THE ARCHITECTURAL FORUM

IN TWO PARTS PART ONE

ARCHITECTURAL DESIGN

GOLF AND COUNTRY CLUB REFERENCE NUMBER

MARCH 1930

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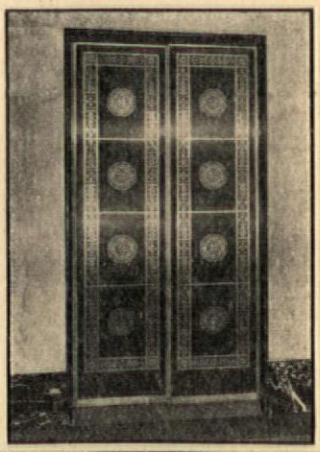
Rubens knew the value of "the final touch"

In many of the pictures known as "Rubens", the famous artist actually painted only the finishing touches, adding beauty and artistry to the entire picture by these well executed strokes of his brush. He displayed his individual technique where it would be seen and thus gave the entire picture the "Rubens touch".

Tyler Elevator Entrances and Cars give that final touch of beauty to a high grade building—as important to its general appearance as Rubens' finishing strokes were to pictures.



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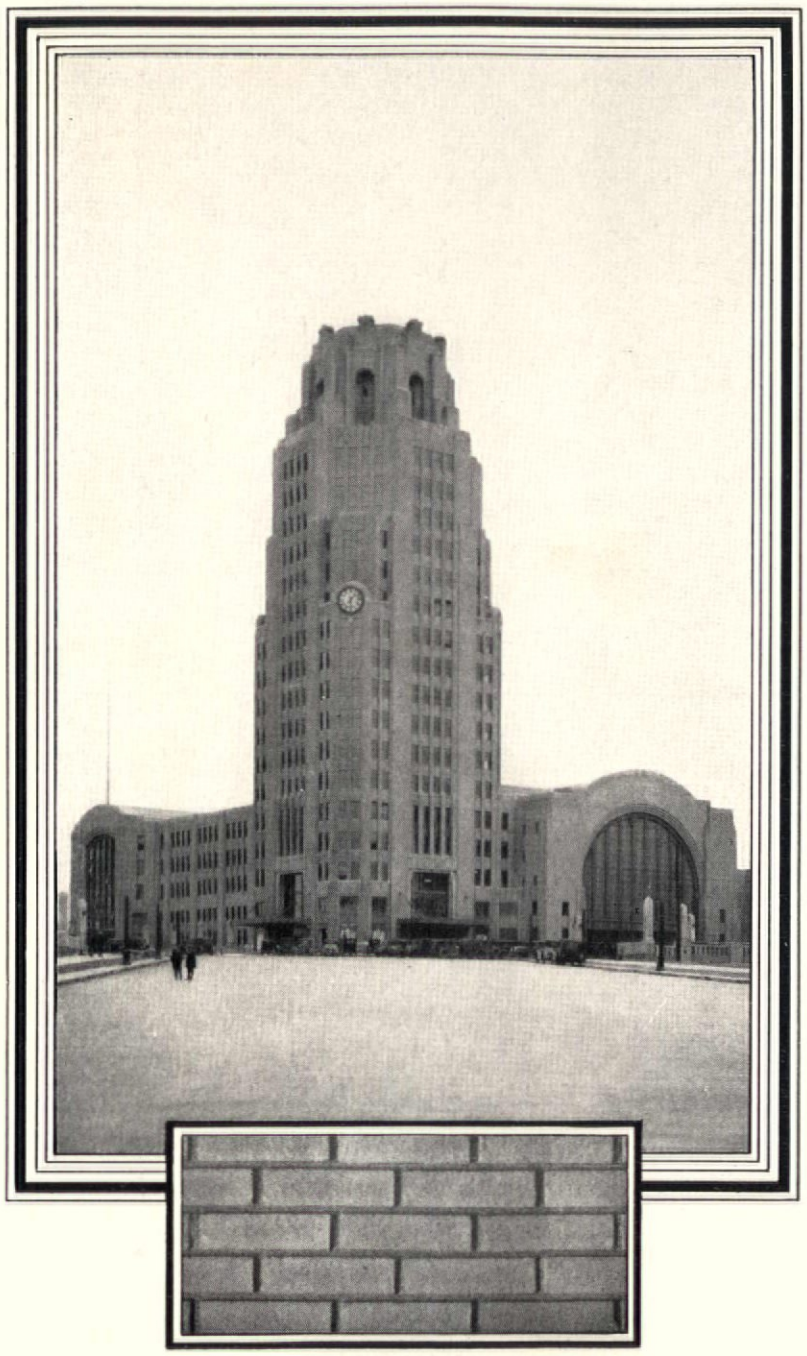

New York Central Terminal Buffalo, New York Fellheimer & Wagner Architects

Hanley Face Brick — Flashed Golden Grey—Grey and Mingled Shades— 136S and 136 Walsh Const. Co., Contractors

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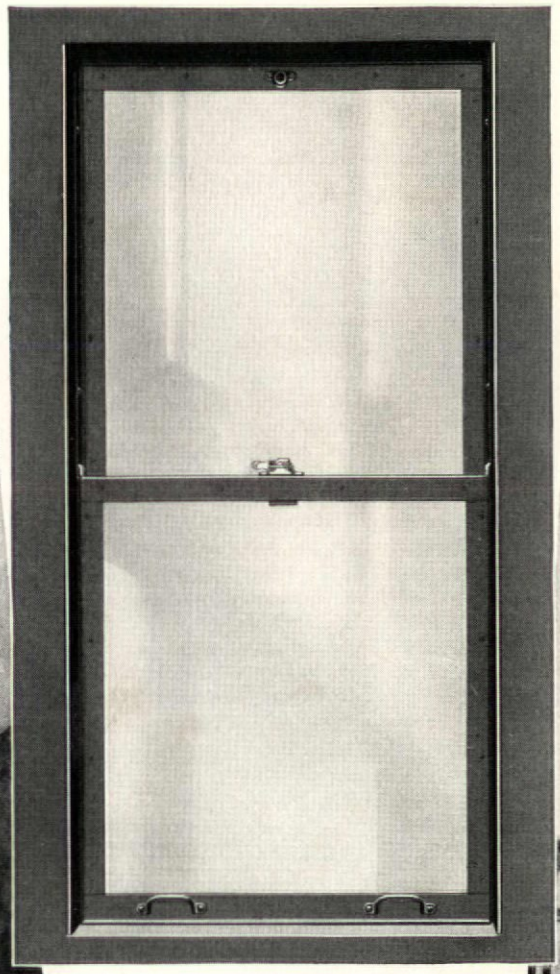
VOLUME LII Number 3

Steuben Club, Chicago, Illinois. Architects, K. M. Vitzthum & Co. Contractors, Paschen Bros.



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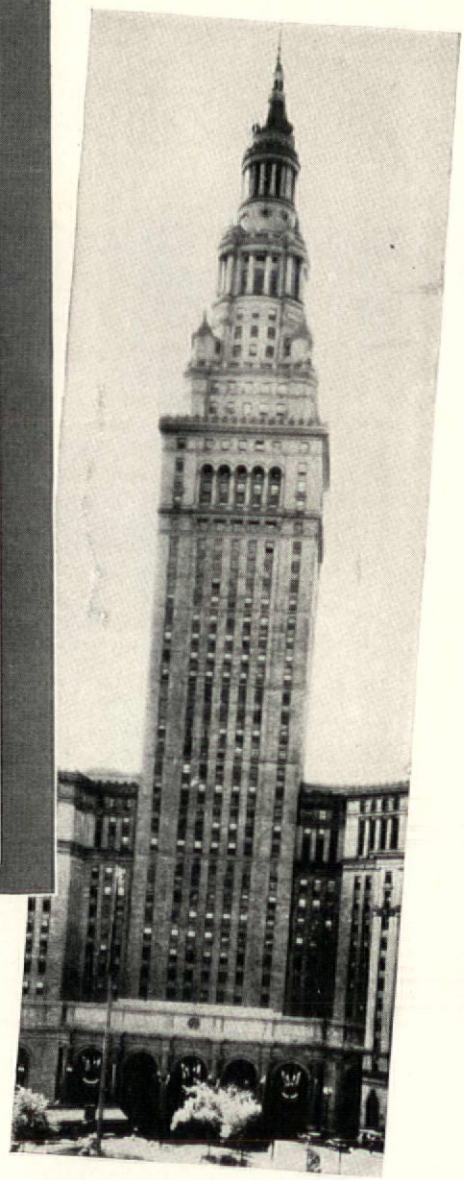

The Tower Building, Cleveland Union Terminals Co. Architects, Graham, Anderson, Probst & White of Chicago. Engineer, Mr. H. D. Jouett. Contractor, John Gill & Sons, Cleveland.

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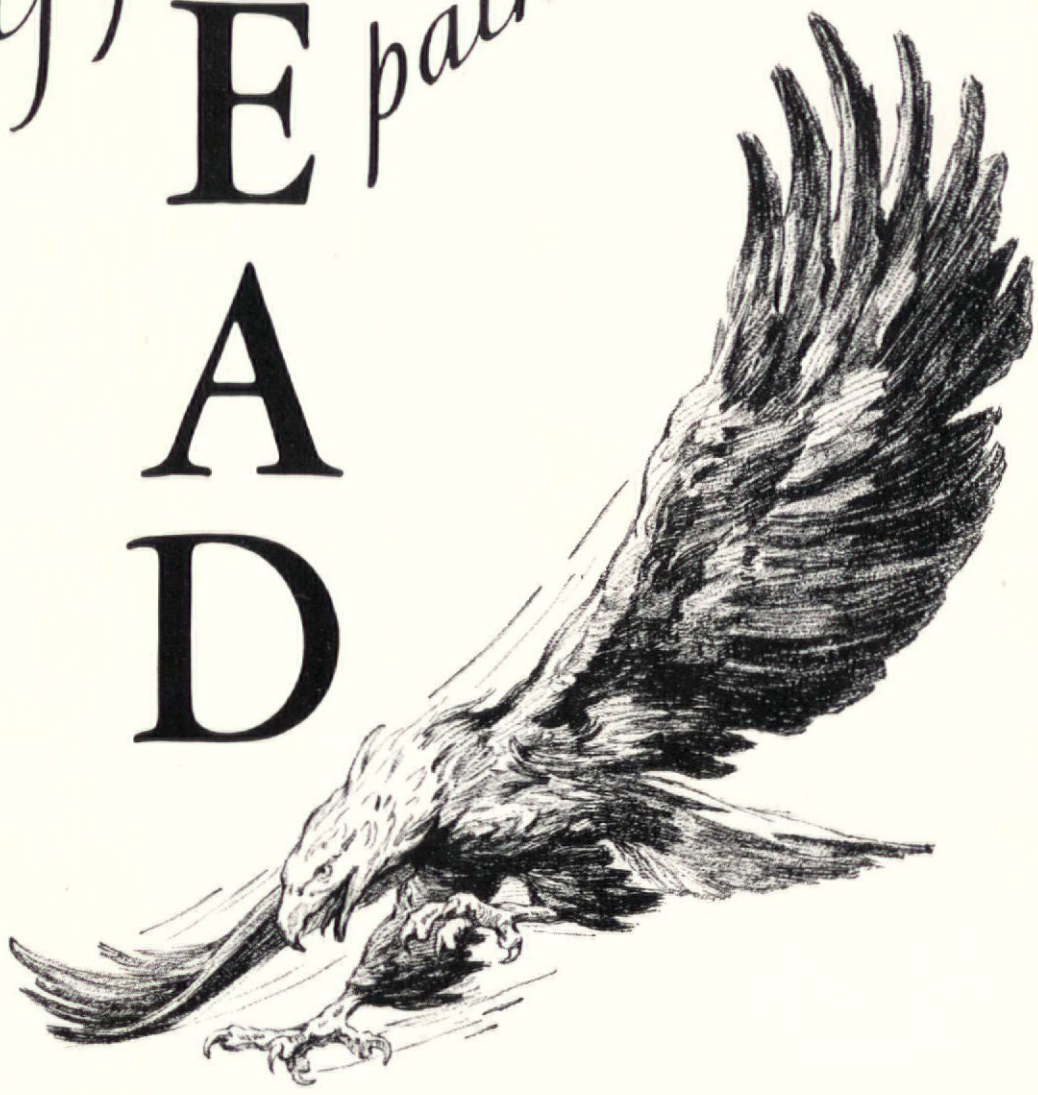

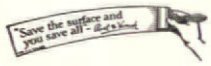

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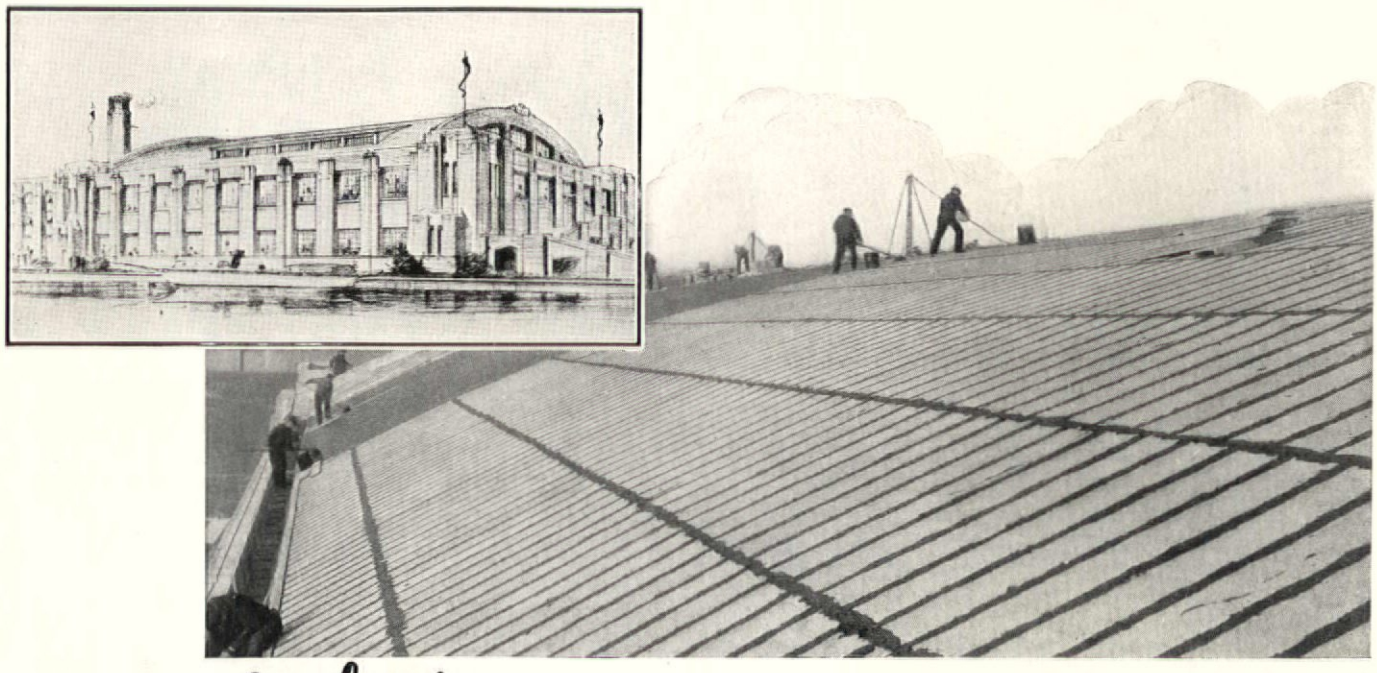

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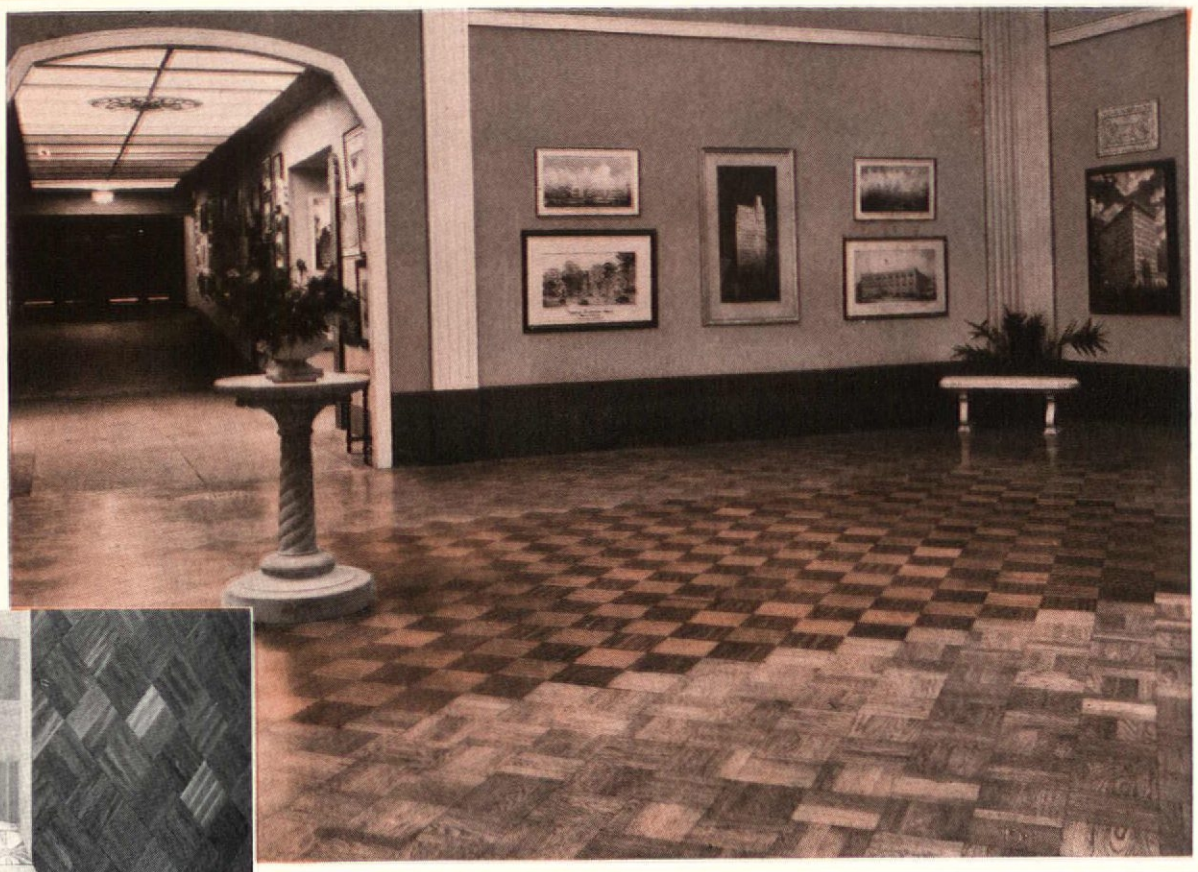
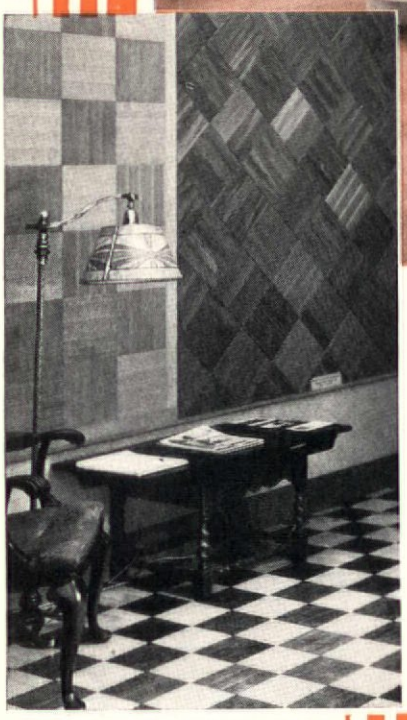


Court of Honor in Architectural and Industrial Arts Exposition, Memphis, Tennessee.
**CELLized Oak Blocks with center area of light and dark mahogany.*



*A corner of the exhibit, showing *CELLized wood blocks for walls as well as floors. Panel at left, white and red oak, laid alternately; at right, red gum. Floor, maple and walnut blocks.*

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			in the following sizes of squares:				for walls and ceilings
6¾ in.	6¾ in.	6¾ in.	6¾ in.	6¾ in.	6¾ in.		6¾ in.
7½ in.	7½ in.	8 in.					
9 in.	9 in.	9 in.	9 in.	9 in.	9 in.	9¾ in.	9 in.
10½ in.		9¾ in.					
		10 in.					
11¼ in.	11¼ in.	11¼ in.		11¼ in.	11¼ in.		11¼ in.
12 in.	12 in.	12 in.				13 in.	
		13 in.					

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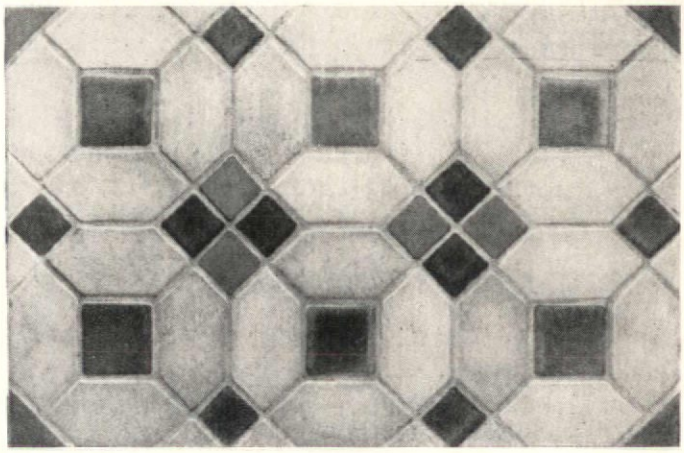

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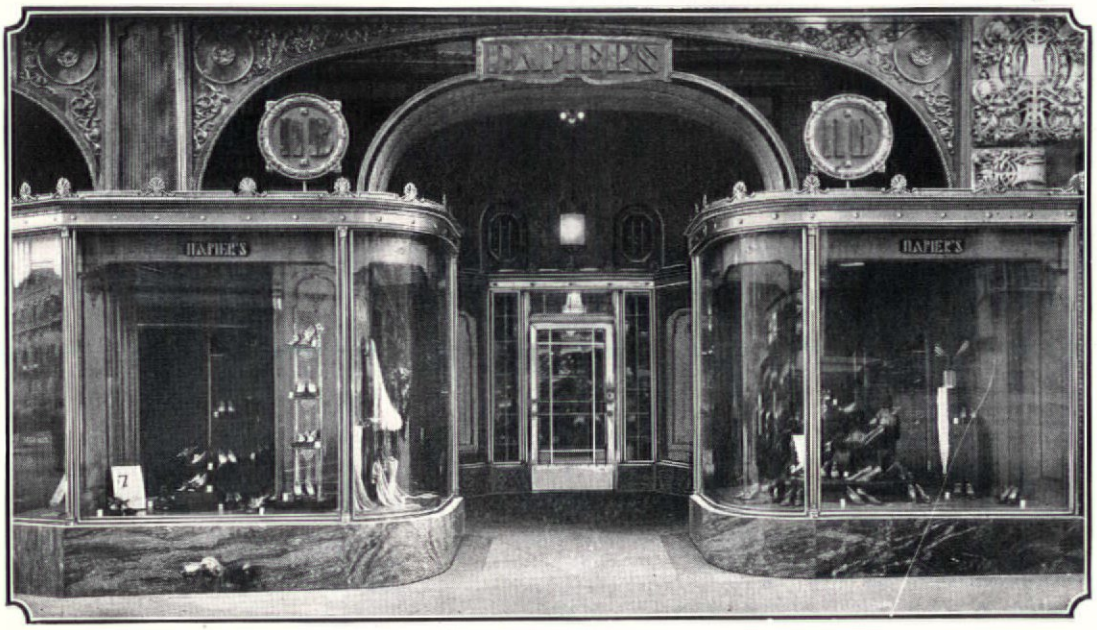

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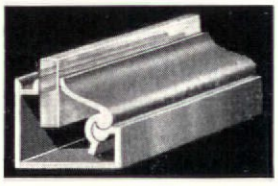

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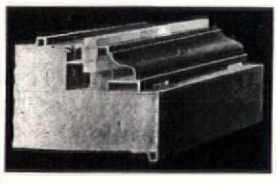

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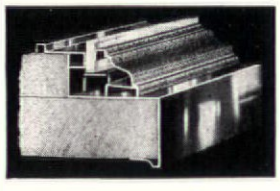

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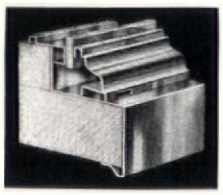

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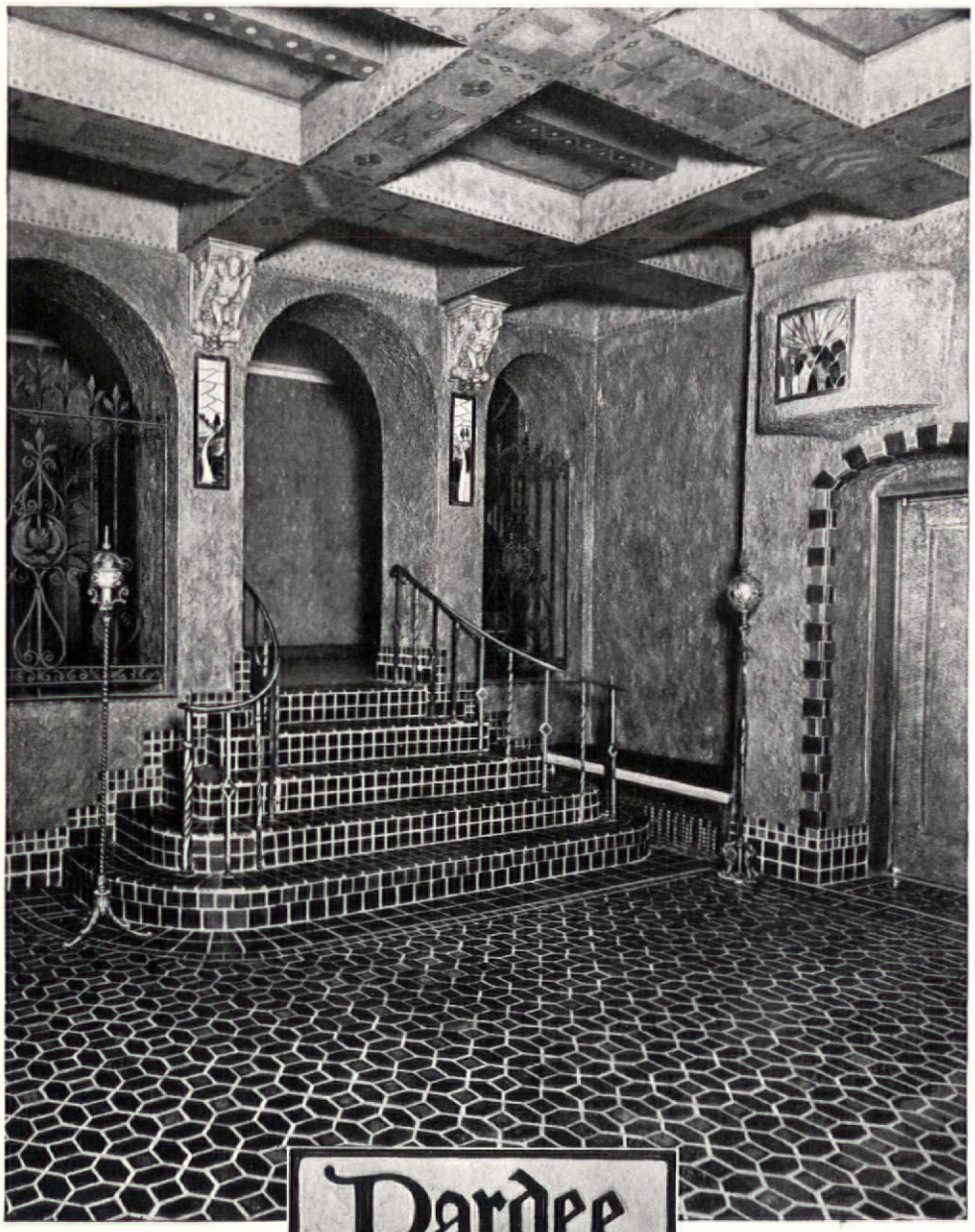

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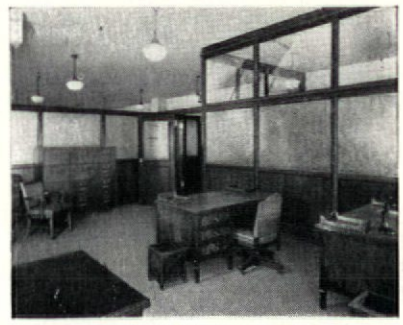

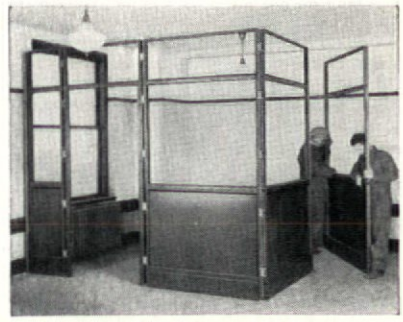

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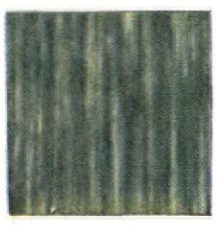

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Ⓐ

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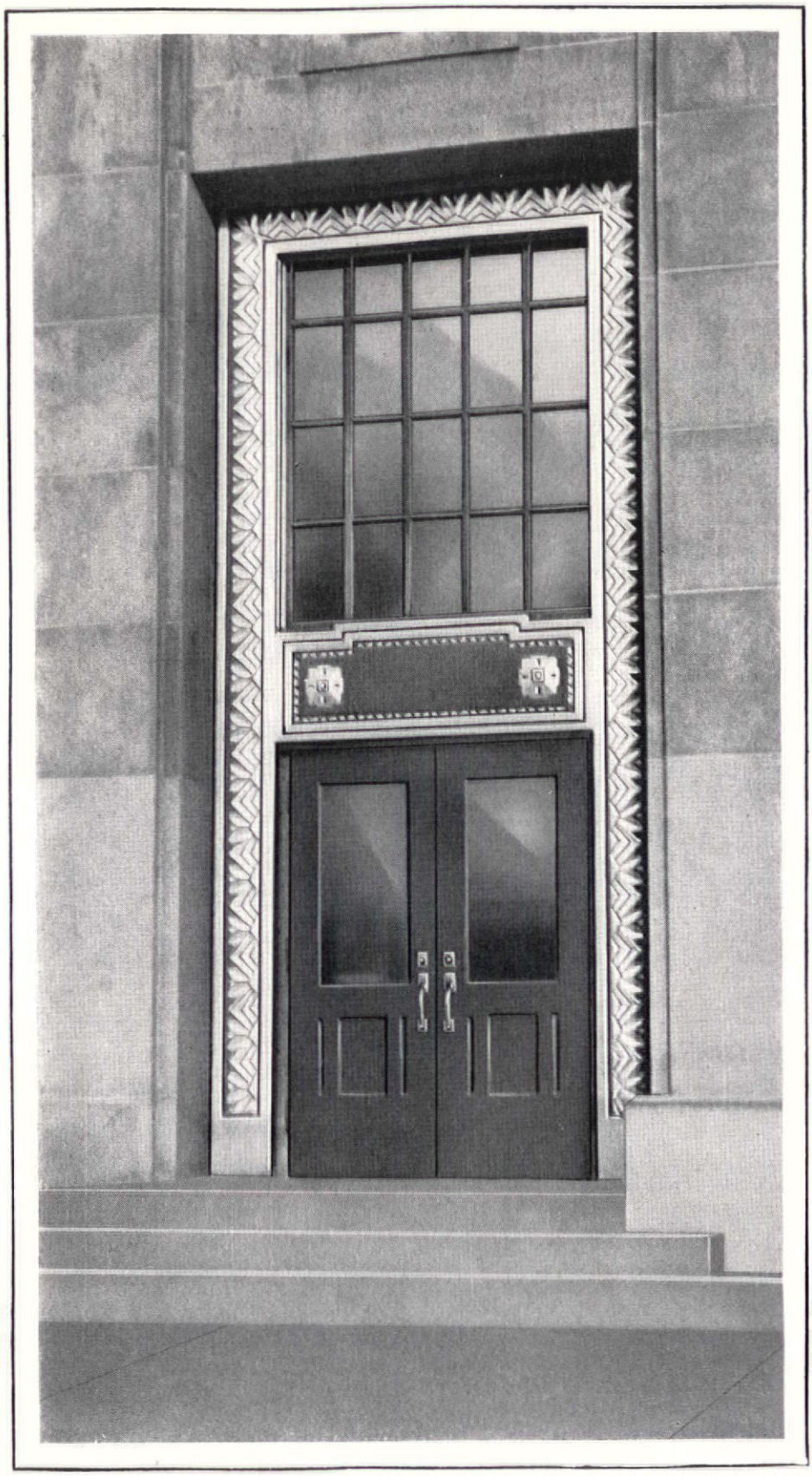
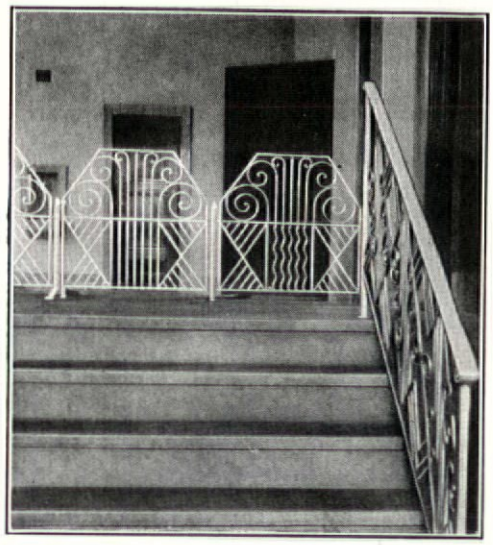


Main entrance to the new Michigan Diamond Telephone Exchange Building, Cleveland. Hadlow-Hughes-Hicks & Conrad, Inc., Cleveland, Architects: Mr. A. W. Baily, Cleveland, Company Architect: The Crowell-Little Construction Company, Cleveland, General Contractors: The Kilroy Structural Steel Company, Cleveland, Sub-contractors. The frame, as well as doors themselves, are made of Alloys of Alcoa Aluminum. Both are deplated and finished in high light.

See next two pages for details.

SPANDRELS · SILLS · VENTILATOR GRILLES · DOOR FRAMES · EVEN

VERSATILITY



Total weight of this Alcoa Aluminum Fence and Stair Rail, 150 lbs.

The new Michigan Diamond Telephone Exchange Building in Cleveland is an interesting study for architects, as it shows the infinite possibilities of using Alcoa Aluminum in architecture.

In addition to the spandrels, foyer fence and stair rail illustrated here, the unit ventilator grilles, sills, vestibule radiator grille and frame, frames to entrance and lobby doors, and the main doors themselves are made of strong Alloys of Alcoa Aluminum. Sheet aluminum is used for ventilator louvers with aluminum wire cloth.

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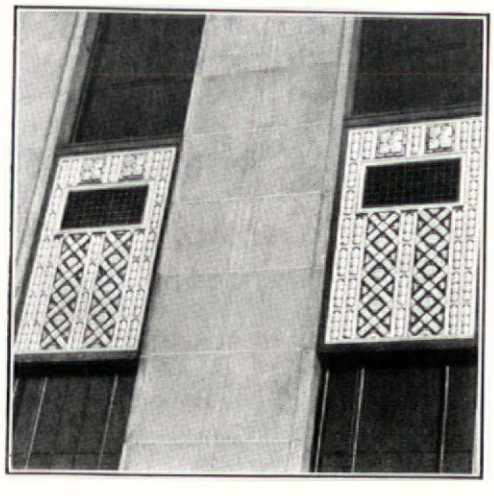

Approximate weight of these Alcoa Aluminum Spandrels, 195 lbs. each.

Our booklet, "Architectural Aluminum", describes interesting applications of Alcoa Aluminum. May we send you a copy without charge or obligation?

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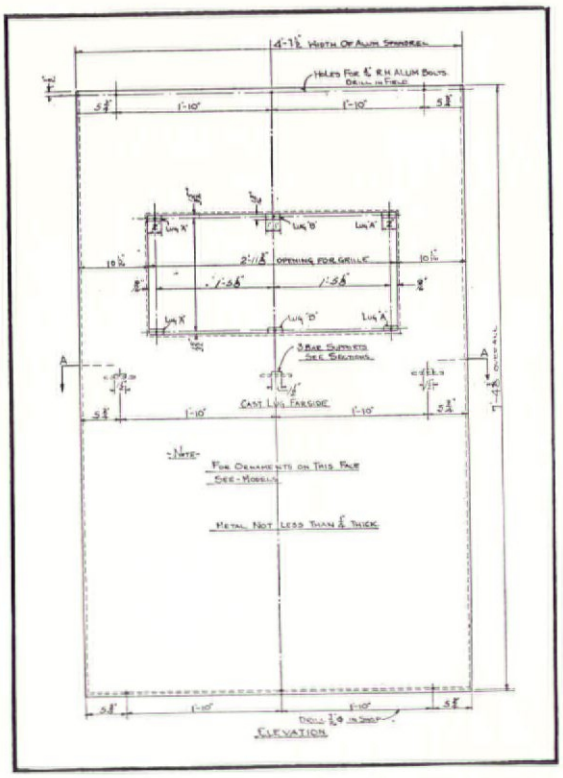
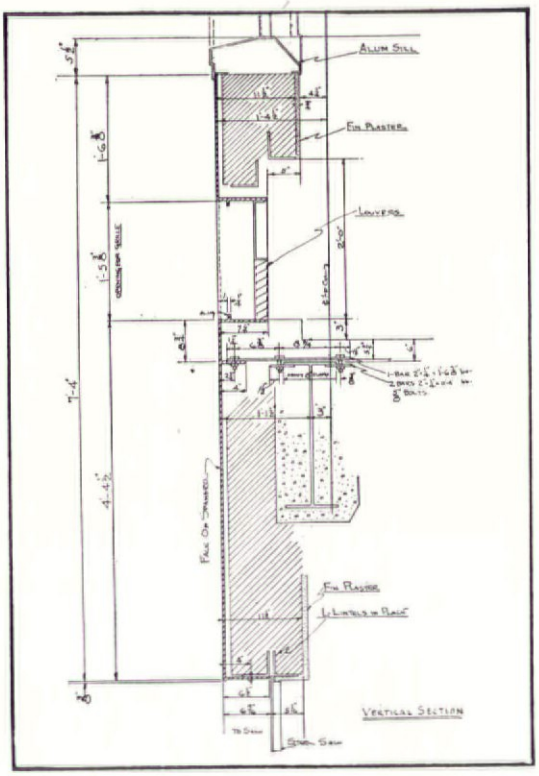
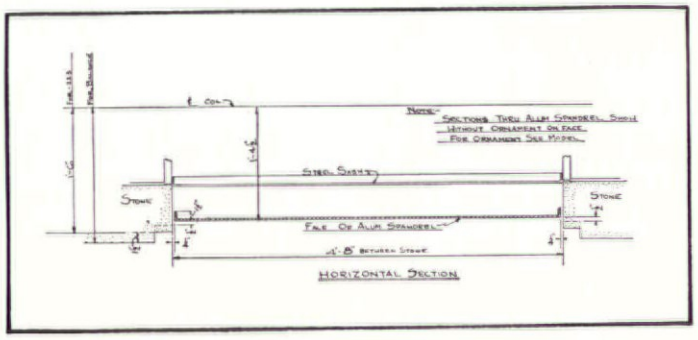


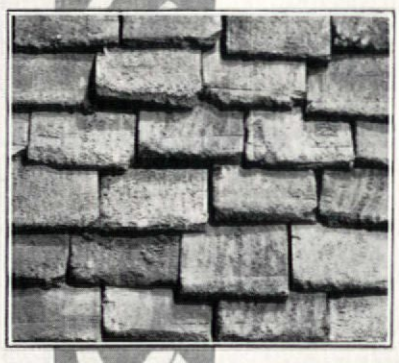




"These Aluminum Spandrels, Sills, and other cast items shall be made of Alcoa No. 43 alloy, having a silicon content of 5%. The average tensile strength shall be 17,000 lbs. per square inch and the average elongation in two inches 5%. The weight shall not exceed .097 pounds per cubic inch. The surface shall be free from imperfections and in all respects equal to sample submitted."

ALUMINUM

ALCOA ALUMINUM



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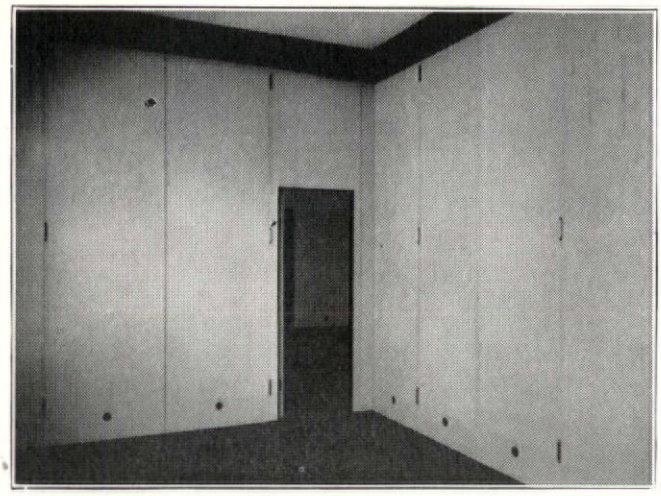

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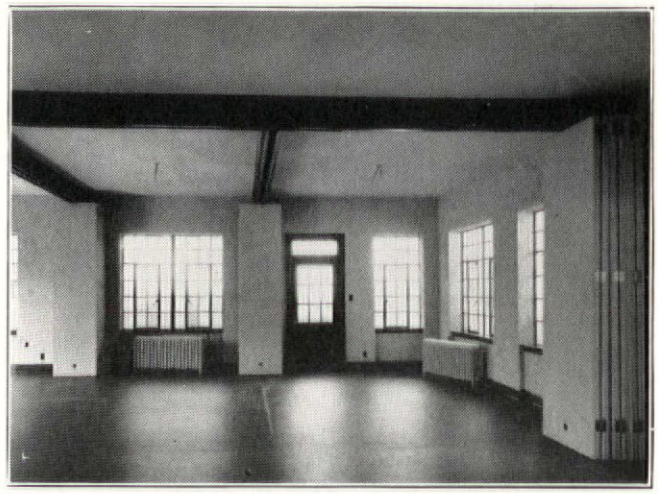
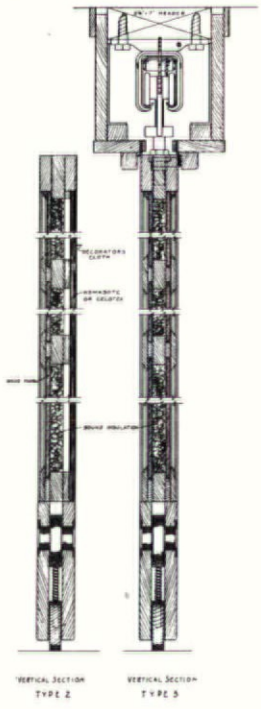


FOLDED



Showing cross sections of two types of Circle A Folding Partitions. The method of sealing these walls at the floor can be seen here. Write for folder of plan drawings.

THE uses for Circle A Folding Partitions are limitless. There are two styles, and four surface treatments. Wherever effective subdivision is desired, there is a Circle A Folding Partition to completely suit the job.

Cabinet work is the finest obtainable. Operating devices are completely housed and fool-proof. The latest type sprocket roller chain drive insures smooth, positive action. Doors are hung on ball bearing swivel hangers.

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BOOK DEPARTMENT

PLANNING AND DESIGNING GOLF AND COUNTRY CLUBS

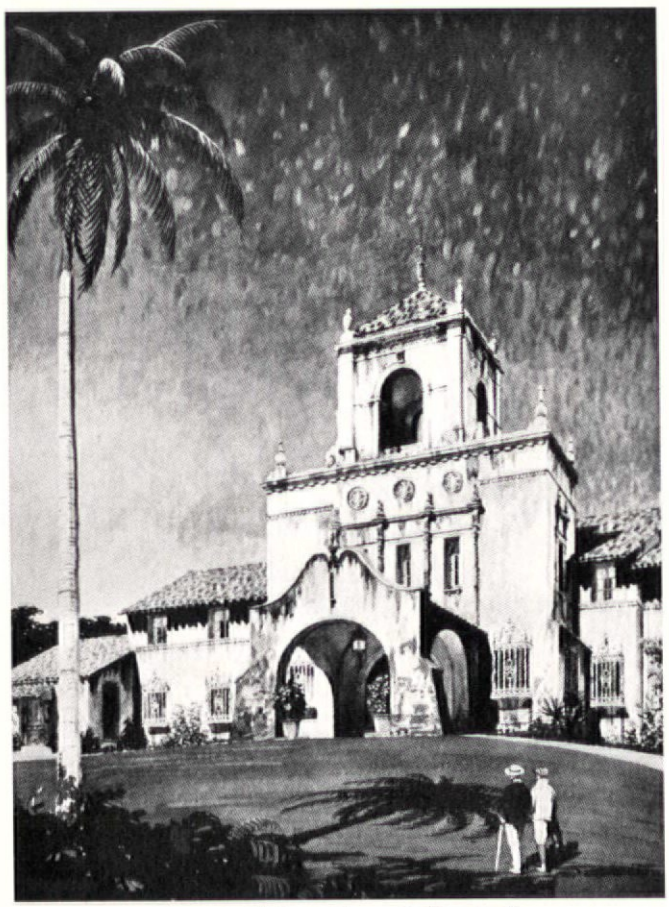
A WORK BY

CLIFFORD C. WENDEHACK

MANY who have traveled extensively in America and Europe are likely to observe that Americans do not know how to play. This may or may not be true in a general way at the present time, but if the increasing number of golf and country clubs affords any indication, it would seem that the shortcoming is rapidly being remedied. A map showing the locations of such clubs within motoring distances of New York would be so heavily studded with dots as to leave little space for anything else, and the same condition exists to a greater or less extent in the suburbs surrounding almost all of the metropolitan centers throughout the country.

In a civilization in which the city areas are rapidly expanding and making it more and more difficult for their inhabitants to reach the open country, golf and country clubs furnish an easy and convenient contact with nature for busy city workers. Formerly golf and the privileges of belonging to a country club were thought to be exclusively for the very wealthy, but more recently it has become possible for a greater number of the well-to-do middle classes to become members of less pretentious clubs, and for those who cannot afford this, there are public and semi-public courses and clubs where all may enjoy the advantages of outdoor play without the expenditure of a great deal of money,—although sometimes at the cost of a large amount of time and patience.

Added to these there are the clubs in connection with seaside, mountain and other resorts. Since all golf courses need some facilities for storage of equipment, and conveniences for the players, the buildings of all sorts in which the golfer may bathe, dress and lounge or enjoy social functions have come to constitute an important and highly specialized type of architecture. In this field, as well as in that of the skyscraper, America has become the leader, and few if any European precedents are being made use of in the planning and construction of clubs. Americans, being accustomed to all sorts of conveniences and luxuries in their homes and shops, are likely to expect the places to which they go to play to be equipped in the same efficient and elaborate manner,—usually to an even greater extent. So varied are the requirements arising from the assemblage of a large group of people for play and recreation that only a specialist is in a position to be familiar with all of them.



Country Club at Caracas, Venezuela
Clifford C. Wendehack, Architect

The members of a club's committees or its managers may know what facilities are likely to be required, but, being unfamiliar with the technique of planning and building, they will probably be unable to provide for them in a proper manner. On the other hand, most architects are eminently capable of making suitable designs for club buildings as judged from the standpoint of design, but unless they have made or are willing to devote a great deal of time to the making of a thorough study of the particular club concerned, there is danger that some of the features essential to the workings of an efficient club building will be overlooked.

As in almost all specialized branches of architecture, several men have become recognized as being among the leaders in the best and most up-to-date practice in the equipment of country and golf clubs. In the realm of the building of golf and country clubs one such man is Clifford Charles Wendehack, and the architectural

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profession as well as the officials of clubs may consider themselves fortunate in that they have available a volume summing up the experience acquired during his long career as a country club specialist. If one wishes to be convinced as to the amount of this experience, one has but to glance through the plate section of this volume and note the surprisingly large number of clubs designed by Mr. Wendehack himself. However, it is likely that the architect will be more interested in the text portion of the work, for it is here that Mr. Wendehack has described in full detail the unseen but highly important features of practical layout and equipment. It is here, in the opening chapter, that he discusses the advisability of housing a club in a remodeled or altered building, and he expresses the opinion, based on long experience, that except as a temporary expedient it is usually undesirable to attempt necessary alterations.

The highly important subject of the materials to be used cannot be too strongly stressed, for it is this consideration together with that of the type and quality of construction that insures the lasting beauty and convenience of any building. Mr. Wendehack is duly appreciative of this fact and devotes considerable discussion to the various types of materials used from foundation to roof, the information being particularly valuable because of the fact that it is backed by data on their cost, permanency, safety and effectiveness. Materials used in the interior finish are given special consideration, the relative merits of flooring materials for use in the various portions of the club being treated as to wearing qualities as well as to their appearance.

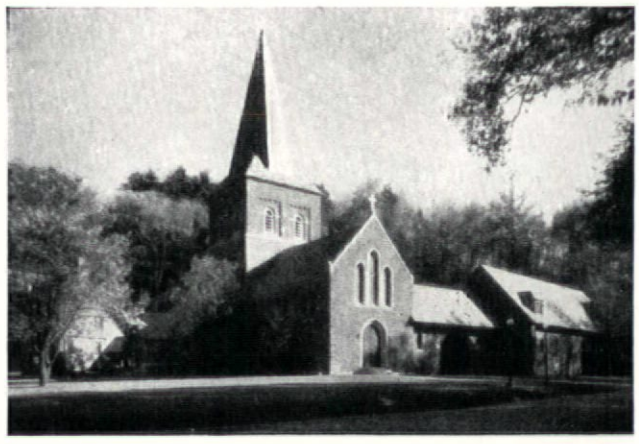
It has sometimes been found necessary by clubs to construct buildings on what might be called the "unit" system,—that is, one part at a time as funds become available or as the need for more space is made evident. The author makes specific recommendations as to which portions of the buildings should be built first and the sequence in which other portions may be added to the best advantage of all concerned. Locker and bathing rooms being most essential, they should come first and may be followed by shops for the the club professionals, kitchen and grill, administration offices, dining rooms, lounges, women's quarters, card rooms, reception rooms, porches and terraces. Although it is permissible in cases of necessity to construct the buildings in this piecemeal fashion, it should be remembered that the whole must be planned as a complete unit at the beginning. The advisability of using only the best grades of materials in order to insure the permanency of the building is emphasized by the strong argument that it is much more economical, and a great deal less troublesome, to expend a larger amount at the start than it is to be constantly appropriating the necessary sums to keep an inferior building in repair, to say nothing of the inconvenience entailed by the making of such repairs. The cost of club buildings is discussed from every angle in order that those planning new structures may reap the greatest and most lasting benefits from the sums expended in building and maintenance.

Mr. Wendehack also has a word to say as to the inspiring influence of color, about which we have been hearing so much of late, and he advances some interesting theories as to why human beings are so strongly influenced by the color effects with which their eyes are

"CHURCH BUILDING"—*By Ralph Adams Cram*

(A NEW AND REVISED EDITION)

THE improvement which has accompanied the progress of American architecture during recent years has been no more marked in any department than in that of an ecclesiastical nature. This has been due primarily to the rise of a few architects who by travel and study have acquired much of the point of view from which worked the builders of the beautiful structures which during the fourteenth century and the fifteenth were being built over all of Europe.



These architects have closely studied the churches, chapels, convents and other similar buildings in England, France, Spain and elsewhere, and the result has been a number of American churches of an excellence so marked that they have influenced ecclesiastical architecture in general and have led a distinct advance toward a vastly better standard. This improvement has not been exclusively in the matter of design, for plans of older buildings have been adapted to present-day needs, and old forms have been applied to purposes which are wholly new.

THE appearance of a new and revised edition of a work which is by far the best in its field records this progress. Mr. Cram, being perhaps the leader among the architects who have led this advance, is himself the one individual best qualified to write regarding the betterment of ecclesiastical architecture. The editions of this work of 1900 and 1914, which have for some time been out of print, have now been considerably revised and much entirely new matter has been added, which in view of the change which has come over ecclesiastical building of every nature is both significant and helpful.

Illustrations used in this new edition of "Church Building" show the best of recent work—views of churches and chapels large and small, in town and country, buildings rich in material and design and others plain to the point of severity, with the sole ornament in the use of fine proportions and correct lines. Part of the work deals with the accessories of the churches and their worship.

345 pages, 6 x 9 inches, Price $7.50

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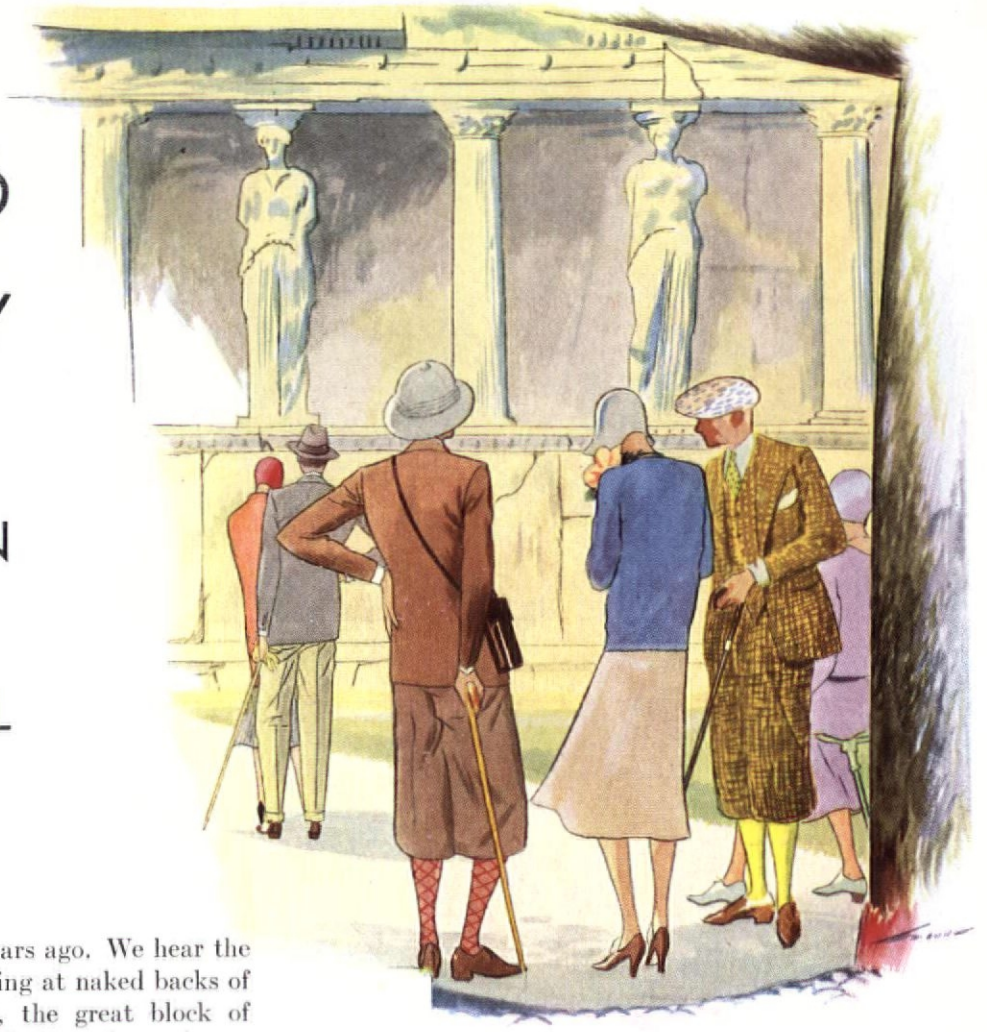
AGE-OLD BEAUTY *in a* MODERN FLOOR MATERIAL



Greece . . . two thousand years ago. We hear the snap of the overseer's lash darting at naked backs of panting slaves. Inch by inch, the great block of polished stone rises . . . then sinks into place. A new temple to the Gods on Mount Olympus is in the making—to be marvelled at down through the centuries.

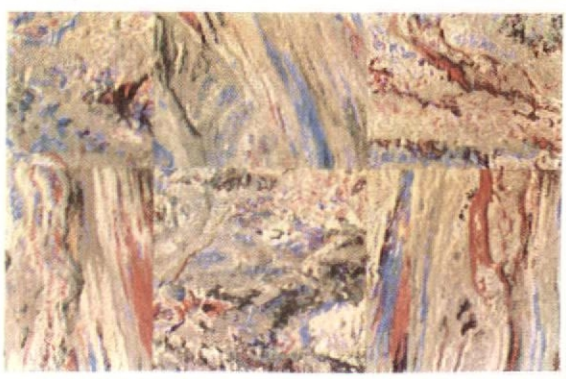
America . . . today. In an enormous factory room, a giant wheel so tall that it turns men into dwarfs, revolves slowly. Beauty issues in an endless stream.

Beauty (here lies the miracle) which shows no trace of its machine origin. With no hint of that tiresome sameness, that uninspired regularity which often betrays the touch of the iron workman.

In the new Karnean Marbled patterns in *Sealex* Inlaid Linoleum, colors run riot—defy discipline—disappear and reappear—writhe and twist themselves into unexpected shapes and courses. They parallel the astonishingly gorgeous, accidental beauty of Nature!

Below is illustrated one of the new *Sealex* designs in which these rare marble markings appear. This pattern represents a departure from the popular "checker-board," such as that illustrated at the left. You will notice that although the veinings of adjoining tiles run at right angles, only one kind of marble effect is used, resulting in a more restful pattern than those floor designs in which more pronounced color contrasts are evident.

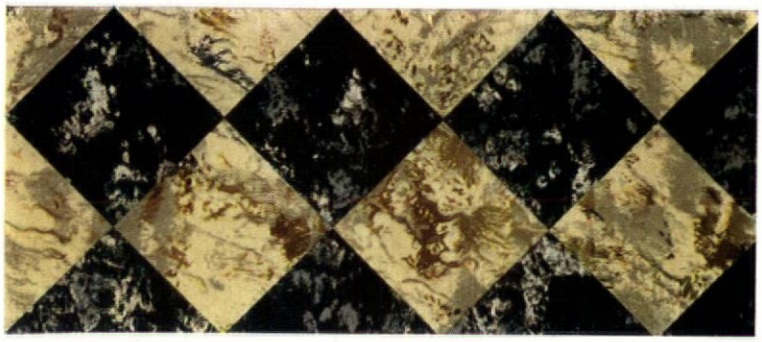
On the next page are reproduced a few more interesting innovations in linoleum design, typical of the *Sealex* floors offered for 1930.



The "*Foyer*" pattern (Sealex Linoleum No. 3104) combines Blue Belge and Italian white marbled block effects, a dignified floor adapted to a great variety of uses. At the right is "*Leonardo*" (Sealex Linoleum No. 3225), quite remarkable for its reproduction of Coralline Breccia marble, quarried on the island of Scio.

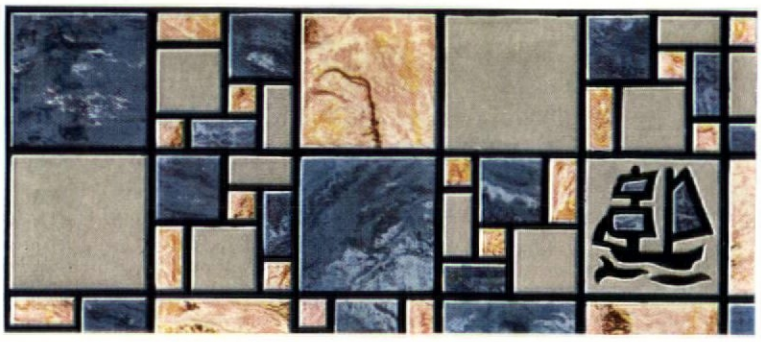
See next page . . .

BELOW are shown four of the new *Sealex* Linoleums. Hundreds of other patterns are reproduced in our new catalog, which we will be glad to send upon request.



"Sea Rock," No. 3037

One of many patterns available in the realistic Karnean Marbled effects. In the small illustration it is impossible, of course, to do justice to the wonderful coloring and veinings.



"Zuyder Zee," No. 2600

In this and other patterns of *Sealex* Embossed Inlaid Linoleum, each tile is slightly *raised* above the "mortar line"—giving an interesting effect of texture and surface.

New Jaspé Effects

The new pastel shades in *Sealex* Jaspé Linoleum will be welcomed by architects who realize the possibilities of this subdued, yet decorative, type of floor. Illustrated here are "Roseglow" and "Lake-blue."

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CONGOLEUM-NAIRN INC., *General Office:* Kearny, N. J.

BONDED FLOORS

SEALEX LINOLEUM AND TILE BACKED BY A GUARANTY BOND

See preceding page

greeted. It is quite evident that if color can produce the effect of putting people in a cheerful and happy frame of mind, there is no place in which it can be used to better advantage than in their clubs, where an atmosphere of cheer and brightness is always to be desired. In the use of color and pleasing forms much can also be accomplished toward giving clubrooms that homelike and friendly atmosphere conducive to the relaxation that is so important to beneficial play. Although the author does not enter deeply into the subject of color, he does point out some interesting facts encouraging its use in clubs.

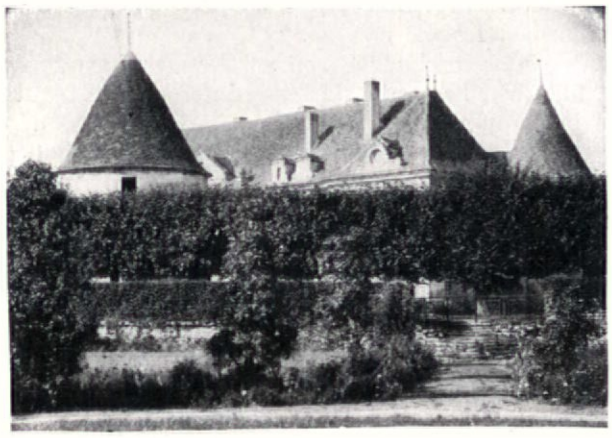
An important problem which many clubs are called upon to decide is whether or not the club group shall include sleeping quarters for guests and members, and if so to what extent they should be included. In a section devoted to this question the author puts forth arguments both in favor of and against the inclusion of such rooms and suggests what type of room will prove most popular and most advantageous from the standpoint of economy. He also discusses the details of equipping and furnishing these rooms to render them attractive.

Another outstanding feature of club convenience is that of the dining room, where members may enjoy a good meal before or after play. It is surprising to what a marked extent the cuisine affects the popularity of a club. As in all places where food is served, the paramount object to be sought in layout and equipment of a club dining room or grill is what is convenient for the guests and facilitates or expedites the smooth and rapid preparation and service of food. Even the best of stewards cannot give satisfactory service if he is impeded by a poorly laid out and equipped establishment. Practical ways of arranging the dining room in relation to other rooms must be sought and the proper amount of space to serve the maximum number of guests provided both in the dining room, serving rooms and kitchen. Figures based on experience are given to show the relation between the number of lockers to be provided and the number of seats which will be required in the dining rooms. Small points, seemingly unimportant, but actually quite essential to the full enjoyment of dining room service, are pointed out by the author. It is to be expected that the architect will take an unusual interest in the treatment of the grill room, for it is here that he is permitted more freedom in making use of some of the more picturesque forms of architectural treatment. The author enumerates some of the up-to-date tendencies in the handling of these rooms and adds some discussion of that important feature, the fireplace.

The departments of a club in which the greatest confusion may result from poor planning and a bad choice of equipment are, of course, the locker room and its adjoining shower rooms. Here everything should be sturdy, sanitary, and convenient to the highest degree. There is a great variety of such equipment on the market, and club committees and architects must make the decision as to what will best serve their needs. There are, however, some basic considerations which will be of value in helping them to make the proper decisions, and those set forth in this volume will be of the greatest practical value in equipping these rooms. Water supply is often a serious problem in the equipment of clubs, and it should be carefully provided for in advance, especially since swimming pools have attained

Small Manor Houses
AND
Farmsteads *in* France

By Harold D. Eberlein and Roger W. Ramsdell



Chateau de Missery, Cote d'Or

IN all the wide search for architectural types in which to design and plan the American home, there has been found nothing more beautiful and appropriate than what is called "French Provincial," the term applying to the better order of farm houses, *manoirs,* and even to minor chateaux. It is a type full of graceful informality along with the touch of dignity or sophistication which renders it just a trifle formal; it is expressive of eighteenth century charm, and it suits admirably the needs of the present-day builders of suburban or country homes. In the refined and slightly reticent exteriors of the old French country houses, much emphasis is placed upon excellent architectural lines, while their interiors show carefully arranged and spacious rooms with well placed chimneypieces, doors and windows.

This excellent and authoritative work should be in the library of every architect whose practice includes work of any kind of residence character. It brings to the attention of American architects a type which is fresh and new without being freakish. It includes 254 illustrations from original photographs showing subjects complete as well as in great detail, together with many measured drawings and perspective plot plans. Flat Quarto (7½ x 11 ins.), bound in handsome library blue buckram, stamped in gold, uncut edges with gilt tops.

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such an important status in club life. These pools require a great deal of special equipment, and their careful planning is the subject of several pages of valuable and practical information and important data.

The plate section, which occupies about two-thirds of the volume, and numbers 157 full pages, contains illustrations from photographs of completed clubs in all parts of the United States. The examples shown include not only the more pretentious clubs but the simpler types as well. In fact, the selection has been made to furnish precedent for almost any prospective building, whatever its requirements may be. The list of architects from whose work the examples have been chosen includes the names of the best known club and country house architects from all sections, including the Pacific coast. Both exteriors and interiors are featured, and in many cases floor plans add to the value of the material. In addition to illustrating the strictly golf and country clubs, variety and interest are lent to the collection by the inclusion of one or two yacht clubs, a well known beach club, and the Golfers' Club, New York, which is a remarkable example of the adaptation of an old stable building to the purposes of an up-to-date city club. The need for a work dealing with this important branch of architecture has long been evident, and those who have been looking forward to its publication will not be disappointed with Mr. Wendehack's treatment.

GOLF & COUNTRY CLUBS. A Survey of the Requirements of Planning, Construction and Equipment of the Modern Club House. By Clifford C. Wendehack, A.I.A. Text and 157 Plates, 9½ x 13 ins. Price $15. William Helburn, Inc., New York.

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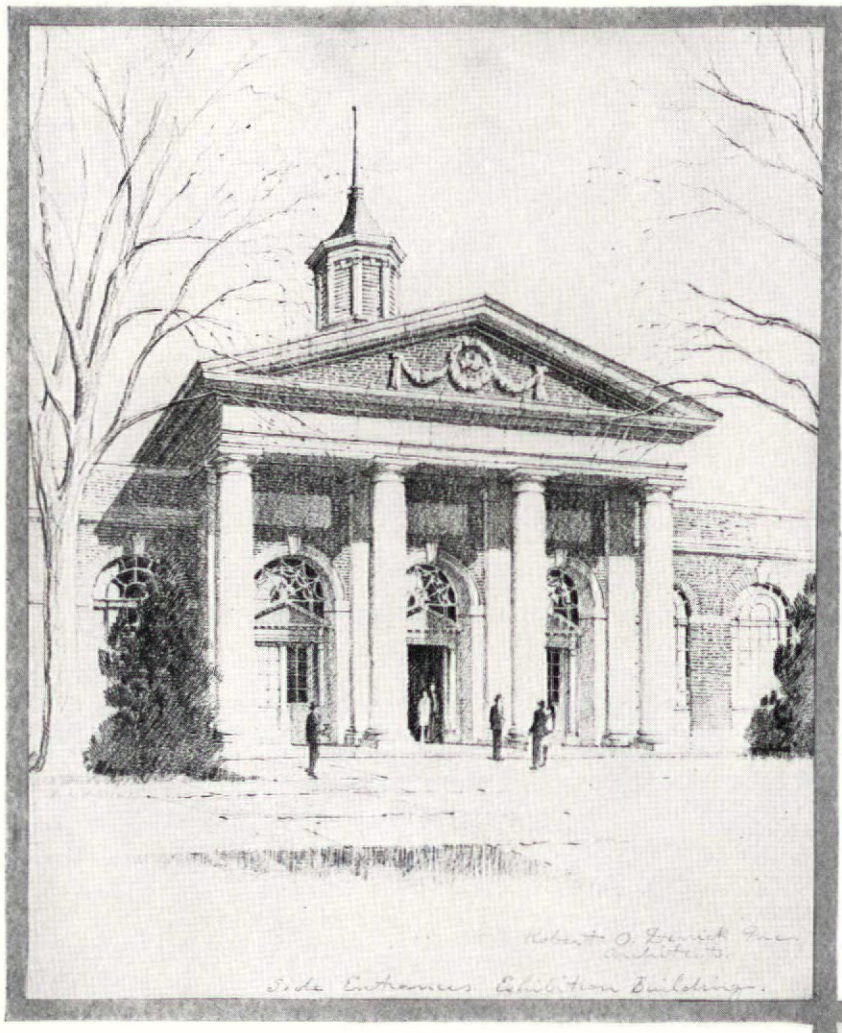

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THE EDITORS' FORUM

CHARLES MORRIS, 1869-1930

THE death of Charles Morris, in Cleveland on January 27, removed from the profession an architect of great ability and a man of high ethical standards. It ends for me a friendship which began in 1891, when I strolled into the Atelier Laloux in Paris with a letter of introduction to Morris from the late Thomas Hastings. Morris hurried me out in time to avoid the usual practical jokes played on visitors, and we became at once intimate friends. We prepared the admission examinations together, and together we bicycled through Touraine and Normandy.

