

AMERICAN ARCHITECT and ARCHITECTURE



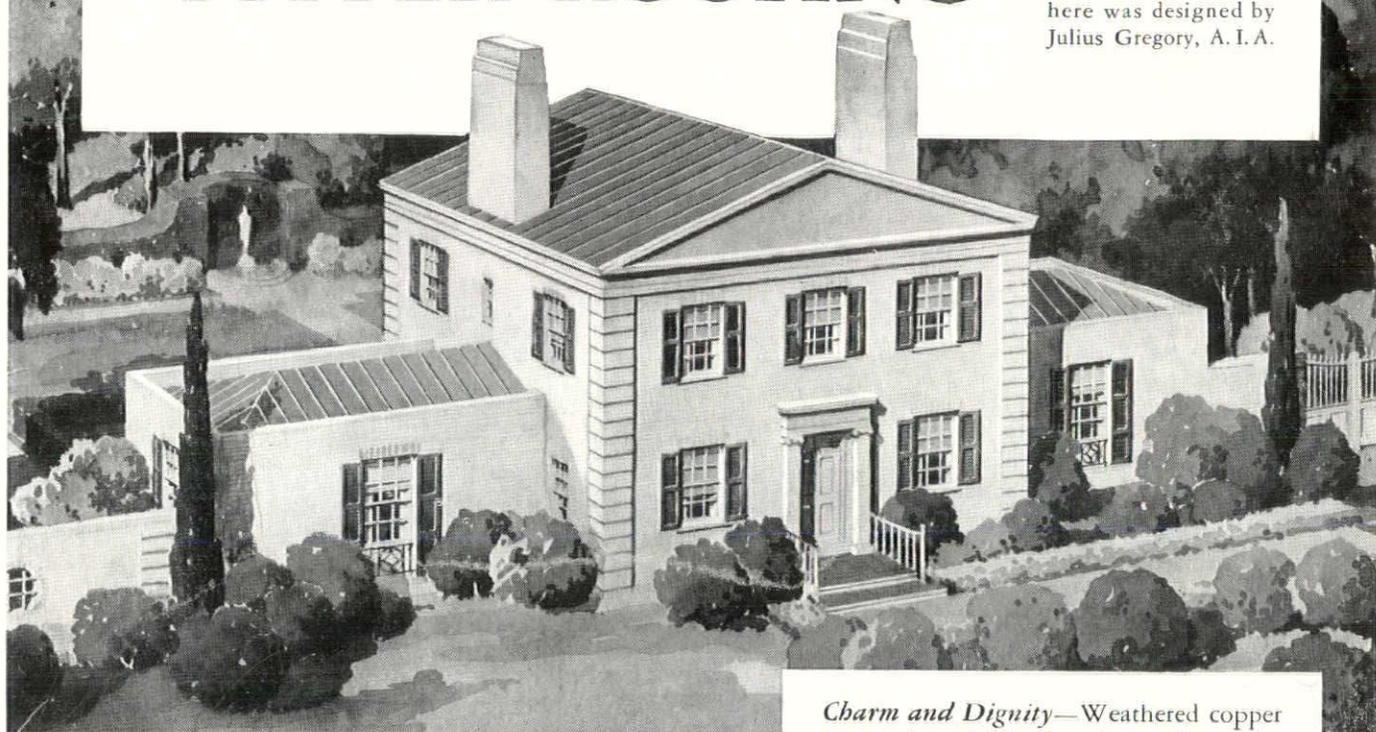
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The residence illustrated here was designed by Julius Gregory, A. I. A.



