

AUGUST, 1935 • MIAMI BEACH HOUSES • CONCRETE IN DESIGN • TIME-SAVER STANDARDS

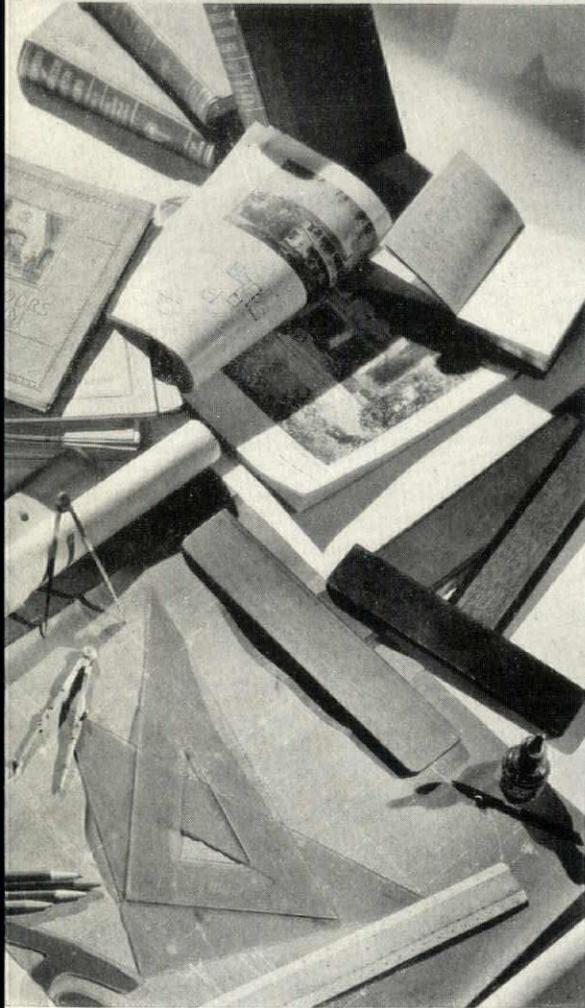
# AMERICAN ARCHITECT

## HIGHLIGHTS OF THE EDITORIAL MONTH

No precisely written definition of "American Architecture" has so far come to our attention. But in Miami Beach, Florida, architects are cleverly expressing the phrase in terms of building design. To prove the point we have included in this issue FIVE MIAMI BEACH HOUSES. None are wholly "traditional" nor entirely "modern." Each contains elements cherished by both schools, but so well are they adapted to conditions of site and use that their combination assumes the characteristics of an American idiom in design. . . . People in Miami Beach live comfortably. And from some of their houses we have illustrated architectural CONTRIBUTIONS TO COMFORT that might well prove practical in any locality. . . . This month's article in American Architect's Materials in Design series deals with CONCRETE. As others have done, it discusses the possibilities and limitations of an important building material. With it are special plate illustrations of Form, Texture and Color in concrete. . . . An 8-page section of TIME-SAVER STANDARDS, dealing with reinforced concrete, inaugurates a new, practical publishing service. The name is descriptive of a technical service to architects which presents, each month, a series of simplified data on important elements of building construction, equipment and planning.

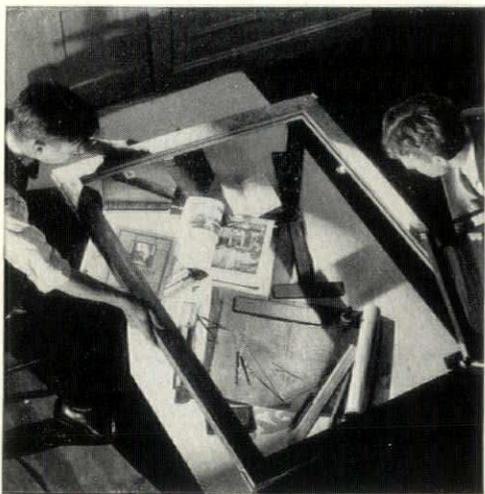
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A SELECTION of articles commonly found in an architect's office was strewn about on a tabletop; a large piece of L·O·F Quality Window Glass, securely clamped in a wooden frame, was suspended over them; a photograph was taken AT AN ANGLE, looking down THROUGH the glass at the tabletop. The frame holding the glass was then removed and a second photograph was taken with NOTHING between the lense and the articles on the table. The two photographs are herewith reproduced. Despite the acute angle at which they were taken, the many straight lines are so faithfully reproduced *through the glass*, that it is practically impossible to tell which picture is which.

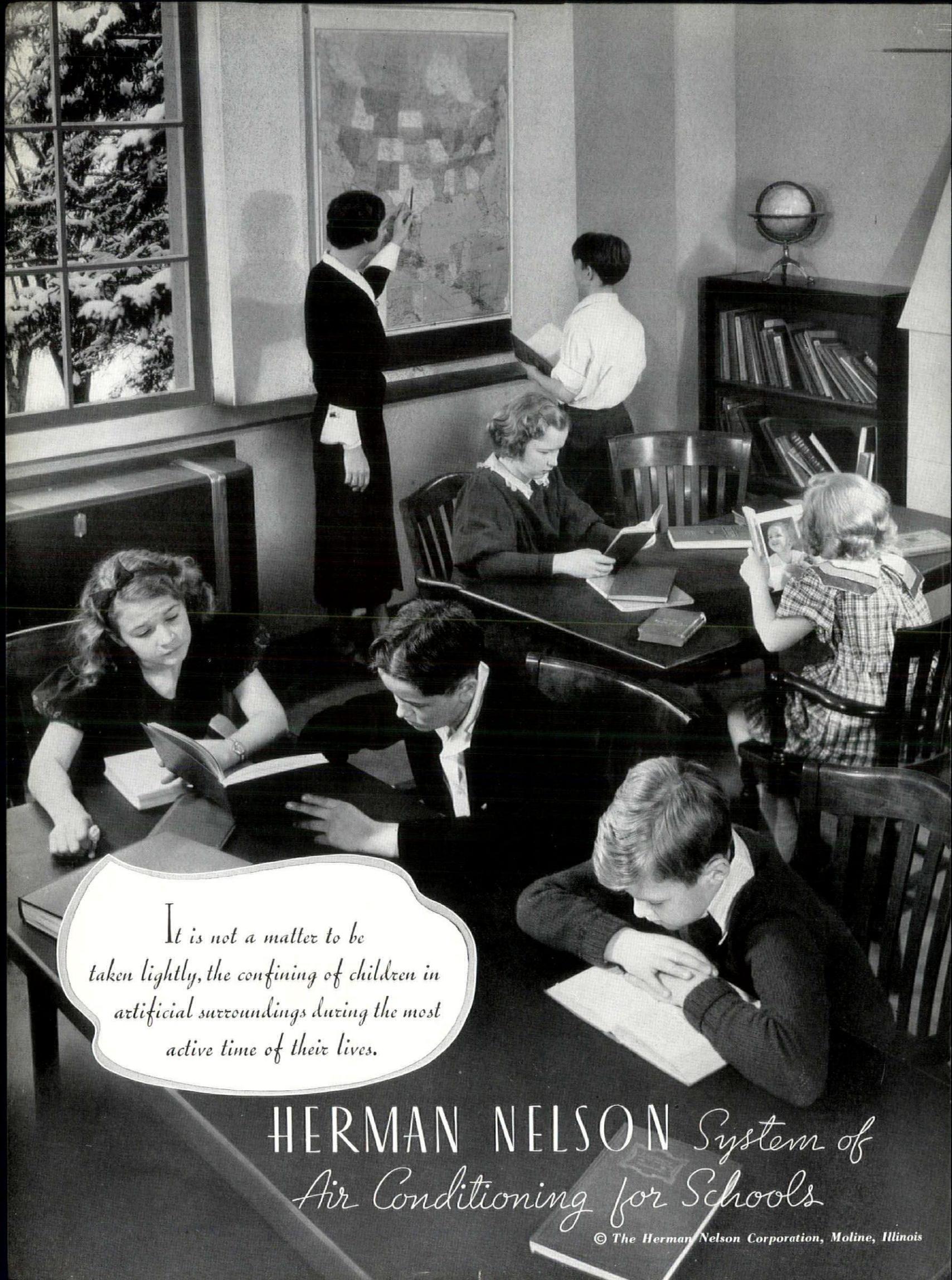


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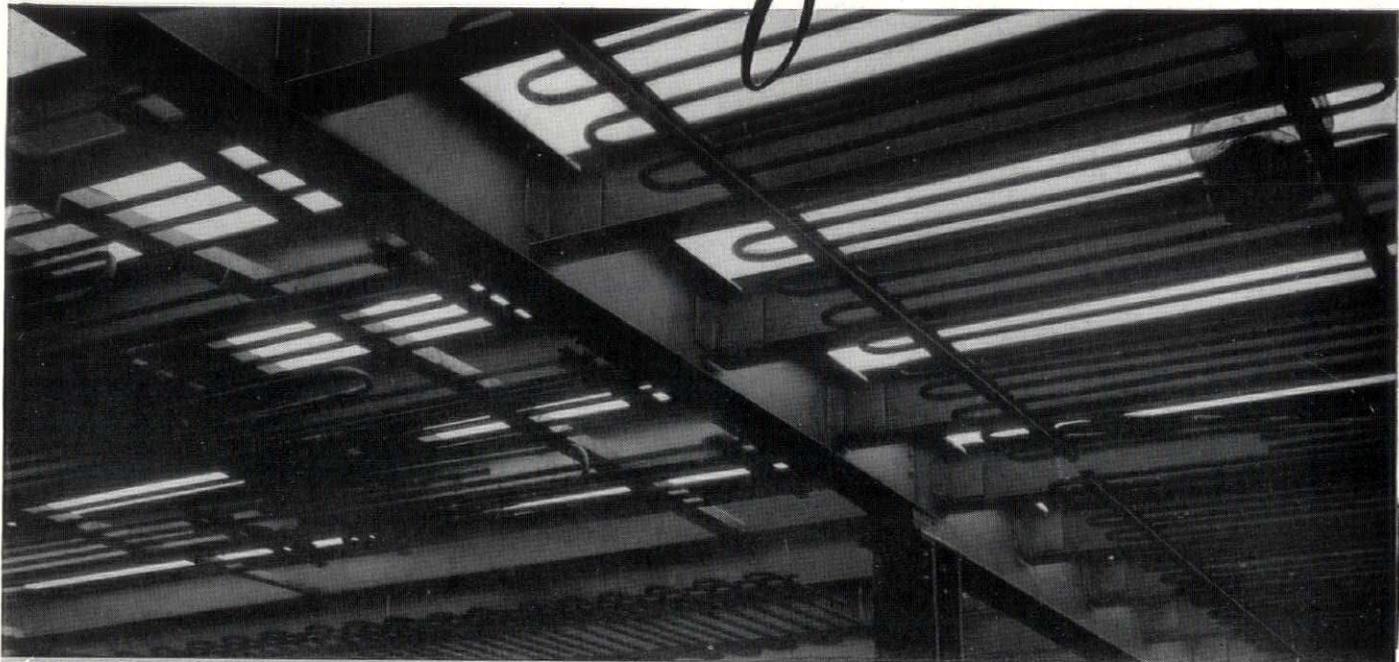


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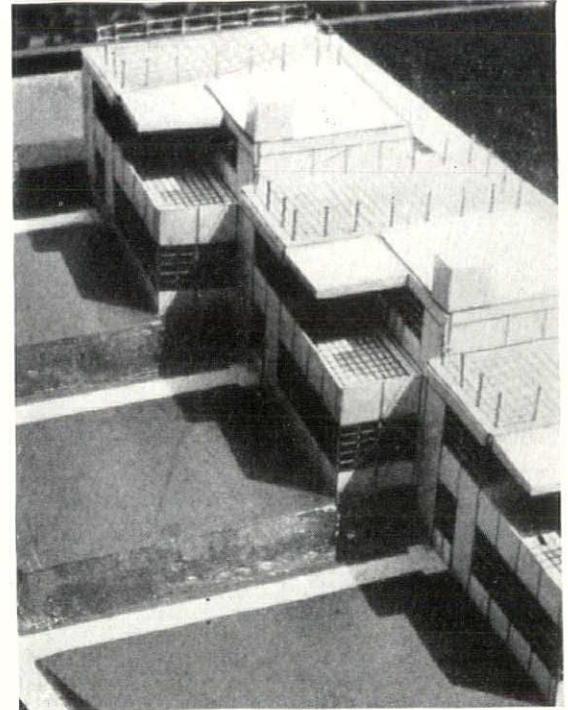
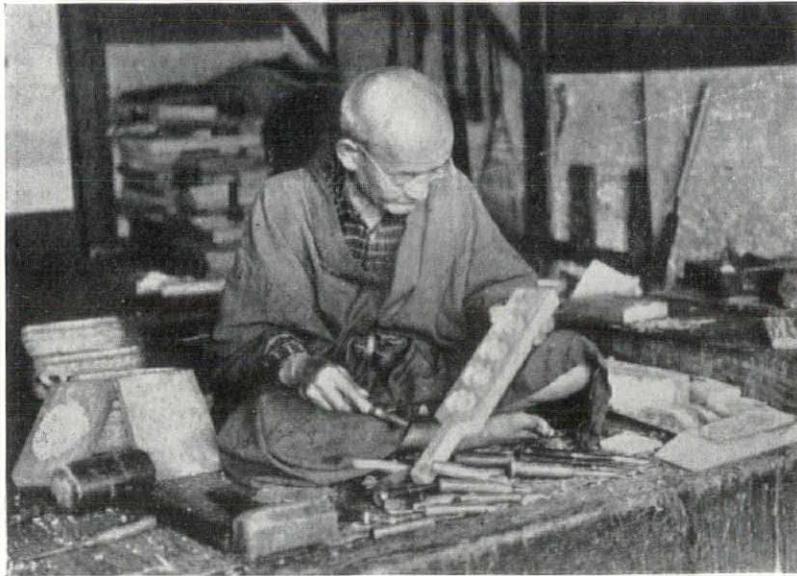
FROM



LINDE

UNION CARBIDE

American Architect, published monthly by International Publications, Inc., 572 Madison Avenue, New York, N. Y. \$3.00 per year. Canada, \$4.00; Foreign, \$5.00. Entered as second class matter April 5th, 1926, at the Post Office, at New York, N. Y., under the act of March 3rd, 1879. Issue 2636, dated August, 1935.



Above, Japanese craftsman at work, illustration from "Design in Art and Industry." Right, model of group-housing development from "Rehousing Urban America"

### DESIGN IN ART AND INDUSTRY

By Ely Jacques Kahn. Published by Charles Scribner's Sons, New York. Illustrated; outlined; 204 pages, size 7 1/2 x 10 1/2. \$3.50.

NOT only a stimulating book, one that will prove provocative to any one alive to present day difficulties of educating for the Arts. The author calls it a "record of an adventure . . . the quest of design, the search for data to define its essence, to evidence its variety, and to demonstrate the strange way it colors every activity of life."

Mr. Kahn in his undertaking circled the globe, found his greatest enlightenment and inspiration in the Far East—"where design seemed to mark every movement of men and women" . . . where the problems of many countries—particularly of Japan—are strangely analogous to our own. To most people of the East, however, education is simply the preparation for a complete and rich existence.

"In our own situation, many queries seem to be admissions of uncertainty as to what we know or want to know. We quarrel about styles, taste, and modernism, chiefly because of the artificiality of standards which cause us to do a great deal of explaining."

The essence of this book is in the nature of a panacea, as well as a stimulant to creative thinking. While our review does not pretend to treat

of the minutiae of Mr. Kahn's wide explorations, it aims to suggest that here is a work which the philosophical as well as the practical educator and artist should possess. An unusual table of contents provides a complete outline of the subject matter. Illustrations are copious, the arrangement of material exemplary.

### REHOUSING URBAN AMERICA

By Henry Wright. Published by Columbia University Press, New York. Illustrated; indexed; 161 pages, size 8 1/4 x 11 1/2. \$7.50.

HERE is a book that is concerned with the whole problem of slum-clearance and rehousing—a problem characterized by the author as "the end product of a series of unfortunate though partially inevitable processes." Not only does he discuss what should be done; he outlines a possible method of doing it in a manner that will stimulate anyone interested professionally in the rehousing movement here and abroad.

Mr. Wright, who is Director of Town Planning at Columbia University and a prominent architect, has produced a book that is, in effect, both a survey of contemporary urban planning and a manual of housing technique. Divided into three parts and replete with photographs, plans and reference tables.

*Rehousing Urban America* takes up, in part; *The Blight of Our Cities*; *Where Shall We House?*; *Visualizing the Possibilities of Rehabilitation*; *The Case for Group Housing*; *Theoretical and Practical Examples of Group Housing*; *The Apartment Dwelling*; *Evolution of Modern German Housing and Community Planning*; *Procedure in Large-Scale Planning*; *Alternate Methods for Rehabilitation*; *Aids to Plan Study*; *New Methods of Construction*; *Quality of Living Space in Low-Cost Housing*; and *Analytical and Cost Studies from Various Sources*.

### ADVERTISING LAYOUT AND TYPOGRAPHY

By Eugene de Lopatecki. Published by the Ronald Press Co., New York. Illustrated; indexed; 133 pages, size 5 3/4 x 8 1/4. \$3.00.

BY treating in a comprehensive and effective manner the underlying principles of composition common to all graphic arts, the author strikes at the root of the advertising layout problem. In that the book includes chapters on typography and hand lettering, as well as presentation, it should appeal to many architects. Those who, as organization representatives, are concerned with institutional advertising will undoubtedly find it useful.

(Continued on page 101)



*In ruby and brown on a field of blue Armstrong's Linoleum, the compass in this gay recreation room floor in a Memphis home repeats the nautical spirit of the other furnishings.*

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rooms—

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## *Armstrong's Linoleum Floors*

# The Readers

## Have a Word to Say

### • PLATE FILING

*Editor, AMERICAN ARCHITECT:*

OUR Committee on Plate Filing has, with the help of the American Institute of Architects, circularized the chapters of the Institute to determine the number of architects and the percentage of architects who file plates and are interested in having the magazines made up in such a fashion that the plates can be easily and intelligently filed.

Our response was very gratifying. We heard from twenty-two chapters, representing 484 votes. Of those chapters, twenty were in favor of plate filing. In one chapter the vote was tied, and one chapter was indifferent. Of the 484 votes cast, 462 votes were in favor of filing plates and having material published so plates could be filed. Twenty-two did not care one way or the other. This gives a percentage of 95.4 per cent in favor of filing plates.

With so large a percentage of the architects in favor of plate filing, it seems to us that more attention should be paid to this phase of publishing the architectural magazines than to the appearance of the magazine.

Of all the architectural magazines with which we are familiar, *AMERICAN ARCHITECT* publishes its plates in a manner best adapted to the architect's use. You are to be congratulated in this respect, and I hope you will always continue the splendid co-operation you have given the architects in the past.—*W. H. Tusler, A. I. A., Minneapolis, Minn.*

### • MILD CRITICISM

*Editor, AMERICAN ARCHITECT:*

HAVE before me the May issue of your magazine wherein appears the article accompanied by photographs of what you choose to term "metal work" (!) This is, I am compelled to say frankly, the most amusing article I ever came across, written by one who really does not know what good metal work is, and who does not realize that the accompanying photographs, although carried out in metal, do not represent even good commercial metal work. As I understand it, these articles are published for the purpose of educating your readers, but I wonder in which direction?

Personally, I believe that people

should not undertake writing on subjects they know so little about.

I hope you will take my "mild" letter in the proper spirit and that you will consider my criticism quite helpful.—*Samuel Yellin, Philadelphia, Pa.*

To a Michelangelo, a Cezanne might be a daub.—Eds.

### • HEART OF THE PROBLEM

*Editor, AMERICAN ARCHITECT:*

IN answer to your question and request on page 32, April *AMERICAN ARCHITECT*, we say emphatically "Yes" and congratulate you on your efforts to start a worth while movement of this kind. It has been needed.

May we make one or two brief observations based upon twenty years' experience. We believe that local architects should have very little voice in directing policies. The local architect is so close to the problem of landing contracts that it is almost impossible for him to free himself from local pressures, combinations and local political influences, etc.

City Boards of Education and County Boards of Supervisors are for the most part educated men. They will not, however, listen seriously to objections of local architects regarding matters under their control. They feel that such objections are colored by the architect's prejudice. But the Boards and similar bodies would listen to National or Regional authorities.

Public education of the architect's functions is needed, not only by the building public generally, but by public bodies and even by University officials who control building operations.

The Federal Housing Administration is doing excellent work by stressing the point that architectural service is desirable. But it cannot go too far in this. It cannot, in a few months, educate the building public. But architects with properly co-ordinated effort could accomplish wonderful results. Public officials who have charge of large building operations will respond quickly if the matter is intelligently and forcibly presented.

Every architect should welcome an opportunity of supporting such a worth while movement. It is, in our opinion, the heart of the problem.—*Edward Glass, Glass & Butner, Architects, Fresno, Cal.*

### • MUST NOT FAIL

*Editor, AMERICAN ARCHITECT:*

ABOUT the Public Relations plan suggested on pages 62 and 63 of your June issue. Some time ago Pencil Points undertook some sort of plan along these lines. I remember we sent them a check which was later returned due to lack of sufficient response, I believe. Later when the proofs of the publicity planned were published for comment, there was most violent criticism thereof.

Hence, I feel this should be a one-man job, for too many cooks to the soup will make a horrible mess of any reading matter and architects are the most cursed "individualists" (a mistaken use that wrongly describes, but I lack one better) who feel they must not only make themselves "important" to the public, but even more so to one another.

And if the plan develops, would it not perhaps be advisable to have a committee of all the professional magazines get together and back the idea as a publishers group therefore being fully representative of the profession and obtaining fuller support in entire accord and co-operation rather than have the other publications sit on the fence or worse? This would be a big thing if accomplished and it must not fail for any reason such as this.—*Harry Lucht, Architect, Cliffside Park, N. J.*

### • VOCIFEROUS "YES"

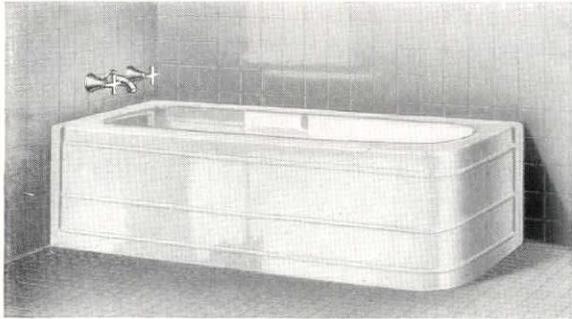
*Editor, AMERICAN ARCHITECT:*

TO the two questions covering your proposed publicity program—a most vociferous YES!!

I am one of those strange birds who claims that Architecture is more of a business than a profession; that if we are to survive we must combine construction with design; that the building of a home represents the major investment of the average citizen and, as such, demands maximum explanation, direction and publicity; that "Collective" advertising conducted by so experienced and courageous a magazine as yours promises maximum results for minimum effort on our part; that some of us define A. I. A. as "Ain't It Awful" when we realize the ineffectiveness of our only representative national organization in times of (Continued on page 101)

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# Story of a Mangrove Swamp . . .

Miami Beach, Florida, is now building at the rate of \$100,000 per day. A stabilized, growing city, her twenty-three years existence is highlighted by the extremes of boom and bankruptcy, amazing expansion and crushing damage

M IAMI BEACH has been familiarly regarded as a sort of American Riviera with blandishments of climate, luxury and sophistication equal to any which the Mediterranean can offer. And to its seven thousand citizens, "The Beach" has no counterpart. To tourists—the economic staff of the small city's life—are expounded the glamour of its nine miles of beaches, the magnificence of ninety hotels, the beauty of more than seventeen hundred homes and the varied pleasures to be derived from golf courses, polo fields, dog and horse tracks, night-clubs and casinos.

Skilful publicity has made such attractions a byword; and from every section of America thousands of visitors have basked in its beauty and climate. Less well realized is the fact that Miami Beach is not yet twenty-five years old. From a wilderness of a mangrove swamp the site of the city was cleared—first to make way for a cocoanut plantation, the dream of John S. Collins, a New Jersey horticulturalist. Today, after extremes of boom and bankruptcy, Miami Beach is the scene of building activity that has boosted to sixth place among all U. S. cities the valuation of its current building permits.

Before 1910 Miami Beach existed only as a low-lying flat of tangled mangrove. Across the bay—useless then as a deep water harbor—lay Miami itself, a straggling town only beginning to develop into a city under the driving initiative of Flagler, owner of the Florida East Coast Railway and Florida's most hard-headed visionary. Forty years ago population of the whole Miami District was limited to two families isolated on the edge of a mosquito infested jungle. The story of its mushroom growth into a city with a population of 110,000

is a fantastic tale in which the wildest sort of speculative exploitation went hand in hand with resourceful engineering.

Development of both Miami and Miami Beach was doubtless inevitable. But the former had been inaccessible before Flagler's railroad came. Similarly, before the causeway was built, Miami Beach was still an island, difficult to reach and therefore of little relative importance as a site for much more than Collins' nut groves. But the causeway *was* built with money supplied by Carl G. Fisher who accepted a slice of Collins' swamp land in return.

To that event are traceable most of Miami Beach present day attractions. It was Collins who first cleared swamp lands, dug a transport canal, planted a windbreak of Australian pines and waited for his cocoanut plantation to mature. But it was Fisher who began pumping sand into the swamps from the bottom of Biscayne Bay, thereby creating building sites and deepwater yacht anchorages at the same time.

It was largely because of Fisher's vision and activity—and the copious expenditure of Fisher's money—that streets were mapped, paved and lined with palms. And it was Fisher's initiative, linked with Collins' dogged pioneering that built hotels, casinos, golf clubs and houses. With the sea sand still settling about it the Nautilus Hotel was started in 1915. Shortly thereafter Miami Beach was incorporated as a city. Thus the stage was set for a land boom equally as intense in speculative frenzy as any of the several that have dotted the history of United States land development.

By 1920 ocean front lots in Miami Beach—first sold for a total of \$750—were being held for \$1,000 per foot of ocean frontage. Miami itself had a year

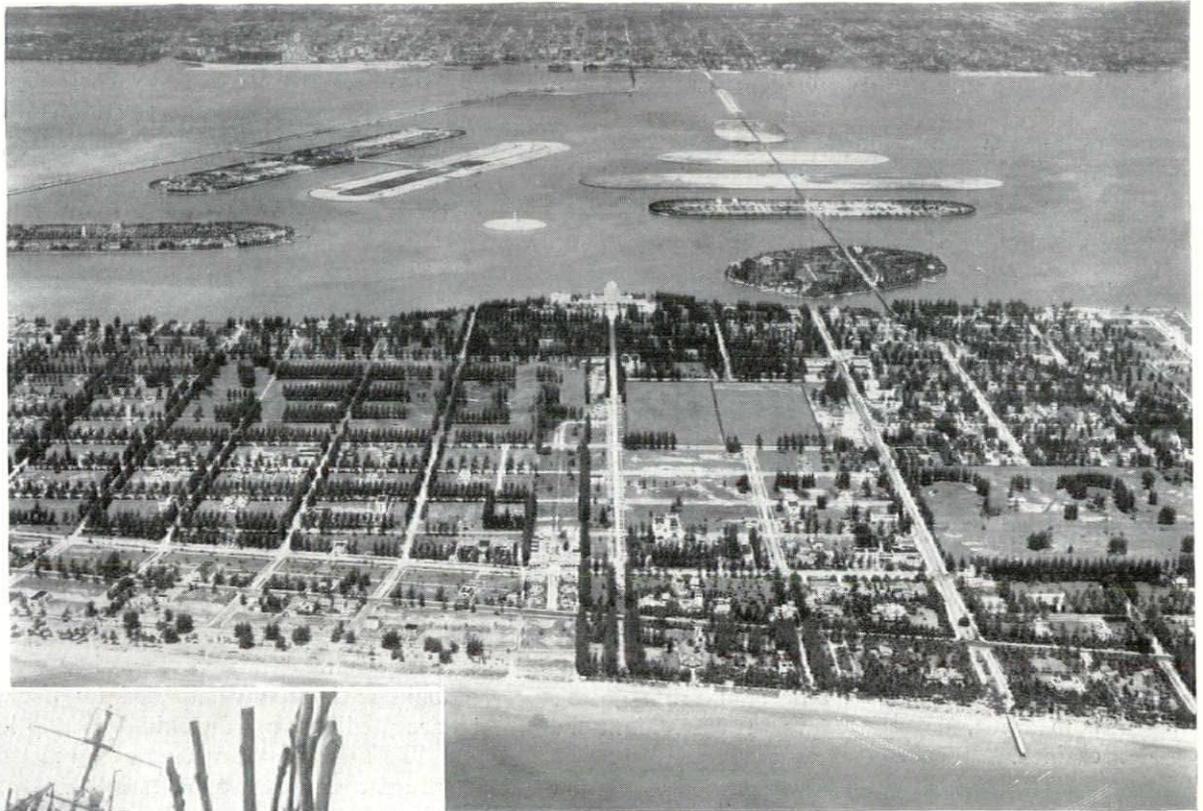
## IN 1912.....

A mangrove swamp, the site of Collins' coconut plantation. By 1915 it was fast becoming a playground. Cocoanuts were forgotten, swamps were being drained and filled, the Hotel Nautilus constructed



## IN 1925.....

A city, nurtured by the building boom, thrived on man-made islands. An air view of "the Beach" looking toward Miami



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## THE HURRICANE . . . . .

**Freakish damage** by wind and water followed the utter collapse of the building boom in the late fall of 1926. Lives were lost, trees and houses leveled, large buildings torn apart and boats tossed about like matchboxes

## TODAY . . .

Development and building in Miami Beach is rapidly approaching normal. The city recovered quickly from both hurricane and building boom. In nine years it has been replanted, rebuilt where necessary, reorganized financially, now ranks 7th in volume of current building permits. Shown here is the boom-time Roney-Plaza Hotel, now thriving with a more recent addition of a beach club pool



round population of 30,000. The boom was well under way; and in two years the fame of the Miami district had been fruitfully broadcast throughout the length and breadth of the country. By 1926 buildings to the value of \$24,000,000 had sprung up on the Collins and Fisher sands.

According to boom traditions the Miami land bubble burst—suddenly and sickeningly, like a blown-out tire on a hot pavement. Building stopped, values crashed. But the city continued; and proved itself unique among others in Florida as having completed all its boom construction before the speculative orgy ceased.

But it was financially disorganized to say the least. And in the Fall of 1926 a hurricane very nearly accomplished its physical ruination. The damaging effects of wind and water were understandably minimized. Actually they were cataclysmic. Lives were lost—how many of them it was impossible to

learn. Houses were leveled; trees twisted, uprooted and in some instances blown for miles. Large buildings were literally torn apart; and in more than one instance the ocean bodily engulfed building lots laboriously manufactured by Fisher's sea dredgers.

Coming as it did upon the heels of the real estate catastrophe, the hurricane effectively eliminated from Miami Beach many formerly active operators. Those who had been able to hold and to re-finance their properties faced huge expenditures for repairs. But if it were the first to suffer damage in 1926, Miami Beach was also the first to recover from the double shock that the entire district had sustained. Within three years finances had been sufficiently untangled. New buildings were going up at a yearly rate of nearly \$8,000,000. In the air was the promise of another boom.

Wall Street squashed this as effectively as the hurricane had flattened the planting along beach

boulevards. The financial crash abruptly checked the new development program. Building expenditures in the greater Miami district declined from \$16,000,000 in 1929 to \$7,500,000 in 1930 and to \$6,500,000 in 1931. The low point was reached in 1932 when scarcely \$2,500,000 worth of building permits was registered. New construction in that year probably did not exceed \$500,000, for a normal annual expenditure for repairs and alterations in the district has been reasonably estimated at about \$2,000,000.

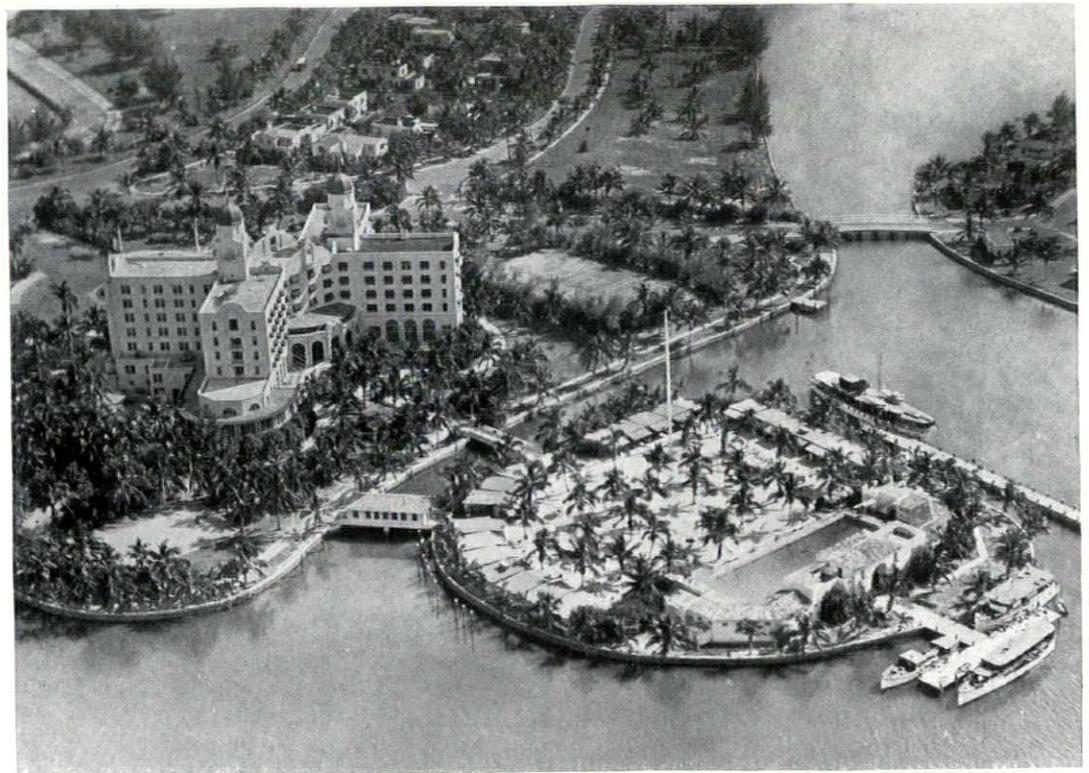
Thus, in common with most American cities, Miami Beach has suffered for the past five years a period of acute depression. But it has been the more pronounced because the city is a pleasure town, dependent to the extreme upon tourist patronage which virtually stopped after the winter of 1929. Only within the last eighteen months have Miami Beach attractions been utilized to any noteworthy degree. During that time the city's real estate transfers amounted to \$6,690,700 certainly not a poor record for the period. As a result, construction is now going forward at a rapid rate. Architects are busy; and progress on the development of a former swamp is being charted as a steeply upward curve.

Miami Beach is building at the rate of \$107,892 a day. That is a significant fact in itself. But comparative figures for the first six months of 1934 and for the same period of 1935 tell a story that can hardly be challenged by any other municipality in

the country: one hundred and twenty-six residences in 1934—value \$1,785,550—is eclipsed with one hundred and thirty two in 1935; thirty-eight new apartment houses against seven for 1934; ten hotels this year with only three recorded for the previous year. Retail business houses have accounted for thirteen new projects in 1935, while only eight were constructed during 1934. One hundred and forty-eight addition and remodeling jobs have been completed in the six month period of 1935. The entire year of 1934 accounted for \$5,478,559 in new construction, while the first six months of 1935 has accumulated a volume of \$4,183,012.

The fact that Miami Beach almost alone among boom towns was never overbuilt, undoubtedly reacts in its favor now. Of importance in this connection have been its far-sighted municipal economies. Not only has a return to the 1931 employee's wage scale been effected, but a saving of hundreds of thousands of dollars to the taxpayers resulted from a premature redemption of an outstanding bond issue. Today the tax rate is the lowest in its history. Florida believes in building its residential population and to encourage construction of new homes has allowed a tax exemption on all homes coming within the \$5,000 price range. This fact alone bids well for the continuation of the up-swing in building construction which has placed Miami Beach sixth among all cities in the U. S. in the valuation of permits for the first six months of 1935.

Hotel Nautilus, first of the Fisher chain and among the oldest of Miami Beach structures. The adjoining island contains a private beach club and swimming pool. It was made by dredges which developed a private anchorage for deep-water yachts



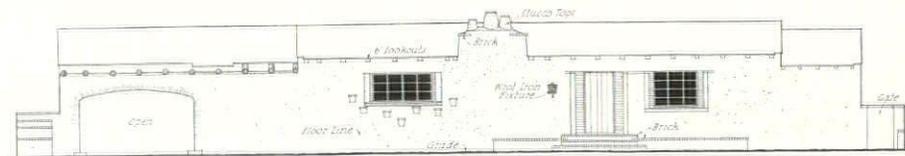
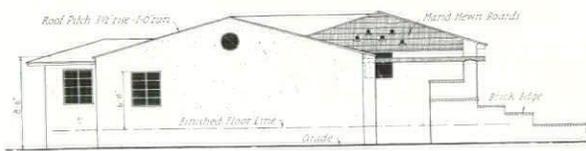


ALL PHOTOS BY SAMUEL H. GOTTSCHO

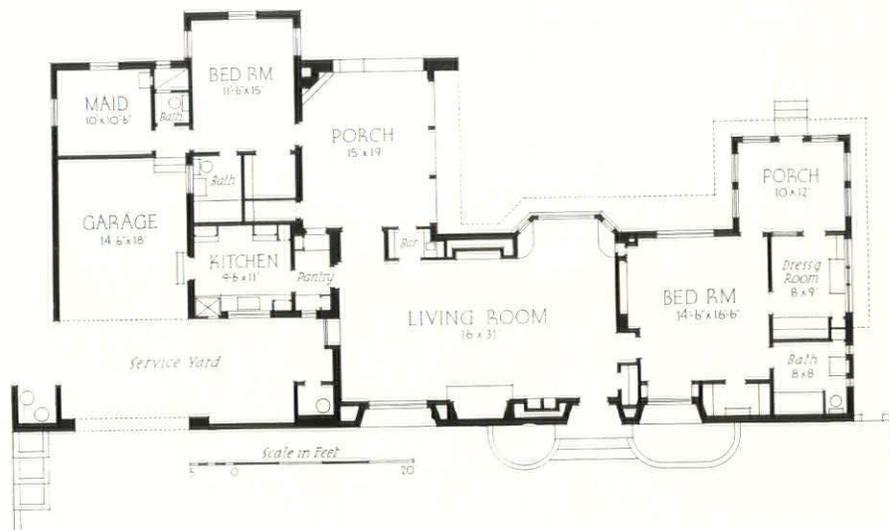
CARLOS B. SCHOEPL AND ARNOLD R. SOUTHWELL, ARCHITECTS  
HOUSE OF J. E. YONGE, MIAMI BEACH, FLORIDA

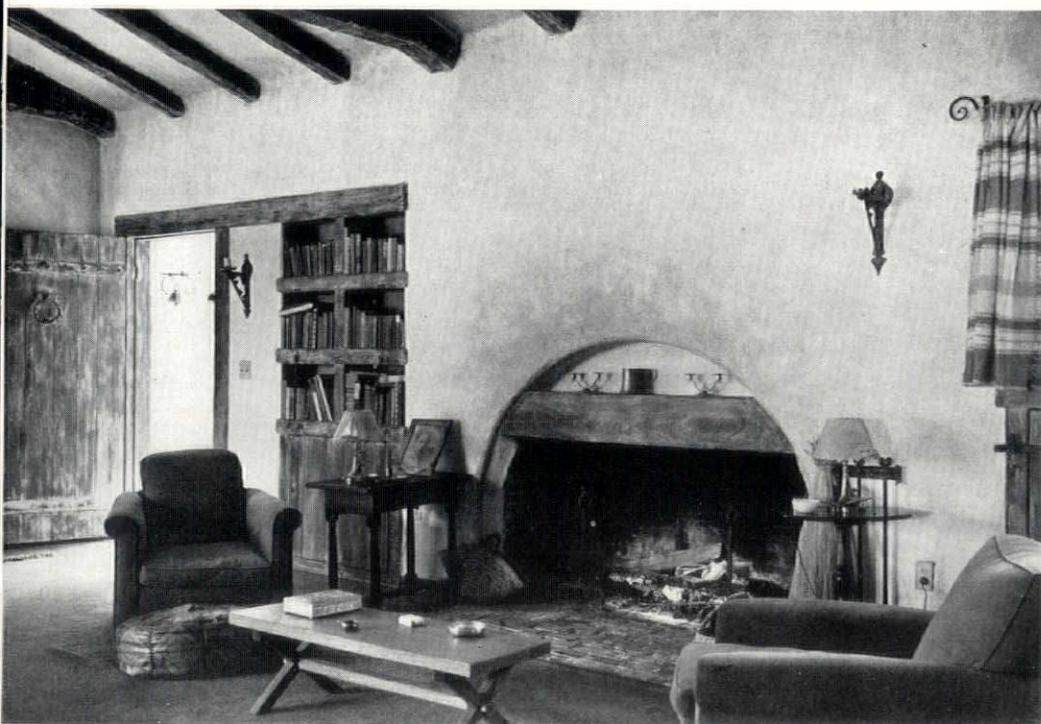
## Miami Beach Today . . .