Morris had the unique distinction of having been the first employe of the firm of Carrere & Hastings, and to that office he returned for a time after completing his work at the Beaux Arts. Later he formed a partnership with Richard Walker, doing excellent work, including a number of the Carnegie Library branches in Brooklyn. In 1902 he and I were asked to go to Cleveland to help on the design of the new court house. After a few weeks of study on the plans, the architects asked one or the other of us to stay on in Cleveland and carry the work through. This Morris did, with the result that Cleveland has one of the finest court houses in the country. Upon his return to New York, Walker & Morris won the commission for the 22nd Regiment Armory in competition, served as architects for the Municipal Ferry houses at South Ferry and the bridge and pavilions on Riverside Drive at 95th Street. Unfortunately, the partnership broke up just when success seemed to be knocking at the door. Charles Morris was then appointed chief designer in the Office of the Supervising Architect of the Treasury, where he greatly raised the standard of design. Hundreds of well designed post offices throughout the country are today a credit to his ability. With our entry into the World War the appropriations for government work were discontinued, and the Supervising Architect's office practically ceased work. After winding up his work in Washington, Morris returned to Cleveland and in 1923 formed the firm of Morris & Weinberg, to which success was coming in a widening field when his fatal illness began. Some three years ago he was forced to suffer the amputation of one leg, but, far from discouraging him, this handicap seemed to render him more optimistic and even more courageous in overcoming difficulties.

He was elected to fellowship in the Institute in 1925 and also served as president of the Cleveland Chapter the following year. During all his practice he showed special interest in architectural education, being one of the early members of the Society of Beaux Arts Architects and serving on its juries from time to time. He was one of the founders of the Cleveland School of Architecture in 1922 and served as secretary and treasurer of the board of trustees until the School became officially affiliated with Western Reserve University in 1928. He remained as a member of the board of trustees until his death. Charles Morris was a fine man and a true and loyal friend. Through many years he persevered without receiving the credit which was his due. In the last years of his life, though working under a severe handicap, he achieved his greatest success.

CHARLES BUTLER.

MODERN AMERICAN PROBLEMS

UNDER the auspices of the Department of Architecture of New York University, College of Fine Arts, a special course of ten lectures will be given on "Modern American Problems." The course is intended primarily for practicing architects, and the lectures will be given in the main lecture room of the Department of Architecture, 9 East 37th Street, New York, on Thursday afternoons from 5:15 to 6:15 P. M.

The schedule is:

Raymond M. Hood	THE ATTACK OF THE PROBLEM	Feb. 20
Ralph Walker	SKYSCRAPERS	Feb. 27
Charles Butler	HOSPITALS	March 6
Henry Wright	CITY PLANNING	March 13
Robert D. Kohn	INDUSTRIAL BUILDINGS	March 20
Ralph Adams Cram	CHURCHES	March 27
H. Van Buren Magonigle	MEMORIALS	April 3
Philip Sawyer	BANKS	April 10
Kenneth M. Murchison	APARTMENT HOUSES	April 17
Joseph Urban	MODERN THEATERS	April 24

Arrangements are being made for the publication of full reports of these lectures in THE ARCHITECTURAL FORUM.

D. EVERETT WAID RECEIVES GOLD MEDAL

AT the annual dinner of the New York Chapter of the A. I. A., held on Thursday evening, February 6, on board the French liner, "Ile de France," the Medal of Honor for 1929 was awarded to D. Everett Waid. In the citation delivered at the presentation, C. Grant La Farge thus fittingly eulogized Mr. Waid: "The New York Chapter of the American Institute of Architects awards its Medal of Honor for 1929 to Dan Everett Waid. Past President of this Chapter, and Past President of the Institute, Mr. Waid is among the foremost of those men who by long years of unselfish devotion, sound judgment and high integrity have notably contributed to the advancement of their profession. To these services he has added great personal generosity. In the practice of his profession he has occupied positions of heavy responsibility, discharging the trust reposed in him with marked ability. This medal is awarded as the fitting recognition of his architectural accomplishments and as testimony to the esteem in which he is held by a profession which is in so many ways his debtor."

A CONGRESS OF ARCHITECTS

THE 12th International Congress of Architects will be held in Budapest, the capital of Hungary, from September 7 to 14, 1930. It is expected that, from all parts of the world, architects will meet in large numbers at Budapest, and already many enrollments have been received at the offices of the Congress. Among others, one of the most celebrated architects of the world, Prof. Ragnar Ostber of Stockholm, has announced his intention of attending the Congress; and he has also declared his readiness to take part in the International Exhibition of Architecture, which will be held in conjunction with the Congress, by exhibiting the plans of one of his most important creations,—the town hall of Stockholm.

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THE
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VOL LII, No. III — MARCH, 1930

GOLF AND COUNTRY CLUB REFERENCE NUMBER

PART ONE—ARCHITECTURAL DESIGN

Cover Design: Capital City Country Club, Atlanta
From a Water Color by R. A. Wank

The Editors' Forum — Page 35

Park Club, Buffalo, N. Y. — *Frontispiece*
From a Water Color by J. Floyd Yewell

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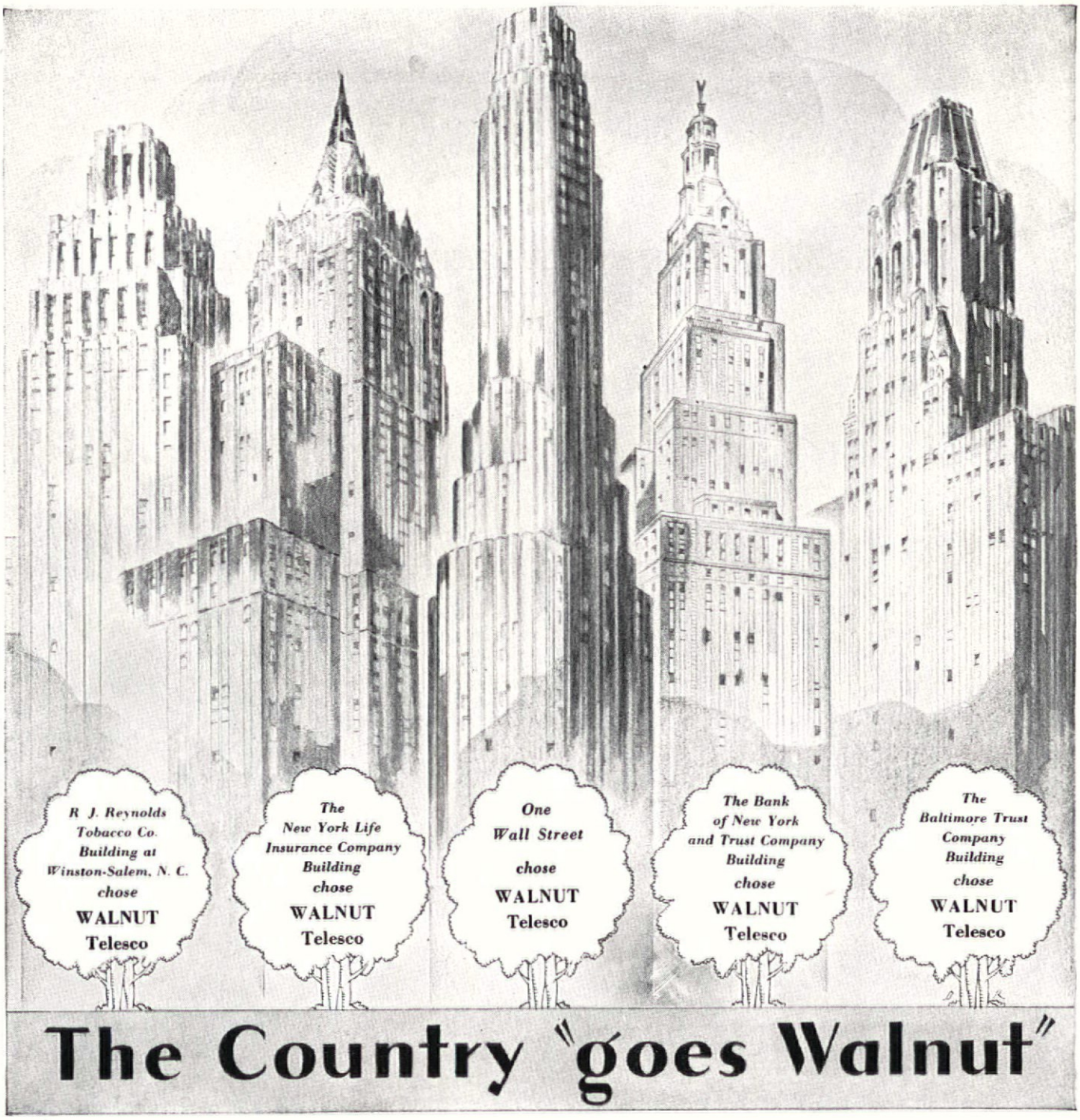

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The Architectural Forum

THE
ARCHITECTURAL
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VOLUME LII NUMBER THREE

MARCH 1930

THE ARCHITECT AND THE BUILDING COMMITTEE

BY

CLIFFORD C. WENDEHACK

ARCHITECT

THERE are many phases to be considered in producing a good club plan, for, regardless of the amount of experience an architect may have had in designing club buildings, they are more often developed by the building committees than by the architect's good judgment. It is not an easy matter to stand before a board of 12 serious men and tell them that their ideas, if put into practice, would produce a conglomerate mass which would fall far short of answering their needs and would be regretted by their successors. In many instances, the building committees are responsible for the architectural abominations which are found throughout the country. An architect is a strange combination of ego and a desire to please, and this latter characteristic makes it difficult indeed for the professional man inexperienced in club planning to stand before a hard-headed group of golfers and tell them that their ideas are wrong, extravagant, and leading them to acquiring a hodgepodge building.

Perhaps if every architect designing a club were a "Bobby Jones," he would have more courage to tell his committee just what he would not permit them to do; but unfortunately this is seldom the case. From personal experience, I know that it is only after many successive operations, after many instances of witnessing the absurdities of a committee's ideas, that an architect gains courage to be bluntly frank and give his clients the benefit of his knowledge gained from the mistakes and faulty logic of other and successive committees. It is interesting to note the different characteristics of a committee of women for a women's club, and those of a similar committee of men. The women are possessed of all the common sense and decisiveness of the race, and while there are always exceptions to every rule, and while the personnel of building committees certainly cannot be judged by rules in any instance, it is interesting to note that committees of women are inclined to leave more to their architects' judgment than the men. Perhaps this is a part of their inherent training,—or perhaps perception on their part, which teaches them that their architects know more about the subject than they do. But the fact remains that although the committee composed of club women usually requires more time for discussion and weighs subjects in a different manner than a committee of husbands would do, when it does reach a conclusion it usually stands by it consistently. Of course, there are always on a women's committee individuals with masculine minds, and vice versa, but for an out-and-out scrap and a successful upsetting of all plans, some committees of men are supreme.

However, common sense judgment, clear visioned business and artistic sense are not the exclusive prerogative of either sex. All architects know from experience that the close relation between client and architect for the period required to design and construct a building brings out a man's or woman's foibles, crotchets and true nature as no other human experience can do, and that when a number of these separate indentities composing a committee are to be dealt with, it is often amusing and tragic to see by what means right triumphs over personal hobbies. In no other form of building, possibly, does the flaunting of personal hobbies come to the fore as strongly as in the designing of a country club. And it is

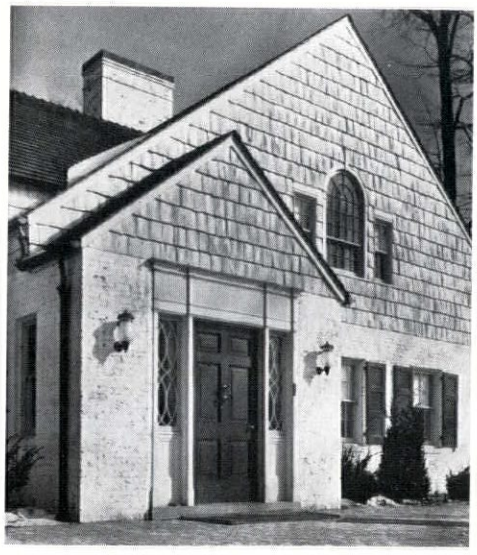
Views of the North and South Elevations and the East Terrace Entrance

Photos. R. S. Grant

Short Hills Country Club
Near Old Short Hills, N. J.
C. C. Wendehack, Architect

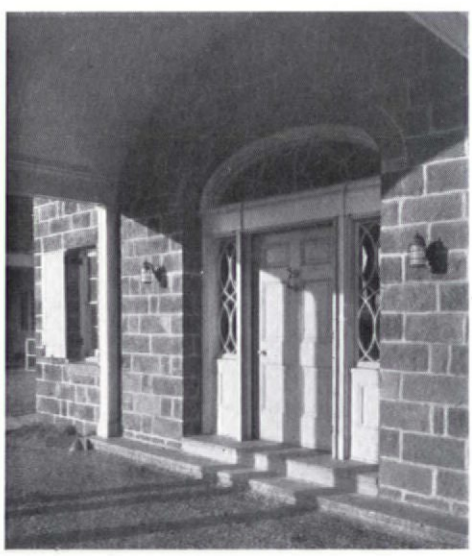
indeed a welcome relief when some clear-visioned member of the committee asserts himself. A man who can stand on his two feet and help the architect accomplish what his experience tells him is right, sooner or later comes to the fore in every club house building committee.

The psychology of committees is an interesting study, provided the architect does not allow his personal feelings to become too much involved,—which of course always produces a hopeless situation. Assuming that he can bide his time for securing the results he desires, it is possible at the psychological moment to swing an entire committee on to the right track to acceptance of the ultimate layout. It is often necessary, however, before this can be accomplished, to detect within the ranks of the committee the cranks who are solely destructive. They are usually the most parsimonious members of the club, and if the



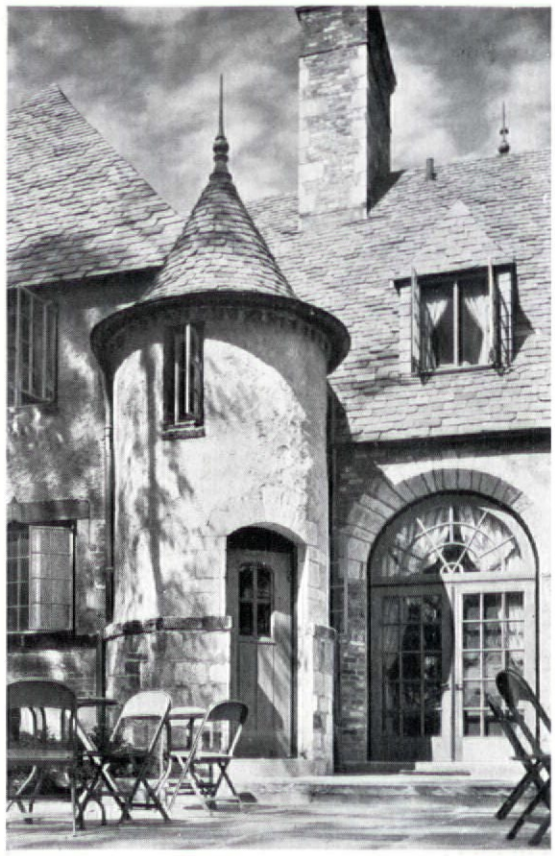
South and West Elevations and the Entrance Door Show Dutch Colonial Influence

The Hackensack Golf Club Situated at Oradell, N. J. C. C. Wendehack, Architect



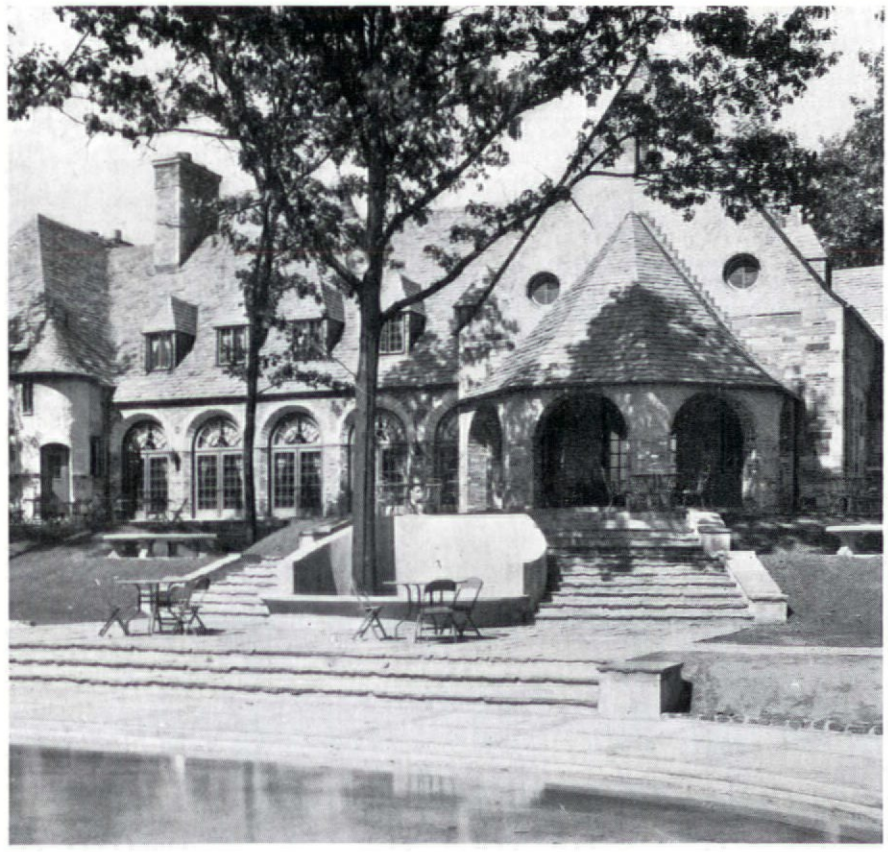
membership were composed entirely of them, the organization would fail for lack of support. The perpetual crank, however, can often work havoc in regard to the building program in the financing as well as in the actual layout of the plan itself; and in looking back over a period of years it is interesting to note what harm committee cranks have been able to effect in the finished product. If the architect could only find some means of letting his committee see, as he does, the errors that their predecessors have made, much would be accomplished for the benefit of future club buildings as well as the club they are sponsoring.

It is only natural that the architect classifies and analyzes the committees with which he finds himself from time to time in contact. It might be logical to classify them as "destructive" and "constructive" types. The latter are inspiring; they spur one on to create, whereas the former are in-



terested only in expressing their own ideas. The final results are obvious, and I am of the firm belief that every club house reflects not only its architect's ability, but the characters of the men who have served on its building committee.

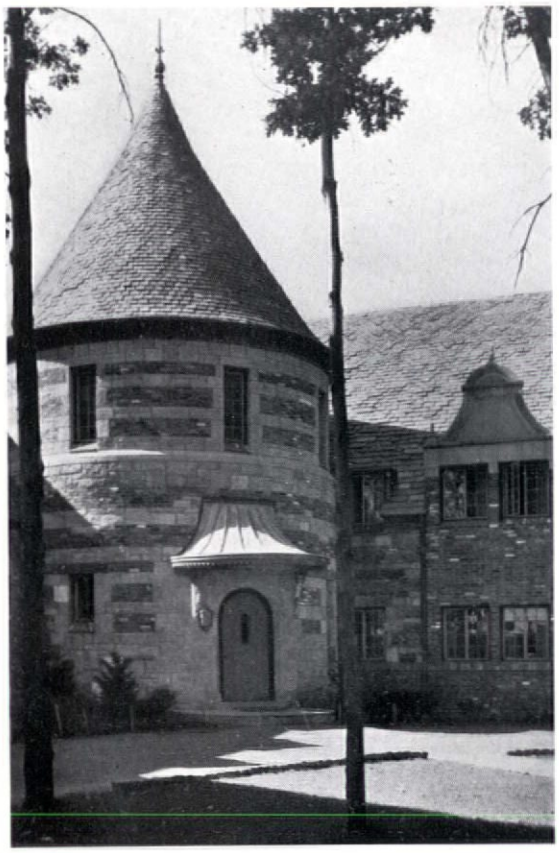
Regardless of how good a talker an architect may be in painting a word picture of a building, laymen are likely to place their own interpretation on his words; or else, as is more often the case, they are unable to visualize his conception at all. Therefore, after a plan is reasonably determined upon, a water color sketch of the building is of great value in "selling" the architect's and committee's ideas to the entire membership. Such sketches should not be used to distract the committee's consideration of the details of the plan, but merely to give an impression to the club at large of what the finished building will be. It is often interesting and helpful to have both plans and perspective produced in color on lantern slides and projected on a screen where they may be explained and discussed by the architect before members. This permits each member to feel that he is being taken into the architect's confidence; and if members are permitted to ask questions, it will be found to be of great assistance in increasing membership or promoting a bond issue. This, of course, is a dangerous procedure, unless the architect with his committee has previously tried



Two Views of the South Elevation, Ridgewood Country Club, Paramus, N. J. Clifford C. Wendehack, Architect

out every possible layout which would solve the problem. If the deductions gained from these successive tryouts have been incorporated in the plan being shown, he will know his subject thoroughly and will feel that he has his committee solidly back of him.

The proper relation of the various rooms comprising a club plan is of fundamental importance. Each and every possible separate and combined use of the various areas should be carefully considered. Often, ideas expressed at an open meeting in relation to these uses are most helpful; for after all every man has a different way of enjoying himself, and when we consider that some men's idea of a good time is to obtain as much seclusion as possible from their families, whereas others wish to be with their families and friends, it becomes a problem to entirely satisfy these opposites within the confines of one building. Therefore, we must always keep in mind the good of the majority, and so relate the main rooms of the club as to produce the largest possible area when desired. This can and has been done in many instances, at the same time retaining livable and architectural rooms. The barn-like appearance of large rooms is obsolete for club purposes just as surely as the club of former days is impractical when it is divided into many small units which are useless for a party of 300 or 400 people. The



Forecourt Entrance and Covered Porch, Ridgewood Country Club, Paramus, N. J. Clifford C. Wendehack, Architect

rambling and informal layout such as is found in the English house does not adapt itself to modern club uses; and neither the architect nor the committee should permit indulging in this type of interior planning.

Probably of the first importance in a club plan is its proper orientation to the points of the compass, to the golf course, and to the means of ingress and egress. In most cases these three considerations are conflicting, and this is one of the first problems that the architect's ingenuity is called upon to solve. To do this, one must have an intimate knowledge of the site, of the home greens and holes of the golf course, and the habits and lines of travel of the membership. After these fundamental problems are satisfactorily solved, there is the practical inter-relation of the rooms which must not be lost sight of. Unnecessary steps, loss of time, and confusion are as costly in a club house, even though it be recreational, as

Living Room and Private Dining Room With Pine Paneling on Walls, in the Ridgewood Country Club at Paramus, N. J. Clifford C. Wendehack, Architect

they are in a business institution. It means wear and tear on furniture and carpets, a larger staff of attendants, and less patronage by the members if the relation of the major rooms is not practical. It is true, nevertheless, aside from certain fundamental principles, that what might be a practical inter-relation of rooms for one organization would not serve well at all for another organization, and only after observing for a while the traditions and life of the individual club can an architect determine upon the practical relation of the rooms.

It is these facts which make architectural competitions for clubs so useless and valueless to the clubs' best interests. Many club committees, in their desire to obtain the best architectural ideas available for their organizations, decide that a competition should be held, usually among several architects who are members of the club and outside friends or relatives of the officers. I have had

Above. Mantel in Lounge, Park Club, Buffalo, N. Y. Below, Living Room, the Hackensack Golf Club, Oradell, N. J. Clifford C. Wendehack, Architect

the pleasure of viewing countless such competitive drawings, and regardless of the ability of the architects competing, I have seldom seen any intelligent solution of that particular club's problem. The reason for this is that the architects do not know their subject,—they cannot be expected to know such a subject in a fortnight's period, with the result that much ink and water color are wasted, and a theoretical architectural expression rather than a club solution is obtained.

The other side of this question is the fact that when the committee members receive these drawings they do not understand them. They are not what the individuals on the committee expected, and even if they should pick the winner and award him the contract, it would be hard to find an instance where the winning plan was actually built. The reason for this is obvious. The ideas incorporated in a club's competitive drawings are usually based on a theory of the way in which the club should function; and although these theories may be ideal, they are usually torn apart when put into practice. If we were to look around the country and were able to find a club that was built from competition drawings, it is safe to say that such a building would be a handicap to its manager, its officers and members. If club committees charged with the selection of an architect could know the inside workings of an architect's office, they would, I am sure, discard this useless practice of asking architects to compete for their buildings, cast personal considerations aside, and select an architect who has had previous experience in this class of building and go to work with him in an honest way to obtain the results which would best meet the needs of the majority in the most practical way possible.

The importance of spending money where it will count most is a matter which should be carried into every conference. Expensive architectural hobbies should not be indulged in for club buildings. Marble mantels and gold leaf do not make a successful club any more than would catering to expensive tastes often possessed by some members of the committee, based on life in their own homes. An architect should be obliged to submerge his own inclinations and force the committee to do likewise until such time as the heart and the main arteries of the plant have been properly taken care of. There are many more effects which can be obtained cheaply, with a little more study perhaps, than with the extravagant use of expensive material. Economics enter largely into the conception of a club building. All organizations have a limit to their earning capacities, and buildings should not be designed for clubs which cannot afford to properly maintain them. Dues, initiations and stock in many instances should be raised and put on a par with those of similar organizations, but there is a limit to which this can be done in all communities, and if this fact is not taken into consideration, the most beautiful and properly planned building will be but a load and a drag on the members for the rest of their lives, instead of a pleasure and a source of recreation for them and their families.

The Phelps Manor Country Club, Englewood, N. J.
Clifford C. Wendehack, Architect

THE ARCHITECTURE OF THE COUNTRY CLUB

BY
ROGER H. BULLARD
ARCHITECT

WITH the apartment becoming more popular as a place of rural as well as urban residence, the country club is taking its place as a vital and important factor in the life of a community. For although some would have us believe that the apartment house has been devised to conform with our modern ideas of living, it is much more to the point to reverse that statement and say that our ideas of living have been necessarily transformed, due to the fact that the majority of us are living in small apartments. However, we still cherish certain of the old traditions on which the home life of past generations was founded. We still like to play a little each day; we still enjoy mingling with our friends, and we still would like to be able to stage certain home affairs such as those in which our fathers and mothers and our grandfathers and grandmothers found such pleasure. In other words, our ideas of living have not changed very much, but we cannot live the same life in a small apartment as we would in a private house. To entertain in a small apartment is almost out of the question. What is the result? Must we give up entertaining? Give up seeing our friends? It is here that we see the opportunities of the country club. When we entertain at dinner, we do so at the club; when we are invited to a dance, the party is sure to be given at the club, and when we go out to play cards, it is almost sure to be a club affair.

Thus we must not think of the modern country club as exclusively a sport club,—a place to play golf and tennis,—but rather must we look at it as a sort of community house. Probably many of the members of an average country club never even held a golf club or a tennis racket in their hands, but they all dance, play cards and enjoy sitting around a big open fire with their friends. In this light we see the lounge as the most important feature of the plan of the country club of today. It must be a good sized room, comfortable in every detail, while its architectural and decorative treatment must not lean too decidedly toward any one style or period, for the membership of any club is made up of people of varied tastes. It is often desirable to arrange the lounge so that it may be combined with the dining room to provide an assembly room for large gatherings. In clubs where golf is played by the majority of the members, the location, size and equipment of the locker room are of major importance in the planning of the club.

It is highly important that the architect be consulted before the actual site of the building is decided upon, for his special problem is to create a composition blending harmoniously with the landscape and expressing in terms of architecture the social and sport life of the community. The style of the architecture selected is a matter of both locality and of taste. In certain sections of the country,—those for example in which Colonial traditions are held sacred, it is desirable that the design reflect certain Colonial tendencies.

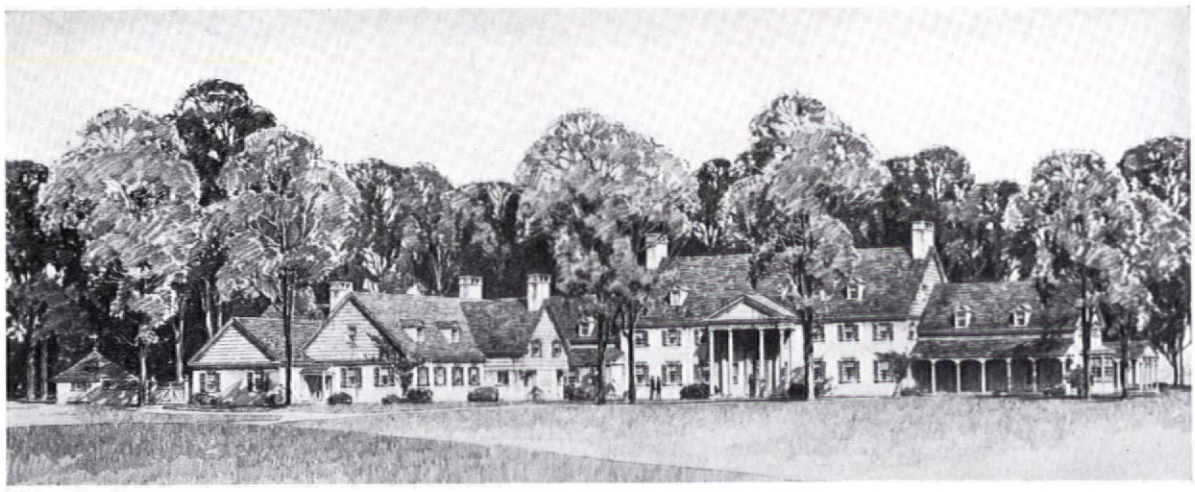
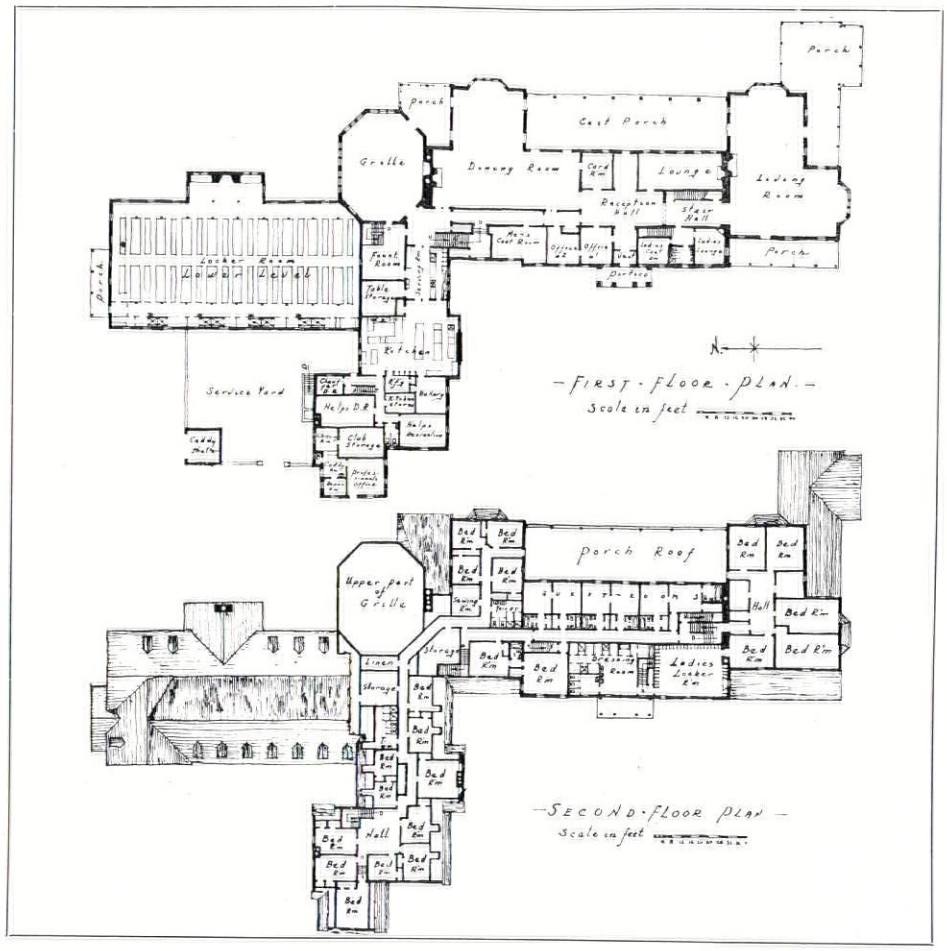


Photo. Hewitt

Milwaukee Country Club.
Fitzhugh Scott and Roger H. Bullard, Associate Architects



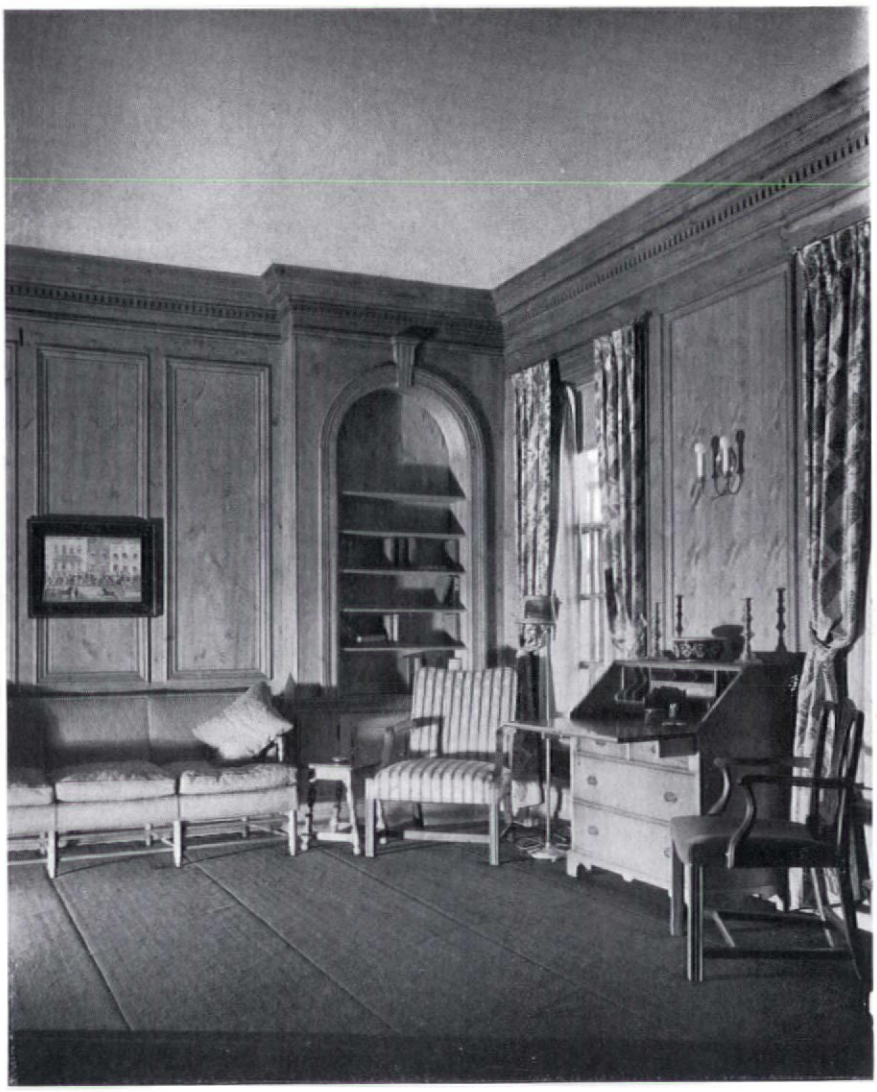
Milwaukee Country Club. Fitzhugh Scott and Roger H. Bullard, Associate Architects

Similarly, in California, where old Spanish traditions are still cherished, the architecture naturally may bear evidence of Spanish influence. Nor must we overlook the effect of structural materials on architectural design. In many cases, while excavating for the club house, a great amount of stone is unearthed which may be used to advantage in the construction of the building. Also, the club property very often abounds with loose stone which allows of a further saving in the cost of the structure. In such cases the design must be such as to conform with stone details, for it is much more important that the building express the peculiar character of the material of which it is constructed than that it shall conform accurately to some period of architecture of the past. It may be that there is an insufficient quantity of stone on the property to complete the building, and in such a case, wood, stucco or brick may be substituted or combined with it. Care should be taken, however, not to disturb the character of a stone building by overdoing the combination of materials.

In the planning of the structure, the architect should consider orientation, contours of the land, and the relation of club house to the golf course, with the principal outlook embracing a view of the course. It is desirable that both the exterior and interior design of a country club should be informal, simple and homelike. The plan, developing usually into the rambling type of building, must be largely a matter of assembling masses of various sizes into one complete composition. The main portion of the structure, or the dominating mass, would house the club rooms, including the lounge, dining room, grill room, card room, porches, a women's locker room, and possibly members' bedrooms on the second floor. Perhaps adjoining this, but in a separate wing, on the ground floor there would be the men's locker room, wash rooms, valeting room, and so forth, but arranged for easy access to the lounge and grill room and with its entrance doorway conveniently near the first tee and 18th green. Another wing would be devoted exclusively to service, including the kitchen, serving room, laundry, servants' dining room and servants' bedrooms above. Grouped around the main entrance there would be such rooms as the entrance hall, office, waiting room and such other rooms as are necessary, depending on the needs of the particular club. These needs vary con-

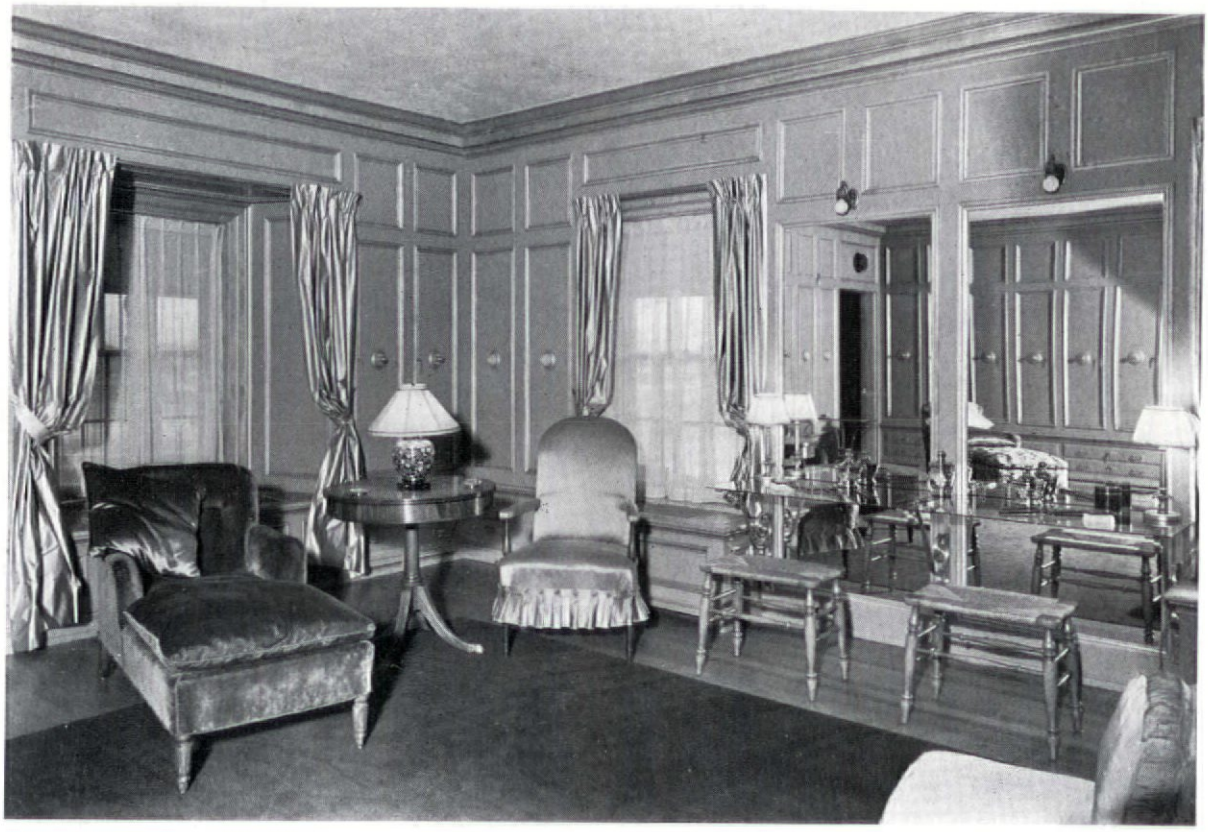
Photos. Trowbridge

ABOVE, GENERAL VIEW OF ENTRANCE FRONT AND DRIVE. BELOW, A PINE PANELED ROOM



MILWAUKEE COUNTRY CLUB. FITZHUGH SCOTT AND ROGER H. BULLARD, ASSOCIATE ARCHS.

Interior Decoration Under the Supervision of Roger H. Bullard and Elizabeth Parker



Women's Locker Room

Milwaukee Country Club. Fitzhugh Scott and Roger H. Bullard, Associate Architects

Fireplace in Lounge

siderably, from those of the club which is almost a hotel, such as the Westchester-Biltmore Country Club at Rye, N. Y.,—which fosters every sport in its season, including golf, tennis, polo, swimming, trap shooting, racing, skating, etc., and which includes housekeeping apartments, barber shops and so forth,—to the simple club of 50 members in a small village where a 9-hole golf course and a building with locker room and lounge,—not forgetting a fireplace,—are sufficient alone to satisfy the needs of its members.

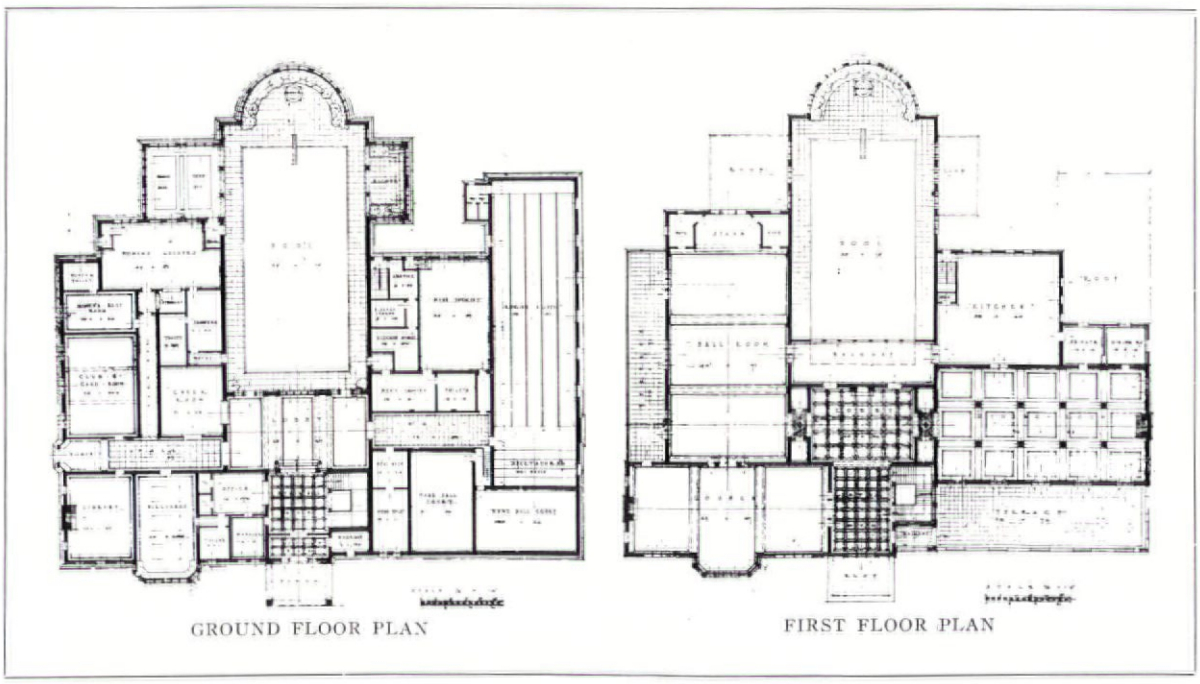
But I would hold as most important that the architectural design be of such a character that the club house building becomes actually a part of the landscape. Being a type of building modern in its origin, as in its purpose, it is much more important that its design reflect characteristics of this day than that an attempt be made to associate it with any architectural period of the past. There may be evidence of stylistic ideas and inspiration in its design, by which the traditions of the locality may be reflected; on the other hand, to emphasize them to the detriment of a design that shall be harmonious to the site, expressive of its purpose and in keeping with the character of its fabric, is to ignore the fundamentals on which architecture is firmly established.

ABOVE, RECEPTION HALL
BELOW, MAIN DINING ROOM

MILWAUKEE COUNTRY CLUB. FITZHUGH SCOTT AND ROGER H. BULLARD, ASSOCIATE ARCHITECTS

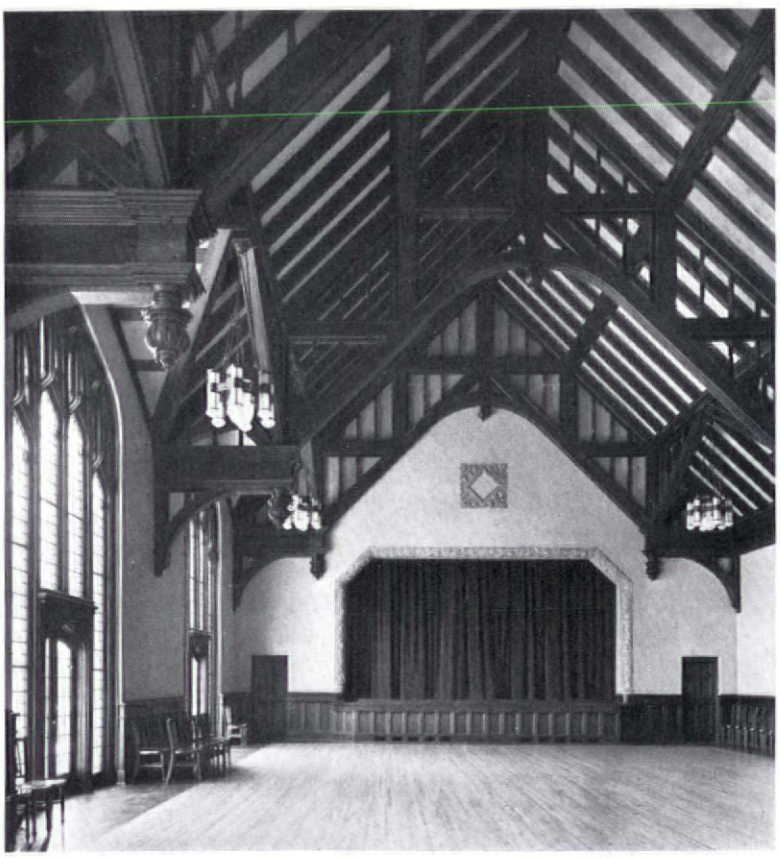
Photos. Trowbridge

LOUNGE



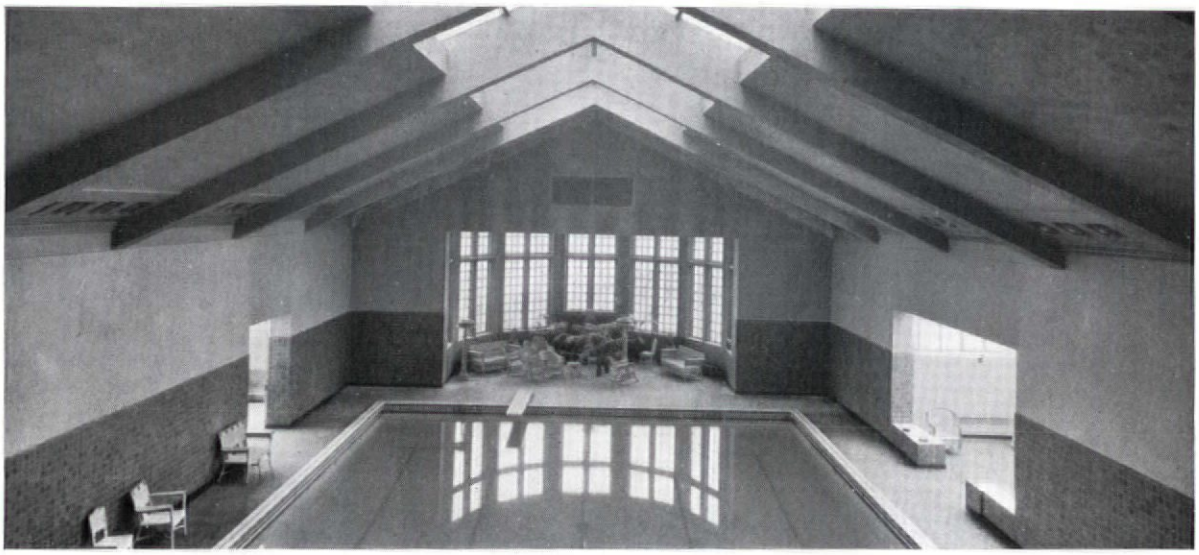
SHAWNEE COUNTRY CLUB, WILMETTE, ILL. BURNHAM BROTHERS, ARCHITECTS

ENTRANCE FRONT



THE BALL ROOM

SHAWNEE COUNTRY CLUB, WILMETTE, ILL. BURNHAM BROTHERS, ARCHITECTS



SWIMMING POOL

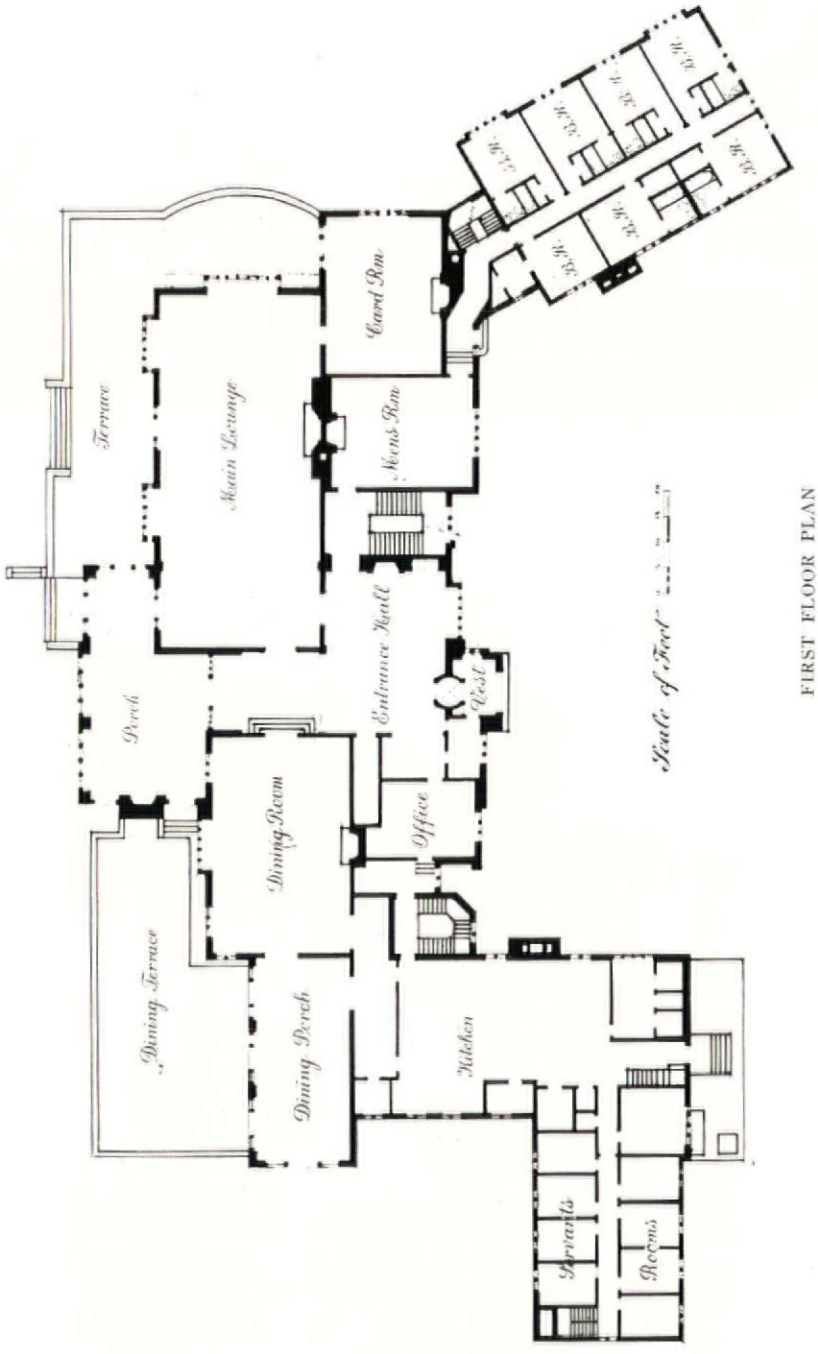
MAIN STAIRWAY

SHAWNEE COUNTRY CLUB, WILMETTE, ILL. BURNHAM BROTHERS, ARCHITECTS

FIVE RECENT GOLF AND COUNTRY CLUBS

Photos. S. H. Gottscho

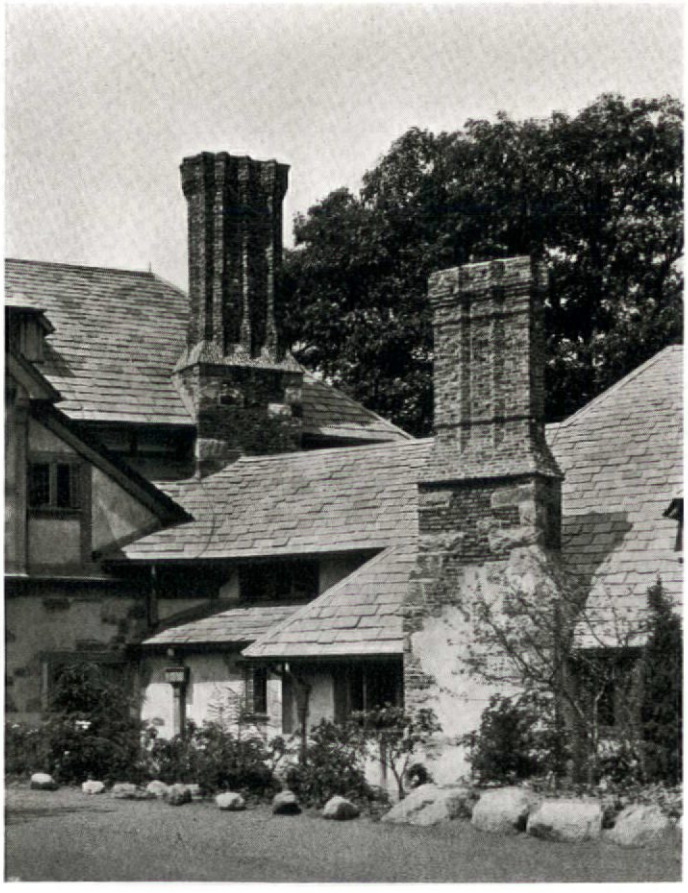
TUXEDO COUNTRY CLUB, TUXEDO PARK, N. Y.
OFFICE OF JOHN RUSSELL POPE, ARCHITECT



THE TUXEDO
COUNTRY CLUB,
TUXEDO PARK, N. Y.

THE OFFICE OF
JOHN RUSSELL POPE,
ARCHITECT

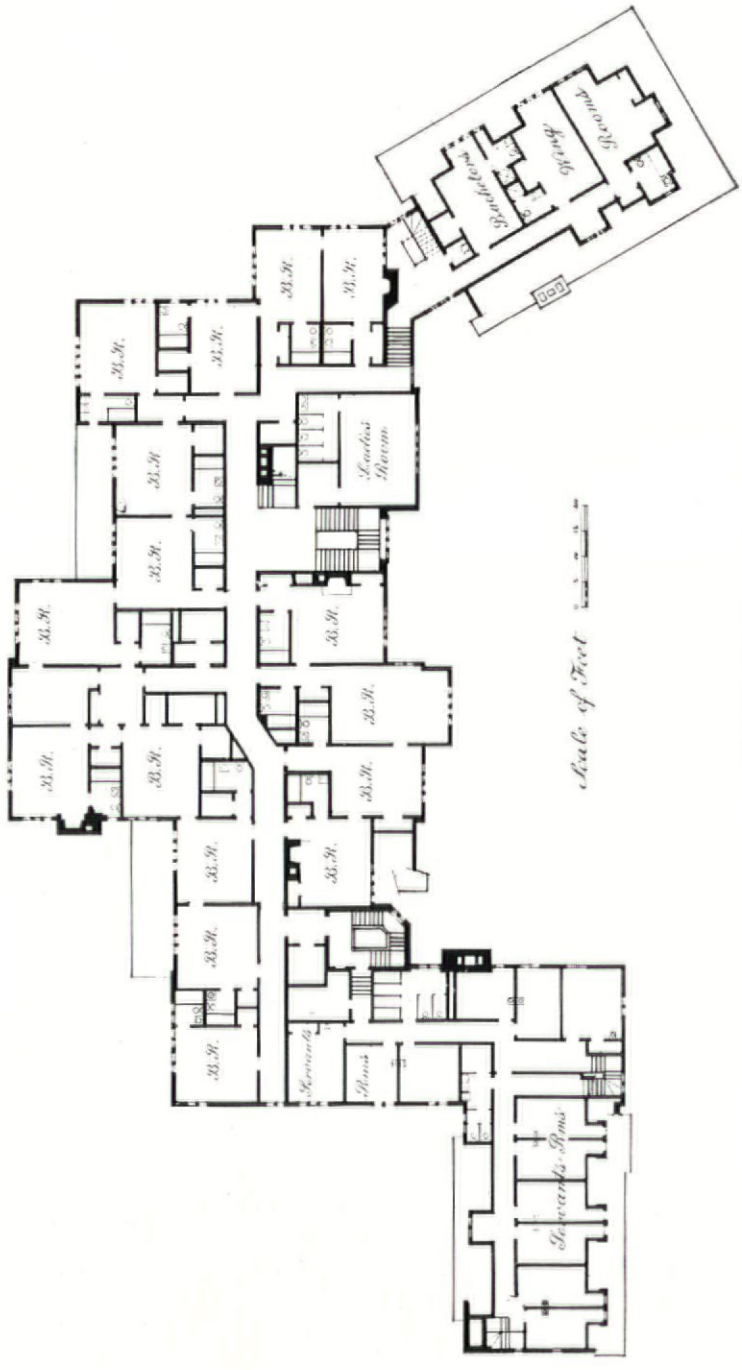
ENTRANCE COURT



BACHELORS' WING

THE TUXEDO
COUNTRY CLUB,
TUXEDO PARK, N. Y.

THE OFFICE OF
JOHN RUSSELL POPE,
ARCHITECT



THE TUXEDO
COUNTRY CLUB
TUXEDO PARK, N. Y.

THE OFFICE OF
JOHN RUSSELL POPE
ARCHITECT

SOUTHWEST TERRACE ADJOINING MAIN LOUNGE

TERRACE ENTRANCE TO MAIN LOUNGE

THE TUXEDO
COUNTRY CLUB
TUXEDO PARK, N. Y.

THE OFFICE OF
JOHN RUSSELL POPE
ARCHITECT

COST AND CONSTRUCTION DATA

YEAR OF COMPLETION: 1928.

TYPE OF CONSTRUCTION: Masonry and wood framing.

EXTERIOR MATERIALS: Rubble stone, stucco and timber.

INTERIOR MATERIALS: Plaster finish and wood trim.

ROOF CONSTRUCTION: Wood framing, slate finish.

WINDOWS: Metal casements, leaded glass, Venetian blinds.

FLOORS: Oak in living rooms, pine in bedrooms, terrazzo in public service rooms.

HEATING: Vapor vacuum steam and return. Coal-burning.

VENTILATING: Mechanical in all service rooms and toilets.

KITCHEN EQUIPMENT: Modern heavy duty hotel type.

NUMBER OF BEDROOMS: 21 double masters, 10 single for bachelors, 40 for servants.

NUMBER OF CUBIC FEET: 679,601.

COST PER CUBIC FOOT: Approximately 77 cents.

TOTAL COST: $526,116.59.

TUXEDO COUNTRY CLUB, TUXEDO PARK, N. Y.
OFFICE OF JOHN RUSSELL POPE, ARCHITECT

MAIN LOUNGE

CARD ROOM

THE TUXEDO COUNTRY CLUB, TUXEDO PARK, N. Y.

THE OFFICE OF JOHN RUSSELL POPE, ARCHITECT

DINING ROOM

ENTRANCE TO DINING ROOM

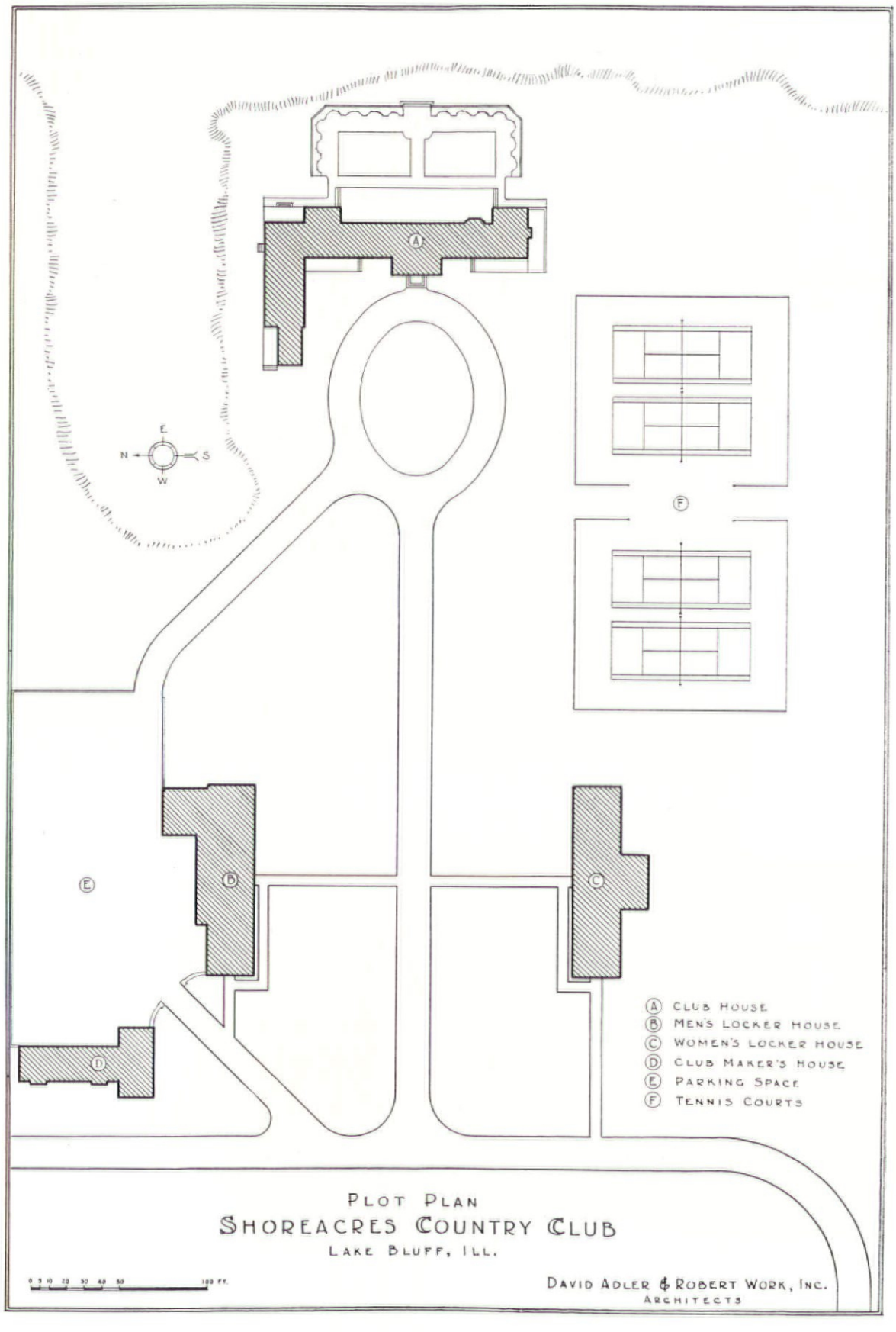
THE TUXEDO
COUNTRY CLUB
TUXEDO PARK, N. Y.

THE OFFICE OF
JOHN RUSSELL POPE
ARCHITECT

MAIN ENTRANCE

SHOREACRES COUNTRY CLUB, LAKE BLUFF, ILL. DAVID ADLER & ROBERT WORK, INC., ARCHITECTS

EAST ELEVATION



PLOT PLAN

SHOREACRES COUNTRY CLUB

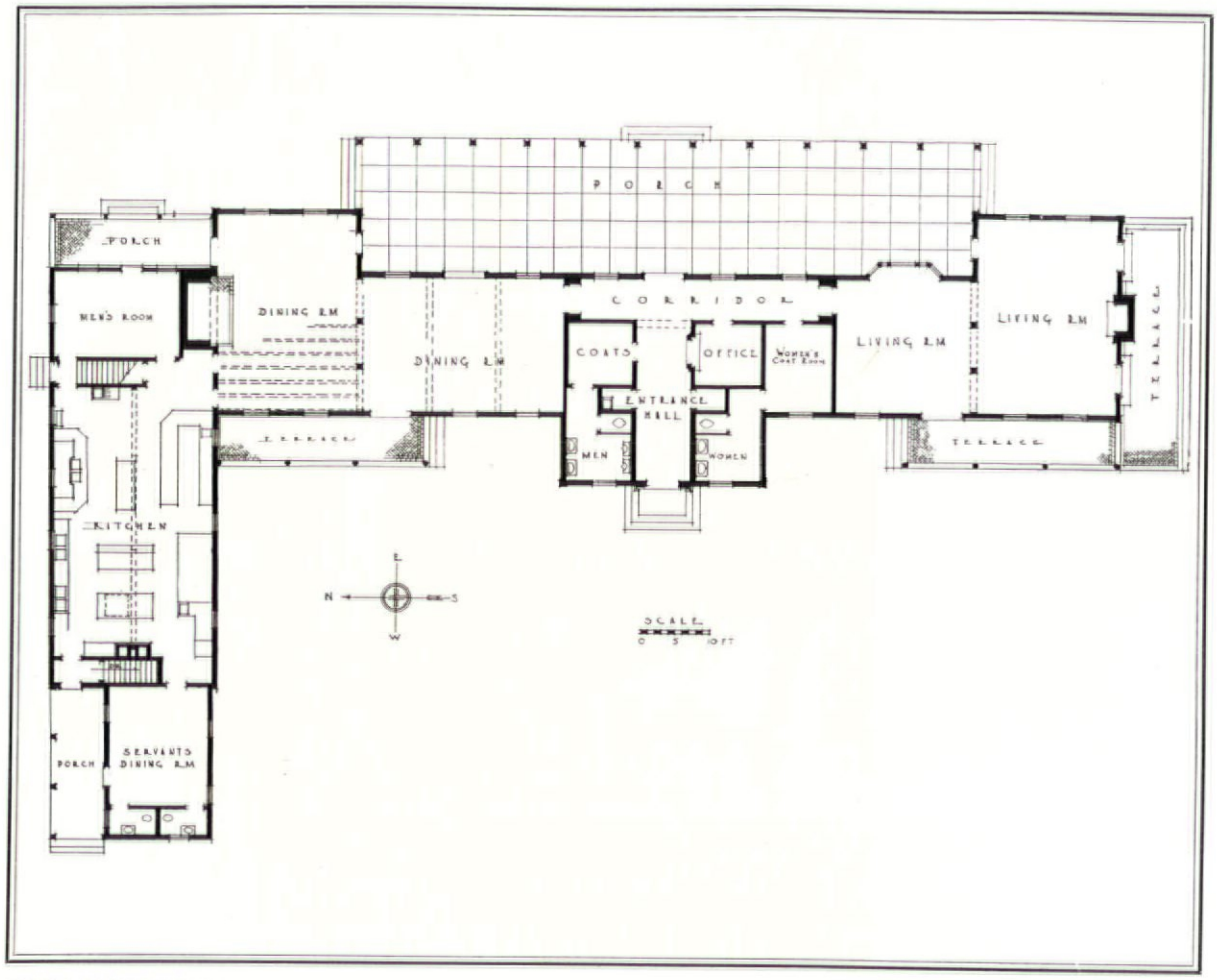
LAKE BLUFF, ILL.

