costs both to the owners and to the contractor. An index for one class of buildings using certain materials and constructed largely with unskilled or semi-skilled labor would vary decidedly at times from an index for a highly finished structure using largely other materials and in which a large percentage of skilled labor is utilized.

Among other leading points in the article on "Construction" are a discussion of tables showing contracts awarded by months for various classes of construction for five years; the proportion different classes of construction form of total construction for five years; a table of index numbers of building material prices, and construction costs; a discussion of certain building trades labor problems, financing of building operations, factors affecting the demand for new construction, the simplification and standardization of building materials, tendencies in the municipal regulation of building, building research, and the movement supported by Secreary Hoover to distribute building activity better throughout the year, and in relation to the business cycle.

Old New Orleans Courtyard
Typical Vieux Carre Scene