Five recent houses, typical of "Florida Architecture"—the result of adopting traditional design to the service of modern, comfortable living in almost-tropical America

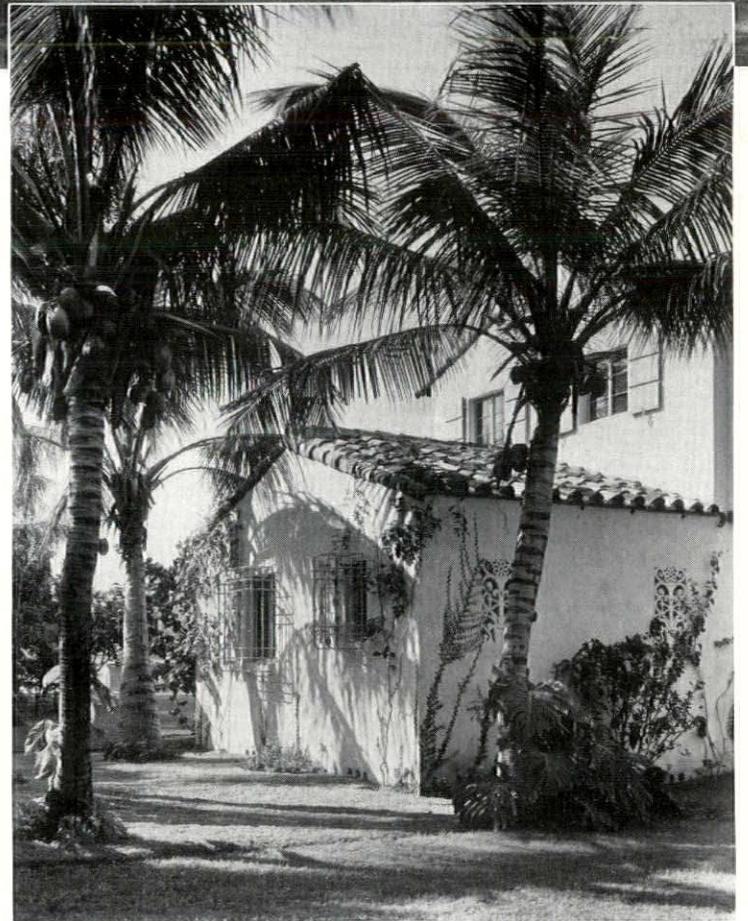


Street facade from driveway. House of J. E. Yonge, Miami Beach, Florida. Carlos B. Schoeppl and Arnold R. Southwell, architects





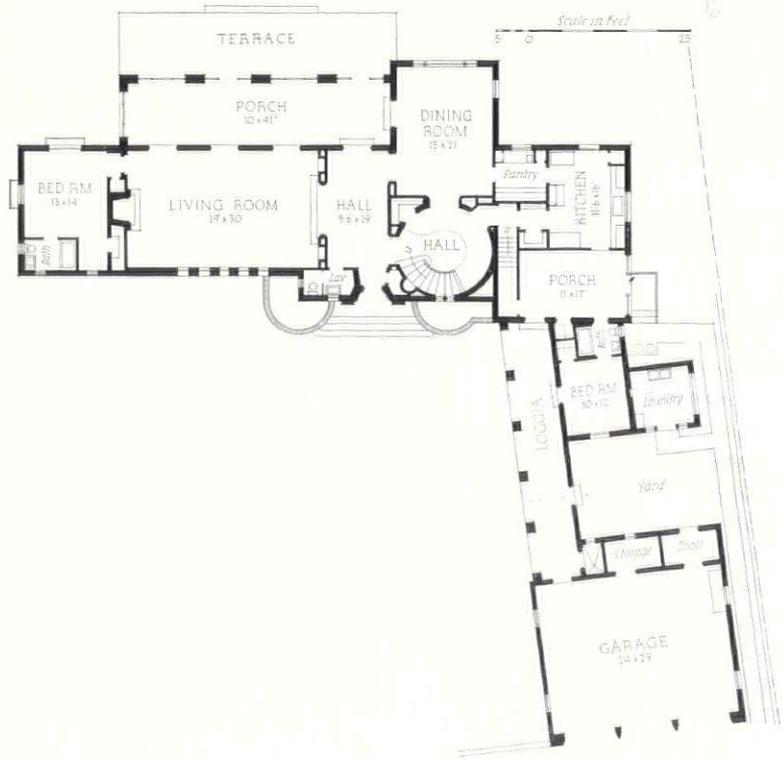
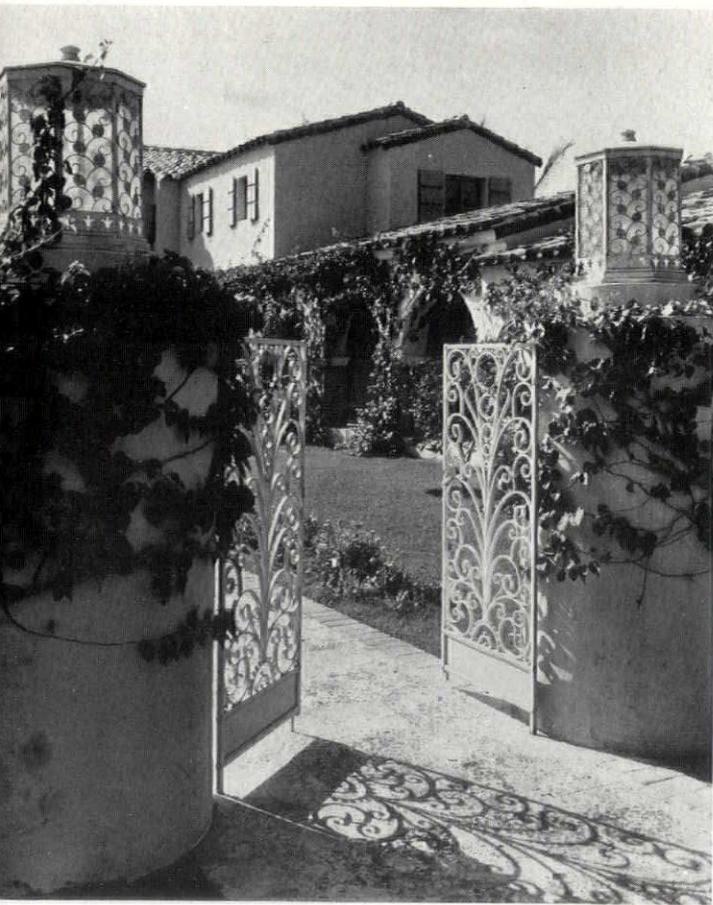
Above, the large porch and rotisserie; left, fireplace and bookshelves, in living room. House of J. E. Yonge, Miami Beach, Florida. Carlos B. Schoeppl and Arnold R. Southwell, architects



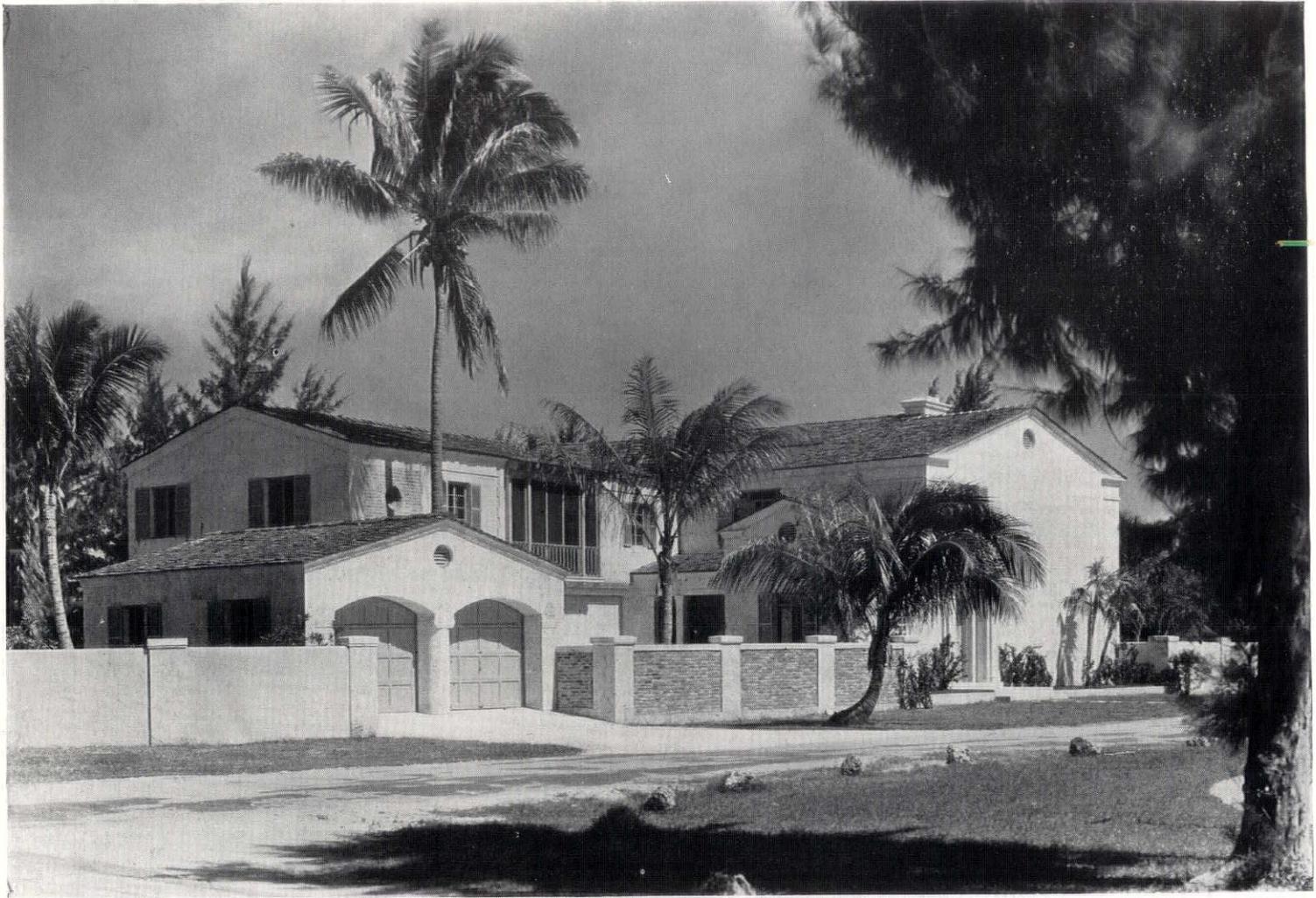
RUSSELL T. PANCOAST, ARCHITECT  
HOUSE OF FREDERICK C. PETERS  
MIAMI BEACH, FLORIDA



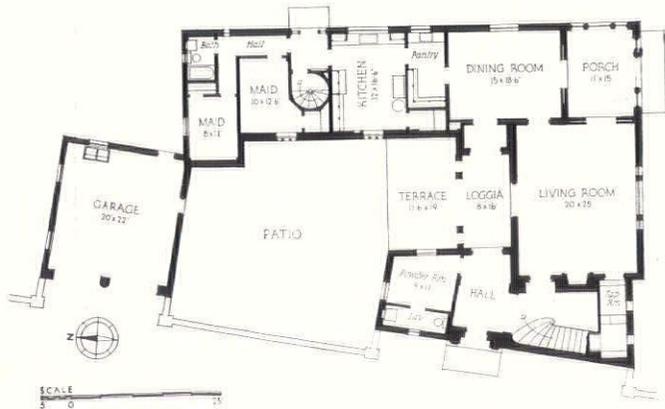
Below, entrance gates and lights. The hall and spiral main stair are shown on the following page. House of Frederick C. Peters, Miami Beach, Florida. Russell T. Pancoast, architect



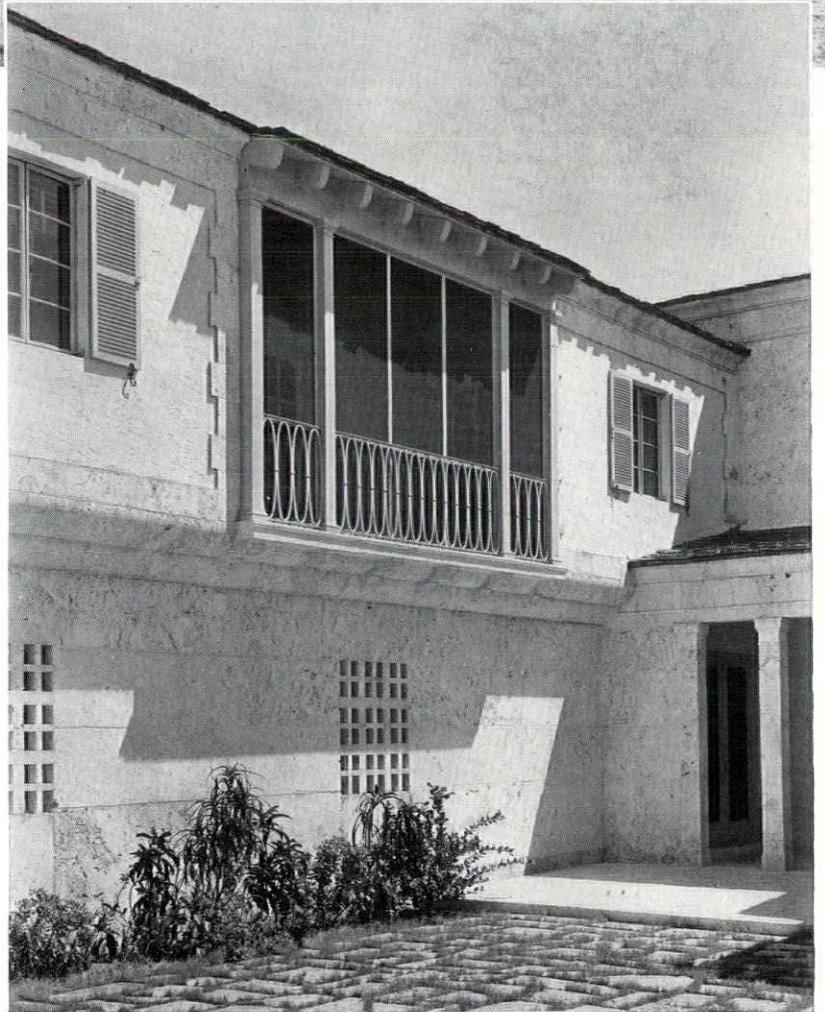
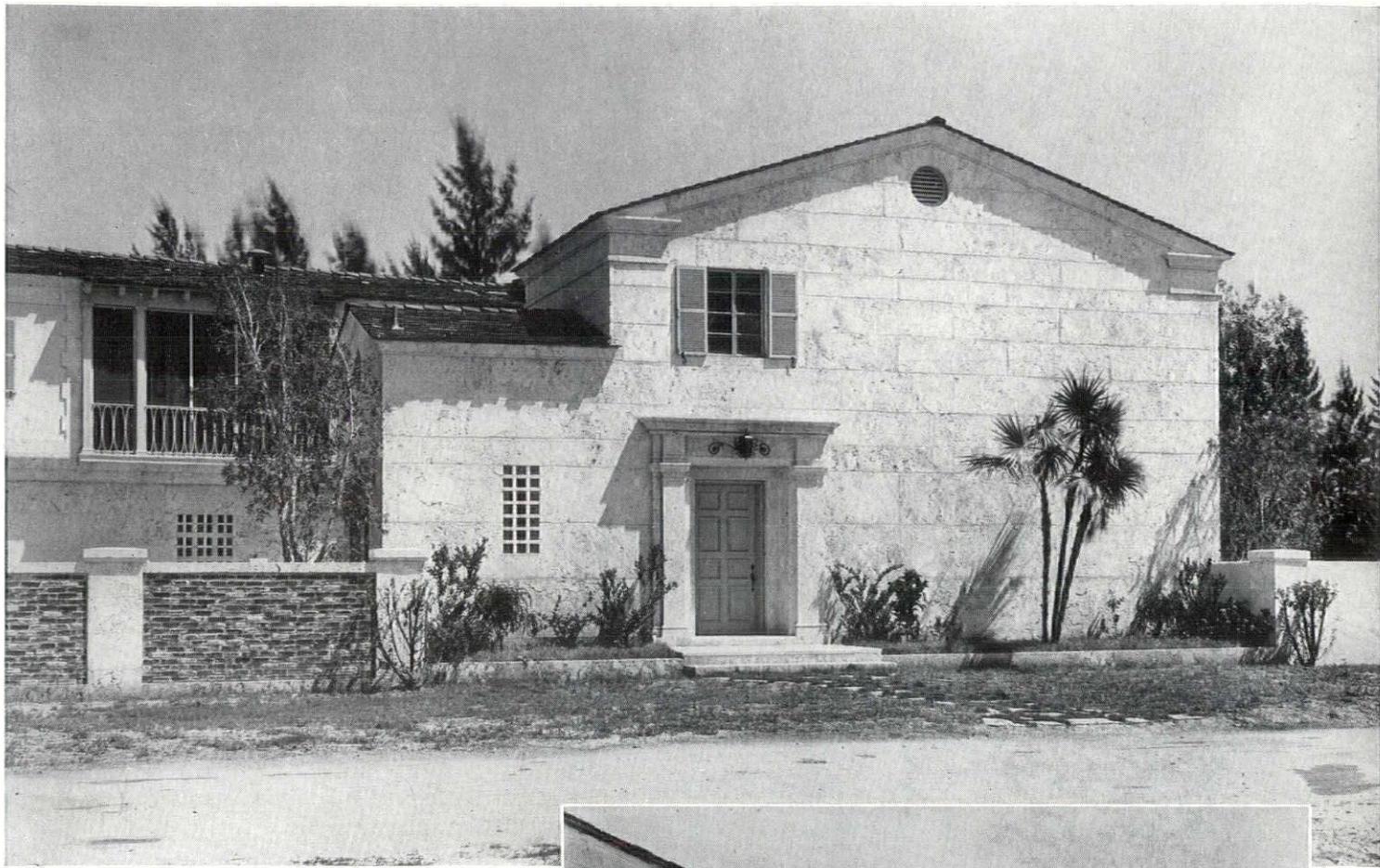




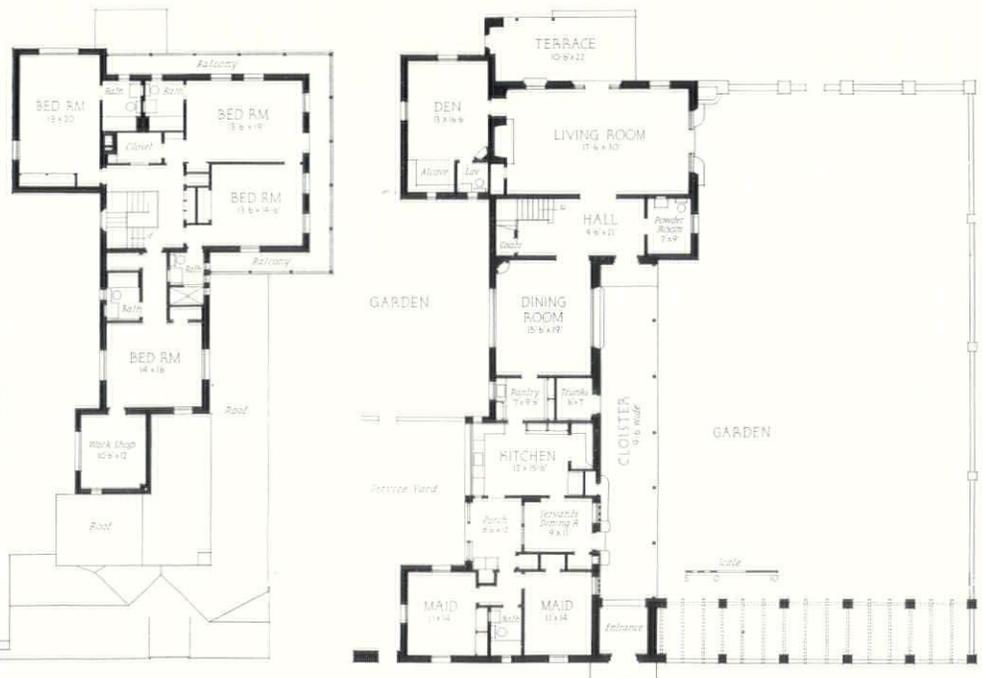
PHOTOGRAPH BY RICHARD B. HOLT



AUGUST GEIGER, ARCHITECT  
 HOUSE OF JOHN P. ORR  
 MIAMI BEACH, FLORIDA



Above, main entrance. Right, detail of patio sleeping porch. House of John P. Orr, Miami Beach, Florida. August Geiger, architect

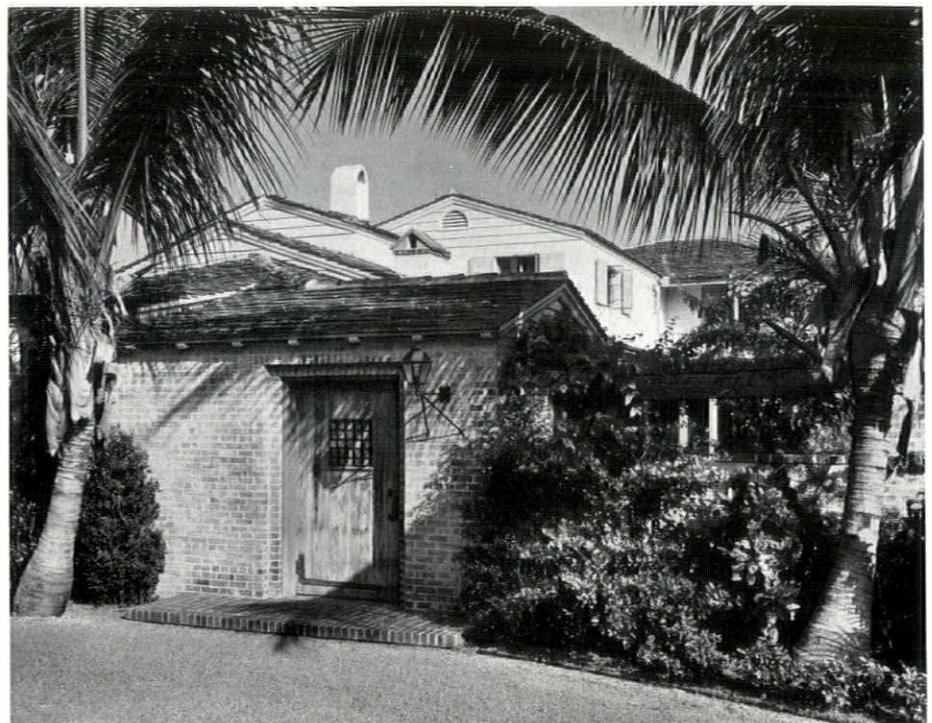
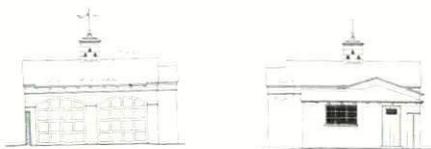


ROBERT LAW WEED, ARCHITECT  
 HOUSE OF J. B. MOOS  
 MIAMI BEACH, FLORIDA

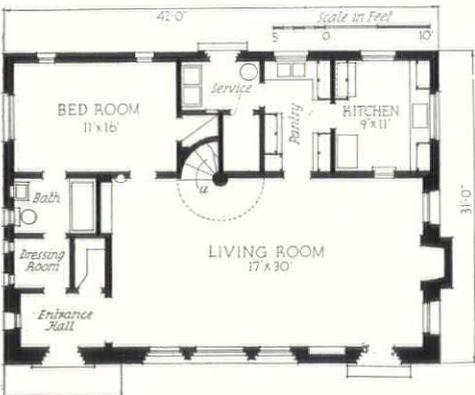
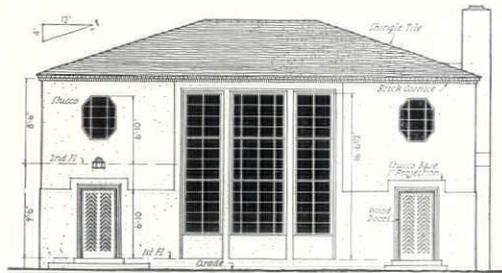
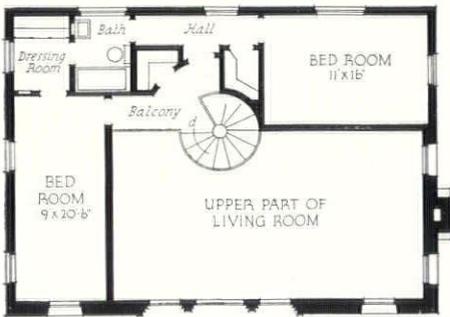




On this page, the "cloister" porch. On facing page, garden entrance to living room. House of J., B. Moos, Miami Beach, Florida. Robert Law Weed, architect



Above, garage end of caretaker's lodge.  
 Right, entrance to cloister from drive.  
 House of J. B. Moos, Miami Beach,  
 Florida. Robert Law Weed, architect



OFFICE OF J. & C. SKINNER, ARCHITECTS  
 HOUSE OF MRS. ELEANOR FARRINGTON  
 MIAMI BEACH, FLORIDA





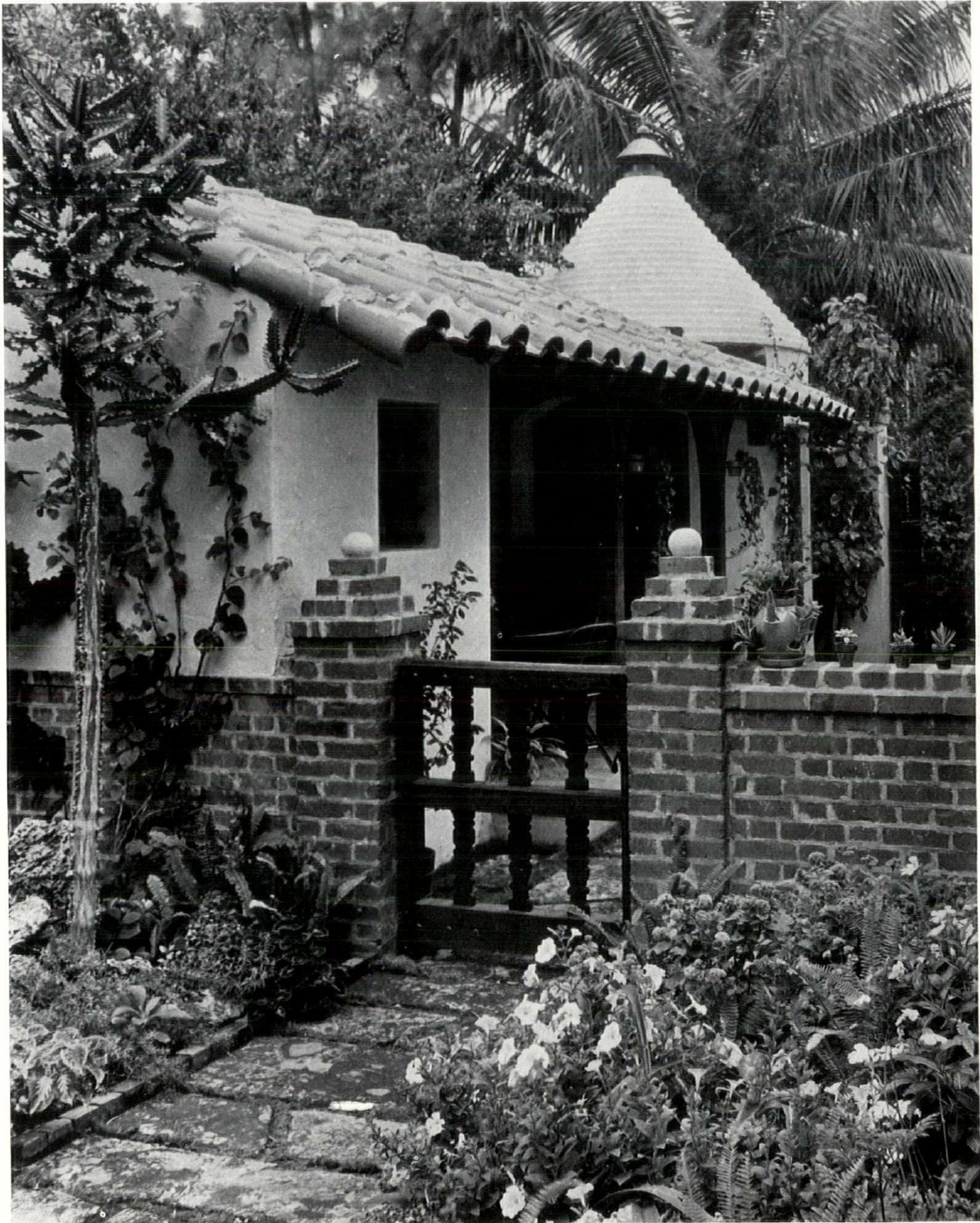
Above, bedroom in the Miami Beach house of Mrs. Eleanor Farrington. Left, living room from fireplace end. On facing page, living room windows toward entrance hall. Office of J. & C. Skinner, architects





## Contributions to Comfort . . . .

OPPORTUNITY for outdoor living is one prime commodity of Miami Beach which a combination of equable climate and exotic landscape has made generally available. Miami Beach architects have seized upon it as a governing factor of design. And as a result owner-clients enjoy the not unusual luxuries of open air bars, lounging shelters, shaded private patios, outdoor dance floors and an almost countless number of lesser details, all of which contribute to the comfort and convenience of a pleasant, semi-tropical existence. Some of these are shown on the following pages. Above is an outstanding example—the patio and open air bar of Arthur P. Bigelow, at Miami Beach. John N. Bullen, architect



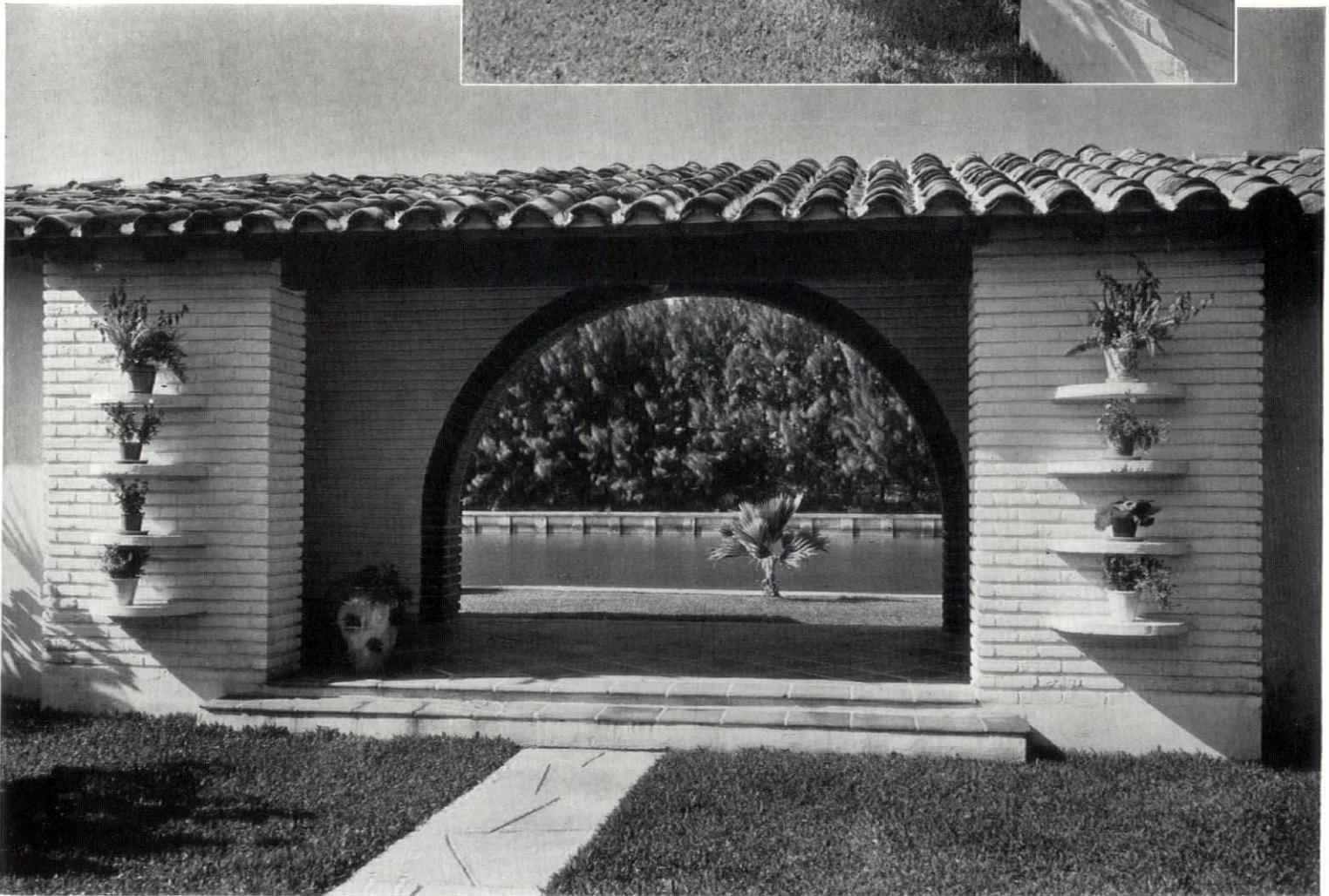


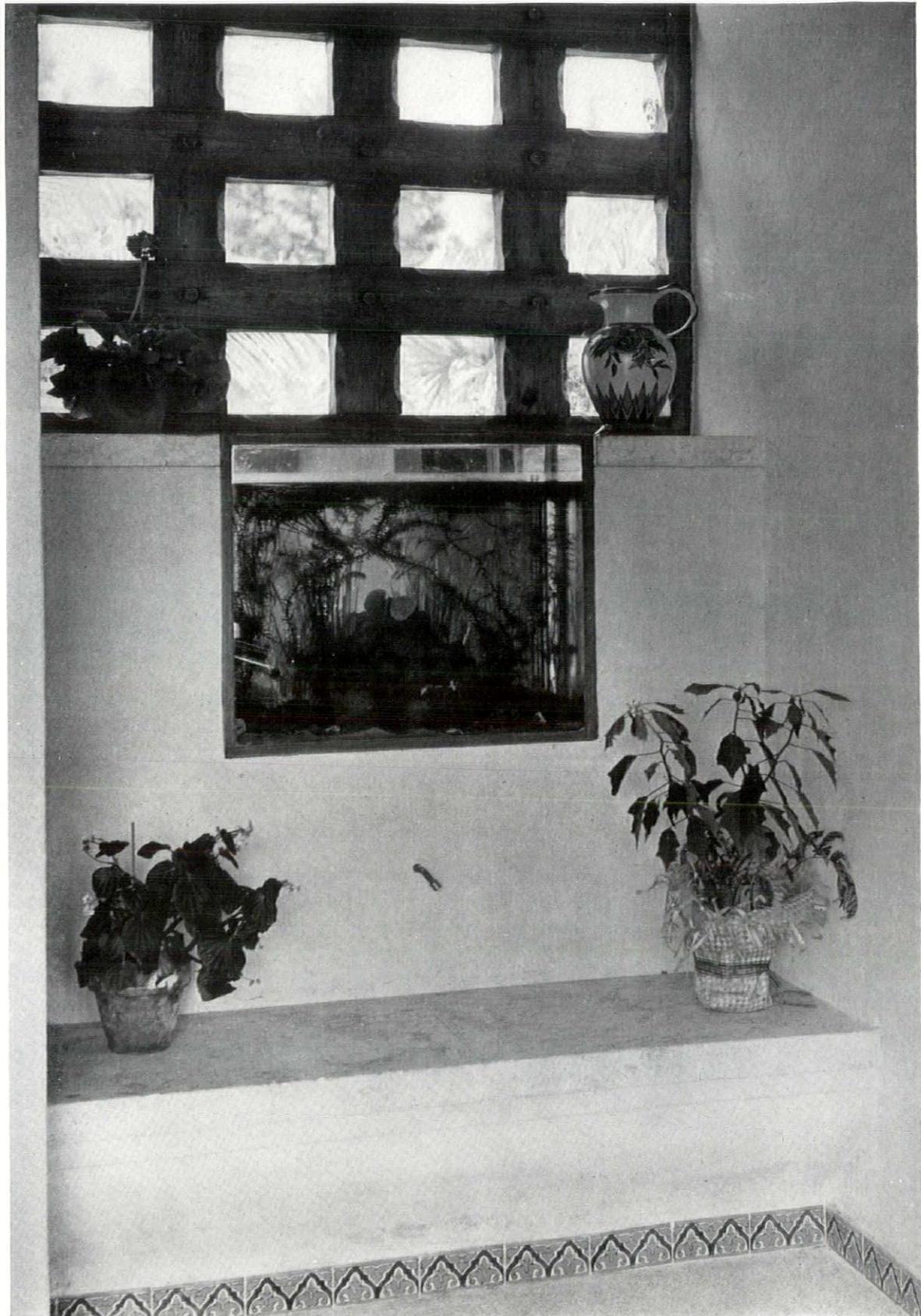
A garden pavillion, usually containing a small bar and an electric—or charcoal—roastisserie, is one contribution to comfortable living which might find favor in any locality. On this page is the bar, above, and the roastisserie in the garden pavillion of Arthur P. Bigelow at Miami Beach. On facing page is the garden entrance in relation to the shelter. John N. Bullen, architect