DAVID ADLER & ROBERT WORK, INC.
ARCHITECTS

ENTRANCE HALL

SHOREACRES COUNTRY CLUB, LAKE BLUFF, ILL. DAVID ADLER & ROBERT WORK, INC., ARCHITECTS

DINING ROOM



FIRST FLOOR PLAN

SHOREACRES COUNTRY CLUB, LAKE BLUFF, ILL. DAVID ADLER & ROBERT WORK, INC., ARCHITECTS

NORTH LIVING ROOM

SHOREACRES COUNTRY CLUB, LAKE BLUFF, ILL. DAVID ADLER & ROBERT WORK, INC., ARCHITECTS

SOUTH LIVING ROOM

CONSTRUCTION DATA

TYPE OF CONSTRUCTION: Frame.

EXTERIOR MATERIALS: Siding.

INTERIOR MATERIALS: Part wood paneled and part plaster walls.

ROOF CONSTRUCTION: Shingle.

WINDOWS: Wood, double-hung.

FLOORS: Wood.

HEATING: Vapor.

VENTILATING: Gravity.

NUMBER OF MEMBERS: 250.

NUMBER OF CUBIC FEET: 189,605.

SHOREACRES COUNTRY CLUB, LAKE BLUFF, ILL. DAVID ADLER & ROBERT WORK, INC., ARCHITECTS

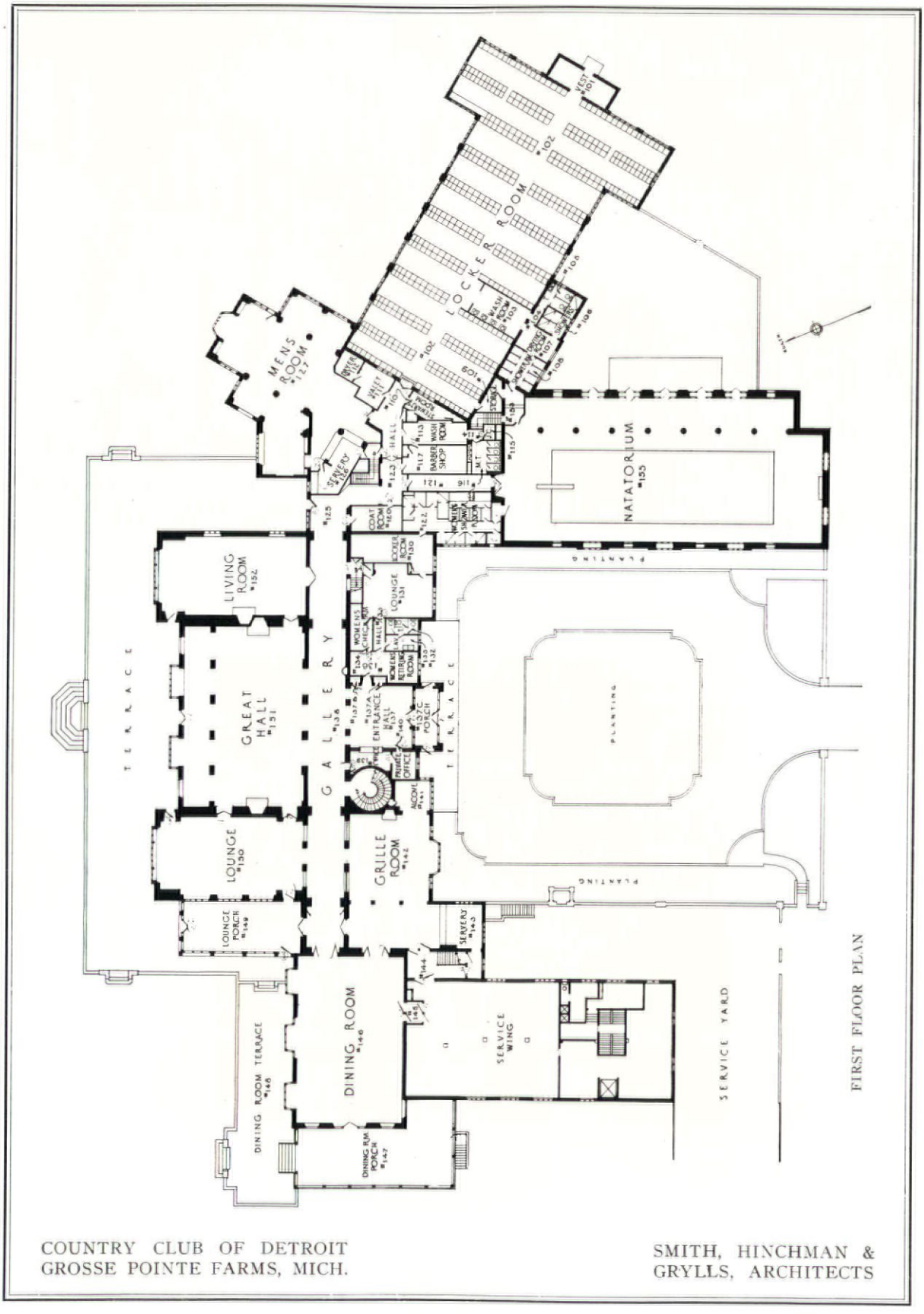
Photos. Ellison

SOUTH ELEVATION FROM THE GOLF LINKS

TERRACE

COUNTRY CLUB OF DETROIT
GROSSE POINTE FARMS, MICH.

SMITH, HINCHMAN & GRYLLS, ARCHITECTS



COUNTRY CLUB OF DETROIT
GROSSE POINTE FARMS, MICH.

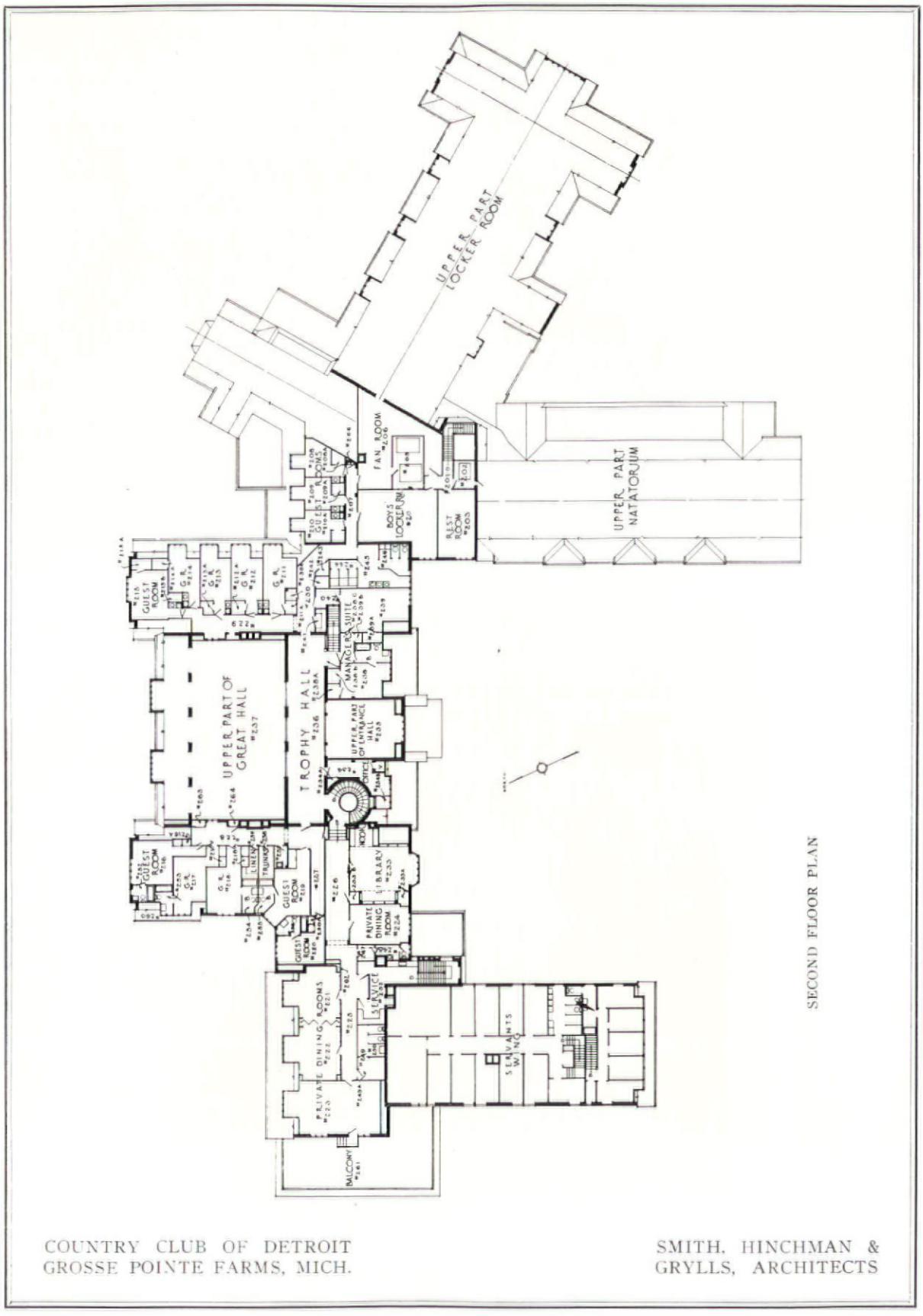
SMITH, HINCHMAN &
GRYLLS, ARCHITECTS

GREAT HALL

ENTRANCE HALL

COUNTRY CLUB OF DETROIT
GROSSE POINTE FARMS, MICH.

SMITH, HINCHMAN &
GRYLLS, ARCHITECTS



SECOND FLOOR PLAN

COUNTRY CLUB OF DETROIT
GROSSE POINTE FARMS, MICH.

SMITH, HINCHMAN & GRYLLS, ARCHITECTS

LIVING ROOM

MEN'S ROOM

COUNTRY CLUB OF DETROIT
GROSSE POINTE FARMS, MICH.

SMITH, HINCHMAN &
GRYLLS, ARCHITECTS

COST AND CONSTRUCTION DATA

YEAR OF COMPLETION: 1927.

TYPE OF CONSTRUCTION: Wall-bearing fireproof.

EXTERIOR MATERIALS: Pressed brick, timber, plaster, slate roof.

INTERIOR MATERIALS: Stone, plaster, hewed oak, tile, brick.

ROOF CONSTRUCTION: Steel rafters and purlins, cement, variegated slate.

WINDOWS: Metal casements, leaded glass.

FLOORS: Oak and teak plank, stone, slate, tile

HEATING: Direct and indirect steam.

VENTILATING: Exhaust system.

NUMBER OF MEMBERS: 700.

NUMBER OF BEDROOMS: 13.

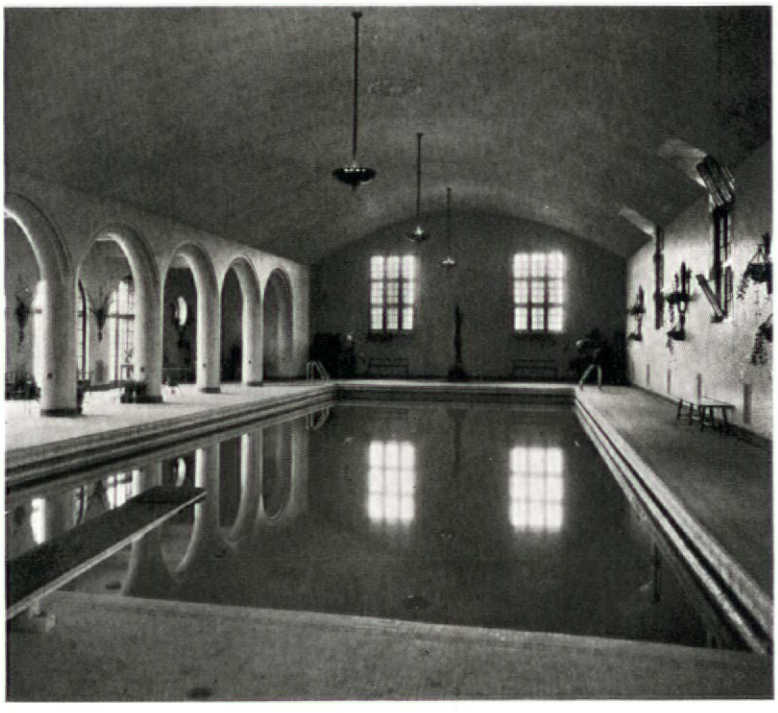
NUMBER OF CUBIC FEET: 867,000.

COST PER CUBIC FOOT: 75 cents.

TOTAL COST: $650,000.

COUNTRY CLUB OF DETROIT, GROSSE POINTE FARMS, MICH. SMITH, HINCHMAN & GRYLLS, ARCHITECTS

MAIN DINING ROOM



SWIMMING POOL

COUNTRY CLUB OF DETROIT
GROSSE POINTE FARMS, MICH.

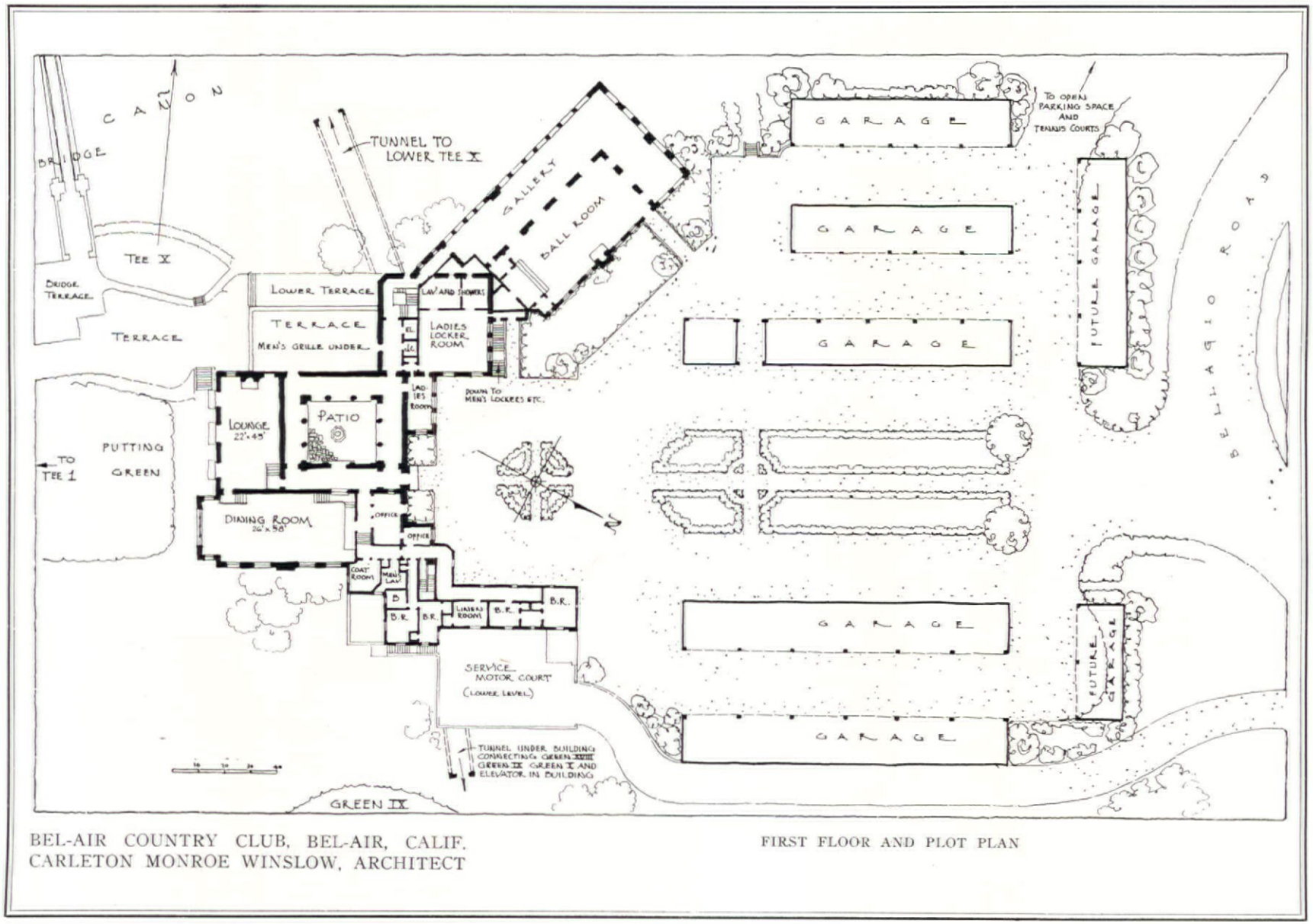
SMITH, HINCHMAN &
GRYLLS, ARCHITECTS

VIEW OF CLUB FROM ACROSS RAVINE

Photos. Mott Studios

FORECOURT AND MAIN ENTRANCE

BEL-AIR COUNTRY CLUB, BEL-AIR, CALIF.
CARLETON MONROE WINSLOW, ARCHITECT



BEL-AIR COUNTRY CLUB, BEL-AIR, CALIF.
CARLETON MONROE WINSLOW, ARCHITECT

FIRST FLOOR AND PLOT PLAN

ROUGH STONE AND STUCCO COVERED WALLS, TILE ROOFS AND ARCADES GIVE SPANISH CHARACTER TO CLUB HOUSE

BEL-AIR COUNTRY CLUB, BEL-AIR, CALIF.
CARLETON MONROE WINSLOW, ARCHITECT

COST AND CONSTRUCTION DATA

YEAR OF COMPLETION: 1926.

TYPE OF CONSTRUCTION: Substructure, reinforced concrete; above, part solid stone masonry and part heavy frame covered with metal lath and cement stucco.

EXTERIOR MATERIALS: Stone and stucco.

INTERIOR MATERIALS: Plaster on metal lath, with the stone masonry appearing inside in part.

ROOF CONSTRUCTION: Heavy frame with clay roofing tile of Italian type.

WINDOWS: Wood and metal frames.

FLOORS: Cement, tile and oak.

HEATING: Steam.

KITCHEN EQUIPMENT: Complete regular equipment.

NUMBER OF MEMBERS: 255.

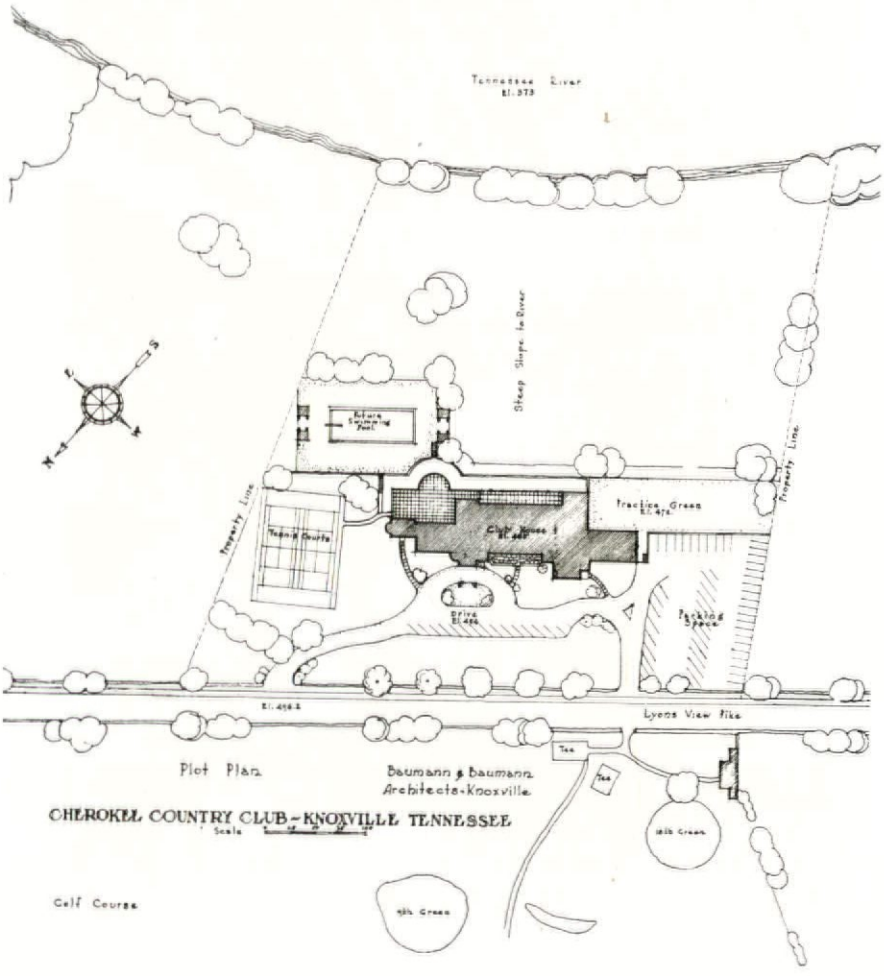
TOTAL COST: $190,621.70, not including architect's commission or furnishings.

BEL-AIR COUNTRY CLUB, BEL-AIR, CALIF.
CARLETON MONROE WINSLOW, ARCHITECT

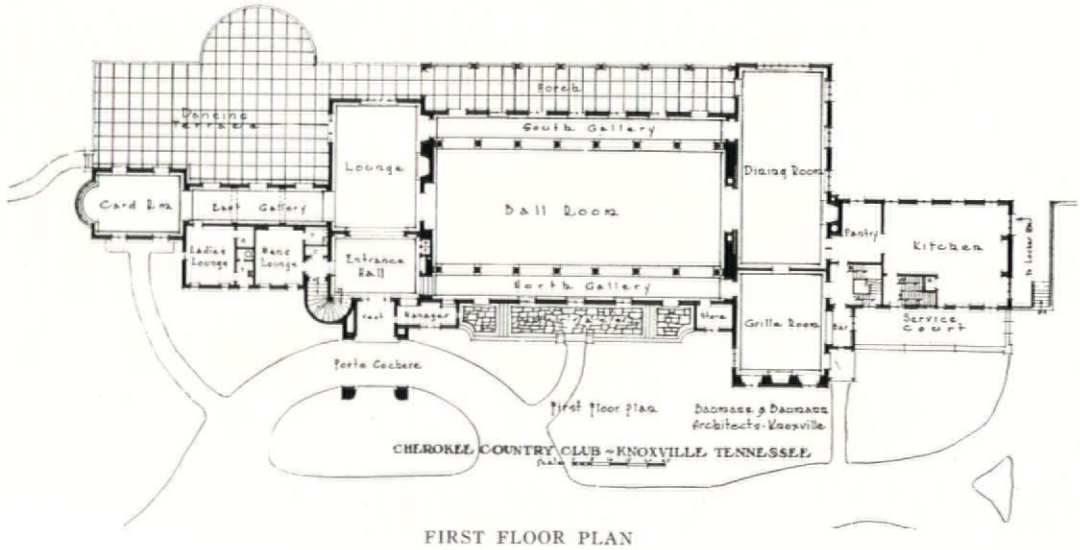
PORTE COCHÈRE

Photos. Tebbs & Knell, Inc.

CHEROKEE COUNTRY CLUB, KNOXVILLE
BAUMANN & BAUMANN, ARCHITECTS



PLOT PLAN



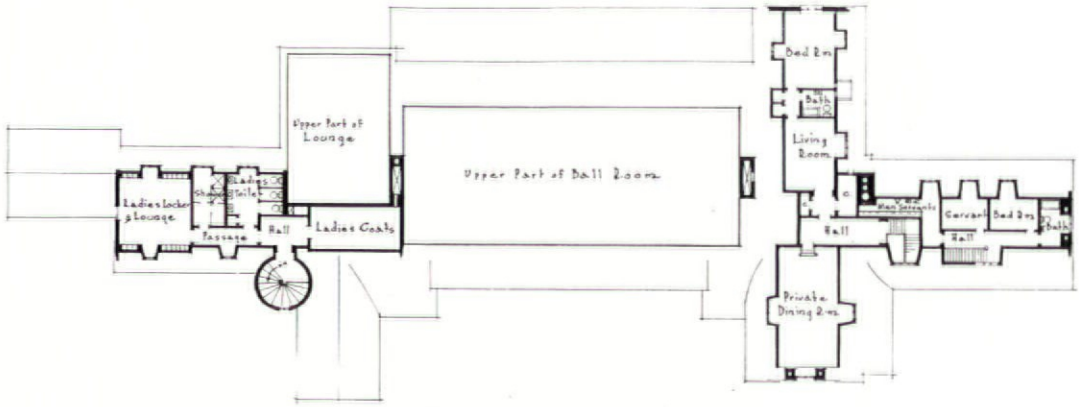
FIRST FLOOR PLAN

CHEROKEE COUNTRY CLUB, KNOXVILLE
BAUMANN & BAUMANN, ARCHITECTS

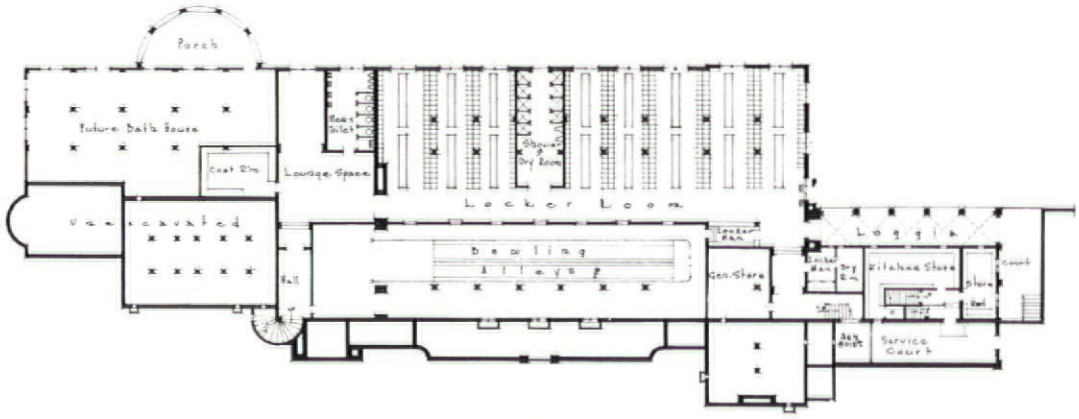
LOUNGE

BALL ROOM

CHEROKEE COUNTRY CLUB, KNOXVILLE
BAUMANN & BAUMANN, ARCHITECTS



SECOND FLOOR PLAN



BASEMENT PLAN

COST AND CONSTRUCTION DATA

YEAR OF COMPLETION: 1928.

TYPE OF CONSTRUCTION: Masonry exterior walls, frame partitions and roof.

EXTERIOR MATERIALS: Stucco, brick, stone, timber.

INTERIOR MATERIALS: Wood, plaster, flagstone.

ROOF CONSTRUCTION: Flagstone over frame.

WINDOWS: Wood and steel.

FLOORS: Oak and flagstone.

HEATING: Vacuum-vapor steam.

VENTILATING: Forced gravity.

KITCHEN EQUIPMENT: Gas, steam, electric.

NUMBER OF MEMBERS: 400.

NUMBER OF CUBIC FEET: 373,862.

COST PER CUBIC FOOT: 52 cents, including all equipment and furnishings.

TOTAL COST: $145,952.31.

CHEROKEE COUNTRY CLUB, KNOXVILLE
BAUMANN & BAUMANN, ARCHITECTS

PLANNING THE CLUB HOUSE

BY
ROBERT O. DERRICK
ARCHITECT

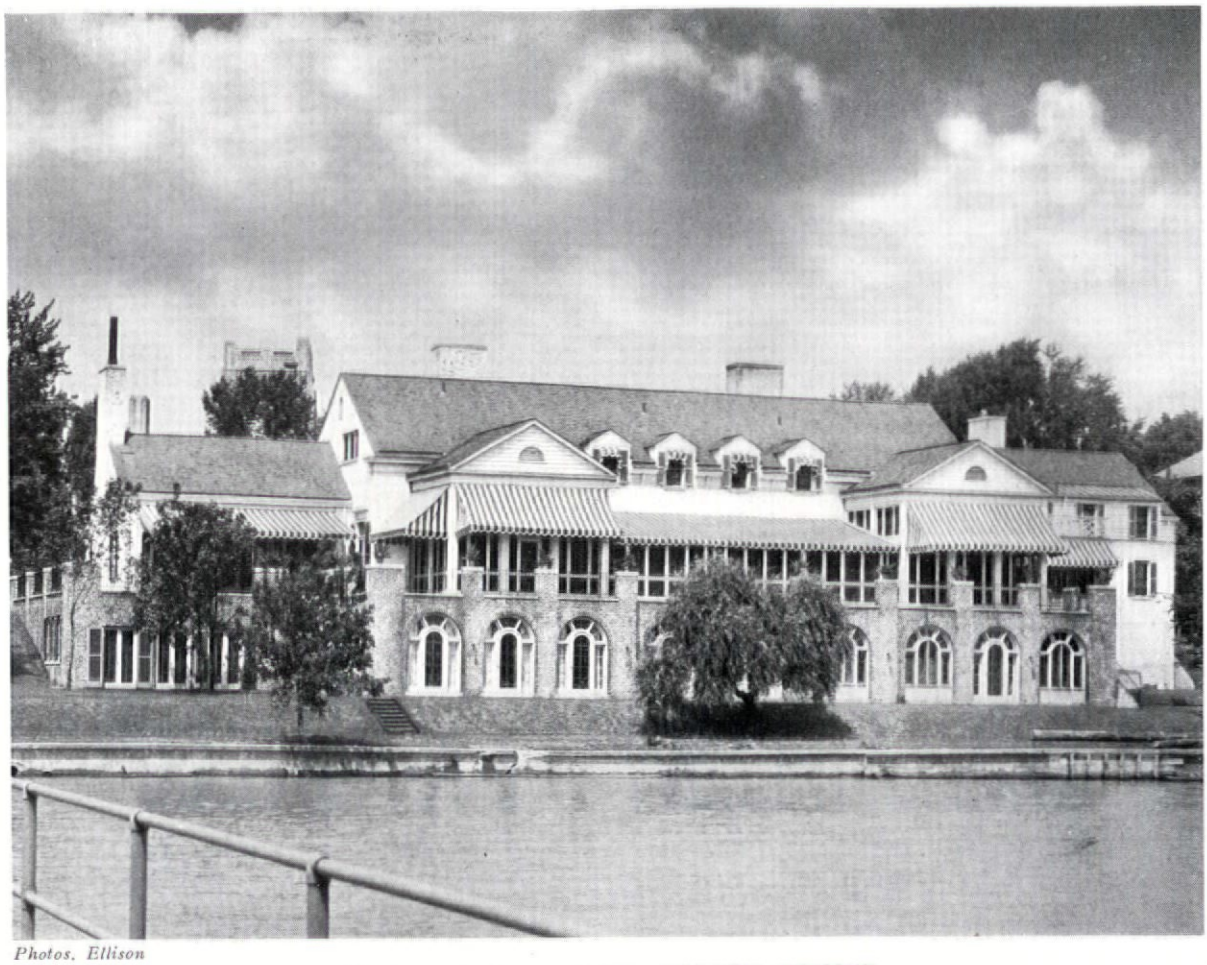
THE enormous development of country clubs throughout the United States, particularly, during the past 20 years, and planning the club houses necessary to accommodate the members, have thrown this type of architectural design into a very specialized class. For this reason country club building committees should select their architects from the ranks of those familiar and experienced with such work, and if possible from among architects who are themselves club members, and above all, club users. Listening to their advice will almost always develop less costly and much better results.

LOCATION. Too often is the architect called in after the grounds,—which may contain a golf course or two, polo fields, tennis courts and swimming pool,—have been planned and had their development started, and sometimes completed. The latter is often true where an old building has been used to temporarily house the membership. So much depends on the location of the club house in relation to the first and tenth tees and the ninth and 19th greens of the modern golf course, the tennis courts, the polo field and other activities, that to place the club house after all this has been determined makes the task doubly hard for the architect. If it all could be worked out together, a more nearly ideal solution would result in most cases. The orientation is of great importance in every instance, and in golf clubs perhaps more so in order that the club porches and terraces may overlook the ninth and 18th fairways and greens and the first and tenth tees, and still be shaded in the late afternoon. A view of the polo field should be considered as well as a view of the tennis courts, and all the time the orientation of the different rooms or units of the club house itself should be given careful study.

GENERAL PLAN. In the case of golf clubs, the men's locker room is of chief importance and must be easily accessible to the first tee and the professional's shop, with porches and terraces and with dining rooms and dining porches facing east to avoid the glare and heat of the late afternoon sun. Other rooms should be arranged as far as possible to obtain good views and their reasonable share of sunshine. One very general but important consideration in modern country club design is the excellent tendency to develop them along more intimate and informal lines, giving them as far as possible a domestic character. This is naturally more easily obtained in smaller buildings, for from 150 to 250 members, but much can be done to secure the same effect in houses designed to accommodate 750 members and even more. The reason for such a consideration may lie in the fact that people are not building the enormous houses of the past or having large and complicated staffs of servants to operate them. Rather are they depending on the use of country clubs for larger and often for even smaller social functions, and also for the housing and entertainment of their out of town guests, thus gaining relief from the problem of providing extra service in their homes.

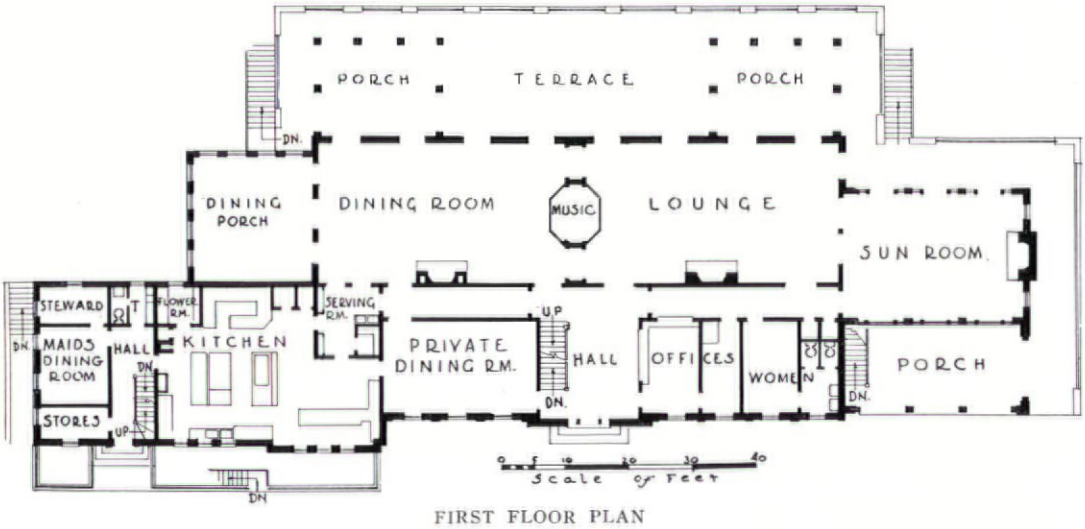
RELATION OF ROOMS. In general, the plan of a golf club should be developed along these lines: The locker room unit, and its necessary facilities such as showers, lavatories, pressing room, etc., should be properly located with reference to the first tee and the professional's shop. The men's lounge, if one is to be provided, should be directly accessible from or next to the men's grill room. The more isolated this grill room is from the main part of the club, the better the men will like it. In any event, it should be so designed that as little noise as possible will be heard in the main part of the building. The kitchen and service end of the building must be adjacent to the grill room, and thus the location of the main dining room is determined. Few clubs can stand the expense of operating a kitchen with its staff for each of these units, and therefore the dining room is located next to the kitchen and on the side opposite the grill. It is then obvious that the service department will probably be somewhere near the middle of the building, with serious complications resulting in many instances. It would be far easier to develop an ideal plan having two kitchens and service departments, one for the grill and one for the dining room, or with one unit serving both but on a lower level. Either solution would be considered as an uneconomical practice, however.

The office in a large building should be adjacent to the front entrance for the purpose of control, and it should also have access to the coat room, the service department if possible, telephone booths, and switchboard. In a smaller building, to accommodate not over 250 members, experience shows that an office in such a loca-



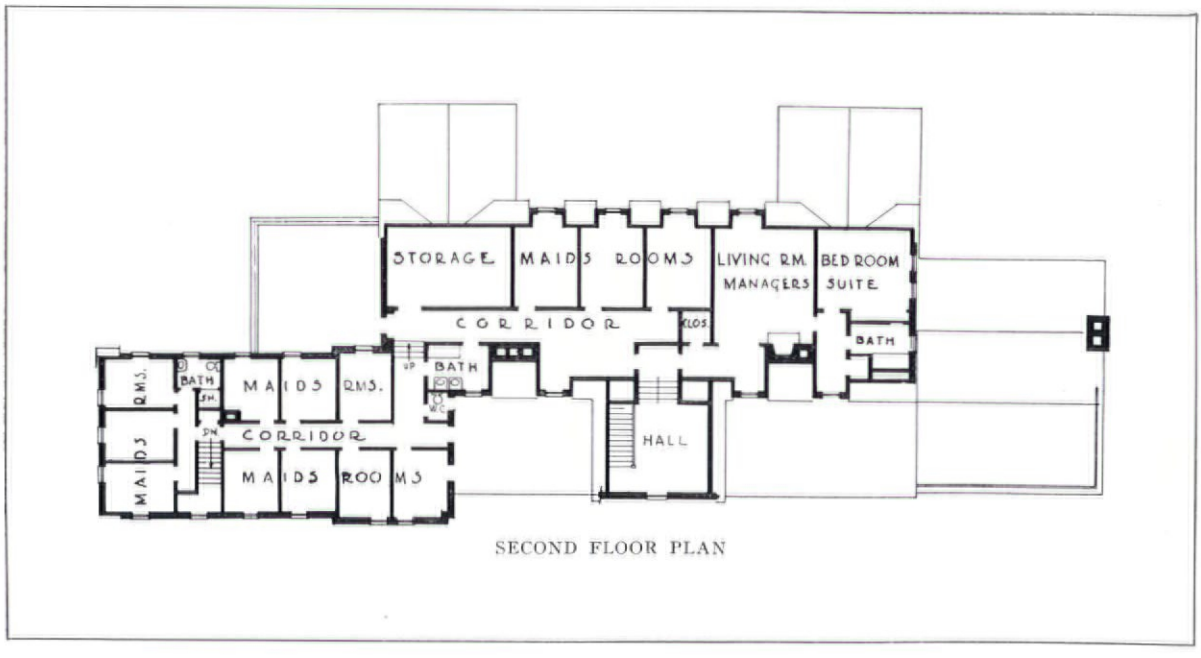
Photos, Ellison

GROSSE POINTE CLUB, GROSSE POINTE, MICH. ROBERT O. DERRICK, ARCHITECT. B. V. GAMBER, ASSOCIATE ARCHITECT



FIRST FLOOR PLAN

ENTRANCE DRIVE AND FRONT ELEVATION
GROSSE POINTE CLUB, GROSSE POINTE, MICH. ROBERT O. DERRICK, ARCHITECT
B. V. GAMBER, ASSOCIATE ARCHITECT



SECOND FLOOR PLAN

MAIN DINING ROOM, DINING PORCH BEYOND

PRIVATE DINING ROOM

GROSSE POINTE CLUB, GROSSE POINTE, MICH. R. O. DERRICK, ARCHITECT, B. V. GAMBER, ASSOCIATE ARCHITECT

THE LIVING ROOM

THE GAMES ROOM

GROSSE POINTE CLUB, GROSSE POINTE, MICH. R. O. DERRICK, ARCHITECT, B. V. GAMBER, ASSOCIATE ARCHITECT

Photos. Gottscho

View of the South Elevation, Onondaga Golf and Country Club, Syracuse, N. Y. Peabody, Wilson & Brown, Architects

tion can be easily dispensed with, thus adding considerably to the intimate and residential character of the interior. The office in this case could be isolated on the second floor, or located out of sight of and away from the members' part of the building. This definitely places the entrance so that there shall be easy access to the office, dining room, men's unit, service department and lounge, and all arranged so that each unit can be reached without passing through any of the others.

The lounge should naturally have a prominent place in regard to the view and sunlight and should usually be connected with the dining room with wide openings, if possible large enough to throw both rooms more or less into one for large functions. This feature should not, however, eliminate the more isolated entrance to the dining room. In most cases, one or more smaller rooms for cards could open off the lounge or be located near it. If an indoor swimming pool is included, there should be easy access to it from both the men's locker room and the women's dressing rooms. In most cases it would be difficult and unnecessary to attempt to have access to it from the women's locker room as well. If an outdoor pool is considered, it would naturally be placed near the men's locker room, and the cost would be from one third to one half that of the indoor pool. The professional's shop would be ideally located if placed between the men's locker room and the first tee. Care should be taken to have the caddies' quarters and yard as much out of sight and hearing as possible, although every possible convenience and comfort should be supplied there. A generous parking space should be provided near the front entrance, extending to the men's locker room entrance if possible. The women's locker room with showers and lounge should, for economy, usually be placed on the second floor with an outside entrance and stairs. In many cases it is actually preferred in such a location by the women members. The amount of revenue to be derived from bedrooms is usually problematical. In a week-end club they are almost a necessity, especially where the distance from the community the club serves is great. Much money and space can be saved by using a modified dormitory plan for single men, with a general shower and wash room. Rooms with baths must, however, be supplied for couples. Members are likely to abuse the privilege of occupying rooms, but this can easily be prevented by house rules permitting rooms to be occupied by one member for two weeks only, unless they are not in demand.

LOCKER ROOMS. To take up the locker room in detail, as one of the most important units, in case of a golf club especially, it is needless to say that enough lockers must be supplied for the golfing members, and that in the case of clubs which hold frequent tournaments, additional locker space, separate if possible, should be supplied for the visitors. Each locker room should have its showers, lavatories and washing facilities centrally located. One attendant's room, with pressing facilities, and a drying room, are important. Perhaps the most economical and

Rear Facade from Golf Links, Onondaga
Golf and Country Club, Syracuse, N. Y.
Peabody, Wilson & Brown, Architects

satisfactory plan for a large locker room is rectangular with a wide center aisle running the length of the building. From this center aisle there should run smaller aisles at right angles to it, and preferably not over 15 or 20 feet in length, with lockers on each side. Where sufficient money is available, experience has shown that these side aisles should be about 12 feet clear between lockers to permit the use of furniture for the members rather than the old fashioned center bench. Practice has shown that no matter how attractive a lounge room may be, placed adjoining the locker room, the locker room itself is still the real lounge room, and apparently it always will be. Having lounging space comfortably furnished in or near the center of the locker room itself is excellent, and may often save space in the end. Naturally, the locker room must be above grade, with the best of light, air and ventilation. It is usually wise to avoid using skylights, which generally admit an unpleasant glaring light, and are likely to produce too much heat from the sun. High window sills are obviously practical and necessary. If the locker room lounge is to be a separate room, it can be small, as its general use is doubtful. However, it should have an intimate and informal character.

THE MEN'S GRILL ROOM is an extremely important unit and deserves special consideration. Usually the size of the grill may be roughly determined by supplying seating capacity for a number equal to about from 20 to 25 per cent of the number of lockers, and it is well to remember that a crowded room is always more cheerful than a room half filled. Also the type of service is usually very fast, and little waiting for places by members is likely to be done during peak hours. On the other hand, the grill room is often the most popular and the most used room in the club house (except the locker room), and this fact must not be entirely overlooked. It is probably better to make it too small than too large, but in many instances the grill is, and should be, larger than the main dining room, all depending upon the club's location, the type and number of members, and the nature of the club. If the grill is to be a men's room exclusively, the more isolated the better, but the fact that the room is then a grill exclusively and can never be anything else, should be considered. It will not be possible to accommodate an overflow from the dining room and be a part of it, nor can it be used in conjunction with the lounge for dancing. If the club holds frequent tournaments, this fact must be considered in determining the size.

As the grill is essentially the place for intimate gatherings, discussions, and informal meetings, with a considerable amount of good fellowship in the way of talking, singing and conviviality, architecture and decorations should heighten this atmosphere. Although hard materials such as stone, slate or tile may be used on the floor and elsewhere, the fact that the room echoes and reverberates is of little consequence. The singing will sound all the better,—at least to the singers themselves,—just as the old time early morning song in the bathroom convinced the soloist that he was an artist. As the fireplace is usually the

focal point of the grill, it should be entirely in keeping with the design of the room, and be most spacious in size. The bar is usually a necessary and important consideration and should be either in the grill room itself, or in an adjoining alcove, with plenty of space in front and back. The bar, for economic reasons, should also connect with the kitchen, so that direct and immediate service can be maintained.

THE KITCHEN. To the kitchen, which is often the heart of the club, too much consideration including all the service features that go with it, can hardly be given. It must be planned to take care of peak loads as well as for the average meals which occur during the week. The club's manager, steward and chef should all be consulted and their opinions considered. Kitchen equipment experts always have valuable suggestions to make. The entire service unit would often, in the average sized club, consist of the kitchen first, a passage or "silent pantry" between the kitchen and the dining room, which passage may also be used for the storage of china, glass, silver and linen, and then storeroom, cold room, receiving room, attendants' dining room and chef's office. In larger clubs there would be, in addition, one or more preparation rooms and perhaps a bake shop. The proper planning of these different units in their relation one to another is usually an important and difficult problem. If it were not for the receiving end, such a service unit located more or less at the center of a building would not be so difficult to handle. The architect should determine, if possible, what the peak load will be. This occurs during tournaments, on Saturdays, Sundays, holidays, and other special occasions. If it is the policy of the club to serve table d'hote meals on such occasions, eliminating a la carte service entirely, the problem is simplified. In any event, have the space and equipment so designed and arranged that one half the peak load can be handled comfortably. The steward or chef will take care of these heavy loads by hiring more servants temporarily. During the week, when the demands are slight, the arrangement should be such that the minimum staff can take care of the service with the fewest number of steps and the least amount of effort. For instance, one man should take care of two or three tables or departments in slack times, while at peak times there might be two men for each table or department.

DINING ROOMS. In planning the dining room it is advisable to have the room too small rather than too large. Nothing is more depressing than an empty room, and nothing puts most people in a better frame of mind than being in a crowd. If the room must be large, its design and decoration can help tremendously in giving it an informal and residential character, far away from the dignified, stately and formal treatments so often seen in clubs. One or two fireplaces with comfortable lounge furniture grouped about each of them will help to give a domestic atmosphere. Furniture can easily be taken out during the more crowded periods, but on average days it will displace dining tables and give the room a smaller and more intimate appearance. In determining the seating capacity of the dining room, a good rule to follow is to supply sufficient space at from 15 to 20 square feet per person for approximately one half the number of members. This again depends on the type of the club and the membership, and should not apply where the grill room is made more important. If the plan will permit an overflow into the lounge or other adjacent rooms, the size can be cut down and a considerable amount of flexibility still maintained. One or more private dining rooms are nowadays almost always necessary. They can be opened one into the other, and also into the main dining room by means of folding doors, if money and space permit, but often much to the detriment of the appearance of these rooms. As a rule each private dining room should be a complete unit in itself. A storage room near the dining room large enough to accommodate all the dining room furniture, is a tremendous convenience and will allow the room, if so desired, to be cleared for dancing or other entertainments in the shortest time possible.

THE LOUNGE is a difficult room to plan, because usually it must be possible for it to take care of a large number of people on special occasions and only a few people on the great majority of days and evenings. Yet it must be cheerful and comfortable at all times. This necessity occurs less often where clubs have ball rooms or so-called "great halls," which are always ready for large entertainments and need have no other character or atmosphere. In cases where the lounge serves both purposes, the proper atmosphere may be obtained by careful architectural detail and decoration, with appropriate furniture placed in intimate groups. All furniture must be fairly easily moved and stored during the larger functions. Fireplaces in the lounge, and in fact in all rooms used by the members, always help, no matter what the desired effect is.

The question of materials is another subject in itself, but suffice it to say that building committees should pay strict attention to this feature and build for permanency. Otherwise, maintenance charges will start almost immediately and will be beyond all bounds within a few years.

Photos. Gottscho

ONONDAGA GOLF AND COUNTRY CLUB, SYRACUSE, N. Y. PEABODY, WILSON & BROWN, ARCHITECTS

MAIN FLOOR PLAN

LOGGIA

ONONDAGA GOLF AND COUNTRY CLUB, SYRACUSE, N. Y. PEABODY, WILSON & BROWN, ARCHITECTS

LIVING ROOM

THE HALL

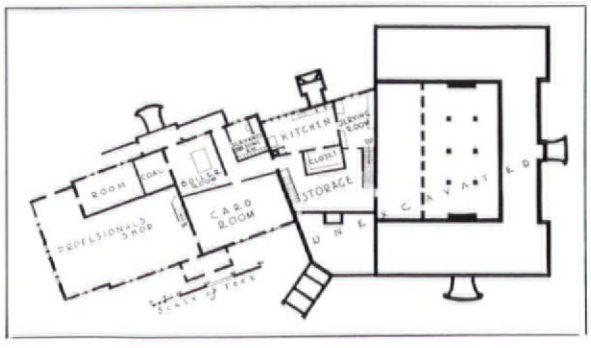
ONONDAGA GOLF AND COUNTRY CLUB, SYRACUSE, N. Y. PEABODY, WILSON & BROWN, ARCHITECTS

GRILL ROOM

Photos. Disinger

THE McGREGOR GOLF CLUB
AT SARATOGA SPRINGS, N. Y.
ALFRED HOPKINS, ARCHITECT

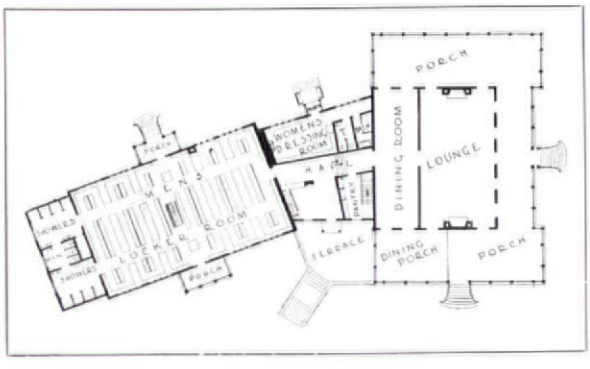
BASEMENT PLAN



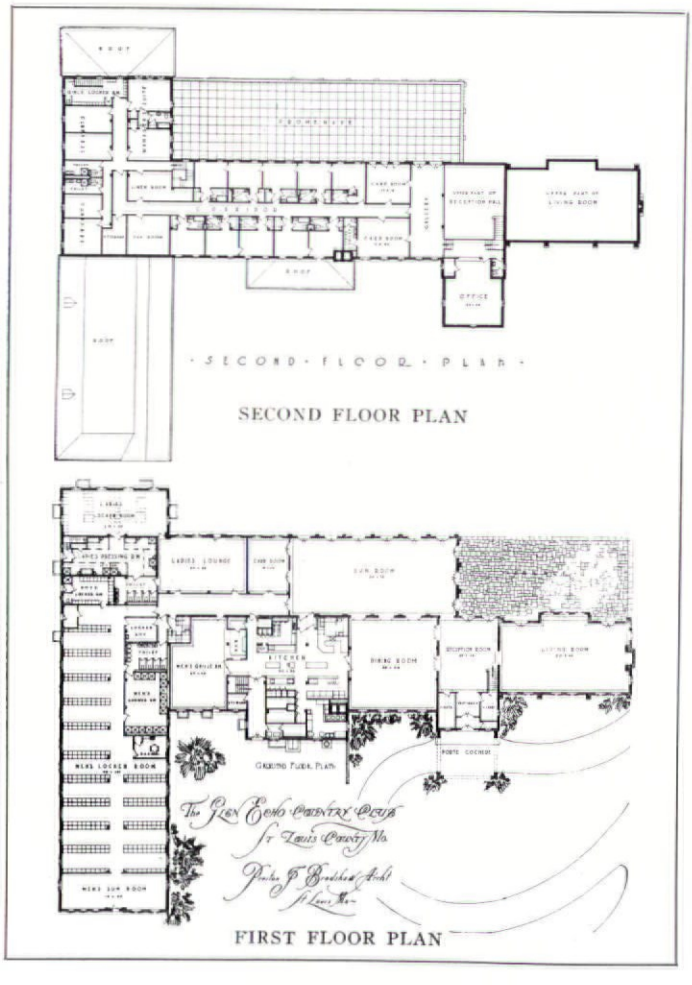
THE McGREGOR GOLF CLUB
AT SARATOGA SPRINGS, N. Y.
ALFRED HOPKINS, ARCHITECT

ENTRANCE TO MEN'S LOCKER ROOM

FIRST FLOOR PLAN



GLEN ECHO COUNTRY CLUB
NORMANDY, MO. PRESTON J.
BRADSHAW, ARCHITECT



THE SMALL COUNTRY CLUB HOUSE

BY

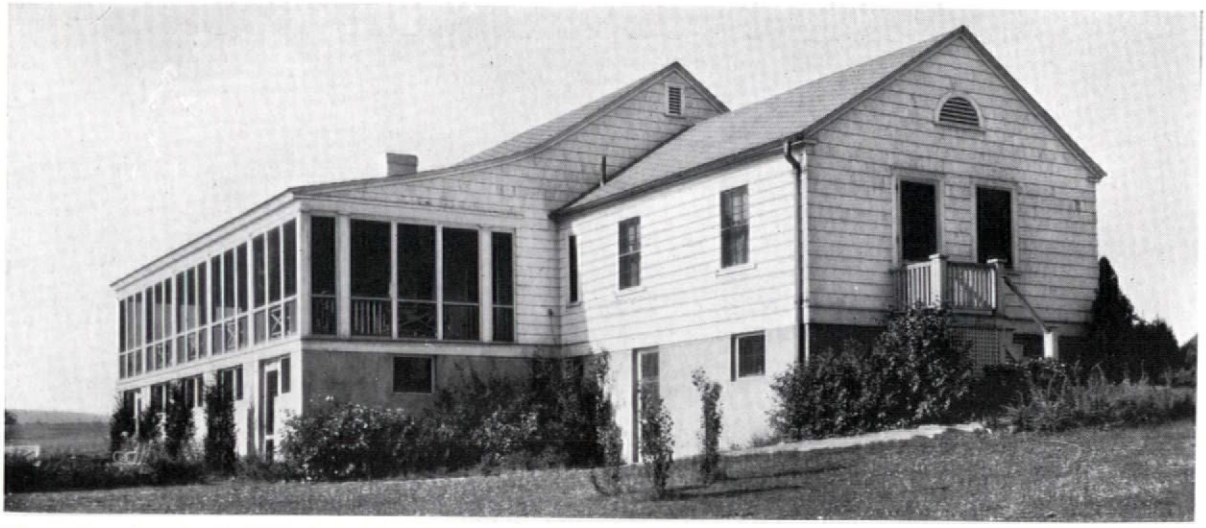
FRANK C. FARLEY

IN many a community there is a distinct need for a country club planned and operated on a basis which puts its major emphasis on providing, first of all, a good golf course and good tennis courts with the simplest adequate accommodations in lockers, bathing and dressing quarters for the players. Our small and moderate-sized industrial and residential towns demand clubs so carried on that the athletic interests and needs absorb the greater part of the budget, and house service is reduced to a minimum. The social features of the club, however, cannot be entirely subordinated. Some provision must be made for the non-golfing and non-tennis playing members, for the entertainment of guests on tournament days, and for furnishing in the winter months a rallying place to sustain interest in the club.

To meet the requirements of the self-service country club house, intended to be operated intensively during the open months and only from time to time during the winter, the needs would seem to be these: (1) Locker rooms with showers and toilet facilities for men and women. (2) Club room for meetings, entertainments, and dancing. An ample porch, preferably overlooking the golf course and tennis courts, capable of being glassed in, and communicating directly with the main club room. (3) Professional's room and shop, easily accessible from the locker rooms and golf course. (4) Kitchen and pantry where temporary servants or caterers can be installed or where individual members or committees of members can prepare regular meals or casual refreshments. (5) Entrance porch where preferably at least two motor cars can load or unload at the same time.

As the key to the real activities of a club is the size and disposition of the locker rooms, the extent of these rooms must be first determined and, in general, as many full sized lockers as possible provided. Club rooms and kitchens can be compressed if necessary, but not locker space. Steel enameled lockers such as are used in many industrial establishments, provided adequate ventilation is secured, are usually found satisfactory. The only other furniture absolutely required are benches placed between the rows of lockers. The toilet rooms and showers should be placed within easy direct access of the locker rooms. Here again the rule should be to make the accommodations as ample as the budget will permit. To keep down cost only the simplest plans and most

Manchester Country Club at South Manchester, Conn. Frank C. Farley Architect. Wm. Harmon Beers, Associated



Rear Elevation Overlooking River

Manchester Country Club at South Manchester, Conn. Frank C. Farley, Architect, Wm. Harmon Beers, Associated

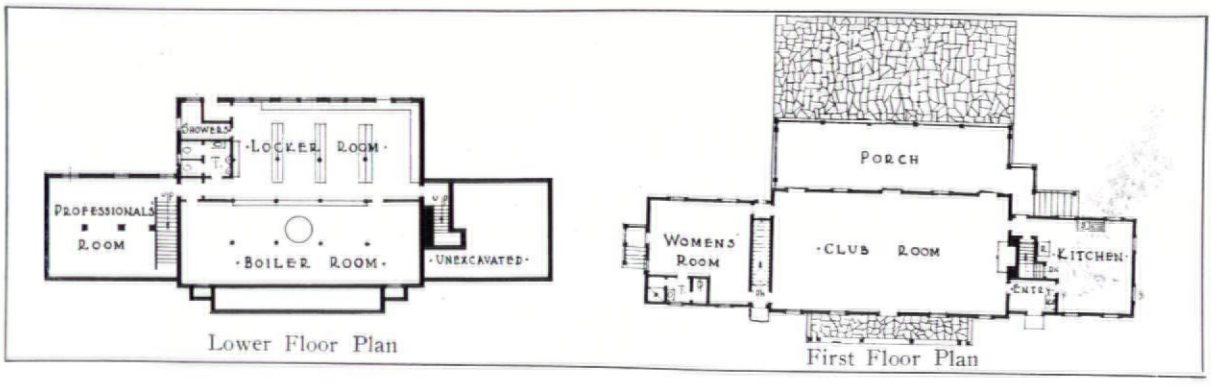
inexpensive equipment can be considered, and as such clubs will necessarily be "self-serviced," it is probable that hot water supply in the fixtures will be dispensed with, but an instantaneous heater or other means will be provided to supply hot water as needed for showers or in the kitchen.

If the men's locker room can be located in a basement, always provided that the basement is entirely above ground level on at least one side or better on two or three, so that adequate light and above all ventilation can be assured by many windows, then much saving in the general bulk of the entire building can be made. The women's locker room, on the other hand, will find its best location on the main floor and in substantially direct connection with the main club room. If funds are available, the portion of the building devoted to lockers may well be separated from a general retiring room.

The kitchen should be a spacious room located in direct connection with the club room and porch so that whether a caterer be employed to serve the dinner or afternoon collation or whether this be undertaken by a committee of members, or whether individuals bring their own refreshments and merely desire to make tea or coffee, the kitchen will be conveniently at hand. As a rule, in such an establishment as we are considering, some kind of portable range burning wood will be found acceptable, since it is equal to cooking a large dinner if required, as well as snacks. As electric power is almost always available, arrangements may well be made for a small electric unit for cooking.

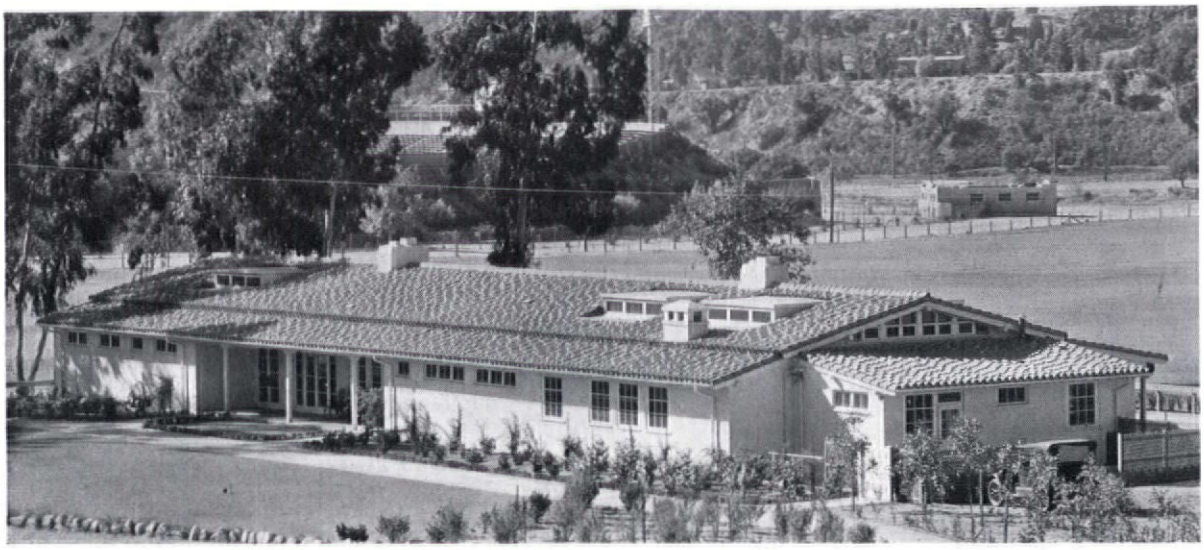
We may now consider the club room and porch, around which all the other parts of the club house may be said to be grouped. Large, free, open space is most to be desired in these units, and if they can be thrown together for large gatherings, they will be doubly useful. A certain domestic atmosphere, however, must be kept, and the opportunity of arranging furniture for groups of friends should not be overlooked.

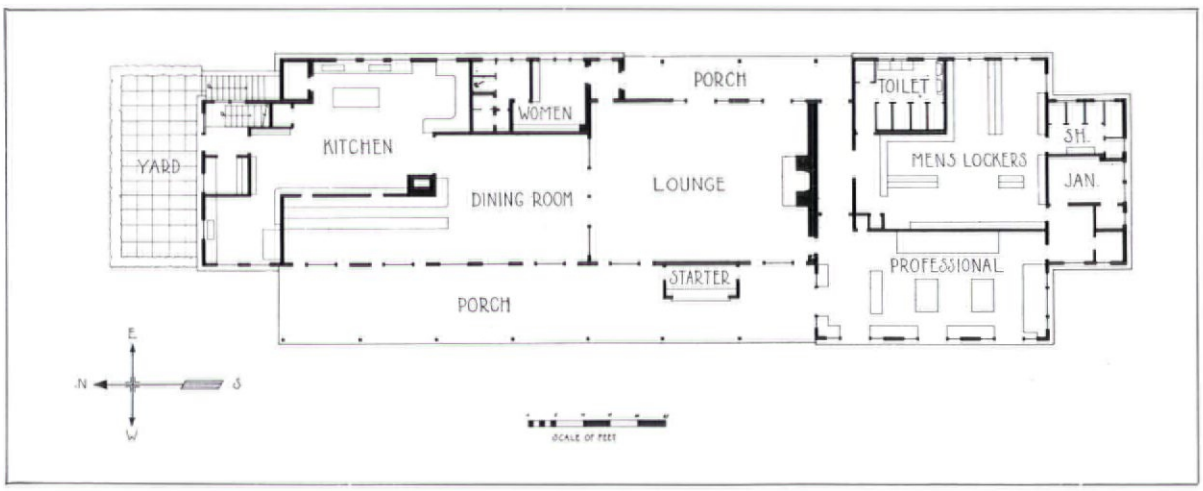
As much of the charm of the country club, however unpretentious its building may be, lies in its setting, it is necessary to provide in its budget for adequate planting, for no other one element will contribute so greatly to its success.



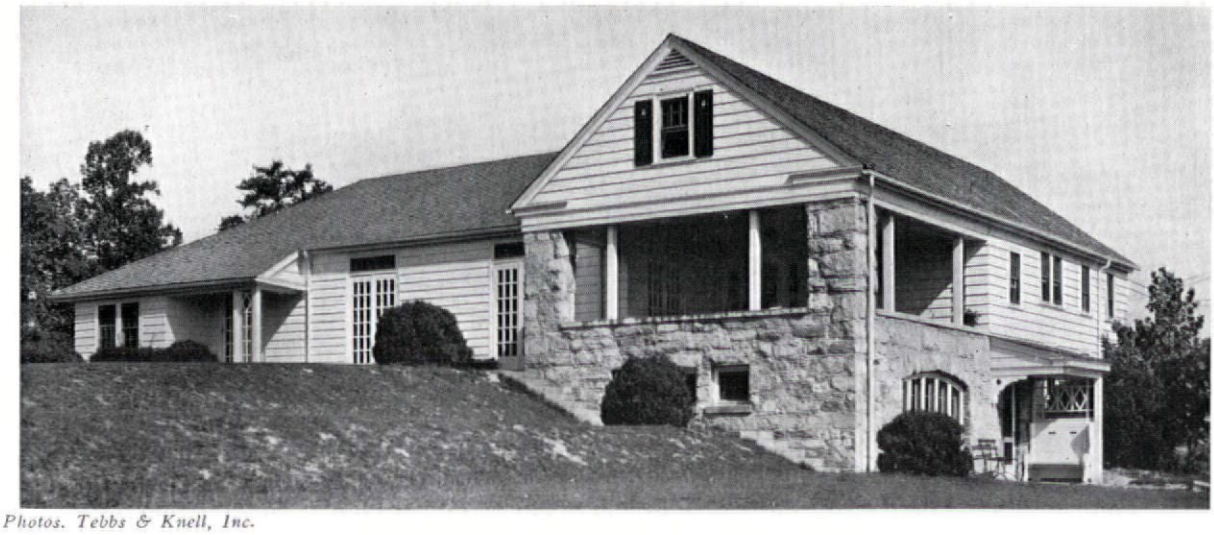
Lower Floor Plan

First Floor Plan



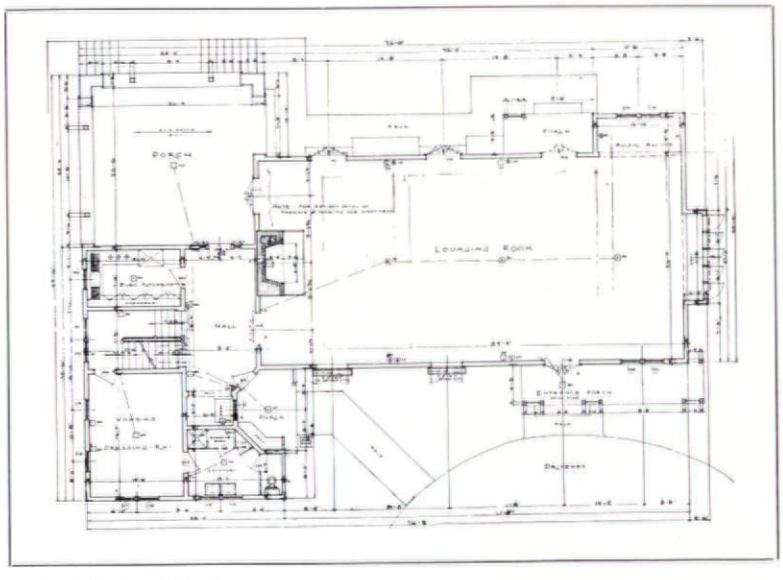


MUNICIPAL GOLF CLUB AT PASADENA. MYRON HUNT & H. C. CHAMBERS, ARCHITECTS



Photos. Tebbs & Knell, Inc.