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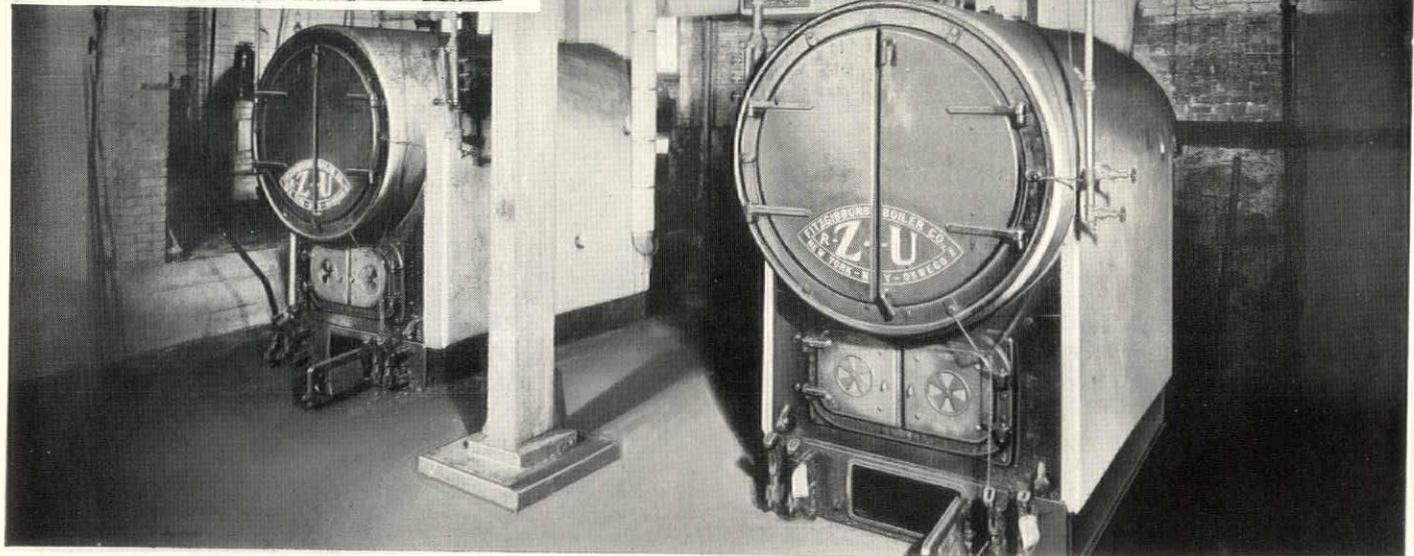
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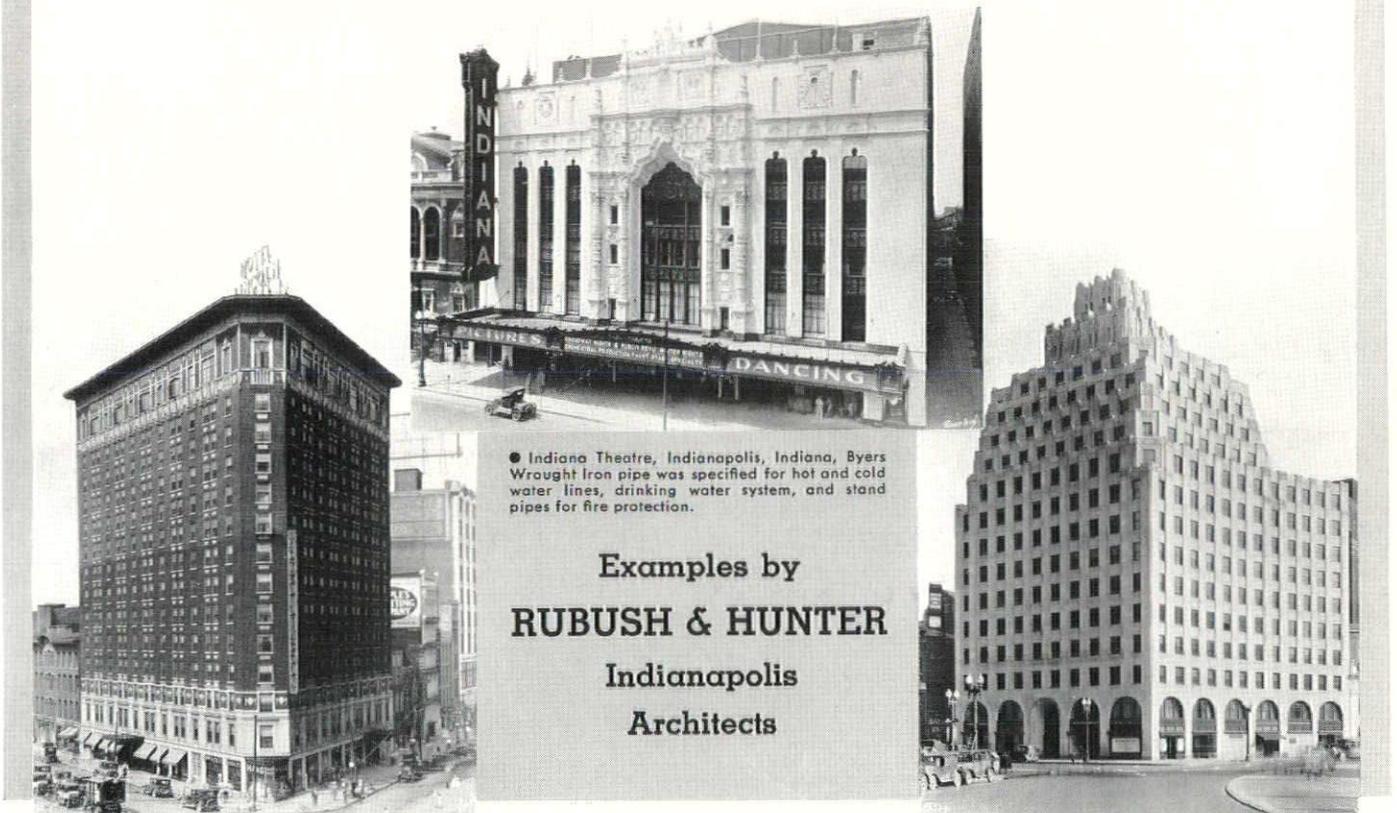
BRANCHES AND REPRESENTATIVES IN PRINCIPAL CITIES