Wrought-iron grille, framed by the entrance doors of the house of Frederick C. Peters, Miami Beach, Florida. Russell T. Pancoast, architect

Swimming shelter looking toward the canal, below. At right, detail of the flower pot shelves which relate the shelter to the patio in the residence of Le Roy Carter, Miami Beach, Florida. Russell T. Pancoast, architect

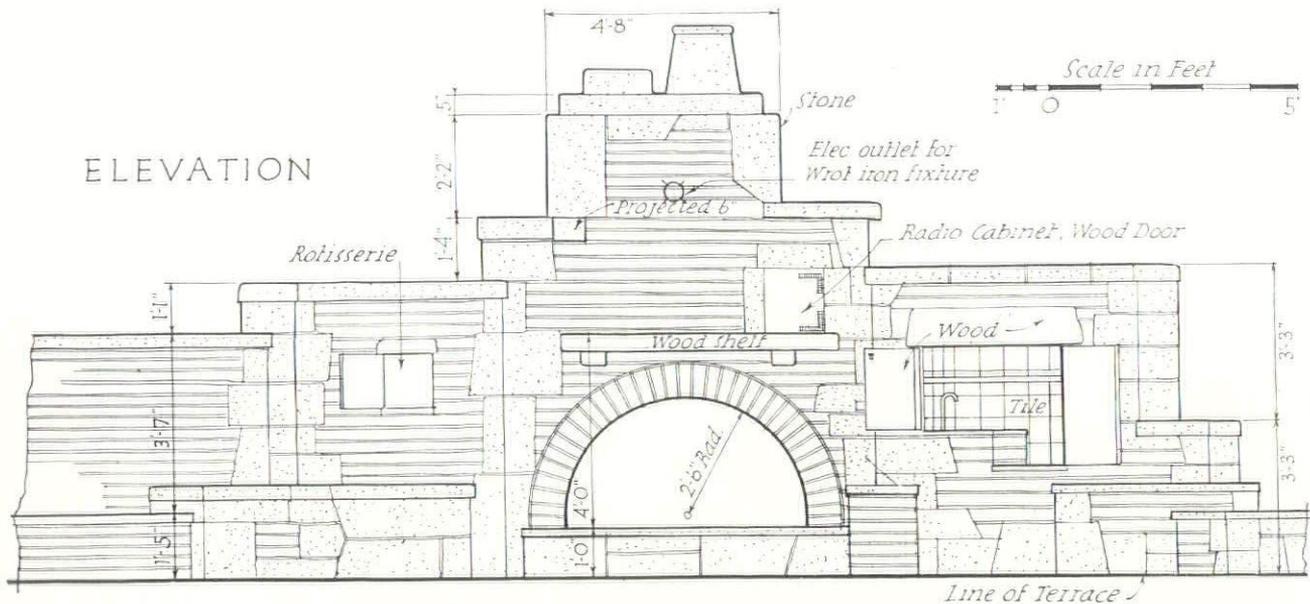




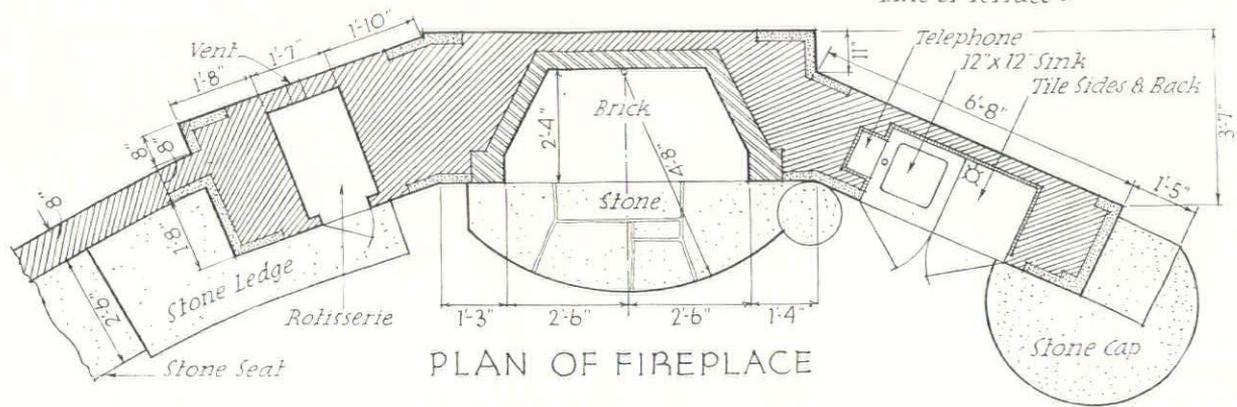
Porch grille and tropical fish aquarium, two distinctive details in the residence of Lee Edwards, Miami Beach, Florida. Carlos B. Schoeppl and Arnold R. Southwell, architects



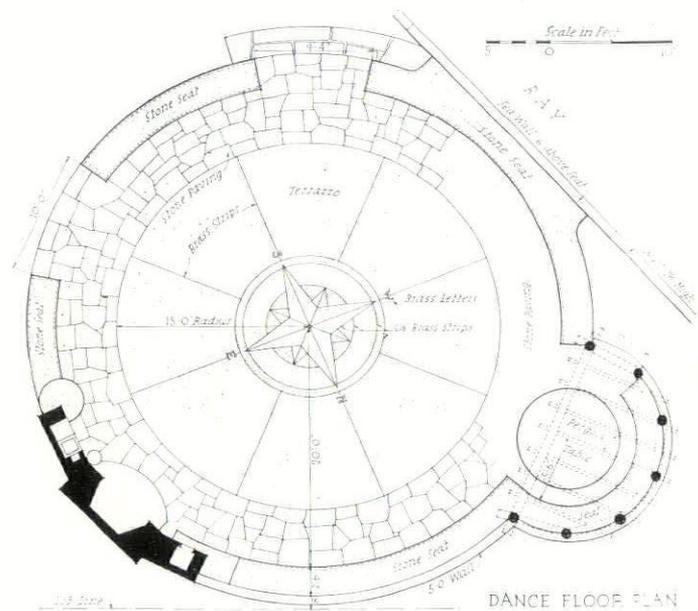
Fireplace, rotisserie and hidden sink adjoining the outdoor dance floor on the Norman W. Peters estate, Miami Beach, Florida. Carlos B. Schoeppl and Arnold R. Southwell, architects



ELEVATION



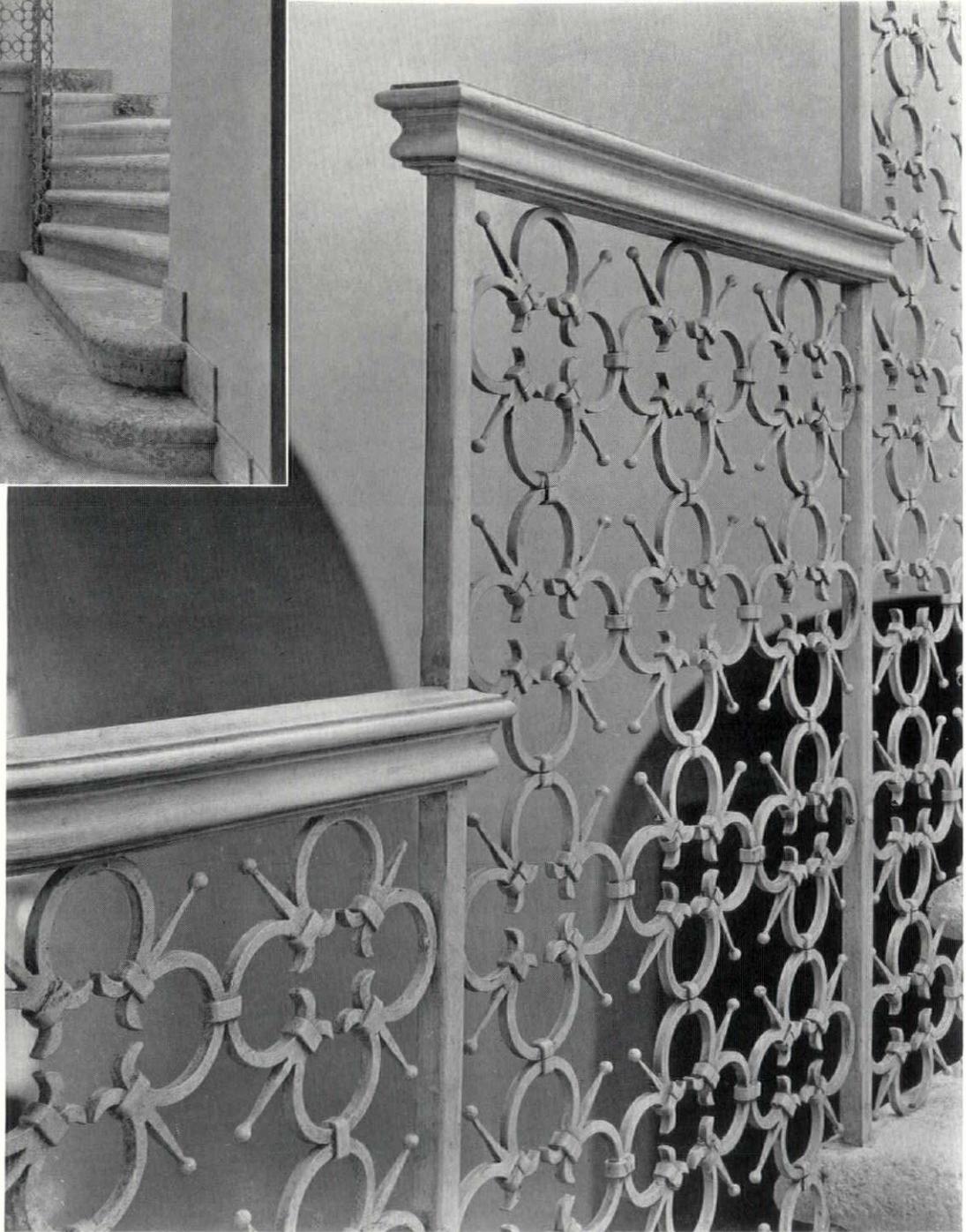
PLAN OF FIREPLACE

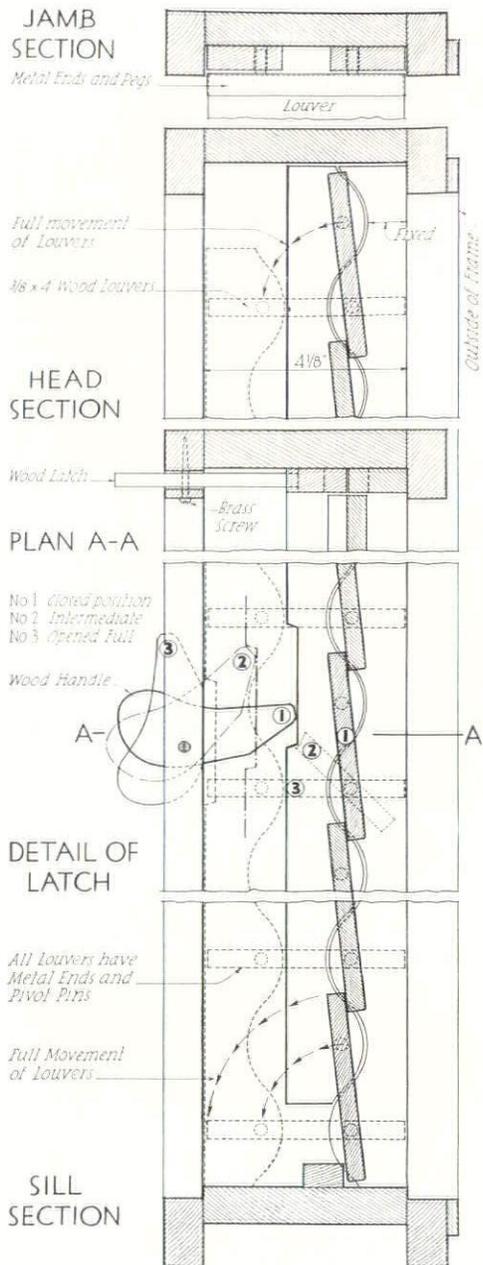


DANCE FLOOR PLAN

Above, drawings of fireplace shown solid in plan of outdoor dance floor and dining pergola, right. Estate of Norman W. Peters, Miami Beach, Florida. Carlos B. Schoeppl and Arnold R. Southwell, architects

Wrought iron is a material much used for both exteriors and interiors of Miami Beach houses. This stair rail, made by J. Marquette Phillips, is in the house of Warren Wright, Miami Beach, Florida. Martin L. Hampton, architect

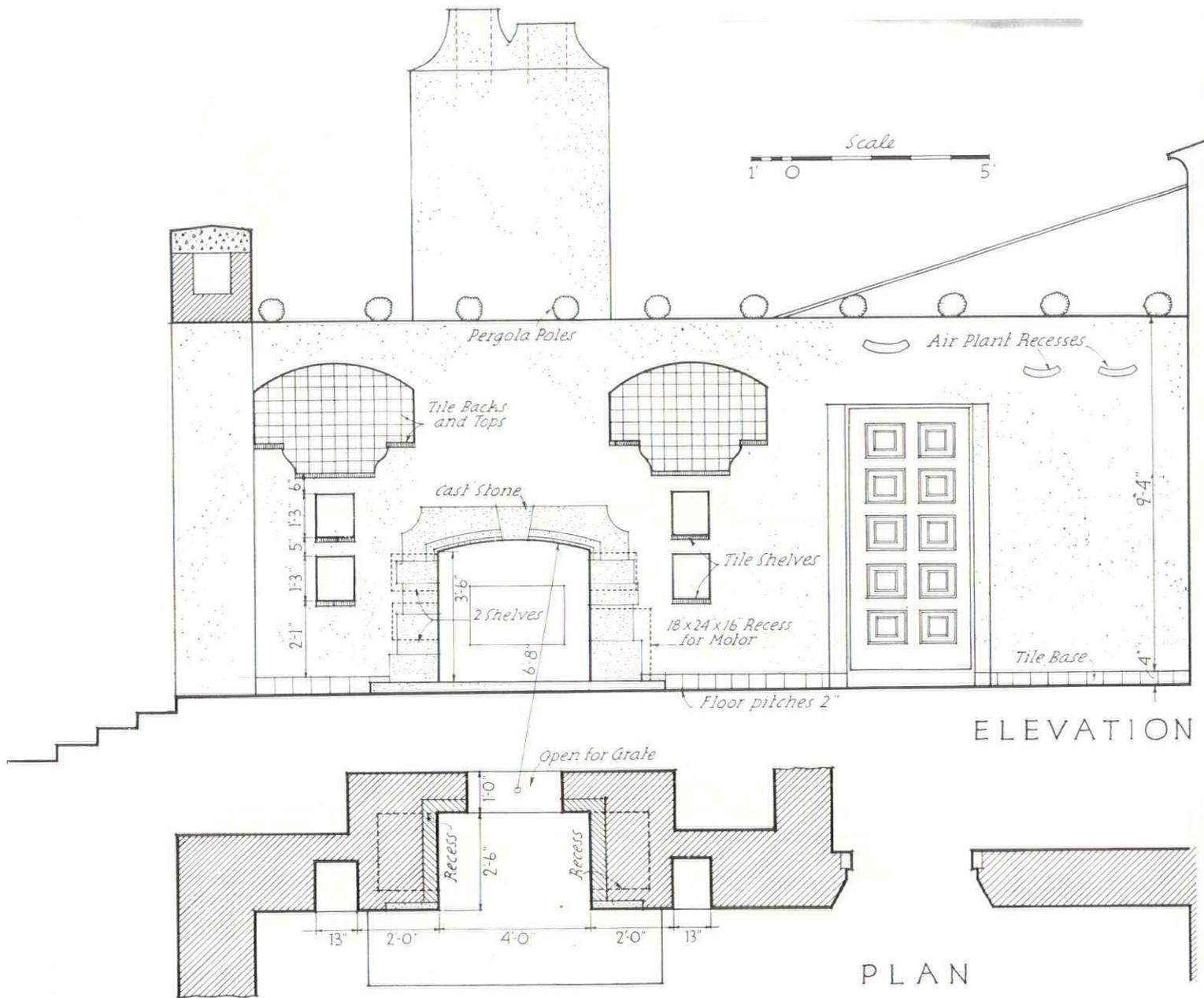




**Porch shutters** make possible a full utilization of outdoor living spaces regardless of weather conditions. The patented type illustrated here is much used in Nassau and the Bahamas as well as at Miami Beach, House of Galt Stockley, Office of J. and C. Skinner, architects



Open air features of Arlington C. Hall's Miami Beach residence are the rotisserie and rustic pergola, above. Carlos B. Schoeppl and Arnold R. Southwell, architects



ELEVATION

PLAN

Elevation and plan of outdoor fireplace and garden wall. House of Arlington C. Hall, Miami Beach, Florida. Office of Carlos B. Schoeppl and Arnold Southwell, architects

# East Coast, West Coast

. . . and all around the country, Small House Competitions are in the professional and public eye. Among recent ones are two that contain major points of architectural interest. Both were conducted under A. I. A. competition rules, one in Seattle, Wash., the other in New York City

DESIGN competitions for small houses indicated, in times past, a healthy and active building market. Recently, several such competitions have engaged the attention of both the profession and the public. And though they have not sprung from the center of a building boom, they at least point to an increasing general interest in house planning—an interest which, eventually, will result in an expanding volume of actual construction.

Among the most recent are two small house competitions which contain several points of special interest. One, held by the New York Chapter of the A. I. A., concerned a theoretical project. The other, conducted under the auspices of the Washington State Chapter of the A. I. A., called for the design of a small house to be built upon a specified plot in Seattle. Each was a closed contest confined to a group of local individuals.

Winners received no cash rewards in either case. The premiated design in the New York contest brought to its creator, J. Andre Fouilhoux, only the glory of winning. J. Lister Holmes, winner of the Seattle competition received a contract for the architectural development of his design and the supervision of its construction.

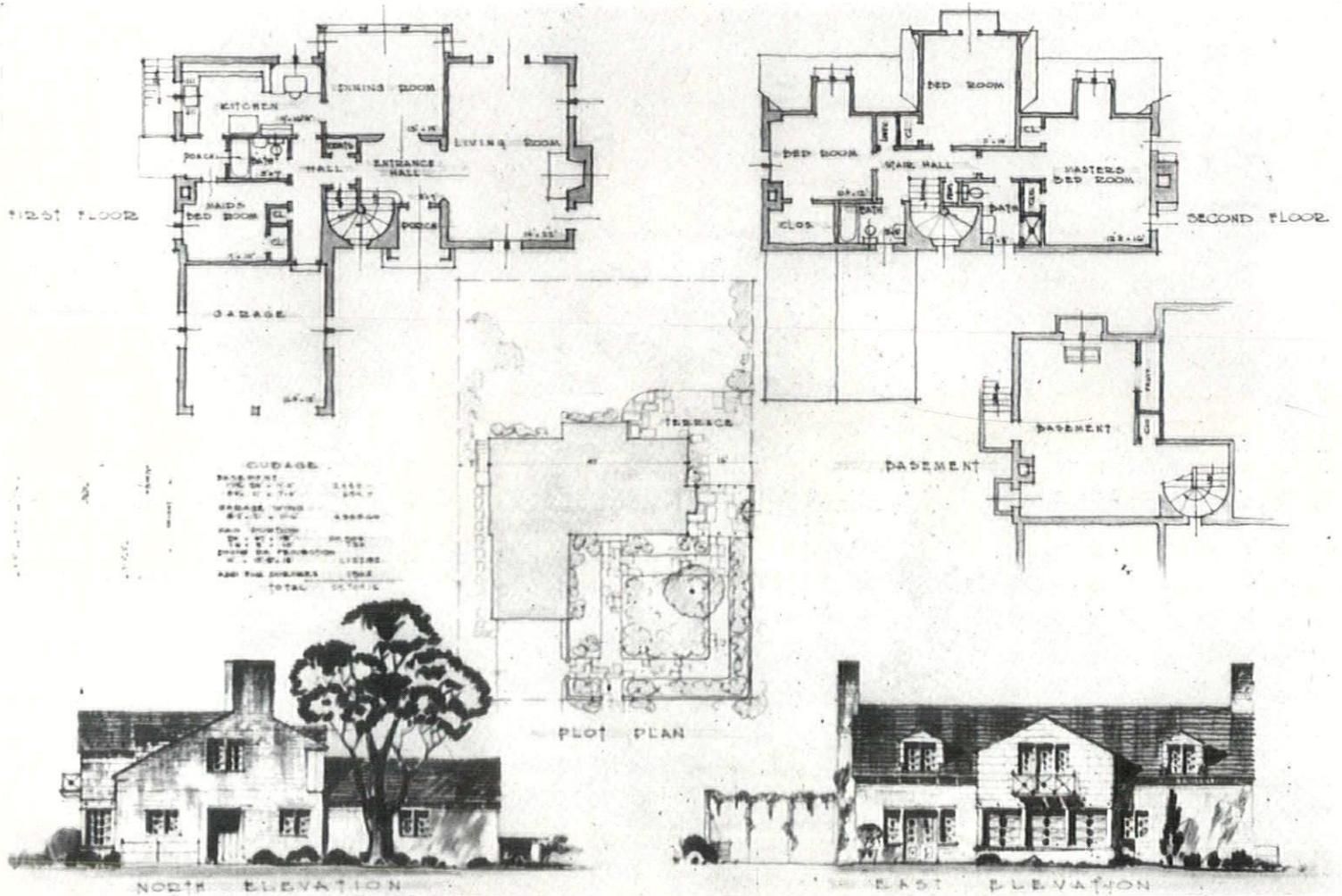
Results of these two competitions illustrate the ways in which competent architects approached two problems, differing widely as to objectives, but similar as to subject. The Seattle project was linked frankly with a real estate development. Five architects—Messrs. Holmes, Ivey, Loveless, Stoddard and Bain—were invited to submit designs for a house to be built upon lot number 28 in Broadmoor, a Seattle subdivision. Contents, including an attached garage and six rooms, were limited to 30,000 cu. ft. A cost limitation of \$8,000 was specified. This last included an architect's fee of 10 per cent, \$500 of

which was to go to the winner and the remainder to the Washington State Chapter, A. I. A.

Limitations of the New York program were quite as rigid. Primarily, however, this was a study competition, calculated to bring forth hopefully affirmative answers to the question, "Can decent and adequate individual houses be designed by architects for the lower income groups?" The program admitted two considerations held as basic by the committee: 1. Houses costing more than \$5,000 present to the architect no inherent problem of design or construction. 2. Development of properly built and equipped individual houses for families with a maximum income of only \$1,200 is conceded to be outside the province of professional ability.

From these statements and from statistics relative to the most evident housing needs, the size of an average family and its capacity to buy developed the program. This specified a house not to exceed a cost of \$3,200, exclusive of fees and land, for a family of four. The site was an hypothetical interior lot, 100 ft. deep with a 50 ft. frontage. Orientation of the house upon it was left to the discretion of the competitors. The program invited proposals for the use of new construction methods where economies and improvements over current building practices could be demonstrated.

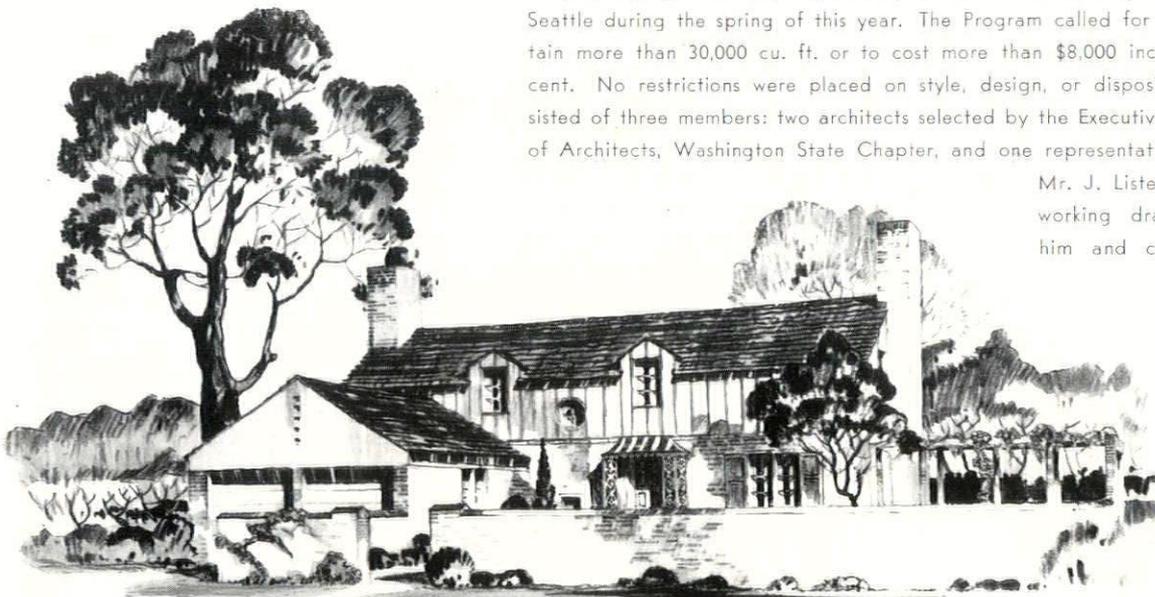
On the following five pages are reproduced three entries from each of the competitions. Those from Seattle are ambitiously presented in comparison with the New York examples. Partly this is due to the mandatory requirements of the program, another reason being, probably, the natural desire to attract the favorable attention of a potential client. No such considerations influenced the New York contestants and results are presented as "working sketches," no less attractive because of their simplicity.



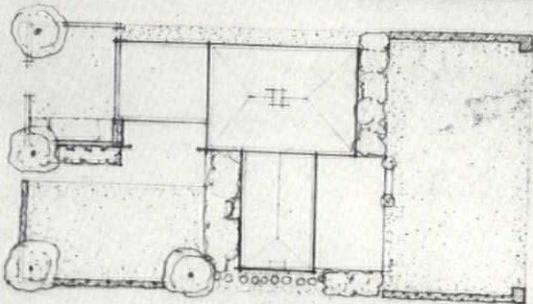
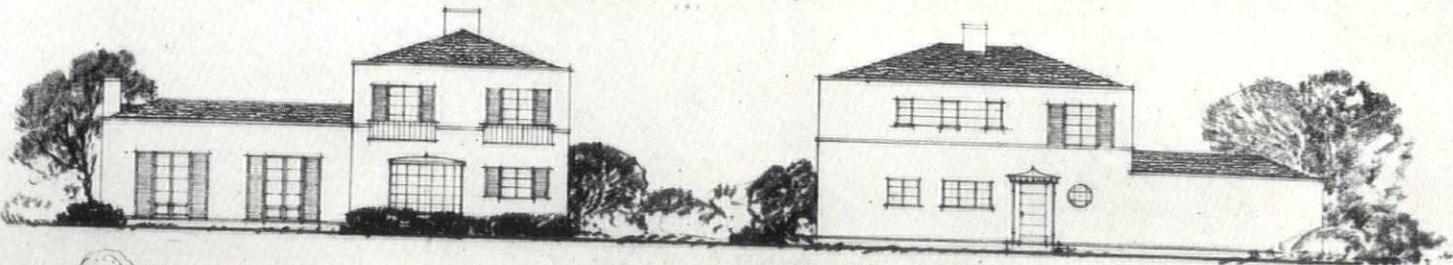
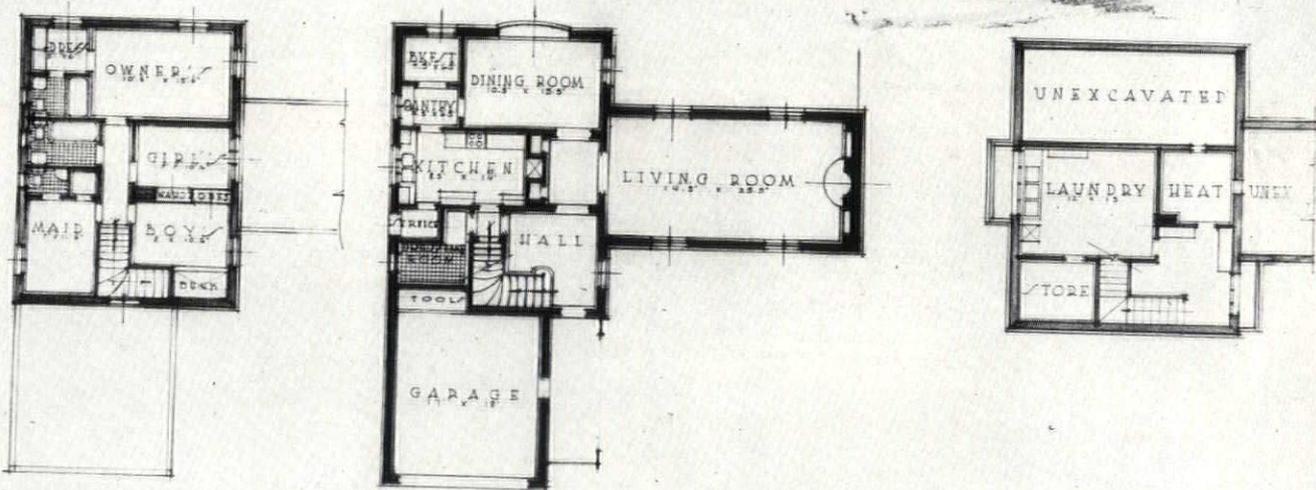
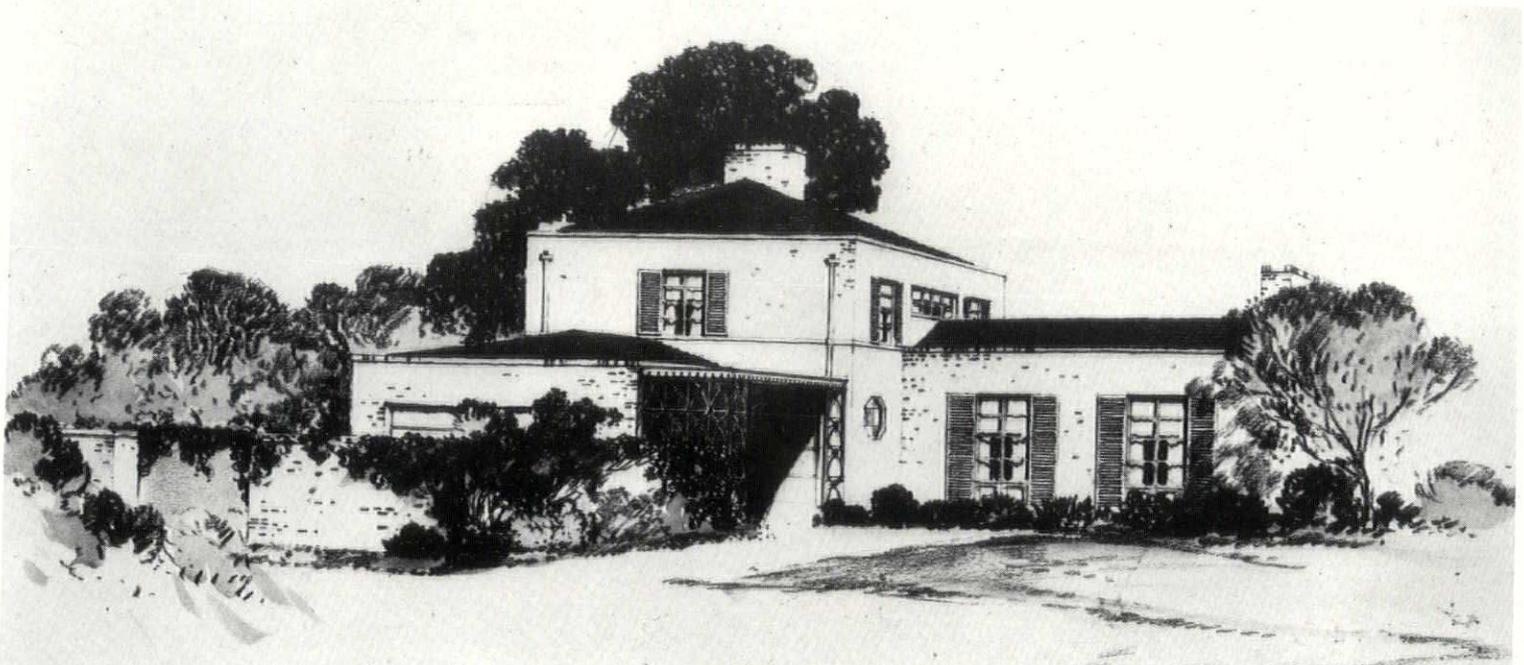
## SEATTLE . . .

THE BROADMOOR COMPETITION, sponsored by the Puget Mill Company, owners of the property (lot No. 28, Broadmoor) on which the winning house is to be built, was held in Seattle during the spring of this year. The Program called for a house and garage not to contain more than 30,000 cu. ft. or to cost more than \$8,000 including architect's fee of ten per cent. No restrictions were placed on style, design, or disposition of property. The jury consisted of three members: two architects selected by the Executive Board of the American Institute of Architects, Washington State Chapter, and one representative of the Puget Mills Company.

Mr. J. Lister Holmes' design was premiated, working drawings were then prepared by him and construction is now in progress.

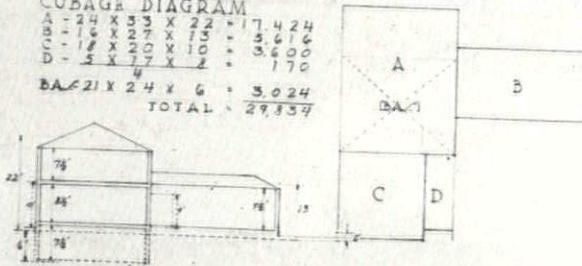


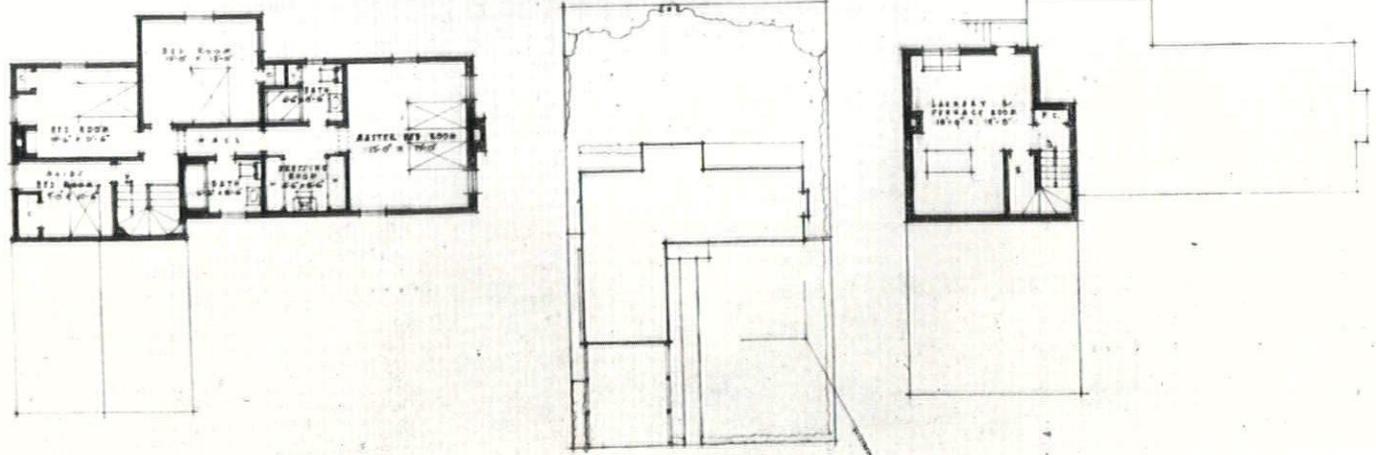
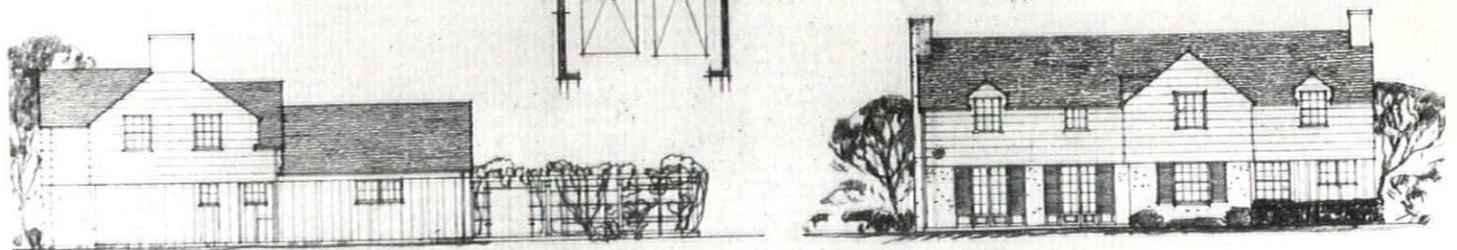
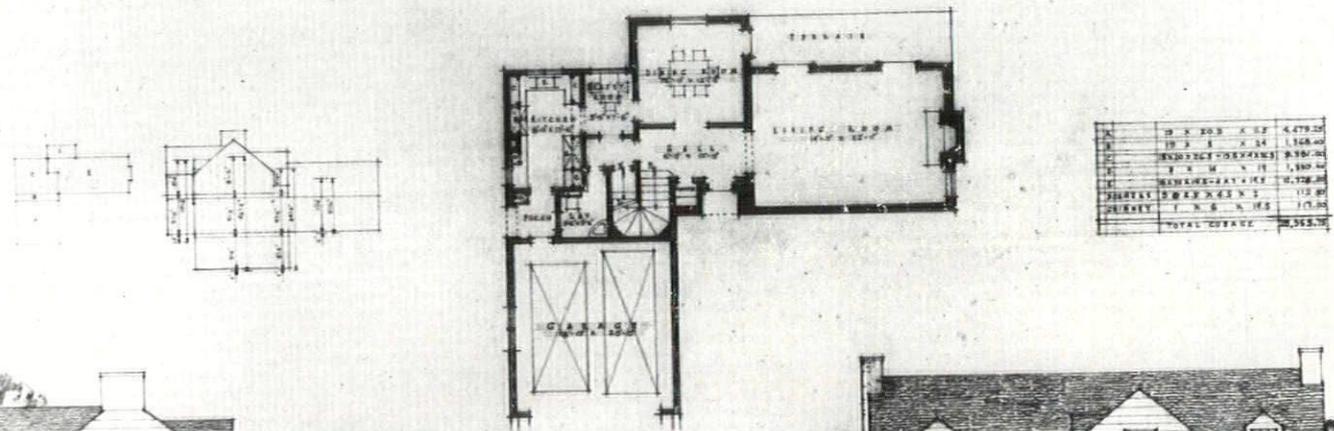
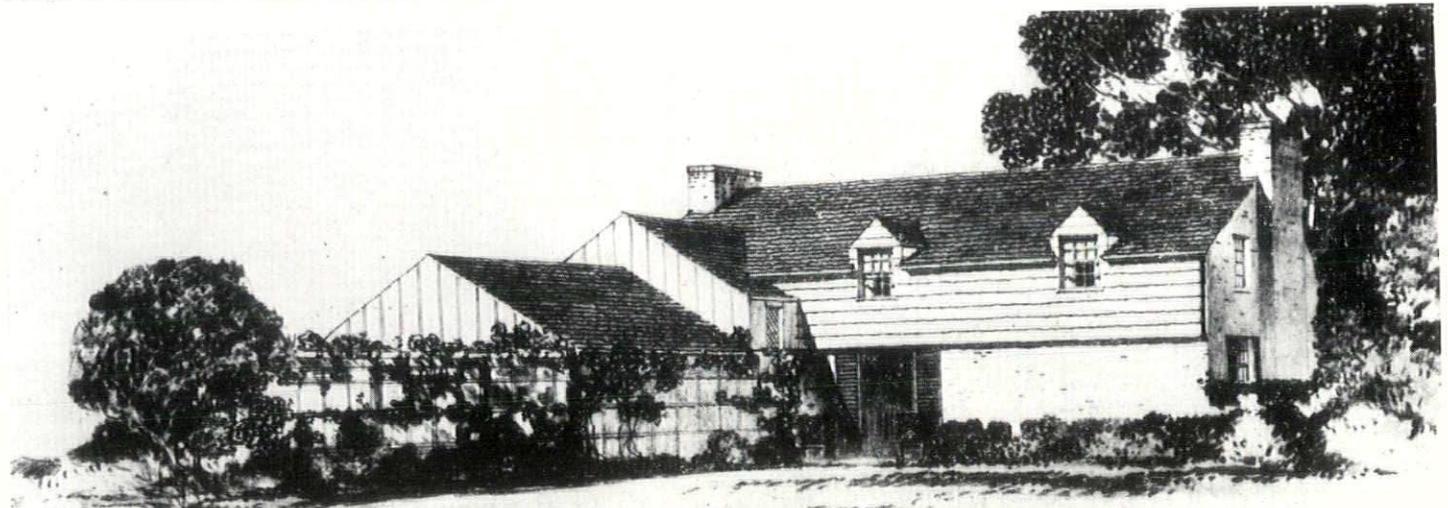
On this page the design submitted by George Wellington Stoddard, A. I. A.