TWO VIEWS OF THE COUNTRY CLUB AT KINGSPORT, TENN. CLINTON MACKENZIE, ARCHITECT



FIRST FLOOR PLAN

Photos. Miller

EXTERIOR AND LOUNGE
INGLEWOOD COUNTRY
CLUB AT SEATTLE
SCHACK, YOUNG AND
MYERS, ARCHITECTS

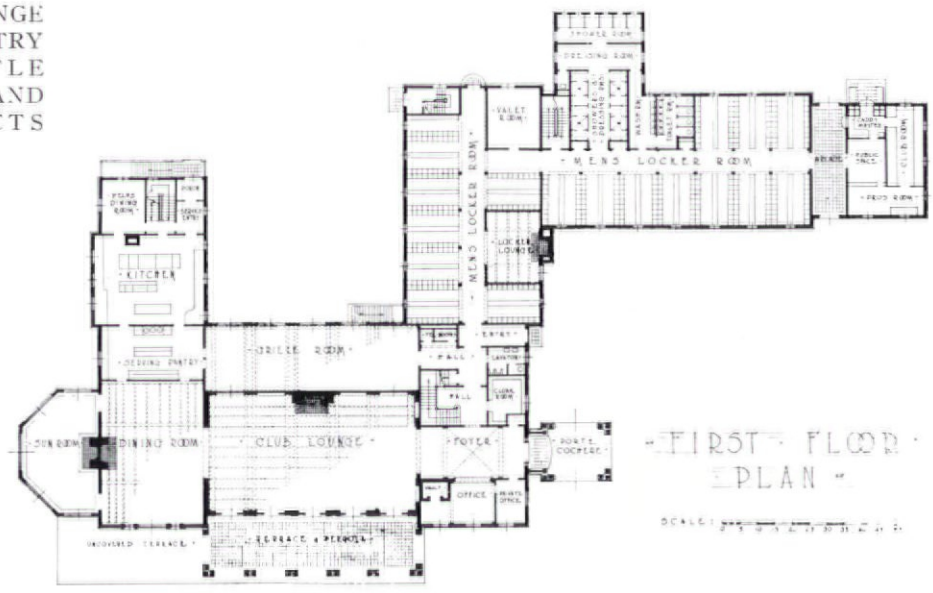
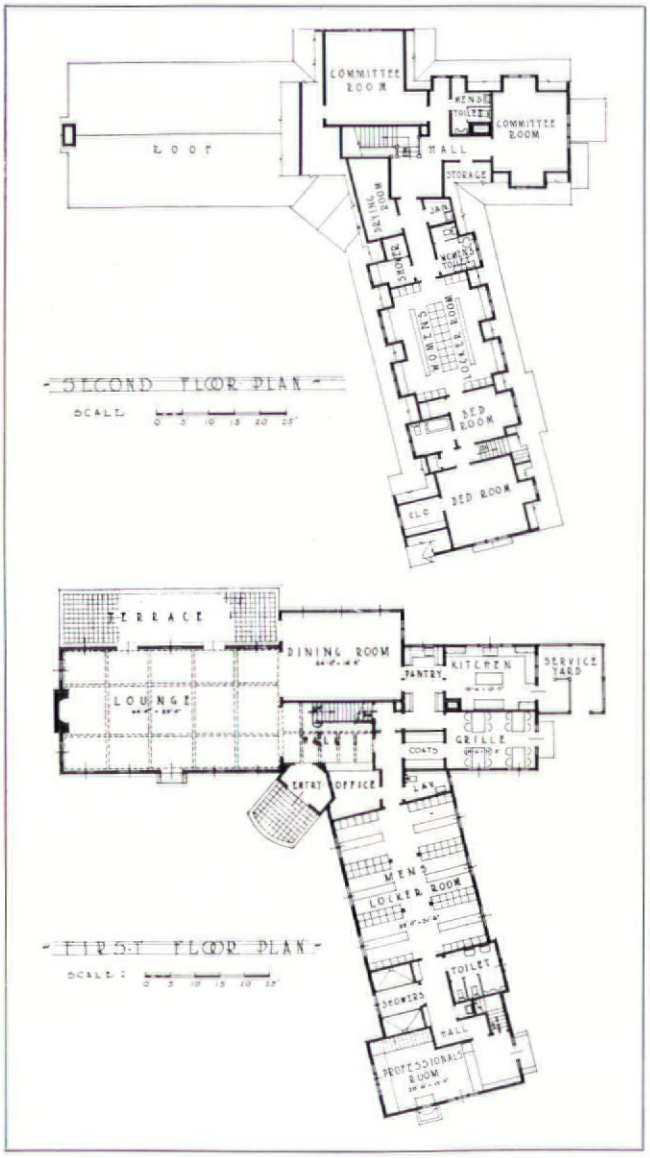
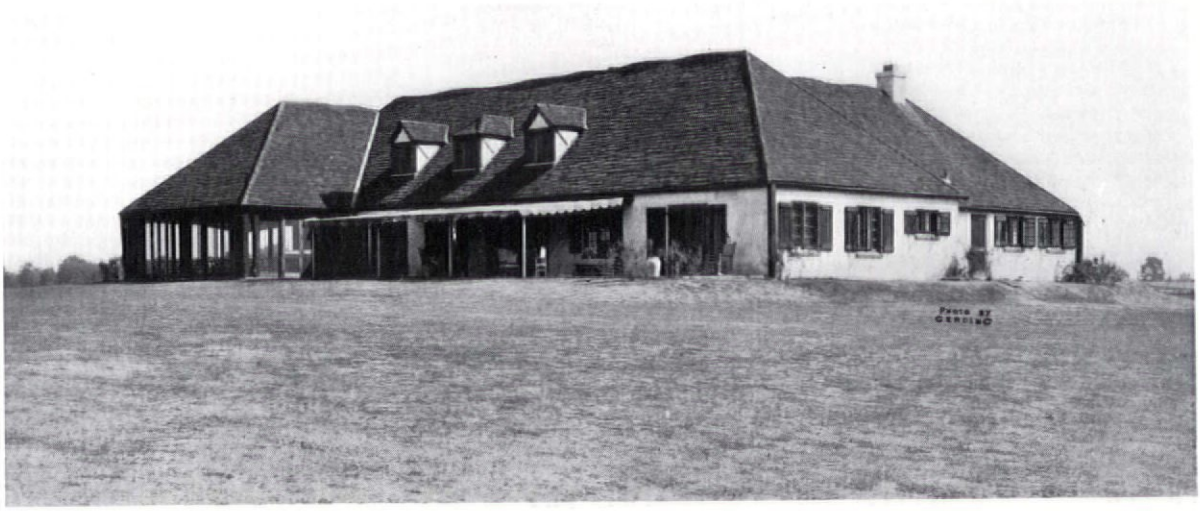


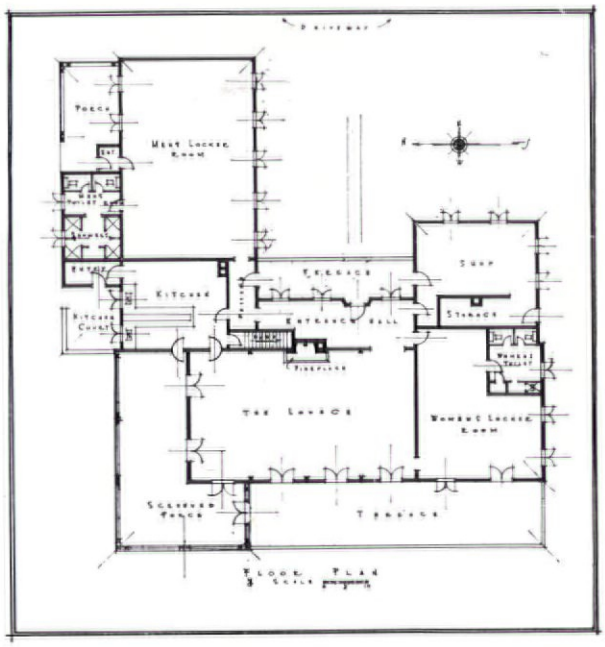
Photo. DePue, Morgan & Co.



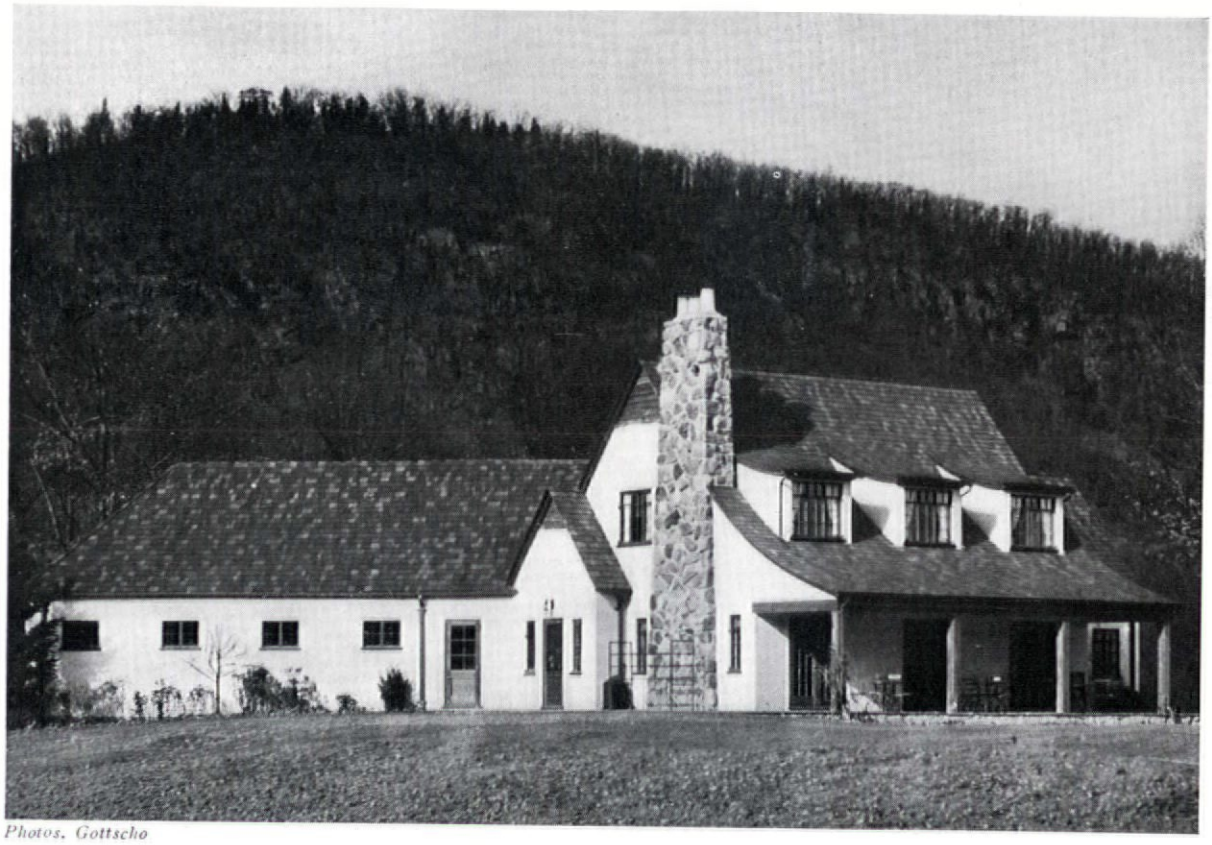
GLENDALE GOLF AND COUNTRY CLUB AT SEATTLE. SCHACK, YOUNG & MYERS, ARCHITECTS



OTTAWA COUNTRY CLUB, OTTAWA, ILL. JOHN HANIFEN, ARCHITECT



ABOVE, REAR ELEVATION. BELOW, EAST ELEVATION AND DRIVEWAY



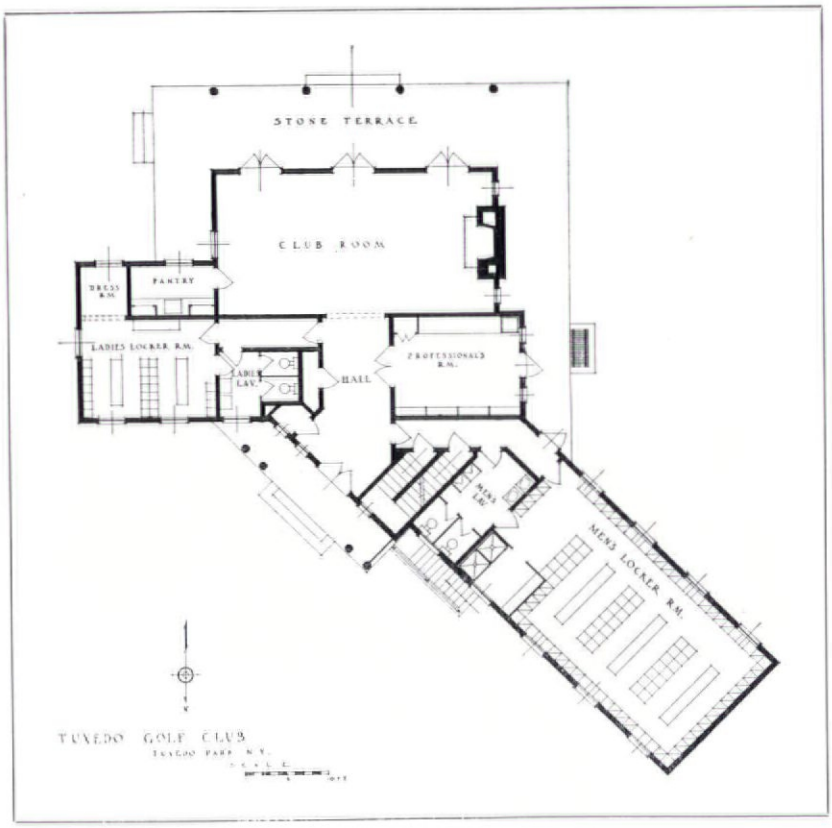
Photos, Gottscho

NORTHEAST ELEVATION

LOCKER ROOM PORCH

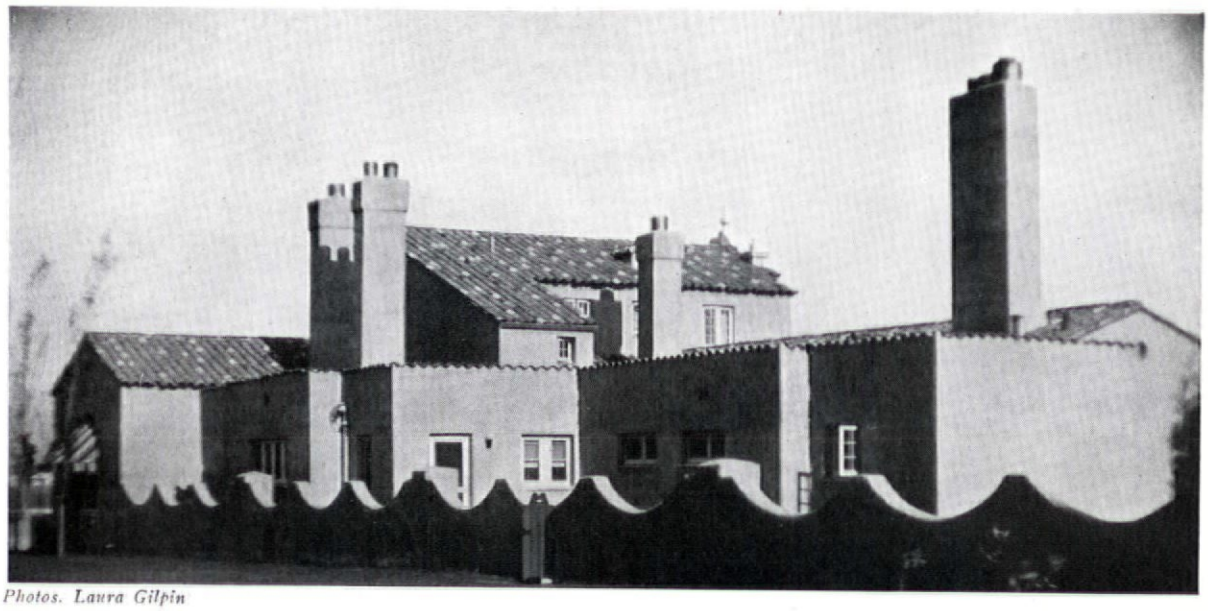
TUXEDO GOLF CLUB AT TUXEDO PARK, N. Y. KENNETH M. MURCHISON, ARCH.

COVERED PORCH



FIRST FLOOR PLAN

TUXEDO GOLF CLUB AT TUXEDO PARK, N. Y. KENNETH M. MURCHISON, ARCH.



Photos. Laura Gilpin

THE POLO CLUB, DENVER
W. E. & A. A. FISHER, ARCHS.

INTERIOR ARCHITECTURE AND FURNISHING OF THE COUNTRY CLUB

BY
DWIGHT JAMES BAUM

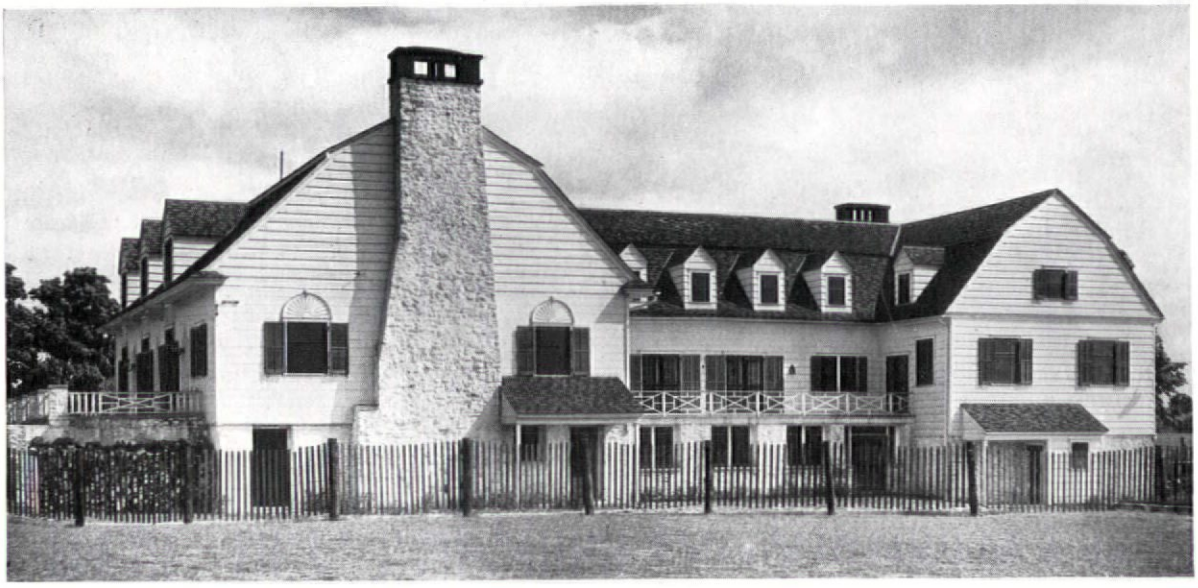
INTERIOR architecture includes all that part of the inside of a building that is conceived, designed and executed under the direction of the architect. By furnishing is meant the movable fittings necessary to complete and make the structure ready for occupancy, such as furniture, rugs, hangings and minor accessories. In either case the architect, who probably has been carefully selected, should not only completely design the interior, but also should select or help select, in association with the decorator, all the furnishings. Unless the architect has control over this important part of the work, his conception of the design or character of the building is likely to be, and usually is, lost. In this day when theaters and hotels are decorated in a lavish manner, most club committees feel that their buildings should be equally if not more attractive, to satisfy or appeal to their members. This does not mean that a great amount of money must be spent, but it does mean that the rooms must be furnished and decorated in a manner that uses to the best advantage the amount of money available. Also the character decided upon must be consistent with the style of the building itself. Often one approaches a structure of definite type and enters expecting to see the interior designed in the same style. Quite often, however, one is disappointed by the different handling of the problem. Probably the chairman of the committee appointed a sub-committee, with the result that the interior architecture does not tie in at all with that of the exterior.

Let us consider materials first. For an informal building in the Italian, French, English, early Colonial or Spanish style, textured walls of plaster, hewn or adzed timbers for beams and ceilings, tile, slate, stone flagging or planks of oak or pine are appropriate. For more formal interiors, such as English Georgian, our own Colonial version, Italian Renaissance or French of the great periods, walls of smooth plaster or paneled with wood either painted or stained are consistent. Ceilings of ornamental plaster or paneled wood, with floors of teak or oak plank, parquet as herringbone, tile or marble should be used.

Considering the plan and design in general, simple treatment of the entrance hall or vestibule serves to accentuate the decorations of the main stair hall or the "great hall," which is often the most important social room. Club offices, cloak rooms and minor rooms such as telephone rooms, powder rooms, lavatories, etc., should be convenient to the entrance so that guests and members need not go through the principal rooms during entertainments to remove their wraps. The stair hall presents great opportunities to the designer

Photos. Gottscho

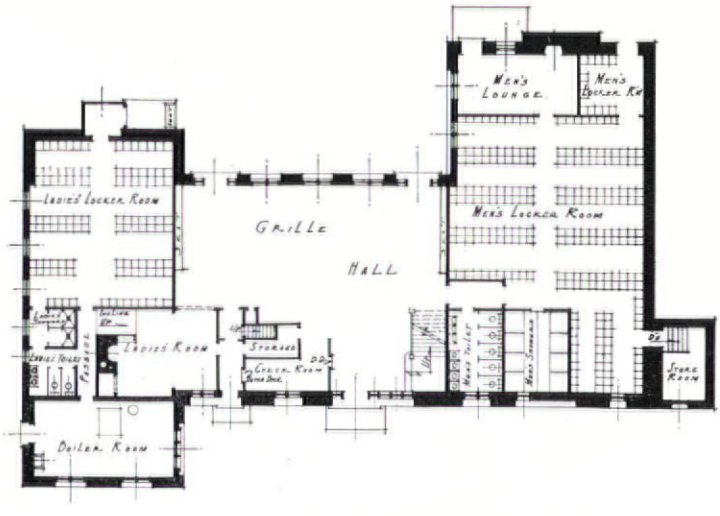
DRUMLIN'S COUNTRY CLUB, SYRACUSE
DWIGHT JAMES BAUM, ARCHITECT



EAST FACADE
DRUMLIN'S COUNTRY CLUB, SYRACUSE
DWIGHT JAMES BAUM, ARCHITECT

for securing an important decorative feature. Some form of curved stairway usually gives the most attractive appearance, if cost and available space permit. A square stairway can be made attractive if it is possible to obtain a stair well of sufficient size to give an effect of stateliness. The rise of the steps should be lower and the treads wider than in the usual country house. There should be landings at proper intervals if the story height is great, and the design and scale of the balusters and rail should be carefully studied. Materials of course should be appropriate to the style chosen, but durability and wear should be considered, since a club house receives hard usage and sometimes not the best of care. Constant repairs and painting are required. In early Italian and Spanish interiors the stairs were usually carried up between partly enclosed walls with vaulted ceilings. This treatment is still appropriate. Later Italian houses, as in Florence and Genoa, had most imposing and monumental stairways. Club houses without important rooms on the second story can of course have less elaborate stairways. Stairs may even be placed in a side hall, such as a hall leading to the locker room.

Another important decorative feature is the fireplace which is usually the center of interest in the great hall, lounge or dining room. In no other architectural detail can the style characteristic of the interior be expressed as easily. This feature should dominate the room, or at least be the most important object on the wall it occupies. If the room is English or American Georgian or Colonial, the mantel is usually of wood stained or painted, with facings of marble, brick, or sometimes of soapstone or cement. Some of the richer mantels are of marble as designed by the brothers Adam in England. In early English rooms,



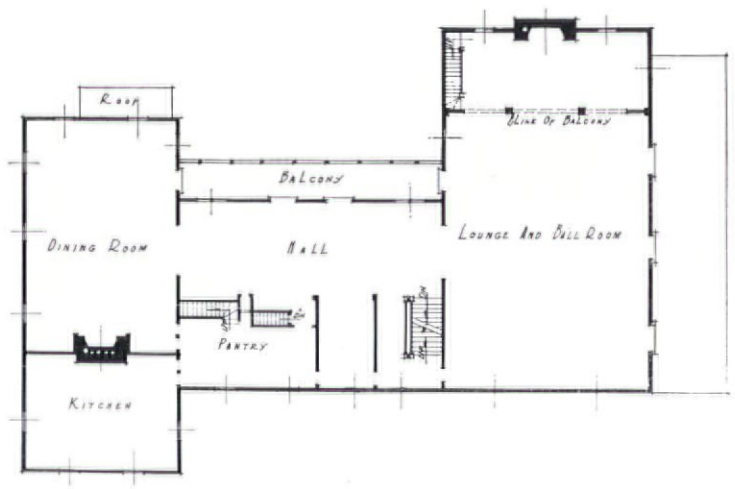
GROUND FLOOR PLAN

NORTH FACADE
DRUMLIN'S COUNTRY CLUB, SYRACUSE
DWIGHT JAMES BAUM, ARCHITECT

mantels of oak with linen fold carved panels and pilasters of Tudor, Elizabethan or Jacobean motifs give a distinctive style. All of these mantels should have fire openings wider than they are high. Many Spanish mantels are of similar proportions, but usually higher in relation to the width. Always in the Italian style the fire opening is larger, especially in height. Sometimes the size is great enough for a man to stand upright within the opening. Such mantels are appropriate for large club rooms. The material is usually of stone, though sometimes of marble. In all mantels the hearths should be of the same material as the facings. French mantels are usually of wood with marble facings, or else entirely of marble. In either case, the linings are of ornamental iron forming a decorative fireback. Early French types, like the popular Norman, have mantels somewhat similar to the early English with stone jambs, occasionally with wooden lintels, and they always have large openings.

The dignity and impressiveness of the two or three most important rooms, such as the great hall, the lounge and the dining room, are greatly increased if they can be at least a story and a half high. Height gives a spacious appearance which is needed in any room planned for entertaining. In designing these rooms, proportion is as important as size, and the selection of materials must be made with care. The selection of wood, texture of walls, ceiling surfaces, use of flooring materials, and finally color all determine the success of the interior.

By wall texture is not meant exaggerated splashed plaster walls showing plainly a striving for an artificial antique effect, but instead a well hand finished room, with a pleasing surface simply done. Flooring can easily express the style



MAIN FLOOR PLAN

of the room. Pine planks indicate early Colonial, oak is English, teak is Georgian or Elizabethan, or late Italian, parquet is French, tile is Italian or Spanish, etc. Color is without doubt one of the most important details of an interior. A well studied color scheme can make an otherwise ordinary interior attractive. Recent successful rooms are done in carefully chosen colors such as gray-green, greenish blue, deep tan and dark gray. The walls, paneling and trim are today preferably painted the same shade and color, giving a much simpler treatment and a more successful room. Where wallpapers are used, as in Colonial interiors, the trim, wainscoting, etc., should be painted a color to match the background or some part of the design in the paper. The furnishings, whether rugs, hangings, furniture or accessories, must complement the interior architecture. Each part is of necessity dependent on the success of the others. If the architect who designed the building has produced a successful interior, he is certainly capable of either selecting or advising on the furnishings. He will not have the facilities or time for carrying out all of the many details, perhaps, so a competent decorator should be associated. Only by this method can the best results be had.

By a decorator is not meant a woman member of the committee who has helped furnish the house of some friends besides her own, or another kind of decorator who is merely a purchasing agent. A real decorator will be able to work in the spirit of the architect's design and help to produce results that will for years be appropriate and attractive. Besides being appropriate, the furnishings must be comfortable, livable, made well and look well. The scale of the pieces must necessarily be larger in the main rooms than in a residence, and yet in the more intimate and smaller rooms there is very little difference. Certain features should of course be made the most important, as in the design of the room. No scheme involving much use of identical pieces is successful, and much similarity in materials, color, etc., makes for ordinary results. If a figured rug or carpet is used, the upholstery fabrics should be of plain colors. If the floor covering is plain, then definitely figured fabrics can be used. If plain walls either of paint or wood paneling are used, figured hangings will be appropriate; otherwise plain curtains should be used.

I have purposely avoided, up to this point, referring to the so-called "modern" architecture. So far the endeavor to create a new style has produced some interesting results, such as the use of plain surfaces and new or unusual combinations in color. I remember that an eminent critic recently said that all the ornament evolved so far is grooved lines, up and down or sideways, zigzags, or streaks of lightning. I do not doubt that something will come out of the present movement, but unless a club is ready to redecorate and refurnish within a few years, I believe that the use of conservative, basically sound styles of the past should be continued and adapted to modern club requirements.

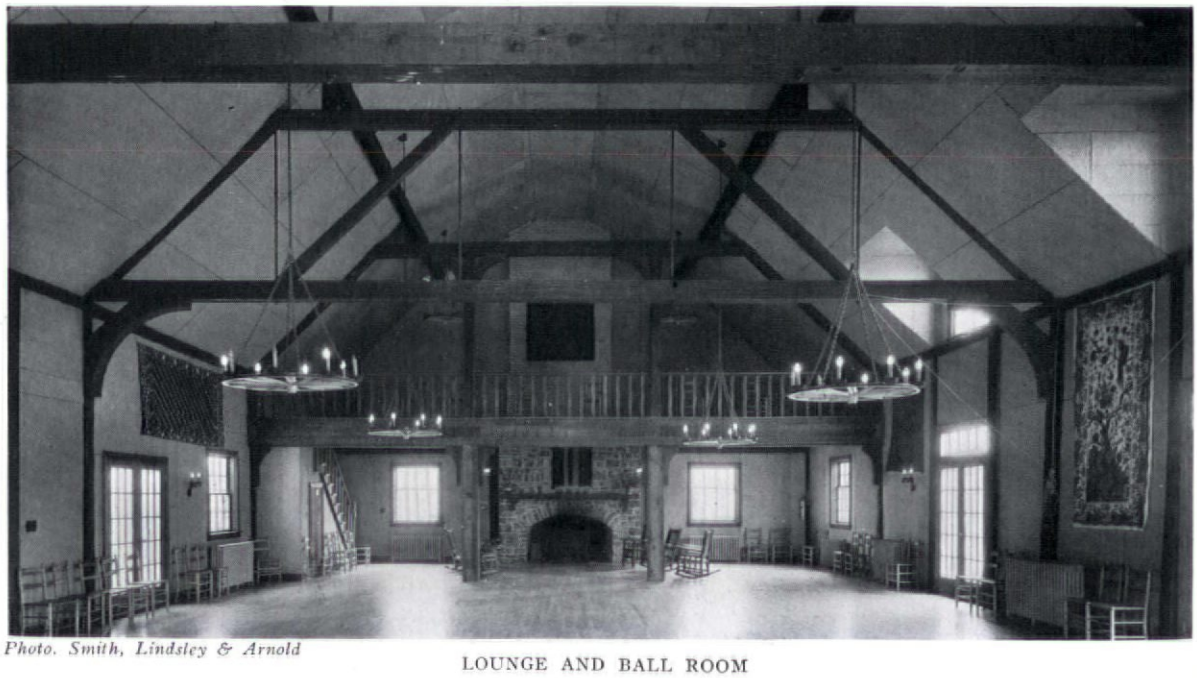


Photo. Smith, Lindsley & Arnold

LOUNGE AND BALL ROOM
DRUMLIN'S COUNTRY CLUB, SYRACUSE
DWIGHT JAMES BAUM, ARCHITECT

Photos. Wallace

MAIN STAIR HALL

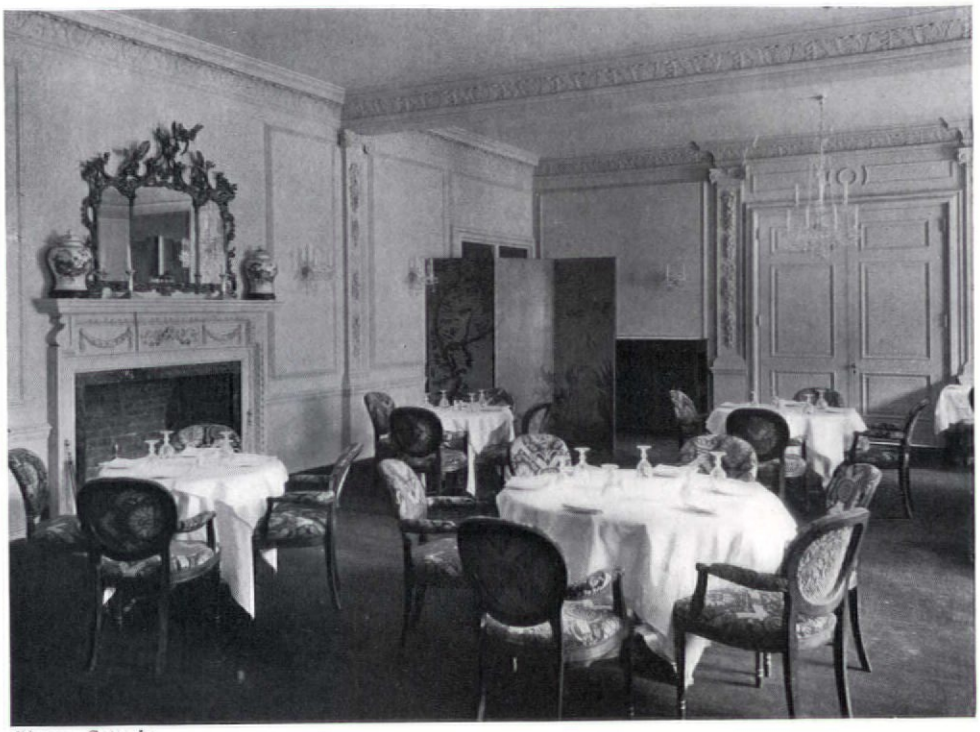
PRIVATE DINING ROOM

HUNTINGDON VALLEY COUNTRY CLUB, WILLOW GROVE, PA. TILDEN, REGISTER & PEPPER, ARCHITECTS

Photos. Tebbs & Knell, Inc.

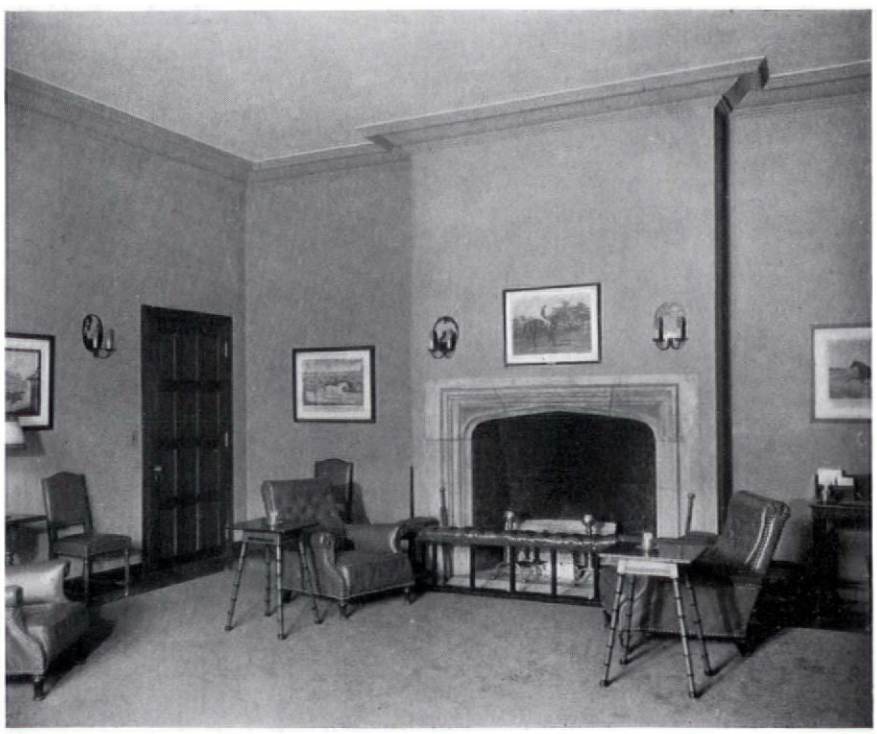
ABOVE, THE MAIN DINING ROOM. BELOW, A CORNER OF THE MEN'S LOUNGE

CHEROKEE COUNTRY CLUB, KNOXVILLE
BAUMANN & BAUMANN, ARCHITECTS



Photos. Gottscho

ABOVE, DINING ROOM SHOWING DOORS LEADING TO DINING PORCH. BELOW, MEN'S LOUNGE

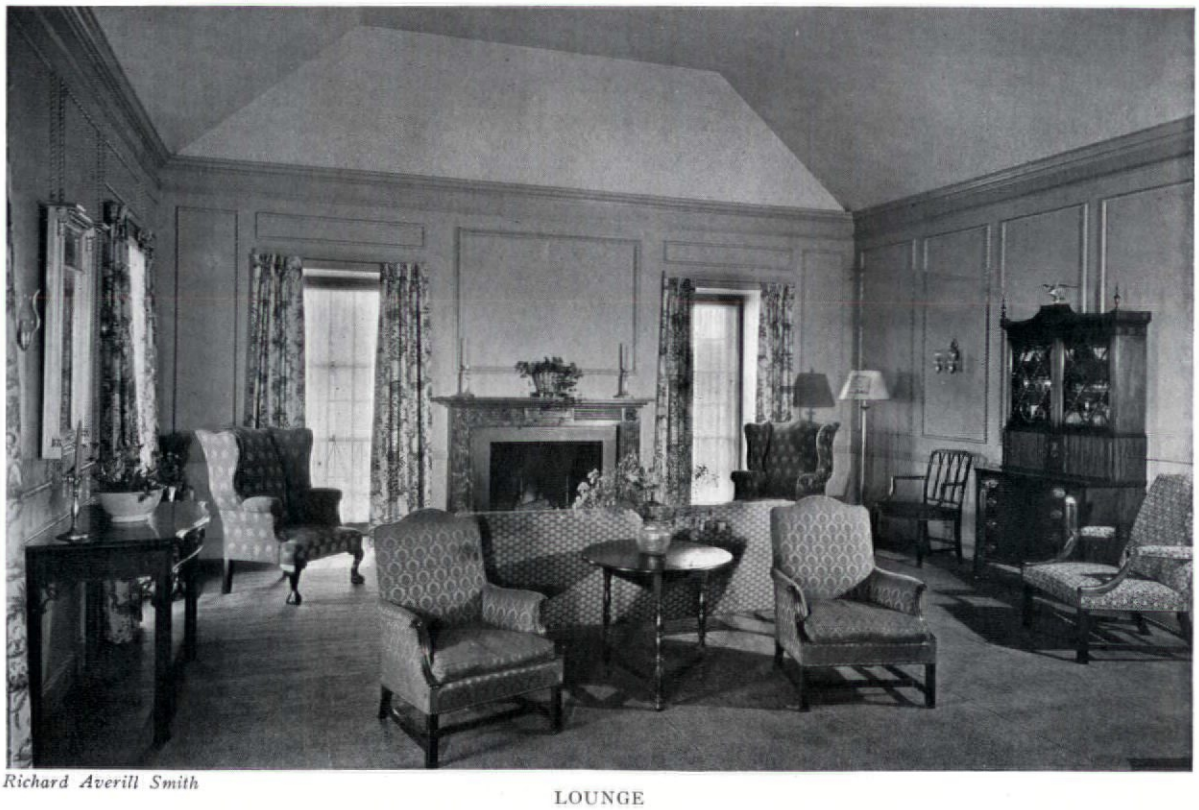


TUXEDO COUNTRY CLUB, TUXEDO PARK, N. Y.
OFFICE OF JOHN RUSSELL POPE, ARCHITECT

Tebbs & Knell, Inc.

PRIVATE DINING ROOM

CAPITAL CITY COUNTRY CLUB, ATLANTA
BURGE AND STEVENS, ARCHITECTS

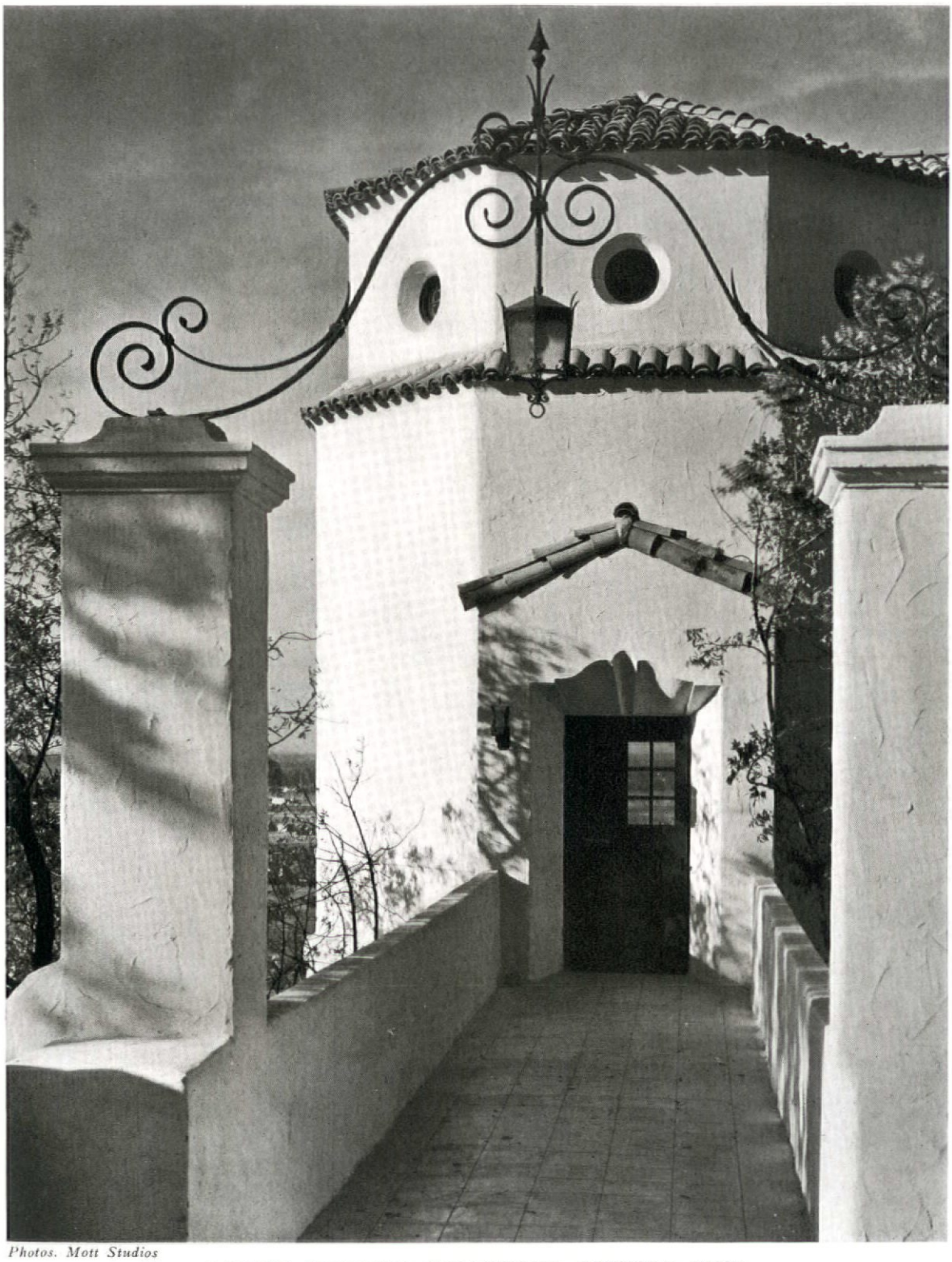


Richard Averill Smith

LOUNGE

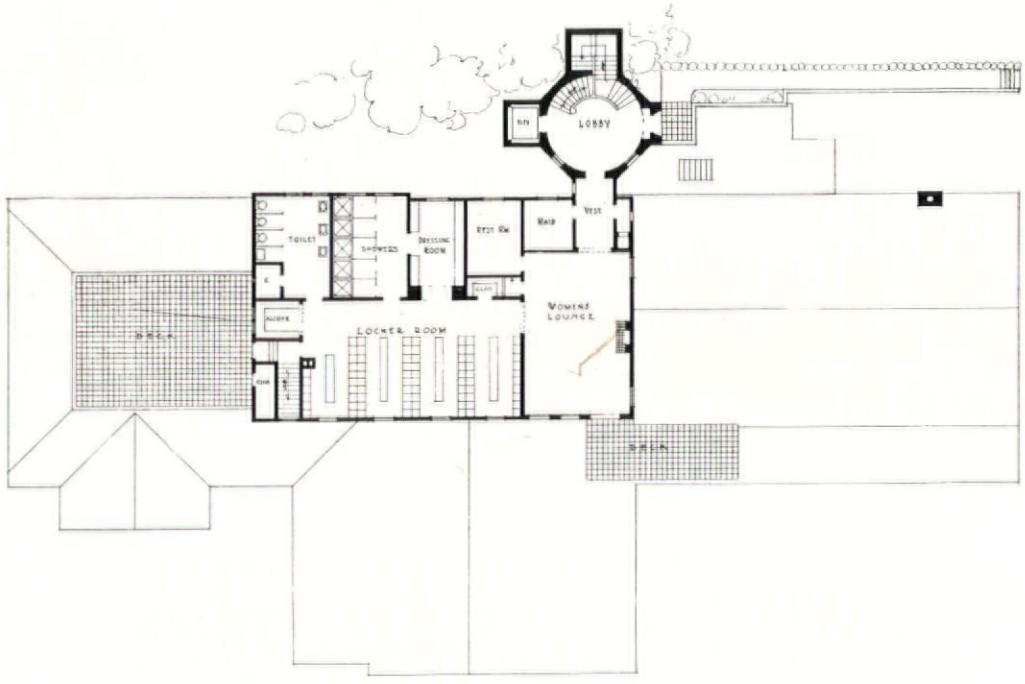
RIVERSIDE YACHT CLUB AT RIVERSIDE, CONN. BREED, FULLER & DICK, ARCHITECTS

EIGHT GOLF AND COUNTRY CLUBS

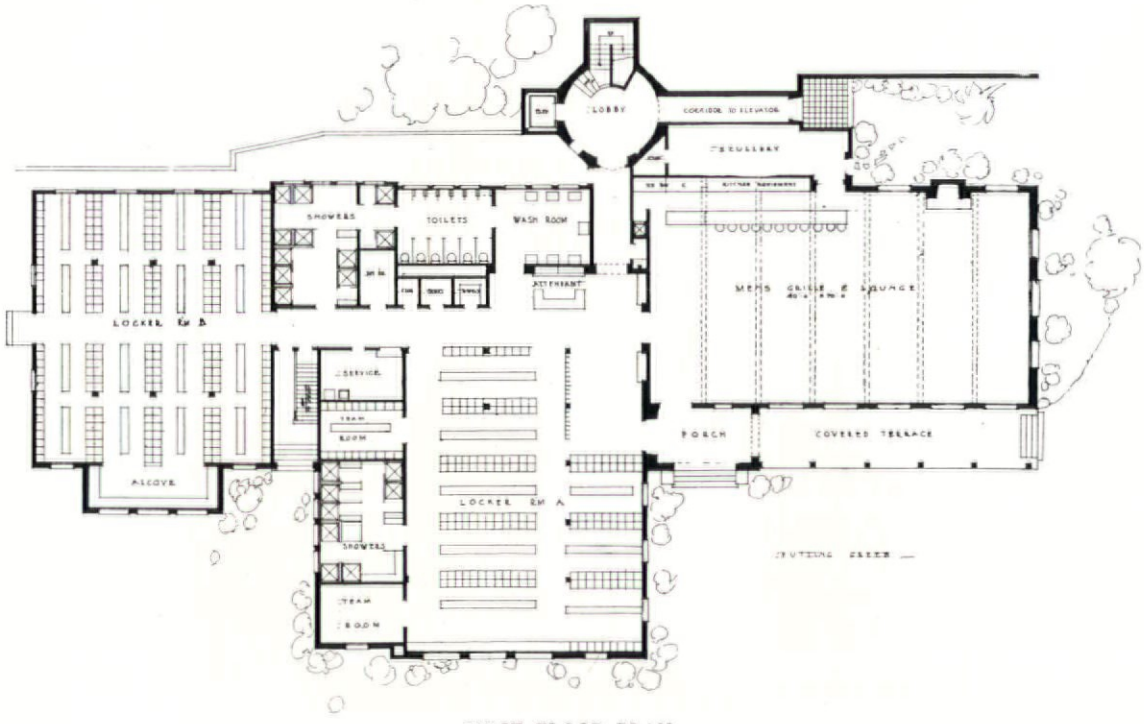


Photos. Mott Studios

LOCKER BUILDING, HOLLYWOOD COUNTRY CLUB
HOLLYWOOD, CAL. ROTH & PARKER, ARCHITECTS



SECOND FLOOR PLAN



FIRST FLOOR PLAN

LOCKER BUILDING, HOLLYWOOD COUNTRY CLUB
HOLLYWOOD, CAL. ROTH & PARKER, ARCHITECTS

GENERAL VIEW

SPIRAL STAIRCASE IN TOWER

LOCKER BUILDING, HOLLYWOOD COUNTRY CLUB, HOLLYWOOD, CAL. ROTH & PARKER, ARCHITECTS

COST AND CONSTRUCTION DATA

YEAR OF COMPLETION: 1929.

TYPE OF CONSTRUCTION: Frame and stucco.

EXTERIOR MATERIALS: Plaster.

INTERIOR MATERIALS: Plaster and wood.

ROOF CONSTRUCTION: Open trusses.

WINDOWS: Wood.

FLOORS: Linoleum.

HEATING: Steam.

VENTILATION: Plenum.

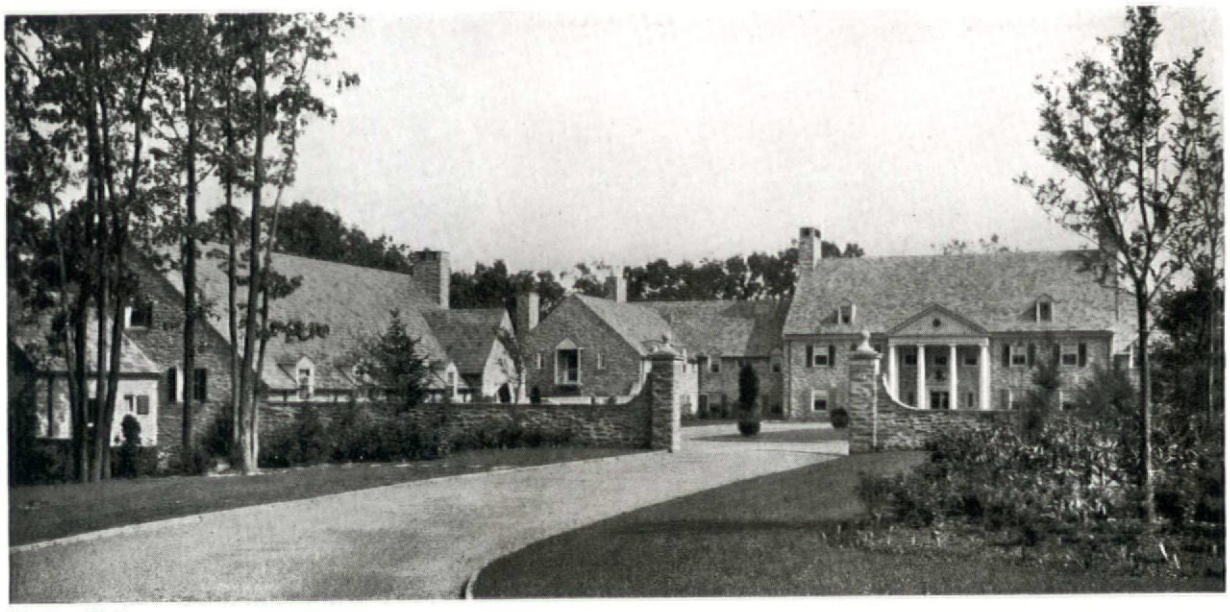
NUMBER OF MEMBERS: 750.

NUMBER OF SQUARE FEET: 20,000.

COST PER SQUARE FOOT: $4.

TOTAL COST: $80,000.

LOCKER BUILDING, HOLLYWOOD
COUNTRY CLUB, HOLLYWOOD, CAL.
ROTH & PARKER, ARCHITECTS

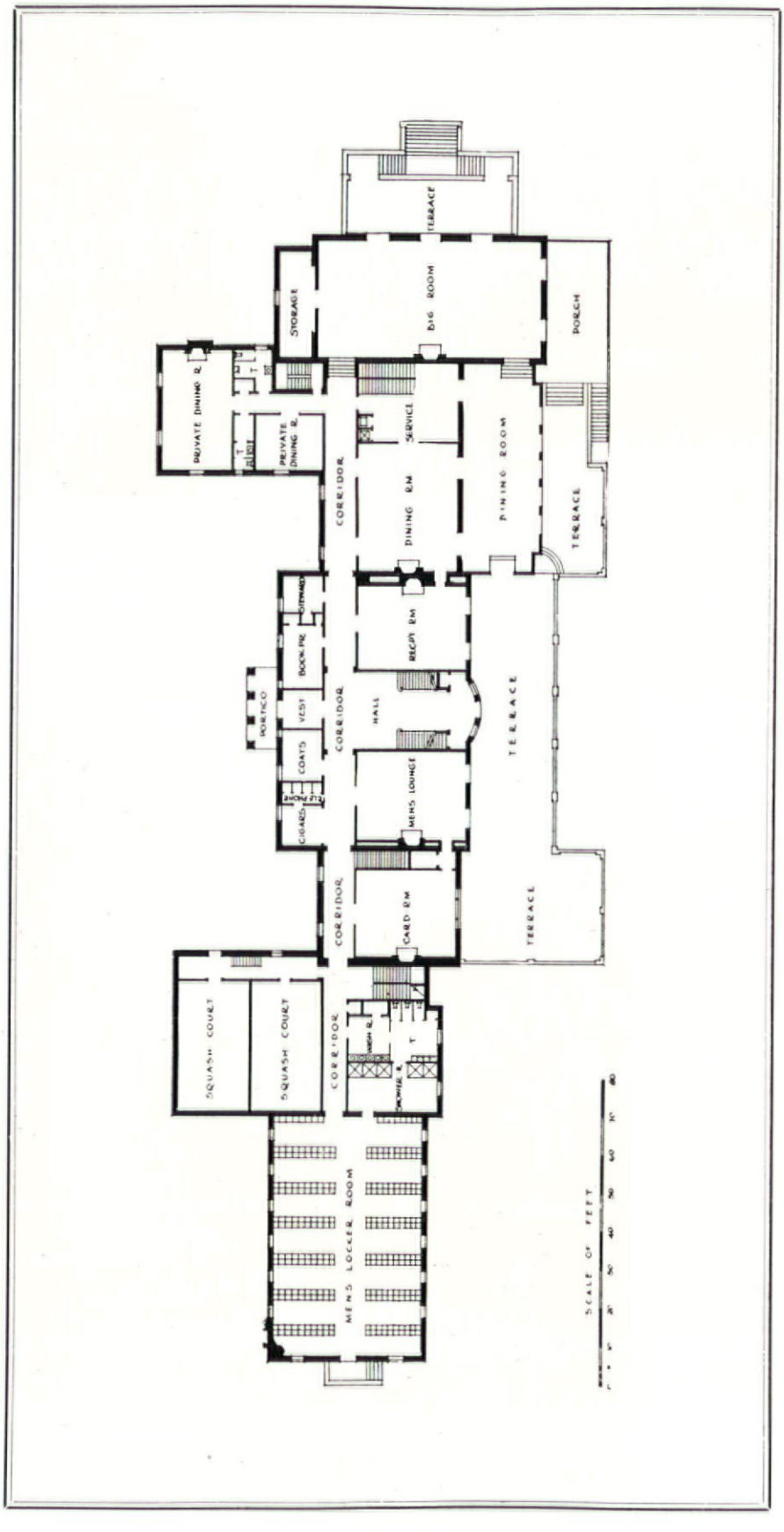


Photos. Wallace

ENTRANCE GATEWAY AND THE FORECOURT.

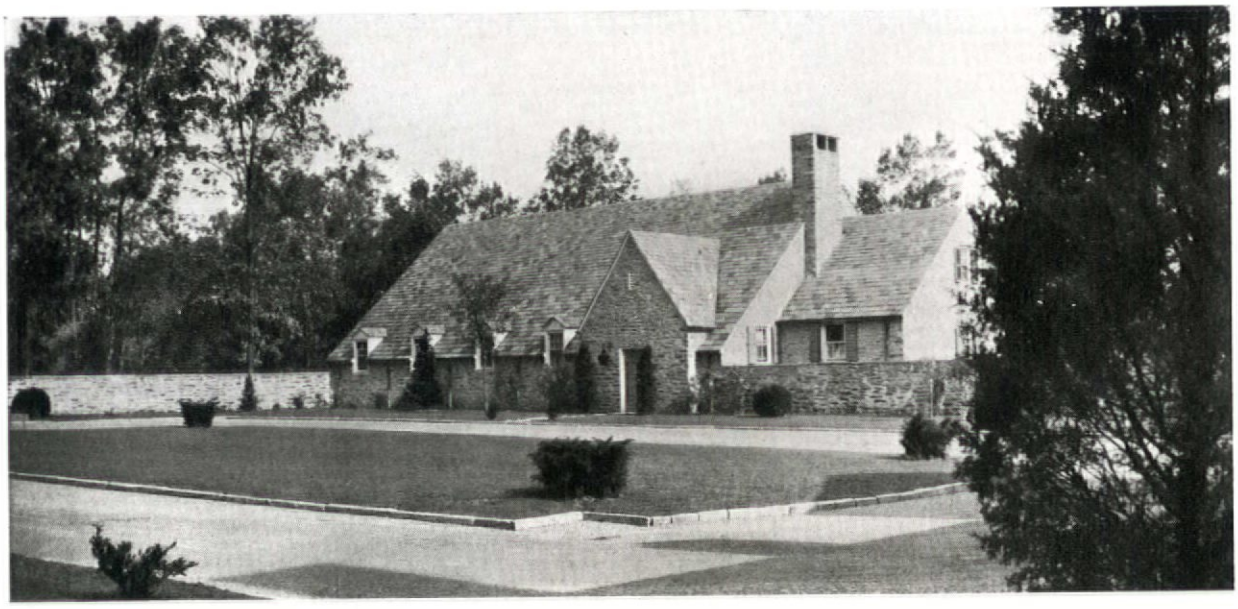
THE LIVING ROOM WING AND PORCH

HUNTINGDON VALLEY COUNTRY CLUB AT WILLOW GROVE, PA. TILDEN, REGISTER & PEPPER, ARCHITECTS



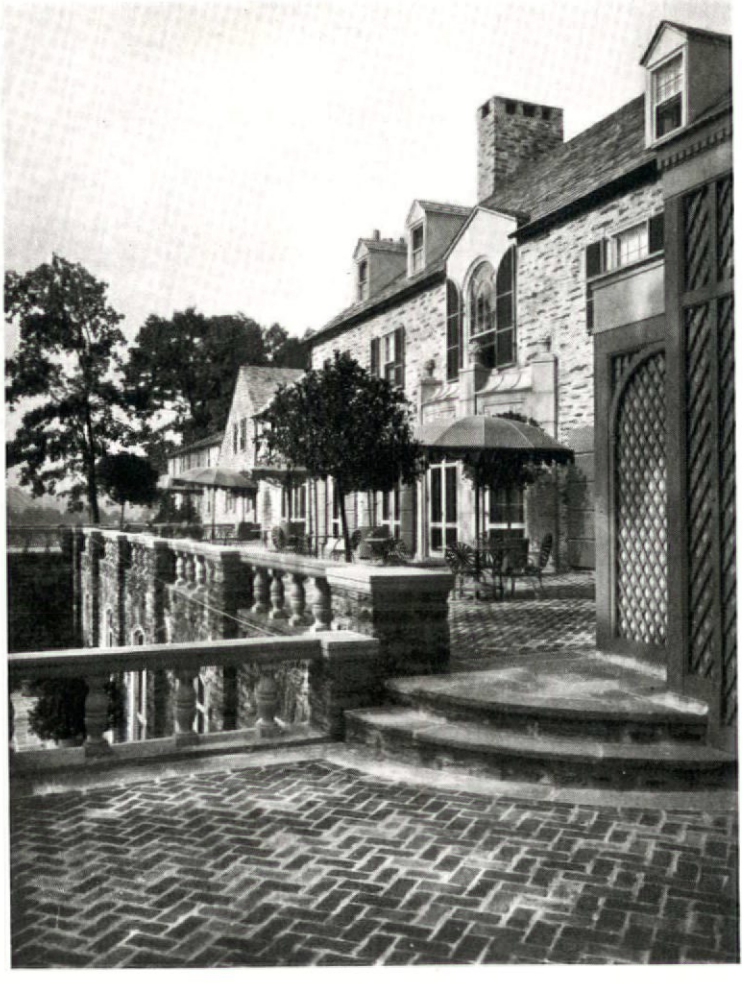
FIRST FLOOR PLAN

HUNTINGDON VALLEY COUNTRY CLUB AT WILLOW GROVE, PA. TILDEN, REGISTER & PEPPER, ARCHITECTS

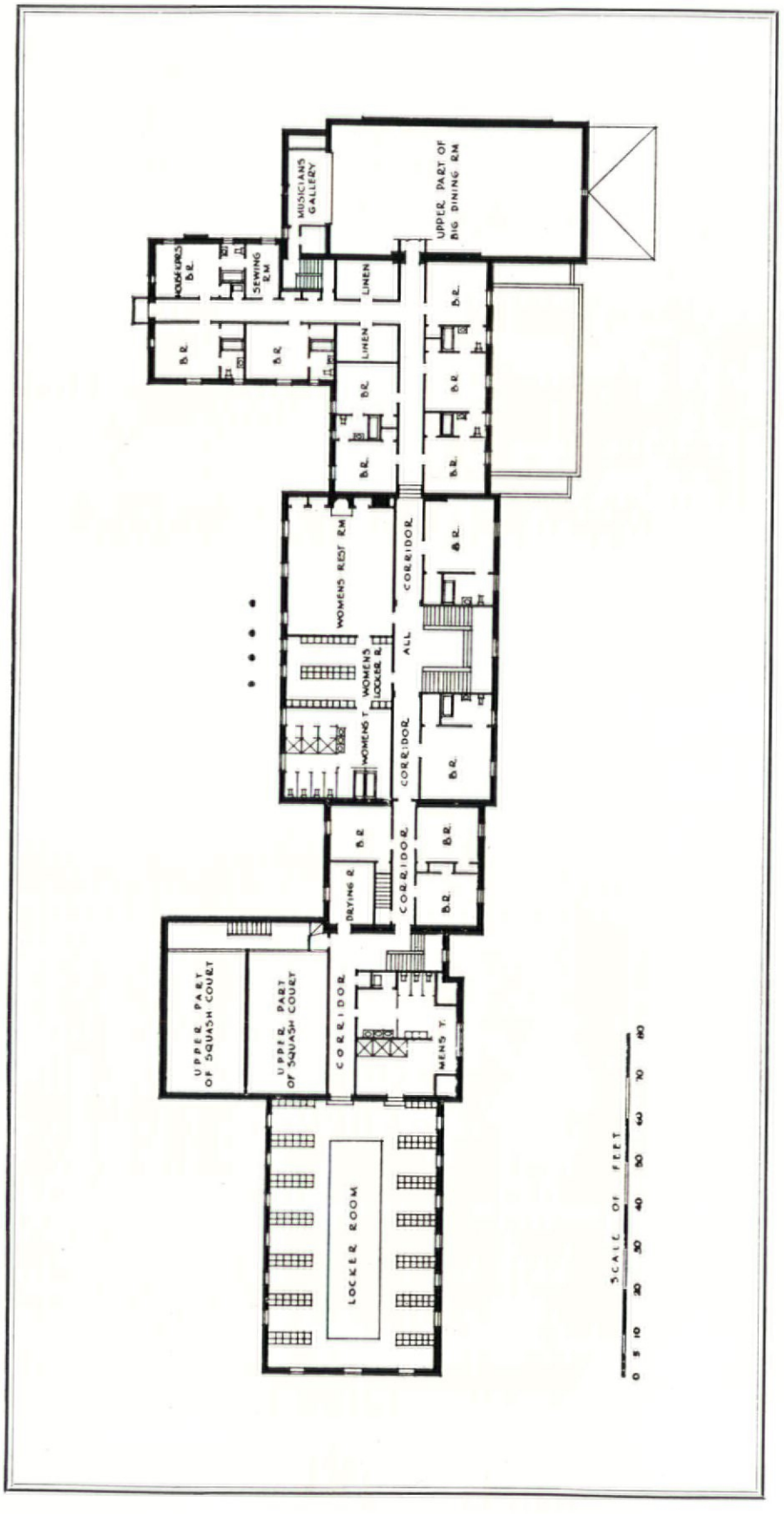


THE GARAGE AND SERVANTS' QUARTERS

ENTRANCE TO THE SOUTH TERRACE



HUNTINGDON VALLEY COUNTRY CLUB AT WILLOW GROVE, PA. TILDEN, REGISTER & PEPPER, ARCHITECTS



SECOND FLOOR PLAN

HUNTINGDON VALLEY COUNTRY CLUB AT WILLOW GROVE, PA. TILDEN, REGISTER & PEPPER, ARCHITECTS

THE DINING ROOM

CHIMNEYPIECE AND SIDE TROPHY CASES IN THE MEN'S LOUNGE

HUNTINGDON VALLEY COUNTRY CLUB AT WILLOW GROVE, PA. TILDEN, REGISTER & PEPPER, ARCHITECTS

COST AND CONSTRUCTION DATA

YEAR OF COMPLETION: 1928.

TYPE OF CONSTRUCTION: Frame.

EXTERIOR MATERIALS: Stone walls, slate roof, wood trim.

INTERIOR MATERIALS: Plaster and wood.

ROOF CONSTRUCTION: Frame.

WINDOWS: Double-hung and French casements.

FLOORS: Oak on light steel.

HEATING: Vapor heating, two boilers.

VENTILATING: In kitchen, serving rooms and third floor servants' rooms.

NUMBER OF BEDROOMS: 13.

NUMBER OF MEMBERS: 600.

NUMBER OF CUBIC FEET: 841,155.

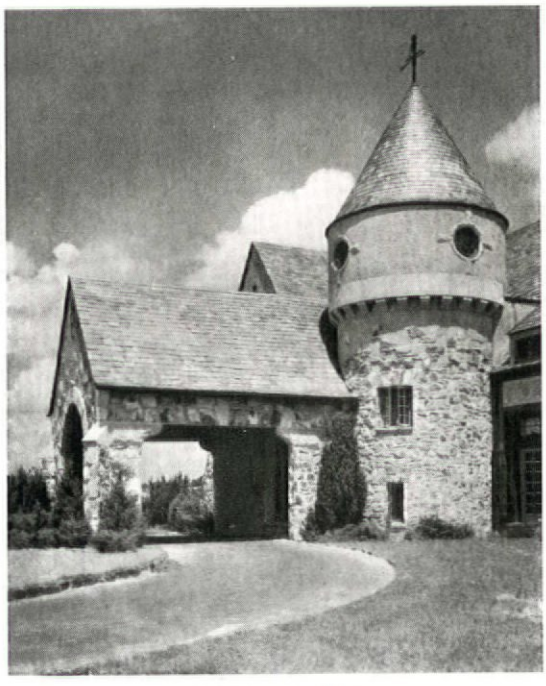
COST PER CUBIC FOOT: 46 cents.

TOTAL COST: $387,000.

HUNTINGDON VALLEY COUNTRY CLUB, WILLOW GROVE, PA. TILDEN, REGISTER & PEPPER, ARCHITECTS

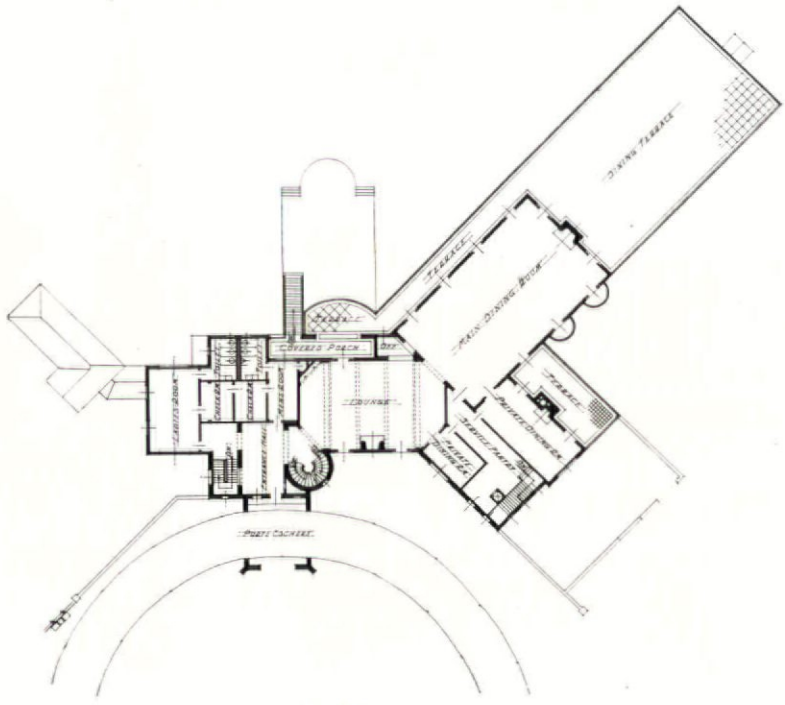
Photos. Tebbs & Knell, Inc.

FRONT ELEVATION

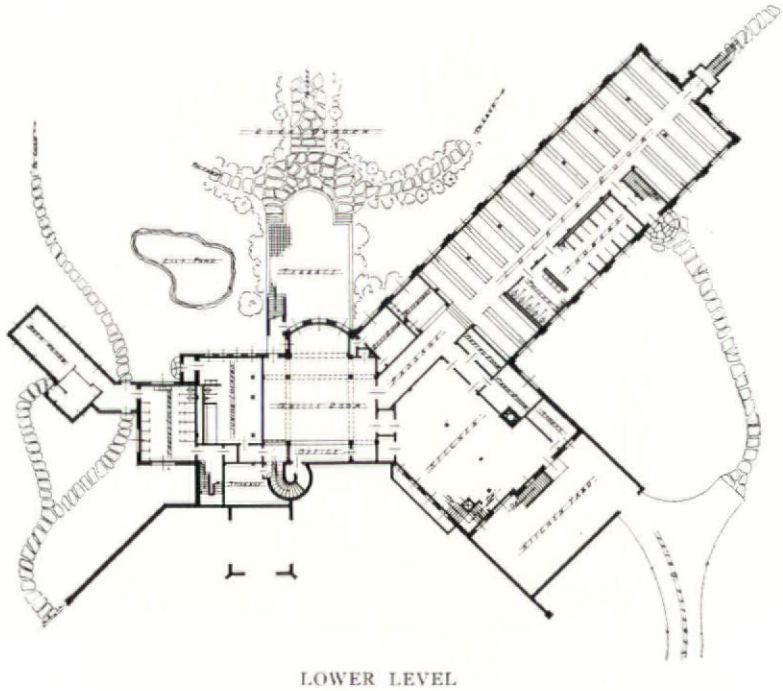


PORTE COCHÈRE

CAPITAL CITY COUNTRY CLUB, ATLANTA,
BURGE AND STEVENS, ARCHITECTS



UPPER LEVEL



LOWER LEVEL

CAPITAL CITY COUNTRY CLUB, ATLANTA
BURGE AND STEVENS, ARCHITECTS

REAR ELEVATION

ENTRANCE TO MEN'S LOCKER ROOM

CAPITAL CITY COUNTRY CLUB, ATLANTA
BURGE AND STEVENS, ARCHITECTS

COST AND CONSTRUCTION DATA

YEAR OF COMPLETION: 1928.

TYPE OF CONSTRUCTION: Fire resistive, reinforced concrete and steel frame, tile partitions.

EXTERIOR MATERIALS: Stone and stucco.

INTERIOR MATERIALS: Birch trim; plastered, papered and wood paneled walls.

ROOF CONSTRUCTION: Slate on nailing concrete supported on steel trusses.

WINDOWS: Steel sash.

FLOORS: Slate, tile, stone, cement, maple and oak.

HEATING: Steam with stoker.

VENTILATING: In kitchen only.

KITCHEN EQUIPMENT: Electric power for all cooking.

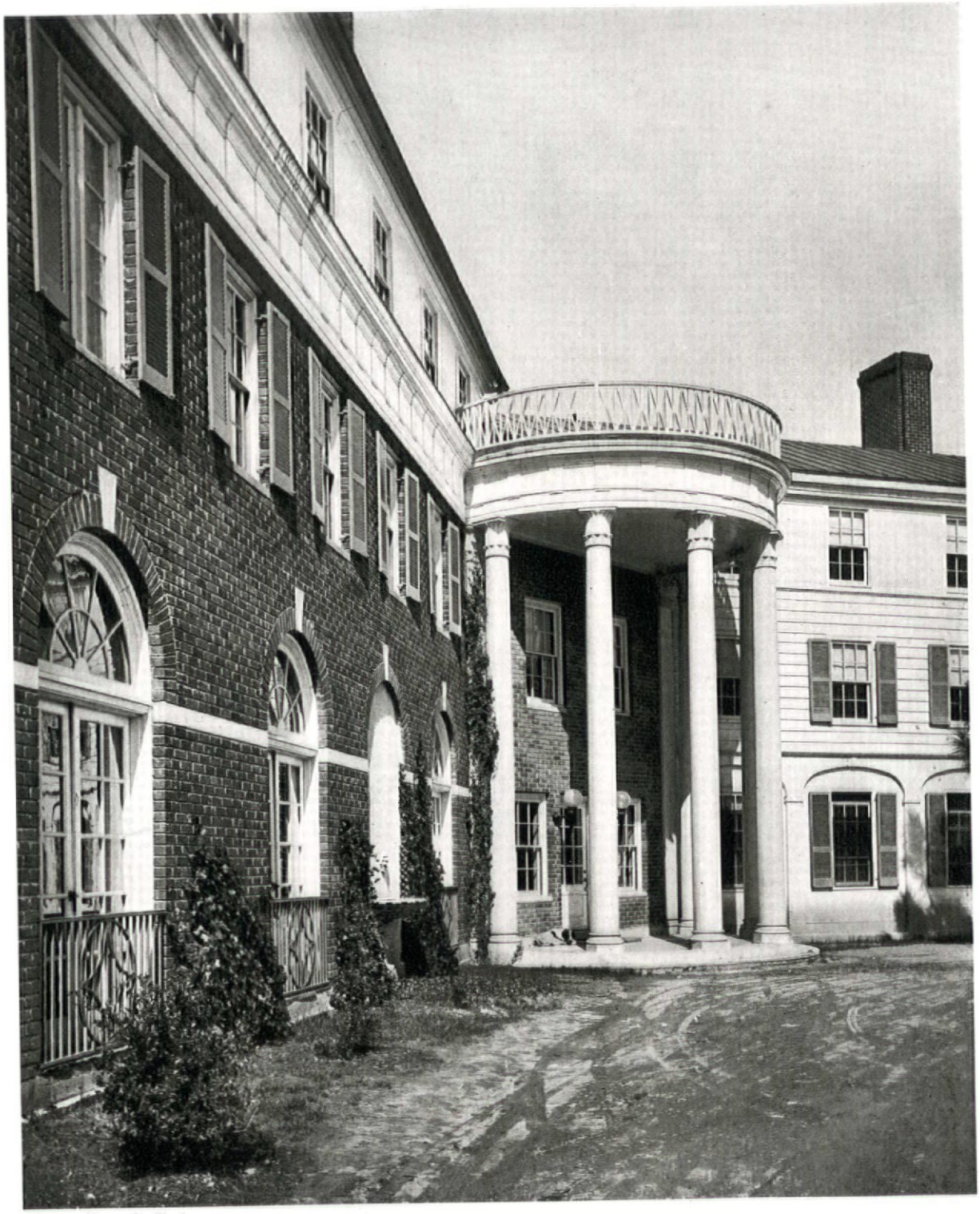
NUMBER OF MEMBERS: 1,000.

NUMBER OF CUBIC FEET: 410,000.

COST PER CUBIC FOOT: 53 cents.

TOTAL COST: $217,000.

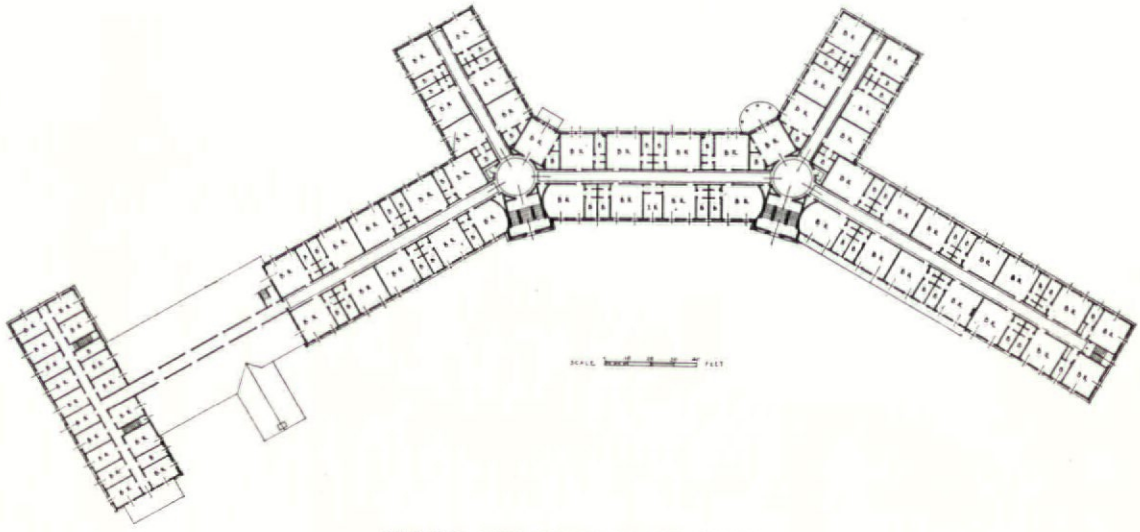
CAPITAL CITY COUNTRY CLUB, ATLANTA.
BURGE AND STEVENS, ARCHITECTS



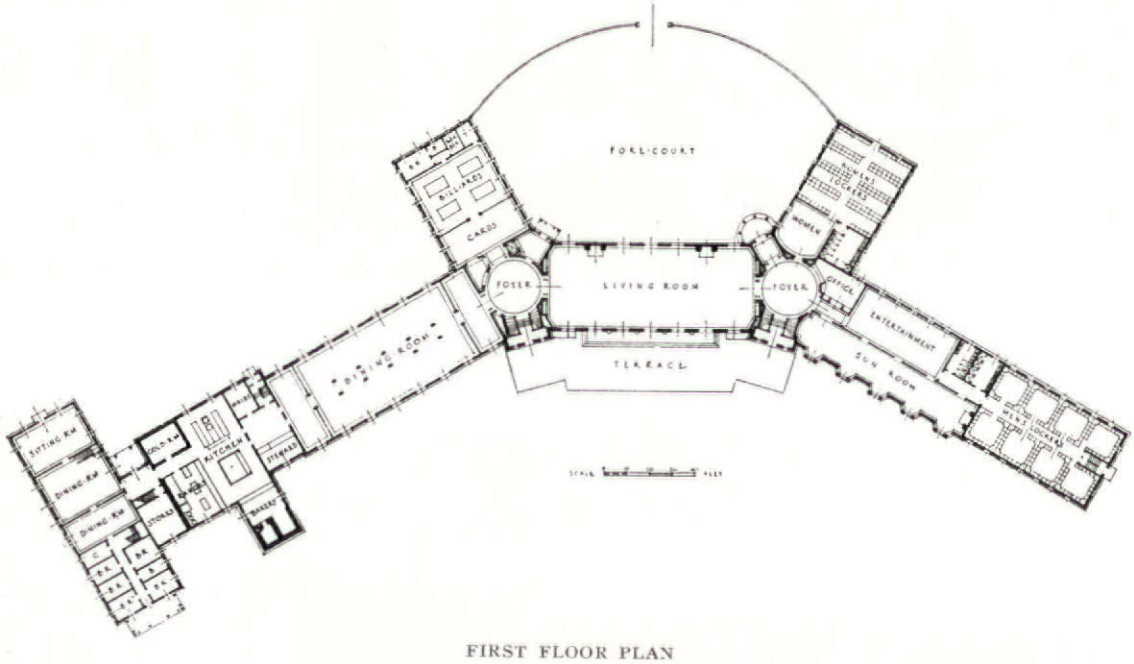
Photos. Kenneth Clark

MID-PINES COUNTRY CLUB
MOORE COUNTY, N.C., AYMAR EMBURY, II, ARCHITECT

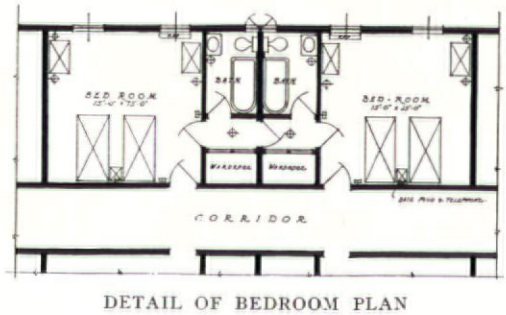
CORNER OF FORECOURT ENTRANCE PORTICO AT RIGHT OF LIVING ROOM



SECOND AND THIRD FLOOR PLAN



FIRST FLOOR PLAN



DETAIL OF BEDROOM PLAN

MID-PINES COUNTRY CLUB
MOORE COUNTY, N. C. AYMAR EMBURY, II, ARCHITECT

CENTER OF SOUTH ELEVATION

MID-PINES COUNTRY CLUB
MOORE COUNTY, N. C. AYMAR EMBURY, II, ARCHITECT

VIEW OF GREAT LIVING ROOM

COST AND CONSTRUCTION DATA

YEAR OF COMPLETION: 1925.

TYPE OF CONSTRUCTION: Non-fireproof.

EXTERIOR MATERIALS: Brick.

INTERIOR MATERIALS: Plaster.

ROOF CONSTRUCTION: Frame and slate.

WINDOWS: Double-hung.

FLOORS: Oak.

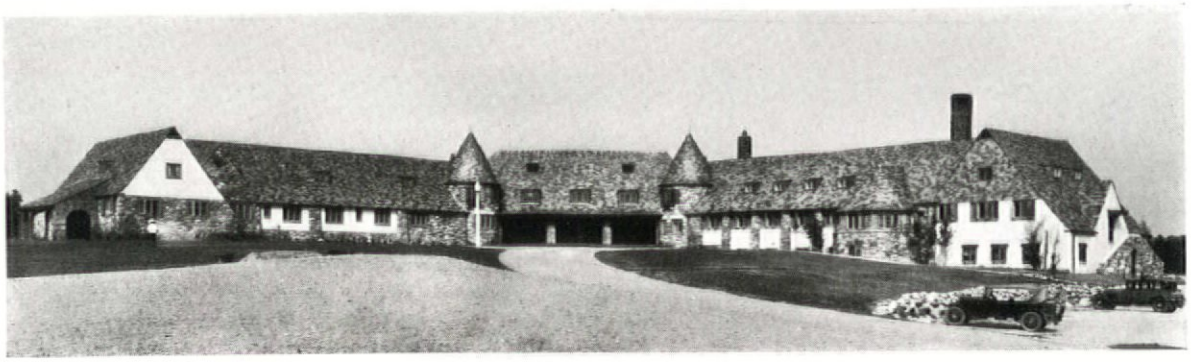
HEATING: Steam.

NUMBER OF MEMBERS: 100.

NUMBER OF BEDROOMS: 100.

COST PER CUBIC FOOT: 43 cents.

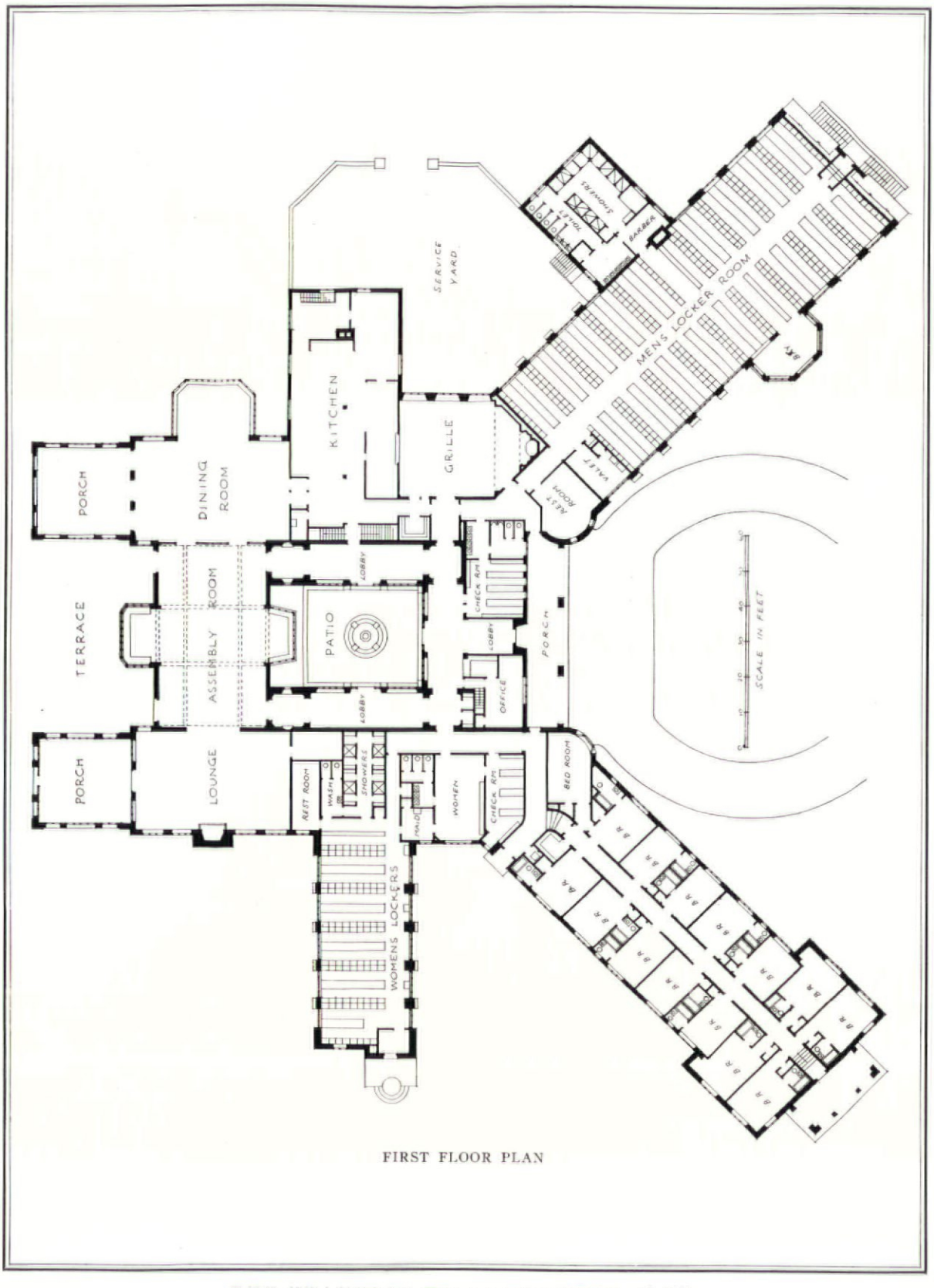
MID-PINES COUNTRY CLUB, MOORE COUNTY, N. C.
AYMAR EMBURY, II, ARCHITECT



GENERAL VIEW

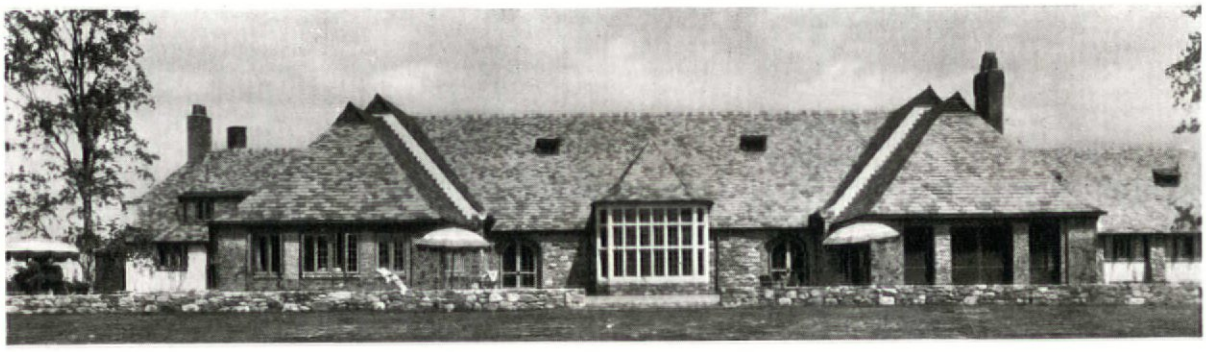
DETAIL OF THE ENTRANCE

THE FRANKLIN HILLS COUNTRY CLUB,
FRANKLIN, MICH. ALBERT KAHN, INC., ARCHS.



FIRST FLOOR PLAN

THE FRANKLIN HILLS COUNTRY CLUB,
FRANKLIN, MICH. ALBERT KAHN, INC., ARCHS.



REAR VIEW OF CLUB HOUSE

LIVING ROOM AND BEDROOM WINGS

THE FRANKLIN HILLS COUNTRY CLUB,
FRANKLIN, MICH. ALBERT KAHN, INC., ARCHS.

COST AND CONSTRUCTION DATA

YEAR OF COMPLETION: 1928.

TYPE OF CONSTRUCTION: Fireproof.

EXTERIOR MATERIALS: Concrete block and brick.

INTERIOR MATERIALS: Cinder block, plaster, wood.

ROOF CONSTRUCTION: Plank on concrete slab.

WINDOWS: Steel casements.

FLOORS: Wood, tile and concrete.

HEATING: Steam.

NUMBER OF MEMBERS: 400.

NUMBER OF BEDROOMS: 15.

NUMBER OF CUBIC FEET: 864,000.

COST PER CUBIC FOOT: 42 cents.

TOTAL COST: $365,300.

THE FRANKLIN HILLS COUNTRY CLUB,
FRANKLIN, MICH. ALBERT KAHN, INC., ARCHS.

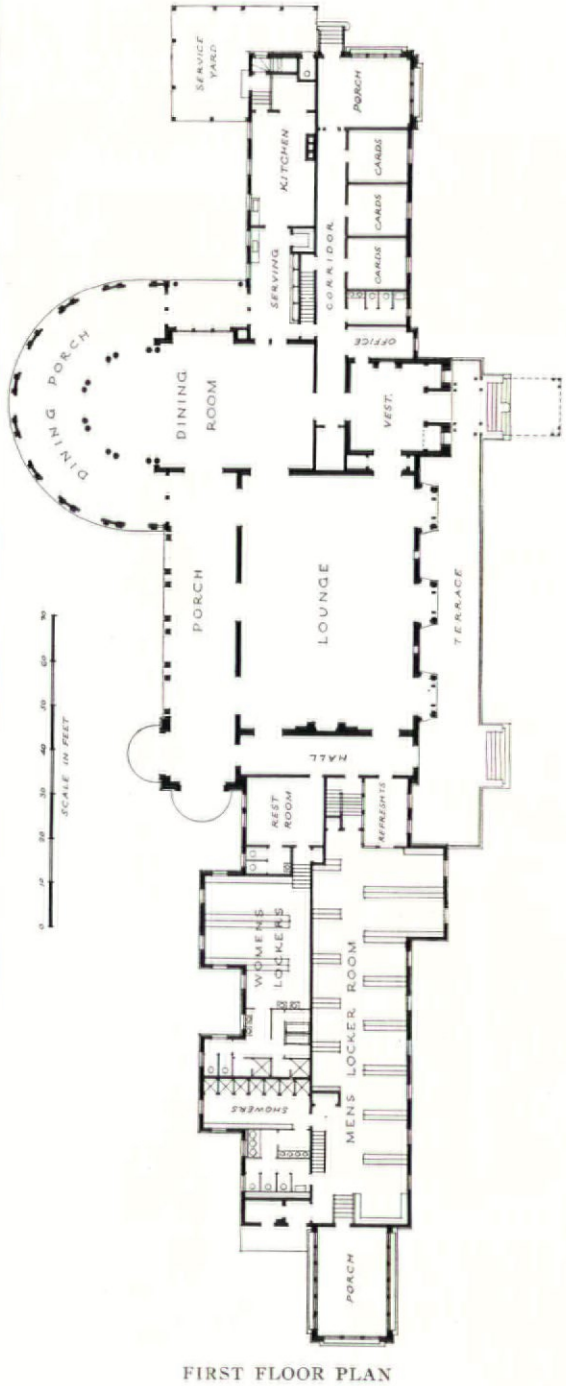
Photos. Tebbs & Knell, Inc.

GENERAL VIEW

LOUNGE

THE WEST END COUNTRY CLUB AT NEW ORLEANS

MOISE H. GOLDSTEIN & EMILE WEIL, ARCHITECTS



FIRST FLOOR PLAN

COST AND CONSTRUCTION DATA

TYPE OF CONSTRUCTION: Hollow tile, stucco, reinforced concrete, wood, steel, pile foundation.

EXTERIOR MATERIALS: Stucco, wood, cast stone.

INTERIOR MATERIALS: Ornamental plaster, wood, ornamental iron.

ROOF CONSTRUCTION: Steel trusses and wood.

WINDOWS: Wood casements.

FLOORS: Tile, hardwood, cement.

HEATING: Steam.

NUMBER OF MEMBERS: 525.

NUMBER OF CUBIC FEET: 302,000.

COST PER CUBIC FOOT: 50 cents.

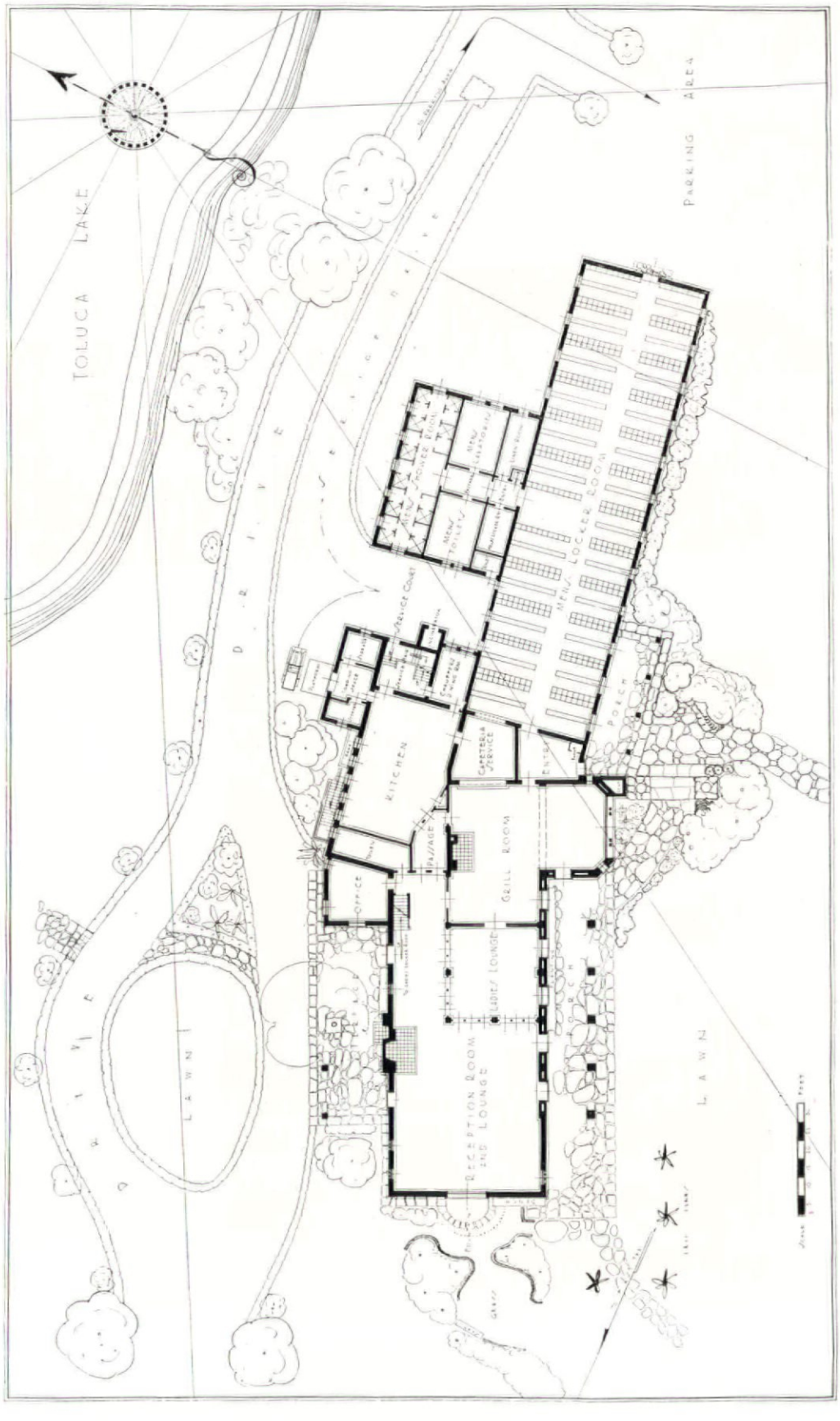
TOTAL COST: $150,198.

THE WEST END COUNTRY CLUB AT NEW ORLEANS.
MOISE H. GOLDSTEIN & EMILE WEIL, ARCHITECTS

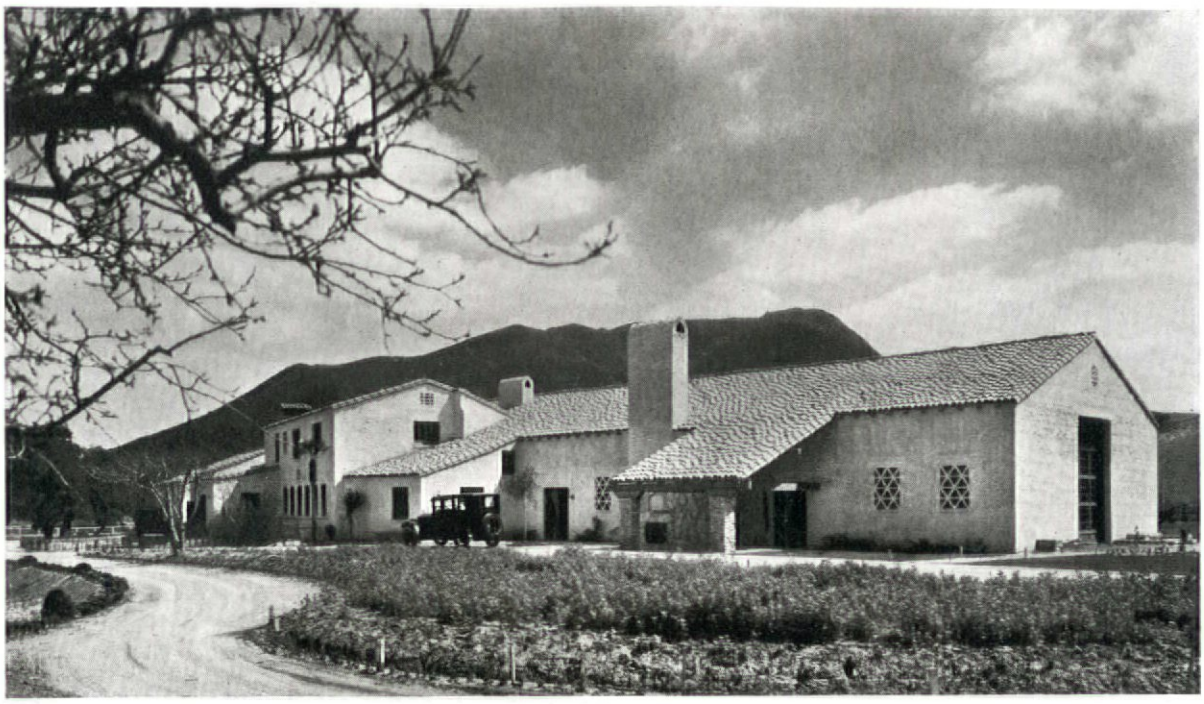
VIEW OF THE SOUTH ELEVATION

Photos, Mott Studios

LAKESIDE GOLF CLUB AT HOLLYWOOD, CAL.
WILLIAM LEE WOOLLETT, ARCHITECT



LAKESIDE
GOLF CLUB



FRONT ELEVATION

FIREPLACE IN THE RECEPTION ROOM

LAKESIDE GOLF CLUB AT HOLLYWOOD, CAL.
WILLIAM LEE WOOLLETT, ARCHITECT

COST AND CONSTRUCTION DATA

YEAR OF COMPLETION: 1925.

TYPE OF CONSTRUCTION: Concrete, brick and frame.

EXTERIOR MATERIALS: Brick.

INTERIOR MATERIALS: Brick, tile, plaster and hardwood with insulated ceiling in locker room.

ROOF CONSTRUCTION: Mission tile.

WINDOWS: Wood casements.

FLOORS: Tile and hardwood.

HEATING: Furnaces.

VENTILATING: In kitchen only.

NUMBER OF MEMBERS: 400.

NUMBER OF BEDROOMS: 2.

NUMBER OF SQUARE FEET: 19,649.

COST PER SQUARE FOOT: $5.09.

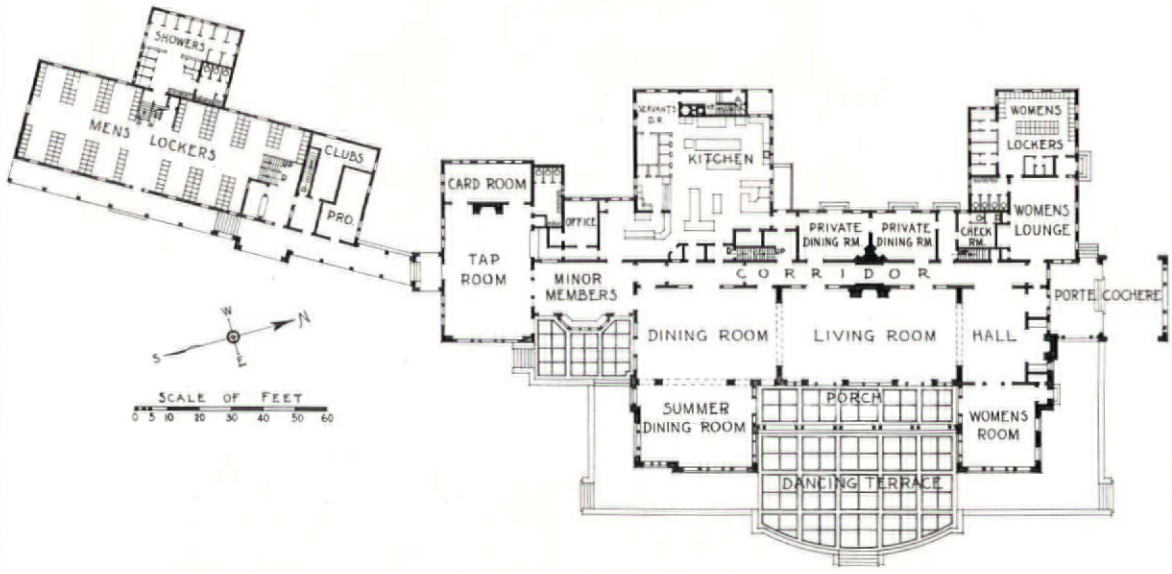
TOTAL COST: $100,000.

LAKESIDE GOLF CLUB AT HOLLYWOOD, CAL.
WILLIAM LEE WOOLLETT, ARCHITECT

EAST ELEVATION

DANCING TERRACE

KANSAS CITY COUNTRY CLUB
HOLDEN, FERRIS & BARNES,
ARCHITECTS. E. T. WILDER &
E. B. DELK, CONSULTING ARCHS.



FIRST FLOOR PLAN

KANSAS CITY COUNTRY CLUB
HOLDEN, FERRIS & BARNES,
ARCHITECTS. E. T. WILDER &
E. B. DELK, CONSULTING ARCHS.

CORNER OF LIVING ROOM

PRIVATE DINING ROOMS

KANSAS CITY COUNTRY CLUB
HOLDEN, FERRIS & BARNES, ARCHITECTS. E. T. WILDER & E. B. DELK, CONSULTING ARCHS.

COST AND CONSTRUCTION DATA

YEAR OF COMPLETION: 1927.

TYPE OF CONSTRUCTION: Frame.

EXTERIOR MATERIALS: Shingles and native stone.

INTERIOR MATERIALS: Canvased walls and knotty white pine paneling.

ROOF CONSTRUCTION: Frame and wood shingles.

WINDOWS: Wood, double-hung and casements.

FLOORS: Oak.

HEATING: Vapor vacuum steam.

NUMBER OF MEMBERS: 350.

NUMBER OF CUBIC FEET: 500,000.

COST PER CUBIC FOOT: 41 cents.

TOTAL COST: $205,000.

KANSAS CITY COUNTRY CLUB
HOLDEN, FERRIS & BARNES, ARCHITECTS. E. T. WILDER & E. B. DELK, CONSULTING ARCHS.

THE SOUTHAMPTON BEACH CLUB

PEABODY, WILSON & BROWN, ARCHITECTS

BY

HAROLD D. EBERLEIN

SEASIDE resorts usually have a seamy side to their aspect. The more popular they are as bathing places, the seamier that seamy side is likely to be. Time and again one is put in mind of Bishop Heber's familiar lines, "Where every prospect pleases, and only man is vile." And man's "vileness,"—vileness, of course, in its strictly correct sense meaning cheapness, shoddiness,—takes the form of hideous bath houses and bathing establishments that hopelessly mar the beaches above high water line. This painful and really inexcusable feature of bathing beach "contraptions,"—the term "architecture" can scarcely be applied,—is not confined to America, although perhaps we are more conscious of it here.

When we find a thoroughly well designed and appropriate structure on the beach devoted to the accommodation of bathers, it brings a sense of pleasure and relief, intensified by the recollection of the ramshackle, shanty-town appearance of too many other beaches where there is no excuse for the existence of such a state of affairs. The pavilion and bath houses of the Southampton Bathing Corporation, at Southampton, N. Y., present a striking embodiment of sound ideals in the plan, design and construction of seaside bathing quarters. The conception back of the enterprise is even more significant, in certain respects, than the actual translation of the scheme into visible and tangible form. Both plan and design are admirable in themselves. All the varied requirements of the Bathing Corporation are adequately provided for in the carefully considered layout of the group; the design is full of interest as a composition, faithfully reflects the plan, and is in every respect appropriate to the environment.

The requirements of the Southampton Bathing Corporation included some of the provisions of a country club. In addition to the bath houses, with all their appropriate and convenient equipment, it was desired to have a casino where dances and other functions might be held; proper appointments for the serving of luncheons, tea or occasional refreshments; comfortable places for the members to sit and read or chat when so disposed; and a large still water pool.

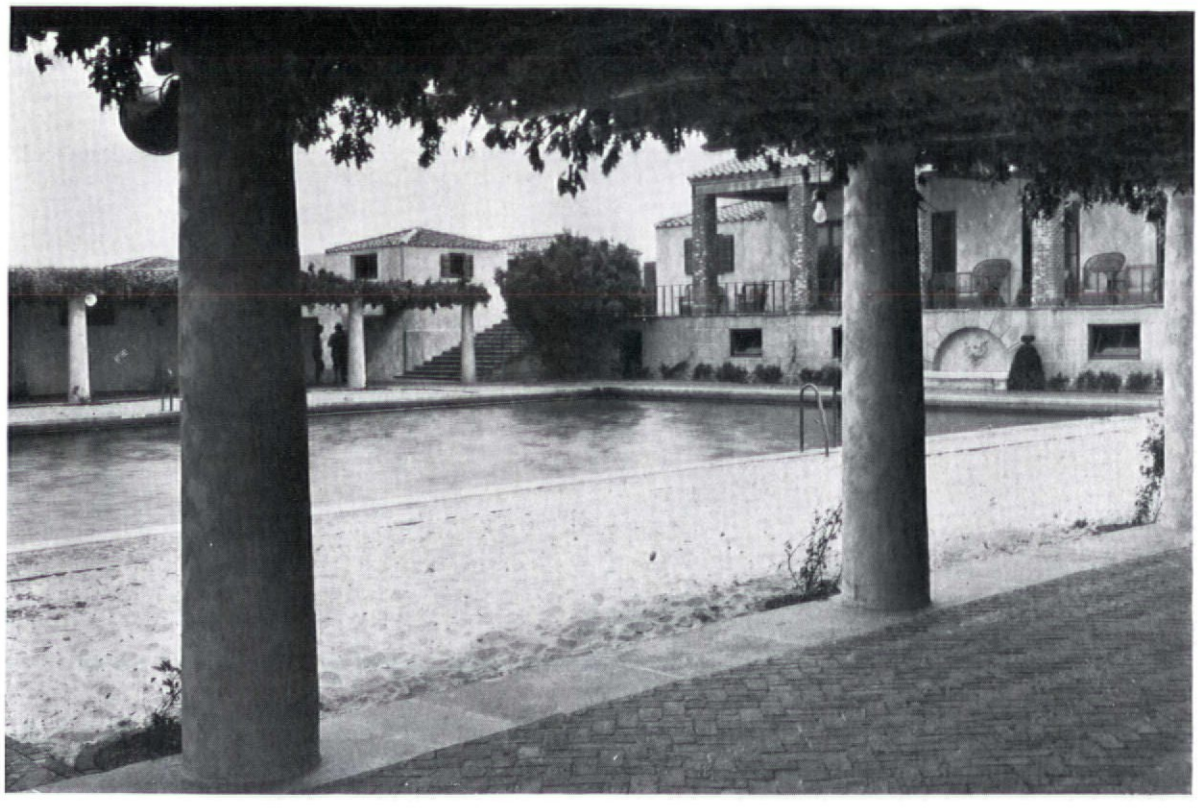
The buildings of the group are on different levels, following the configuration of the dunes, and this diversity of land contour has been turned to excellent account in the composition of the ensemble. The casino stands on top of an elevation from which there is an unbroken downward sweep of sand to the water line. The south or seaward front has a broad, brick-paved loggia commanding a view of the surf and the bathers. Between this loggia and the edge of the dune there is room for a number of round metal tables shaded by large, gaily colored umbrellas which lend a cheerful chromatic accent to the scene. The ranges of bath houses, grouped around their respective courts, to the immediate east and west of the casino, are on the same level. At each side of the casino, flights of steps descend to the lower level on the north from which there is a pleasant outlook over the meadows and Lake

SOUTHAMPTON BEACH CLUB, SOUTHAMPTON, N. Y.
PEABODY, WILSON & BROWN, ARCHITECTS

THE WALL FOUNTAIN AT END OF POOL

Agawam, with the village in the distance. The central feature of this lower level before the north front of the casino is the large still water bathing pool, along each side of which, beyond the stretch of sand directly surrounding the cement margin of the pool, are brick-paved pergolas. Beyond these pergolas again, both east and west, are ranges of bath houses, on the same level, built about open courts and connected by intersecting alleys. Two main cross alleys, running east and west, divide the groups of bath houses and courts on the higher level from those on the lower, and the eastern alley is also the main entrance way giving access to the pool court and also to the steps ascending to the upper level on which one enters the north veranda of the casino or the upper groups of bath houses. Beneath the casino is a kitchen and, on the main floor level there are also a smaller kitchen and serving room. At the present time fresh towels are given out from the old pavilion, and in it there is also the executive office as well as a supply counter for the dispensing of cigarettes, biscuits and sundry odds and ends likely to be called for. In due time this building will give place to an extension of the group already in use.

The most striking feature of the plan is the

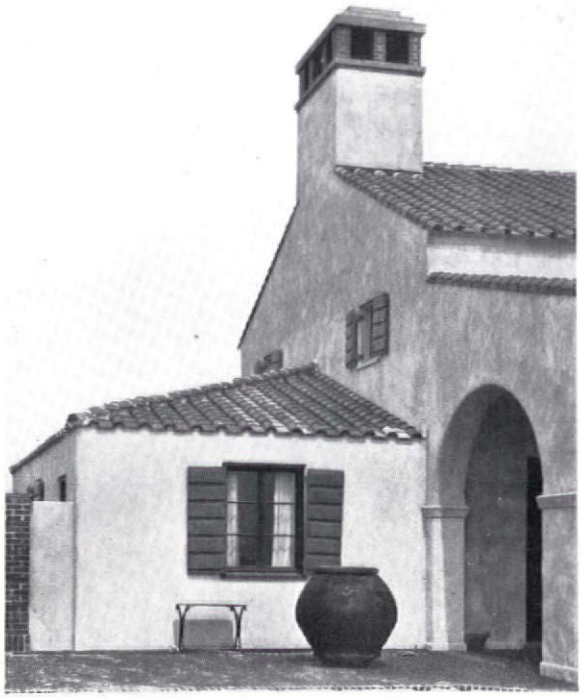


SOUTHAMPTON BEACH CLUB, SOUTHAMPTON, N. Y.
PEABODY, WILSON & BROWN, ARCHITECTS

THE POOL

arrangement of the bath houses about a succession of open courts connected by alleys. The scheme is really an expansion of the old Italian principle of the house built around a *cortile*. Indeed, the entire bath house group vividly recalls the arrangement of Pompeii. This element of resemblance can be seen in the illustration of the main eastern alley leading toward the pool court. The openings on the right of this little "Pompeian street" indicate the cross alleys leading to the several courts; the opening on the left shows the steps ascending to the main alley of the upper level for the group on top of the dune. This old Roman town system supplies the very keynote of the entire scheme. For economy of space and economy of construction it has proved highly satisfactory, and it ensures abundance of light and air to every bath house in each group. The bath houses are planned with outer and inner rooms, each being well lighted by windows. The smaller anteroom has benches and hooks, and here wet bathing suits are taken off; the larger inner room is completely furnished with dressing stands, cupboards, chairs and tables.

When the new buildings of the Southampton Bathing Corporation were first under consideration, it was felt desirable that they should be as



DETAIL, WEST END OF SEA FRONT

WEST ENTRANCE

SOUTHAMPTON BEACH CLUB, SOUTHAMPTON, N. Y.
PEABODY, WILSON & BROWN, ARCHITECTS

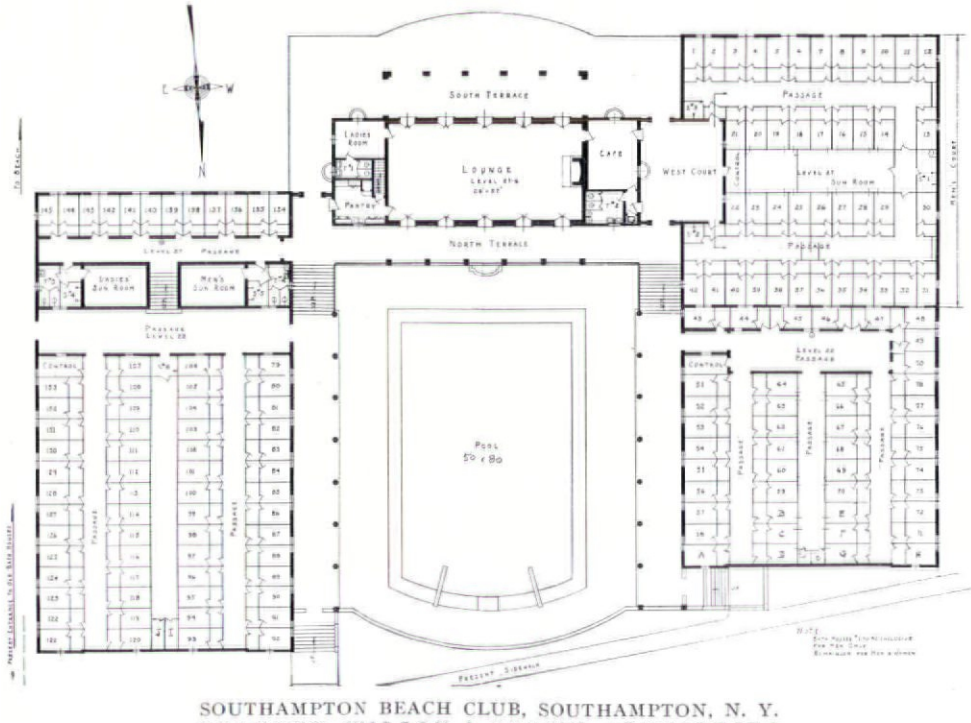
near the water as possible. Therefore, to prevent erosion of the beach and to ensure the safety and stability of the buildings, a bulkhead was carried the entire length of the property along the sea front below the water line. The still water pool in the large court is supplied from wells out beyond this bulkhead. The bottom of the pool is appreciably below the surface level of Lake Agawam,—the body of fresh water just across the road from the north side of the property,—and to prevent the seepage of fresh water through the sand from that source into the pool, the bottom and the sides of the pool had to be constructed with special reinforcement and waterproofing.

The walls of the casino are stuccoed over metal lath on wooden construction; the walls of the bath houses are built of concrete blocks covered with stucco, and the inside partition walls of the bath houses are made of 3/8-inch asbestos boards. The stucco is a patent cement product, waterproof in itself, and the pigment used is mixed directly in the cement. This pigment is blended in little dashes of red, blue and yellow deftly worked into the gray ground, giving the wall surfaces a pleasant iridescent sparkle on close view and dying completely into a light gray when seen from a distance. All the roofs are of red half-round tiles. Local Long Island red brick of an agreeable hue appears in the paving and in the piers of the veranda along the north side.

The architectural grace of the group is wholly dependent upon the well studied composition and the use of the materials employed in construction. Apart from several appropriate items of accent, there has been no attempt to introduce any scheme of ornamentation. One of the decorative items is the head of the sea monster in cast stone, from whose mouth water gushes into the wall fountain at the base of the veranda in the pool court, and another is the cast stone fireplace at the end of the great room in the casino, where sea creatures disport themselves on the frieze. Both of these pieces are the work of Frank G. Menconi, the architectural sculptor.

The great room of the casino exhibits an engaging scheme of blithesome simplicity in its decoration. The walls are a pale blue, and the curtains at the long windows are of light jade green sateen. The rope moulding, which is the only cornice between the wall surfaces and the arched ceiling, is light green and gold, and the lighting fixtures, which were especially designed for the room, are also in green and gold.

The accepted design for the buildings was the result of a competition. In view of the constant vicissitudes of a club organization, with building committees almost inevitably changing their personnel at each annual election, it was felt necessary to stipulate that one member of the club should remain in responsible control during the entire period of building in order to secure continuity of effort and avoid the mistakes so likely to occur through changed personnel of committees. This one person was Marshall Dodge, and it is proper in this place to make due acknowledgment of the tact and sympathetic understanding with which he discharged his office.

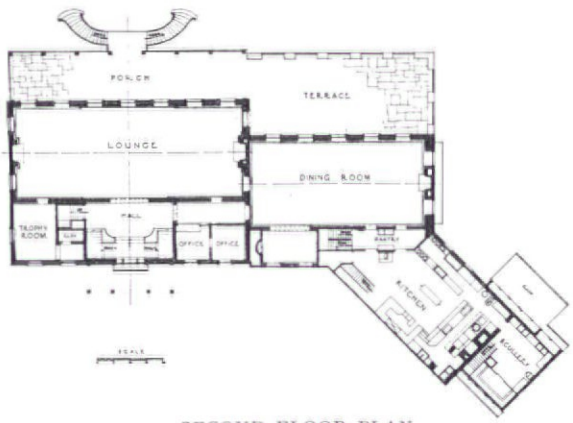


SOUTHAMPTON BEACH CLUB, SOUTHAMPTON, N. Y.
PEABODY, WILSON & BROWN, ARCHITECTS

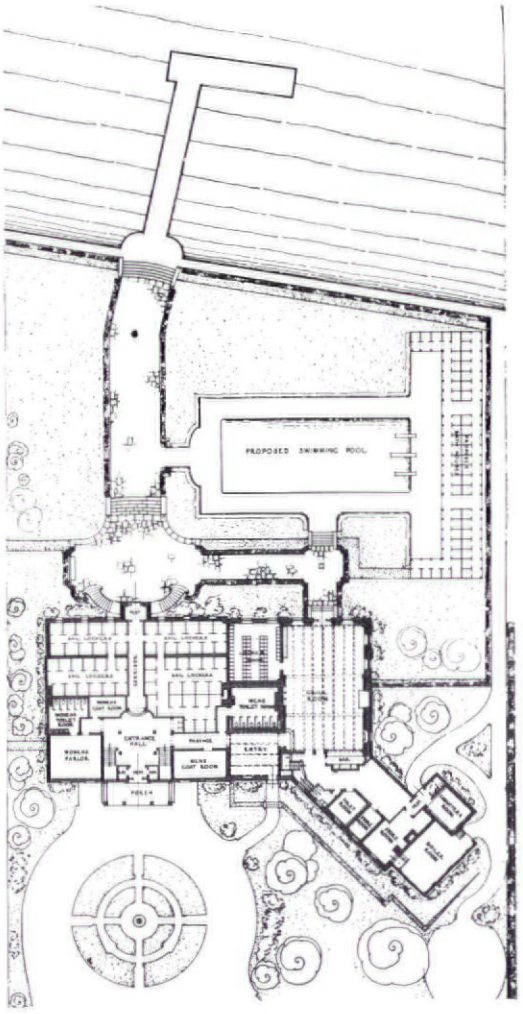
Photos. Van Anda

MANHASSET BAY YACHT CLUB AT PORT WASHINGTON, N. Y. TH. ENGELHARDT, ARCHITECT

THIRD FLOOR PLAN

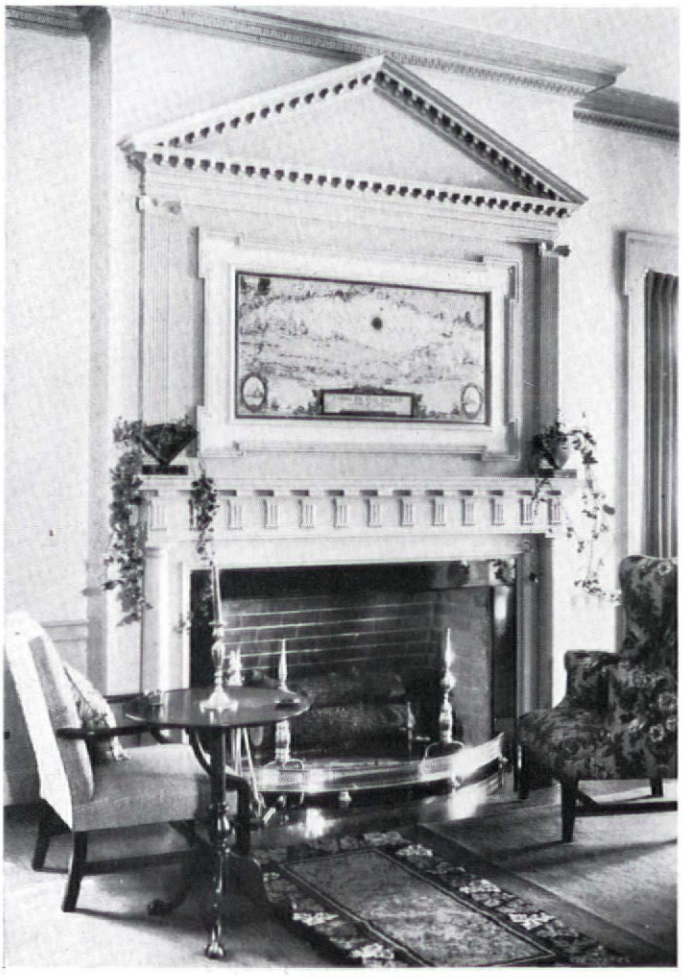


SECOND FLOOR PLAN



GROUND FLOOR PLAN

VIEW OF THE GRILL ROOM



FIREPLACE IN THE LOUNGE

MANHASSET BAY YACHT CLUB
AT PORT WASHINGTON, N. Y.
TH. ENGELHARDT, ARCHITECT

THE ENTRANCE COURT

AN ALCOVE DINING ROOM

MANHASSET BAY YACHT CLUB
AT PORT WASHINGTON, N. Y.
TH. ENGELHARDT, ARCHITECT

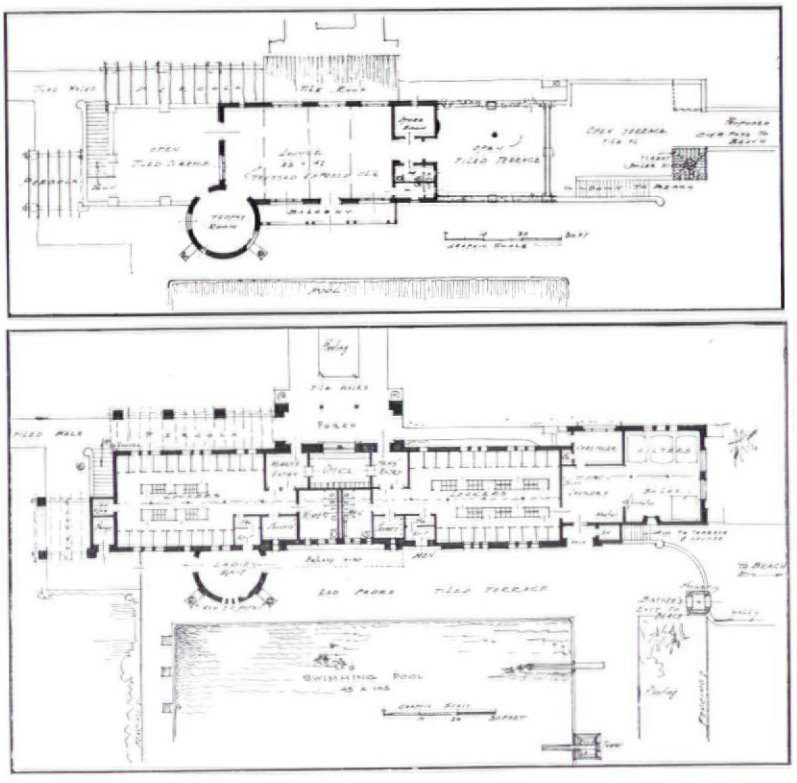
GENERAL VIEW

Photos. Padilla Studios

REAR ELEVATION

SAN CLEMENTE BEACH CLUB
AT SAN CLEMENTE, CAL.
V. WESTBROOK, ARCHITECT

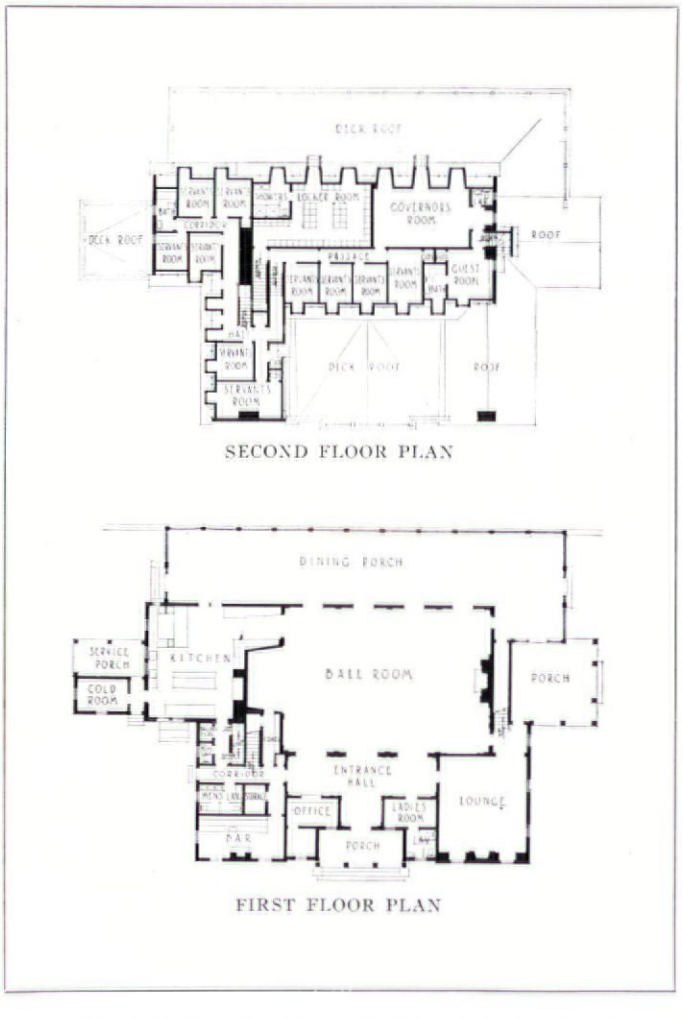
SWIMMING POOL



SAN CLEMENTE BEACH CLUB
AT SAN CLEMENTE, CAL.
V. WESTBROOK, ARCHITECT

Photos. Richard Averill Smith

ENTRANCE COURT AND FRONT ELEVATION



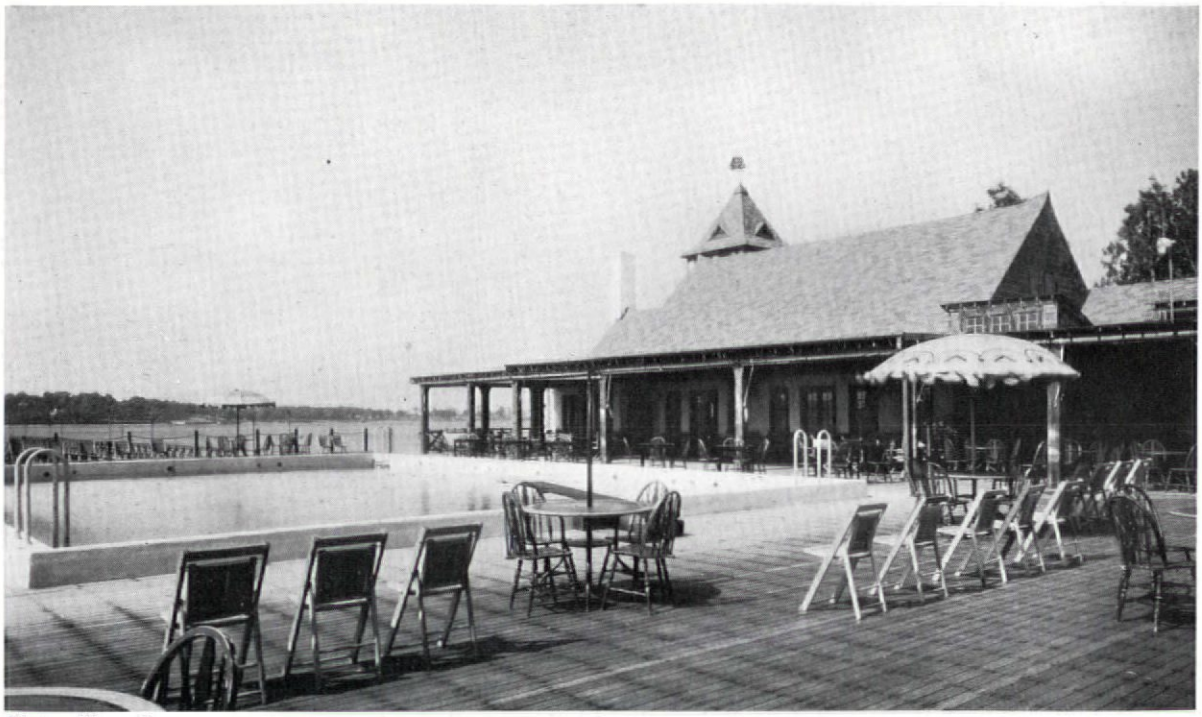
SECOND FLOOR PLAN

FIRST FLOOR PLAN

RIVERSIDE YACHT CLUB, RIVERSIDE, CONN. BREED, FULLER & DICK, ARCHITECTS

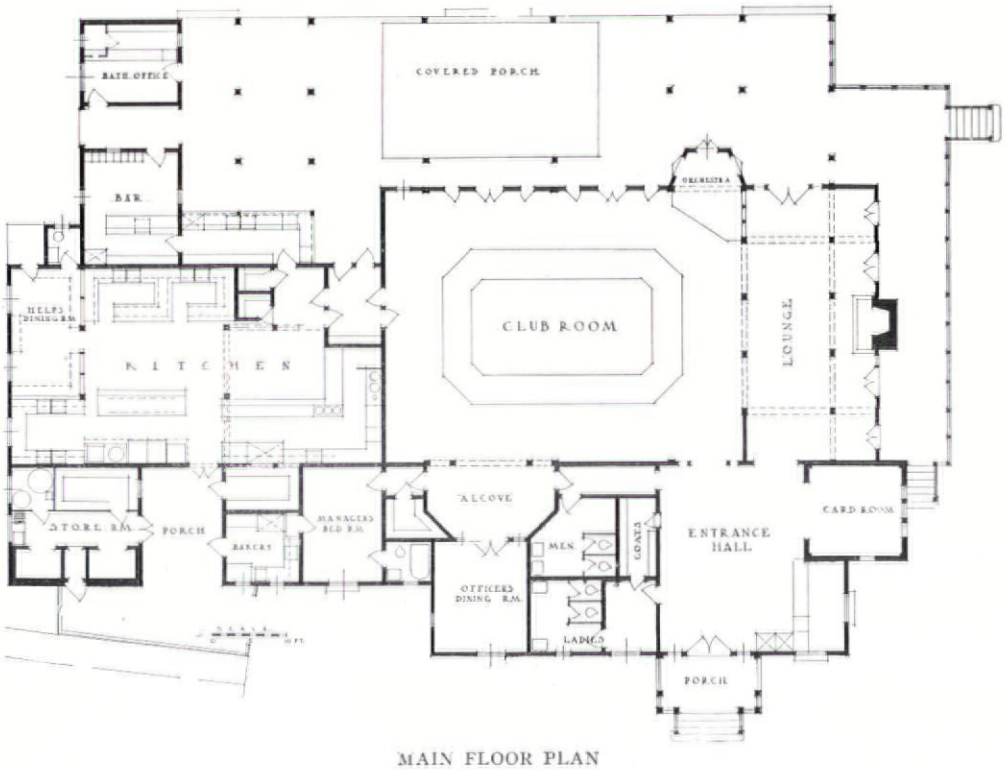
BALL ROOM FIREPLACE

FIREPLACE END OF THE CORNER LOUNGE
RIVERSIDE YACHT CLUB, RIVERSIDE, CONN. BREED, FULLER & DICK, ARCHITECTS



Photos. Wurts Bros.