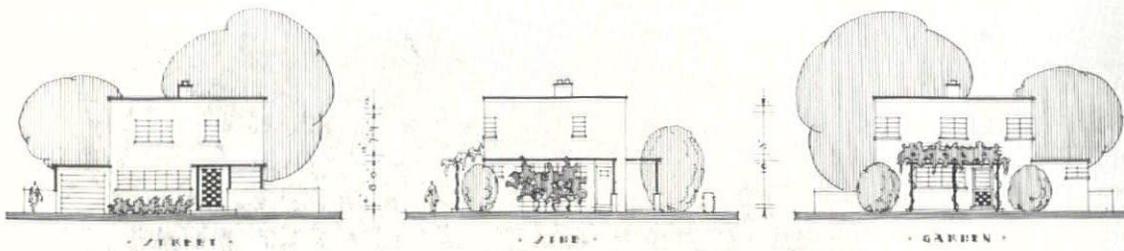


CUBAGE DIAGRAM

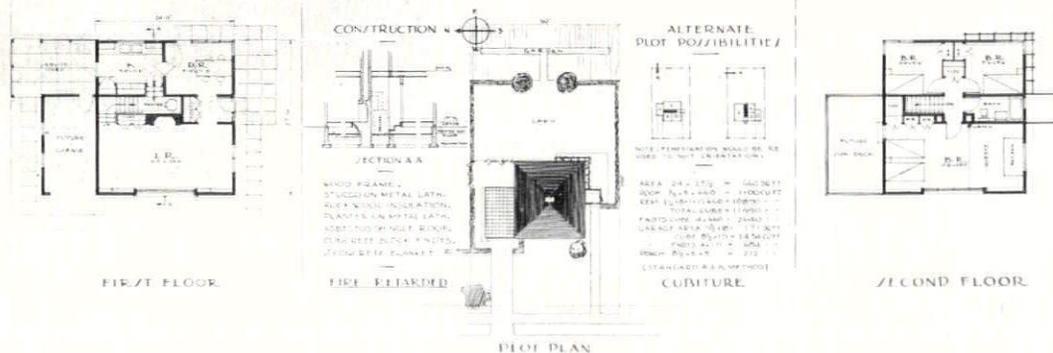
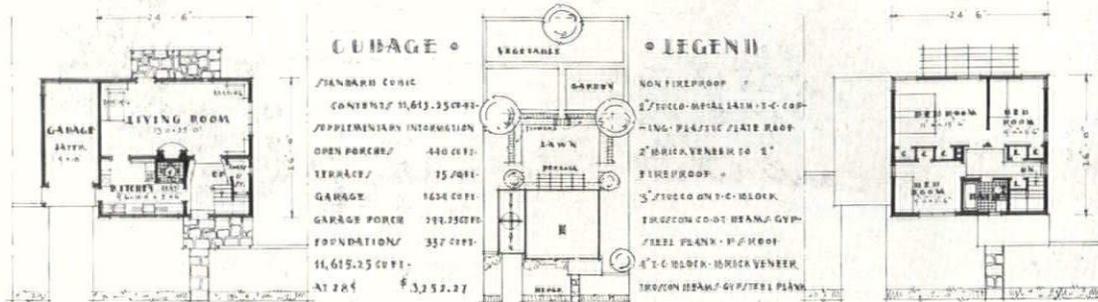
A	- 24 X 33 X 22	= 17,424
B	- 16 X 27 X 15	= 5,616
C	- 12 X 20 X 10	= 3,600
D	- 5 X 17 X 2	= 170
BA 21 X 24 X 6		= 3,024
TOTAL		= 29,834







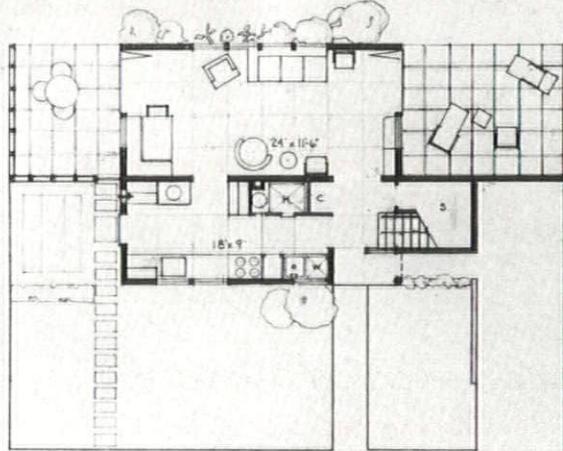
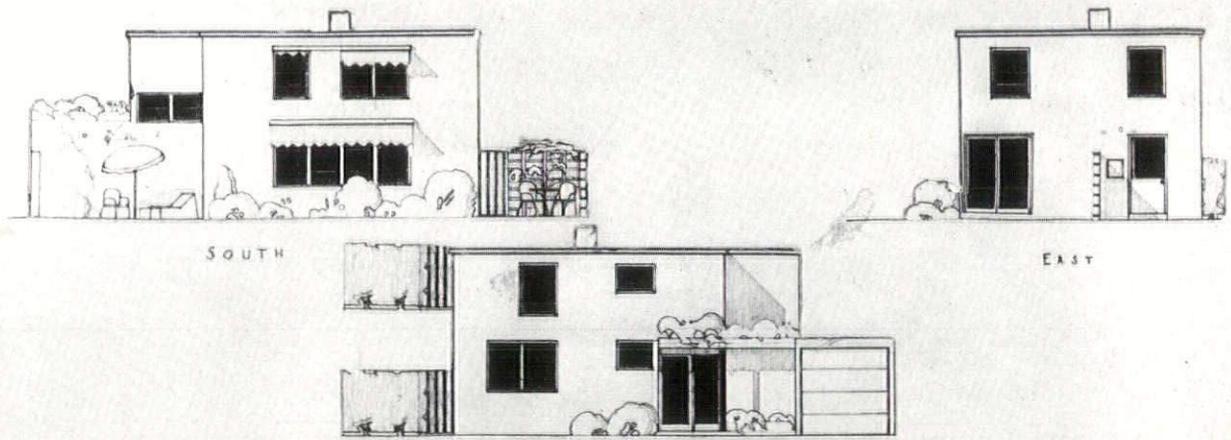
This design by John Theodore Haneman placed second in the New York competition



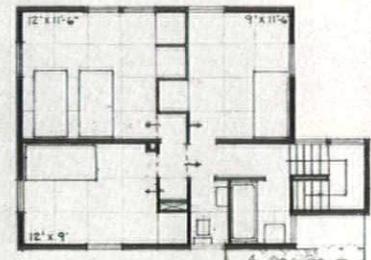
Third place went to Frederick G. Frost, for this design

# NEW YORK...

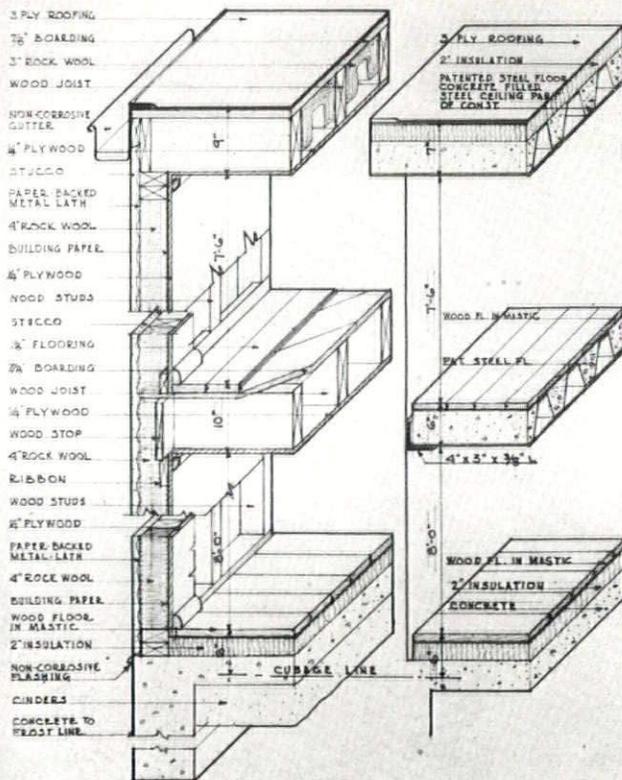
A STUDY Competition for Low-Cost Houses was sponsored by the New York Chapter of the A. I. A. for the avowed purpose of encouraging prospective builders of such houses to engage the services of professional architects for them. The Program struck a modern note by emphasizing the desirability of fireproof construction in solving the problem. It called for a house to accommodate four persons (two adults and two children) at a cost not to exceed \$3,200 exclusive of land. The imagined site was an interior lot 50 ft. wide by 100 ft. deep, fronting on a street or road. Orientation was left to the competitor. The jury consisted of members of the Chapter Committee on Enlarging the Field of Professional Practice, plus three additional architects selected by the President of the Chapter. Designs by J. Andre Fouilhoux, also a winner in the recent General Electric Small House competition, were awarded First and Fourth Place, respectively.



FIRST FLOOR



SECOND FLOOR



DETAIL OF CONSTRUCTION

ALTERNATE

Economy is the essence of the problem. At this stage none of the prefabricated units offer any saving.

However, this house planned around a modulus unit is adapted to the use of prefabricated units when their costs will have been brought down thru economy in fabrication and handling and thru quantity production.

Outside wall studs with stucco on paper backed lath. Space between studs filled with rock wool bats giving heat insulation as well as making the wall almost fireproof.

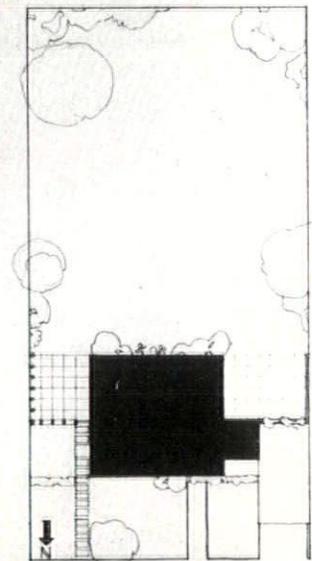
Inside wall and ceiling surfaces plywood. Bathroom and kitchen asbestos board. Closets built of plywood will also form partition.

Stairs built as outside unit save expense of special framing.

Economy in heating plant by having furnace centrally located with short duct runs and small horizontal propeller fan insuring positive circulation. Oil burner fed from bottle refilled from outside tank.

Special arrangement of plumbing fixtures in two rooms more than double capacity of ordinary bathroom for family.

Alternate floor framing of cellular steel as shown on sketch would probably add but slightly to the expense if the number of houses built were sufficient. On account of its shallowness it will save eubage.



PLOT

CUBAGE  
WOOD FL. 595<sup>1</sup>/<sub>2</sub> x 17-7" = 10,469 cu ft  
STEEL FL. 595<sup>1</sup>/<sub>2</sub> x 17-1" = 10,171 cu ft

## "Come, Gentlemen, Consider . . ."

NEED OF a vigorous program of professional education—for the architect and public alike — is forcefully brought out in a quotation from a recent issue of *American Builder*, a publication with a national circulation among operative builders and contractors.

Commenting upon the experiences of a builder in Iowa, the editorial says: "Like most builders, he is a salesman. *He gets the prospect.* He works with him to find out what kind of a house he wants and when he does, prepares sketches and tentative details which a close contact with and understanding of prospects make him sure will suit their individual needs. When the contract has been signed—*but not until then*—he calls in a local architect. For a 2 per cent fee the architect serves as consultant, checks the plans, advises on their practicality and beauty, gives the benefit of his training and experience. As a result, *the contractor retains control of the job, the architect gets a 2 per cent fee (which is adequate for the service rendered)* and the home owner gets a good house. We fear, however, that the architectural code of ethics would frown a mighty frown on such procedure."

The italics are ours. They emphasize a condition which, without question, constitutes the greatest of all barriers to a successful small house practice in the average architect's office. For development of the condition the contractor cannot be blamed. He is in business too. And if he cannot obtain a sufficient volume of work through the regular channel of architects offices, he cannot be blamed for seeking it elsewhere.

The architect must place himself upon an equal footing with the contractor as regards business ability. He must make it a point to demonstrate his technical skill first to the client instead of to the builder. Unless he does so, he must expect to receive only a minimum return as concerns money for his pains or authority on the job. Without an effort to change the condition outlined above, the architect need look for little improvement in his economic or professional situation as a result of increased house building activity.

Evidence exists that this effort is being made. But the rate of improving the situation is still far too slow. Acceleration can come only through co-operative and systematic action of individual architects and professional organizations in exposing the fallacies of fundamentally improper building procedure.

One such needed action is the unification of all architects in a single, strong professional body. Another is the immediate institution of a nationally organized public relations program, conducted for and sponsored by all architects. The first would develop tactical power through a unity of purpose. The second would provide a proven method for making that power an effective agent for the common professional good.

# A s I t L o o k s

## PUBLICITY IN CANADA

THE success of any public relations campaign depends largely upon the support of interested individuals. Mr. Ronald W. Catto, Chairman of the Toronto Chapter of the Ontario Association of Architects, writes, "From time to time architects have seized upon some method of advertising with the idea of promoting the interests of the profession. Too often such plans are not carried on for sufficient time to assure real or lasting results. One reason may be the expense involved. But another is certainly that advertising programs are too seldom backed up by the individual architect in his daily contacts. Almost every type of advertising campaign requires some such definite personal influence to consummate the individual sale."

Obviously, the purpose of any publicity or advertising effort is to create more work, directly or indirectly. But only to the extent that architects take advantage of individual opportunities thus uncovered can such efforts be regarded as wholly successful or worth the expense involved. Elsewhere in this issue Mr. Catto outlines a well-balanced program of public relations sponsored as a local activity by the Toronto Chapter of the O. A. A. It is the type of program which could be easily developed by many organizations in this country. Backed by individual interest, any such campaign should prove an effective aid in enlarging the opportunities of all.

## LET'S HAVE ACTION

DESPITE the fact that 450 millions of work relief funds were specifically appropriated by Congress for housing, and although 67 housing projects totaling approximately 250 million dollars have been submitted for the President's approval by the Committee of Allotments, the Housing Division, PWA is still obliged to limit its operations to seven projects, funds for which are being taken from old funds. Certainly the need for such work at the present moment in providing dwelling accommodations is no longer a matter of surmise. The demand has been more than well demonstrated by the large number of projects submitted and approved by the Housing Division's Committee on allotments. The manufacturers of building materials and equipment are eager to start production, workers in the building trades throughout the country are crying for work—not the dole—and the architects both as individuals and as a group, through the A. I. A. have repeatedly offered their services in getting these

projects under way at once. What is needed is action now! Not in 1936 just before the presidential election.

## REPORTING CURRENT ACTIVITY

NOT infrequently the editors receive comments from readers criticizing the publication of "modern" buildings. Whether or not we like these buildings is beside the point. Perhaps they are experiments in design that will lead to great future achievements. In any event, it is a mistake to overlook what is being done in this direction. Any magazine which completely ignores trends in the field of architecture is not serving its readers well. The editors of AMERICAN ARCHITECT endeavor to select buildings of "modern" character and design which appear to be significant. No attempt is made to over-emphasize this school of professional thought. On the contrary, an effort is made to present an impartial report of current activity from which the reader may draw his own conclusions.

## A VIEW OF THE FUTURE

AT about the time of the Civil War, men's clothing was 100 per cent merchant tailored. After the Civil War, ready-made clothing made its appearance. By 1920 the merchant tailors' business had fallen off to 7 per cent of the total annual volume of business in men's clothing, and in 1930 about 10 per cent of the dollar value of men's clothing. Some individuals apparently view the effect on architects of the entrance of prefabrication in the building field as analogous to that of the ready-made clothing idea on the merchant tailors in the clothing field. This is not entirely correct for while prefabricated units will affect construction and design methods, they will not necessarily affect the volume of work which must be planned by architects.

## HELP THE PUBLIC TO CHOOSE

ONE interesting and profitable question for architects to study would be the way that people select an architect. Such a study could lead to practical methods by which the profession might enlarge the circle of its potential clientele. At present many people who might be convinced of the advantages of retaining an architect do not do so because they do not know how to select one. Too many people have solved the problem by going to a local builder. Thus the whole question is one that

# t o t h e E d i t o r s

requires answer on the part of local architects. In part it involves a greater individual effort in the selling of professional services. In part also it involves the necessity of creating in the mind of the public a *desire* for that professional service through forceful demonstration of its value. Added to both these factors is the development of a simple, direct method by which the public's employment of architectural services is made easy. Solutions of these problems are important. They exist; and architects in every locality would do well to put them into operation at once.

## INVESTMENT IN SAFETY

HOUSES equipped with lightning rods are almost as rare today as the cross-road country store, yet property damage due to lightning and lightning fires is conservatively estimated at \$20,000,000 annually. According to the National Fire Protective Association the only safe buildings are those with metal-frame construction and well-grounded, all-metal buildings. In many localities the modern steel framed house may prove a worth while investment in safety by preventing both property damage and a possible loss of life.

## GLASS CRAFTSMANSHIP

A FASCINATING story of early craftsmanship in this country, with particular reference to glass making has just recently been revealed by Walter F. Sparks of Richmond, Virginia. Near old Jamestown he has found the remains of what probably were the furnaces used by a group of Dutch and Polish glass makers which in 1608, Captain John Smith brought into the colony. He has also discovered the site on which a group of Italian glass makers worked only a few years later. His specimens include mostly beads; fine blues made with copper and cobalt, ambers from iron oxide, bluish purples made with potash and manganese and red purples obtained from manganese and soda; there are fine opalescent blues, and whites, and an opaque red colored with copper, which appears green in transmitted light. Many of the beads, it is said, bear a close resemblance to Egyptian beads made 2000 B.C. Evidence of a furnace for making ware and window glass has been discovered; broken pieces of refractory material and crystal glass slag, together with pieces of glass plainly showing the tool marks of the ancient workmen. Much of this material resembles window glass in historic Jamestown.

## WANTED: OFFICE STANDARDS

WITH the inauguration in this issue of AMERICAN ARCHITECT "Time-Saver Standards" as a regular and continuing feature of the magazine, the Technical Editor appeals to architectural offices for copies of office manuals of standard details which have been developed to save time for designers and draftsmen. Many architectural offices have been accumulating standard details ranging from the dimensions of common design elements to uniform methods of labeling drawings. The Technical Editor proposes carefully to analyze these active office standards from all available sources to determine what types of information are most helpful; to adjust the slight differences in practice between various offices; and subsequently to republish this information in the form of AMERICAN ARCHITECT Time-Saver Standards.

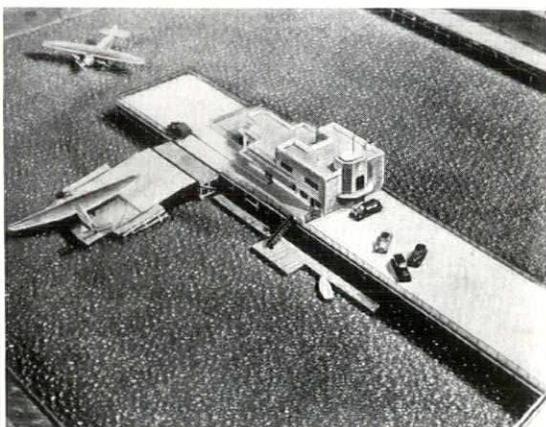
## MOVIES COULD HELP

GOOD "travel" movies usually include some architecture of the country shown. Many of them briefly call attention to the characteristics of the architecture. It takes but little imagination to visualize "talkies" skilfully presented that would dramatize the best architecture of all countries in a way that would interest the general public. Thus an appreciation of good architecture might readily be developed on the part of movie followers.

## FOUR THOUSAND MODEL HOUSES

EVIDENCE that private capital is once more becoming interested in building is offered by the start of more than 4,000 model houses on the National Better Housing Day, sponsored by the FHA. The total value of these houses has been estimated at more than \$25,000,000. Most of them are being built in accordance with FHA standards and were therefore eligible for financing facilities under the FHA plan of mortgage insurance. Not all of them, probably were designed by architects. This fact may, or may not, be the fault of the architects in the localities involved. At the present time that may be relatively unimportant. The significant fact is that each one of these houses will undoubtedly be visited by thousands of people. They are therefore valuable as a forceful advertisement to many prospective home owners that "now is the time to build." As such they have an importance to the architect that can hardly be overestimated.

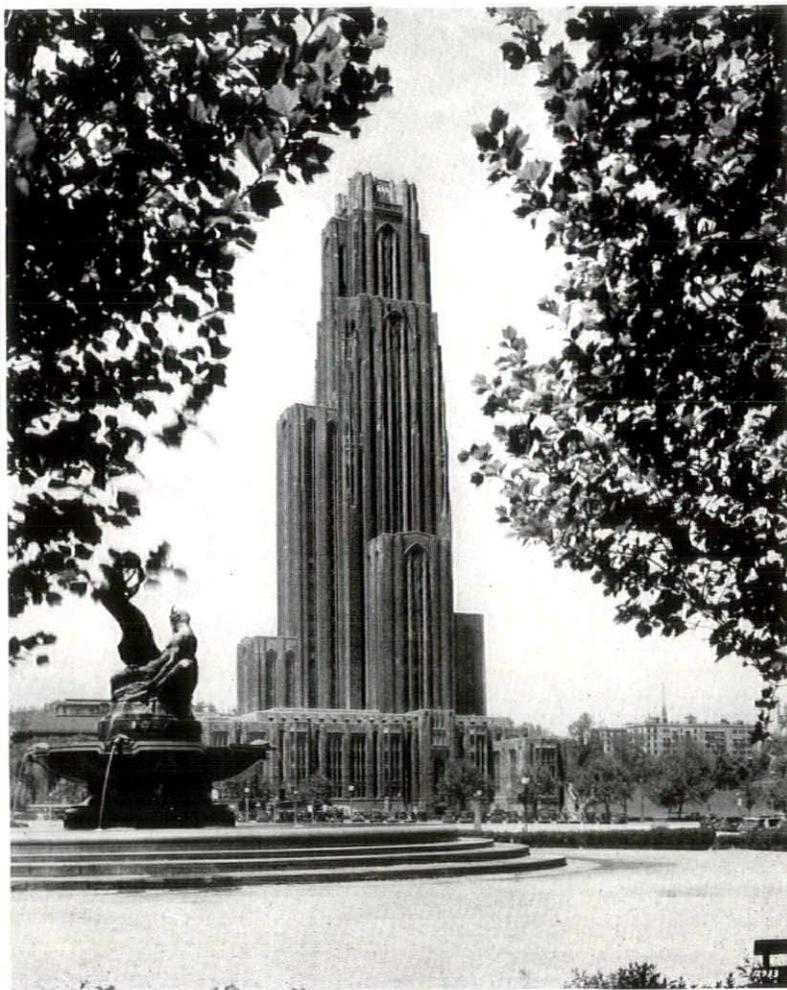
After ten years of building, the University of Pittsburgh's 42-story home, right, has received its final capmould. Interiors are still incomplete. Charles Z. Klauder, architect. **Below:** model of air-ferry terminal for New York, now being built with PWA funds. **Center:** Lox-Blox, new building game of wood and wire being shown by the wife of its inventor, Alfred Troiel. **Bottom:** timber skeleton of 200-year-old windmill at Shrewsley, Warwickshire, England, one of several which may be preserved as monuments



WIDE WORLD



UNDERWOOD & UNDERWOOD



UNDERWOOD & UNDERWOOD



GLOBE PHOTOS

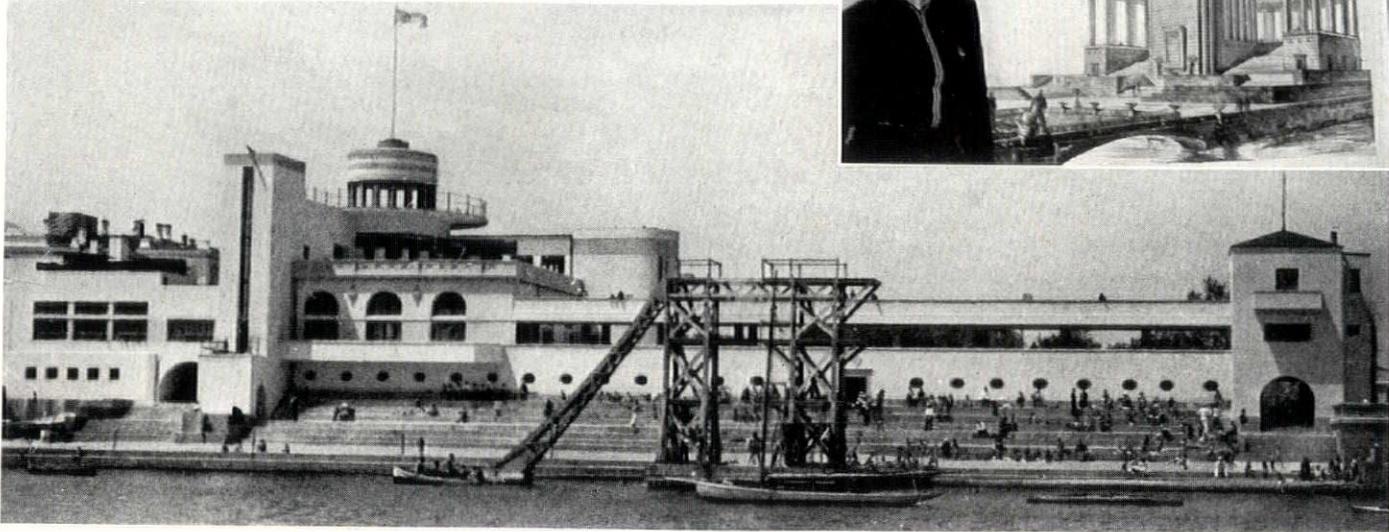
## Trends and Topics

**BUILDING PERMITS SOAR . . .** Recovery in the building industry scaled a new high peak for June of this year and for the first six months of 1935, according to the current figures of Dun and Bradstreet, Inc. A survey covering 215 representative cities in all sections of the country disclosed that the six months' figure for 1935 is 51.3 per cent ahead of that for 1934. Estimated totals for June indicated a gain of 6.8 per cent over the preceding month and an impressive increase of 84.1 per cent over the June, 1934 figures. These figures are averages of those covering totals of eight sectional groups. In every locality gains were evident, the lowest percentage of change being in the New England section, 25.9 per cent, and the highest in the East Central which this year more than doubled its construction volume, showing a percentage increase of 115.6 per cent



ACME

A roof landing for mailplanes will give quick service in Philadelphia's new \$5,000,000 Post Office, left. James A. Wetmore, U. S. Supervising Architect. **Below:** contrast the winning design by Olga Ivanova for a Russian memorial with the new Sports Pavillion at Sebastopol, U. S. S. R.

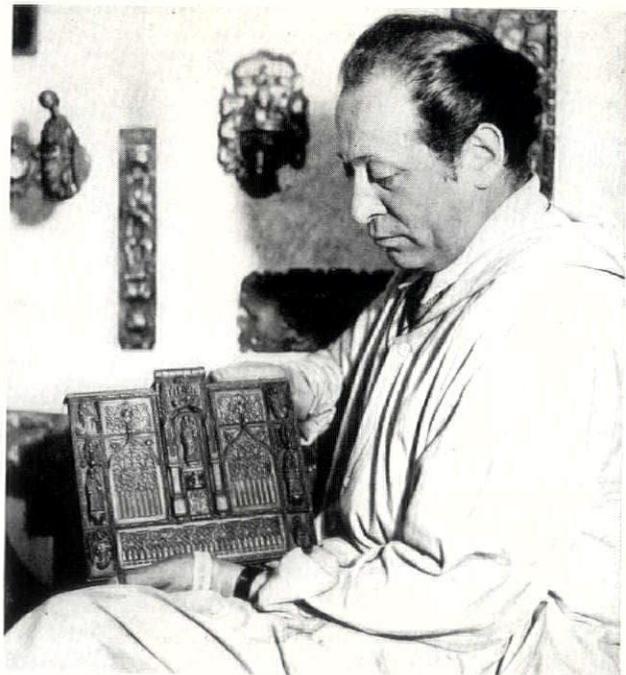


SOVFOTO

## of the Times . . . .

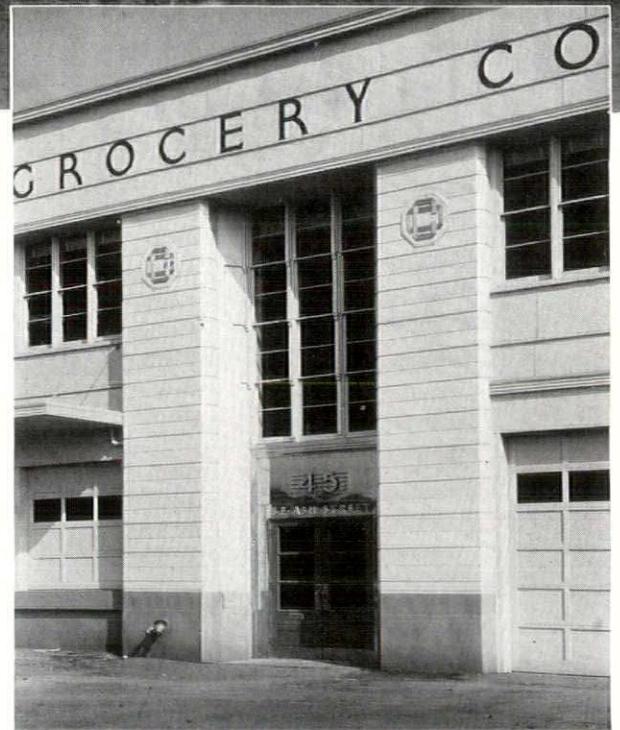
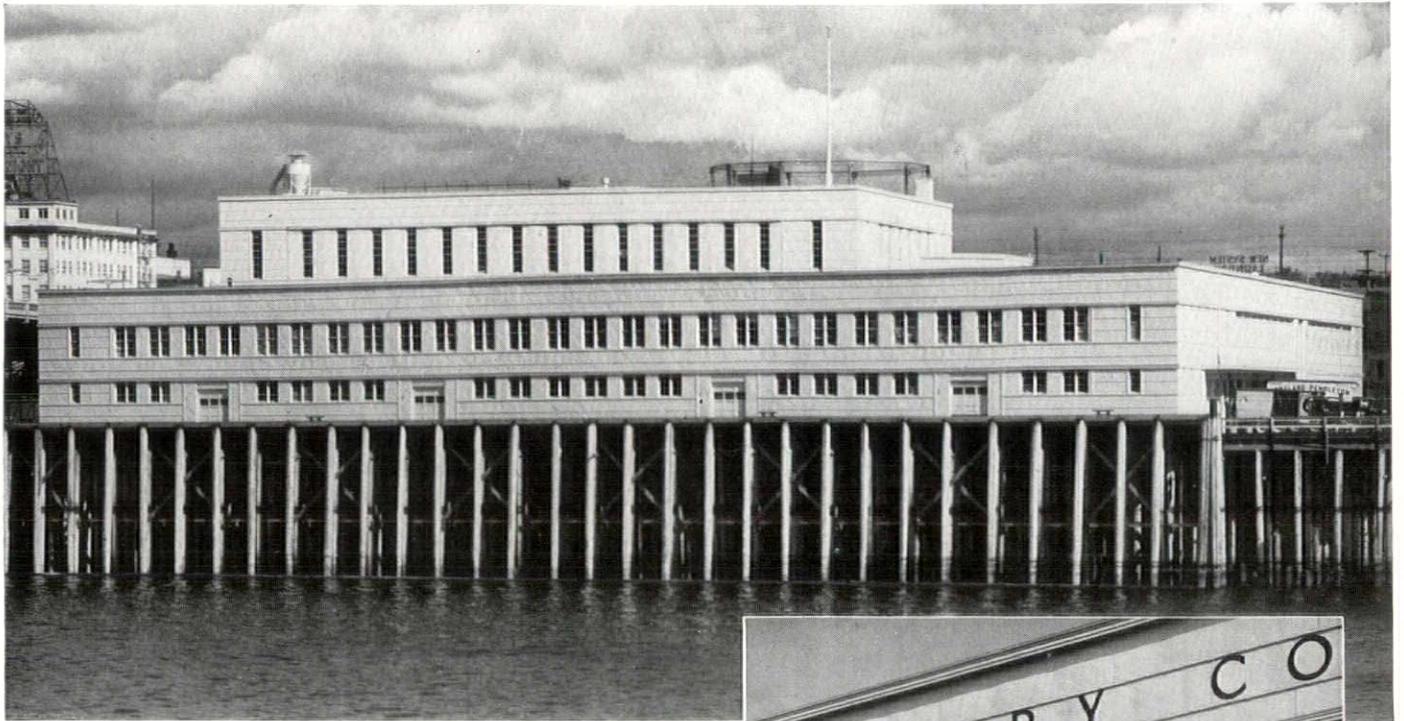
over the June 1934 figures. In New York City the gain was even higher, for building permits climbed to a figure 136.8 per cent higher than the 1934 June total. Perhaps an absolutely inclusive survey of the entire country would change these figures, which, in all cases refer to building permit totals. So impressive is the record of advance, however, that the Dun and Bradstreet percentages offer very real encouragement even after a radical discount upon the conservative side.

**SKYSCRAPER CITY . . .** Easterners who have come to regard the Empire State Building and the Rockefeller Center Group as something pretty big in the way of skyscrapers had better look to their laurels. In St. Louis, Mo., Henri Rush, architect and former Chief Engineer of that city, dreams of even bigger



WIDE WORLD

Samuel Yellin, of Philadelphia, known to architects as a master metal worker, has recently designed a gate for the Washington Cathedral, still uncompleted at the Capital. He is shown with a rare piece of carved iron from his collection



## METAL WALLS HAVE COME . . . .

THE use of metal as an exterior wall facing has long been advocated by enthusiastic proponents of new construction techniques. In this recently completed warehouse and manufacturing plant of the General Grocery Company of Portland, Oregon, at least some claims regarding the efficiency of the material have been justified. The entire building, 260 ft. square is faced with sheet metal, nailed to strips. Sheets of standard size are laid with S slip joints to allow for expansion or building settlement without damage. The facing, accented with horizontal ribs, was used to conserve weight. Supported entirely upon piles, the building is of heavy mill construction, equipped with sprinklers. Walls are insulated, offices sheathed with plywood and composition board. Cost was approximately \$200,000. The architects were Sutton, Whitney and Aandahl, of Portland

things. Recently, in a speech before a gathering of amazed architects, he explained his plans for a building of 196 stories—the Empire State Building contains a mere 86—with capacities to house 250,000 people! Towering more than 2,000 ft. above the pavement, this structural colossus would cover four city blocks, cost about \$223,000,000. It would include industrial and commercial facilities and provide a residential district, a complete university and a hospital. Mr. Rush explained that his “sky-scraping city” would necessarily be located to be accessible to ocean-going vessels, and thus could become a kind of “international clearing house” for commerce, industry and education. A definite site and financing details are not yet decided.

- Dr. Edith Elmer Wood, housing expert and consultant of the PWA Housing Division, is authority for the statement that one-third of U. S. people live in sub-standard dwellings and neighborhoods. According to Dr. Wood, “Housing is sub-standard if each family is not furnished with an ample and pure supply of running water, with an indoor flush toilet for its exclusive use, with a bathtub or shower. . . .” Surely, this is not too elaborate a minimum standard.

- Work started by the Construction Code Authority will be continued by the U. S. Bureau of Labor Statistics so far as it relates to the gathering of construction statistics. *(Continued on page 108)*

Toronto Architects believe that

# Professional Publicity Pays

BY RONALD W. CATTO

Chairman, The Toronto Chapter, Ontario Association of Architects

THE Toronto Chapter of the Ontario Association of Architects has inaugurated several methods of publicity with a view to creating in the public mind a greater comprehension of what may be expected of an architect. These efforts have been in progress for some few years; and no great success is claimed. But this is due, at least in part, to the attendant stagnation in the building industry. Thus, far from relaxing their activities, the Chapter is constantly increasing and enlarging its efforts in this direction.

Some of the major activities carried on with a view to informing the public about the architect and his work are set out below:

**1. Mailing Piece . . .**A folder, containing the names and addresses of all chapter members is published annually and mailed to all classes of professional and business people listed in the City Telephone Directory. Trade reports are followed; and whenever any building project is mentioned without referring to an architect as being already engaged, a copy of the folder is mailed to the owner.

The folder also contains some information about architectural services and extracts from the Regulations governing the practice of architecture within the Province. The purpose of this is to make the usefulness and ethics of the profession more generally known.

One member of the Chapter undertakes to have the folders addressed and mailed by his office staff as a voluntary contribution to the general good. Last year was the first in which the folders were issued; about 2500 were mailed. This year 3500 or more will be distributed at a cost of less than \$125.00. They are sent to the same people each year as a reminder.

**2. Magazine Articles . . .**Arrangements have been made with a magazine devoted to houses and gardens to supply for each issue an article on some phase

of domestic architecture. This series of articles is planned and edited by a Chapter committee, the personnel of which is changed each year in order to lighten the burden of work involved and increase the interest of the members.

The Committee co-operates closely with the Editor of the magazine. Articles are written and illustrations are provided by members of the Chapter and other architects whom the Committee request to do so. In each article the advantages of employing an architect are subtly stressed. The magazine does not pay for the articles, but in return prints a full page advertisement in each issue advocating the services of the architect. Copy for this is prepared by the Committee, but no mention of the Chapter is made.

This activity has been carried on for nearly two years. Chapter members are convinced that it should be continued. The publishers are of the opinion that the architectural tone of their magazine has been greatly improved.

**3. Newspaper Publicity . . .**In addition to regular publication of these articles, the Chapter finds opportunities for individual members to write articles for other periodicals and newspapers. This is urged especially when a controversial subject of an architectural nature, such as Housing, appears to be a focus of public interest.

**4. Illustrated Lectures . . .**Another Committee of the Chapter is organizing a number of lectures with suitable lantern slides. These will cover a variety of architectural subjects, treated so as to interest the layman. Some have already been prepared. When sufficient are in hand, they will be delivered under Chapter auspices by one of its members at the request of any school, church or other organization. A very small fee to cover the expenses only will be charged. It is hoped these lectures will provide opportunities to advance the interests of architects in general.

"TO VENTURE UPON AN UNDERTAKING SUCH AS A BUILDING, WITHOUT THE HELP AND ADVICE OF A QUALIFIED ARCHITECT, IS LIKE GOING TO SEA WITHOUT A NAVIGATOR." . . . About this forceful sentence Canadian architects in Toronto have developed an excellent local public relations campaign. The Toronto Chapter of the Ontario Association of Architects is the active sponsor for the campaign that has cost practically nothing and has been successful in enlisting support of individual architects—regardless of professional affiliation—in many publicity efforts to stimulate public interest in architectural matters.

Set forth in the accompanying paragraphs are eight ways by which architects can place themselves and their activities properly before the public. All are being employed by the Toronto Chapter, O.A.A. All of them are directly applicable in any locality in the United States and can be used to good advantage by any of the many local organizations of architects in this country.

**5. Special Exhibitions . . .** At the Canadian National Exhibition held annually in Toronto, the Chapter arranges for an exhibit of architectural photographs. Perhaps no direct value is derived from this exhibit, but it is regarded as another good opportunity for placing the work of architect before the public.

**6. General Exhibitions . . .** The Chapter holds a Biennial Exhibition of Architecture and the Allied Arts in the Art Gallery of Toronto. Photographs of the work of members are displayed and awards given in various classes of buildings. Important work is primarily illustrated, but members are urged to display also examples of minor operations. Special classes include alteration work and the small house; the latter being emphasized strongly.

All this is for the purpose of promoting the architect's services particularly on small projects. On larger work, it is likely the architect will be employed. On smaller projects his value is not always generally realized but if an owner can be induced to employ an architect on a small job and is satisfied, he will probably follow the same practice when he undertakes something more important. Models of houses and buildings are exhibited in addition to photographs. Displays of interior decora-

tion and craftsmanship of various kinds assist in creating a general public interest.

The Exhibition has proved to be one of the most popular held at the Art Gallery. In the past, it has met with much success and the average attendance for the month has been over 30,000 persons.

**7. Planning Projects . . .** Last year, the Chapter undertook to study a town planning problem for the Village of Forest Hill, a residential district adjacent to the City. A Committee of Chapter members, working anonymously and without remuneration, prepared a scheme for this project. The Village Council defrayed expenses of draughting (unemployed draughtsmen were engaged), material, mounting, etc.

The scheme was presented and met with general approval. Without such co-operation from the Chapter, it is doubtful if the Village would have undertaken this project, for under different circumstances expense would have been much greater. Anonymity on the part of designers and the fact that the scheme was presented over the name of the Toronto Chapter only, served to assist the Village Council in arousing a general interest in the proposed development. *(Continued on page 107)*



San Francisco's modern Mint, a prize rendering from the Office of the Supervising Architect, Gilbert Stanley Underwood, architect. At right, scene of the exhibition, the National Museum foyer



## EXHIBITION . . .

### The Association of Federal Architects Stages its 4th Annual Show

PEOPLE are prone to think of the Federal Government's architectural activity as being confined to the Office of the Supervising Architect. That Office admittedly is in charge of a large number of P. W. A. projects throughout the nation, and latterly has engaged the services of well-known architects formerly in private practice. But not to be overlooked are the other governmental departments that also are actively concerned with design and construction.

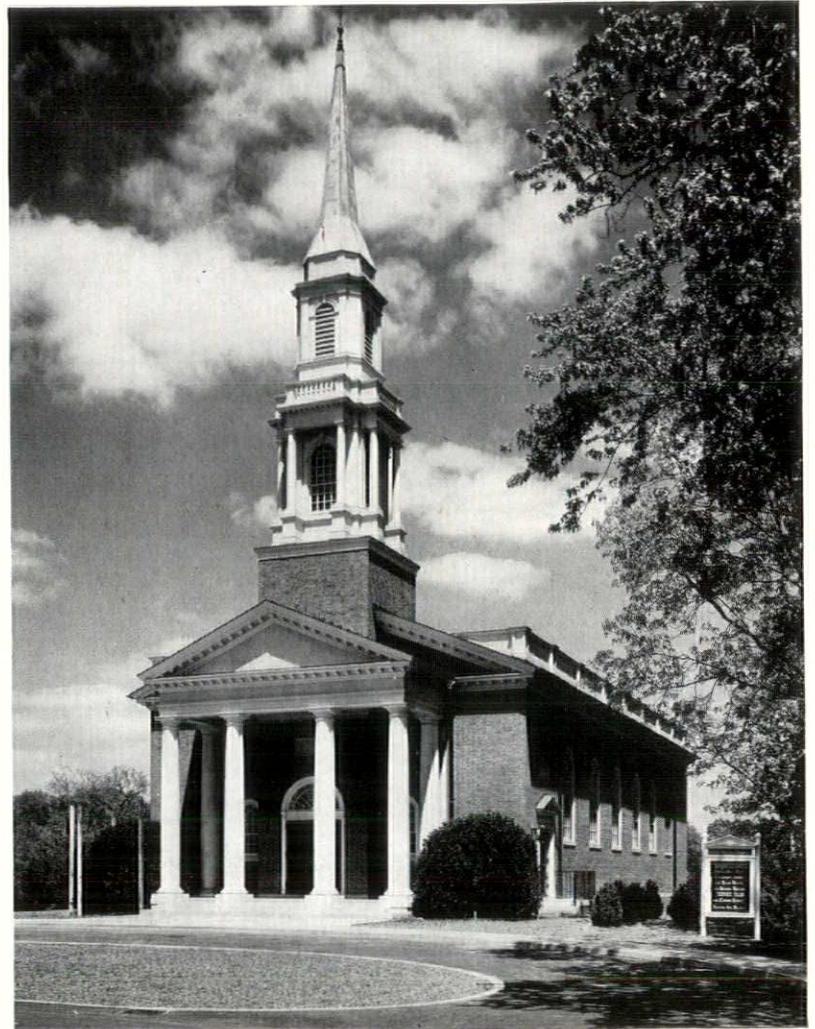
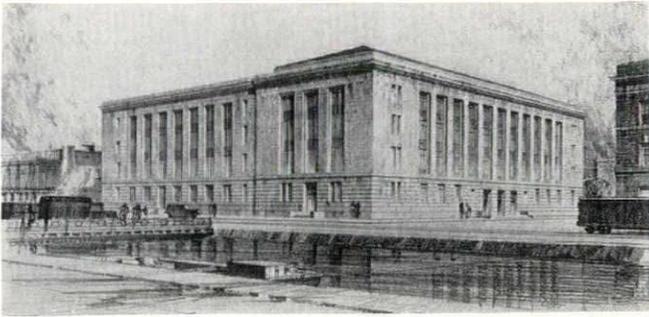
This fact, Washington's Fourth Annual Exhibition of the Association of Federal Architects served to drive home. In the National Museum, last month it disclosed the unexpectedly wide range and varied character of projects handled by architectural offices attached to the Treasury, Navy, War, and Agriculture Departments and the construction branch of the Veterans Bureau.

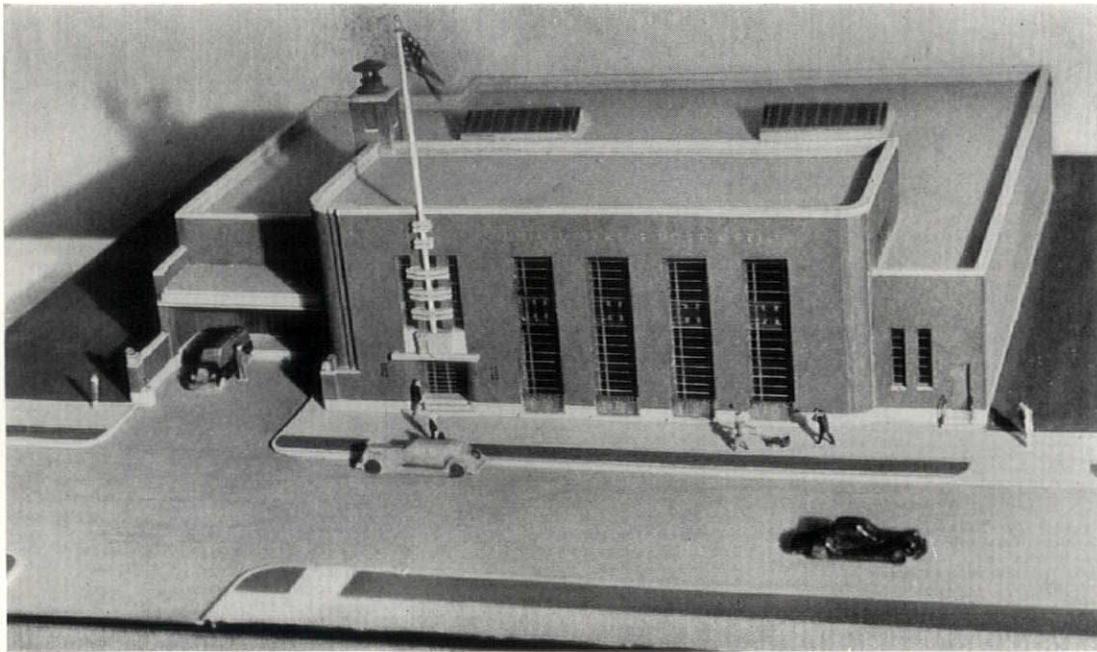
A jury composed of Francis Sullivan, Arthur Heaton and Victor Mindeleff awarded the Association's newborn Medal to the Office of the Supervising Architect (Treasury) for general excellence, and a "Mention" for a color rendering of San Francisco's proposed new Mint. Post Office-Court Houses in St. Albans, Vt., and Trenton, N. J. were commended. The Veterans Bureau also walked off with a "Mention" for its hospital at Roanoke, Va., as did the Navy Department for its Barracks at Balboa, Canal Zone. Eight awards were given for individual excellence.

Of the Government's seven hundred odd architectural employees, five hundred are in the Office of the Supervising Architect, the remainder make up the staffs of the four other departmental units.

The oldest and most active of Federal architectural positions is that (Continued on page 103)

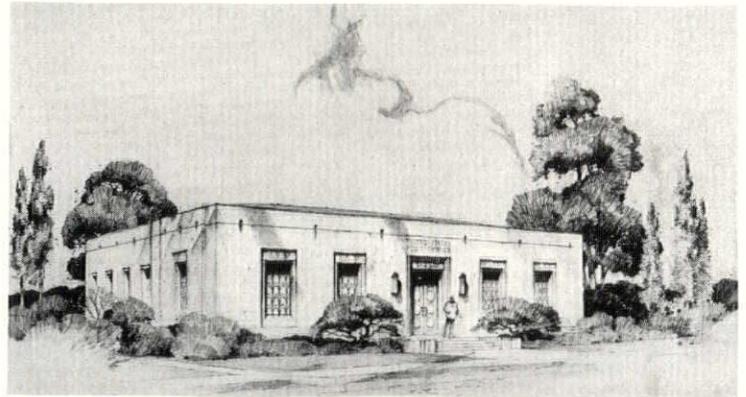
# Here and There With the Federal Architects





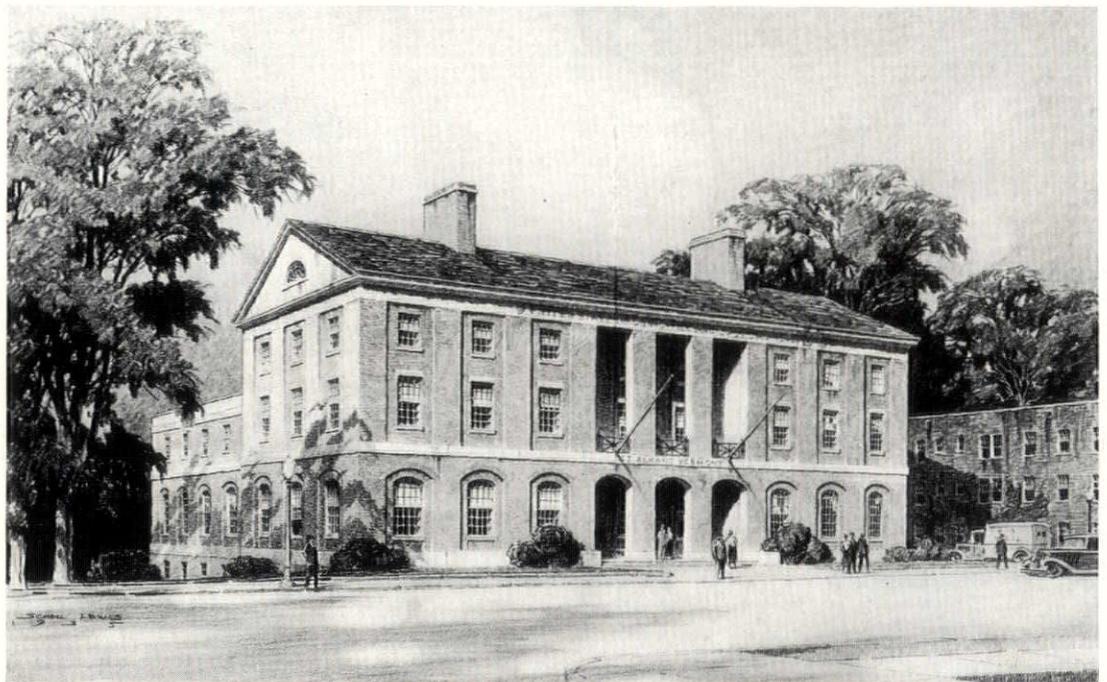
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**Top:** Model of the Roseland Postal Station, Chicago, Architect, John C. Bollenbacher of the Supervising Architect's staff, Treasury Department. **Left center:** Naval Barracks, Balboa, Canal Zone, designed by the Bureau of Yards and Docks, Navy Department. **Right center:** sketch for a Post Office, Design No. 5A-2, from the Supervising Architect's Office. **Bottom:** U. S. Post Office, St. Albans, Vermont, a "commended" design from the Office of the Supervising Architect



ON FACING PAGE . . .

**Top left:** Post Office-Court House, Trenton, N. J., designed by the Supervising Architect's Office. **Left center:** Air view of the U. S. Veterans Hospital, Fort Miley, San Francisco. Architects, the Construction Branch of the Veterans Bureau. **Top right:** the new colonial Chapel at Fort Myer, Virginia, a product of the Quartermaster General's Office. **Bottom:** Magney and Tussler were the architects for this new Federal Post Office in Minneapolis, Minn.



# The Legal Side of Architecture

BY CLINTON H. BLAKE

Blake and Voorhees, Counsellors-at-Law

## Law Protects Architects Against Blame for Minor Defects in Construction

IT has long been the established law in the State of New York, that the architect is not responsible for defects in the work, provided he exercises reasonable care and skill in the performance of his duties. While there have been decisions in some states at variance with the foregoing rule, it is, generally speaking, the established law throughout the country. Whether the architect has been negligent must be decided on the facts in each case. The matter is of vital importance to the profession, because, if it be found that he has been negligent, he may be penalized, not only by the loss of his fee, but by the assessment against him of any damages suffered by his client.

### ARCHITECT NOT INSURER OF A PERFECT JOB

A LEADING case on this whole subject was decided in New York in 1889 and affirmed by the Court of Appeals of New York in 1890 (*Hubert v. Aitken*, 5 N. Y. Supp. 839; 123 N. Y. 655). The question was flatly presented in that case, whether an architect is in effect the insurer of the perfection of the work and, if not, whether he is obligated to do more than exercise reasonable skill and care. It was contended that the contractor's work was defective and that therefore the court should hold, as a matter of law, that the architect had not properly performed his contract. The court declined to take this view and held, on the contrary, that it was a question of fact and not of law; that the architect was not an insurer. The court said in part, speaking of the architect:

"He is bound only to exercise reasonable care and to use reasonable powers of observation and detection, in the supervision of the structure. When, therefore, it appears that the architect has made frequent visits to the building, and in a general way has performed the duties called for by the custom of his profession, the mere fact, for instance, that inferior bricks have been used in places, does not establish, as a matter of law, that he has not entirely

performed his contract. He might have directed at one of his visits that portions of the plumbing work be packed in wool; upon his return to the building the pipes in question might have been covered with brick in the progress of the building. . . .

"An architect is no more a mere overseer or foreman or watchman than he is a guarantor of a flawless building, and the only question that can arise in a case where general performance of duty is shown is whether, considering all the circumstances and peculiar facts involved, he has or has not been guilty of negligence. This is a question of fact, and not of law."

In another case, decided as early as 1886, (*Petersen v. Rawson*, 34 N. Y. 370), the court held that the failure of an architect to notice a variation in the height of various window-sills from the floor did not in itself constitute negligence on his part, and that an architect would not be held liable for a defect which would not be perceptible to an inexperienced eye, in the absence of clear proof that he should, by reason of his special knowledge and skill, have detected it.

### RECENT LITIGATION SUPPORTS PREVIOUS RULINGS

THE rule thus laid down in the earlier cases has been followed and applied in a recent case, where the architect sued to recover for his services and the client defended the suit on the ground that the architect had been negligent (*Major v. Leary*, 241 N. Y. 606). The facts in this case appear sufficiently from the opinion, which again approves the doctrine that the architect is not the insurer of a perfect job, but is required merely to act with that ordinary and reasonable skill usually exercised by a member of his profession. The court said:

"In July, 1919, after conferences between the plaintiff and the defendant and his wife, the former was selected as architect to draw plans and superintend in a general way the construction of an elaborate and pretentious country residence and garage which the defendant proposed to build at Southampton. This house was of an unusual design. The plans and specifications were drawn, bids were solicited on a lump sum basis, and eventually the construction was undertaken by one of defendant's corporations. The defendant was a civil engineer and an experienced

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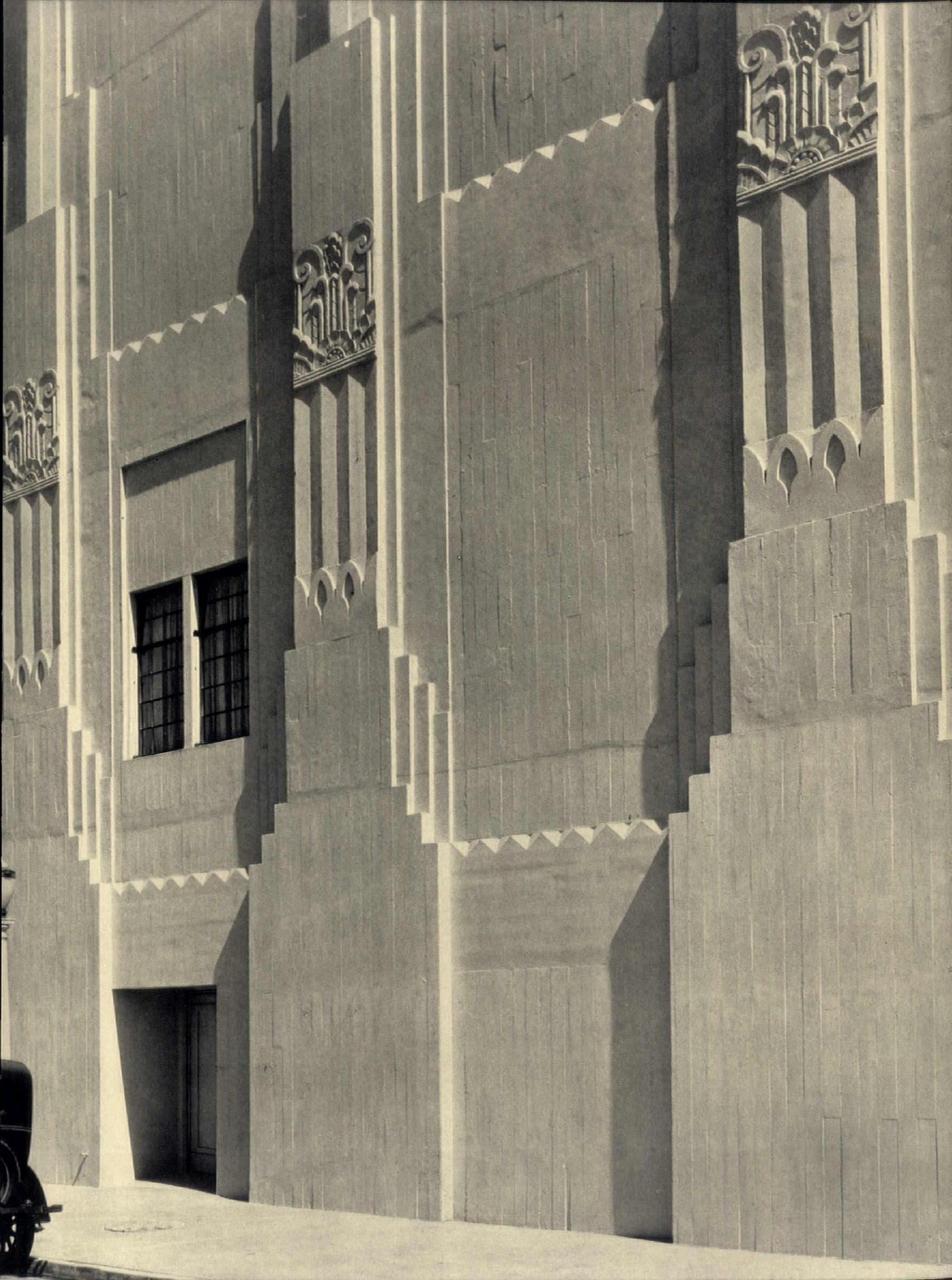


MOTT STUDIOS

**F**ORM, TEXTURE AND COLOR in concrete offer a virtually unlimited range for expression in architectural design. Form, in detail, can become texture in mass. Mass texture contributes to the brilliance of contrasting detail. And color can be used with both. Thus the possibilities of each are confined only by the designer's imagination and the economics of his problem. . . . In the Home of the Pilgrimage Play, at Hollywood, above, color is natural and texture produced by marks left by form liners. William Lee Woollett, architect. **On the following page**, the stage wall of a theater becomes a facade with a powerful rhythm of pilasters contrasting with a texture of horizontal form marks. Pellissier Building, Los Angeles; Morgan, Walls & Clements, architects. Facing it, Fox Theater, Los Angeles, illustrates contrast between bold details and various simple wall textures. S. Charles Lee, architect. Mott Studios photo

# DESIGNS IN CONCRETE







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MOTT STUDIOS

COLOR can be advantageously used on concrete surfaces particularly where elaborate detail is required. **Opposite page:** Tower Theater, Detroit, Michigan, Arthur K. Hyde, architect, in which cinder concrete blocks were decorated with cement paint. Photo: Elmer L. Astleford. **Above:** Form marks are barely discernible through the painted decoration of the ceiling in the Los Angeles Public Library. Bertram G. Goodhue, architect; Carleton M. Winslow, associate architect



MILES BERNÉ

**STAIRWAY CORBEL** in the Church of the Precious Blood, Los Angeles, cast as a monolith, with textures produced wholly by the use of form board and waste moulds. H. C. Newton and R. D. Murray, architects. **Facing page:** the effectiveness of delicate detail is emphasized by coarse textured walls cast in forms of square edged slash-grain lumber. St. John's Episcopal Church, Los Angeles. Pierpont and W. S. Davis, architects. Photo: Mott Studios





PHOTO: "DICK" WHITINGTON

**THE PLASTIC NATURE OF CONCRETE**, coupled with its enduring strength, unfold limitless design possibilities worthy of the creative artist's finest concepts. Of all construction materials available today, concrete is the most completely honest medium when all its characteristics are sympathetically employed. It reveals its structural quality; it needs no concealment; it need imitate nothing. Combined with reinforcing steel (for steel may be properly considered a fourth ingredient of concrete) it may express the lightness and grace of the most delicate stonework. Used in mass, its solidity and weight may express extreme sturdiness and strength. The past has already shown the possibilities of architectural design in concrete; the future holds much more for this material

# CONCRETE

AMERICAN ARCHITECT "MATERIALS IN DESIGN" SERIES, No. 4



# CONCRETE

FORM . . . TEXTURE . . . COLOR

BY ARTHUR MCK. STIRES

It is surprising to find an architectural material which, although its present high state of development is largely due to the skill and enthusiasm of a group of architects, is still comparatively unappreciated by architects generally. East of the Sierra Nevada Mountains, architects, with a few conspicuous exceptions, are inclined to think of concrete as a structural rather than an architectural material. Yet, on the West Coast, it is the pre-eminent architectural medium, the material which most architects consider first when thinking of a new project.

There is no practical reason for this geographic limitation of the use of architectural concrete; no reason traceable either to lack of adaptability in the material or to differences in climatic conditions. It is probably the result, on the one hand, of accumulating experience and appreciation and, on the other, of lack of experience and consequent lack of full and proper evaluation.

The aim of this article, therefore, is to present to architects generally as complete a picture as space permits of the work, the methods and the discoveries of those of their contemporaries who have made a thorough study of the architectural aspects of concrete and who have found their efforts amply rewarded.

The three primary points to be considered are form, texture and color—the creations of architectural design in concrete, whether monolithic or pre-cast. While no attempt will be made here to discuss the purely structural qualities of this material, it may be of interest to note that only within the last twenty years—and especially within the last ten—has concrete become the generally accepted material we know today, no longer haphazard in production and variable in behavior, but made with scientific accuracy productive of assured results.

Ten to twenty years ago the average strength of concrete was 2,000 pounds per square inch. Today 5000 pounds per square inch concrete is common. With the cement and aggregates used in modern work, it would actually be difficult to hold the strength of concrete down to the former maximums, if such a thing were desirable. The same laboratory methods which have brought about this change have

worked similar improvements along other lines, such as water-tightness and durability. The fundamental principles of concrete making are well known today. There need be no more uncertainty in its use than in the use of any other structural material.

The fact that concrete is structural and enclosing is what gives real significance to the fact that it is also decorative. It deserves, perhaps, to be called the most "honest" of architectural materials since it requires no facing other than the surface of the supporting and enclosing structure. It will be seen that this homogeneous quality in concrete has been consistently the basic source of design inspiration to architects working in this medium. A new approach to design, consistent with the unique character of this plastic material, is rapidly being developed. The modern concepts of line and mass, the treatment of flat surfaces, the introduction of color are finding in concrete the versatility, beauty and economy necessary to bring them into being.

## FORM

MONOLITHIC concrete provides the architect with a range of possibilities which has scarcely begun to be explored. Being a plastic material it immediately suggests the development of design motifs, economically possible with few other materials, which can be cast integrally with the structure. This phase of its development alone has contributed much to raise it from the warehouse and factory era to its present position.

The use of forms and waste moulds to produce surface patterns, mouldings, ornament, and even sculptural groups, has accordingly been brought to a high point of development. The variety of effects obtainable are practically limitless and are continually being expanded by architects who have studied the character of the material and are finding new ways of expressing that character. There are, however, certain basic methods which are standard in evolving architectural form in concrete.

**Form boards**, which serve as temporary retaining walls for concrete in its plastic state, also provide the simplest and most direct method of evolving pattern and design on the finished surface. When



**TEXTURE** through form and scale obtained by using black corrugated iron as a form liner. Only two form sections were used, the lower one being removed when the concrete had hardened and replaced in perfect alignment above the upper one. Complete lack of joint lines visibly demonstrates the monolithic character of the construction. Edmond Meany Hotel, Seattle, Washington. R. C. Reamer, architect

concrete first came into the architectural field, every effort was made to produce smooth surfaces, free from grain impressions and the joint lines between form boards. In order to accomplish this, two-inch dressed lumber was used for form sheathing, because it was not inclined to warp and thereby accentuate joint lines. Surfaces were often rubbed to remove traces of form boards.

The day came—as in the interests of honest design it had to come—when some vigorous pioneer decided that, since the form boards were characteristic of concrete and essential as part of construction, the marks left by them should remain visible. Out of this successful experiment grew the present technique of using form boards of various grades and widths and of applying liners of plywood and fibre board, corrugated metal and such other materials as might occur to the inventive imagination of the architect. Out of it, perhaps, also came the whole process of developing form, texture and ornamental detail in the construction of the form.

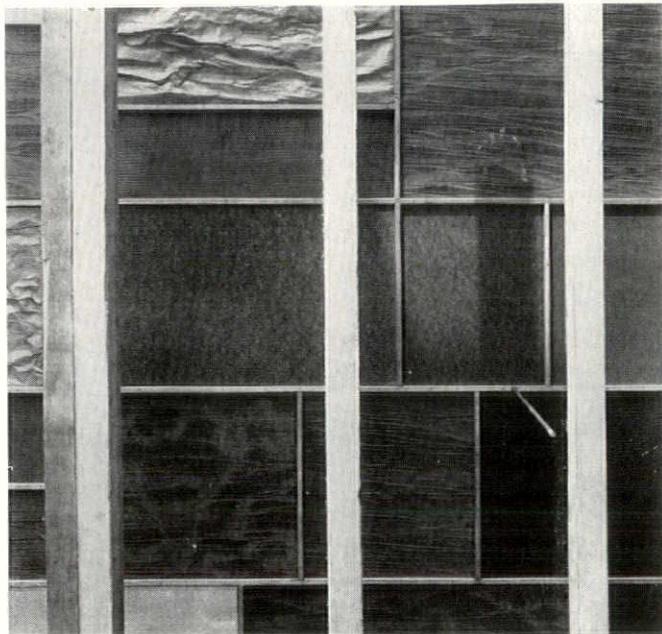
Essentially, this method of obtaining effective decoration in concrete wall surfaces is extremely

simple. A glance at the illustrations will serve to indicate the variety of pattern obtainable by means of the form boards alone. Some architects use wide (8 and 10 inch) boards, because they have a tendency to warp or “cup” and leave a distinctive pattern in the concrete. Some develop a very rough texture with strong parallel lines by using slash-grain boards with square edges in which the grain is made even more pronounced by soaking before oiling. Sometimes joint lines are emphasized by chamfering the edges of form boards  $1/16$ ” deep and  $1/4$ ” wide to give a V-shaped bead along the joints. Smoother surfaces are obtained by the use of close-fitting tongue-and-groove sheathing.

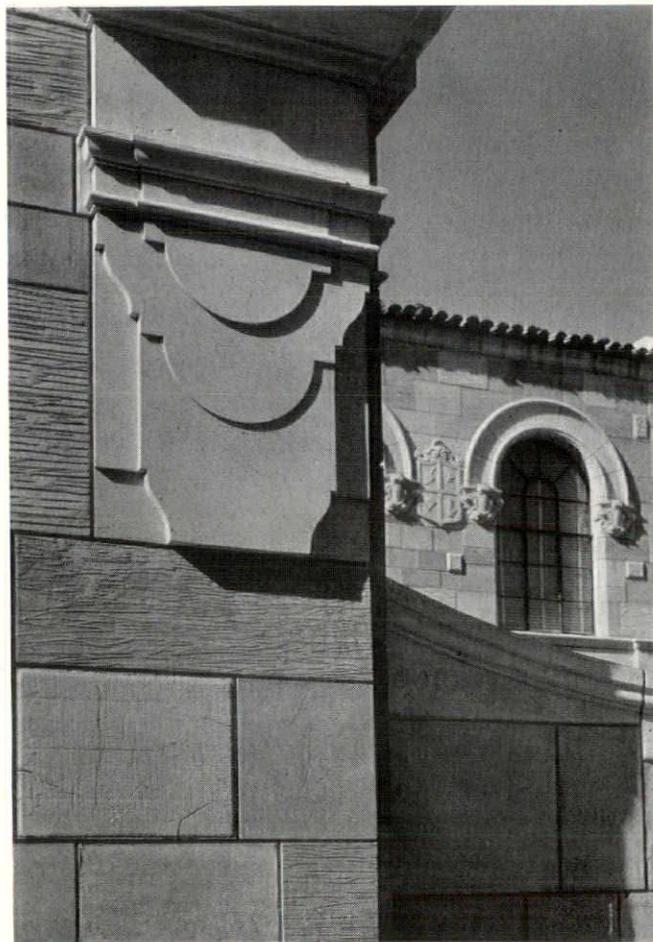
These and other methods are more readily appreciated by a study of the photographs. Form boards are usually kept straight and true, care being taken to maintain this relationship in the construction of all angles and returns. Boards are sometimes placed vertically in the forms rather than horizontally; or a combination of both may be used.

Forms are usually oiled before using, regardless of the material used as the form sheathing. A

**VARIED TEXTURES** were produced on the Hollywood Masonic Auditorium by using rubber matting, fibre board, paper and roofing materials to line forms. Below, the form with joint strips and lines in place. Since the liners were of different thicknesses, some blocks project beyond others on the wall surface. Morgan, Walls and Clements, architects. On facing page: cast concrete textures, reproduced at approximately full size. (Courtesy, Onondaga Litholite Co.)



W. J. VAN ROSSEM



MOTT STUDIOS

special paraffine-base oil such as is manufactured by most petroleum companies, is often used. Some prefer soft yellow cup grease thinned with kerosene. Care must be taken to wipe off any excess oil to prevent staining the surface of the concrete.

Liners of various materials and textures are used to modify and control the pattern left by the forms in the concrete surface. The most common liners are fibre board and plywood.

Fibre board is available in large sheets which can be readily sawn in size. It is light in weight, because it is only  $\frac{1}{8}$  to  $\frac{5}{16}$  inch thick, and is easily nailed to forms and drilled to allow passage of tie rods. Adjoining sheets are generally butted tightly together, because the fibre board most commonly used is very non-absorbent. Cigar box nails, having thin flat heads, are used to secure the lining to the sheathing so the impression of the nail heads will be very slight. Fibre board liners are usually shellacked before oiling to prevent staining the concrete.

Plywood and fibre board liners are used where an almost perfectly smooth surface is desired. Often this is used in contrast with the rough surfaces obtainable by use of form boards. Very thin liners of this type bulge between the sheathing boards if not backed up tightly. This produces a slightly

undulating surface which may be desirable at times, but is usually avoided. Plywood should be of the kind made for form construction with a waterproof glue or resin binder. This material need not be shellacked, but simply oiled.

Other lining materials are numerous. On this page above are illustrated a section of a form having a variety of liners used together and the resulting surface pattern. They indicate the character and pattern which these and similar materials may be expected to produce.

Raised or sunken lines or panels, reveals and projections appropriate to the design can be produced by simple modification of the form work, usually by nailing to the surface of the form strips or panels which will leave the required impression in the concrete. Examples of such procedure are illustrated on pages 76 and 77.