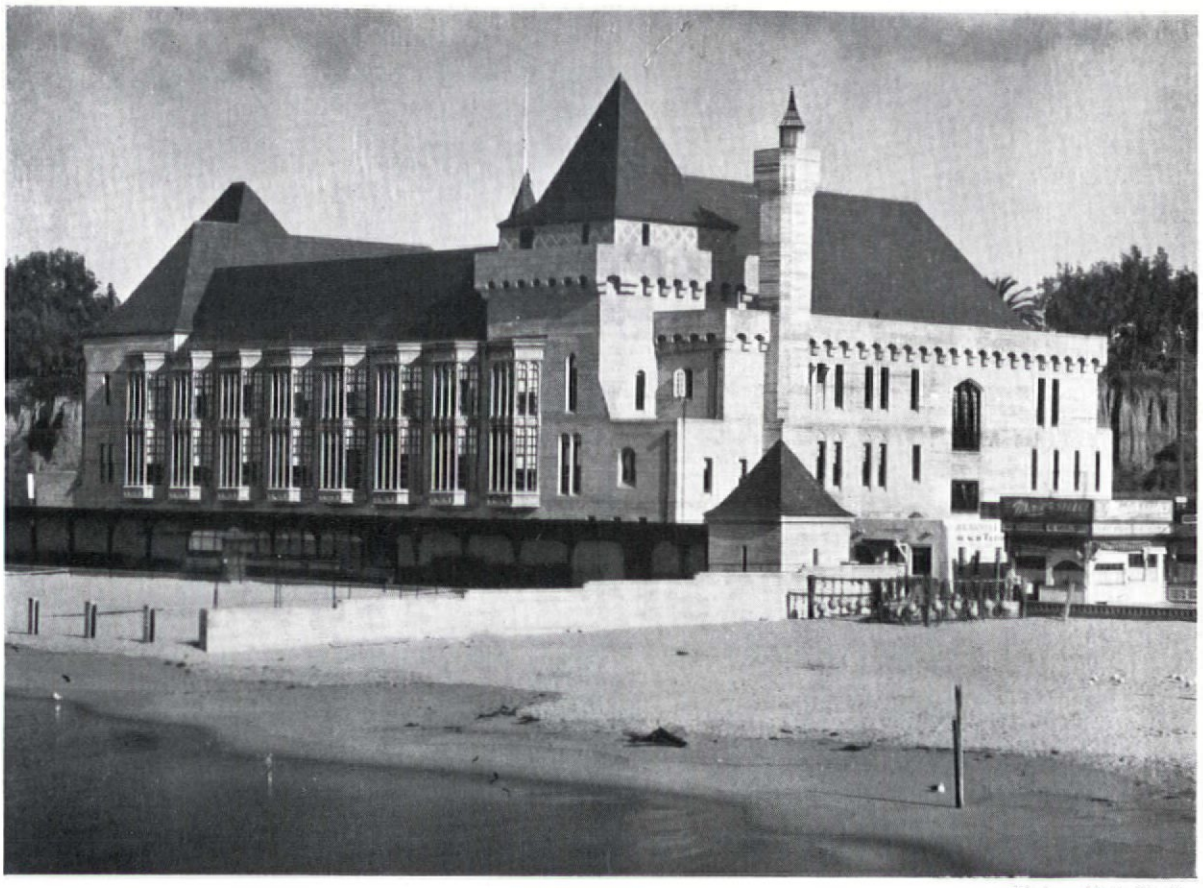
THE SWIMMING POOL AND OPEN PORCH
SANDS POINT BATH CLUB, SANDS POINT, N. Y. KENNETH M. MURCHISON, ARCHITECT



MAIN FLOOR PLAN

MAIN CLUB ROOM WITH LOUNGE BEYOND
SANDS POINT BATH CLUB, SANDS POINT, N. Y. KENNETH M. MURCHISON, ARCHITECT

MAIN ENTRANCE



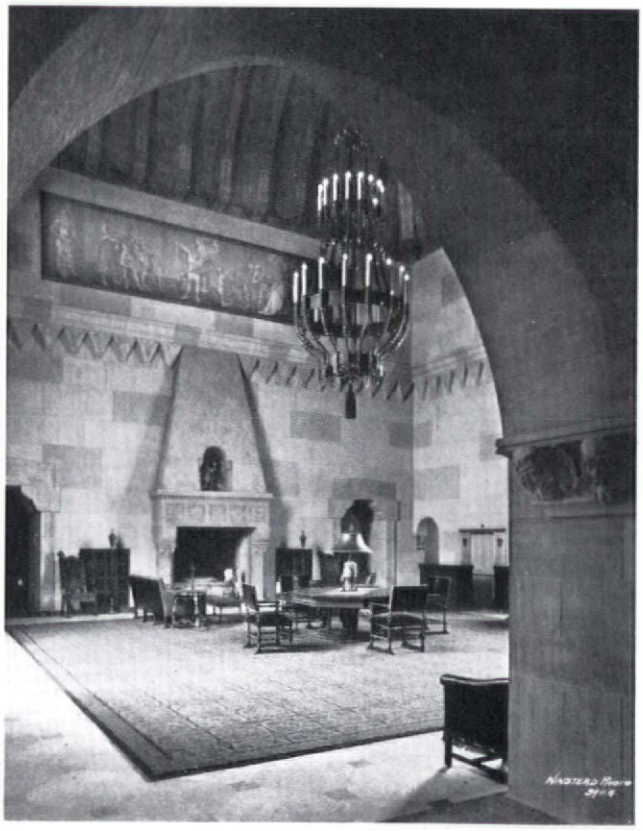
Photos. Mott Studios

ABOVE, VIEW OF CLUB FROM BEACH. BELOW, DINING ROOM

DEAUVILLE BEACH CLUB AT SANTA MONICA, CAL. MORGAN, WALLS & CLEMENTS, ARCHITECTS

Photos. Brown & Ward and Winstead Bros.

ABOVE, THE MAIN ENTRANCE
BELOW, VIEW OF GRAND HALL



THE PACIFIC COAST CLUB AT LONG BEACH, CAL. CURLETT AND BEELMAN, ARCHITECTS

Photos, Van Anda

REAR ELEVATION OVERLOOKING LAKE

FIREPLACE IN MAIN CLUB ROOM

LAKE SUNAPEE YACHT CLUB, SUNAPEE, N. H. PRENTICE SANGER, ARCHITECT

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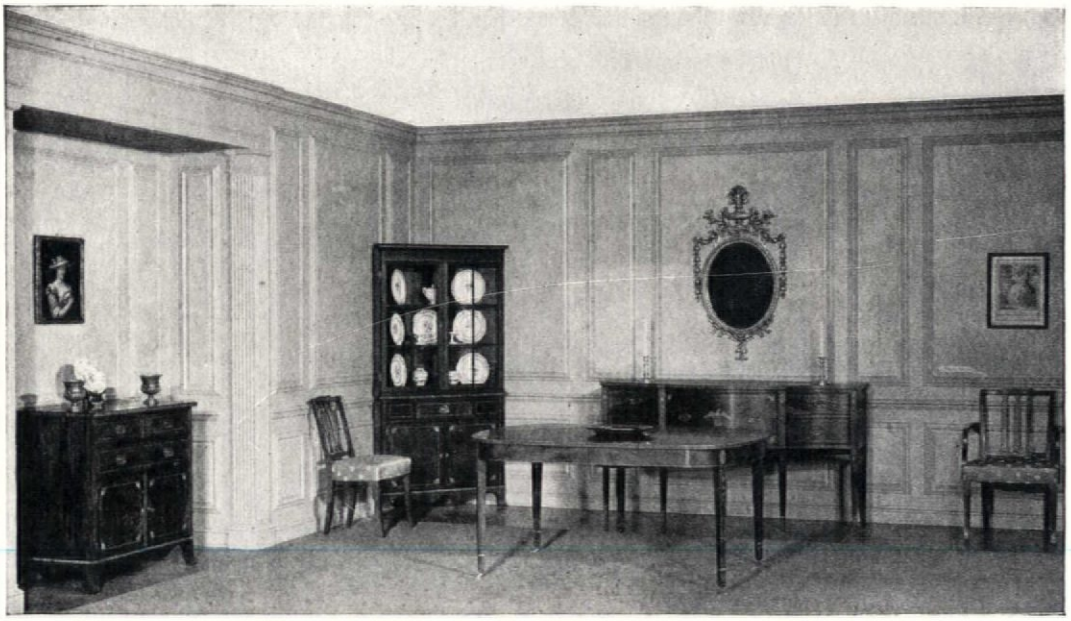

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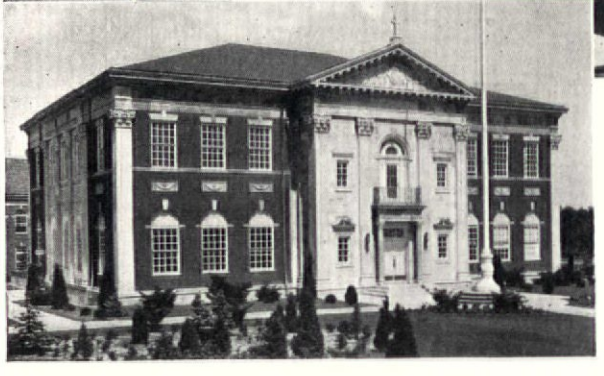

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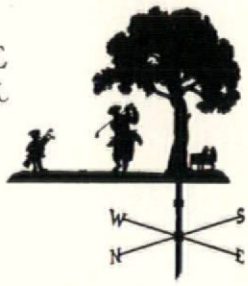

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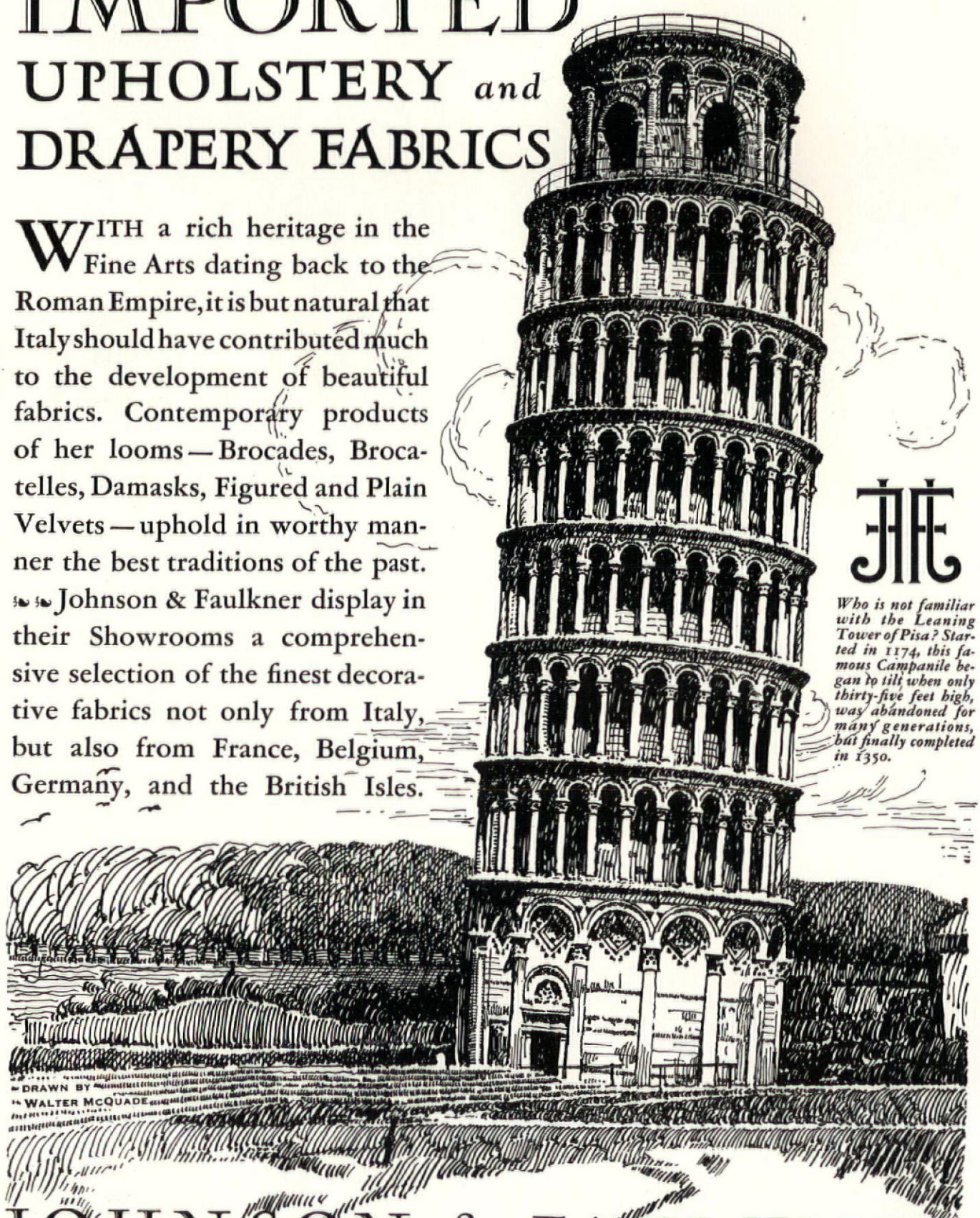

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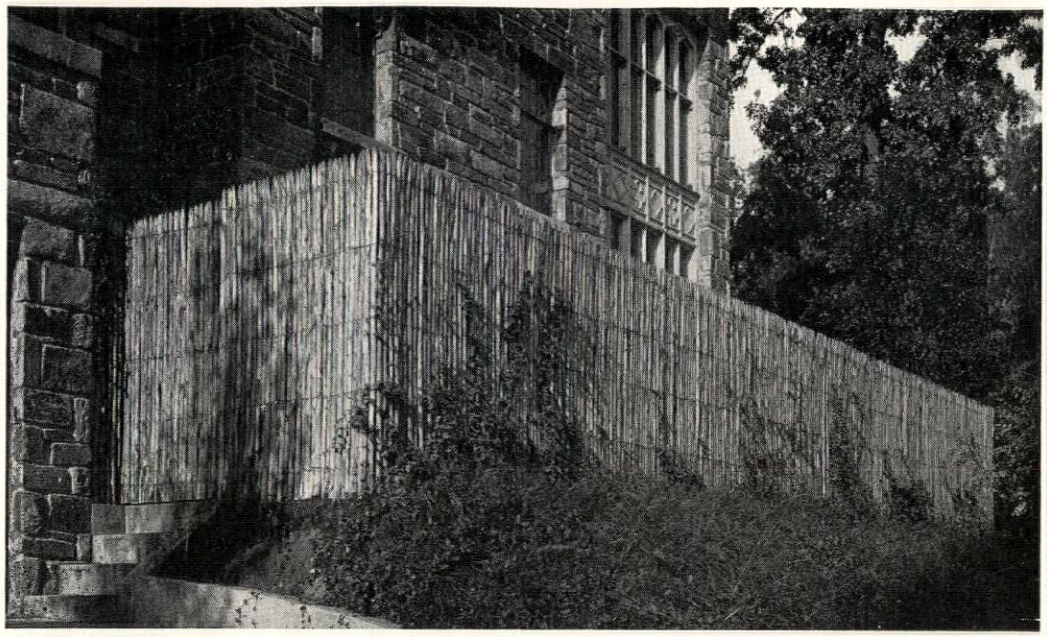

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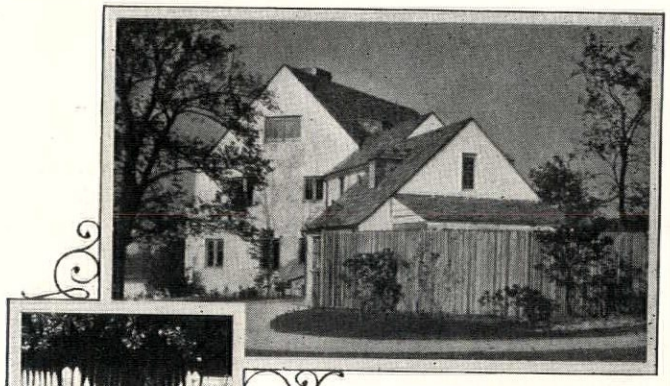

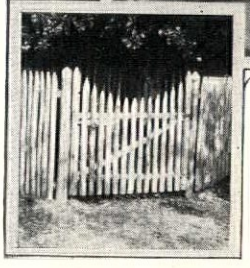

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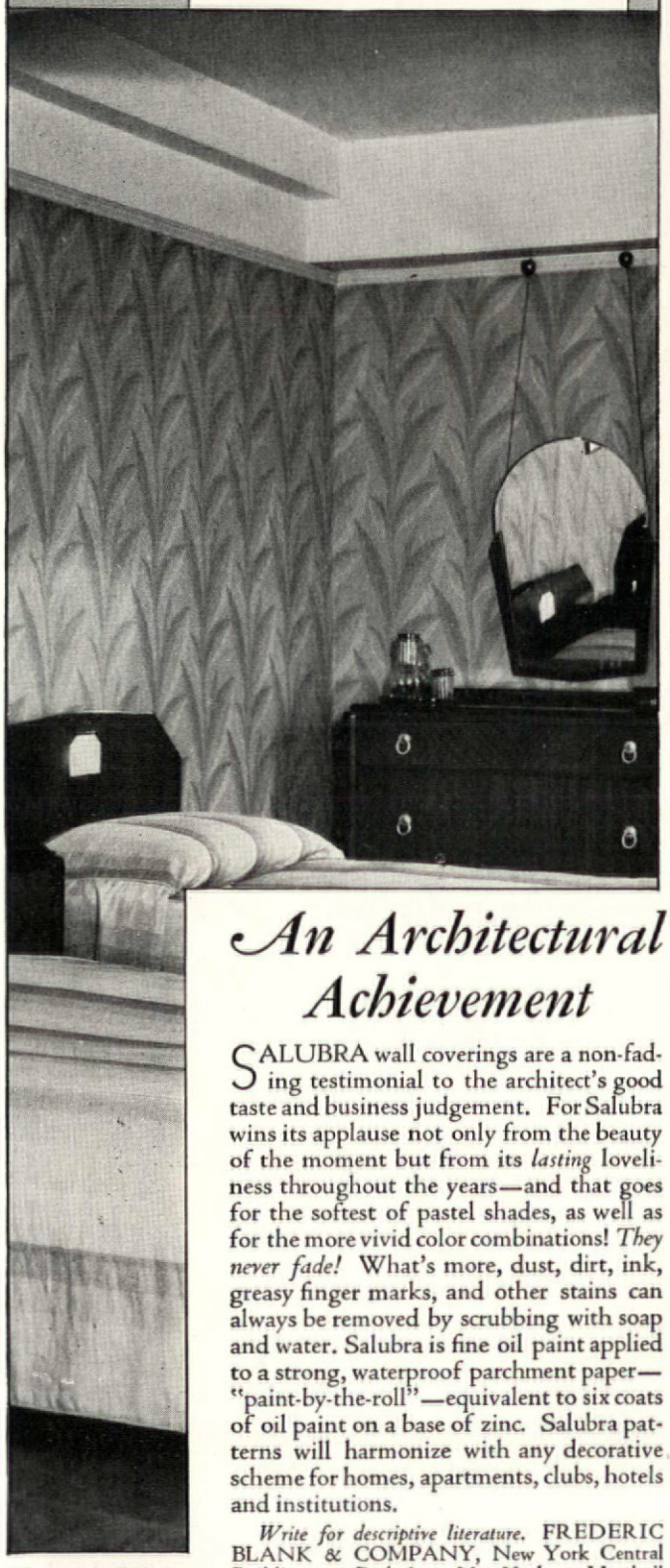

Modernistic Bedroom in Hotel Plymouth, New York City, H.I. Feldman, Architect

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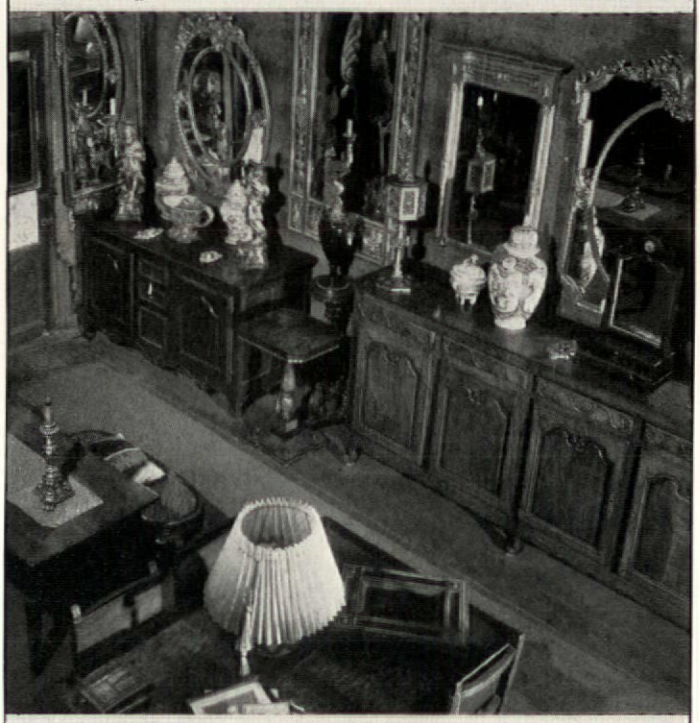

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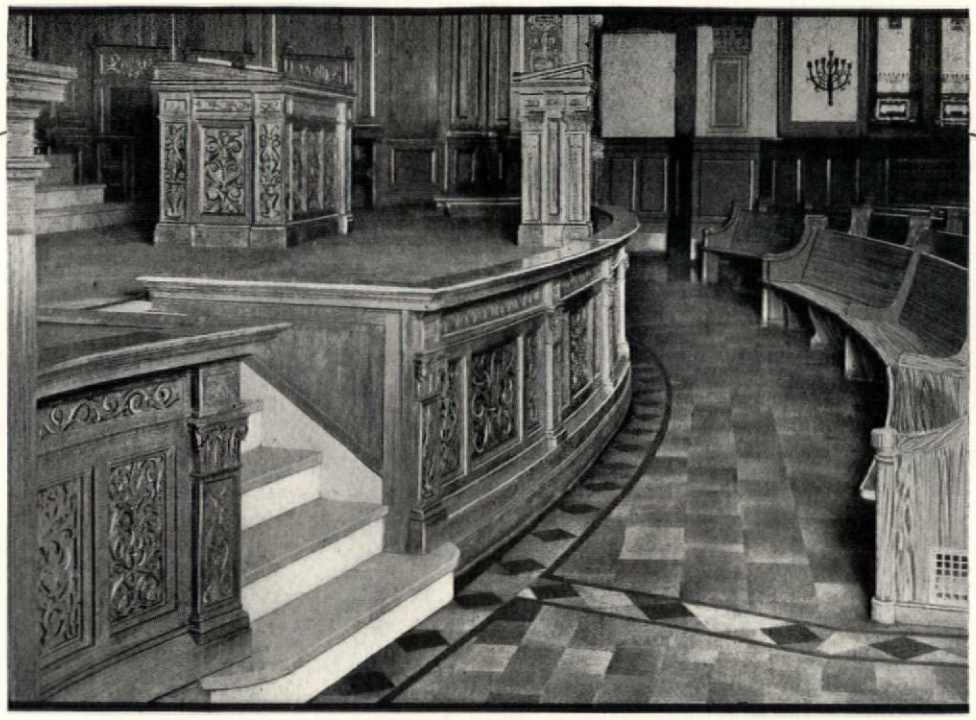
LIBRARY at the Massachusetts Institute of Technology. The floor is done in Stedman Reinforced Rubber Tiles of Verde Antique, laid in squares with the grain alternating. . . .



Interesting—this floor design in random shades of Armstrong's Cork Tile, laid in the auditorium of Anshe Emeth Beth Temple, Cleveland, Ohio.

You can't compromise *in* Church

Yet you can assure grace, good taste, and comfort with custom-built floors like these

HOW often the church architect sighs . . . and abandons some structural or decorative inspiration because its character is slightly unsympathetic. In church there is no compromise. Beauty, comfort, even quietness must be put aside if they do not enhance the austere, dignified atmosphere.

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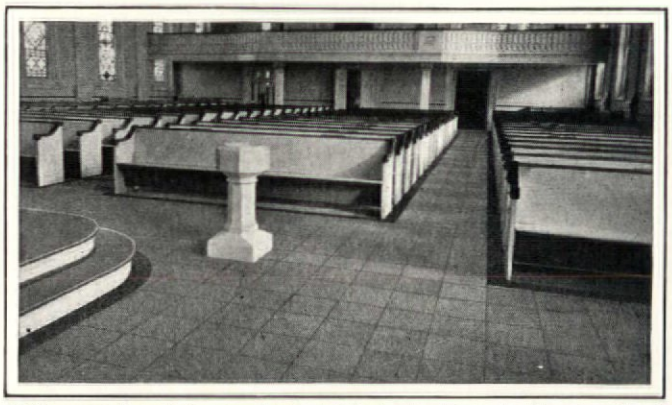

7,000 square feet of Armstrong's Cork Tile in the Nazareth Moravian Church, Nazareth, Pa., bring more proof in the case for custom-built floors.

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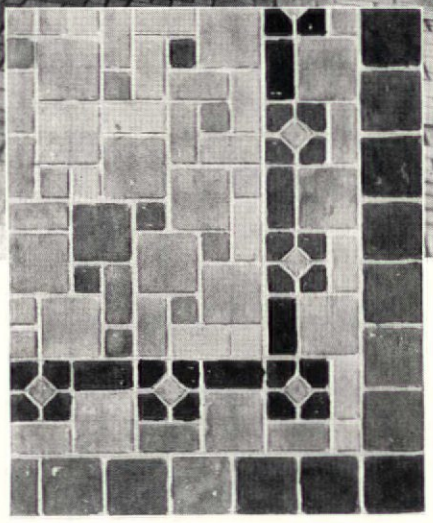

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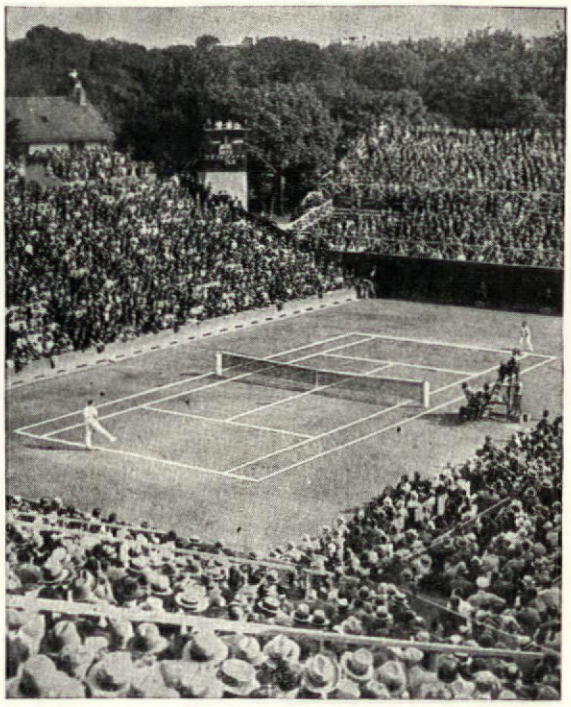

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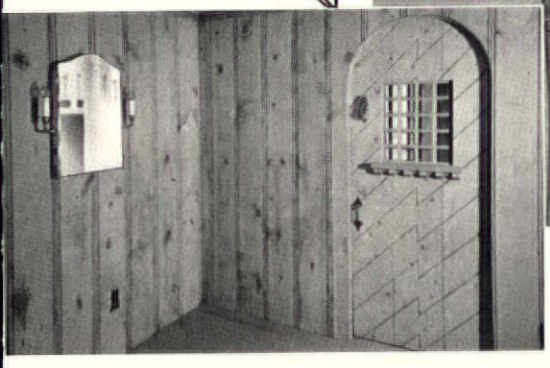
(Below) The office of Hal Stonebraker, Kansas City architect, effectively decorated in Knotty Pine.



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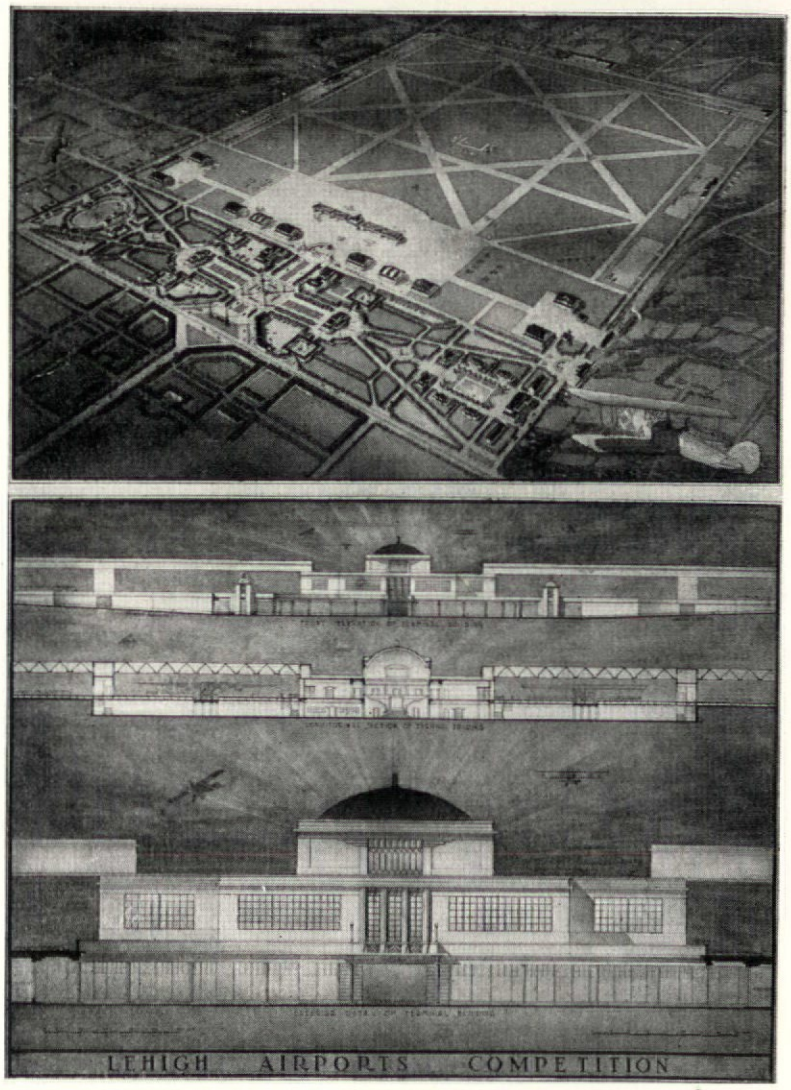
A far-sighted guide for airport development



Third-prize design, submitted by Odd Nanser. of East Orange, New Jersey, and Latham C. Squire of New York City.

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And it is plain to be seen that concrete must play an important part in the construction of the modern airport—to insure both beauty and permanence.

On this and the opposite page are reproduced the third- and fourth-prize designs. The former was submitted by Odd Nansen of East Orange, New Jersey, and Latham C. Squire of New York City; and the latter by Will Rice Amon of New York City.

Odd Nansen, New York architect and city planner, is a graduate in architecture of the Norwegian University of Technology. Upon coming to the United States he became associated

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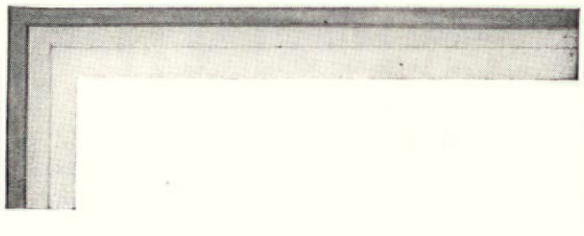


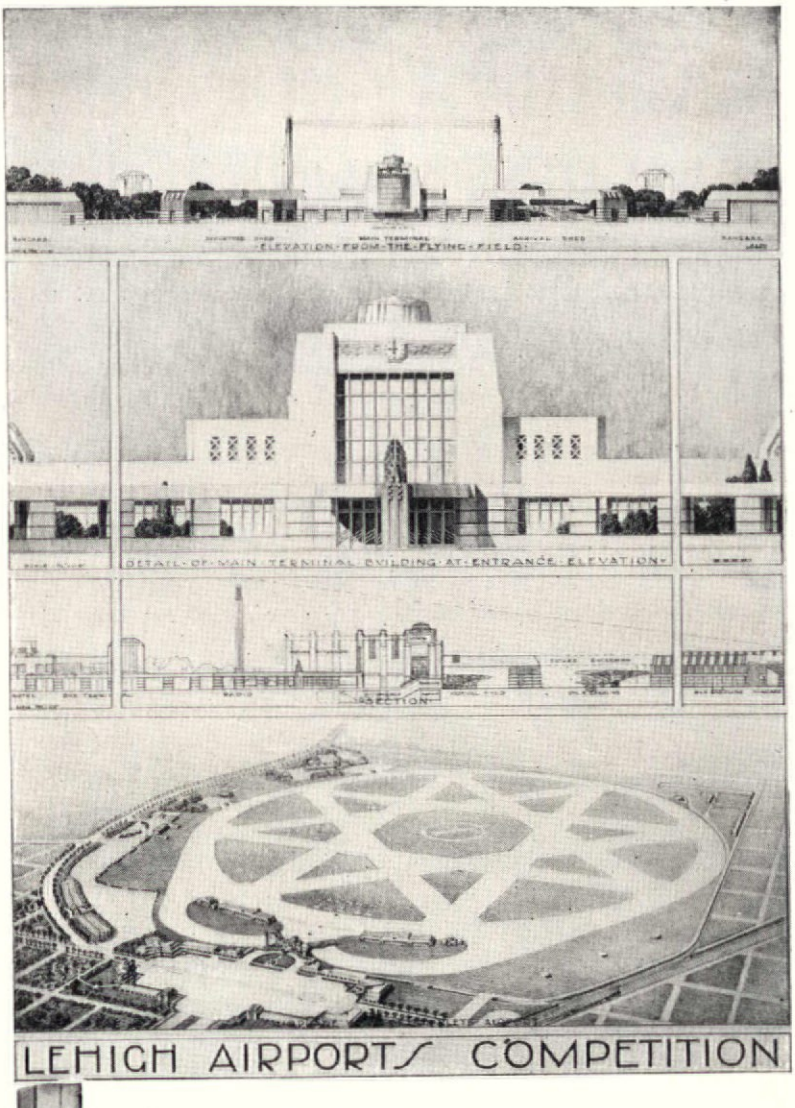
modern

with the Technical Advisory Corporation as a city planner. The plan in which he collaborated with Latham C. Squire, suggests many new ideas bearing on the modern airport with respect to city planning.

Latham C. Squire, New York City planner, attended the University of Virginia and Colorado School of Mines, graduating from the latter as a civil engineer. He is now engaged in city and airport planning problems with the Technical Advisory Corporation.

Will Rice Amon, New York architect, is a graduate of the Massachusetts Institute of Technology. He was one of ten architects chosen to enter the final competition for design of the Columbus Memorial Lighthouse to be erected in Santo Domingo by the Pan-American Union. He is associate patron in design of the Architectural Department of New York University.

We would be pleased to have you write for more complete details on the results of the Lehigh Airports Competition. Ask us to send you a copy of our brochure, "Highlights of the Lehigh Airports Competition."



LEHIGH AIRPORTS COMPETITION

Fourth-prize design, submitted by Will Rice Amon, of New York City.

THE JURY'S DECISION

FIRST PRIZE: A. C. Zimmerman and Wm. H. Harrison, Los Angeles, Cal. (jointly) $5,000

SECOND PRIZE: C. Gifford Rich, Chicago, Ill. . . . $2,500

THIRD PRIZE: Odd Nansen, East Orange, N. J., and Latham C. Squire, New York City (jointly) . . . $1,000

FOURTH PRIZE: Will Rice Amon, New York City . $500

Honorable Mention—$100 each

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H. Roy Kelley, Los Angeles, Cal.
James S. Nussear, Jr., architect, and William N. S. Pugh, associate, Baltimore, Md.
Edward C. Remson, New York City.
George A. Robbins, Philadelphia, Pa.
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Fred E. Sloan and Elmer A. Johnston, Chicago, Ill.
Lloyd N. F. Spicer, Bayside, Long Island, N. Y.
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George B. Ford, A. I. A., Technical Advisory Corporation, Planning Consultants; Airfield Planner to the War Department.
E. P. Goodrich, Consulting Engineer, City Planning Consultant.
Dr. George W. Lewis, Director of Research, National Advisory Committee for Aeronautics.
Major John Berry, Manager, Cleveland Municipal Airport.
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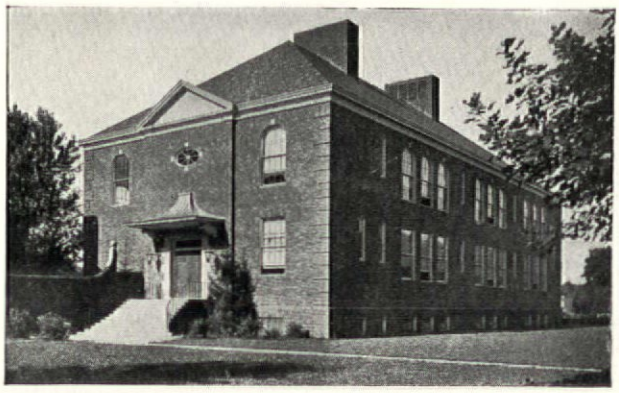

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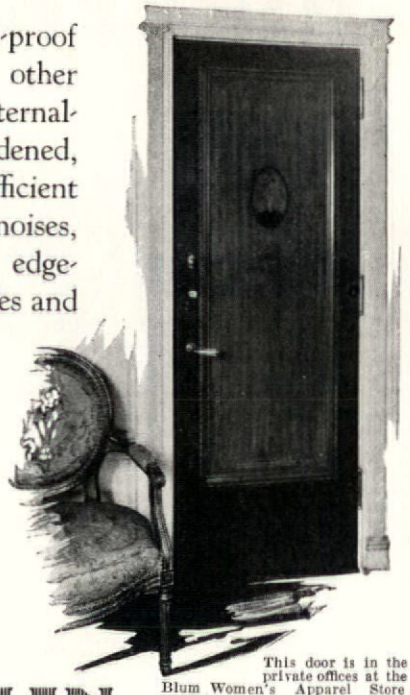

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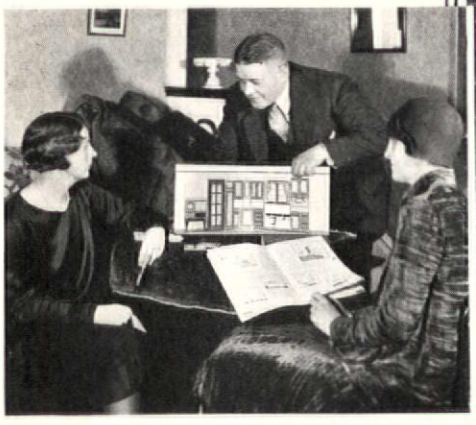

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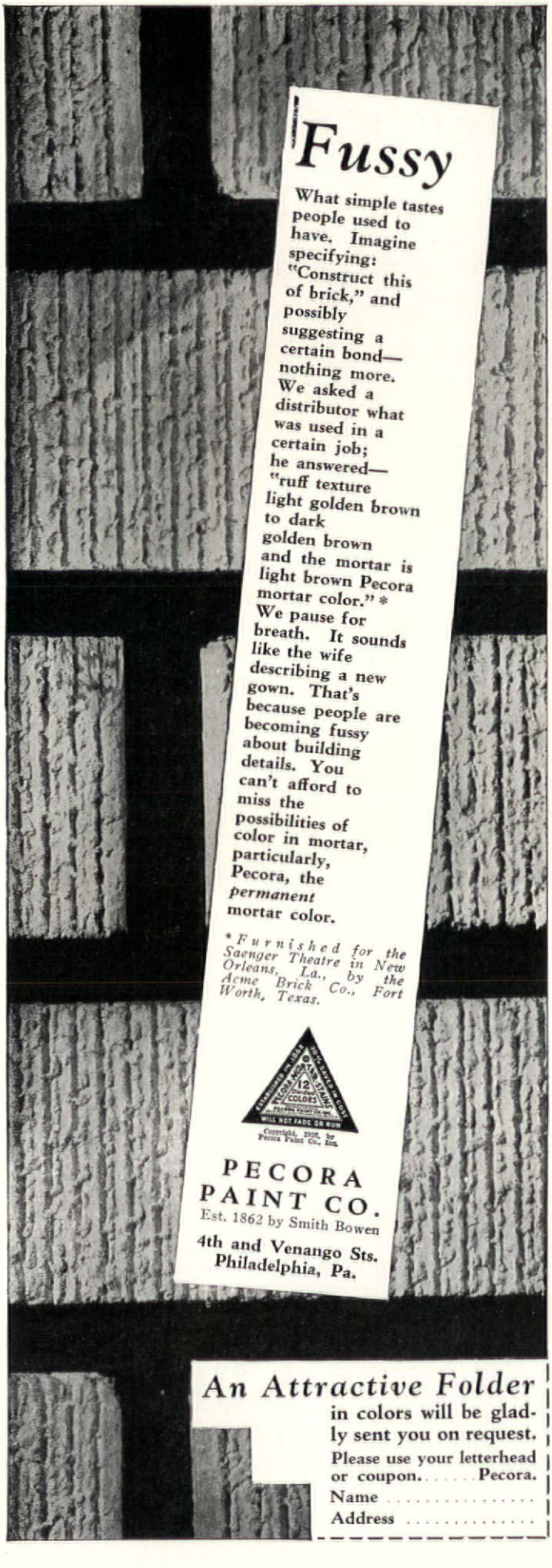

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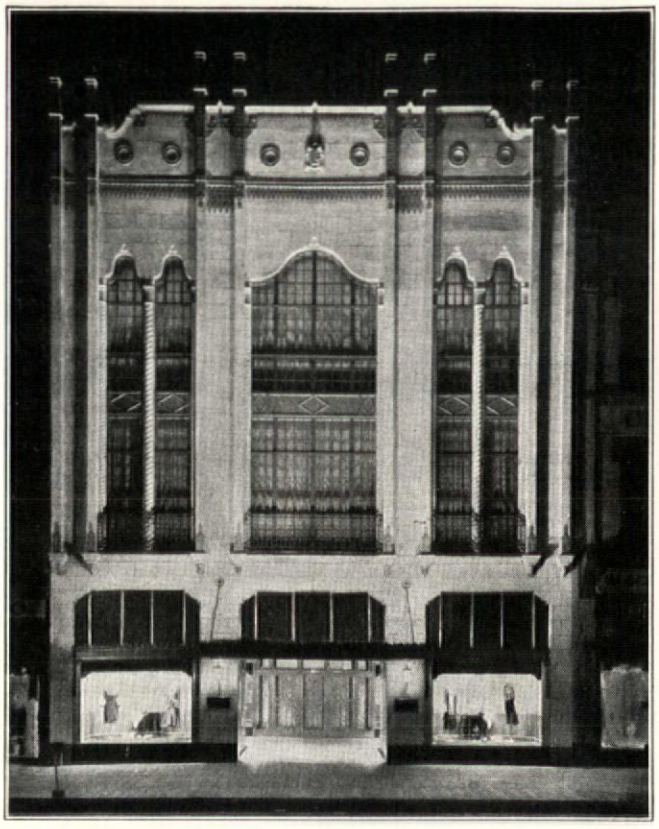

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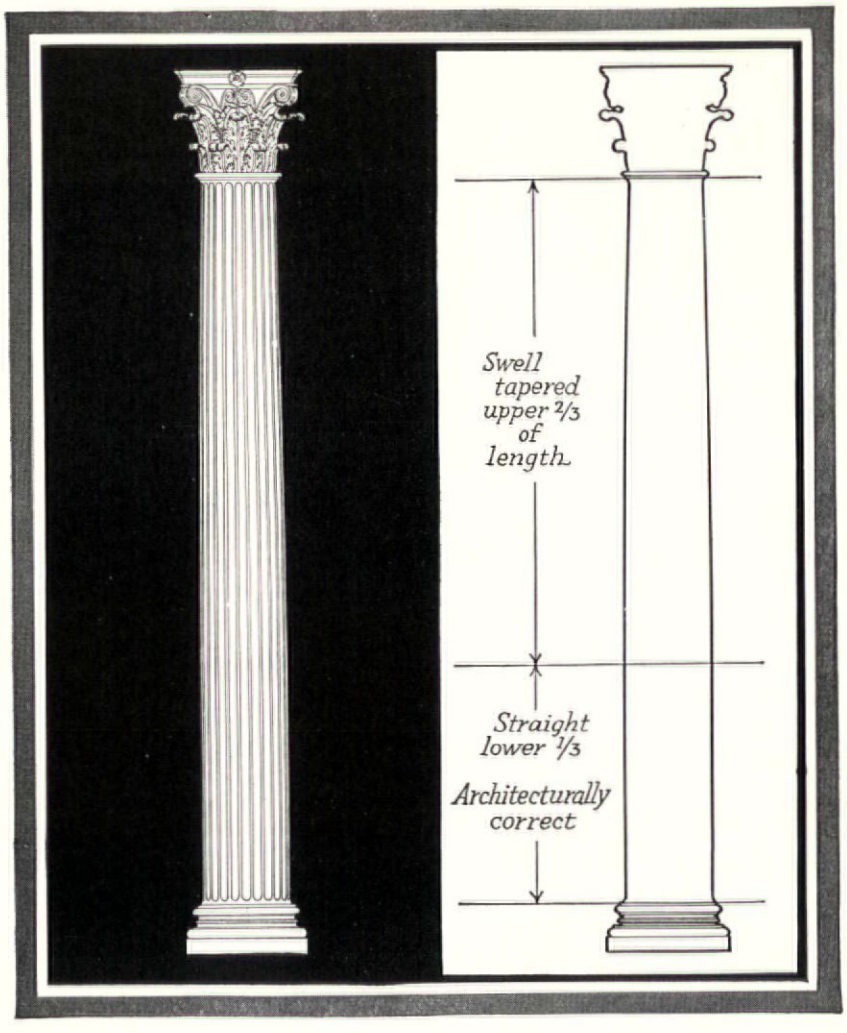

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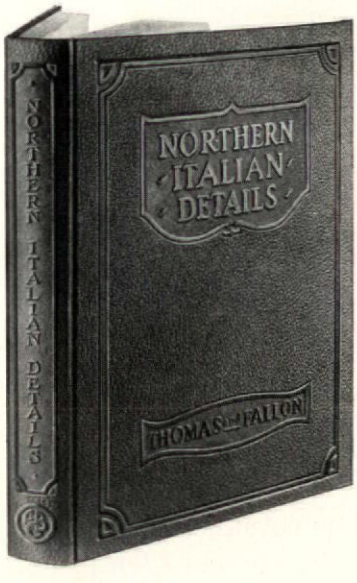

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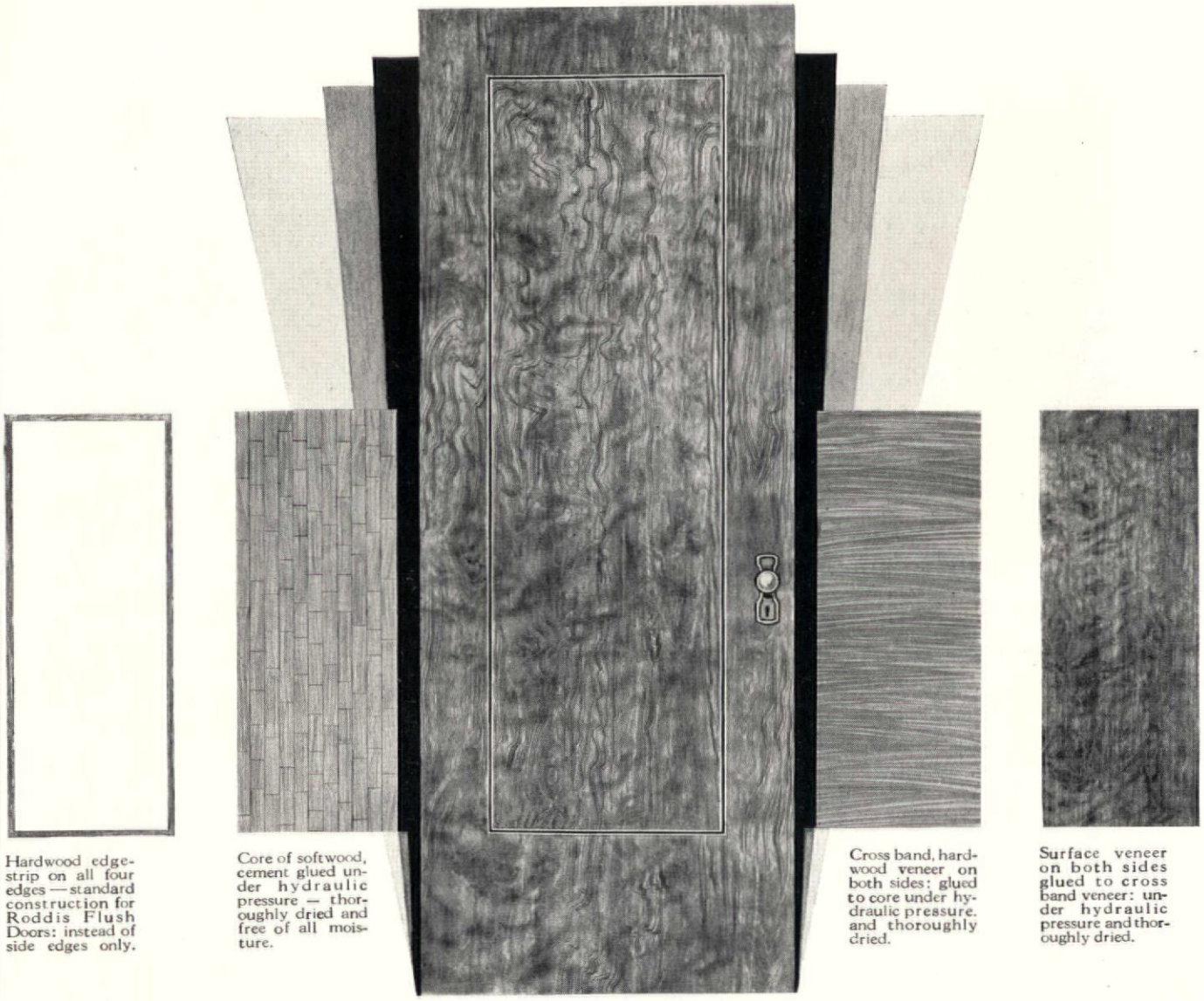

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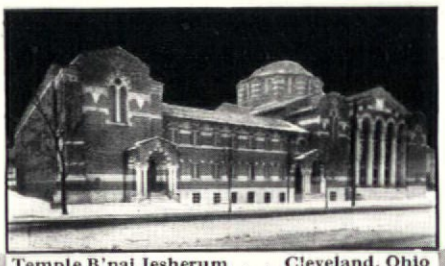

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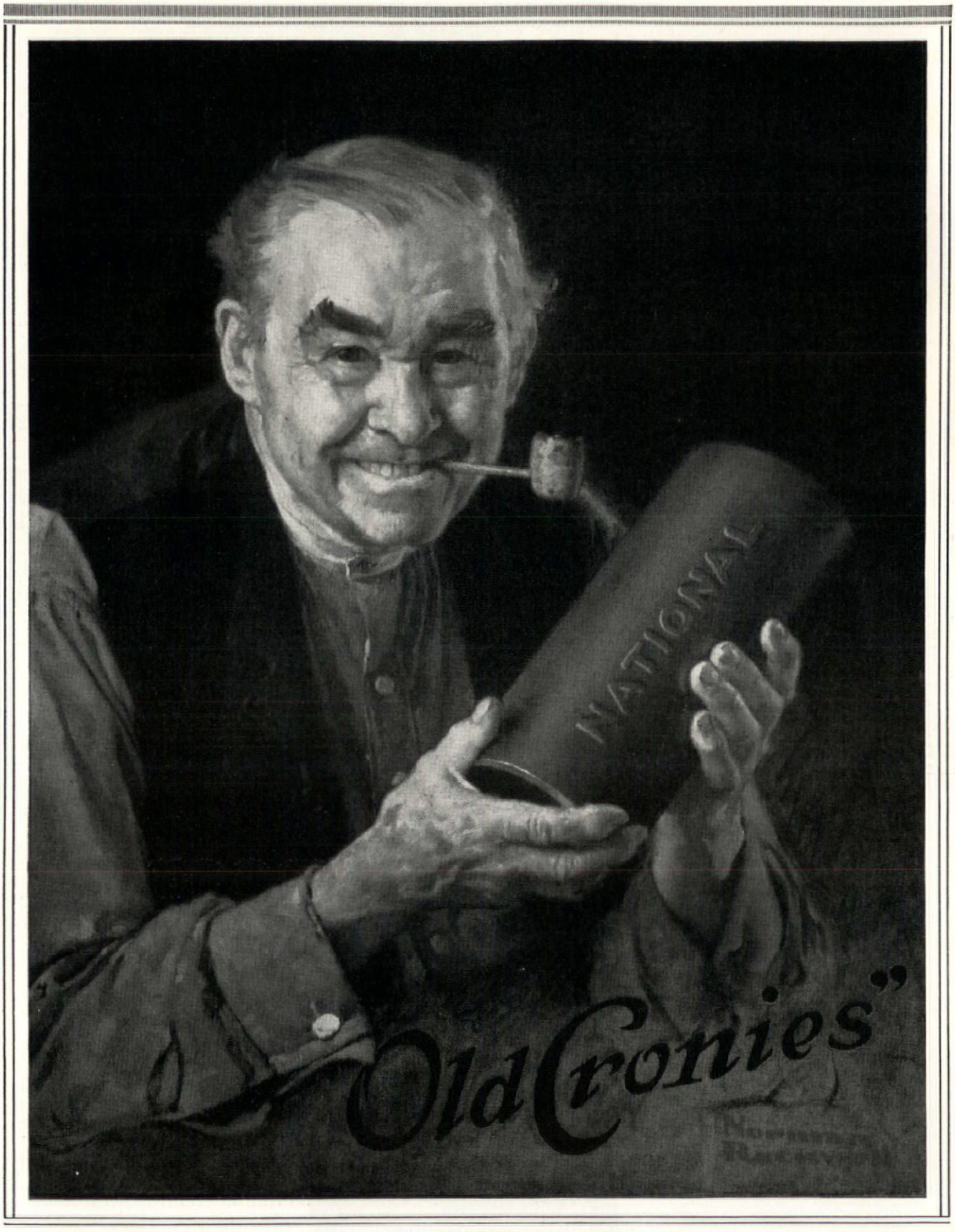

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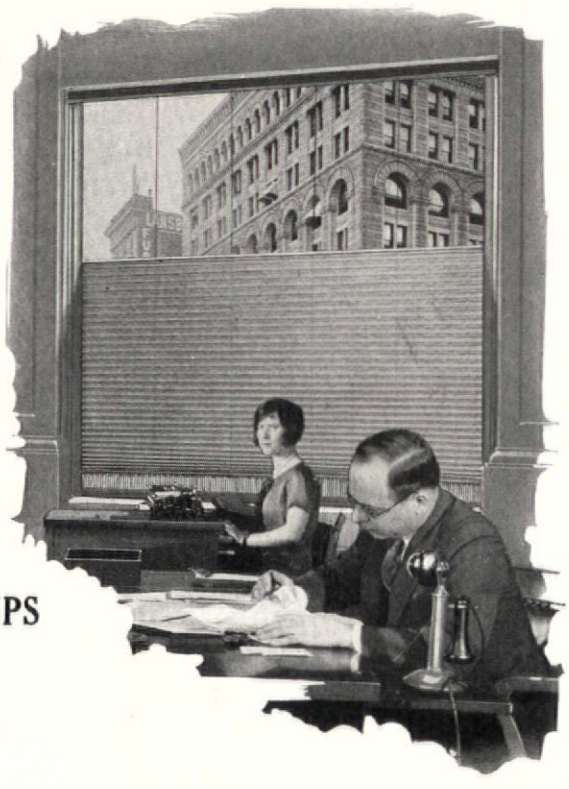

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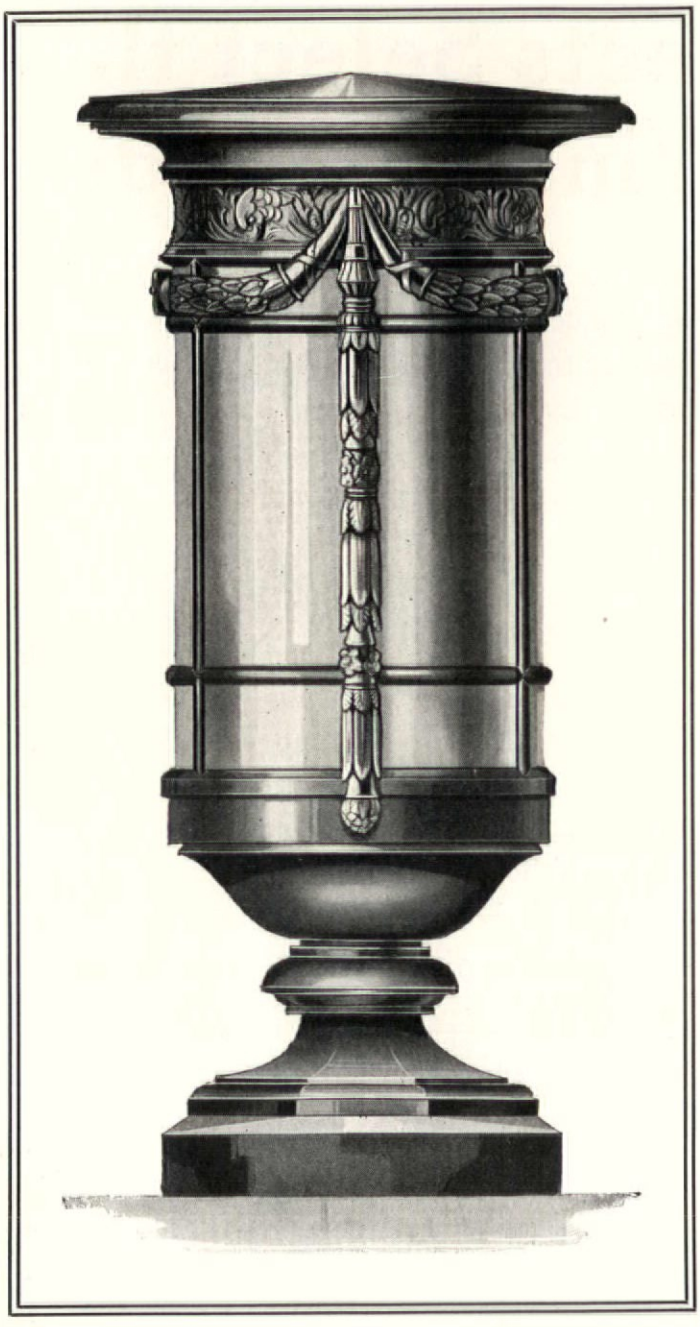

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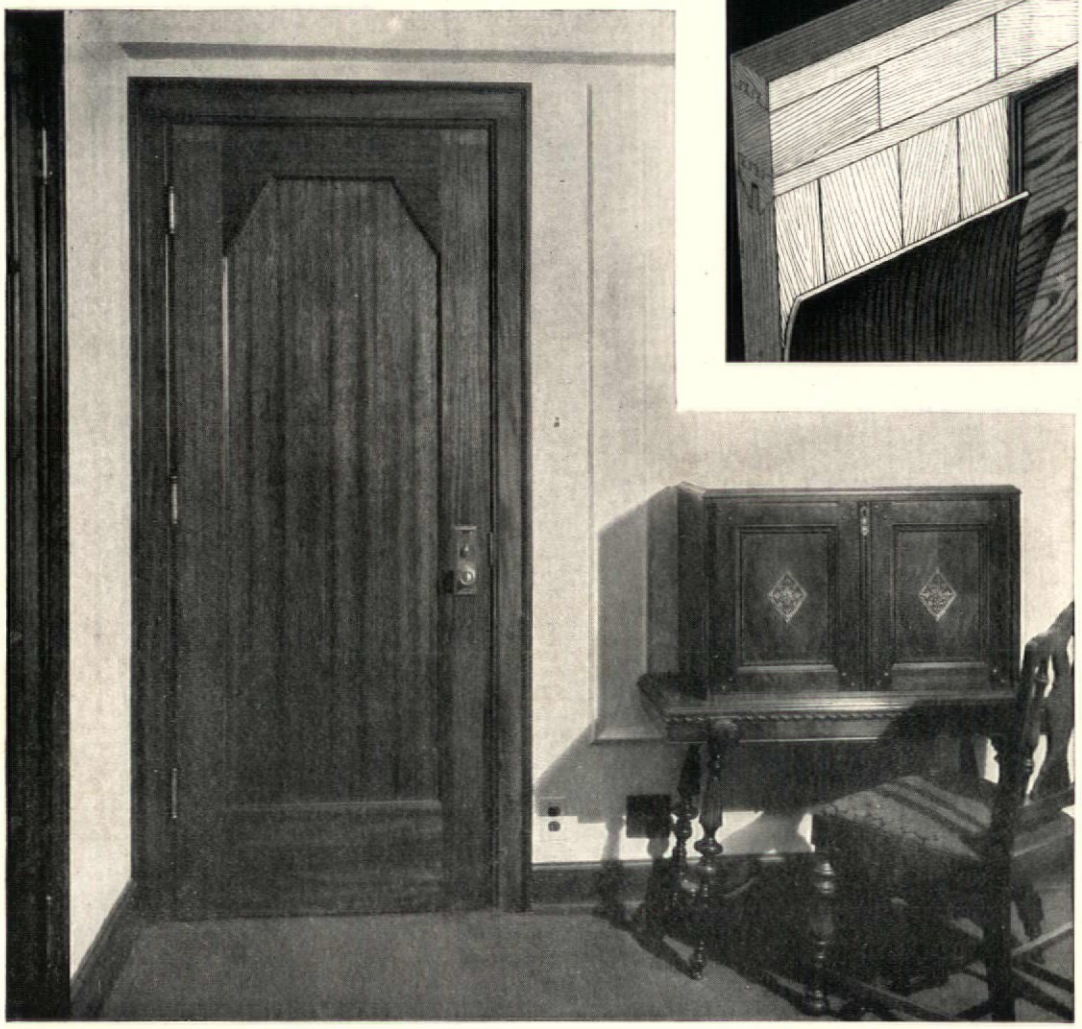

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Johns-Manville Corporation, New York.
Sound-Absorbing Treatment in Banks and Offices, Booklet, 18 pp., 8½ x 11 ins. Illustrated.
Sound-Absorbing Treatment in Churches and Religious Institutions. Brochure. 22 pp., 8½ x 11 ins. Illustrated.

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Hanley Company, Bradford, Pa.
General Catalog. 16 pp. 8½ x 11 ins. Illustrated.
Bradford Reds. Folder. 8 pp., 3 x 8 ins. Illustrated.

CABINET WORK

Henry Klein & Co., 25 Grand Street, Elmhurst, L. I., N. Y.
Driwood Period Mouldings in Ornamented Wood. Brochure, 28 pp., 8½ x 11 ins. Illustrated.
Ensemble Offices for the Banker and Broker. Folder. 4 pp., 8½ x 11 ins. Illustrated.
Luxurious Office Partitions in Walnut, Mahogany and Quartered Oak. Folder. 4 pp., 8½ x 11 ins. Illustrated.

CEMENT

Carney Company, The, Mankato, Minn.
A Remarkable Combination of Quality and Economy. Booklet, 20 pp., 8½ x 11 ins. Illustrated. Important data on valuable material.

Louisville Cement Co., 315 Guthrie St., Louisville, Ky.
BRIXMENT for Perfect Mortar. Self-filing handbook, 8½ x 11 ins. 16 pp. Illustrated. Contains complete technical description of BRIXMENT for brick, tile and stone masonry, specifications, data and tests.

Portland Cement Association, Chicago, Ill.
Concrete Masonry Construction. Booklet, 48 pp., 8½ x 11 ins. Illustrated. Deals with various forms of construction.
Town and Country Houses of Concrete Masonry. Booklet, 20 pp., 8½ x 11 ins. Illustrated.
Facts About Concrete Building Tile. Brochure, 16 pp., 8½ x 11 ins. Illustrated.
The Key to Firesafe Homes. Booklet, 20 pp., 8½ x 11 ins. Illustrated.
Design and Control of Concrete Mixers. Brochure, 32 pp., 8½ x 11 ins. Illustrated.
Portland Cement Stucco. Booklet, 64 pp., 8½ x 11 ins. Illustrated.
Concrete in Architecture. Bound Volume, 60 pp., 8½ x 11 ins. Illustrated. An excellent work, giving views of exteriors and interiors.

CHURCH EQUIPMENT

John Van Range Co., Cincinnati.
Practical Planning for Church Food Service. Booklet, 32 pp., 8½ x 11 ins. Illustrated.

CLUB EQUIPMENT

John Van Range Co., Cincinnati.
Practical Planning for Club Food Service. Booklet, 32 pp., 8½ x 11 ins. Illustrated.

CONCRETE BUILDING MATERIALS

Concrete Steel Company, 42 Broadway, New York.
Modern Concrete Reinforcement. Booklet, 32 pp., 8½ x 11 ins. Illustrated.

CONCRETE COLORINGS

The Master Builders Co., 7016 Euclid Ave., Cleveland.
Color Mix, Colored Hardened Concrete Floors (integral). Brochure, 16 pp., 8½ x 11 ins. Illustrated. Data on coloring for floors.
Dychrome. Concrete Surface Hardener in Colors. Folder, 4 pp., 8 x 11 ins. Illustrated. Data on a new treatment.

CONSTRUCTION, FIREPROOF

Master Builders Co., Cleveland, Ohio.
Color Mix. Booklet, 18 pp., 8½ x 11 ins. Illustrated. Valuable data on concrete hardener, waterproofer and dustproofer in permanent colors.

National Fire Proofing Co., 250 Federal St., Pittsburgh, Pa.
Standard Fire Proofing Bulletin 171. 8½ x 11 ins., 32 pp. Illustrated. A treatise on fireproof floor construction.

North Western Expanded Metal Co., 1234 Old Colony Building, Chicago, Ill.
North Western Expanded Metal Products. Booklet, 8½ x 10¾ ins. 16 pp. Fully illustrated, and describes different products of this company, such as Kno-burn metal lath, 20th Century Corrugated, Plaster-Sava and Longspan lath channels, etc.
A. I. A. Sample Book. Bound volume, 8½ x 11 ins., contains actual samples of several materials and complete data regarding their use.

CONSTRUCTION, STONE AND TERRA COTTA

Cowing Pressure Relieving Joint Company, 100 North Wells St., Chicago, Ill.
Pressure Relieving Joint for Buildings of Stone, Terra Cotta or Marble. Booklet, 16 pp., 8½ x 11 ins. Illustrated. Deals with preventing cracks, spalls and breaks.

DAMPPROOFING

The Master Builders Co., 7016 Euclid Ave., Cleveland.
Waterproofing and Dampproofing Specification Manual. Booklet, 18 pp., 8½ x 11 ins. Deals with methods and materials used.
Waterproofing and Dampproofing. File. 36 pp. Complete descriptions and detailed specifications for materials used in building and concrete.

Minwax Company, Inc., 11 West 42nd St., New York.
Complete Index of all Minwax Products. Folder, 6 pp., 8½ x 11 ins. Illustrated. Complete description and detailed specifications.

Toch Brothers, New York, Chicago, Los Angeles.
Handbook of R. I. W. Protective Products. Booklet, 40 pp., 4½ x 7½ ins.

DOORS

David Lupton's Sons Company, Philadelphia.
Lupton Commercial Steel Doors. Folder. 8½ x 11 ins. Illustrated.
Lupton Steel Industrial Doors. Brochure. 8 pp., 8½ x 11 ins. Illustrated. Details and specifications.

DOORS AND TRIM, METAL

The American Brass Company, Waterbury, Conn.
Anaconda Architectural Bronze Extruded Shapes. Brochure, 180 pp., 8½ x 11 ins., illustrating and describing more than 2,000 standard bronze shapes of cornices, jamb casings, mouldings, etc.

William Bayley Co., 147 North Street, Springfield, Ohio.
Bayley Tubular Steel Doors. Brochure, 16 pp., 8½ x 11 ins. Illustrated.

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SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—*Continued from page 77*

DOORS AND TRIM, METAL—Continued

The Kawneer Company, Niles, Michigan.
Detail sheet, 8½ x 11 ins., with A.I.A. File No. featuring Heavy Welded Bronze Doors.

Richards-Wilcox Mfg. Co., Aurora, Ill.
Fire-Doors and Hardware. Booklet, 8½ x 11 ins., 64 pp. Illustrated. Describes entire line of tin-clad and corrugated fire doors, complete with automatic closers, track hangers and all the latest equipment—all approved and labeled by Underwriters' Laboratories.

Truscon Steel Company, Youngstown, Ohio.
Copper Alloy Steel Doors. Catalog 110. Booklet, 48 pp., 8½ x 11 ins. Illustrated.

DOORS, SOUNDPROOF

Irving Hamlin, Evanston, Ill.
The Evanston Soundproof Door. Folder, 8 pp., 8½ x 11 ins. Illustrated. Deals with a valuable type of door.

DRAINAGE FITTINGS

Josam Mfg. Co., Michigan City, Ind.
Josam Products. Booklet, 73 pp., 8½ x 11 ins. Illustrated. A valuable line of accessories.
Josam-Marsh Grease, Plaster, Sediment and Hair Interceptors. Brochure. 7 pp., 8½ x 11 ins. Illustrated.
Josam New Saw Tooth-Roof Drain. Folder, 4 pp., 8½ x 11 ins. Illustrated.