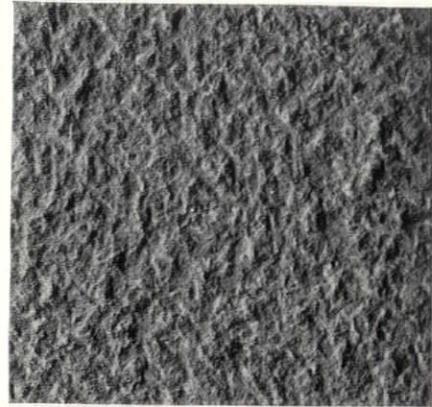
**Waste moulds** made of casting plaster are used for ornaments of considerable detail and refinement. These are made from models approved by the architect and, in monolithic construction are securely placed in the forms so that all such ornament, whether comparatively simple mouldings or complex pieces of sculpture, are cast integrally with the



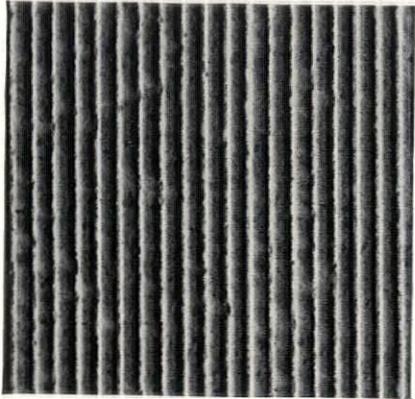
HAMMER DRESSED OR BUSH HAMMERED



COARSE CRANDALL



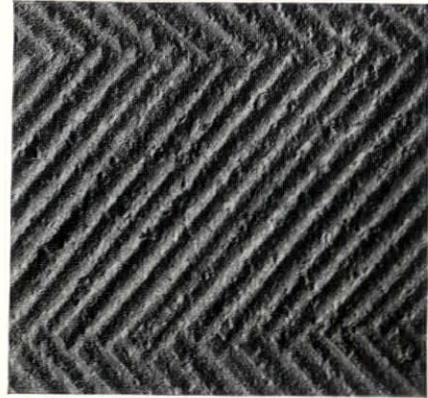
FINE CRANDALL



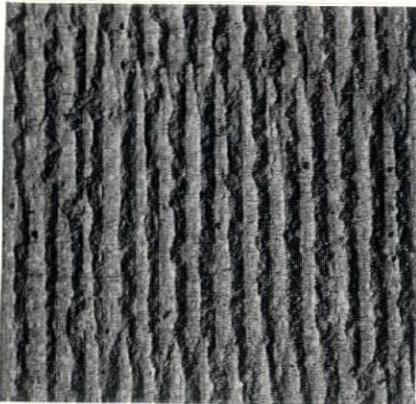
MACHINE TOOLING, 4, 5 OR 6 TO THE INCH



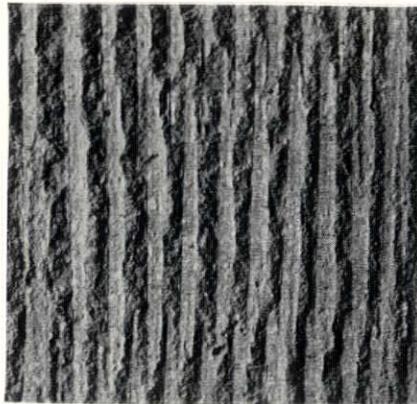
DROVE, OR HAND TOOLING, IRREGULAR



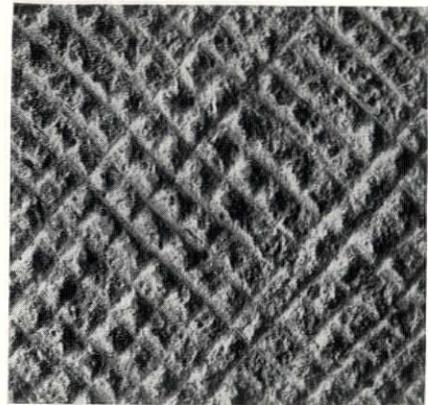
DROVE, OR HAND TOOLING, HERRINGBONE



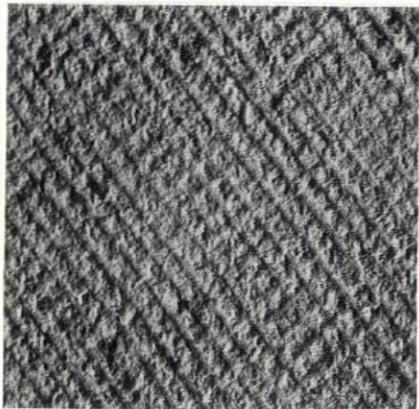
CHISEL STAB, 5 TO THE INCH



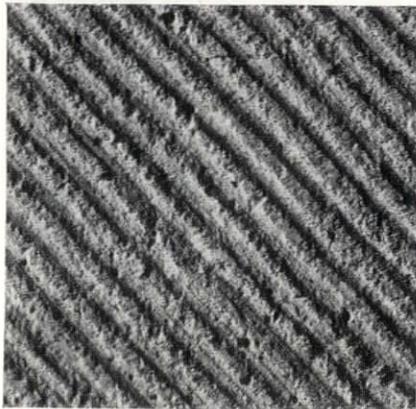
CHISEL STAB, 4 TO THE INCH



CROSSED MEDIUM-TOOTH CHISELLING



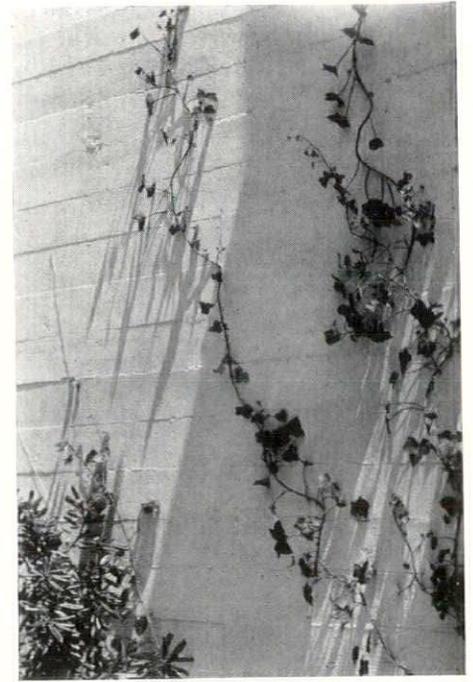
CROSSED FINE-TOOTH CHISELLING



ANGLE-TOOTH CHISELLING, MEDIUM



ROCK-FACED



MOTT STUDIOS

**SCALED** to the needs of small buildings and houses, as well as to the larger building on which it was used, this texture, used by R. C. Flewelling, architect, for the Hawthorne School, Beverly Hills, Calif., was produced by the simple expedient of using a rough lumber which varies sufficiently in thickness to accentuate the joint lines. A coating of white cement paint does not obscure the board marks

structure. These moulds are broken—"wasted"—when stripped from the concrete. When the pattern is to be repeated, other moulds are made from the master model.

There is practically no limit to the forms obtainable by this method. Sometimes, especially when the design calls for extraordinarily fine detail or where the placing of concrete would require an excessive amount of labor, thereby making the work too costly or too slow, ornament is precast and applied to the structure. This practice also obtains in such types of work as the rose window illustrated on page 75, or the pierced dome of the Baha'i Temple shown on page 75. In such instances a single plaster mould or series of moulds may often be used throughout the job. In some cases, precast ornament is set in place in the forms, serving as part of the form itself and becoming practically an integral part of the structure when the concrete is placed behind it. This process has been used recently in developing color work in exposed aggregate and will be mentioned later in this article.

An interesting technic in the use of plaster moulds has been developed for use when detail is so refined that concrete of normal stiffness cannot readily be tamped into all the small holes and crevices in the mould. This condition has been met by using a rather wet mix—the water acting as a vehicle to carry the solid particles into the recesses of the

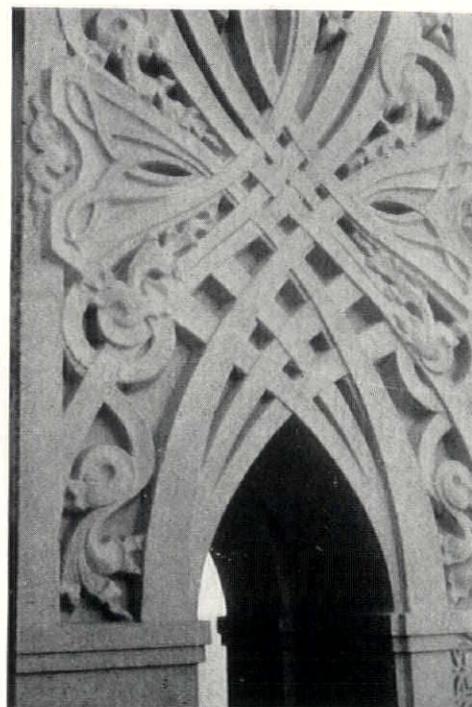
mould—and then reducing the water-cement ratio at the time of set by the use of an absorptive medium which draws superfluous moisture from the mix and restores the proper balance of ingredients.

Use of this method is thus far quite limited but presents many interesting possibilities. The more common method—and one which is in most cases satisfactory—is to proportion the concrete mixture to give the necessary plasticity. Vibration is also being used to place relatively harsh mixes of low water ratio which would be unworkable by hand methods.

All plaster moulds must be waterproofed before they are used. Usually this is done by sizing them with one or two coats of shellac and painting them with a mixture of cup-grease thinned with kerosene to which crystallized stearic acid is sometimes added. Some architects omit the shellac, claiming that the grease alone is sufficient.

Stripping waste moulds from the concrete is not an operation which can be performed carelessly. In the case of ornament having undercut or rather delicate detail, the cutting away of the mould must be done skillfully. To assist the workman in this task, a coating of colored plaster, about an eighth-inch thick, is sometimes applied to the inner surface of the mould to warn him when his chisel is nearing the concrete.

It is important to take precautions in depositing



**PRECAST** in plaster moulds, this intricate detail from Baha'i Temple, Wilmette, Ill., is strengthened by a network of spot-welded reinforcing rods. The surface has been brushed to expose the aggregate. Louis Bourgeois, architect

**ONLY THE WINDOW** and entrance trim of Grace Cathedral, San Francisco, is of precast concrete, the structure itself being monolithic. Strength, permanency and adaptability are significant characteristics of concrete. Lewis P. Hobart, architect

concrete in forms and moulds to prevent the concrete accumulating or being spattered on moulds and rustications above the general level of that already placed. When such accumulations harden on the forms and are subsequently covered with fresh concrete they leave disfiguring marks on the finished surface. In order to control the placing of concrete in deep forms, canvas chutes, called "elephant trunks," are used. They protect the upper portions of the forms and aid in preventing segregation of the concrete. Similarly to protect plaster moulds from such accumulations, and also from possible injury, a canvas curtain is frequently fastened in place over the face of the mould, the lower edge of the curtain being kept two or three inches below the level of the concrete and raised as the pouring progresses.

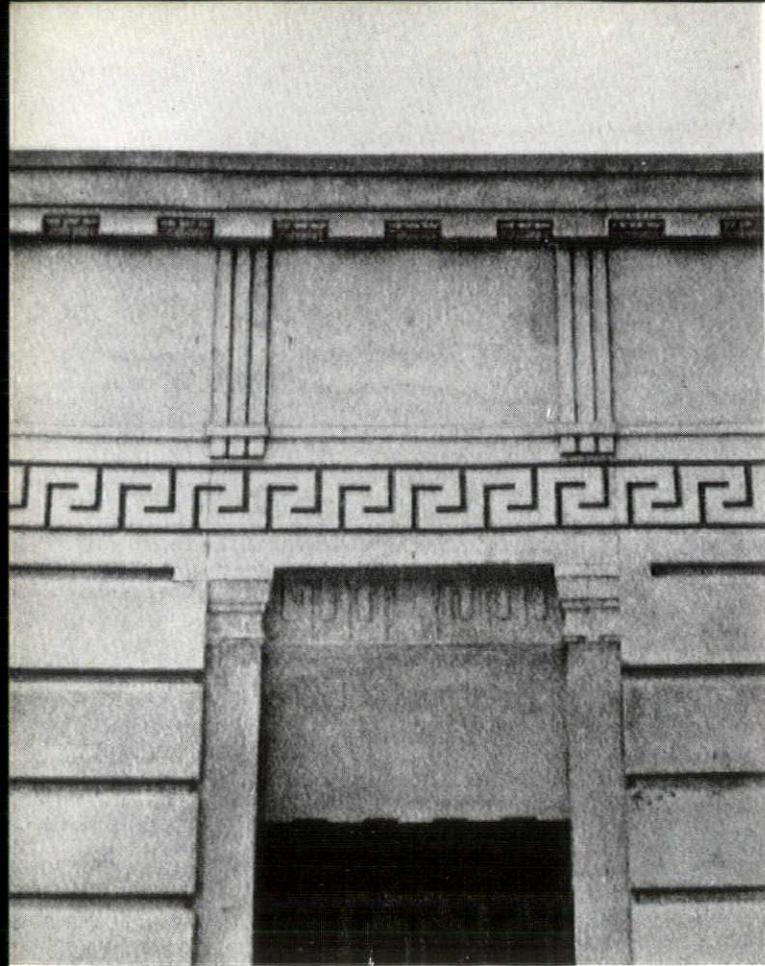
## TEXTURE

○ F the two methods generally used to produce texture in concrete walls, one has already been mentioned. The result of the frank use of form

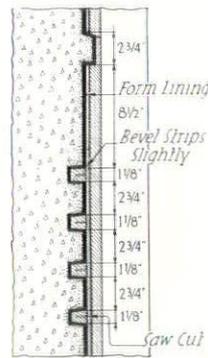
boards is perhaps as much a matter of texture as of form. It is evident that smooth surfaces or rough may be obtained by the proper selection and use of form boards or liners. Some of the accompanying photographs will give an idea of the quality of texture produced by this method. But a true appreciation of the beauty of some of this work can only be gained by seeing the effect of changing lights, from morning till night, on the walls of the building.

A variation of this manipulation of the surface to produce texture is found in the application of various types of stucco finish to the concrete surface. The skill of the individual workman is often the factor which determines the success of this type of work. The principal methods used in obtaining texture on stucco are familiar to most architects. But whether a dash coat is thrown on the wall, or troweling or hand-rubbing or brooming is employed, the effect may be good or bad depending on the craftsmanship of the men who do the work.

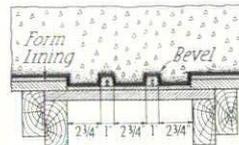
In contrast to the foregoing methods of obtaining texture is another method—that of exposing the aggregates.



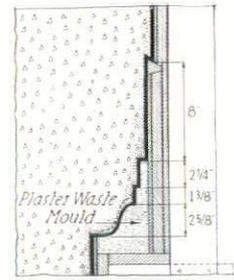
Griffith Observatory, Los Angeles:  
John C. Austin and Frederic M. Ashley, architects



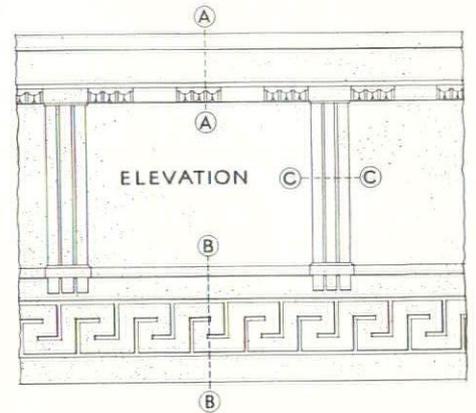
SECTION B-B



SECTION C-C



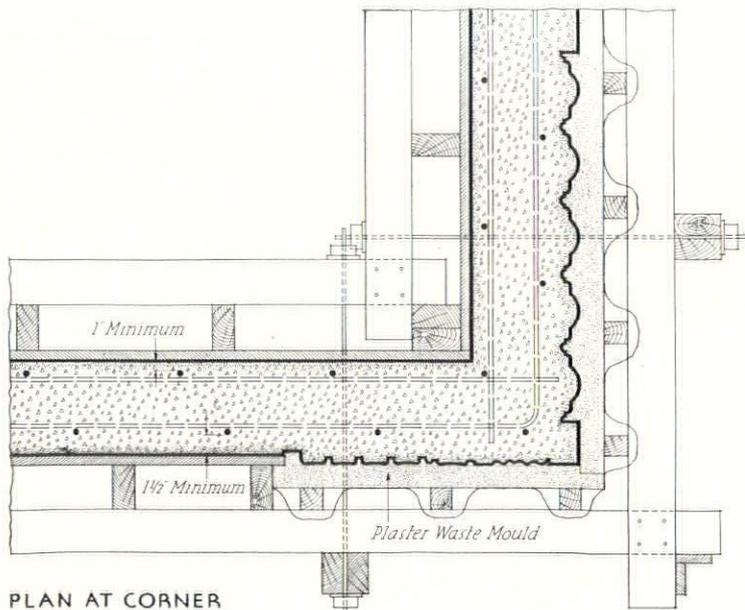
SECTION A-A



## TECHNIQUE OF FORMING MONOLITHIC CONCRETE

Details and drawings, courtesy of the  
Portland Cement Association

Wilshire Professional Building, Los Angeles, A. E. Harvey,  
architect. Plaster waste moulds made from master pat-  
terns were used extensively. The terrazzo sidewalk,  
with lines leading toward doorways, is worthy of study



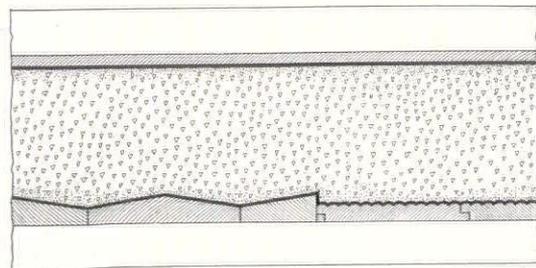
PLAN AT CORNER

MOTT STUDIOS

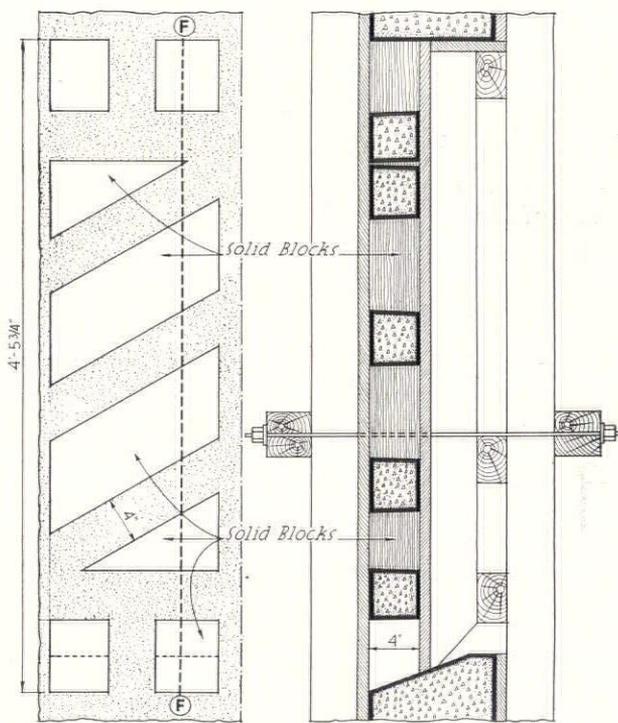




MOTT STUDIOS



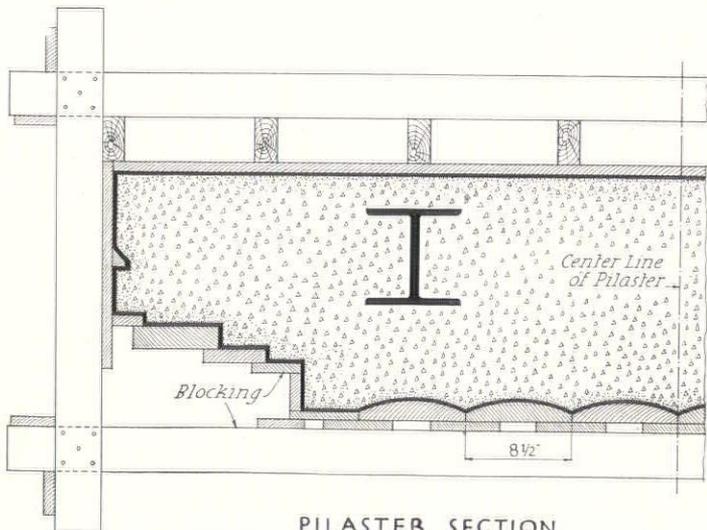
Chouinard School of Art, Los Angeles, Morgan, Walls and Clements, architects. Simple millwork on the face of form boards and diagonal joint strips nailed across ribbed members produced the effects shown



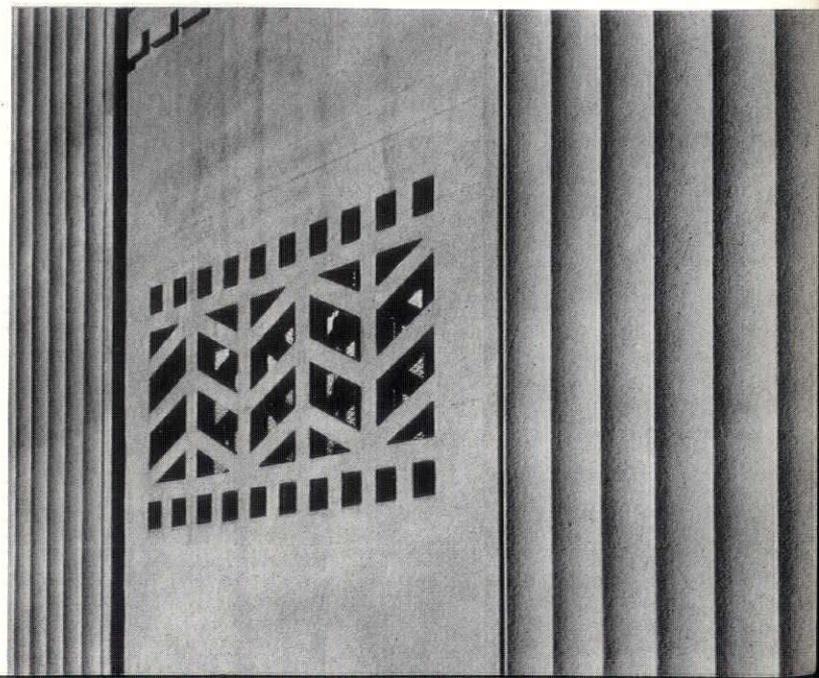
PART ELEVATION

SECTION F-F

Men's Gymnasium, University of California, George W. Kelham, architect. These cast-in-place grilles were designed to permit gravity filling of all parts of the formwork. Broad flutings were formed by convex-shaped planks; window reveals by plain boards, blocked out



PILASTER SECTION



**Exposed aggregate** concrete, as the name implies, is simply concrete from which the cement paste on the surface has been removed, exposing the aggregate beneath. The two factors which determine the type of texture produced by this means are the method used in exposing the aggregate and the degree to which it is exposed. The size and nature of the aggregate itself is, of course, a factor.

One of the most enthusiastic and advanced proponents of this type of work has called exposed aggregate "the mark of architectural concrete," basing his premise on the contention that the aggregate, rather than the surface paste, is the dominant element in concrete and that the appearance of the concrete should therefore be the appearance of the aggregate. The individual architect may choose between these two salient "schools of thought," or he may find right on both sides and thus use both according to the nature of his requirements. There exists, of course, a difference in cost in favor of securing texture by the use of forms, since most exposed aggregate work requires an additional operation to remove the cement surface.

Wire-brushing to expose the aggregate is perhaps the most favored method from the point of view of results obtained. This is done before the concrete is thoroughly hardened and a number of advantages are claimed for it. Such hand brushing is said to develop uniform surfaces, good drawing and beautiful architectural planes such as are not procurable by any of the other methods. While this can be readily appreciated, certain difficulties are imposed by the process which would be relieved if the concrete could be allowed to harden thoroughly before the forms or moulds were removed.

Exceptional care must be taken in such work to prevent "spalling" or breaking of corners, projections and the like. Nevertheless, results obtained indicate that further development of this method may make it one of the really important contributions to the technic of architectural concrete. In this process it is necessary to cure the concrete by keeping it wet for several days because the protection against premature drying has been removed with the forms.

Other methods, all of which are employed toward the same final result, are almost sufficiently described by their designations:

**Mechanical brushing and rubbing** applies abrasive action to the hardened cement surface to grind it away.

**Chemical treatments** are based on the use of a chemical which will attack the cement and permit it to be scrubbed from the surface of the aggregate.

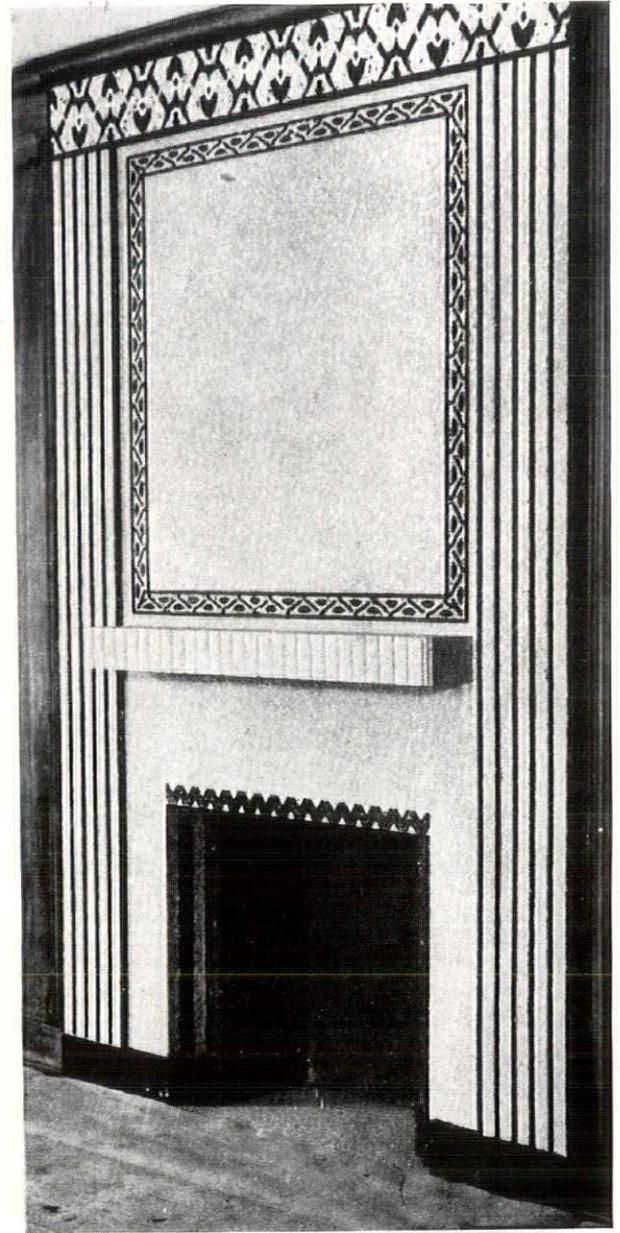
**Sandblasting** is another method of applying abrasive action.

**Bush-hammering and pneumatic tooling** are quite frequently employed, particularly when it is desired to fracture the aggregates on the surface, thereby ex-

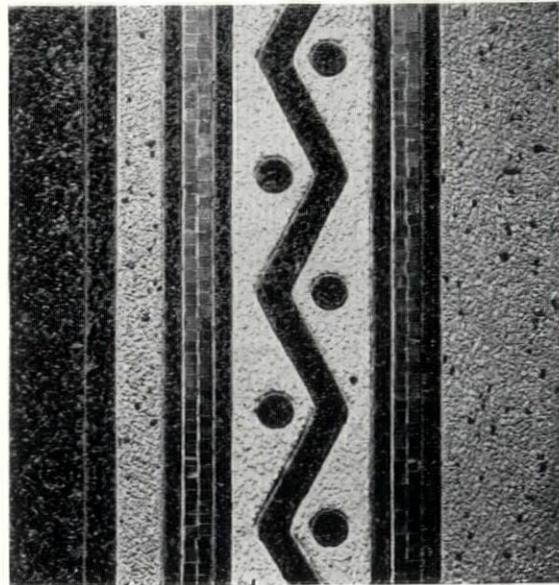
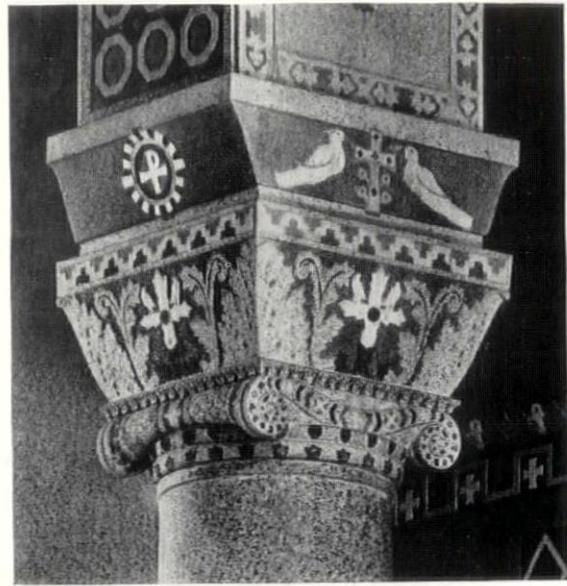
posing their internal structure and color. Good effects have been achieved economically in this manner.

## COLOR

It would be difficult to find any one element in contemporary architectural design which is receiving more enthusiastic attention than the use of color. In architectural concrete this interest is reflected both in the intensive research being conducted by individual laboratories and in the avidity with which progressive designers are availing themselves



**PRE-CAST CONCRETE**, typified by this monolithic fireplace panel, is well adapted to use in small houses. Field, light buff ceramic aggregate; borders, red and blue; fireplace, black, outlined in red. John J. Earley, architectural sculptor



**COLOR AND TEXTURE** were produced in the Shrine of the Sacred Heart, Washington, D. C., by the controlled use of exposed aggregate. Main body of concrete was wire-brushed before completely set to expose the aggregate. Precast details were similarly treated after removal from plaster moulds of a type which permitted the segregation of colored particles. Murphy & Olmsted, architects; John J. Earley, architectural sculptor

of the resources thus placed at their disposal. Especially in modern architecture, where so much of the design is developed in flat planes, color and contrasting colors can become a tremendous asset in the creation of effective ornament consistent with the structure.

Coloring of the entire mass of concrete, in monolithic construction, is a process which is limited in the range of tones which may economically be produced. Many coloring ingredients are still comparatively expensive, despite the progress made by technicians in reducing this factor, and such lavish

use can hardly be considered practical. For this reason, although solid concrete could be made in almost any color applicable to smaller areas, it is customary to use one of the following procedures of precasting colored slabs or of applying color to the finished surface.

**Selected aggregate.** The use of selected aggregate for color work in concrete is a logical development of the trend toward color in architecture. The aggregate used may be colored glass, vitrified clay or porcelains, or natural stone of any suitable color.

This aggregate is used as facing for precast slabs or blocks which are placed in position. The work done on the ceilings of the Department of Justice Building in Washington, where colored aggregate arranged in a decorative pattern was used in precast slabs which served as a form behind which the concrete was afterwards placed, is well known. Since that time important studies have been undertaken along two lines: First, in the study of manufacturing processes aimed at the reduction of cost of colored aggregate; second, methods for building monolithic concrete wall forms of precast slabs are being developed which show excellent promise and are now being tested in an actual job.

The significance of these steps should not be underrated. It means not only that the architect will be able, for example, to precast a band or panel, decorated with a variety of colors in a pattern of simple or elaborate design and apply this color to the building, but he can make it an integral part of the structure—practically monolithic in character—by using the band or panel as a form and placing concrete behind it. There is nothing to prevent whole wall areas or whole buildings being constructed by this method.

The system is essentially simple. In precasting the slabs a mix containing the selected aggregate is first placed in a form to the desired depth. This is vibrated (the modern technic of "puddling") until it is well compacted. A wire mesh is then laid over it and a backing of ordinary concrete is placed immediately. This backing is similarly vibrated, just enough to compact and bond it to the facing but not enough to disturb the first layer. When the slab has hardened sufficiently, the form is removed and the colored aggregate is exposed by wire brushing or other methods of finishing.

When colored cement is to be used in connection with selected colored aggregate it has been found that a perfect match in color is undesirable in that the result is somewhat "flat." It is better, therefore, to establish a slight contrast between the color of the aggregate and that of the cement. For example, with a dark blue aggregate use a somewhat lighter blue cement.

If a design in different colors is to be precast, a mould of plaster is made in which the design is outlined by raised sections or ribs in the surface of the mould. These act as separators to keep the various colors from running into one another. The colored aggregates are placed in their designated sections in the mould and the backing applied as in the method described above.

The method of erecting precast slabs, so that they compose one side of the form into which the structural concrete is placed, is illustrated and described elsewhere in these pages. Since it involves not only the application of color but the development of textures possible with selected aggregate it is of first importance. Structurally, the result is almost monolithic in character, so perfect is the

bond between the precast surface and that of the concrete behind it.

**Scraffitto**, a centuries-old technic for developing color designs in lime plaster and stucco, has been applied, with variations, to modern work in concrete. In the Mediterranean countries where it originated it consisted of superimposing layers of variously colored plaster on one another and, after they had hardened, scratching through to whichever colors brought out the desired pattern. The same general procedure may be followed with colored portland cement stuccos, or a modern process, which is the reverse of this ancient one, may be used. This calls for a series of skillfully cut oil cloth patterns (approximately similar to those used in making a block print). As successive patterns are arranged in place, mortar is filled into the spaces which remain uncovered, building up a "concrete color print" on the surface to be decorated.

**Cement paint** is extensively used as a means of applying color on the surface of concrete. Such colors are available in a wide range, the possibilities being practically unlimited if standard available colors are blended. But it is important, especially where color is to be used outdoors or in locations subject to moisture, to use only such paints as are known to stand up well under such conditions of use.

Cement paint is easily applied and bonds with any concrete, stucco or concrete masonry surface. It is widely used on the West Coast, both as a medium for the execution of design and for the application of a "color wash" to the entire wall surface. Since it is generally applied quite thin and is consistent with the cement surface of concrete, it may be used on walls bearing the impression of form boards or liners without obscuring such marks or altering the texture and character of the surface.

All surfaces to which cement paint is applied must be wet. This requirement is an advantage in that such paint can be applied to concrete immediately after the forms have been removed or to fresh cement plaster or stucco.

## STAINS AND OIL PAINTS

**A**NY concrete surface to which stains or oil paints are applied must be absolutely dry. This means not merely that the surface must be dry but that sufficient time must be allowed for moisture to dry out of the whole wall. The length of time will vary according to conditions of temperature and humidity, but at least eight weeks should be allowed. Organic paints form an impermeable film over the surface of concrete and may be pushed off by moisture in the concrete. For this reason also it is essential that concrete on which painted decorations are applied be impervious to prevent infiltration of moisture.

**Oil paints** are widely used for exterior and interior work and afford the designer a very wide range of



**COLOR STAINS**, unlike oil paint applied to concrete, penetrate the pores of the material, thus becoming, in fact, a homogeneous part of the structure. As in the interior decoration of St. Joseph's Church, Seattle, the use of stain colors permits simplicity of structure and richness of surface treatment without sacrifice of the monolithic characteristics of the design. A. H. Albertson, architect; Joseph W. Wilson and Paul Richardson, associate

colors. Paints and stains are often used together, stains being applied to the entire area and paint used more sparingly to produce brilliantly colored stenciled designs against the stained background.

Oil paints for use on concrete are of two types: Chinawood oil (Tung oil) paints consist of a mixture of boiled linseed and Chinawood oils thinned with turpentine or naphtha and colored with pigments. In the use of these paints all new concrete surfaces must first be prepared to neutralize any lime that may have been deposited on the surface as a result of the chemical action that takes place

during the hardening of concrete. Such lime will tend to saponify the linseed oil in paints if it is not neutralized. This treatment is not necessary on old concrete or old stucco.

Synthetic resin paints—the second of the two types—are proprietary paints and lacquers which, when made by reputable manufacturers and used in accordance with their directions, can generally be relied upon for satisfactory results. Synthetic resin paints do not require neutralization of the concrete wall before application. As a general rule, it is best to avoid applying paint any thicker than is necessary

to get the desired color. The most effective examples of such decoration, as seen for instance in the ceilings of Goodhue's Los Angeles Public Library, never obscure the texture and pattern of the concrete surface under the paint.

To protect painted surfaces, thin clear varnish or shellac is often applied. A further treatment, which is an additional protection and also aids materially in reducing the cost of maintenance, is the application of a coating of ordinary starch. When such coating is removed by washing, any accumulation of soot or dirt on the surface is also removed. After cleaning, the surface may be re-covered with a fresh coat of starch.

**Stains** used on concrete are often the same as those used on wood. Chemical stains which produce color by a reaction with the constituents of the concrete surface are also used. Since color produced with stains of any kind is induced into the concrete itself, rather than overlaid on its surface, as in the case of oil paints, the color becomes in a sense homogeneous with the material and, as noted above, does not alter the texture of the surface.

In all color work it is important to remember that some colors are more fugitive than others, and to use only such colors as are light-fast and promise satisfactory service under conditions of use. Observance of this precaution does not necessarily limit the color range unduly. For example, many blue pigments are notoriously fugitive but cobalt blue can be absolutely guaranteed. In the case of ultramarine or other blues it is highly advisable to require the manufacturer to assume responsibility for color.

## CRAFTSMANSHIP IN CONCRETE

IN the creation of form, texture and color in concrete, no less than in the structural phases of the work, the skill and experience of contractors and workers is a factor of the highest importance. The nature of the material and the technic of its use requires a measure of craftsmanship and intelligent co-operation from every individual connected with construction. Careless spading may break plaster moulds and damage wood forms; careless placing may leave the surface marred by hardened deposits of spattered concrete; careless stripping of forms may cause spalling and the necessity for subsequent patching. And aside from such actual mishaps, the development of textures, the construction and manipulation of form boards and liners, and all the other details of practical work will in most cases be carried out to the architect's satisfaction only when an experienced and conscientious contractor is at work.

Fortunately an increasing number of such contractors are becoming available. There seems to be something infectious about working in this medium and it is very noticeable that contractors and workers who have become experienced in architectural concrete work have developed a pride of craftsmanship which promises well for the future, and which is an

asset of inestimable advantage to the architect. The architect who plans to build a structure in this material and who does not know of a capable contractor experienced in modern concrete work would, therefore, be well advised to get in touch with a recognized and impartial source of information on concrete and request the names of any such contractors in his vicinity.

While this precaution is of especial importance in connection with monolithic concrete construction, it also applies to work carried out in cast stone and terrazzo.

## CAST STONE AND CONCRETE MASONRY

CAST stone has undergone within recent years the same intensive development as monolithic concrete. Although it is a material familiar to all architects, improvements are constantly being introduced both in the production of new textures and colors, and in new specification and construction methods. Cast stone is obtainable, for example, in seven standard shades of buff and seven standard shades of gray, any of which can be furnished in one of the following finishes: rubbed, bush-hammered, etched and brushed.

These standard colors and finishes have recently been adopted by the industry to overcome the difficulty previously experienced by architects in attempting to specify a definite color or finish. By choosing his colors and finishes from standard samples and specifying by number, the architect removes the cause of most misunderstandings in this matter. As the demand arises, standards on other colors and finishes will be adopted.

The decorative usefulness of cast stone, aside from ornamental forms or the more brilliant colors, is occasionally overlooked. It has been pointed out that when an architect makes a colored rendering of a proposed building he usually introduces variations of hue and value in the rendering of the various surfaces. The result is thus made more interesting and is the expression of the effect he really desires in the building. By using cast stone, material over which he has absolute color control, the architect may readily obtain the same interesting effect.

Concrete masonry, like cast stone and monolithic concrete, has also progressed to new and better things as will be seen by some of the accompanying photographs, and makes its appearance as a highly effective material for both exterior and interior finish when laid as coursed or random ashlar. Where variety of tone and color is needed, as in large interior wall areas, cement paint is often used to produce in the individual blocks the subtle differences desired. Walls built of concrete masonry units made with cinder or Haydite aggregate, have remarkably good acoustic properties and in consequence this material has been very successfully used in the construction of a number of theaters.

For help in compiling much of the material included in this article, grateful acknowledgment is made to the Portland Cement Association

## The Legal Side of Architecture . . . (Continued from page 60)

builder. He gave charge of the work of construction to a superintendent of his own choice and of whose skill he had knowledge.

"From time to time changes were made in many details to suit the fancy of defendant and his wife. The building was practically completed and ready for occupancy when defendant discharged plaintiff. Until that time, no serious complaints had been made, although defendant was throughout in close contact with the work and had his own representative and agent on the job making frequent confidential reports concerning the work. Defendant was constantly writing plaintiff, making changes in different details and offering minor complaints. There were some mistakes in the plans and specifications, as there are bound to be in an undertaking of the nature and scope here presented. The law does not expect or require absolute perfection, but tests the efficiency of the architect by the rule of ordinary and reasonable skill usually exercised by one of that profession.

"As a question of fact the contract was performed as the parties proceeded with the work and as they gave practical construction to the various details. The belated criticism comes from experts called by defendant, viewing the plans, specifications and construction in retrospect. For thirteen years the parties have been pursuing a leisurely course in presenting their grievances before a referee. The referee has found the facts in favor of plaintiff to the effect that there has been substantial performance and that the complaints in respect to the architect's skill and his attention to the work are not well founded. Judgment has been rendered in favor of the plaintiff for the value of his services performed at \$9,815.94, with interest.

"In a case of this nature we would be reluctant to find facts contrary to those found by the referee, who saw and heard the witnesses and who had ample time to examine the voluminous documents submitted. The plaintiff seems to have given the best evidence available on the subject of actual cost. The defendant offered a very lame excuse for the non-

production of records of actual cost of the buildings and claimed he could not tell what the actual cost was. Under the circumstances the proof offered by plaintiff was competent as a basis of damages.

"We think the record discloses that the plaintiff devoted to the work a reasonable degree of skill and fidelity. The alleged errors on his part as now set forth by defendant appear to be to a large extent trivial and in other respects largely captious and artificial, depending as they do upon testimony of experts and not upon actual complaints made during the progress of construction. It is time that this litigation came to an end."

### KEEP RECORD OF ALL CHANGES

WHILE the architect finally prevailed in the foregoing case, it serves nevertheless to emphasize the importance of keeping the record clear where the client is constantly making changes or giving new instructions as the work proceeds. Such a condition of affairs is always potentially dangerous from the point of view of the architect. In his efforts to satisfy and meet the requirements of the client, it is natural for him to go ahead with various changes, without getting the client on record in such a way as to prevent him from claiming later that the architect has been negligent or lacking in proper skill or diligence.

While the courts do not make the architect the insurer of the work, they do very definitely require that he bring to the work the special degree of skill and ability which a client has a right to expect from a member of the architectural profession. The ability of the ordinary layman or contractor is not enough. The architect is presumed to possess the qualifications of one trained in architectural work and practice. If his work measures up to this standard, he has done all that the law will expect of him; if it falls below it, the courts will sustain a finding that he has been negligent and will penalize him accordingly.

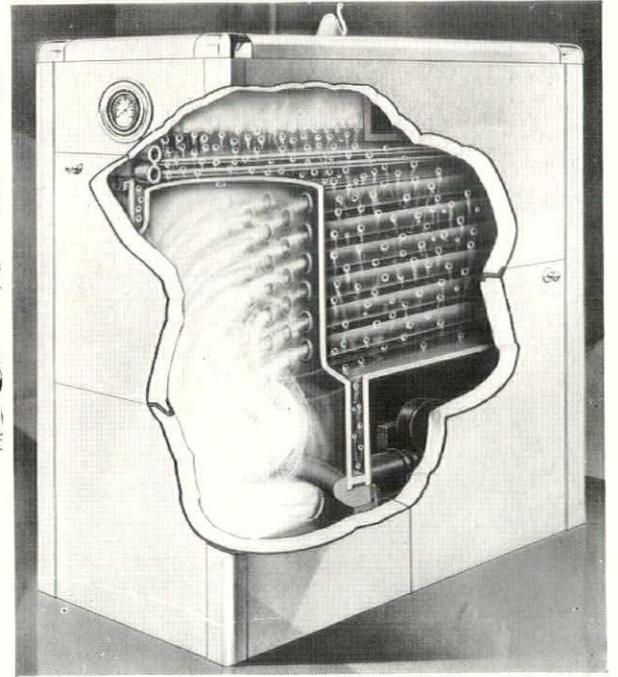


Sunrise at  
Miami Beach

Photograph by  
Samuel H. Gottscho



"The LITTLE HOME"—Steel Pier, Atlantic City, N. J.  
 ARCHITECT—WM. F. B. KOELLE of Phila., Pa.  
 This is the first structure completed under direction of the Federal Housing Administration in its campaign to stimulate home building. A striking example of today's low-cost home-building possibilities, it also constitutes



## Significant Recognition of the FITZGIBBONS OIL-EIGHTY AUTOMATIC

### Reasons for selecting the OIL-EIGHTY AUTOMATIC

It has established a record for efficient, fuel-saving performance in thousands of homes throughout the country. Developed expressly for oil firing, it satisfies every scientific and mechanical requirement of the process.

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It offers year 'round INSTANTANEOUS HOT WATER without a storage tank.

Its enameled, chromium-trimmed steel jacket adds the appeal of modern beauty.

It is available in 13 different capacities ranging from 425 to 2680 sq. ft. E. D. R.

It can be installed in a few hours in any residence, new or old.

It may be purchased under the FITZGIBBONS FHA SUMMER PURCHASE PLAN, which permits immediate installation with no payment before October and 3 years to complete payment.

That an OIL-EIGHTY AUTOMATIC was chosen for this project is more than an honor — it is a tribute to this boiler's sound value, not only in the exceptionally efficient, dependable heating it assures, but also in the *extra service* it performs in taking care of hot water requirements.

The features of the OIL-EIGHTY AUTOMATIC which decided its selection, are given in the column at the left. Including as they do, everything that could be desired in a boiler for domestic oil heating, they argue compellingly for the selection of this boiler for any home, large or small, be it a new project or one of modernization.

OIL-EIGHTY Catalog AM gives the full details.

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# NEW CATALOGS . . .

Readers of AMERICAN ARCHITECT may secure without cost any or all of the manufacturers' catalogs described on this and the following page by mailing the prepaid post card printed below after writing the numbers of the catalogs wanted. Distribution of catalogs to draftsmen and students is optional with the manufacturers

## THE MAHOGANY BOOK

716... The story of mahogany is told in a new 68-page handbook issued by the Mahogany Association, Inc., Chicago. The book opens with a brief discussion of the origin, characteristics and types of mahogany. It is followed by chapters on the principal historical periods of furniture design and manufacture, with illustrated examples of each. Mahogany veneers, plywood, finishes, woodwork, and various types of mahogany furniture are discussed in the closing chapters. Illustrations of 28 typical figures and patterns to be found in mahogany are also shown on color pages.

## J-M TRANSITE WALLS

717... "Johns-Manville Transite Walls" is a new 12-page brochure just published by Johns-Manville, New York, which describes and illustrates a type of partition which is said to combine the advantages of portable partitions with the permanence of block and plaster walls. Materials used in these units, construction advantages, method of installation and other details are fully outlined. A short form standard specification is also included. Filing size; A. I. A. File 28-K-1.

## HIMCO STORE FRONTS

718... The complete line of Himco store front constructions in either extruded, solid rolled or stainless laminated metal is presented in Catalog E issued by The Himmel Brothers Co., New Haven, Conn. Description, application, and detail drawings and sectional illustrations are given for each type of construction.

## FRICK REFRIGERATION

719... Frick Company, Waynesboro, Pa. has issued Bulletin 504-A which illustrates and describes several types of Frick Refrigerating machines for air conditioning work. A large number of typical installations of this equipment in offices, theaters, restaurants, hotels, shops, residences, etc. are illustrated.

## THE BOOK OF 100 HOUSES

720... One hundred houses, both new and remodelled, which have used Cabot's shingle stains and Collopakes, and Cabot's Quilt, are illustrated in a new 24-page filing-sized brochure issued by Samuel Cabot, Inc. Boston, Mass. Brief data

on advantages, uses and characteristics of each product are given. Also included are a number of testimonial letters from users of these materials.

## WASHINGTON MONUMENT RESTORATION

721... The Medusa Portland Cement Company, Cleveland, Ohio, has issued a fascinating illustrated 8-page brochure which tells the story of the recent repair and cleaning of the Washington Monument. It gives a brief historical summary of the monument and describes the procedure followed in its restoration.

## METAL LATH SPECIFICATIONS

722... The Metal Lath Manufacturers Assn., Chicago, has released a 24-page illustrated booklet containing details and specifications for metal lath construction. These specifications constitute a revision and simplification of those issued in 1929. Besides the working details covering wood, steel and concrete construction, an appendix gives miscellaneous specifications for bucks, electrical outlets, plastering, concrete stucco, etc.

## AIR CONDITIONING UNITS

723... Various types of self-contained unit air conditioners offered by De La Vergne Engine Company, Philadelphia, are described and illustrated in Bulletin 104, a 12-page filing-sized catalog. Information given about each unit includes data on its functions, capacity, dimensions, installation, and type of refrigerating unit.

## INDIRECT LIGHTING LUMINAIRES

724... Curtis Lighting, Inc., Chicago, has issued a 28-page filing-sized handbook which contains suggestions and information on planning indirect lighting from ceiling luminaires, wall brackets, pedestals, and built-in or recessed equipment. Illustrations and descriptions of the Curtis line of indirect lighting luminaires are included, together with dimensions, ratings, finishes available, etc. Many illustrations of actual installations show a variety of applications of this equipment.

## PORCELAIN ENAMEL

725... Porcelain Enamel Institute, Inc., Chicago, has issued a 24-page, filing-sized brochure which describes in non-technical language the origin, nature, application, uses and advantages of porcelain enamel. Its 92 illustrations show fabrication and application methods, and typical uses, including household equipment, lighting, architectural and a host of others.

## ROBERTSON STEEL FLOOR SYSTEM

726... "New Life for Buildings" is a new 20-page brochure published by H. H. Robertson Company, Pittsburgh, which tells the complete story of the Robertson Steel Floor System, which is both a floor and a self-contained electrical distributing system in one. Other uses of the cellular steel units used to form a Robertson Steel Floor are also described, including load-carrying side walls, partitions and roofs.

NO POSTAGE REQUIRED ON THIS CARD

AMERICAN ARCHITECT  
New York City

August, 1935

Please have the following catalogs reviewed in this issue sent to me.

Numbers .....

• I also desire further information about the new products described in this month's "New Materials and Equipment." . . . (See pages immediately following this insert.)

Numbers .....

• I would like to have catalogs and information concerning the following products advertised in this issue. (Write page number or name.)

Name .....

Firm name .....

Address .....

City .....

Occupation .....

FOR AUGUST 1935

# These NEW Catalogs may be obtained through AMERICAN ARCHITECT

## ALUMINUM AND ITS ALLOYS

727...A comprehensive 92-page manual which gives fundamental information on aluminum and its alloys has been issued by Aluminum Company of America, Pittsburgh. In its pages will be found complete data on physical properties, compositions, mechanical properties, dimension tolerances, available commercial forms, fabrication methods, etc.

## DUPLEXALITE LIGHTING FITTINGS

728...The complete line of Duplexalite lighting fittings for commercial and residential requirements manufactured by The Miller Company, Meriden, Conn., are cataloged in a new portfolio, No. DP 184, just issued. A table showing wattage, finish, dimensions, etc. accompanies each unit illustrated. A number of the fittings are shown in full color. Pictures of typical installations are also included. Filing size; A. I. A. File 31-F-232.

## ILG AIR CONDITIONING

729...Some twenty-one typical installations of Ilg cooling and air conditioning equipment, including stores, restaurants, offices, theaters, etc., are pictorially presented in a new filing-sized catalog issued by Ilg Electric Ventilating Co., Chicago. Testimonial letters from owners of these projects are also included.

## TRANE PRODUCT COOLERS

730...Trane Product Coolers, which provide forced circulation of air for storage rooms housing meats, vegetables and similar perishables, are illustrated and described in a four-page, filing-sized catalog issued by The Trane Company, La Crosse, Wis. Ratings, roughing-in dimensions and specifications are included.

## AIR CONDITIONING UNITS

731...Buffalo Forge Company, Buffalo, N. Y., has issued Bulletin 2967 which contains illustrations and descriptions of its line of cooling and air conditioning units, including suspended unit coolers,

floor type unit coolers, central conditioning cabinets of various types. Ratings, dimensions, capacities, specification data, and a Btu temperature chart relating to the central conditioning cabinets, are included. Filing size; A. I. A. file 30-D-1.

## INDIANA LIMESTONE

732...Many typical residences which have been built with Ilco Stone exteriors are pictured in a 24-page consumer brochure issued by Indiana Limestone Corp., Bedford, Ind. The booklet describes the advantages of this material, briefly outlines construction methods, and summarizes the ultimate economies resulting from its use.

## DATA SHEETS ON KOPPERS PRODUCTS

733...Koppers Products Company, Pittsburgh, Pa. has issued a group of Don Graf Data sheets on its waterproofing, damp-proofing and roofing products. A large variety of subjects are covered including indoor and outdoor swimming pools, shower bath construction, waterproofing of foundations, roofing, wood finish floors in damp locations, etc.

## NICKEL SILVER PLUMBING FIXTURES

734...The International Nickel Company, Inc., New York, has issued two new pamphlets which illustrate a number of nickel silver plumbing fixture installations in several types of modern buildings.

## SPRAY PAINTING EQUIPMENT

735...A two-color, 32-page booklet (Bulletin AD-114) issued by the Binks Mfg. Company, Chicago, briefly outlines the entire Binks line of spray equipment, including descriptions, prices and illustrations of spray guns for finishing, cleaning and oiling, cup-type containers, etc. Helpful suggestions and technical information on the proper equipment for various uses are given.

## THRU-WALL FLASHINGS

736...Revere Copper and Brass Incorporated, New York, has issued an 8-page illustrated broadside which gives detailed information on both Revere Thru-Wall Flashing and Cheney Flashing. Details showing various types of flashing, sizes, specifications and other pertinent data are given for both types of flashing. Filing size; A. I. A. file 12-H-1.

## STANDARD AIR CONDITIONING PRODUCTS

737...The functions and applications of the three types of air conditioning units manufactured by Standard Air Conditioning, Inc., New York, are described in a 12-page catalog recently issued. The first type cools, dehumidifies and circulates the air; the second gives all phases of air conditioning except cooling and dehumidifying; the third is for all-year air conditioning.

## UNDERGROUND STEAM CONDUIT

738...An illustrated 8-page booklet (Bulletin 351) describing the advantages and physical properties of Therm-O-Tile underground steam conduit system—a conduit system for the protection, support and insulation of underground hot or cold pipe lines—has been published by H. W. Porter & Co., Newark, N. J.

## HUMIDITY CONTROL

739...Two new bulletins have been issued by Julien P. Friez & Sons, Inc., Baltimore, Md. Bulletin "A" illustrates and describes in detail the new range of Friez wall mounting and insertion type humidistats. Bulletin "AT/R" gives data on Friez relays and control assemblies for use in conjunction with Friez humidistats, thermostats, etc. List prices are given in each bulletin.

## C-E BENT TUBE BOILER

740...Combustion Engineering Company, Inc., New York, has issued a four-page bulletin describing its Design VM Bent Tube Boiler for medium sized and small plants. Blueprint reproductions are included showing typical settings with underfeed chain and traveling grate stokers as well as with pulverized coal.

## KELVINATOR AIR CONDITIONING

741...Describing the advantages of air conditioning for homes, offices, shops, restaurants, etc., two new 8-page folders (Form Nos. 2945 and 2946) have been issued by Kelvinator Corp., Detroit, Mich. Through the use of photographs and copy, the folders present a complete picture of the benefits of Kelvinator air conditioning and show some typical units.

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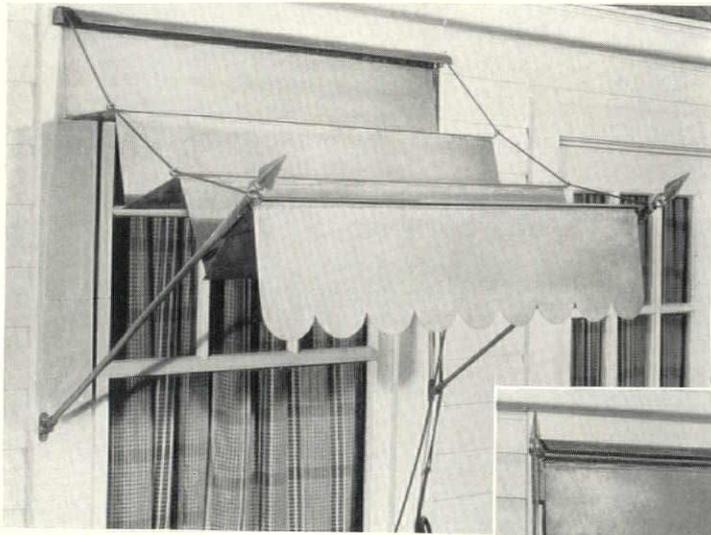
**AMERICAN ARCHITECT**

572 Madison Avenue

New York, N. Y.

AMERICAN ARCHITECT

# New Materials and Equipment

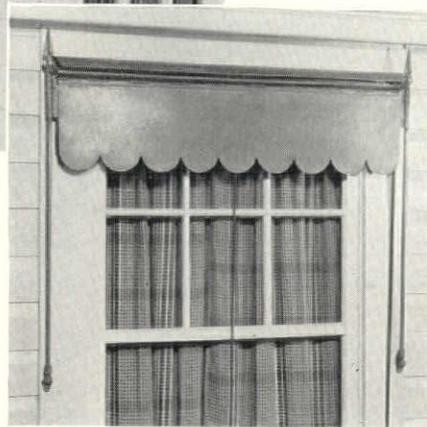


## Folding Metal Awnings

**485M** Folding metal awnings in copper, aluminum or especially treated corrosion-resisting steel, have recently been introduced by Metal Awning Corp., New York. They are said to be permanent, fire-proof, weather-proof, and rot-proof. They will not tear or become baggy and may be left up the year 'round. These awnings may be used with the natural metal finish or painted to harmonize with the exterior color scheme. When not in use the awning forms a valance for the window, folding out of the way under its own canopy.

## G-E Condensing Units

**486M** Eight new condensing units of from 1½ to 20 h.p. and rated at from 1.8 to 2.15 tons refrigerating capacity, have been announced by the Air Conditioning Department of General Electric Company, New York. All of the new units have external motors with multiple V-belt drive to the compressors, liquid refrigerant filters, suction-pressure controls, high-pressure safety lockouts, water-regulating valves, service valves, and water and refrigerant connections. Three of them are equipped with water-cooled, double-tube counterflow condensers, and the others have new shell-and-tube condenser-receivers. Included with each unit is a magnetic motor starting switch and a thermal overload protective device for the motor.



## Patrician Inside Locksets

**487M** A new development in residence builders' hardware is the Patrician inside lockset just announced by Lockwood Hardware Mfg. Company, Fitchburg, Mass. The knob body, solid color throughout, is a plastic of high tensile strength. The top and shank are of solid die cast metal, being also available in brass and bronze at slight extra cost. The knob construction securely fastens the knob body to the top and shank, eliminating any possibility of twisting. Colors include ebony, ivory, green, orchid, mahogany and red to harmonize with interior color schemes.

## Hot Water Mixing Valve

**488M** The Babbin thermostatic mixing valve, distributed by Evry-Use Products Co., Inc., 258 Canal St., New York, automatically regulates the delivery of hot water for domestic and manufacturing uses from copper coils or tubes submerged in the boiler. It is of all-bronze construction with only one moving part, and no sleeves or valves to get out of order. The Babbin will deliver hot

water at any desired temperature ranging from 140° to 190°. Temperature adjustments are easily controlled. Three sizes are available; 1, 1½ and 2 inches.

## Modine Unit Coolers

**489M** Modine Manufacturing Company, Racine, Wis., has introduced two new types of unit coolers for space cooling. The cold water type is in general identical in construction with Modine Unit Heaters (hot water type) fitted with a moisture eliminator for collecting moisture from the atmosphere. This assembly may be removed in the fall. Practically any cooling medium may be used. The direct expansion type has the same applications as the cold water type, but has a specially constructed core, and is used in conjunction with a compressor employing direct expansion gases for the cooling medium.



## Floor Model Blueprinter

**490M** A new model of the Angstrom lamp blueprinter is announced by Milligan & Wright Co., 4728 Prospect Ave., Cleveland. This one is a floor model with an arrangement for the washing and fixing trays and drying boards provided in the base. It can be plugged into any 110 volt A.C. or D.C. light socket and produces prints with exposure of ¾ to 1½ minutes depending upon the drawing and paper used. A time switch cuts off the current at the end of the exposure selected. Floor space required is 28" x 30".



### Tempered-Aire Unit

**491M** Gar Wood Industries, Inc., Detroit, Mich., announce a new, smaller Tempered-Aire Unit, known as Model 102, suitable for the average home of six or seven rooms. This unit delivers filtered, humidified, circulated warm air in winter, and can be used for "blower" cooling in summer. It is constructed in one compact unit containing blower cabinet and furnace, and has a pressure atomizing type burner using No. 3 fuel oil. All the advantages of larger models have been retained.



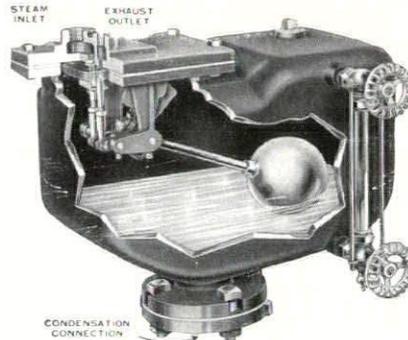
### Protective Finished Metal Coating

**492M** A new type of protective coating, for use during handling and construction on such finished metal parts as flashings, window stools, door frames, hardware and other materials used in structural work, has been developed by Kelsan Products, St. Clair, Mich. Applied in liquid form, this coating rapidly turns into live rubber, effectively safeguarding such parts against scratches, nicks, corrosion, etc., and is easily peeled off upon completion of the job.

### Vacuum Power Switch

**493M** The Continental Electric Co., St. Charles Ill., has introduced the Continental Vacuum Power Switch. This new switch has a sole-

noid in its construction which controls the position of the contacting mechanism, thus eliminating the use of tilting or rotating devices in making or breaking the circuit. This contacting mechanism is contained in a high vacuum chamber which is hermetically sealed in a strong metal container. The applications of the unit are practically unlimited. It can be used in corrosive or inflammable atmospheres, for remote control and high voltage installations for sign flashings, traffic signals, automatic equipment control, etc. Two types are available: normally open and normally closed, single pole, single contact switches.



### Condensation Return Traps

**494M** Jas. P. Marsh Corporation, Chicago, has introduced an automatic condensation return trap which functions to return water of condensation to the boiler without the use of pumps. It may be used in connection with low pressure heating, process or industrial installations where the operating pressure is not in excess of 25 lbs. The trap is installed at a suitable point adjacent to the condenser, above the water line. The condensation connection is joined with the lowest level of the return main below the water line. On either side of this latter connection, swing check valves are installed. A connection is made from the boiler proper to the steam inlet. The exhaust is then piped away to a stack or other convenient point.

### Curtis Lumiline LightStrip

**495M** A new addition to functional and decorative illumination is the Curtis Lumiline LightStrip just announced by Curtis Lighting, Inc., Chicago, which provides unbroken lines of continuous light for cove, panel and built-in lighting, or wherever a lighting channel is required. To accommodate the terminal end of the lamp, the lumiline LightStrip unit has receptacles at each end

which hold the snap-in caps, fastened on each end of the lamp. Screw base sockets are not used. The bright aluminum reflector is highly polished and other parts are cadmium plated. Strips are available in 12 and 18 inch lengths.



### York Air Conditioners

**496M** York Ice Machinery Corp., York, Pa. announces the development of 15, 20 and 30-ton horizontal type air conditioners designed for large retail stores, restaurants, and wide range of comfort and industrial uses. They can be arranged for year-round air conditioning or for summer operation only. The 15-ton model may be installed as a unit within the space to be conditioned, or as a central station conditioner in the basement with a system of air distributing ducts. The 20- and 30-ton models are built to be installed only as central type air conditioners, serving conditioned spaces through ducts. These heavy-duty units have coils for either Freon, refrigerated water, or cold brine. Heating surfaces are designed for either steam or hot water.

### Colored Valve Wheels



**497M** A new type of valve wheel which is moulded of colored plastic materials has been introduced by Jenkins Bros., New York. This new wheel makes it possible to designate valves for steam, water, air or any other fluids and gases by distinctive colors. Five standard colors—blue, red, black, green and gray—are offered, unmarked and with five standard service markings moulded in relief. Wheels of special color or with special markings can be made up to meet any requirement. The wheel is adaptable to use on valve-equipped apparatus.

water, air or any other fluids and gases by distinctive colors. Five standard colors—blue, red, black, green and gray—are offered, unmarked and with five standard service markings moulded in relief. Wheels of special color or with special markings can be made up to meet any requirement. The wheel is adaptable to use on valve-equipped apparatus.

## BOOKS (Continued from page 4)

### UNIT PLANS FOR LOW-RENT HOUSING

Publishing by the Housing Division of the Public Works Administration, Washington, D. C. 116 pages; 13 $\frac{3}{4}$  x 10 $\frac{1}{4}$ .

THESE typical room arrangements, site plans and details, have been designed and assembled for the express purpose of providing architects and engineers with information in designing low-rent housing units. Thirty-seven of these plans were published in *AMERICAN ARCHITECT* last February. Rather than serving as a means of plan standardization, these studies have as their object the establishment of standards of planning and the development of the architect's own creative ability along such lines.

Whereas eight types of unit plans, classified according to shape, are illustrated in Part I of the book, and many important construction details make up Part III, it seemed to this reviewer, at least, that Part II, consisting of Site Plans, will appeal most strongly to many architects as presenting patterns into which they can fit their own individual mosaics.

### SIX WAYS TO FIGURE RADIATION

Edited by Harold L. Alt. Published by Domestic Engineering Co., Chicago, Ill. Illustrated; 64 pages; size 3 $\frac{3}{4}$  x 6 $\frac{1}{2}$ .

IN this pocket size booklet, the editor collects and explains with practical examples the six standard methods of figuring radiation: (1) without tables, (2) with cubic divisors, (3) with the 2-20-200 rule, (4) with tables, (5) by the Btu. method, (6) with decimal factors. All six ways are useful

for estimating steam and hot water heating system requirements. They should be understood by architects as well as contractors.

### MEDIEVAL TOWN PLANNING

By T. F. Tout, Litt.D., LL.D., F.B.A. Published by Manchester University Press, Manchester, England. Illustrated; 34 pages; 5 $\frac{1}{2}$  x 9 $\frac{3}{4}$ ; paper-bound; price 2 shillings.

DR. TOUT'S lecture on the classic and medieval background of the modern municipality deserves attention for several reasons. In the first place, it segregates the various influences that brought about town development in the past. It sketches briefly the Roman attempts at planning, shows how they were snuffed out by Barbarian invasions, military or agrarian exigencies of the Dark Ages. Thereafter, political necessity usually took precedence over economics in the founding of towns. Conscious town planning is traced from Edward I's French efforts across the Channel into England. His grandson initiated its Golden Age from which our immediate heritage springs. After 1350 destruction took the place of construction; "yet enough of the tradition lingered on to survive in some well-planned towns of the 16th Century . . . to inspire the English colonists to revive in North America the rectilinear plans of the Middle Ages."

One is left with the practical realization that remote ages had to grapple with the same problems we are trying to solve today.

### MANUAL OF ACCOUNTING FOR ARCHITECTS

By the American Institute of Architects. Standard Document No. 978; Indexed; 132 pages; size 6 x 9; price \$4.00 to A. I. A. members, \$5.00 to others.

SINCE architecture is a business as well as a profession and an art, and since architects are not as a rule accountants, this publication of the Institute should fill a conspicuous gap. Prepared by practicing architects, its practicality is assured, moreover it is a symposium of the best published information on the subject, to date.

The introduction stresses the real need for careful bookkeeping in the architectural office. That this may be facilitated, the first chapter deals with the Principles of Accounting; the 2nd with Accounts, Bookkeeping Records and Financial Statements; the 3rd with the Schedule of Accounts; the 4th with The Asset Accounts; the 5th deals with Liabilities and Net Worth Accounts; the 6th with Income Accounts; the 7th with Expense Accounts; the 8th with Cost Accounting; the 9th with Journalizing and Other Recording; the 10th discusses Bank Deposits and Checks; the 11th considers the question of Construction Accounts.

In short, this is a manual of accounting designed to present and explain those phases of the subject with which architects primarily are concerned. An elaborate appendix contains sample forms with which a workable accounting system can be developed in any office.

## Readers Have a Word to Say

(Continued from page 6)

distress; that local chapters, societies and unaffiliated groups of our profession should shoulder the burden of a 100 per cent subscription to your most praiseworthy effort.

Heil *AMERICAN ARCHITECT*!—*Fredrick Wallick, Architect, Indianapolis.*

### • COMPULSION CLAUSE

Editor, *AMERICAN ARCHITECT*:

WITH reference to my article in July *AMERICAN ARCHITECT* entitled "Professional Recovery for Architects" a Syracuse, N. Y., architect writes as follows:

"You hit the nail on the head when you point out there should be more cooperation between bankers and architects. You, no doubt, know that many

owners have been led astray by extravagant architects, which causes many bankers to look on some architects as dangerous dreamers. This would lead me to hesitate about any compulsion clause in a lenders' agreement."

If it is true that some architects can be classified as "dangerous dreamers," is it not also true that such people are to be found in every walk of life—even perhaps among the bankers themselves?

Unquestionably architects as a class have had necessary scientific and technical training, supplemented by sufficient practical experience, to protect the banker's interests in a building operation.

If it is true, as the vice president of a prominent Savings Bank states,

that "only a small percentage of investment builders have had any practical experience in the art of construction, only a fraction of a per cent have had any scientific or technical training that would fit them to be called builders," it would certainly be a forward step for the builders were they to take cognizance of the architectural profession in which by far the large majority possess the scientific and technical qualifications that the investment builder so woefully lacks.

By insisting on a compulsion clause in their agreements with borrowers it is my opinion that bankers could protect the best interests of all concerned.—*Charles H. Lench, Architect, New York, N. Y.*



**MODERNIZE MAIN STREET ELECTRICALLY**

It is up to you to see that this rewiring of America's business properties is dependable and adequate. On a building's wiring system depends its electrical efficiency and economy. General Electric "Safecote" Building Wires, Hot Galvanized Rigid Conduit, BX Armored Cable, Switches, Convenience Outlets are available everywhere. Specify reliable G-E Wiring Materials for modernization work or new building. Write for complete information to Section CDW-248, Merchandise Dept., General Electric Company, Bridgeport, Conn.

Business men and property owners in America are beginning to modernize. They realize the increased business modern structural and electrical planning can bring them. Government agencies have made modernization possible. Architects everywhere are being consulted.



**GENERAL ELECTRIC WIRING MATERIALS**

# Exhibition—Federal Architects Stage 4th Annual Show

(Continued from page 57)

of Supervising Architect. Upon the shoulders of the present incumbent, Louis A. Simon, falls the impressive mantle of L'Enfant and Bullfinch, Latrobe and Mills. A part of the Public Works branch of the Procurement Division, the Office of the Supervising Architect has recently recruited the professional assistance of Charles Klauder, Philip B. Mayer, Henry R. Shipley, Aymar Embury, Le Roy Barton, Max Dunning, Thomas Ellett, Lorimer Rich, Alan B. Mills, William Dewey Foster, Wesley Bessell, Eric Kebbon, Rudolph Stanley-Brown, Howard Cheney, John Bollenbacher, Waddy B. Wood, B. H. Flournoy, and George Licht, winner of the 1935 Prix de Rome.

Construction of forts, posts, etc. for the army comes under the jurisdiction of the Quartermaster General's Construction division, which commands the professional capabilities of L. M. Leisenring, former president of the Association of Federal Architects. F. W. Southworth is in charge of the Navy Department's architectural unit. Airfields, navy yards and other real property of the sea forces fall within the scope of its activities. Comparative-

ly recent are those of the Agriculture Department's Engineers, who design buildings for New Deal agricultural experiment stations under direction of chief designer J. E. Miller.

Hardly less active is the construction branch of the Veterans Bureau. Primarily concerned with hospitals and related buildings, Messrs. Talbott, Russell and Stratton have also made it known for careful attention to landscaping details connected with the Bureau's projects.

Dissimilar as these spheres of authority appear, they share a bond of professional interest. To cement that bond the Association of Federal Architects came into being eight years ago. Its activities have since expanded into the publishing and exhibition fields. Today practically all permanent staff architects are members, or about one half of the seven hundred employed. Many non-members however, contribute to the success of exhibitions. The present Supervising Architect was the first president; L. M. Leisenring, C. J. Stratton, E. B. Morris and H. C. Sullivan followed.

## PERSONALS

• If you change your address, please report the change direct to American Architect five weeks before the change is to take effect, sending both old and new addresses. The Post Office will not forward copies to your new address unless extra postage is provided by you. Our request is made to save you this expense and to assure the receipt of your American Architect

• Robert Stanton, architect of Pebble Beach, California, has been appointed Architect for the Del Monte Properties Company and has established his office at Hotel Del Monte.

• Vitale & Geiffert, Gilmore D. Clarke, announce that Michael Rapuano has been taken into the firm as their associate for the practice of the profession of landscape architecture in the development of private estates, parks, parkways and town, city and regional planning.

• Julius Boenisch, architect, formerly of Washington, D. C. is now located at 3380 Fulton Road, Cleveland, Ohio.

• Robert Helmer, architect, formerly of the firm of Halsey McCormack & Helmer Inc. 286 Fifth Ave., New York City, is now independently practicing at 1180 Fulton Street, near Bedford Avenue, Brooklyn, N. Y.

• Frank W. Richardson has been re-elected President of the American Institute of Decorators. Other officers are: Vice Presidents, Louis Rorimer of Cleveland, John Macmullen of Baltimore, and William A. Kimball of New York; Treasurer, Gertrude G. Robinson of New York; Secretary, Nancy Mc-

Clelland of New York. On June 19th William A. French, Minneapolis decorator, announced winners of two design competitions sponsored by the Institute. First Prizes of \$50 went respectively to John Love of the University of California for "An Apartment Vestibule" and to Victoria Lewis of Minneapolis for "A Child's Day and Night Nursery."

• Kenneth W. Dalzell, Summit, N. J., has been elected president of the New Jersey Chapter of the A. I. A. and the New Jersey Society of Architects.

• L. A. S. Wood, of the Westinghouse Electric and Manufacturing Company, well known as an illuminating expert in this country and in England of which he is a native, was elected President of the Illuminating Engineering Society, his term of office beginning October 1, 1935.

• James A. Wares, architect, now has offices at 11528 Normal Avenue, Chicago.

• Professor Harry Sternfeld of the University of Pennsylvania School of Architecture is the architect of 48 air-conditioned houses now under construction in Washington, D. C. They are part of three Waverly Taylor housing developments which will include 75 air-conditioned residences built to sell for from \$13,000 to \$39,000 apiece. Mr. Taylor is past chairman of the Home Builders Division of the National Association of Real Estate Boards and currently one of its directors.

THE TENNESSEE CHAPTER  
OF THE AMERICAN INSTITUTE OF ARCHITECTS, INC.  
MEMPHIS, TENN.  
February 14, 1935

# "Build Now! Consult

Mr. Benjamin F. Betts, Editor,  
American Architect,  
572 Madison Avenue,  
New York City, N.Y.

Dear Mr. Betts:

At the last meeting of the Tennessee Chapter of the American Institute of Architects, much favorable comment was made on the advertising appearing in *Town & Country* and *House Beautiful*.

I wish you could have been present to hear some of the remarks in favor of these publications and expressing the individual appreciation of each member for the service done the profession as a whole.

While there was no official resolution offered expressing this appreciation, I am taking it upon myself as President of the Chapter to thank your publishing company. It seems to fit in with the timely subject of selling the Architect to the real building public, which is the house owner.

With our best wishes for the success of the American Architect and associate publications, and with kindest personal regards to you, I am

Sincerely yours,  
TENNESSEE CHAPTER, A.I.A.  
*Shayestha*  
President.

JFS:M



# We're Saying that to Tho

Just a year ago—working in conjunction with the other magazines of the Stuyvesant Building Group—AMERICAN ARCHITECT launched the biggest promotion and publicity campaign in the architect's behalf that has ever been undertaken.

As the keynote of the campaign, full page advertisements—like those illustrated above—have been appearing every month since last August in both TOWN AND COUNTRY and HOUSE BEAUTIFUL. Concentrated in quality groups, both of those powerful magazines reach thousands of potential home-

owners. And to those prospective clients of yours we have been saying again and again:

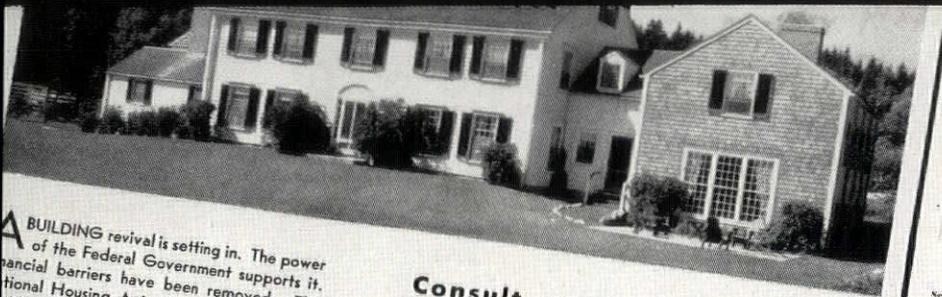
**"Build NOW . . . and when you build, CONSULT YOUR ARCHITECT—for his moderate fee will be saved many times over in the values and economies he secures for you."**

Another magazine with which AMERICAN ARCHITECT is associated—GOOD HOUSEKEEPING, reaching nearly two million better families every month—is consistently urging its readers to retain an architect before building or remodeling.

AMERICAN ARCHITECT  
THE LEADING JOURNAL OF ARCHITECTURE

HOUSE BEAUTIFUL combined with HOME & FIELD  
 avoid higher costs...  
**BUILD NOW!**

# Your Architect!"



A BUILDING revival is setting in. The power of the Federal Government supports it. Financial barriers have been removed. The National Housing Act, now operating under President Roosevelt's sponsorship, appropriates billions to finance home-building and modernizing. Soon the effect of this impetus will be in every community. Architects will be in demand for building materials and household equipment will result. You will pay you to build your house now before competition becomes keen; before the best sites are selected; before the prices of labor and materials go higher. Your architect. He will give you reliable advice on the style and style of architecture, to meet your particular requirements. He knows how to produce a modern, soundly

**Consult your Architect**  
 Now is the time to save money, get the best labor and materials...  
**SECURE ENDURING VALUE**

constructed, livable house. He will suggest the latest approved equipment for heating, air conditioning, lighting, refrigeration and countless things that enter into the completed structure; and he will see that they are purchased with economy. His experience will save you much more than his fee by safeguarding you against mistakes and faulty construction. If you intend to finance your house through your bankers, the architect's judgment will carry weight with them.

**THE STUYVESANT BUILDING GROUP**  
 House Beautiful  
 American Architect  
 Town & Country  
 572 MADISON AVENUE NEW YORK

This "WHEN YOU BUILD," by Benjamin F. Betts, Editor of American Architect. This new free booklet explains what the prospective home owner should know about building. It shows how to get the most satisfaction and value when you build.

**YOU'RE BUILDING THIS SPRING!**  
 Send for this free booklet to which a group of experienced architects tell you how to get the most from your building investment.

Read for this now  
 \*\*\*\*\*

It would be hard to overstate the value of a booklet that tells you how to get the most from your building investment. The booklet is a complete guide to the building process, from the selection of the site to the completion of the house. It is a must for every prospective home owner.