DRINKING FOUNTAINS

Halsey W. Taylor Co., Warren, Ohio
Halsey Taylor Drinking Fountains. Architects' Catalog H. 52 pp., 8½ x 11 ins. Ilustrated.

DUMBWAITERS

Sedgwick Machine Works, 151 West 15th St., New York, N. Y.
Catalog and Service Sheets. Standard specifications, plans and prices for various types, etc. 4¼ x 8¼ ins., 60 pp. Illustrated.
Catalog and pamphlets, 8½ x 11 ins. Illustrated. Valuable data on dumbwaiters.

ELECTRICAL EQUIPMENT

R. W. Cramer & Company, 136 Liberty Street, New York.
Sauter Electric Time Switches. Booklet, 16 pp., 8½ x 11 ins. Illustrated.

The Electric Storage Battery Co., Philadelphia.
Emergency Lighting and Emergency Power Data. Booklet. 12 pp., 8½ x 11 ins. Illustrated.

General Electric Co., Merchandise Dept., Bridgeport, Conn.
Wiring System Specification Data for Apartment Houses and Apartment Hotels. Booklet, 20 pp., 8 x 10 ins. Illustrated.
Electrical Specification Data for Architects. Brochure, 36 pp., 8 x 10½ ins. Illustrated. Data regarding G. E. wiring materials and their use.
The House of a Hundred Comforts. Booklet, 40 pp., 8 x 10½ ins. Illustrated. Dwells on importance of adequate wiring.

Harvey Hubbell, Inc., Bridgeport, Conn.
Electrical Specialties. Catalog No. 19. 52 pp., 8½ x 10 ins. Illustrated.

Prometheus Electric Corporation, 360 West 13th St., New York.
Electric Heating Specialties. Booklet, 24 pages. 8½ x 11 ins. Illustrated. Specialties for heating, cooking, hospitals, organ lofts, etc.

Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.
Electric Power for Buildings. Brochure, 14 pp., 8½ x 11 ins. Illustrated. A publication important to architects and engineers.
Variable-Voltage Central Systems as Applied to Electric Elevators. Booklet, 12 pp., 8½ x 11 ins. Illustrated. Deals with an important detail of elevator mechanism.
Modern Electrical Equipment for Buildings. Booklet, 8½ x 11 ins. Illustrated. Lists many useful appliances.
Electrical Equipment for Heating and Ventilating Systems. Booklet, 24 pp., 8½ x 11 ins. Illustrated. This is "Motor Application Circular 7379."
Westinghouse Panelboards. Catalog 224. Booklet, 64 pp., 8½ x 11 ins. Illustrated.
Beauty; Power; Silence; Westinghouse Fans. (Dealer Catalog 45.) Brochure, 16 pp., 8½ x 11 ins. Illustrated. Valuable information on fans and their uses.
Electric Range Book for Architects (A. I. A. Standard Classification 31 G-4). Booklet, 24 pp., 8½ x 11 ins. Illustrated. Cooking apparatus for buildings of various types.
Westinghouse Commercial Cooking Equipment (Catalog 280). Booklet, 32 pp., 8½ x 11 ins. Illustrated. Equipment for cooking on a large scale.
Electric Appliances (Catalog 44-A). 32 pp., 8½ x 11 ins. Deals with accessories for home use.

ELEVATORS

Otis Elevator Company, 260 Eleventh Ave., New York, N. Y.
Otis Push Button Controlled Elevators. Descriptive leaflets, 8½ x 11 ins. Illustrated. Full details of machines, motors and controllers for these types.
Otis Geared and Gearless Traction. Elevators of All Types. Descriptive leaflets, 8½ x 11 ins. Illustrated. Full details of machines, motors and controllers for these types.
Escalators. Booklet, 8½ x 11 ins., 22 pp. Illustrated. Describes use of escalators in subways, department stores, theaters and industrial buildings. Also includes elevators and dock elevators.

Richards-Wilcox Mfg. Co., Aurora, Ill.
Elevators. Booklet, 8½ x 11 ins., 24 pp. Illustrated. Describes complete line of "Ideal" elevator door hardware and checking devices, also automatic safety devices.

Sedgwick Machine Works, 151 West 15th St., New York, N. Y.
Catalog and descriptive pamphlets, 4¼ x 8¼ ins., 70 pp. Illustrated. Descriptive pamphlets on hand power freight elevators, sidewalk elevators, automobile elevators, etc.
Catalog and pamphlets, 8½ x 11 ins. Illustrated. Important data on different types of elevators.

ESCALATORS

Otis Elevator Company, 260 Eleventh Ave., New York, N. Y.
Escalators. Booklet, 32 pp., 8½ x 11 ins. Illustrated. A valuable work on an important item of equipment.

FIREPLACE CONSTRUCTION

H. W. Covert Company, 243 East 44th Street, New York, N. Y.
Covert Fireplace Construction. Booklet, 12 pp., 8½ x 11 ins. Illustrated. Valuable data on an important topic.

FIREPROOFING

Concrete Engineering Co., Omaha, Neb.
Handbook of Fireproof Construction. Booklet, 54 pp., 8½ x 11 ins. Valuable work on methods of fireproofing.

Concrete Steel Company, 42 Broadway, New York.
Economical Fireproof Floors for Suburban Buildings. Folder. 4 pp., 8½ x 11 ins. Illustrated.

National Fire Proofing Company, Fulton Building, Pittsburgh.
Natco; The Complete Line of Structural Clay Tile. Booklet. 48 pp., 8½ x 11 ins. Illustrated.

North Western Expanded Metal Co., 407 South Dearborn Street, Chicago, Ill.
A. I. A. Sample Book. Bound volume, 8½ x 11 ins. Contains actual samples of several materials and complete data regarding their use.

FLOOR HARDENERS (CHEMICAL)

Master Builders Co., Cleveland, Ohio.
Concrete Floor Treatment. File, 50 pp. Data on securing hardened dustproof concrete.
Concrete Floor Treatments—Specification Manual. Booklet, 24 pp., 8½ x 11 ins. Illustrated. Valuable work on an important subject.

Minwax Company, 11 West 42nd Street, New York, N. Y.
Concrete Floor Treatments. Folder, 4 pp., 8½ x 11 ins. Illustrated.

Toch Brothers, New York, Chicago, Los Angeles.
Handbook of R. I. W. Protective Products. Booklet, 40 pp., 4½ x 7½ ins.

FLOORS—STRUCTURAL

Concrete Steel Company, 42 Broadway, New York.
Structural Economies for Concrete Floors and Roofs. Brochure, 32 pp., 8½ x 11 ins. Illustrated.

Truscon Steel Co., Youngstown, Ohio.
Truscon Floretyle Construction. Booklet, 8½ x 11 ins., 16 pp. Illustrations of actual jobs under construction. Lists of properties and information on proper construction. Proper method of handling and tables of safe loads.

Structural Gypsum Corporation, Linden, N. J.
Gypsteel Pre-cast Fireproof Floors. Booklet, 36 pp., 8½ x 11 ins. Illustrated. Data on flooring.
Service Sheet No. 3. Specifications and Details of Design and Construction for Gypsteel Pre-Cast Floors and Ceilings. Folder, 8½ x 11 ins. Illustrated.

FLOORING

Armstrong Cork Co. (Linoleum Division), Lancaster, Pa.
Armstrong's Linoleum Floors. Catalog, 8½ x 11 ins., 44 pp. Color plates. A technical treatise on linoleum, including table of gauges and weights and specifications for installing linoleum floors. Newly revised, February, 1929.
Armstrong's Linoleum Pattern Book, 1929. Catalog, 9 x 12 ins., 44 pp. Color plates. Reproduction in color of all patterns of linoleum and cork carpet in the Armstrong line.
Linoleum Layer's Handbook. 5 x 7 ins., 36 pp. Instructions for linoleum layers and others interested in learning most satisfactory methods of laying and taking care of linoleum.
Enduring Floors of Good Taste. Booklet, 6 x 9 ins., 48 pp. Illustrated in color. Explains use of linoleum for offices, stores, etc., with reproductions in color of suitable patterns, also specifications and instructions for laying.

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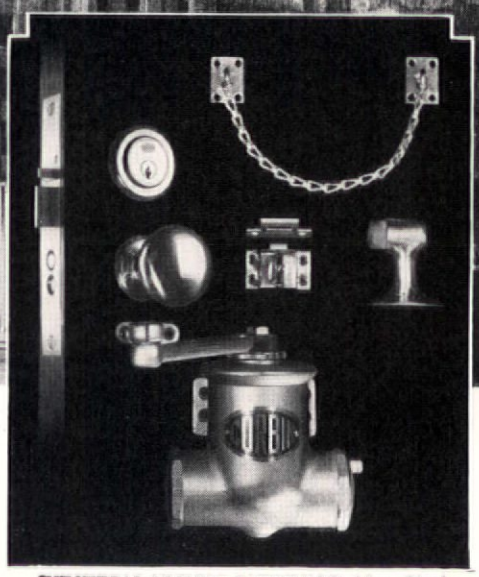

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Paramount Building
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International Telephone Bldg.
Bank of Manhattan

SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—*Continued from page 78*

FLOORING—Continued

Cellized Oak Flooring, Memphis, Tenn.
Style in Oak Floors. Booklet, 16 pp., 6 x 9 ins. Illustrated.

Congoleum-Nairn, Inc., 195 Belgrove Drive, Kearny, N. J.
Facts you should know about Resilient Floors. A series of booklets on floors for (1) schools, (2) hospitals, (3) offices, (4) stores, (5) libraries, (6) churches, (7) Clubs and Lodges, (8) apartments and hotels. Illustrated.
Specifications for Resilient Floors. Booklet, 12 pp. A reprint from Sweet's.
A New Kind of Floor Service. Brochure, 8 pp. Data on Bonded Floors.
Sealex Battleship Linoleum. Booklet, 12 pp. Illustrated. Shows typical installations.
Sealex Treadlite Tiles. Two booklets, 8 and 16 pp. Illustrated.
Colonial Planks. Brochure, 8 pp. Illustrated.

National Lumber Manufacturers' Association, Transportation Building, Washington.
Wood Floors. Booklet. 30 pp., 8½ x 11 ins. Illustrated.

C. Pardee Works, 9 East 45th St., New York, N. Y., and 1600 Walnut St., Philadelphia, Pa.
Pardee Tiles. Bound Volume, 48 pp., 8½ x 11 ins. Illustrated.

Stedman Products Company, South Braintree, Mass.
Stedman Tile, The Original Reinforced Rubber Floor. Booklet, 16 pp., 8½ x 11 ins. Illustrated. Valuable data on flooring.

Structural Gypsum Corporation, Linden, N. J.
Gypsteel Pre-cast Fireproof Floors. Booklet, 36 pp., 8½ x 11 ins. Illustrated. Data on floorings.

U. S. Gypsum Co., Chicago.
Pyrobar Floor Tile. Folder, 8½ x 11 ins. Illustrated. Data on building floors of hollow tile and tables on floor loading.

FURNITURE

American Seating Co., 14 E. Jackson Blvd., Chicago, Ill.
Art Ecclesiastical Booklet, 6 x 9 ins., 48 pp. Illustrations of church fitments in carved wood.
Theatre Chairs. Booklet, 6 x 9 ins., 48 pp. Illustrations of theatre chairs.

Kittinger Co., 1893 Elmwood Ave., Buffalo, N. Y.
Kittinger Club & Hotel Furniture. Booklet, 20 pp., 6¼ x 9½ ins. Illustrated. Deals with fine line of furniture for hotels, clubs, institutions, schools, etc.
Kittinger Club and Hotel Furniture. Booklet, 20 pp., 6 x 9 ins. Illustrated. Data on furniture for hotels and clubs.
A Catalog of Kittinger Furniture. Booklet, 78 pp., 11 x 14 ins. Illustrated. General Catalog.

GLASS CONSTRUCTION

Adamson Flat Glass Co., Clarksburg, W. Va.
Quality and Dependability. Folder, 2 pp., 8½ x 11 ins. Illustrated. Data in the company's product.

Libbey-Owens Sheet Glass Co., Toledo, Ohio.
Flat Glass. Brochure, 12 pp., 5⅛ x 7⅝ ins. Illustrated. History of manufacture of flat, clear, sheet glass.

GREENHOUSES

King Construction Company, North Tonawanda, N. Y.
King Greenhouses for Home or Estate. Portfolio of half-tone prints, varnishes, 8¼ x 10½ ins.

William H. Lutton Company, 267 Kearney Ave., Jersey City, N. J.
Greenhouses of Quality. Booklet, 50 pp., 8½ x 11 ins. Illustrated. Conservatories making use of Lutton Patented Galvanized Steel V-Bar.

GYPSUM

Structural Gypsum Corporation, Linden, N. J.
Service Sheet No. 1. Specifications and Details of Design and Construction for Gypsteel Pre-Cast Long-Span Roofs. Folder, 8½ x 11 ins. Illustrated. Service Sheet No. 2. Specifications and Details of Design and Construction for Gypsteel Pre-Case Short-Span Roofs. Folder, 8½ x 11 ins. Illustrated.

HARDWARE

P. & F. Corbin, New Britain, Conn.
Early English and Colonial Hardware. Brochure, 8½ x 11 ins. An important illustrated work on this type of hardware.
Locks and Builders' Hardware. Bound Volume, 486 pp., 8½ x 11 ins. An exhaustive, splendidly prepared volume.
Colonial and Early English Hardware. Booklet, 48 pp., 8½ x 11 ins. Illustrated. Data on hardware for houses in these styles.

Cutler Mail Chute Company, Rochester, N. Y.
Cutler Mail Chute Model F. Booklet, 4 x 9¼ ins., 8 pp. Illustrated.

Richards-Wilcox Mfg. Co., Aurora, Ill.
Distinctive Garage Door Hardware. Booklet, 8½ x 11 ins., 66 pp. Illustrated. Complete information accompanied by data and illustrations on different kinds of garage door hardware.

HARDWARE—Continued

Distinctive Elevator Door Hardware. Booklet, 90 pp., 10½ x 16 ins. Illustrated.

Russell & Erwin Mfg. Co., New Britain, Conn.
Hardware for the Home. Booklet, 24 pp., 3½ x 6 ins. Deals with residence hardware.
Door Closer Booklet. Brochure, 16 pp., 3½ x 6 ins. Data on a valuable detail.
Garage Hardware. Booklet, 12 pp., 3½ x 6 ins. Hardware intended for garage use.
Famous Homes of New England. Series of folders on old homes and hardware in style of each.

Todhunter, Inc., 119 East 57th St., New York, N. Y.
Colonial Hardware. Booklet. 12 pp., 8½ x 11 ins. Illustrated. Deals with hardware of the best type for exterior and interior use.

HEATING EQUIPMENT

American Blower Co., 6004 Russell St., Detroit, Mich.
Heating and Ventilating Utilities. A binder containing a large number of valuable publications, each 8½ x 11 ins., on these important subjects.

American Radiator Company, The, 40 West 40th St., N. Y. C.
Ideal Boilers for Oil Burning. Catalog 5½ x 8½ ins., 36 pp. Illustrated in 4 colors. Describing a line of Heating Boilers especially adapted to use with Oil Burners.
Corto—The Radiator Classic. Brochure, 5½ x 8½ ins., 16 pp. Illustrated. A brochure on a space-saving radiator of beauty and high efficiency.
Ideal Arcola Radiator Warmth. Brochure, 6¼ x 9½ ins. Illustrated. Describes a central all-on-one-floor heating plant with radiators for small residences, stores, and offices.
How Shall I Heat My Home? Brochure, 16 pp., 5¾ x 8½ ins. Illustrated. Full data on heating and hot water supply.
New American Radiator Products. Booklet, 44 pp., 5 x 7¾ ins. Illustrated. Complete line of heating products.
A New Heating Problem. Brilliantly Solved. Broadside, 4 pp., 10¾ x 15 ins. Illustrated. Data on the IN-AIRID invisible air valve.
In-Airid, the Invisible Air Valve. Folder, 8 pp., 3½ x 6 ins. Illustrated. Data on a valuable detail of heating.
The 999 ARCO Packless Radiator Valve. Folder, 8 pp., 3½ x 6 ins. Illustrated.

James B. Clow & Sons, 534 S. Franklin St., Chicago, Ill.
Clow Gasteam Vented Heating System. Brochure, 24 pp., 8½ x 11 ins. Illustrated. Deals with a valuable form of heating equipment for using gas.

C. A. Dunham Company, 450 East Ohio St., Chicago, Ill.
Dunham Radiator Trap. Bulletin 101, 8 x 11 ins., 12 pp. Illustrated. Explains working of this detail of heating apparatus.
Dunham Packless Radiator Valves. Bulletin 104, 8 x 11 ins., 8 pp. Illustrated. A valuable brochure on valves.
Dunham Return Heating System. Bulletin 109, 8 x 11 ins. Illustrated. Covers the use of heating apparatus of this kind.
Dunham Vacuum Heating System. Bulletin 110, 8 x 11 ins., 12 pp. Illustrated.
The Dunham Differential Vacuum Heating System. Bulletin 114. Brochure, 12 pp., 8 x 11 ins. Illustrated. Deals with heating for small buildings.
The Dunham Differential Vacuum Heating System. Bulletin 115. Brochure, 12 pp., 8 x 11 ins. Illustrated. Deals with heating for large buildings.

The Fulton Sylphon Company, Knoxville, Tenn.
Sylphon Temperature Regulators. Illustrated brochures, 8½ x 11 ins., dealing with general architectural and industrial applications; also specifically with applications of special instruments.
Sylphon Heating Specialties. Catalog No. 200, 192 pp., 3½ x 6¼ ins. Important data on heating.

Hoffman Specialty Company, Inc., 25 West 45th St., New York, N. Y.
Heat Controlled With the Touch of a Finger. Booklet, 46 pp., 5¾ x 8¾ ins. Illustrated.
How to Lock Out Air, the Heat Thief. Brochure, 48 pp., 5 x 7¼ ins. Illustrated.

Janette Manufacturing Company, 556 West Monroe Street, Chicago.
More Heat from Any Hot Water System on Less Fuel. Folder. 4 pp., 8½ x 11 ins. Illustrated. Deals with use of the "Hydrolator."

S. T. Johnson Co., Oakland, Calif.
Johnson Oil Burners. Booklet, 9 pp., 8½ x 11 ins. Illustrated
Bulletin No. 4A. Brochure, 8 pp., 8½ x 11 ins. Illustrated. Data on different kinds of oil-burning apparatus.
Bulletin No. 31. Brochure, 8 pp., 8½ x 11 ins. Illustrated. Deals with Johnson Rotary Burner with Full Automatic Control.

Kewanee Boiler Corporation, Kewanee, Ill.
Kewanee on the Job. Catalog, 8½ x 11 ins., 80 pp. Illustrated. Showing installations of Kewanee boilers, water heaters, radiators, etc.

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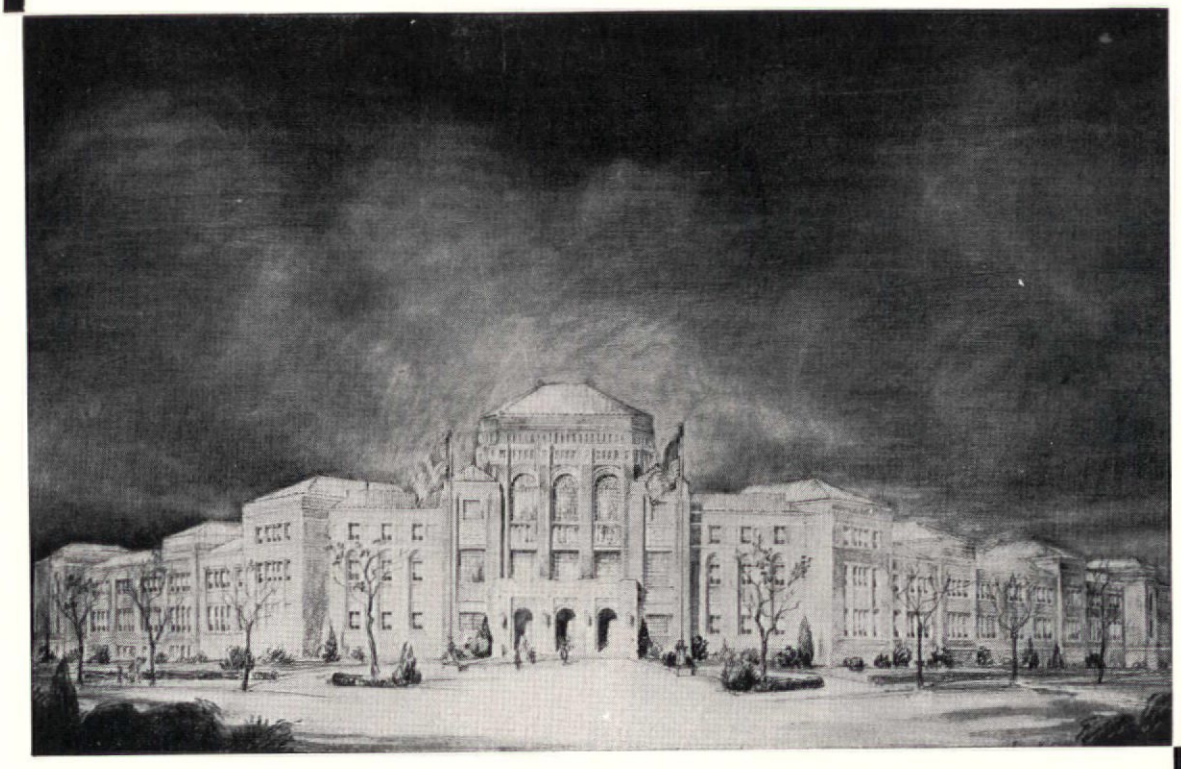
Associate Architects: Trueblood and Graf
Contractors: Humes and Deal
Masonry Contractors: Aetna Brick Laying Co.



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Another of the important elements responsible for the fine position Carney Cement holds in the masonry field, is the steady adherence to an ideal of manufacturing perfection. Every piece of stone used in Carney Cement must satisfy a rigid standard of chemical analysis—every sack of Carney Cement that leaves our warehouses must meet a definite unvarying high standard of refinement. This explains the implicit confidence with which Carney Cement is received by architects.

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District Sales Offices

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Mills: Mankato and Carney, Minn.

Cement Makers Since 1883

CARNEY CEMENT
for Brick and Tile Mortar

Specifications: 1 part Carney Cement to 3 parts sand

SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—*Continued from page 80*

HEATING EQUIPMENT—Continued

Catalog No. 78, 6 x 9 ins. Illustrated. Describes Kewanee Firebox Boilers with specifications and setting plans.
Catalog No. 79, 6 x 9 ins. Illustrated. Describes Kewanee power boilers and smokeless tubular boilers with specifications.

May Oil Burner Corp., Baltimore, Md.
Adventures in Comfort. Booklet, 24 pp., 6 x 9 ins. Illustrated. Non-technical data on oil as fuel.
Taking the Quest Out of the Question. Brochure, 16 pp., 6 x 9 ins. Illustrated. For home owners interested in oil as fuel.

McQuay Radiator Corporation, 35 East Wacker Drive, Chicago, Ill.
McQuay Visible Type Cabinet Heater. Booklet, 4 pp., 8½ x 11 ins. Illustrated. Cabinets and radiators adaptable to decorative schemes.
McQuay Concealed Radiators. Brochure, 4 pp., 8½ x 11 ins. Illustrated.
McQuay Unit Heater. Booklet, 8 pp., 8½ x 11 ins. Illustrated. Gives specifications and radiator capacities.

Modine Mfg. Co., Racine, Wisc.
Modine Copper Radiation. Booklet, 28 pp. 8½ x 11 ins. Illustrated. Deals with industrial, commercial and domestic heating.
A Few Short Years. Folder. 4 pp. 8½ x 11 ins. Illustrated. Heating for garages.
Dairy Plant Heating. Folder. 4 pp., 8½ x 11 ins. Illustrated.
Industrial Heating. Folder. 4 pp., 8½ x 11 ins. Illustrated.
Modine Unit Heater. Folder. 6 pp., 8½ x 11 ins. Illustrated.

Nash Engineering Company, South Norwalk, Conn.
Bulletin 85. Booklet. 12 pp. 10¾ x 7½ ins. Illustrated in color. Describes construction and operation of the Jennings Return Line Vacuum Heating Pump.
Bulletin 87. Brochure. 8 pp. 10¾ x 7½ ins. Illustrated in color. Deals with Sizes T and U Jennings Vacuum Heating Pump for 2500 and 5000 square feet equivalent direct radiation.
Bulletin 63. Booklet. 4 pp. 10¾ x 7½ ins. Illustrated. Describes in detail the Unit Type Motor Driven Jennings Condensation Pump.

National Radiator Corporation, Johnstown, Pa.
Aero Radiators; Beauty and Worth. Catalog 34. Booklet, 6 x 9 ins., 20 pp., describing and illustrating radiators and accessories.
Six Great Companies Unite to Form a Great Corporation. Booklet, 28 pp., 8½ x 10½ ins. Illustrated. Valuable data on heating.

Prometheus Electric Corporation, 360 West 13th St., New York.
Electric Heating Specialties. Booklet, 24 pages. 8½ x 11 ins. Illustrated. Specialties for heating, cooking, hospitals, organ lofts, etc.

Rome Brass Radiator Corporation, 1 East 42nd Street, New York.
Proof of the Pudding. Booklet, 24 pp., 8½ x 10½ ins. Illustrated. Describes Robras, 20-20 concealed-within-the-walls, lightweight, all-brass radiators.
Within the Walls. Brochure, 16 pp., 4 x 9 ins. Illustrated. Gives facts regarding modern, out-of-sight, lightweight, Robras 20-20 radiators.
Engineering Data. Booklet, 16 pp., 8½ x 10½ ins. Illustrated. Full data and tables to facilitate selection and installation of Robras 20-20 concealed radiators for steam, water and vapor heating systems.
Small Bathrooms Made More Spacious, Brochure, 4 pp. Illustrated. Gives descriptions, sizes and prices of Robras lightweight cabinet radiators to be installed under wash basins.

Sarco Company, Inc., 183 Madison Ave., New York City, N. Y.
Steam Heating Specialties. Booklet, 6 pp., 6 x 9 ins. Illustrated. Data on Sarco Packless Supply Valves and Radiator Traps for vacuum and vapor heating systems.
Equipment Steam Traps and Temperature Regulations. Booklet, 6 pp., 6 x 9 ins. Illustrated. Deals with Sarco Steam Traps for hospital, laundry and kitchen fixtures and the Sarco Self-contained Temperature Regulation for hot water service tanks.

Spencer Heater Co., Williamsport, Pa.
Catalog. Booklet, 20 pp., 6⅛ x 9 ins. Illustrated. Complete line of magazine feed cast iron sectional and steel tubular heaters.
The Fire that Burns Uphill. Brochure, 24 pp., 6⅛ x 9¼ ins. Illustrated in color. Magazine feed heaters for steam, vapor and hot water heating.

B. F. Sturtevant Company, Hyde Park, Boston, Mass.
Tempervane Heating Units. Catalog 363. Booklet, 44 pp., 8½ x 11 ins. Illustrated. Data on "Heating Every Corner with Maximum Economy."

Trane Co., The, La Crosse, Wis.
Bulletin 14, 16 pp., 8½ x 10⅝ ins. Covers the complete line of Trane Heating Specialties, including Trane Bellows Traps, and Trane Bellows Packless Valves.
Bulletin 20. 24 pp., 8½ x 10⅝ ins. Explains in detail the operation and construction of Trane Condensation. Vacuum, Booster, Circulating, and similar pumps.
How to Cut Heating Costs. Booklet, 18 pp., 8½ x 11 ins. Illustrated.

HOISTS, TELESCOPIC

Gillis & Geoghegan, Inc. 535 West Broadway, New York.
G & G Telescopic Hoist. Booklet. 24 pp. 8½ x 11 ins. Illustrated complete data on hoists.
Ash Removal. Folder. 8½ x 11 ins. Illustrated. Hoists for removing ashes from basements.

HOSPITAL EQUIPMENT

The Frink Co., Inc., 369 Lexington Ave., New York City.
Catalog 426. 7 x 10 ins., 16 pp. A booklet illustrated with photographs and drawings, showing the types of light for use in hospitals, as operating table reflectors, linolite and multilite concentrators, ward reflectors, bed lights and microscopic reflectors, giving sizes and dimensions, explaining their particular fitness for special uses.

Holophane Company, 342 Madison Avenue, New York.
Lighting Specific for Hospitals. Booklet, 30 pp., 8½ x 11 ins. Illustrated.

The International Nickel Company, 67 Wall St., New York, N. Y.
Hospital Applications of Monel Metal. Booklet, 8½ x 11½ ins., 16 pp. Illustrated. Gives types of equipment in which Monel Metal is used, reasons for its adoption, with sources of such equipment.

Prometheus Electric Corporation, 360 West 13th St., New York.
Electric Heating Specialties. Booklet, 24 pages. 8½ x 11 ins. Illustrated. Specialties for heating, cooking, hospitals, organ lofts, etc.

Wilmot Castle Company, Union Trust Bldg., Rochester, N. Y.
The Hospital Sterilizer Data Sheets. Booklet, 16 pp., 8½ x 11 ins. Illustrated. Data on planning sterilizer installations.

HOTEL EQUIPMENT

Pick-Barth Company, Inc., Albert, 1200 West 35th St., Chicago, and 34 Cooper Square, New York.
Some Thoughts on Furnishing a Hotel. Booklet, 7½ x 9 ins. Data on complete outfitting of hotels.

INCINERATORS

Home Incinerator Co., Milwaukee, Wis.
The Decent Way. Burn it with Gas. Brochure, 30 pp., 5¼ x 7¼ ins., inside. Illustrated. Incinerator sanitation equipment for residence use.
A. I. A. File, 12 pp., 8¾ x 10¾ ins., inside. Suggestions for architect on incineration, showing installation and equipment.
Specialized Home Comforts Service Plan Book. 40 pp., 8½ x 11 ins., inside. Illustrated. A complete outline of the many advantages of incineration.
Blue Star Standards in Home Building. 16 pp., 5½ x 8½ ins., inside. Illustrated. Explaining fully the Blue Star principles, covering heat, incineration, refrigeration, etc.

Josam Mfg. Co., Michigan City, Ind.
Josam-Graver Incinerators. Folder, 4 pp., 8½ x 11 ins. Illustrated.

Kerner Incinerator Company, 715 E. Water St., Milwaukee, Wis.
Incinerators (Chimney-fed). Catalog No. 15 (Architect and Builders' Edition). Size 8½ x 11 ins., 16 pp. Illustrated. Describes principles and design of Kernerator Chimney-fed Incinerators for residences, apartments, hospitals, schools, apartment hotels, clubs and other buildings. Shows all standard models and gives general information and working data.
Sanitary Elimination of Household Waste. Booklet, 4 x 9 ins. 16 pp. Illustrated. Gives complete information on the Kernerator for residences.
Garbage and Waste Disposal for Apartment Buildings. Folder, 8½ x 11 ins., 16 pp. Illustrated. Describes principle and design of Kernerator Chimney-fed Incinerator for apartments and gives list of buildings where it has been installed.
Sanitary Disposal of Waste in Hospitals. Booklet, 4 x 9 ins., 12 pp. Illustrated. Shows how this necessary part of hospital service is taken care of with the Kernerator. Gives list of hospitals where installed.
The Kernerator (Chimney-fed) Booklet. Catalog No. 17, 20 pp., 8½ x 11 ins. Illustrated. Data on a valuable detail of equipment.

INSULATION

Armstrong Cork & Insulation Co., Pittsburgh, Pa.
The Insulation of Roofs with Armstrong's Corkboard. Booklet. Illustrated. 7½ x 10½ ins., 32 pp. Discusses means of insulating roofs of manufacturing or commercial structures.
Insulation of Roofs to Prevent Condensation. Illustrated booklet, 7½ x 10½ ins., 36 pp. Gives full data on valuable line of roof insulation.
Filing Folder for Pipe Covering Data. Made in accordance with A. I. A. rules.
The Cork-lined House Makes a Comfortable Home. 5 x 7 ins. 32 pp. Illustrated.
Armstrong's Corkboard. Insulation for Walls and Roofs of Buildings. Booklet, 66 pp., 9½ x 11¾ ins. Illustrates and describes use of insulation for structural purposes.

National Lumber Manufacturers' Association, Transportation Building, Washington.
The Cost of Comfort. Booklet. 80 pp., 8½ x 11 ins. Illustrated. A handbook on the economies of dwelling insulation.

Structural Gypsum Corporation, Linden, N. J.
Heat Insulation Value of Gypsteel. Folder, 4 pp., 8½ x 11 ins. Brochure, by Charles L. Norton, of M. I. T.

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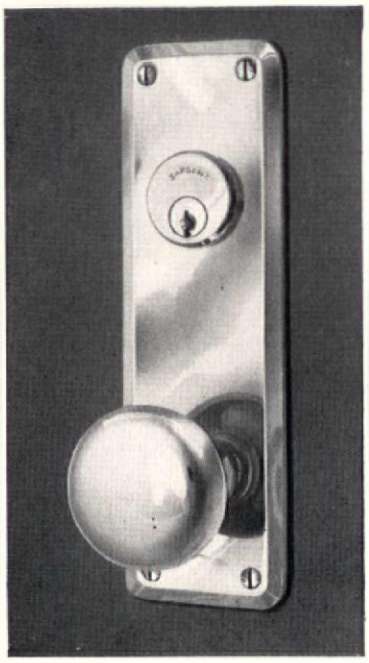

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SARGENT

LOCKS AND HARDWARE

SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—*Continued from page 82*

JOISTS

Concrete Steel Company, 42 Broadway, New York, N. Y.
Structural Economies for Concrete Floors and Roofs. Booklet, 32 pp., 8½ x 11 ins. Illustrated.
Modern Concrete Reinforcement. Brochure, 32 pp., 8½ x 11 ins. Illustrated.
Construction Details for Installing Havemeyer Trusses. Data sheets, 8½ x 11 ins. Illustrated.
Standard Practice for Placing Havemeyer Reinforcement in Columns, Beams and Slabs. Data sheets, 8½ x 11 ins. Illustrated.

KITCHEN EQUIPMENT

The International Nickel Company, 67 Wall St., New York, N. Y.
Hotels, Restaurants and Cafeteria Applications of Monel Metal. Booklet, 8½ x 11 ins., 32 pp. Illustrated. Gives types of equipment in which Monel Metal is used, with service data and sources of equipment.

Prometheus Electric Corporation, 360 West 13th St., New York.
Electric Heating Specialties. Booklet, 24 pages. 8½ x 11 ins. Illustrated. Specialties for heating, cooking, hospitals, organ lofts, etc.

John Van Range Co., Cincinnati.
Practical Planning for Church Food Service. Booklet, 32 pp., 8½ x 11 ins. Illustrated.
Practical Planning for Club Food Service. Booklet, 32 pp., 8½ x 11 ins. Illustrated.
Practical Planning for School Food Service. Booklet, 32 pp., 8½ x 11 ins. Illustrated.
Planning Restaurants That Make Money. Booklet, 78 pp., 8½ x 11 ins. Illustrated. Excellent work on equipment.

LABORATORY EQUIPMENT

Alberene Stone Co., 153 West 23rd Street, New York City.
Booklet, 8¾ x 11¼ ins., 26 pp. Stone for laboratory equipment, shower partitions, stair treads, etc.

Duriron Company, Dayton, Ohio.
Duriron Acid, Alkali and Rust-proof Drain Pipe and Fittings. Booklet, 8½ x 11 ins., 20 pp. Full details regarding a valuable form of piping.

LANTERNS

Todhunter, Inc., 119 East 57th St., New York, N. Y.
Lanterns. Booklet, 16 pp., 8½ x 11 ins. Illustrated. Deals with a fine assortment of fixtures for exterior and interior use.

LATH, METAL AND REINFORCING

Milwaukee Corrugating Co., Milwaukee.
The Milcor Manual. Booklet, 96 pp., 8½ x 11 ins. Illustrated. Data on metal lath and similar materials.
Milcor Metal Ceiling Catalog. Booklet, 288 pp., 8½ x 11 ins. Illustrated. Data on metal ceiling and wall construction.

National Steel Fabric Co., Pittsburgh, Pa.
Better Walls for Better Homes. Brochure, 16 pp., 7¾ x 11¾ ins. Illustrated. **Metal lath, particularly** for residences.
Steeltex for Floors. Booklet, 24 pp., 8½ x 11 ins. Illustrated.
Combined reinforcing and form for concrete or gypsum floors and roofs.
Steeltex Data Sheet No. 1. Folder, 8 pp., 8½ x 11 ins. Illustrated. Steeltex for floors on steel joists with round top chords.
Steeltex Data Sheet No. 2. Folder, 8 pp., 8½ x 11 ins. Illustrated. Steeltex for floors on steel joists with flat top flanges.
Steeltex Data Sheet No. 3. Folder, 8 pp., 8½ x 11 ins. Illustrated. Steeltex for folders on wood joists.

North Western Expanded Metal Co., 1234 Old Colony Building, Chicago, Ill.
North Western Expanded Metal Products. Booklet, 8½ x 10¾ ins., 20 pp. Fully illustrated, and describes different products of this company, such as Kno-burn metal lath, 20th Century Corrugated. Plasta-saver and longspan lath channels, etc.
Longspan ¾-inch Rib Lath. Folder, 4 pp., 8½ x 11 ins. Illustrated. Deals with a new type of V-Rib expanded metal.
A. I. A. Sample Book. Bound volume, 8½ x 11 ins. Contains actual samples of several materials and complete data regarding their use.
Norwest Metal Lath. Folder, 8½ x 11 ins. Illustrated. Data on Flat Rib Lath.

Truscon Steel Company, Youngstown, Ohio.
Truscon ¾-inch Hy-Rib for Roofs, Floors and Walls. Booklet, 8½ x 11 ins., illustrating Truscon ¾-inch Hy-Rib as used in industrial buildings. Plates of typical construction. Progressive steps of construction. Specification and load tables.

LAUNDRY MACHINERY

American Laundry Machinery Co., Norwood Station, Cincinnati, O.
Functions of the Hotel and Hospital Laundry. Brochure, 8 pp., 8½ x 11 ins. Valuable data regarding an important subject.
Laundry Equipment of Small Hotels, Hospitals and Institutions. Booklet, 36 pp., 8½ x 11 ins. Illustrated.

General Laundry Machinery Corporation, 608 South Dearborn St., Chicago, Ill.
General All-Metal Washer. Booklet, 16 pp., 8½ x 11 ins. Illustrated. Timken-equipped Monel metal washer with one-lever control.
General Dry Tumbler. Brochure, 16 pp., 8½ x 11 ins. Illustrated. Specifications and details of Up-Draft Dry Tumbler with automatic temperature control.

Troy Laundry Machinery Co., Inc., 9 Park Place, New York City.
Laundry Machinery for Large Institutions. Loose-leaf booklet, 50 pp., 8½ x 11 ins. Illustrated.
Laundry Machinery for Small Institutions. Loose-leaf brochure, 50 pp., 8½ x 11 ins. Illustrated.
Accessory Equipment for Institutional Laundries. Leather bound book, 50 pp., 8½ x 11 ins. Illustrated.
Dry Cleaning Equipment for Institutional Purposes. Brochure, 50 pp., 8½ x 11 ins. Illustrated.

LIGHTING EQUIPMENT

The Frink Co., Inc., 369 Lexington Ave., New York, N. Y.
Catalog 415, 8½ x 11 ins., 46 pp. Photographs and scaled cross-sections. Specialized bank lighting, screen and partition reflectors, double and single desk reflectors and Polaralite Signs

Gleason Tiebout Glass Company, 67 West 44th St., New York, N. Y.
Fragment of Celestialite. Booklet, 24 pp., 7 x 10 ins. Illustrated. Data on lighting for offices, schools, hospitals, etc.
Celestialite Catalog 727. Booklet, 18 pp., 8½ x 11 ins. Illustrated. Valuable brochure on lighting.

Holophane Company, Inc., 342 Madison Ave., New York, N. Y.
The Lighting of Schools; A Guide to Good Practice. Booklet. 24 pp., 8½ x 11 ins. Illustrated.
Lighting Specifications for Hospitals. Brochure, 30 pp., 8½ x 11 ins. Illustrated.
Industrial Lighting. Bulletin 448A. Booklet, 24 pp., 8½ x 11 ins. Illustrated.
Holophane Catalog. Booklet, 48 pp., 8½ x 11 ins. Combination catalog and engineering data book.
The Lighting of Schools. A Guide to Good Practice. Booklet, 24 pp., 8½ x 11 ins. Illustrated.

Smyser-Royer Co., 1700 Walnut Street, Philadelphia, Pa.
Catalog "J" on Exterior Lighting Fixtures. Brochure, illustrated, giving data on over 300 designs of standards, lanterns and brackets of bronze or cast iron.

Todhunter, 119 East 57th St., New York, N. Y.
Lighting Fixtures, Lamps and Candlesticks. 24 pp., 8½ x 11 ins. Illustrated. Fine assortment of lighting accessories.

Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa.
Industrial Lighting Equipment. Booklet, 32 pp., 8½ x 11 ins. Illustrated.
Commercial Lighting. Brochure, 24 pp., 8½ x 11 ins. Illustrated.
Airport and Floodlighting Equipment. Booklet, 20 pp., 8½ x 11 ins. Illustrated.

MAIL CHUTES

Cutler Mail Chute Company, Rochester, N. Y.
Cutler Mail Chute Model F. Booklet, 4 x 9¾ ins., 8 pp. Illustrated.

MANTELS

Henry Klein & Co., Inc. 40-46 West 23rd Street, New York.
Driwood Mantels. Booklet. 12 pp. 8½ x 11 ins. Illustrated. Fine line of eighteenth century English and American mantels.

Todhunter, Inc., 119 East 57th St., New York, N. Y.
Georgian Mantels. Brochure, 12 pp., 8½ x 11 ins. Illustrated. Illustrates and describes an excellent assortment of fine mantels based on Georgian precedent.

MARBLE

The Georgia Marble Company, Tate, Ga.; New York Office, 1328 Broadway.
Why Georgia Marble Is Better. Booklet, 3⅛ x 6 ins. Gives analysis, physical qualities, comparison of absorption with granite, opinions of authorities, etc.
Convincing Proof. 3⅛ x 6 ins., 8 pp. Classified list of buildings and memorials in which Georgia Marble has been used, with names of Architects and Sculptors.
Hurt Building, Atlanta; Senior High School and Junior College, Muskegon, Mich. Folders, 4 pp., 8½ x 11 ins. Details.

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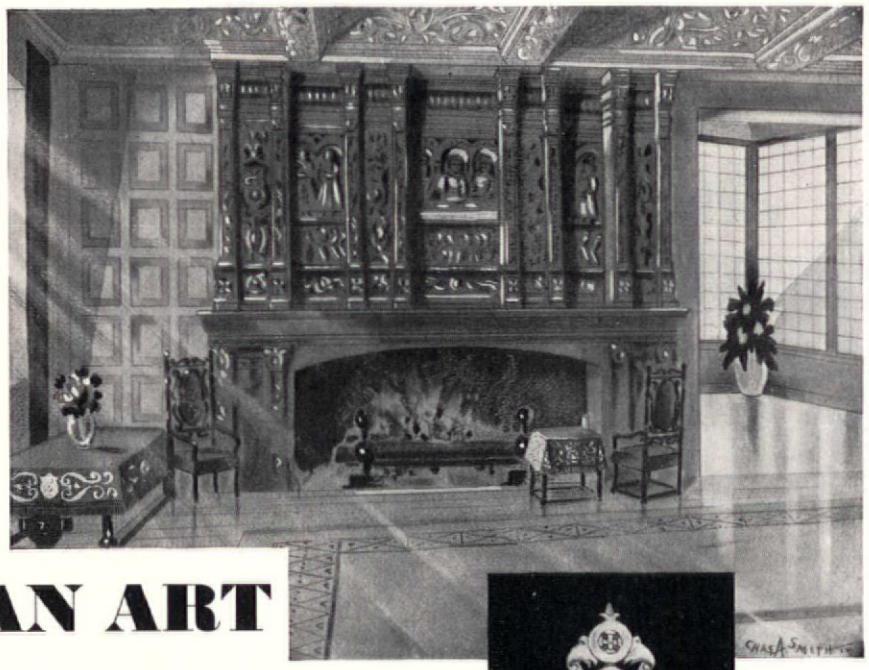

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THE ELIZABETHAN PERIOD is above all domestic in its appeal. Born under the Renaissance influence it offers beauty, comfort, and sturdiness. It insists on durability. For nearly a century RUSSWIN . . . actuated by the ideals of Elizabethan art . . . has combined grace with faultless mechanical operation. Hardwick, herewith illustrated, is one of the exclusive RUSSWIN designs in this delightful period. It will enhance the little manor house, the baronial home or the monumental business structure and provide unfailing, trouble-free, lasting service. Whether it be a sturdy, handsome door knob, a lock, door closer, night latch, or even such as small hinges and locks for the corner cupboard . . . all will be in perfect accord if you select RUSSWIN. Consult your architect or interior decorator, when making plans, or write to us for descriptive booklet covering RUSSWIN Hardware expressly made for leading periods of design. Russell & Erwin Manufacturing Company (The American Hardware Corporation, Successor) New Britain, Connecticut—New York, Chicago, London.

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DISTINCTIVE HARDWARE
Hardware that lasts – Base Metals of Bronze or Brass

SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—*Continued from page 84*

METALS

Aluminum Company of America, Pittsburgh.
Architectural Aluminum. Brochure, 30 pp., 8½ x 11 ins. Illustrated. An excellent booklet on the subject.

Central Alloy Steel Corporation, Massillon, Ohio.
Sheet Iron Primer. Booklet, 64 pp., 5¼ x 7¾ ins. Illustrated.
The Path to Permanence. Brochure, 52 pp., 8½ x 11 ins. Illustrated. Data on sheet iron.

The International Nickel Company, 67 Wall St., New York, N. Y.
Monel Metal Primer. 8 folders, 4 pp., 8½ x 11 ins. Illustrated. Valuable data on use of monel in kitchens, laundries, etc.

MILL WORK—See also Wood

Hartmann-Sanders Company, 2155 Elston Ave., Chicago, Ill.
Column Catalog, 7½ x 10 ins., 48 pp. Illustrated. Contains prices on columns 6 to 36 ins. diameter, various designs and illustrations of columns and installations.

The Pergola Catalog. 7½ x 10 ins., 64 pp. Illustrated. Contains illustrations of pergola lattices, garden furniture in wood and cement, garden accessories.

Klein & Co., Inc., Henry, 11 East 37th St., New York, N. Y.
Two Driwood Interiors. Folder, 4 pp., 6¼ x 9 ins. Illustrated. Use of moulding for paneling walls.

A New Style in Interior Decoration. Folder, 4 pp., 6¼ x 9 ins. Illustrated. Deals with interior woodwork.

Driwood Period Mouldings in Ornamented Wood. Booklet, 28 pp., 8½ x 11 ins. Illustrated.

How Driwood Period Mouldings in Ornamented Wood Set a New Style in Decoration. Folder.

Roddis Lumber and Veneer Co., Marshfield, Wis.
Roddis Doors. Brochure, 24 pp., 5¼ x 8½ ins. Illustrated price list of doors for various types of buildings.

Roddis Doors, Catalog G. Booklet, 184 pp., 8½ x 11 ins. Completely covers the subject of doors for interior use.

Roddis Doors for Hospitals. Brochure, 16 pp., 8½ x 11 ins. Illustrated work on hospital doors.

Roddis Doors for Hotels. Brochure, 16 pp., 8½ x 11 ins. Illustrated work on doors for hotel and apartment buildings.

MORTAR AND CEMENT COLORS

Clinton Metallic Paint Co., Clinton, N. Y.
Clinton Mortar Colors. Folder, 8½ x 11 ins., 4 pp. Illustrated in colors, gives full information concerning Clinton Mortar Colors with specific instructions for using them.

Color Card. 3¼ x 6½ ins. Illustrates in color the ten shades in which Clinton Mortar Colors are manufactured.

Something New in Stucco. Folder, 3½ x 6 ins. An interesting folder on the use of coloring matter for stucco coated walls.

ORNAMENTAL PLASTER

Jacobson & Co., 241 East 44th St., New York, N. Y.
A Book of Old English Designs. Brochure, 47 plates, 12 x 9 ins. Deals with a fine line of decorative plaster work.

Architectural and Decorative Ornaments. Cloth bound volume, 184 pp., 9 x 12 ins., 18 plates. Price, $3.00. A general catalog of fine plaster ornaments.

Geometrical ceilings. Booklet, 23 plates, 7 x 9 ins. An important work on decorative plaster ceilings.

PAINTS, STAINS, VARNISHES AND WOOD FINISHES

Minwax Company, Inc., 11 West 42nd St., New York.
Color Card and Specifications for Minwax Brick and Cement Coating. Folder, 4 pp., 8½ x 11 ins. Illustrated.

National Lead Company, 111 Broadway, New York, N. Y.
Handy Book on Painting. Book, 5½ x 3¾ ins., 100 pp. Gives directions and formulæ for painting various surfaces of wood, plaster, metals, etc., both interior and exterior.

Red Lead in Paste Form. Booklet, 6¼ x 3½ ins., 16 pp. Illustrated. Directions and formulæ for painting metals.

Came Lead. Booklet, 6 x 8¼ ins., 12 pp. Illustrated. Describes various styles of lead cames.

Sherwin-Williams Company, 601 Canal Rd., Cleveland, Ohio.
Complete Architectural Specifications for painting, varnishing and lacquering, reprinted from the Sherwin-Williams Architectural Catalogue as it appears in Sweet's Architectural Catalogue. Form Number B 303. 8½ x 11, bound in paper, thirty pages of specifications and color chips; carries A. I. A. file number.

PAINTS, STAINS, VARNISHES, WOOD FINISHES—Continued

Toch Brothers, New York, Chicago, Los Angeles.
Architects' Specification Data. Sheets in loose leaf binder, 8½ x 11 ins., dealing with an important line of materials.

PARTITIONS

Circle A. Products Corporation, New Castle, Ind.
Circle A. Partitions Sectional and Movable. Brochure. Illustrated. 8½ x 11¼ ins., 32 pp. Full data regarding an important line of partitions, along with Erection Instructions for partitions of three different types.

Irving Hamlin, Evanston, Ill.
Hamlinized Folding Partitions Made from Hamlin's Evanston Soundproof Doors, Sectional and Movable. Folder, 4 pp., 8½ x 11 ins. Illustrated.

Hauserman Company, E. F., Cleveland, Ohio.
Hollow Steel Standard Partitions. Various folders, 8½ x 11 ins. Illustrated. Give full data on different types of steel partitions, together with details, elevations and specifications.

Henry Klein & Co., 25 Grand Street, Elmhurst, L. I., N. Y.
Telesco Partition. Catalog, 8¼ x 11 ins., 14 pp. Illustrated. Shows typical offices laid out with Telesco partitions, cuts of finished partition units in various woods. Gives specifications and cuts of buildings using Telesco.

Detailed Instructions for Erecting Telesco Partitions. Booklet, 24 pp., 8½ x 11 ins. Illustrated. Complete instructions, with cuts and drawings, showing how easily Telesco Partition can be erected.

Improved Office Partition Co., 25 Grand St., Elmhurst, L. I., N. Y.
(See Henry Klein & Co.)

Richards-Wilcox Mfg. Co., Aurora, Ill.
Partitions. Booklet, 7 x 10 ins., 32 pp. Illustrated. Describes complete line of track and hangers for all styles of sliding parallel, accordion and flush-door partitions.

Structural Gypsum Corporation, Linden, N. J.
Service Sheet No. 4. Specifications for Gypsteel Partition File. Folder, 8½ x 11 ins. Illustrated.

Telesco Office Partition, 25 Grand St., Elmhurst, L. I., N. Y.
(See Henry Klein & Co.)

U. S. Gypsum Co., Chicago, Ill.
Pyrobar Partition and Furring Tile. Booklet, 8½ x 11 ins., 24 pp. Illustrated. Describes use and advantages of hollow tile for inner partitions.

PIPE

American Brass Company, Waterbury, Conn.
Bulletin B-1. Brass Pipe for Water Service. 8½ x 11 ins., 28 pp. Illustrated. Gives schedule of weights and sizes (I.P.S.) of seamless brass and copper pipe, shows typical installations of brass pipe, and gives general discussion of the corrosive effect of water on iron, steel and brass pipe.

American Rolling Mill Company, Middletown, Ohio.
How ARMCO Dredging Products Cut Costs. Booklet, 16 pp., 6 x 9 ins. Data on dredging pipe.

Clow & Sons, James B., 534 S. Franklin St., Chicago, Ill.
Catalog A. 4 x 16½ ins., 700 pp. Illustrated. Shows a full line of steam, gas and water works supplies.

Duriron Company, Dayton, Ohio.
Duriron Acid, Alkali, Rust-proof Drain Pipe and Fittings. Booklet, 20 pp., 8½ x 11 ins. Illustrated. Important data on a valuable line of pipe.

Maurice A. Knight, Akron, Ohio.
Knightware in the Princeton Chemical Laboratory. Booklet, 16 pp., 6¾ x 8½ ins. Illustrated.

National Tube Co., Frick Building, Pittsburgh, Pa.
"National" Bulletin No. 2. Corrosion of Hot Water Pipe, 8½ x 11 ins., 24 pp. Illustrated. In this bulletin is summed up the most important research dealing with hot water systems. The text matter consists of seven investigations by authorities on this subject.

"National" Bulletin No. 3. The Protection of Pipe Against Internal Corrosion, 8½ x 11 ins., 20 pp. Illustrated. Discusses various causes of corrosion, and details are given of the deactivating and deareating systems for eliminating or retarding corrosion in hot water supply lines.

"National" Bulletin No. 25. "National" Pipe in Large Buildings. 8½ x 11 ins., 88 pp. This bulletin contains 254 illustrations of prominent buildings of all types, containing "National" Pipe, and considerable engineering data of value to architects, engineers, etc.

Modern Welded Pipe. Book of 88 pp., 8½ x 11 ins., profusely illustrated with halftone and line engravings of the important operations in the manufacture of pipe.

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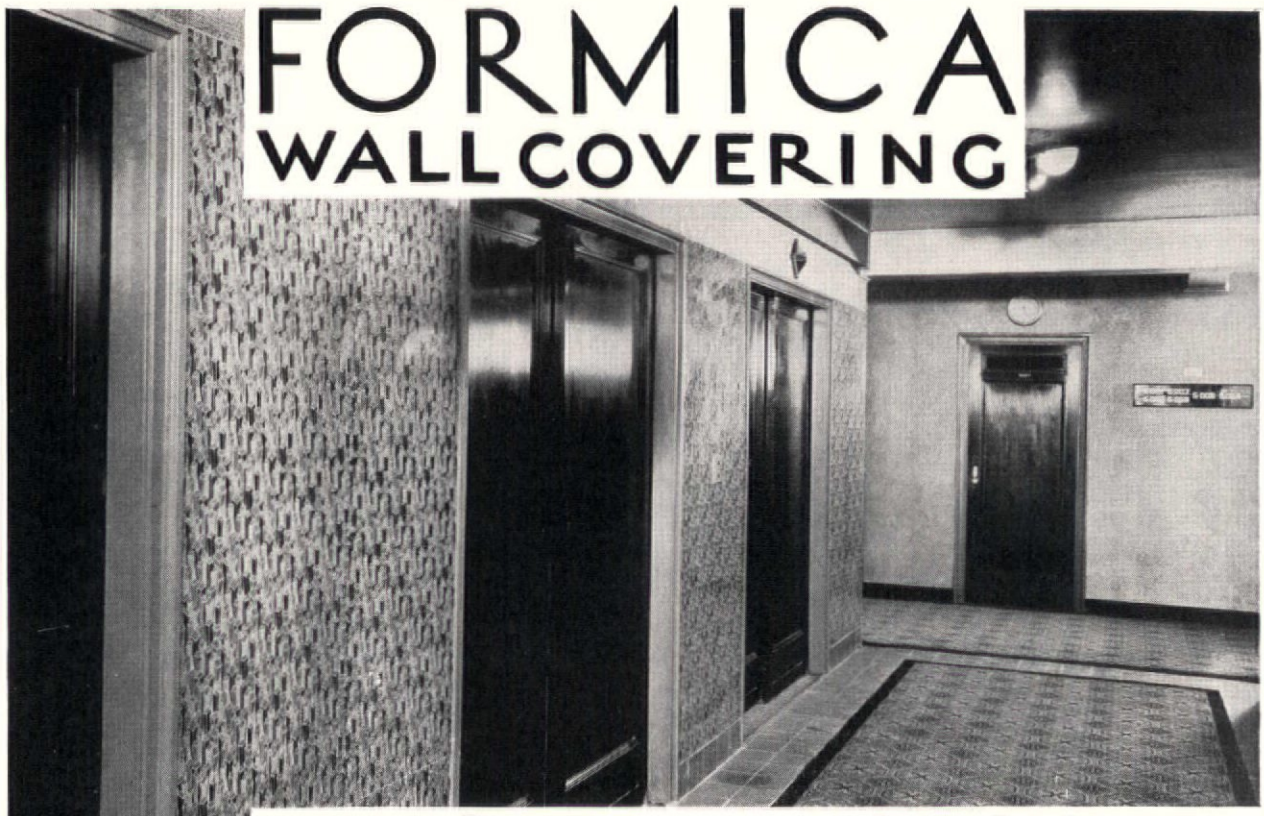

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This adds a very attractive touch of color . . . and makes it easy to keep the walls looking clean and fresh. The material is also used for tops on bedroom furniture throughout this large new hotel, and for wall coverings in several of the restaurants.

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FORMICA
for BUILDING PURPOSES

SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—*Continued from page 86*

PLASTER

Best Bros. Keene's Cement Co., Medicine Lodge, Kans.
Information Book. Brochure, 24 pp., 5 x 9 ins. Lists grades of plaster manufactured; gives specifications and uses for plaster.

Plasterers' Handbook. Booklet, 16 pp., 3½ x 5½ ins. A small manual for use of plasterers.

Interior Walls Everlasting. Brochure, 20 pp., 6¼ x 9¼ ins. Illustrated. Describes origin of Keene's Cement and views of buildings in which it is used.

PLUMBING EQUIPMENT

Clow & Sons, James B., 534 S. Franklin St., Chicago, Ill.
Catalog M. 9¼ x 12 ins., 184 pp. Illustrated. Shows complete line of plumbing fixtures for Schools, Railroads and Industrial Plants.

Crane Company, 836 S. Michigan Ave., Chicago, Ill.
Plumbing Suggestions for Home Builders. Catalog, 3 x 6 ins., 80 pp. Illustrated.

Plumbing Suggestions for Industrial Plants. Catalog, 4 x 6½ ins., 34 pp. Illustrated.

Planning the Small Bathroom. Booklet, 5 x 8 ins. Discusses planning bathrooms of small dimensions.

John Douglas Co., Cincinnati, Ohio.
Douglas Plumbing Fixtures. Bound volume, 200 pp., 8½ x 11 ins. Illustrated. General catalog.

Another Douglas Achievement. Folder, 4 pp., 8½ x 11 ins. Illustrated. Data on new type of stall.

Hospital. Brochure, 60 pp., 8½ x 11 ins. Illustrated. Deals with fixtures for hospitals.

Duriron Company, Dayton, Ohio.
Duriron Acid, Alkali and Rust-Proof Drain Pipe and Fittings. Booklet, 8½ x 11 ins., 20 pp. Full details regarding a valuable form of piping.

Imperial Brass Mfg. Co., 1200 W. Harrison St., Chicago, Ill.
Watrous Patent Flush Valves, Duojet Water Closets, Liquid Soap Fixtures, etc. 8½ x 11 ins., 136 pp., loose-leaf catalog, showing roughing-in measurements, etc.

Speakman Company, Wilmington, Del.
Catalog K. Booklet, 150 pp., 8½ x 10⅞ ins. Illustrated. Data on showers and equipment details.

Trenton Potteries Company, Trenton, N. J.
The Blue Book of Plumbing. Bound volume, 182 pp., 8½ x 10½ ins. Illustrated.

PNEUMATIC TUBE SYSTEMS

G & G Atlas Systems, Inc., 544 West Broadway, New York.
12 pp., 8½ x 11. Illustrated booklet of tube systems for retail stores and other buildings.

4 pp., 8½ x 11. Data Sheet showing schematic diagrams for hotel, bank, factory and wholesale buildings, table of sizes, space requirements and preliminary layout steps. A.I.A. 35h21.

PUMPS

Kewanee Private Utilities Co., 442 Franklin St., Kewanee, Ill.
Bulletin E. 7¾ x 10¼ ins., 32 pp. Illustrated. Catalog. Complete descriptions, with all necessary data, on Standard Service Pumps, Indian Brand Pneumatic Tanks, and Complete Water Systems, as installed by Kewanee Private Utilities Co.

Nash Engineering Company, South Norwalk, Conn.
Bulletin 52. Brochure. 6 pp., 10¾ x 7½ ins. Illustrated in color. Devoted to Jennings Standard Centrifugal Pumps for house service, boosting city water pressure to supply top stories, for circulating warm water, etc.

Bulletin. 97. Booklet. 16 pp., 10¾ x 7½ ins. Illustrated in color. Describes the design, construction and operation of the Jennings Suction Sump Pump.

Bulletin 11. Brochure. 8 pp., 10¾ x 7½ ins. Illustrated in color. Deals with Nash Hytor Vacuum Pumps for air and gases.

The Trane Co., La Crosse, Wis.
Trane Small Centrifugal Pumps. Booklet, 3¾ x 8 ins., 16 pp. Complete data on an important type of pump.

RAMPS

Auto Ramps Corporation. Builders' Exchange, Richmond, Va.
The Double Spiral Auto Ramp. Brochure, 8½ x 11 ins. Illustrated. Data on a valuable type of equipment.

Ramp Buildings Corporation, 21 East 40th St., New York, N. Y.
Building Garages for Profitable Operation. Booklet, 8½ x 11 ins. 16 pp. Illustrated. Discusses the need for modern mid-city, parking garages, and describes the d'Humy Motoramp system of design, on the basis of its superior space economy and features of operating convenience. Gives cost analyses of garages of different sizes, and calculates probable earnings.

Garage Design Data. Series of informal bulletins issued in loose-leaf form, with monthly supplements.

REFRIGERATION

The Fulton Syphon Company, Knoxville, Tenn.
Temperature Control of Refrigeration Systems. Booklet, 8 pp., 8½ x 11 ins. Illustrated. Deals with cold storage, chilling of water, etc.

North Western Expanded Metal Company, Chicago, Ill.
Designing Data. Book, 6 x 9 ins., 96 pp. Illustrated. Covers the use of Econo Expanded Metal for various types of reinforced concrete construction.

REINFORCED CONCRETE—See also Construction, Concrete

Longspan ¾-inch Rib Lath. Folder, 4 pp., 8½ x 11 ins. Illustrated. Deals with a new type of V-Rib expanded metal.

Truscon Steel Company, Youngstown, Ohio.
Shearing Stresses in Reinforced Concrete Beams. Booklet, 8½ x 11 ins., 12 pp.

RESTAURANT EQUIPMENT

John Van Range Company, Cincinnati.
Planning Restaurants That Make Money. Booklet, 78 pp., 8½ x 11 ins. Illustrated. Excellent work on equipment.

ROOFING

The Barrett Company, 40 Rector St., New York City.
Architects' and Engineers' Built-up Roofing Reference Series; Volume IV Roof Drainage System. Brochure, 64 pp., 8½ x 11¼ ins. Gives complete data and specifications for many details of roofing.

Federal Cement Tile Co., 608 S. Dearborn Street, Chicago.
Catalog and Roof Standards. Booklet, 36 pp. 8½ x 11 ins. Illustrated. Describes Featherweight Concrete Insulating Roof Slabs, including complete data, weights and dimensions, specifications and detail drawings. Also includes complete information on Featherweight Nailing Concrete Roof Slabs for use with ornamental slate or copper covering. The catalog is profusely illustrated and contains also a partial list of users.

Examples of Theaters and Theater Roofs. Brochure, 16 pps., 8½ x 11 ins., Illustrated. Contains views of theaters designed by some of the country's leading architects.

Federal Interlocking Tile and Glass Tile. 4 pp., 8½ x 11 ins. Illustrates and describes complete roof or precast concrete slabs requiring no composition covering.

Heinz Roofing Tile Co., 1925 West Third Avenue, Denver, Colo.
Plymouth-Shingle Tile with Sprocket Hips. Leaflet, 8½ x 11 ins. Illustrated. Shows use of English shingle tile with special hips.

Italian Promenade Floor Tile. Folder, 2 pp., 8½ x 11 ins. Illustrated. Floor tiling adapted from that of Davanzati Palace.

Mission Tile. Leaflet, 8½ x 11 ins. Illustrated. Tile such as are used in Italy and Southern California.

Georgian Tile. Leaflet, 8½ x 11 ins. Illustrated. Tiling as used in old English and French farmhouses.

Johns-Manville Corporation, New York.
The New Book of Roofs. Brochure, 24 pp., 8½ x 11 ins. Illustrated. Roofing from the Architect's point of view.

Ludowici-Celadon Company, 104 So. Michigan Ave., Chicago, Ill.
"Ancient" Tapered Mission Tiles. Leaflet, 8½ x 11 ins., 4 pp. Illustrated. For architects who desire something out of the ordinary this leaflet has been prepared. Describes briefly the "Ancient" Tapered Mission Tiles, hand-made with full corners and designed to be applied with irregular exposures.

Milwaukee Corrugating Co., Milwaukee.
Milcor Architectural Sheet Metal Guide. Booklet. 72 pp., 8½ x 11 ins. Illustrated. Metal tile roofing, skylights, ventilators, etc. Milcor Sheet Metal Handbook. Brochure. 128 pp., 8½ x 11 ins. Illustrated. Deals with rain-carrying equipment, etc.

Structural Gypsum Corporation, Linden, N. J.
Relative Effectiveness of Various Types of Roofing Construction in Preventing Condensation of the Under Surface. Folder, 4 pp., 8¾ x 11 ins. Important data on the subject.

Gypsteel Pre-cast Fireproof Roofs. Booklet, 48 pp., 8½ x 11 ins. Illustrated. Information regarding a valuable type of roofing.

U. S. Gypsum Co., Chicago, Ill.
Pyrobar Roof Construction. Booklet, 8 x 11 ins., 48 pp. Illustrated. Gives valuable data on the use of tile in roof construction.

Sheetrock Pyrofill Roof Construction. Folder, 8½ x 11 ins. Illustrated. Covers use of roof surfacing which is poured in place.

SCHOOL EQUIPMENT

John Van Range Co., Cincinnati.
Practical Planning for School Food Service. Booklet, 32 pp., 8½ x 11 ins. Illustrated.

SEWAGE DISPOSAL

Kewanee Private Utilities, 442 Franklin St., Kewanee, Ill.
Specification Sheets. 7¾ x 10¼ ins., 40 pp. Illustrated. Detailed drawings and specifications covering water supply and sewage disposal systems.

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MEDUSA

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SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—*Continued from page 88*

SEWAGE DISPOSAL—Continued

Nash Engineering Company, South Norwalk, Conn.
Bulletin 67. Booklet. 16 pp. 10¾ x 7½ ins. Illustrated in color. Describes Type A Jennings Sewage Ejector for handling Unscreened sewage and raising it from basements below sewer level.
Bulletin 103. Brochure. 16 pp. 10¾ x 7½ ins. Illustrated in color. Deals with small size Type B Jennings Sewage Ejector.

SCREENS

American Brass Co., The, Waterbury, Conn.
Facts for Architects About Screening. Illustrated folder, 9½ x 11¾ ins., giving actual samples of metal screen cloth and data on fly screens and screen doors.

Athey Company, 6015 West 65th St., Chicago, Ill.
The Athey Perennial Window Shade. An accordion pleated window shade, made from translucent Herringbone woven Coutil cloth, which raises from the bottom and lowers from the top. It eliminates awnings, affords ventilation, can be dry-cleaned and will wear indefinitely.

SHELVING-STEEL

David Lupton's Sons Company, Philadelphia, Pa.
Lupton Steel Shelving. Catalog E. Illustrated brochure, 40 pp., 8½ x 11 ins. Deals with steel cabinets, shelving, racks, doors, partitions, etc.

STEEL PRODUCTS FOR BUILDING

Bethlehem Steel Company, Bethlehem, Pa.
Steel Joists and Stanchions. Booklet, 72 pp., 4 x 6¾ ins. Data for steel for dwellings, apartment houses, etc.