THE STUYVESANT BUILDING GROUP  
 572 MADISON AVENUE, NEW YORK

**THINGS TO KNOW**  
 ... when planning your house

Read for this now  
 \*\*\*\*\*

It would be hard to overstate the value of a booklet that tells you how to get the most from your building investment. The booklet is a complete guide to the building process, from the selection of the site to the completion of the house. It is a must for every prospective home owner.

THE STUYVESANT BUILDING GROUP  
 572 MADISON AVENUE, NEW YORK

Never again, perhaps, can you obtain so much quality for so little...  
**BUILD NOW!**

THE STUYVESANT BUILDING GROUP  
 572 MADISON AVENUE, NEW YORK

# Thousands of People Every Month

Even closer contact with potential home-owners has been secured through the 24-page booklet, "WHEN YOU BUILD," a copy of which has been included free in each of the TOWN AND COUNTRY and HOUSE BEAUTIFUL advertisements. Written by the architect, to the architect's future client, this booklet has been acclaimed as the most effective piece of professional promotion ever prepared.

Over 30,000 copies (four editions) have either been distributed direct to potential home owners or placed in the hands of prospective clients by archi-

itects themselves. If you have not seen this booklet, we will gladly send you a sample copy without charge.

Reproduced above is a letter from the President of the Tennessee Chapter of the A.I.A. His expression of appreciation "for the service done the profession as a whole" is but one of hundreds of indications of the growing enthusiasm with which this campaign — a natural outgrowth of AMERICAN ARCHITECT's policy of aggressively supporting the profession's interests—has been received everywhere.

**ARCHITECT**

PRACTICE - 572 MADISON AVENUE - NEW YORK

## ANNOUNCEMENTS

• Because the City Council of Marietta, Ohio, voted to withhold all action on the proposed Memorial City Hall, until after August 13th, preliminary information sent out concerning a competition to be held for its design is superseded by a new statement. It has been decided to conduct it in two stages of approximately 60 days each, beginning about August 20th. The first stage will require simple drawings at small scale, and will be open to A. I. A. members who have been in good standing since January 1, 1933. The second stage will be open to six competitors chosen from the first stage. Construction will depend upon favorable action by PWA on a grant and loan now pending, and a favorable vote of the city electorate on a bond issue.

Prizes for the second stage will be: (1) commission for services at 5%; (2) \$1,000; (3) \$750; (4) \$500. Prospective competitors should apply to the Architectural Adviser, Howard Dwight Smith, A.I.A., Department of Architecture, Ohio State University.

• The Exposition of Architecture, Decorative and Industrial Arts under the joint auspices of the A. I. A., The Architectural League of New York, and The American Institute of Decorators will open on October 10th and continue through the 19th. The place is the Grand Central Palace, New York. The purpose, "to bring together forces that combine to stimulate new building operations and much needed remodeling of buildings . . . to display the actual merchandise of the manufacturer to the user or the one responsible for its selection."

• In the Pencil Points-Iron Fireman House Competition the First Award of \$1,000 was won by Amedeo Leone of Detroit. John W. Keyes of Philadelphia and John Floyd Yewell of New York won the Second and Third Prizes of \$500 and \$250 respectively. A \$100 Fourth Prize was shared by Helmer N. Anderson and Frank Elmer Wood of Chicago.

• The John Stewardson Memorial Scholarship, at the University of Pennsylvania School of Fine Arts, has been awarded this year to George C. Rudolph, graduate student in the Department of Architecture. The Stewardson Scholarship provides \$1,000 for study through travel either in this country or abroad, is limited to students or practicing architects in the Commonwealth of Pennsylvania. Mr. Rudolph has sailed to visit France, England, Holland, Germany and Spain. Also commended was the work of Joseph Wigmore, Jr., Philadelphia, and William V. Flynn of Pittsburgh.

• Under the direction of Henry Wright, the School of Architecture at Columbia University will open a new studio of Site Planning, beginning this fall. For the first few semesters the work will be divided between two groups: the younger students and the more advanced. The course, which will give attention primarily to training in site planning and civic design, will be open to a limited number of students who are matriculated in the School of Architecture.

• The annual graduate scholarship competition of New York University School of Architecture and Allied Arts, was awarded to Sidney L. Katz. The prize carries with it a year of graduate study leading to the degree of Master of Architecture.

• The New York Building School, formerly in the Grand Central Terminal Building, has moved into new quarters at 67 West Forty-fourth Street, New York City, where courses in Building Design and Review for State Examination will continue under direction of L. M. Bernfeld and William Hoffberg.

• The American Institute of Steel Construction announces the reopening of three district offices—in Atlanta, St. Louis and Dallas respectively. The New York Metropolitan area and Washington, D. C., are handled personally by F. H. Frankland, Technical Director of the Institute.

## DEATHS

• Arthur Byne, architect, photographer, artist and author and a world-renowned authority on Spanish art, died July 16th as the result of an automobile accident in Madrid, Spain, his home since 1916. Born in Philadelphia fifty-one years ago, he was graduated in 1905 from the School of Architecture at the University of Pennsylvania, studied in Rome, and later joined the New York architectural firm of Howells and Stokes. In 1914 he became curator of museum of the Hispanic Society of America where he was assisted by his wife, also an authority on Spanish art and architecture. Especially well-known for his numerous books on Spanish ironwork, architecture, interior, furniture and gardens, Mr. Byne will be remembered for his water colors, which were exhibited in New York and Madrid. He won the Sil-

ver Medal at the 1915 San Francisco Exposition, and the Spanish Gran Cruz del Merito Militar. He was a member of the Architectural League in New York, honorary member of the American Institute of Architects, and a corresponding member of the Hispanic Society in America, the Royal Academy Hispano-Americano of Arts and Sciences, and the College Art Association of America.

• F. Leo Smith, chief architect of the technical division of the Federal Housing Administration, died in Washington on July 21. He was forty-two years old. A native of Marion, Mr. Smith became associated with the Ohio Board of Building Standards in 1924 and later with the Portland Cement

Association. Since 1932 he served as technical secretary of the structural service bureau of the A. I. A. Between 1933 and the establishment of the FHA he served as assistant construction engineer for the PWA Housing Division.

## Toronto Architects Believe That Professional Publicity Pays

(Continued from page 56)

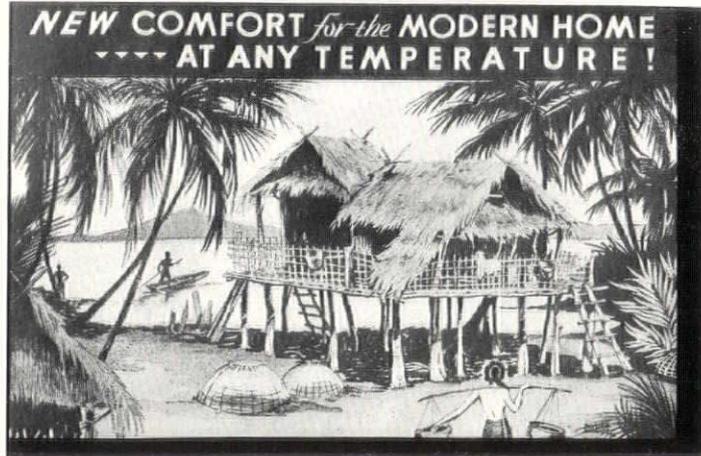
This project illustrated pointedly the endeavor of the Chapter as a group to create and foster a public realization of the value of architectural services and to dislodge the prevailing notion, unfortunately generated by efforts of some individuals, that architects are not willing to give group aid in public matters involving architecture.

**8. Radio Broadcasts . . .** Recently the Chapter has undertaken still another advertising activity—a series of radio broadcasts. During a period of twelve weeks the Chapter arranged for a five-minute talk each week under the general title of "Architecture in Modern Life." Each talk was prepared and presented by different members of the Chapter. This lightened the burden of individual work of this kind, served to avoid any possible monotony in presentation and consequently assured added interest on the part of the audience. In order to achieve a reasonable amount of uniformity, however, all talks were edited by the Executive Committee of the Chapter before being accepted for radio delivery.

Public reaction to these broadcasts has been favorable. Apparently people enjoy hearing about such things over the radio. Certainly there is no dearth of excellent material which may constitute the subject of radio talks. It is hoped that this department of the Chapter's advertising activities can be extended in the future.

The foregoing paragraphs outline some of the major activities undertaken by the Chapter for the advancement of the profession. Toronto may not be yet a Happy Hunting Ground for architects because of them, but there are many reasons to believe they are a constructive influence for the layman and many signs indicate that the public's taste in architecture and the public's attitude toward the architect has already been improved as one desirable result.

Every Chapter activity emphasizes a cardinal point. No amount of group effort, nor any program of advertising, can be successful without the sincere co-operation of the individual architect. He must be ever on the alert to use his daily contacts; he must seize every opportunity to draw attention to architectural work of all kinds—the work of other architects as well as that executed by himself. This is, perhaps, the hardest lesson for any one of us to learn. But only this individual co-operation evidenced by well-directed group action can accomplish the prime objective—jobs for all!



HOMES that are as HOT  
as a JUNGLE HUT . . .

have no place  
in our Modern Scheme!

WALL-THICK GIMCO ROCK WOOL GIVES  
ADEQUATE PROTECTION FROM SUMMER HEAT



Homes that are as stifling hot as a native hut in the steaming jungle, can be made 8° to 15° cooler with proper insulation. To do a thoroughly adequate job, full wall-thick (3½") Gimco insulation should be specified.

Gimco engineers constantly strive to make Gimco Rock Wool in "Bat," granulated or bulk form the finest insulation that can be produced.

Specify wall-thick Gimco Rock Wool for maximum efficiency. Equally efficient and adaptable to both new and existing structures.



Through the Gimco Finance Plan, money for home insulation is available, under the provisions of the N.H.A.

**GENERAL INSULATING & MFG. CO., Alexandria, Ind.**  
WORLD'S LARGEST EXCLUSIVE MANUFACTURERS OF ROCK WOOL PRODUCTS

MAIL TODAY

Send technical data concerning methods of installation and efficiency of Gimco Rock Wool.

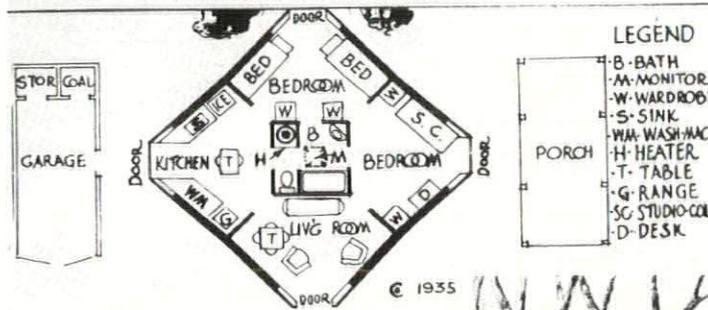
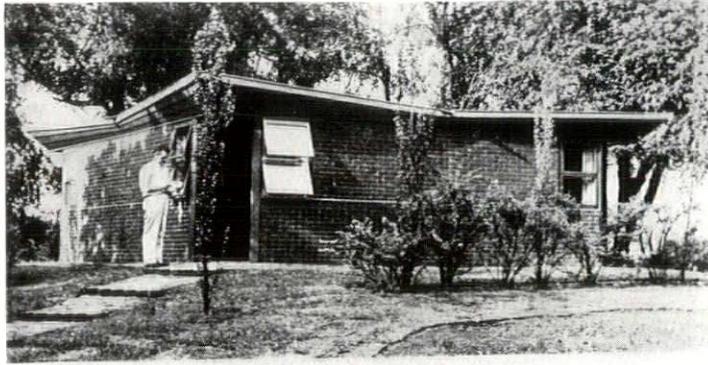
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# Trends and Topics of the Times . . .

(Continued from page 54)

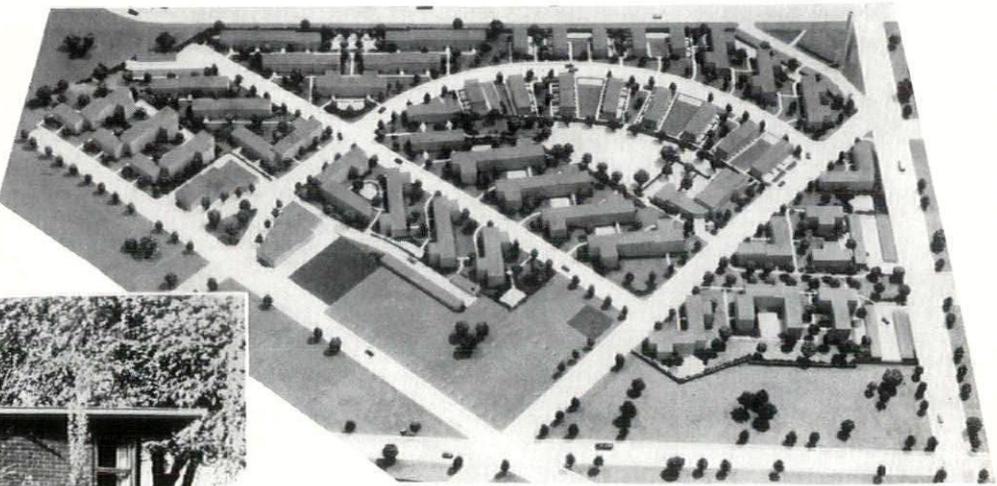


ONE

© 1935  
ACME

## NEW HOUSING SCHEMES

**One:** This diamond-shaped house with brick walls was built by Max A. Montgomery, Canton, Ohio, architect, for \$1,750. **Two:** PWA model of Cleveland's \$3,000,000 West Side project. **Three:** Mexico's first low-rent project, a worker's village near Mexico City. **Four:** perspective of interior court indicating type of design planned for the Outhwaite project in Cleveland

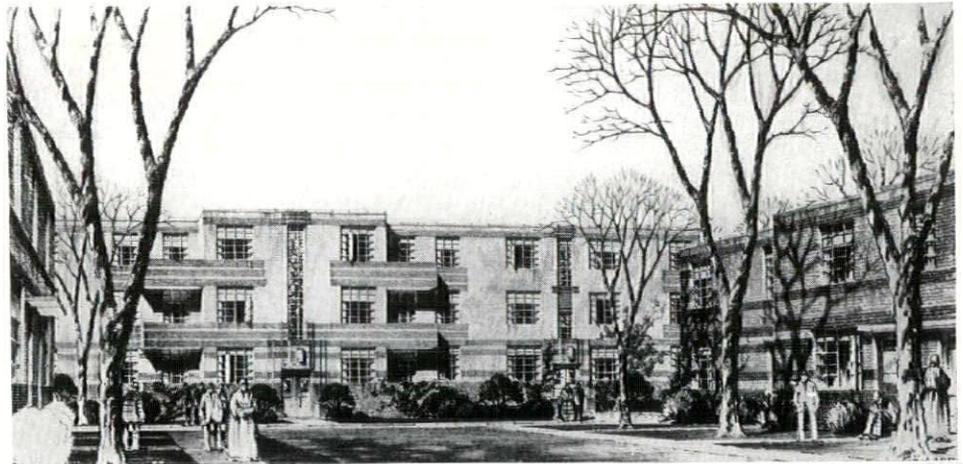


TWO



WIDE WORLD

THREE



FOUR

• Appeal to the radio audience by Langdon W. Post, New York Tenement Commissioner and Chairman of the N. Y. City Housing Authority: "Go to your civic organizations, to your political clubs, to your church clubs and to your labor unions and insist that your organization and its officers demand that the slums be cleared, that additional money be appropriated and spent for low-rental governmental housing."

• Corrosion of lead pipes, glazing bars, etc., in

buildings, usually caused by moisture in oxygen, may cause formation of poisonous white lead dust. Prevention of this dangerous condition can be accomplished, according to findings of the British Department of Scientific and Industrial Research, by coating the lead with bitumen. Buried lead pipes can best be protected by packing them round with chalk, limestone or old well-carbonated mortar.

• H. Craig Severance and J. Andre Fouilhoux, New York architects, and A. Lawrence Kocher of

the *Architectural Record* were among the jury which awarded \$100 to Jerome Raphael, M.I.T. student, for his winning design for a bridge in a competition sponsored by the American Institute of Steel Construction.

- Windowless buildings are becoming almost common—or at least they no longer constitute a major building miracle. Among the latest is an office building, now being erected in Hershey, Pa., to house executives of the chocolate company. The building, completely air conditioned, is three stories high and was designed by Hershey Company officials. Other windowless buildings have been built in Fitchburg, Mass., for the Simmonds Saw Company, and in Chicago, Ill., for Sears-Roebuck.

- According to a statement by William Orr Ludlow, F.A.I.A., the “modernistic” house will probably never become popular because its plain walls, flat roofs and large window areas do not go into the making of a beautiful and homelike house. Automobiles are chosen mostly for their attractive lines rather than good engines; clothes are selected for their looks rather than their comfort and when a home owner selects a house, he does so with the same ideas in mind. Mr. Ludlow believes that although an occasional client may be educated to the “modernistic” in theory for someone else, he generally sticks to the old reliable of Colonial, Cape Cod or farmhouse for himself. “Modernism,” said Mr. Ludlow, “is likely to be considered by the next generation as just another one of those extreme styles which periodically come and go.”

- Sullivan Jones, formerly State Architect of New York and chairman of the National Planning and Adjustment Board under the Construction Code, has been named as chairman of a new committee formed by the Construction League of the U. S. The new body, called the Committee on Useful Employment, will endeavor to mobilize the construction industry for the purpose of moulding trade and professional opinion regarding President Roosevelt’s Works Relief Program. The Construction League’s immediate program includes also an attempt to stimulate demand for useful local projects, in the hope of eliminating the necessity of purely relief work of the CWA type and increasing normal employment through use of private enterprise.

- England has been giving official attention to the same kind of roadside problem that has caused much distress to lovers of the countryside and students of the traffic problem in this country. “Ribbon Development” in British parlance denotes a row of houses immediately along-side a highway. Because of a growing tendency among English landlords to utilize narrow roadside strips of land for building purposes, many of the country’s finest highways resemble village streets. To combat this evil, the government has launched a bill giving local authorities power to control all building within 220 feet of the center of any important highway.

Drinking Water Systems



Food Service



Air Conditioning



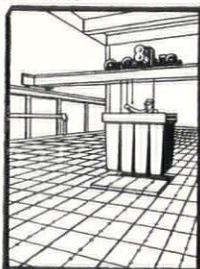
## Are You Getting the Full Benefits of Modern Refrigeration?



Architectural Work



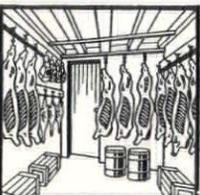
Retailing



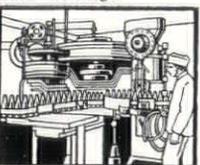
Ice Making



Test and Research



Cold Storage



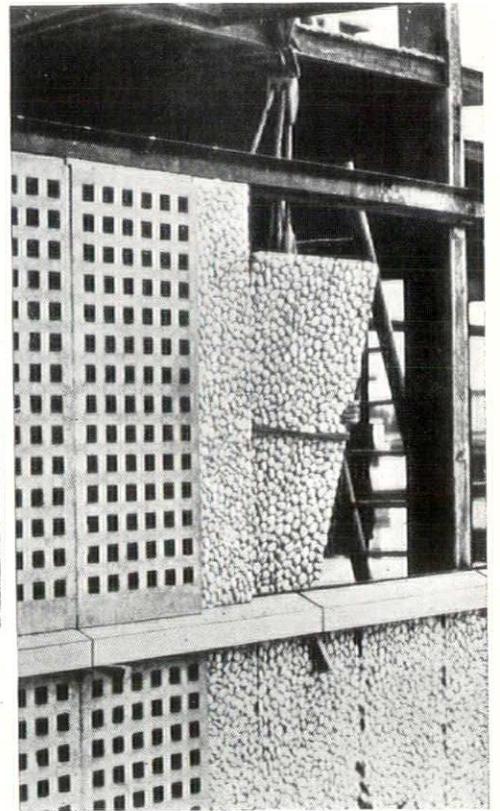
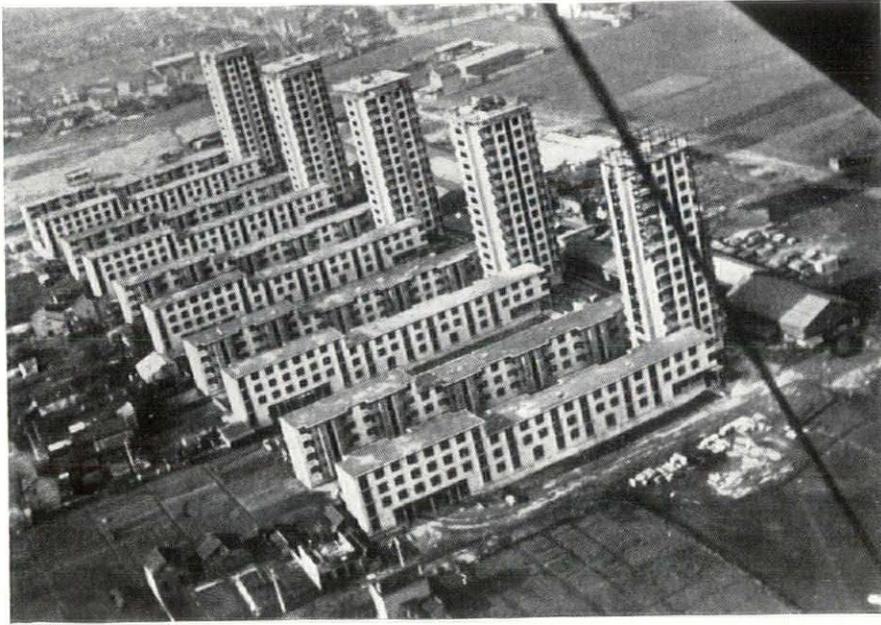
Food Processing

Time was when “ice machines” were used only for brewery work, ice making, and cold storage. Today, Refrigeration will serve your clients in a dozen profitable ways, performing any of the following jobs:

- Air conditioning
- Cooling drinking water
- Test and research work
- Processing foods, chemicals, etc.
- Cooling boxes and display cases
- Serving soda fountains and bars
- Precooling fruits before shipment
- Making block ice, ice cubes, ice chips or dry ice
- Keeping furs, flowers, candy, serums, etc.
- Freezing ice cream and other desserts
- Transporting under refrigeration.
- Sinking shafts in quick sand
- Quick-freezing fish, poultry, etc.
- Drying motors, cable wire, powder, etc.

Let the nearest Frick man aid you in adapting Refrigeration, the New Tool of Industry and Business, to your particular problems. No obligation; but write, wire or phone NOW.

**Frick Company**  
 WAYNESBORO, PA., U. S. A.  
 ICE MACHINERY SUPERIOR SINCE 1882



IN Drancy, industrial suburb of Paris, skeptical Frenchmen have watched wide-eyed the erection of the world's highest prefabricated dwellings. Named the "Cite de la Muette," sixteen stories high and in five units, they constitute a new departure for low-rent housing projects.

Ten years have passed since Corbusier started Functionalists thinking perpendicularly with his rejected "Centre de Paris." Lurcat followed with a

Prefabricated building development in Drancy, France

similar, sociologically more rational, solution for the communistic suburb of Villejuif. Last year at Lyonais, Maurice Lereux, was the first architect to have his lofty apartment houses actually constructed in the new Center at Villeurbanne.

Drancy chose the Parisian firm of Beaudoin and Lods to design its "Cite." The result resembles Frank Lloyd Wright's Broadacre model. When completed it will cover 27 acres, include the five identical towers and lower buildings, an educational center, parks, an athletic field. The towers are divided into small apartments of two and three rooms; larger apartments of four and five are in the lower buildings. The latter are connected by underground passages, served throughout by a common refuse incinerator, heating plant, etc.

Barring steelwork, the buildings were assembled of standardized prefabricated members. All concrete framing of the lower structures—walls, partitions, floor slabs, etc.—being assembled from light concrete units precast on the site. These included two types of floor members in standard lengths of 5 ft. 2 in. Walls are of cellular, heat-insulating concrete, dressed with boards of concrete "marble" requiring neither plastering nor painting. All reinforcing steel was welded.

Concrete is conveyed in vibrating casting tables by hand. Metal forms are carefully washed and sprayed with oil. Each casting bears the initial of the worker and the date when it was removed from the frames.

Since no member weighed over 200 pounds, floor slabs less than 55, the erection plant functioned without heavy derricks, falsework or forms. Five and one-half months were required to build a four-story block with a floor area of 58,000 sq. ft. Cost of labor and materials was 3,157,000 francs.

U. S. Patent  
No. 1,970,105  
Other Patents  
Pending



## DESIGNED TO PLEASE THE ARCHITECTS

● Fedders handsome, sturdy cabinets and quieter operation now make the effective heating ability of unit heaters available for commercial as well as industrial uses.

Fedders Series 3 Unit Heaters are made in a complete line up to 1300 EDR. Write for name of representative.

**FEDDERS MANUFACTURING CO.**

**57 TONAWANDA ST., BUFFALO, N. Y.**

*Are You Getting Your Copy of the Fedders News?*

- Among the most important and timely of this summer's European conventions is the International Housing and Town Planning Conference which met last month in the new London headquarters of the R.I.B.A. Among Federal officials who attended was J. A. Dusenberry, architect and chairman of the F.H.A. Advisory Council. . . . Representing the F.H.A. Advisory Council and the A.I.A. next month at the International Congress of Architects in Rome will be Stephen F. Voorhees, new president of the A.I.A.

- Unique among United States post offices, is the new Philadelphia structure, with air, water and land connections (see page 53). The building replaces its superannuated predecessor which had served since the '80s. Discreetly modern in the new Washingtonian tradition, it is the work of James A. Wetmore, Supervising Architect. Rankin & Kellogg, and Tilden, Register & Pepper were Associates. It took two and half years to build; cost \$5,000,000.

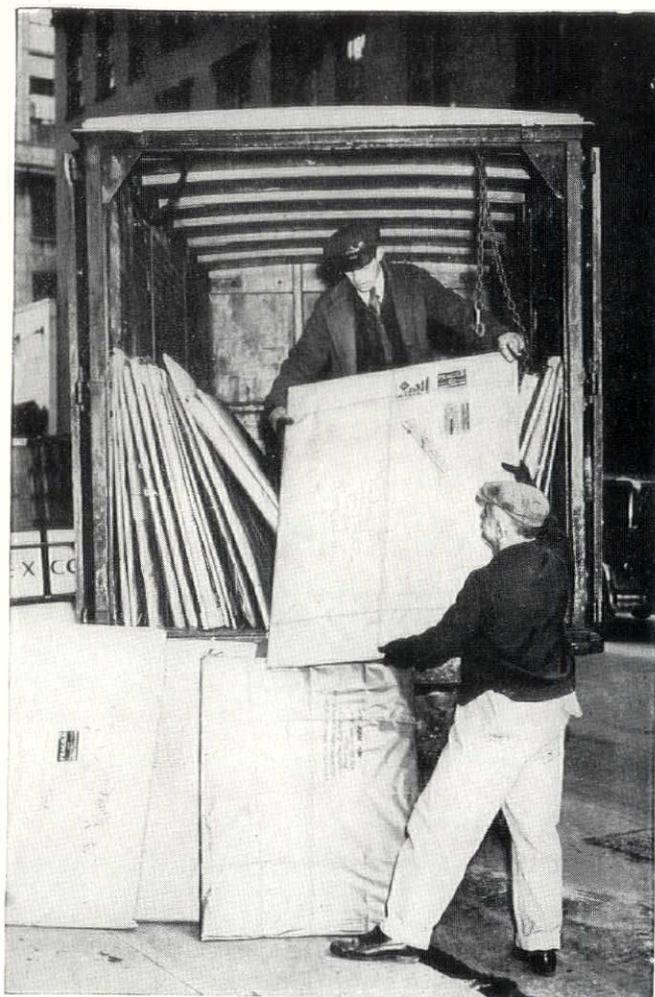
- What is said to be a perfect match between porcelain enamels used on sheet and cast iron was finally developed. In the past, enamel used on cast iron was usually yellow or grey and did not possess the opacity of sheet iron enamels. The Porcelain Enamel and Manufacturing Company of Baltimore, Md., have perfected a new series of lead-free cast iron enamels which they believe will overcome the difficulty.

- A recent article in *News and Opinion*, publication of the Building Trades Employers' Association of New York City, commented upon the prefabricated house as representing a new industry of great potential importance. The article estimated that only 50 per cent of the labor required to construct an orthodox house was necessary to erect one of the present prefabricated models.

- A new governmental agency has been established in the Department of Commerce. Under the Bureau of Foreign and Domestic Commerce a Construction Section has been formulated to maintain contact with the construction industry, co-ordinate and index various types of building statistics and utilize in all possible ways the Real Property Inventory, conducted last year as a relief activity.

- The firm of Cram & Ferguson were Consulting Architects for the Bourne Bridge over the Cape Cod Canal at Bourne, Mass., illustrated on page 49 of the July, 1935 issue. Credit should have been given them in the accompanying caption. Fay, Spofford & Thorndike were engineers.

- To Warner & Mitchell, architects, credit should have been given for design of the service station of Pochontas Oil Co., Cleveland, illustrated on page 81 of the July, 1935 issue.



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# The Beauty of Tile

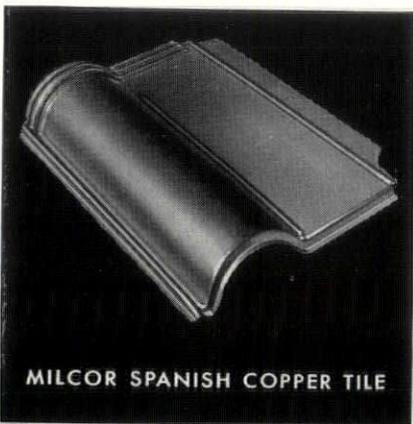
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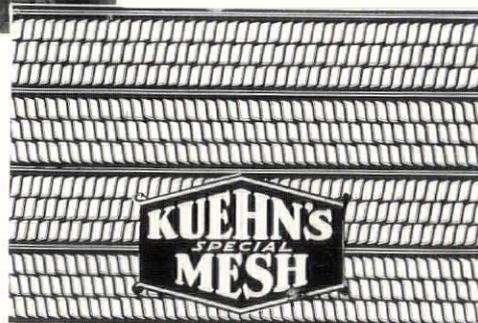
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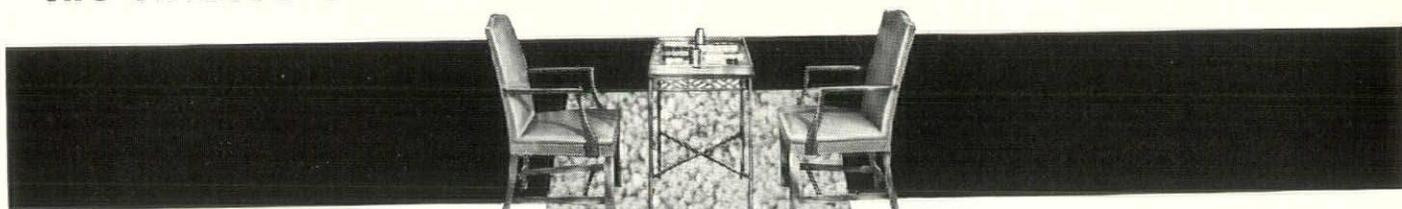
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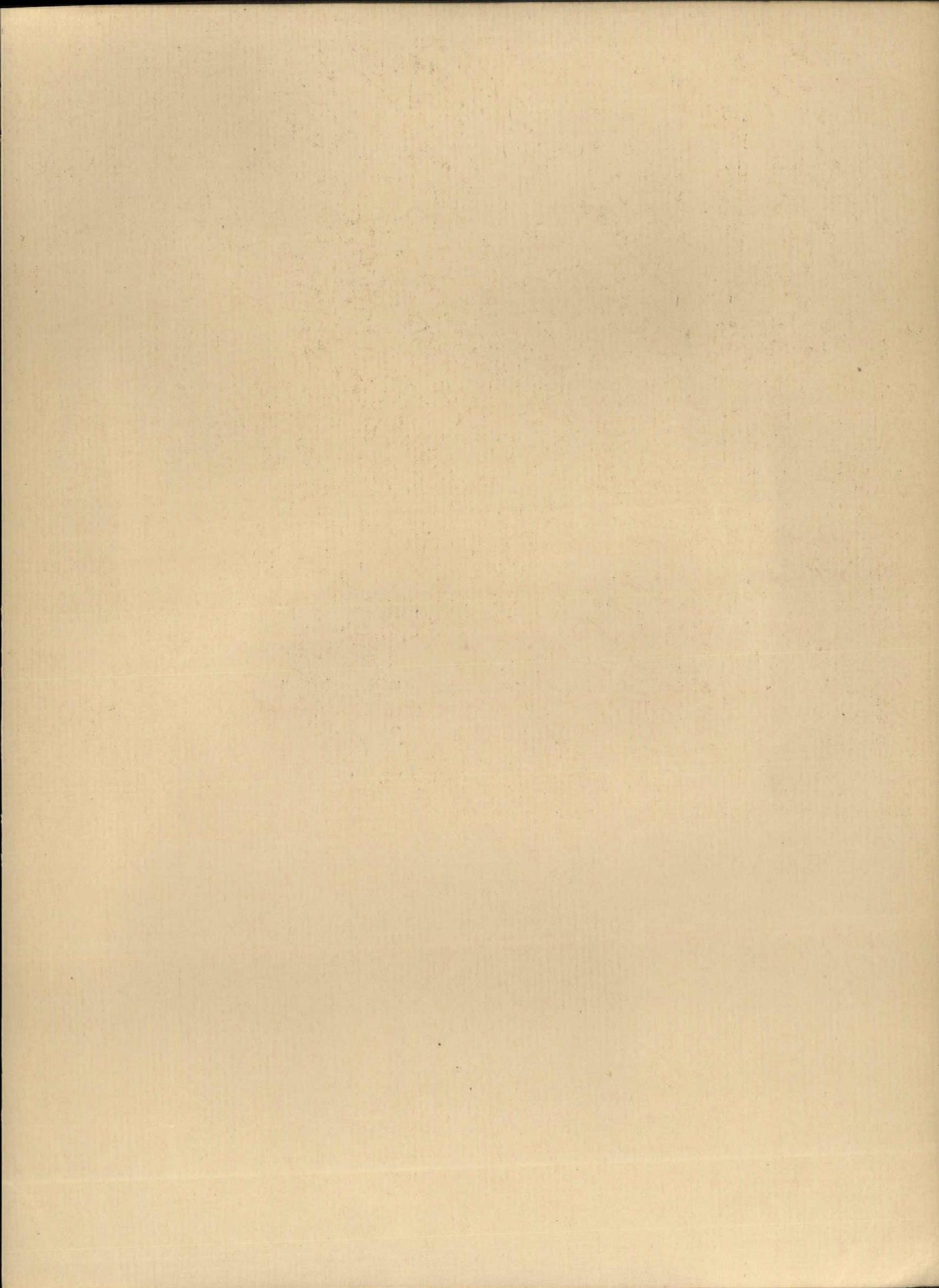
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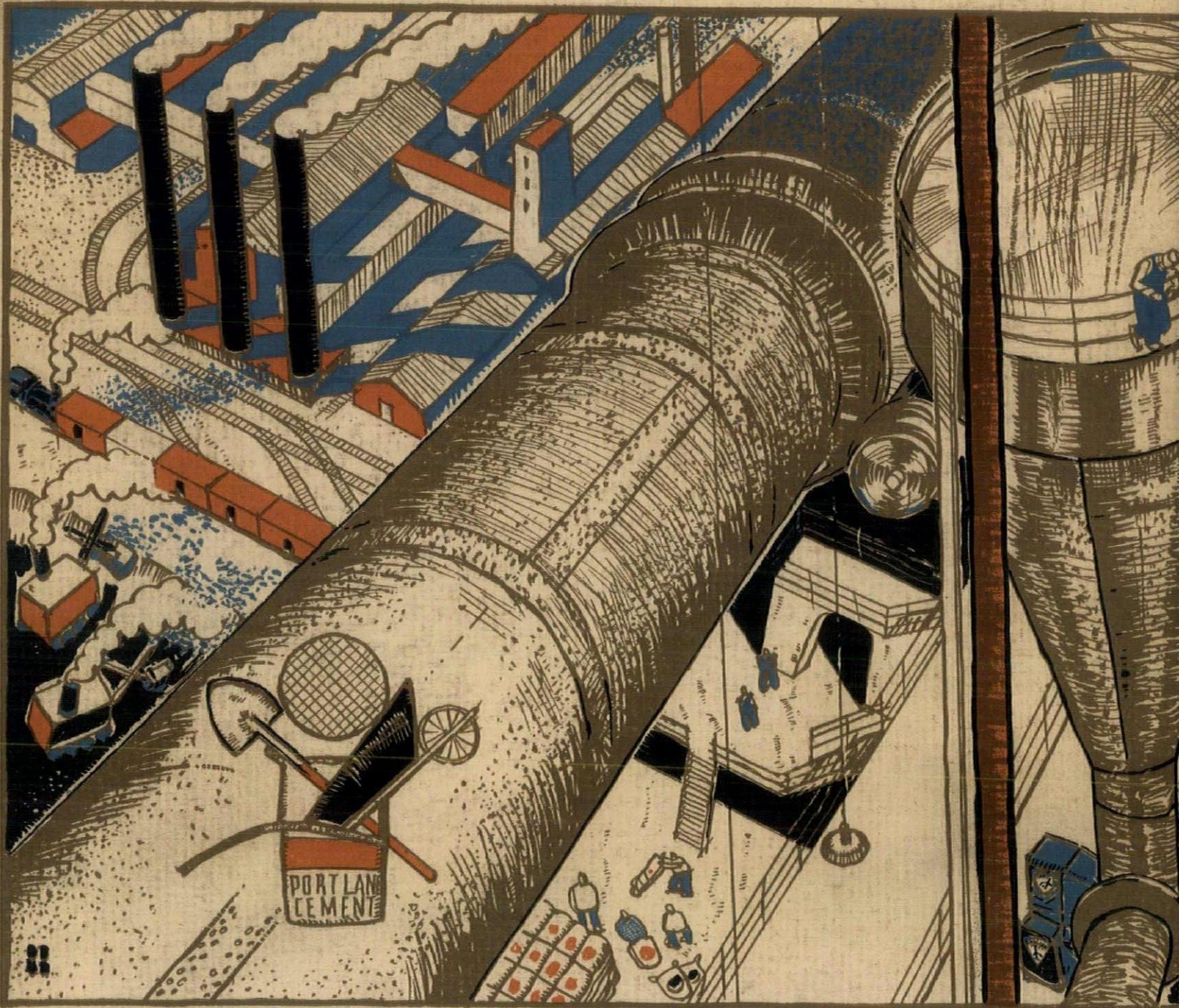
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