Steel Frame House Company, Pittsburgh, Pa. (Subsidiary of McClintic-Marshall Corp.)
Steel Framing for Dwellings. Booklet, 16 pp., 8½ x 11 ins. Illustrated.
Steel Framing for Gasoline Service Stations. Brochure, 8 pp., 8½ x 11 ins. Illustrated.
Steel Frame Standard Gasoline Service Stations. Booklet, 8 pp., 8½ x 11 ins. Illustrated. Three standard designs of stations.

Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.
The Arc Welding of Structural Steel. Brochure, 32 pp., 8½ x 11 ins. Illustrated. Deals with an important structural process.

STONE, BUILDING

Indiana Limestone Company, Bedford, Ind.
Volume 3, Series A-3. Standard Specifications for Cut Indiana Limestone work, 8½ x 11 ins., 56 pp. Containing specifications and supplementary data relating to the best methods of specifying and using this stone for all building purposes.
Volume 1. Series B. Indiana Limestone Library, 6 x 9 ins., 36 pp. Illustrated. Giving general information regarding Indiana Limestone, its physical characteristics, etc.
Volume 4. Series B. Booklet. New Edition, 8½ x 11 ins., 64 pp. Illustrated. Indiana Limestone as used in Banks.
Volume 5. Series B. Indiana Limestone Library. Portfolio, 11¾ x 8¾ ins. Illustrated. Describes and illustrates the use of stone for small houses with floor plans of each.
Volume 6. Series B. Indiana Limestone School and College Buildings. 8½ x 11 ins., 80 pp. Illustrated.
Volume 12. Series B. Distinctive Homes of Indiana Limestone. 8½ x 11 ins., 48 pp. Illustrated.
Old Gothic Random Ashlar. 8½ x 11 ins., 16 pp. Illustrated.

STORE FRONTS

Brasco Manufacturing Co., 5025-35 South Wabash Ave., Chicago, Ill.
Catalog No. 33. Series 500. All-Metal Construction. Brochure, 20 pp., 8½ x 11 ins. Illustrated. Deals with store fronts of a high class.
Catalog No. 34. Series 202. Standard construction. Booklet, 16 pp. 8½ x 11 ins. Illustrated, complete data on an important type of building.
Detail Sheets. Set of seven sheets, 8½ x 11 ins., printed on tracing paper, giving full-sized details and suggestions for store front designs.
Davis Solid Architectural Bronze Sash. Set of six sheets, 8½ x 11 ins., printed on tracing paper. Full-sized details and suggestions for designs of special bronze store front construction.

The Kawneer Company, Niles, Mich.
Catalog M, 1929 Edition, 64 pages, 8½ x 11 ins., with the A.I.A. File No., profusely illustrated. General Catalog.
Detail Sheet and descriptive folder, 8½ x 11 ins., with A.I.A. File No. featuring "B" Store Front Construction, designed along modernistic lines.

TELEPHONE SERVICE ARRANGEMENTS

All Bell Telephone Companies. Apply nearest Business Office, or American Telephone and Telegraph Company, 195 Broadway, New York.
Planning for Home Telephone Conveniences. Booklet, 52 pp., 8½ x 11 ins. Illustrated.
Planning for Telephones in Building. Brochure, 74 pp., 8½ x 11 ins. Illustrated.

TERRA COTTA

National Terra Cotta Society, 19 West 44th St., New York, N. Y.
Standard Specifications for the Manufacture, Furnishing and Setting of Terra Cotta. Brochure, 8½ x 11 ins., 12 pp. Complete Specification, Glossary of Terms Relating to Terra Cotta and Short Form Specification for incorporating in Architects' Specification.
Color in Architecture. Revised Edition. Permanently bound volume, 9½ x 12¼ ins., containing a treatise upon the basic principles of color in architectural design, illustrating early European and modern American examples. Excellent illustrations in color.
Present Day Schools. 8½ x 11 ins., 32 pp. Illustrating 42 examples of school architecture with article upon school building design by James O. Betelle, A. I. A.
Better Banks. 8½ x 11 ins., 32 pp. Illustrating many banking buildings in terra cotta with an article on its use in bank design by Alfred C. Bossom, Architect.

TIMBREL TILE VAULTS

R. Guastavino Co., 40 Court Street, Boston.
Timbrel Arch Construction. Booklet, 8 pp., 8½ x 11 ins.

TILE, HOLLOW

National Fire-Proofing Co., 250 Federal Street, Pittsburgh.
Natco. The Complete line of Structural Clay Tile. Booklet. 39 pp. 8½ x 11 ins. Illustrated. A General Catalog.
Natco Double Shell Load Bearing Tile Bulletin. 8½ x 11 ins., 6 pp. Illustrated.
Natco Face Tile for the Up-to-Date. Farm Bulletin. 8½ x 11 ins.
Natco Header Backer Tile Bulletin. 8½ x 11 ins., 4 pp. Illustrated.
Natco Unibacker Tile Bulletin. 8½ x 11 ins., 4 pp. Illustrated.
Natcoflor Bulletin. 8½ x 11 ins., 6 pp. Illustrated.

TILE, STRUCTURAL CLAY

National Fireproofing Corporation, Fulton Building, Pittsburgh, Pa.
Natco. The Complete Line of Structural Clay Tile. Booklet, 48 pp., 8½ x 11 ins. Illustrated. A General Catalog.
Natco Vitritile Bulletin No. 164. 40 pp., 8½ x 11 ins. Illustrated. Shows color charts, sizes and shapes, actual installations, etc.
Natco Header Backer Tile Bulletin. 8½ x 11 ins. 4 pp. Illustrated.
Natco Unibacker Tile Bulletin. 8½ x 11 ins. 4 pp. Illustrated.
Natcoflor Bulletin. 8½ x 11 ins., 6 pp. Illustrated.

TILES

Hanley Company, Bradford, Pa.
Hanley Quarry Tile. Folder. 4 pp., 5 x 8 ins. Illustrated.

C. Pardee Works, 9 East 45th St., New York, N. Y., and 1600 Walnut St., Philadelphia, Pa.
Pardee Tiles. Bound volume, 48 pp., 8½ x 11 ins. Illustrated.

TRUSSES

McKeown Bros. Company, 523 South Keeler Avenue, Chicago.
Truth in Architecture. Folder, 4 pp., 8½ x 11 ins. Illustrated. Deals with use of trusses of wood.

VALVES

Crane Co., 836 S. Michigan Ave., Chicago, Ill.
No. 51. General Catalog. Illustrated. Describes the complete line of the Crane Co.

C. A. Dunham Co., 450 East Ohio St., Chicago, Ill.
The Dunham Packless Radiator Valve. Brochure, 12 pp., 8 x 11 ins. Illustrated. Data on an important type of valve.

Jenkins Brothers, 80 White Street, New York.
Office Buildings Yesterday and Today. Folder, 8½ x 11 ins. Illustrated. Valves for use in office buildings.

VENETIAN BLINDS

Burlington Venetian Blind Co., Burlington, Vt.
Venetian Blinds. Booklet, 7 x 10 ins., 24 pp. Illustrated. Describes the "Burlington" Venetian blinds, method of operation, advantages of installation to obtain perfect control of light in the room.

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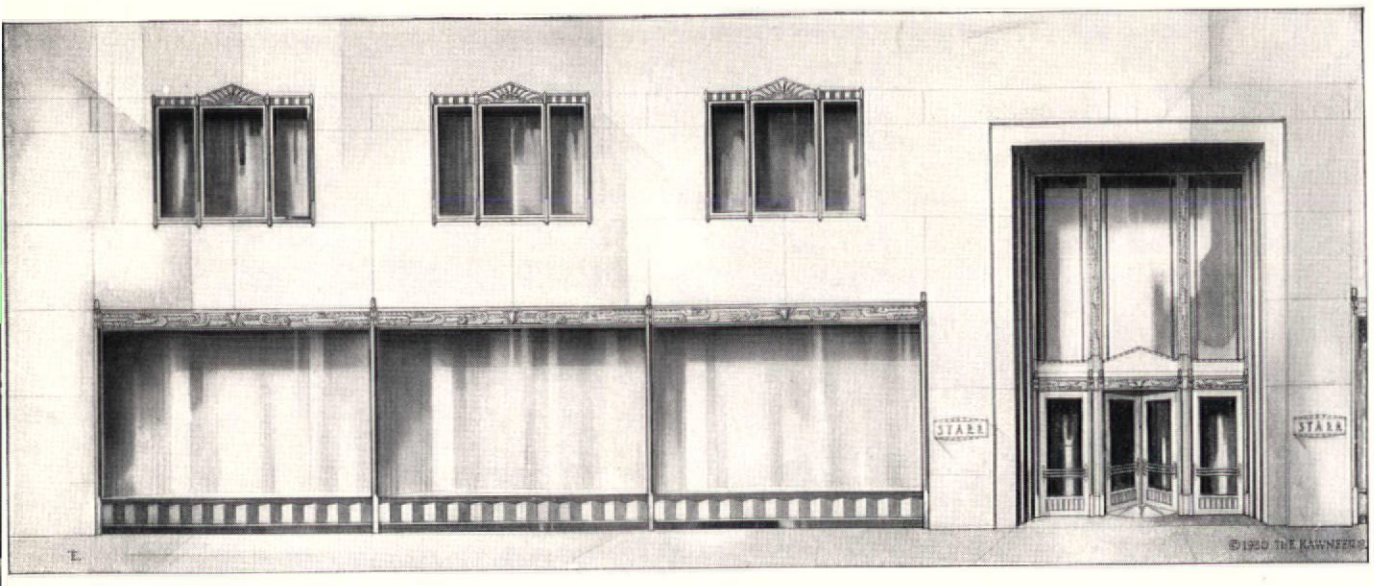

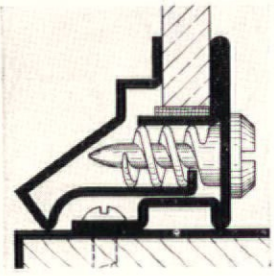

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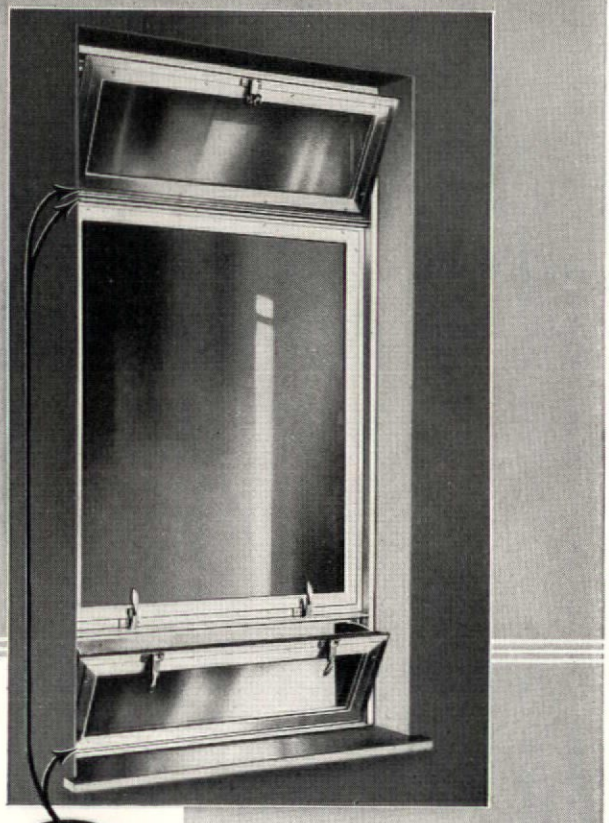

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SELECTED LIST OF MANUFACTURERS' PUBLICATIONS—*Continued from page 90*

VENTILATION

American Blower Co., Detroit, Mich.
American H. S. Fans. Brochure, 28 pp., 8½ x 11 ins. Data on an important line of blowers.

Duriron Company, Dayton, Ohio.
Acid-proof Exhaust Fans. Folder, 8 x 10½ ins., 8 pp. Data regarding fans for ventilation of laboratory fume hoods.
Specification Form for Acid-proof Exhaust Fans. Folder, 8 x 10½ ins.

WATERPROOFING

Master Builders Company, Cleveland, Ohio.
Waterproofing and Dampproofing and Allied Products. Sheets in loose index file, 9 x 12 ins. Valuable data on different types of materials for protection against dampness.
Waterproofing and Dampproofing File. 36 pp. Complete descriptions and detailed specifications for materials used in building with concrete.

Minwax Company, Inc., 11 West 42nd St., New York.
Waterproofing Stadia. Folder, 4 pp., 8½ x 11 ins. Illustrated.
Transparent Waterproofings for All Masonry Walls and Surfaces. Folder, 4 pp., 8½ x 11 ins. Illustrated.
Data Sheet on Membrane Waterproofing. Folder, 4 pp., 8½ x 11 ins. Illustrated.

Sommers & Co., Ltd., 342 Madison Ave., New York, N. Y.
"Permantile Liquid Waterproofing" for making concrete and cement mortar permanently impervious to water. Also circulars on floor treatments and cement colors. Complete data and specifications. Sent upon request to architects using business stationery. Circular size, 8½ x 11 ins.

Toch Brothers, New York, Chicago, Los Angeles.
Architects' Specification Data. Sheets in loose leaf binder, 8½ x 11 ins., dealing with an important line of materials.

WEATHER STRIPS

Athey Company, 6035 West 65th St., Chicago, Ill.
The Only Weatherstrip with a Cloth to Metal Contact. Booklet, 16 pp., 8½ x 11 ins. Illustrated. Data on an important type of weather stripping.

WINDOWS

William Bayley Co., 147 North Street, Springfield, Ohio.
Bayley Pivoted Windows. Booklet, 24 pp., 8½ x 11 ins. Illustrated. Sections, hardware, and other details, and illustrations of installations.

Detroit Steel Products Co., 2250 E. Grand Boulevard, Detroit.
Fenestra Blue Book. Brochure, 75 pp., 8½ x 11 ins. Illustrated. Data on steel windows.

The Kawneer Company, Niles, Mich.
Circular, 8½ x 11 with A.I.A. File No. featuring full size details and specifications of Heavy Type Sealair Independent Balanced Sash Window.
Circular, 8½ x 11 with A.I.A. File No. featuring full size details and specifications of Light Independent Balanced Sash Sealair Windows.
Circular, 8½ x 11 with A.I.A. File No. featuring full size details and specifications of In-swinging Sash Sealair Windows. The above to be furnished in non-ferrous metal and steel.

David Lupton's Sons Company, Philadelphia, Pa.
Lupton Pivoted Sash. Catalog 12-A. Booklet, 48 pp., 8½ x 11 ins. Illustrates and describes windows suitable for manufacturing buildings.
Lupton Commercial Projected Windows. Brochure. 24 pp., 8½ x 11 ins. Illustrated. Details and specifications.

WINDOWS, CASEMENT

Detroit Steel Products Co., 2250 E. Grand Boulevard, Detroit.
Fenestra Casements. Booklet, 14 pp., 8¼ x 11 ins. Illustrated. Discusses casements, particularly for residences.
Fenestra Screen Casements. Brochure, 16 pp., 8½ x 11 ins. Illustrated.
Decorating With Casements. Booklet, 18 pp., with inserts in color 6 x 8½ ins. Deals with use of decorations, particularly draperies, with casement windows.

Hope & Sons, Henry, 103 Park Ave., New York, N. Y.
Catalog, 12¾ x 18½ ins., 30 pp. Illustrated. Full-size details of outward and inward opening casements.

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WINDOWS, CASEMENT—Continued

David Lupton's Sons Company, Philadelphia, Pa.

Lupton Casement of Copper Steel. Catalog C-217. Booklet, 24 pp., 8⅝ x 11 ins. Illustrated brochure on casements, particularly for residences.

Lupton Creates a Complete Casement. Folder, 8½ x 11 ins. Illustrated data on a casement providing for screens, shades and draperies.

Lupton Heavy Casements. Detail Sheet No. 101, 4 pp., 8½ x 11 ins. Details and specifications only.

Richards-Wilcox Mfg. Co., Aurora, Ill.

Casement Window Hardware. Booklet, 24 pp., 8½ x 11 ins. Illustrated. Shows typical installations, detail drawings, construction details, blue-prints if desired. Describes AIR-way Multifold Window Hardware.

Architectural Details. Booklet, 8½ x 11 ins., 16 pp. Tables of specifications and typical details of different types of construction.

List of Parts for Assembly. Booklet, 8½ x 11 ins., 16 pp. Full lists of parts for different units.

WINDOW SCREENS

Detroit Steel Products Co., 2250 E. Grand Boulevard, Detroit.

Fenestra Screen Casements. Brochure, 16 pp., 8½ x 11 ins. Illustrated.

William Bayley Co., 147 North Street, Springfield, Ohio.

Bayley Pivoted Windows Screened. Booklet, 8 pp., 8½ x 11 ins. Data on screening and window ventilation.

WINDOWS, STEEL AND BRONZE

William Bayley Co., 147 North Street, Springfield, Ohio.

Bayley Steel Window Inserts. Brochure, 8 pp., 8½ x 11 ins. Illustrated Suggestions on correct use of inserts.

David Lupton's Sons Company, Philadelphia, Pa.

A Rain-shed and Ventilator of Glass and Steel. Pamphlet, 4 pp., 8⅝ x 11 ins. Deals with Pond Continuous Sash. Sawtooth Roofs, etc.

How Windows Can Make Better Homes. Booklet, 3⅞ x 7 ins., 12 pp. An attractive and helpful illustrated publication on use of steel casements for domestic buildings.

Truscon Steel Company, Youngstown, Ohio.

Drafting Room Standards. Book, 8½ x 11 ins., 120 pages of mechanical drawings showing drafting room standards, specifications and construction details of Truscon Steel Windows, Steel Lintels, Steel Doors and Mechanical Operators.

Truscon Solid Steel Double-Hung Windows. 24 pp. Booklet, 8½ x 11 ins. Containing illustrations of buildings using this type of window. Designs and drawings of mechanical details.

Continuous Steel Windows and Mechanical Operators. Catalog 126. Booklet, 32 pp., 8½ x 11 ins. Illustrated.

WOOD—See also Millwork

American Walnut Mfrs. Association, 618 So. Michigan Boulevard, Chicago, Ill.

American Walnut. Booklet, 7 x 9 ins., 46 pp. Illustrated. A very useful and interesting little book on the use of walnut in Fine Furniture with illustrations of pieces by the most notable furniture makers from the time of the Renaissance down to the present.

American Walnut for Interior Woodwork and Paneling. 7 x 9 ins. Illustrated. Discusses interior woodwork, giving costs, specifications of a specimen room, the different figures in Walnut wood, Walnut floors, finishes, comparative tests of physical properties and the advantages of American Walnut for woodwork.

National Lumber Mfrs. Assn., Washington, D. C.

Airplane Hangar Construction. Booklet, 24 pp., 8½ x 11 ins. Use of lumber for hangars.

Modern Home Interiors. Booklet, 8½ x 11 ins. Illustrated. Deals with interior uses of wood.

WOOD FINISH

Minwax Company, 11 West 42nd St., New York.

Color card and specification for Minwax Flat Finish. Folder, 4 pp., 8½ x 11 ins. Illustrated. Deals with a penetrative, preservative stain finish giving stain and soft wax effect.

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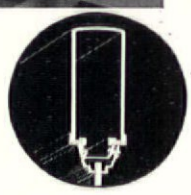

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Heavy tubular frame strongly welded

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The rails and stiles of this door consist of heavy tubular members, the joints of which are strongly welded. The inner edge of the frame is trimmed with shapely mouldings used for securing the center panel. With necessary hardware furnished and applied the complete ensemble presents a unit appropriate for use in the finest commercial buildings.

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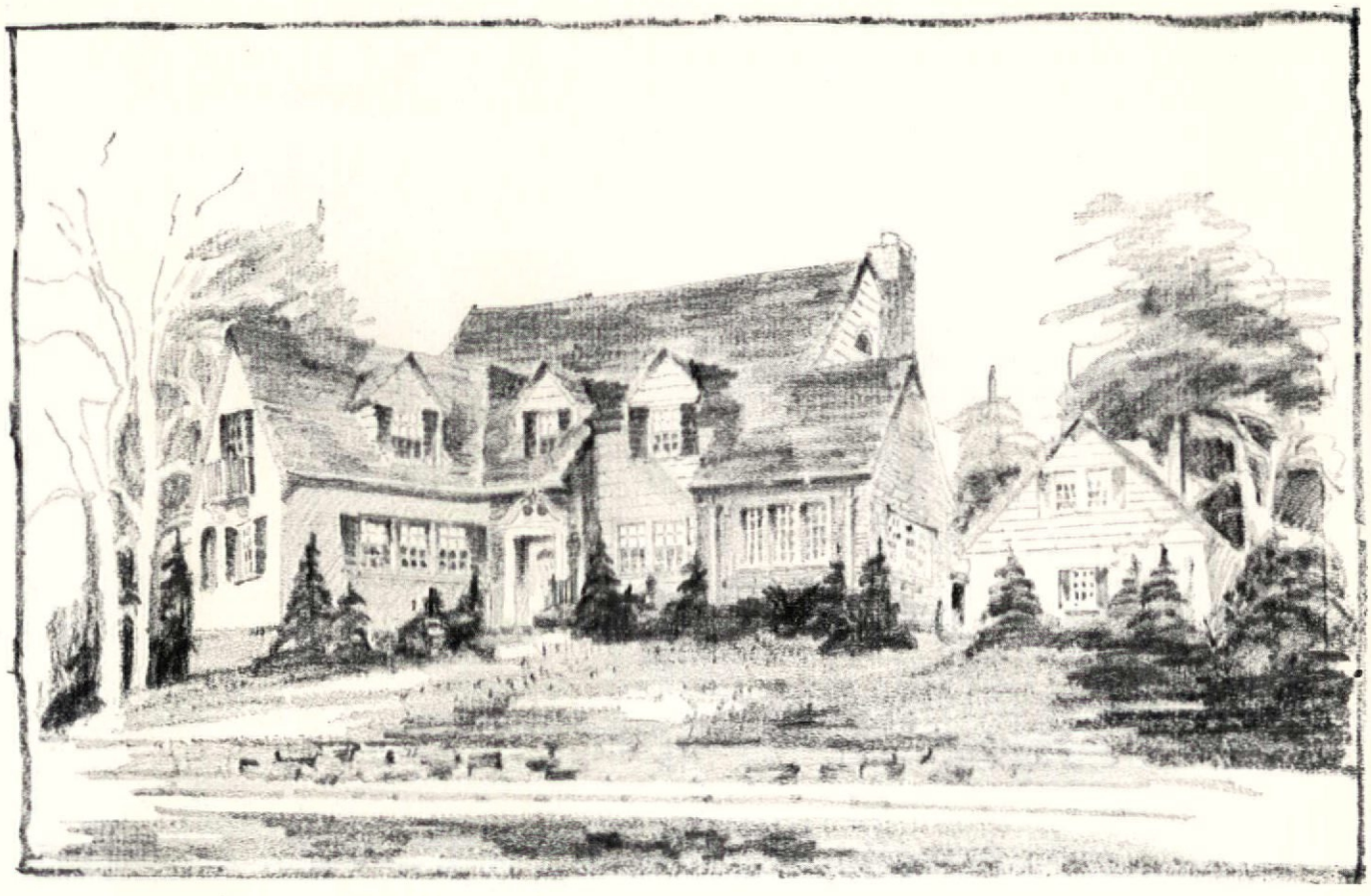

ARCHITECT'S SKETCH OF THE ROLSCREENED RESIDENCE OF JOHN H. VALENTINE — SYRACUSE, N. Y.
Merton Elwood Granger, Architect

. . . "ROLSCREENS of Pella combine new conveniences, added harmony in window beauty, utility and durability — filling a long felt architectural need.

"Our Rolscreen installations have met with definite satisfaction and approval. The liberal Rolscreen guarantee is backed by a company whose business standards have been proven reliable."

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from the old
Waldorf-Astoria

Here is an unretouched photograph of a bedroom door from this famous old hostelry, which has recently been torn down to make room for the 85-story Empire Building.

The door was in the original Waldorf, built in 1893 (The Astoria added next year) and together with the other woodwork in that famous old building, was finished with Murphy Transparent Interior Varnish. This door has never needed any refinishing and doesn't need it now. Thirty-seven years old and still young!

Murphy Transparent Interior is a wonderful varnish—not only to bring out the inherent beauty of the wood, but to last and last beautifully.

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Specifications for Murphy products can be found in Sweets Catalog, Volume C, or write for Murphy Specification Manual.

Murphy Varnish Company

Members of the Producers' Council

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From unretouched photograph

35,000 Sq. Yds. of WILD'S LINOLEUM!

Montgomery Ward & Co., General Office Building, Chicago, Illinois. Linoleum Contractor, Wm. Slater, Jr., Chicago.

THE beautiful new Montgomery Ward & Co. General Office Building, Chicago, has its floors equipped with 35,000 square yards of Wild's 6 mm Brown Battleship Linoleum. This is a record linoleum installation—one of the largest in the United States.

It is a significant fact that this great institution selected Wild's as the ideal floor covering — a fact that is self-explanatory when it is considered that Wild's is the original American linoleum — the first linoleum ever made in this country (1875), and still recognized today as the standard of linoleum quality and excellence.

BLABON-SANDURA COMPANY, Inc.

FINANCE BUILDING PHILADELPHIA, PA.

The graceful grouping of sylvan foliage is suggested by this *Plastic Paint Finish*...

DUTCH BOY...

Textured with a Paint Brush

THIS is the way you can achieve beautiful sidewall decorations that express, in artistic low-relief textures, your own individual conceptions even to the most imaginative details.

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When textured, which may be done with a sponge, paint brush, whiskbroom, graining comb, or in many other ways, the paint is complete as a finish, or may be glazed if desired. It gives a finish that is thoroughly washable and durable.

The illustrations indicate the beauty and originality of the effects that are obtainable.

For further information about white-lead and oil plastic paint, and illustrations of various textures, write to our Department of Color Research and Decoration for the booklet, "White-Lead and Oil Plastic Finishes". Address your inquiry to our nearest branch.

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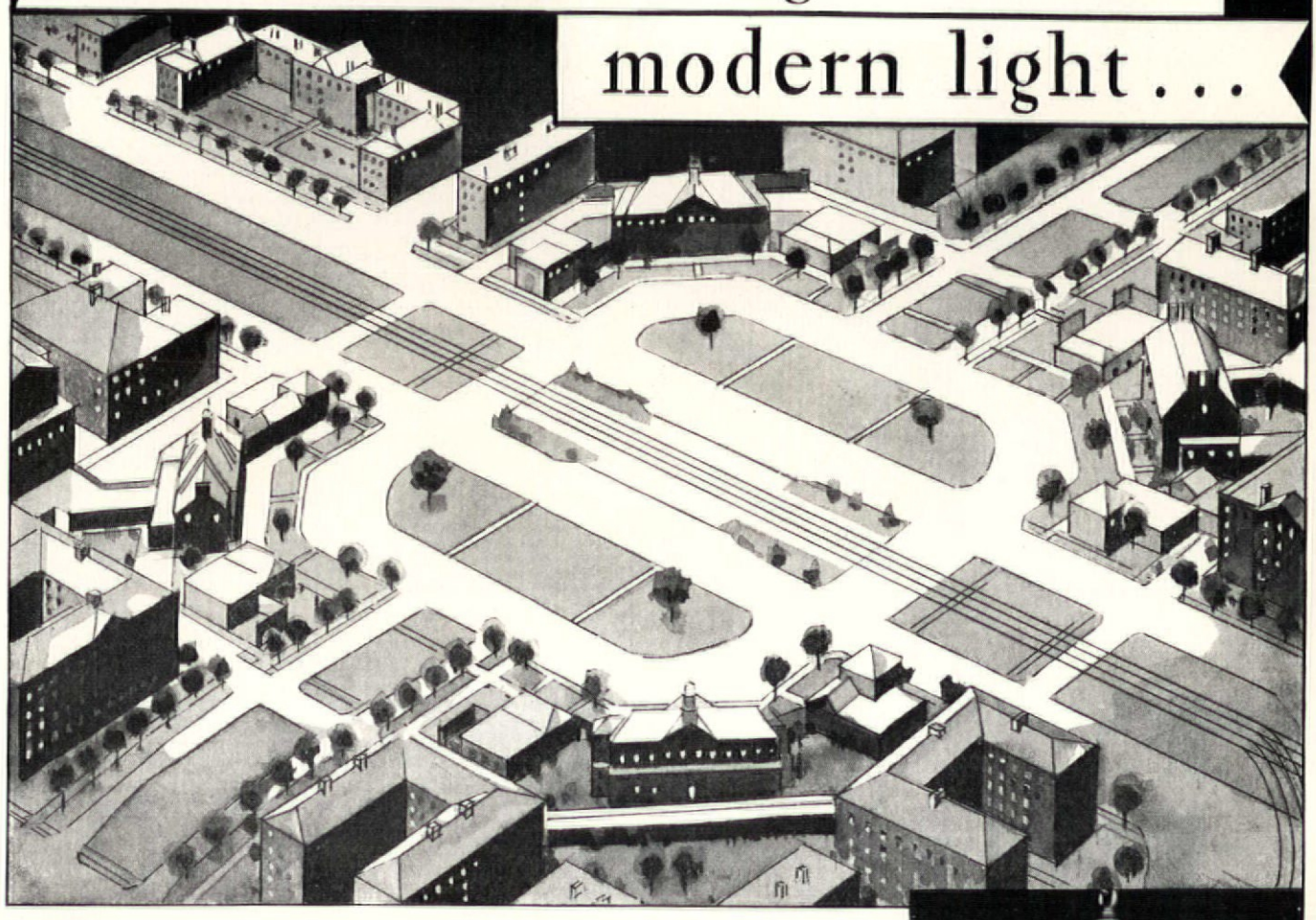
This modern village installs modern light . . .



MOST villages we read about in history or in the alluring advertisements of tourist agencies are the result of "happenstance" and gradual growth without any preconceived plan. This one, on Shaker Heights, near Cleveland, Ohio, was built all at once, exactly as planned by its architects.

Although Colonial in style, the village is strictly modern in its equipment. Monax Globes were chosen for lighting the entire group of business buildings facing the square.

Monax Globes meet all the requirements of commercial lighting. They provide a maximum of well-diffused light, eliminating sharp shadow and harsh glare. Moreover, they are economical to maintain, absorb scarcely any light and are easily cleaned.

Architects and building managers are invited to make use of Macbeth Engineering Service in designing lighting systems for either new or old buildings. There is no charge for the service.

Monax Globe No. 5133. Installed in the business buildings of the Shaker Square Group. Phillip Lindsley Small & Associates, Architects. Installation by Enterprise Electric Lighting Fixtures, Inc.

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Ample light without glare

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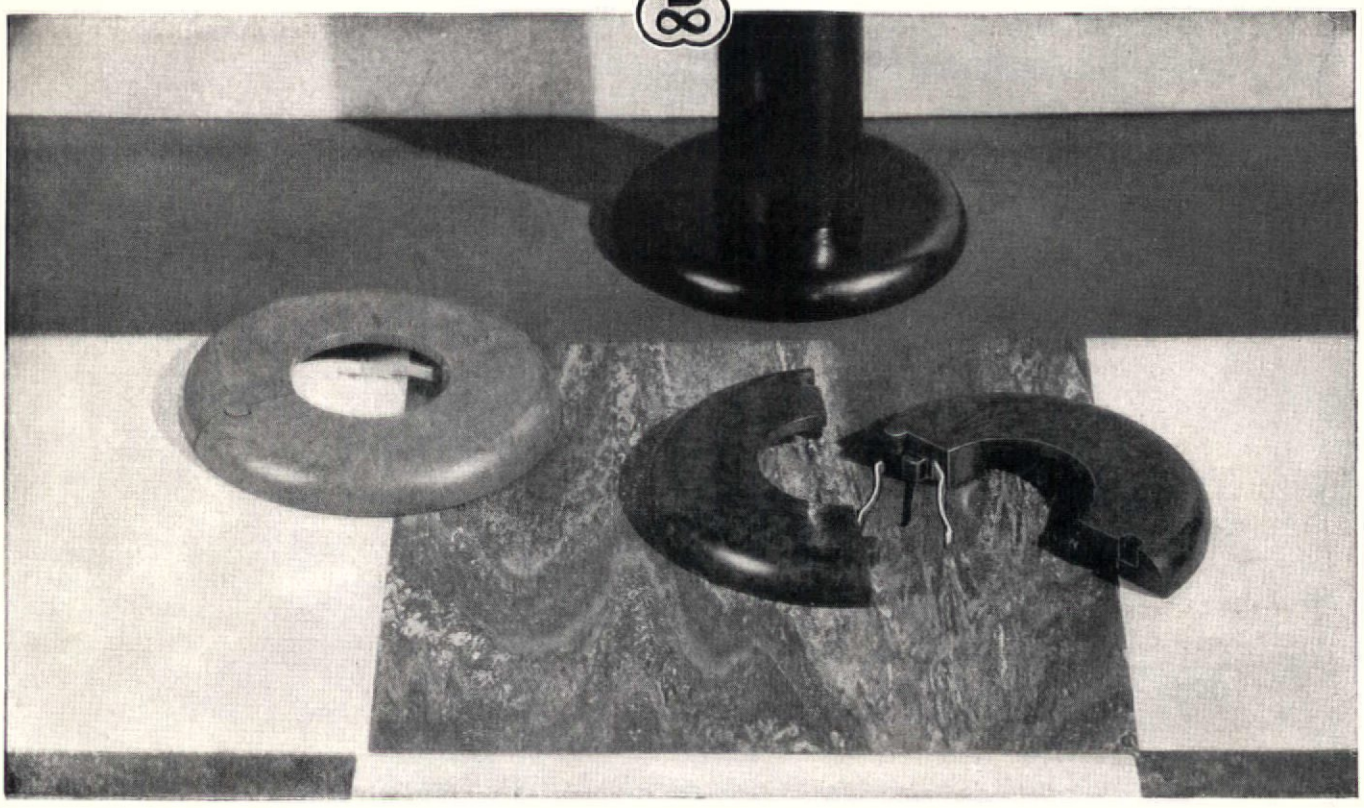

Bakelite Molded floor plates made by Modern Utilities Co., Harrisburg, Pa.

Rustless Bakelite Molded floor plates in colors to match fine floors

SINCE the earliest days of steam heating, old-style floor plates have been an unsightly necessity. Easily dented, quick to acquire a coating of rust, they mar the appearance of many well-kept floors.

The new Bakelite Molded floor plates combine the advantages of lasting good looks and greater utility. Their smooth, lustrous surface cannot corrode and lasts indefinitely. They cannot be dented nor deformed. A choice of several colors makes it possible to match various floor finishes, whether wood or tile.

Made in two interchangeable parts, Bakelite Molded floor plates are snapped around the pipe in an instant. Strong copper-plated springs hold them firmly in place, and they do not slip on the pipe. This makes them available for ceiling plates too, where steam risers are exposed.

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These Books Should Be In Every Draughting Room—How Many Have You?

Guptill's Drawing with Pen and Ink

Like its companion book, "Sketching and Rendering in Pencil," this book is based partly on lectures and instructions given by the author in his classes at Pratt Institute, Brooklyn, N. Y., and partly on his experience as a professional illustrator and as an architectural renderer. The student and draftsman will find it to be a sound and complete guide for the study of pen and ink and its various techniques, even through the use of colored inks.

The chapters follow the work of the student from the beginning with instructions and suggestions about pens, ink, drawing paper, rulers, erasers, etc., up to the final chapters treating of special matters. An attempt has been made to preserve the unity of each chapter so if read by itself it will have a complete meaning, thus making the book valuable as a reference. In addition to an exhaustive text and hundreds of illustrations by the author, the book is embellished by examples of the work of leading illustrators and architectural renderers, such as: Charles Dana Gibson, Aubrey Beardsley, A. B. LeBoutillier, A. T. Bishop, Rockwell Kent, Franklin Booth, John R. Neill, Gerald K. Geerling, John R. Flanagan, Willy Pogany, Bertram S. Goodhue, James Macgregor, Walter Jardine, Edward Penfield, Sydney Castle, David Gregg, F. L. Griggs, James M. Flagg, Robert Lockwood, Charles D. Maginnis, Samuel V. Chamberlain, Walter D. Teague, Sydney R. Jones, Herbert Railton, Louis C. Rosenberg, John R. Rowe, Hubert G. Ripley, Harry Clarke, Ernest Peixotto, and many others.

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Contents: Wrought Iron Craftsmanship; Properties of Wrought Iron; Texture, Legitimate and Otherwise; Tools and Terms; Architectural Design, Motifs and Ornamentation; Economic Aspects in Design; Wrought Iron Finish; The Architect's Drawings; Italian Wrought Iron; Spanish Wrought Iron; French Wrought Iron; Iron Work of Belgium and Holland; English Wrought Iron; German Wrought Iron; American Wrought Iron (Pre-Twentieth Century); Twentieth Century Wrought Iron; Lighting Fixtures and Knockers; Wrought Iron Specifications; Bibliography.

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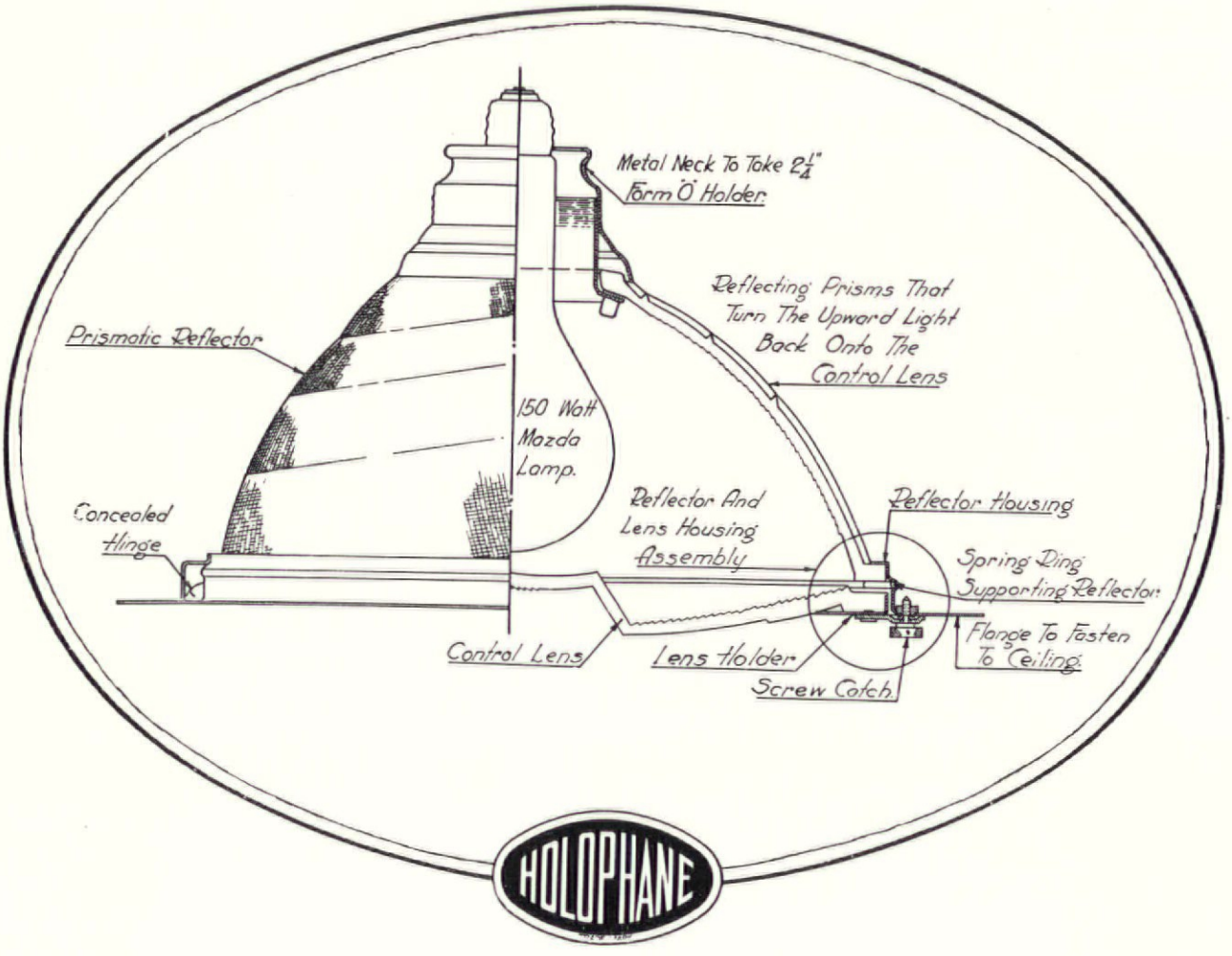

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REVIEWS OF MANUFACTURERS' PUBLICATIONS

THE C. F. PEASE COMPANY, Chicago. "Peerless Model '30' Blue Printing Equipment." Some data concerning it.

Less than a century ago, Sir John Frederick Herchel discovered the principle of blue printing, a simple method of exposing sensitized paper to light projected through a thin, transparent tracing. The original process is fundamentally that of today, but the application is vastly improved. More than all else, the continuous printing, washing and drying machine has lifted blue printing out of the realm of uncertainty and established the "art of making blue prints" on an absolutely thorough scientific basis. The C. F. Pease Company is proud to have pioneered and produced the first automatic continuous blue-printing, washing and drying machine. Swiftly followed progress, and it is a far cry from the early, discouraging sun frame to the new Pease "Peerless" Model "30," continuous blue-printing equipment; a marvel of engineering, combining every feature of high standard production, excellence of prints, dashing speed and surpassing economy of operation and maintenance. This beautifully illustrated catalog will give one all possible data regarding the Pease "Peerless" Model "30" Blue Printing Machine.

THE PEELLE COMPANY, Flushing and Stewart Avenues, Brooklyn. "Peelle Freight Elevator Doors."

The success of a freight elevator system depends in large measure on the doors which are used with it. Ingenuity has provided quite a variety of doors suited for use with elevators intended to serve different purposes, and along with a variety of doors there goes a still wider assortment of appliances and devices for use with them to increase their usefulness or to add to the safety or convenience with which they may be used. It is doubtful, in fact, if even a well informed architect or builder realizes the full extent of this variety until it is brought to his attention in a publication such as this from the Peelle Company. "Elevator door efficiency is the keynote of this catalog. It has been prepared to give complete, but brief, information concerning Peelle freight elevator doors and other Peelle products. It contains descriptions, details and illustrations, and indicates the conditions under which Peelle products are best installed and used. It includes the very latest developments and improvements in Peelle products. The Peelle principle of highest quality in material and construction, of efficiency and economy, of durability and safety, is rigidly maintained in every type of door and appliance. Included in Peelle products are many that are tributes to mechanical genius and craftsmanship."

RICHARDS-WILCOX MANUFACTURING COMPANY, Aurora, Ill. "Richards-Wilcox Door Ways." Fire Doors.

If a devastating fire comes to one's building and wipes out the physical plant, business must be suspended for a period; one will lose some part of valuable good will, since competitors will take this opportunity to annex trade. One will lose competent employes who cannot afford to wait and will take work elsewhere. In fact, an entire smooth-running "going business" will become temporarily demoralized. It will take some time to get back into pace. Fire losses in the United States amounted to $472,224,568 in 1928, according to figures compiled by the National Board of Fire Underwriters. This represents a decrease of $709,000 from the 1927 total, which in turn showed a decrease of $89,000,000 from the previous year. The 1928 total is the lowest figure since 1920. R-W fire-door hardware is inspected by Underwriter's Laboratories, Inc., under direction of the National Board of Fire Underwriters. Richards-Wilcox challenge the world. An R-W trolley will be sent to any responsible manufacturer for free trial, for proving in his own plant its outstanding superiorities under actual working conditions. On the record of the years there is spread an account of property saved by R-W Fire-Doors and Automatic Fire-Door Equipment which amounts in value to millions of dollars. A few instances are cited in this interesting trade publication, edited and published by the Richards-Wilcox Manufacturing Company.

CLAUDE NEON LIGHTS, INC., New York. "Architectural Review of Gaseous Tube Lighting."

Architects experienced in the mechanics of luminous tube lighting have secured the best results by anticipating such installations in their original plans. In some instances, the placing of transformers, wiring outlets and supports where necessary can be facilitated. The design of the lighting can be held in comformity with the character of the building better when it is given advance thought. In considering the possibilities of Claude Neon luminous tubes, these classifications, while of necessity incomplete, may be helpful: Architectural Outlining of Buildings; Displays Featuring a Name; Interpretative Designs; Applique Lighting; Building and Store Fronts; Marquee Decorations; Aëronautical Roof Beacons; Sub-aqueous Lighting; Garden Illumination; Interior Lighting. A booklet called "Architectural Review of Gaseous Tube Lighting" has been published by Claude Neon Lights, Inc., setting forth the wide variety of lighting possibilities with luminescent tubes. It shows the various manners in which architects in many cities are utilizing this type of decorative lighting for different purposes and with success.

THE GENERAL IRON WORKS CO., Cincinnati. "'Hot-Kold,' a Most Efficient Heating System." Data regarding it.

In these modern days of swiftly moving scientific discovery, the ink may not be dry on the paper announcing an achievement as a world's record when the news of another record breaker flashes over the wire. "Hot-Kold" marks an epoch in heating, its economy of operation and installation opening to thousands the advantages of healthful, care-free automatic air conditioning. Today "Hot-Kold" is the result of seven years of scientific research and development. "Ordinarily, the General Iron Works Co. would apologize for reproducing a testimonal letter in its brochure. Most of them mean nothing, and the most worthless product in the world has at least some quality which will bring forth praise from someone. The yokel, bowling along the smooth highway in his flivver, imagines he is enjoying the ultimate in motoring because he has never been behind the wheel of a Rolls or a Packard. To those who have never enjoyed the finest of completely automatic gas heating, the old fashioned sooty, dusty, gravity system may seem ideal. The General Iron Works Co. therefore present with pride the judgment of those who know all forms of heating from wide experience." This very interesting catalog, published by the General Iron Works Co., contains illustrations which describe the system.

JOHNS-MANVILLE CORPORATION, 292 Madison Avenue, New York. "Johns-Manville Tile Flooring, Type A."

There is no part of a building more important than the flooring. It is actually the only part of the structure that receives constant physical, frictional wear. In the modern building, club, hospital, bank or school, floors must not only be serviceable and long-lived, but attractive in appearance. For years the choice of flooring materials has been restricted to either a decorative type, lacking in outstanding durability, or a utilitarian floor, unattractive in appearance. Today, in J-M Tile Flooring, one finds a flooring of resilient type that has unusually long life, is easy to maintain, and inexpensive to buy. At the same time, however, its surface is attractive and offers a score of decorative color combinations and designs. A number of factors should be taken into consideration when selecting a finish flooring. This is particularly true when large areas are to be covered and when the care and maintenance must be left to general service around the building. The principal points to be considered before specifying any particular kind of flooring are the type of flooring applicable to service; cost; wearing qualities or durability; sanitary and waterproof features; ease and economy of maintenance; comfort and resilience; appearance or decorative effect; resistance to fire, stains, etc.; ease of repairs and extension, if necessary. This booklet, published by the Johns-Manville Corporation, describes the material.

IN ITS WINDOWS *lies much of the charm of a home*

It is a fact — and architects everywhere recognize it — that in the windows lies much of the charm of a home. ¶ It is also a fact that the basic beauty of a window is in the glass it contains. ¶ The overwhelming preference for Libbey-Owens glass — as evidenced by the thousands of fine residences, as well as other buildings, glazed with Libbey-Owens — is therefore significant. ¶ It means that architects have found that the rich, sparkling lustre of Libbey-Owens glass adds to the beauty and attractiveness of the window and therefore to the charm of the home. ¶ To achieve the utmost in window beauty, always specify Libbey-Owens "A" quality glass. Each light bears the familiar L/O label—known everywhere as the symbol of uniform high quality. Libbey-Owens Glass Co., Toledo, Ohio.

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REVIEWS OF MANUFACTURERS' PUBLICATIONS

SOUTHERN PINE ASSOCIATION, New Orleans. "And Now Dry Lumber." A brochure on lumber production.

In the production of building material of almost every type there has been, during the past few years, critical research into manufacturing processes to make possible the securing from a material of all the value which it can be made to give. This research has been extended to include study of the adapting to use raw materials, and in no department of all this effort has research been more carefully conducted than in the department which has to do with the production and marketing of lumber. This brochure, for example, deals with the drying of lumber, a matter of much greater importance than might appear at first thought. "For years the principal aim of the producers of Southern Pine who subscribe to the Southern Pine Association has been to supply consumers with the particular grade and species of this lumber best suited to requirements in use. With the perfection of grades and manufacture, accruing from careful supervision by expert Association inspectors, there remained but one barrier in the efforts of these progressive manufacturers of Southern Pine to furnish lumber users with an entirely satisfactory product. This barrier was the excessive moisture contained in much of the lumber purchased. From the standpoint of efficiency in manufacture, economy in shipping, and for the conservation of the timber supply, the careful producer of Southern Pine has always endeavored to properly dry his product. This is particularly true of the mills subscribing to the Southern Pine Association. Too much Southern Pine, however, is produced by manufacturers not so careful, and it accordingly became necessary for the leaders in the industry, after long study and research, to incorporate in the standard grading rules for Southern Pine lumber, definite limitations in the way of maximums of moisture content permissible in the different grades and items. A study was conducted by engineers of the Forest Products Laboratory at 20 mills, representing both large and small producers of all species of Southern Pine. The purpose of the study was to ascertain what constituted the best drying practices, because the objective was to bring the whole industry up to this point of efficiency rather than have the entire product lowered to the level of the inefficient and careless shipper of green lumber. Very little thought is given by lumber users to the time and attention devoted by the careful manufacturer in converting the lumber coming green from the saw into a mature product suitable for use requirements. Drying processes have kept in step with the times. There are, of course, fundamentally two methods of seasoning,—one that is natural, and the other artificial, in the sense that aid is given to nature. The first of these is 'air drying'—the second 'kiln drying.' Since the first log was sawn, drying has been a primary subject for study by lumbermen. With the enormously growing demands of construction upon the lumber industry, there have arisen from time to time, problems of widely varying nature, most of which have been successfully solved by the lumber manufacturer. To the present day constant studies of both air drying and kiln drying of lumber are in progress, and, as new methods prove to be more efficient, they are put into operation. In their effort to deliver a suitably dried product, Southern Pine manufacturers have expended and continue to expend large sums of money. Great stacks of lumber are piled with meticulous care in the open air in such a manner that proper natural circulation results. Under this influence excessive moisture in the lumber evaporates, each cubic foot of air which passes through and around the stack taking away its proportion. Days stretch into weeks and months, and finally the moisture content of the wood comes into equilibrium with that of the surrounding atmosphere, and the wood is said to be 'air dried.' The rate of drying, of course, varies with the time of the year, species of wood, size and form of pieces, and method of piling. Certain of these factors may be controlled or utilized to hasten the drying process and lessen the likelihood of defects appearing in the material. The artificial method of seasoning is known as 'kiln drying.' As the name implies, it means the placing of lumber in a heated compartment for varying periods of time. The heat of smoke was once used to hasten the drying of lumber within enclosures, but today steam-heated air is forced about and through the stacks, with controls of humidity and temperature within the rooms. Much study has been given to this forced method of seasoning, and it was only after years of experiment that present-day efficiency was attained. Millions of dollars have been spent in arriving at this point, and Southern Pine mills, equipped as so many of them are with the latest improved devices for the production of properly dried lumber, have led the way. The resultant product has been of great benefit."

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY. "Westinghouse Commercial Lighting Equipment."

Lighting equipment suitable for commercial interiors of any type is illustrated and described in a catalog published by the Westinghouse Electric & Manufacturing Company. While additions have been made and new and interesting developments are shown for the first time, there is nothing experimental, nothing untried and untested, and nothing for which a definite lighting requirement does not exist. The Westinghouse Sollux retains the place on the market that its excellence in design and workmanship has won for it. This year, one addition to the Sollux line has been made. The new "Sollux Corridor Unit" is a ceiling type somewhat more decorative than the ordinary hanger, and yet not as ornate as the "Ornamental Sollux." There is a demand for this luminaire, and the Sollux Corridor Unit will be welcomed in many instances. The new luminaire unit is one of the most interesting lighting developments in years. It gives a soft, restful, semi-indirect illumination. A part of the light is diffused through the lower part of the globe, while the greater diffusing qualities of the glass, which are in the upper part of the globe, direct the greater part of the light against the ceiling to provide indirect light at the working plane. The "Sollaire" has been brought more closely to a parallel with the Sollux line by the addition of the new "Ornamental Sollaire," available in suspension, ceiling and bracket types. These new units, added to the Embossed Bronze Sollaire, introduced in 1928, the regular Sollaire, give the line a comprehensiveness that meets every requirement. "Sollite Luminaires" are available for use where a globe contour somewhat more modernistic in trend is desired. Kitchen units and the "Chromilite Window Floodlight" add to the completeness of the line. For any commercial lighting requirement, this Westinghouse equipment can provide correct lighting from luminaires that are artistic in themselves and adapt themselves attractively to any surroundings with which they may be used. In price they compare favorably with that of any equipment on the market, when distinctive features and quality of the workmanship and material are considered.

HENRY KLEIN & CO., INC., 40 West 23rd Street, New York. "Driwood Mouldings in Ornamental Wood, and Mantels."

The ingenuity and resources of manufacturers of certain building materials have made possible use of many excellent details at no excessive cost. This is particularly true of interior woodwork, for several manufacturers are now producing excellent wood trim,—door and window architraves, mantels, cupboards and cabinets of various types, and the other details which mean so much in designing good interiors, all these designed and made under the direction of architects widely known for their good taste. These pages of THE FORUM have several times called attention to the fine assortment of mouldings of different types produced by this particular firm, and now the house issues a portfolio of 16 plates which show the use of these mouldings in creating wall paneling, wainscots, bases, and friezes, and also use of the excellent wood mantels which the firm is offering. These mantels have been carefully reproduced from examples in old houses in various parts of the district which formed the original American states, or else they have been studied from examples which were originally in such houses but are now installed in different museums. If one small objection were to be made to arrangements so excellent it would be to the use of brick,—and apparently brick of rather rough textures,—as facings for fireplaces at which use is made of mantels of highly refined and delicate design. Thus there is given a contrast which seems to be rather incongruous and which would be much improved by use of marble or even of painted plaster instead of brick. Still, to make any such suggestion seems to be rather ungenerous, and after all the use of brick seems rather to emphasize the architectural excellence of the woodwork, which is the chief consideration.

SUNLIGHT *for* SCIENCE

Hand in hand with architects and scientists, the American Window Glass Company continues its campaign for "More and Larger Windows." The architect has demonstrated how large wall areas of glass can be employed to enhance the appearance of a building. The scientist has proved his claim that health and happiness dwell in the structure that is "open" to a full flood of daylight.

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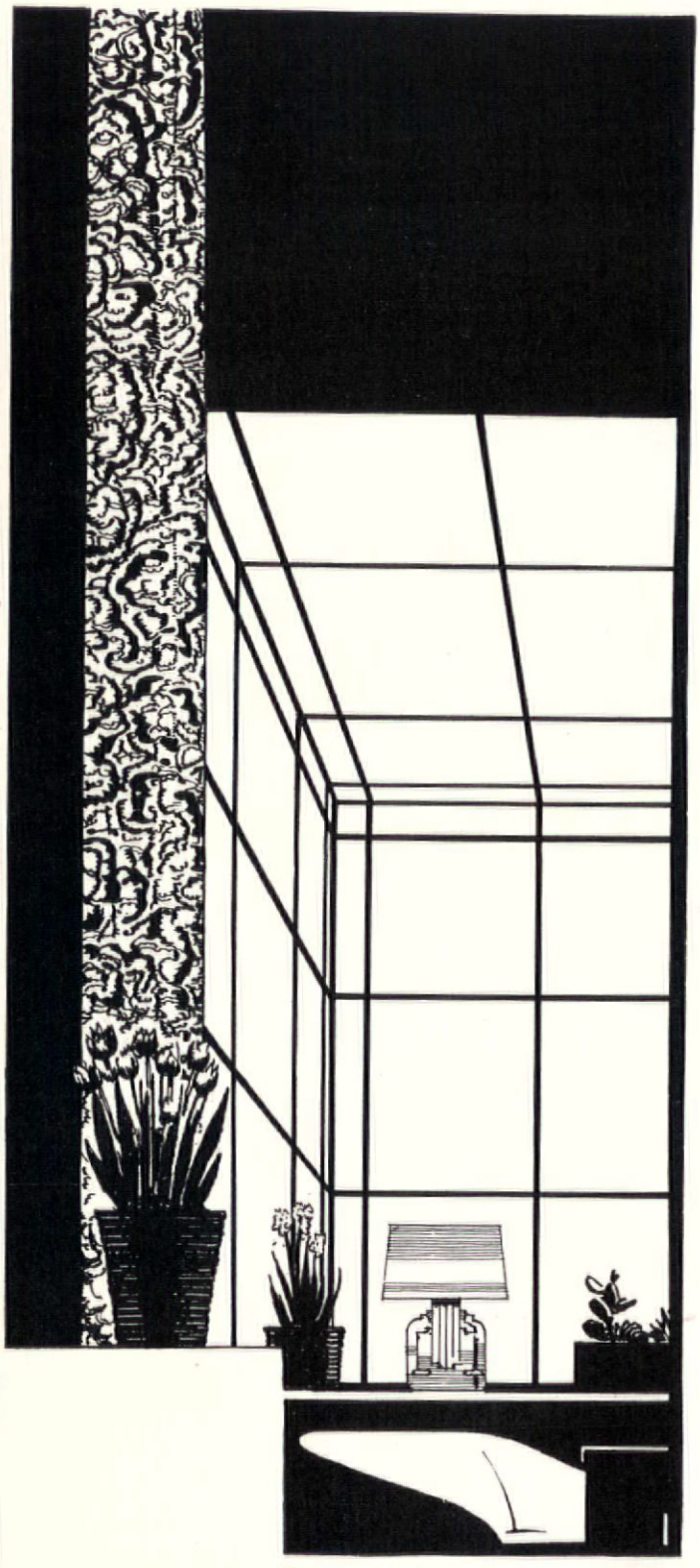

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Windows designed to invite sunlight should also be windows that let the sunlight in—all of it, including the vital ultra-violet rays that build and protect health. So, in specifying ultra-violet ray glass for solariums, sun-porches, nurseries, gymnasiums and similar purposes, specify a glass that you can be absolutely sure will transmit a major portion of those vital rays—and will do so permanently.

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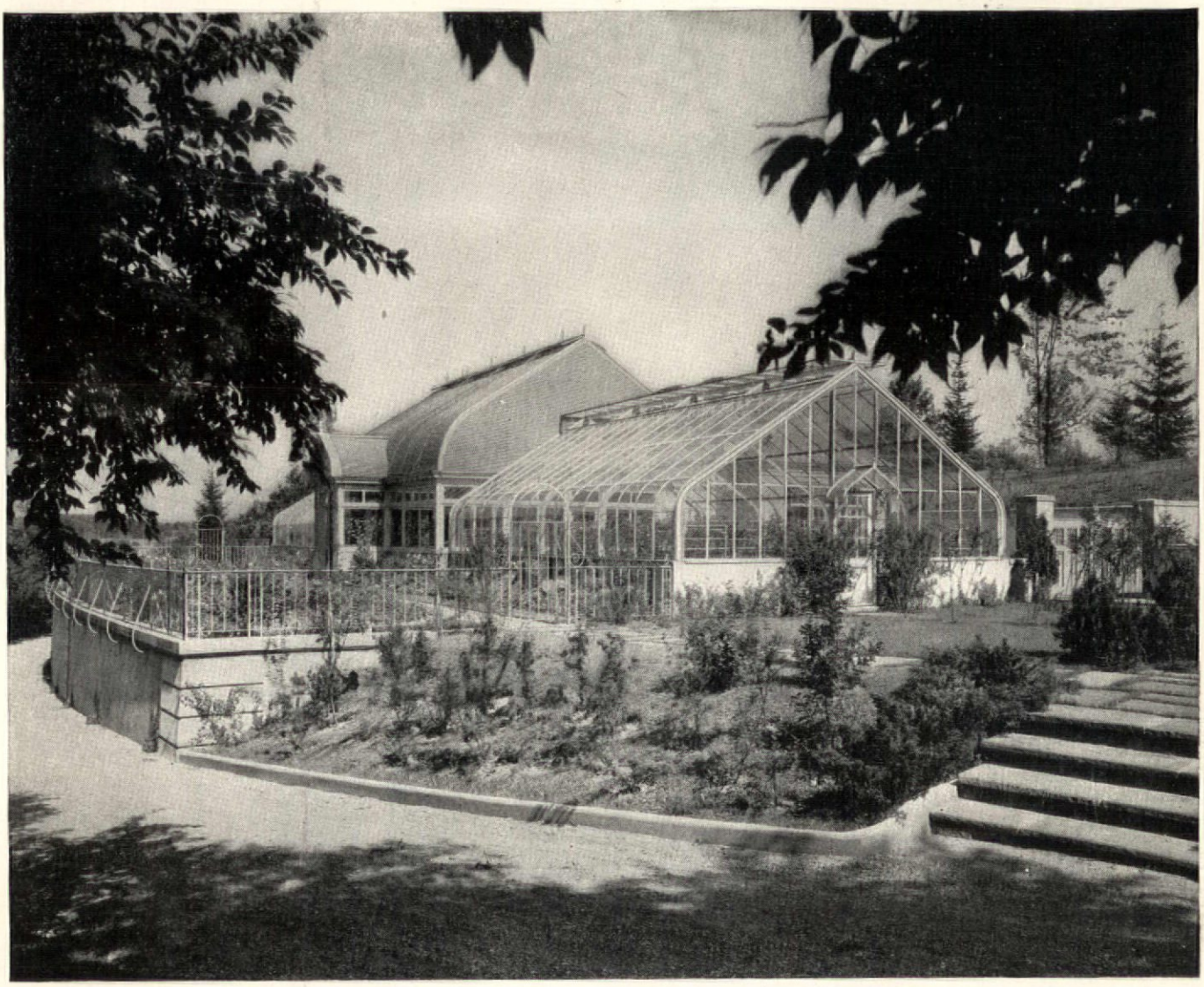

Lutton Solar V-Bar Greenhouse on estate of W. O. Briggs, Birmingham, Mich. Pitkin & Mott, Landscape Architects.

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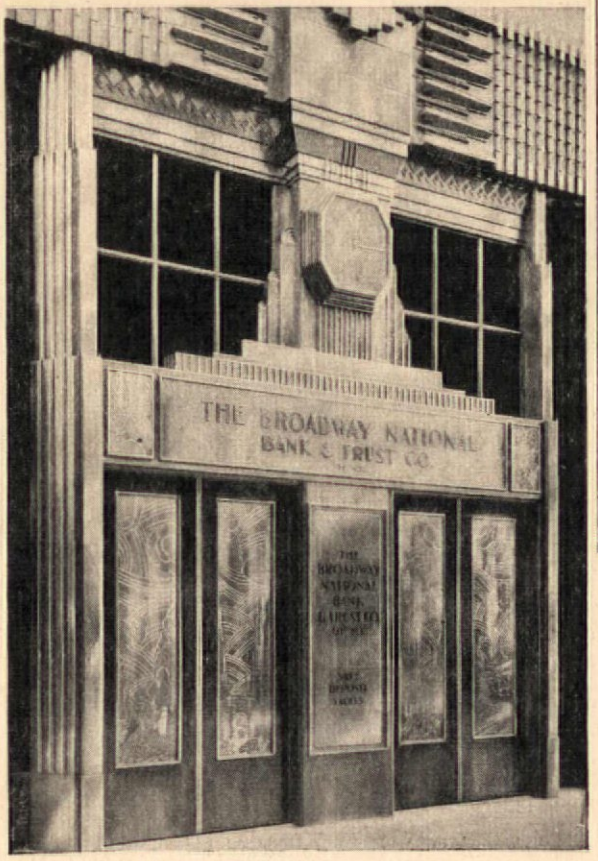

THERE'S no better place than Fifth Avenue, New York, to watch the trend of popular favor—in fashions, in automobiles or in architectural decoration. On Fifth Avenue are situated some of the most impressive bank and office buildings American architecture has created. You may look to Fifth Avenue for inspiring suggestions for modern metal decoration.

On the entrance to the Broadway National Bank & Trust Company, at the corner of 29th Street, you will see etched Monel Metal panels inserted in bronze doors. You will see a Monel Metal clock dial. Inside the bank, you will find combinations of Monel Metal and bronze employed for counter screens, check desks, grilles and other trim.

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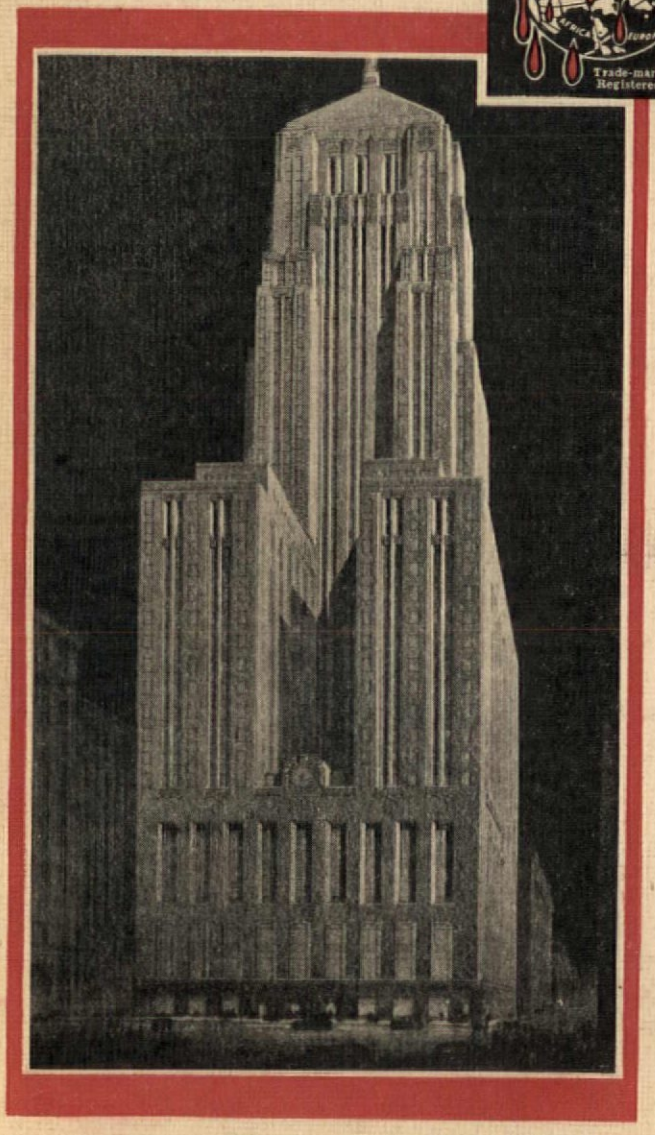

Chicago Board of Trade Building

All interior wood trim finished with Opex Lacquers

THE Chicago Board of Trade is known the world over and the new building is a monument to modern architecture. The interior trim strikes a new note in decorative beauty. While the typical office trim is of mahogany, corridor trim is finished in contrasting colors. Ebony Finish Opex is used for door casings which are beautifully set off by the maple door panels and transom stained in silver gray and finished with Opex Clear Lacquer. Matthews Bros. Mfg. Co., Inc., of Milwaukee, furnished this beautiful woodwork.

Opex Lacquers were selected for this building because they preserve the natural beauty of the wood and form a tough, enduring film that is not easily marred or scratched. Speed of application was another factor in their choice. Opex sprays on, or can be supplied for brushing. It levels quickly and forms a flawless surface before dust can settle into it. Maintenance costs will be kept low because of the ease with which Opex surfaces can be kept clean and bright. They remain unaffected by caustic soap solutions.

Countless color combinations are available to the architect who specifies this finish. For complete information, write us on your letterhead. For immediate reference, turn to pages C-3423 to C-3452 inclusive, in the 1930 edition of Sweet's Architectural Catalog. The services of our Technical Staff are promptly procurable for consultation on any finishing problem. The Sherwin-Williams Co., Dept. 706, 601 Canal Road, N. W., Cleveland, Ohio.

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