FITZGIBBONS R-Z-U BOILERS

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● Indiana Theatre, Indianapolis, Indiana, Byers Wrought Iron pipe was specified for hot and cold water lines, drinking water system, and stand pipes for fire protection.

Examples by
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 Indianapolis
 Architects

● Lincoln Hotel, Indianapolis, Indiana, Byers Wrought Iron pipe was specified for hot and cold water lines, drinking water system, and stand pipes for fire protection.

● Circle Tower Building, Indianapolis, Indiana, Byers Wrought Iron pipe was specified for hot and cold water lines, drinking water system, and stand pipes for fire protection.

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AMERICAN ARCHITECT and ARCHITECTURE

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DECEMBER, 1936

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TRENDS

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PHOTO: WIDE WORLD

Long have San Franciscans wanted a bridge between their city and Oakland across the bay. Last month by the simple and significant gesture of pushing a button in the White House, President Roosevelt marked the official opening of the new San Francisco-Oakland Bay Bridge

Housing Again

President Roosevelt had scarcely settled back in his library chair after his overwhelming re-election before partisan groups throughout the country were preparing to hold him to campaign promises. Already the bulletin "Public Housing Progress," published by the National Housing Conference, has claimed in headlines that "Roosevelt Landslide Makes Slum Clearance Act Certain."

Quoting from one of the President's pre-election speeches the bulletin says: "We have too long neglected the housing problem for all our lower-income

groups. We have spent large sums of money on highways, parks, on bridges, on museums, and for other projects of civic betterment. For the most part, that money was well spent. But we have not yet begun adequately to spend money in order to help the families in the overcrowded sections of our cities to live as American citizens have a right to live. You and I will not be content until city, state and Federal Governments join with private capital in helping every American family to live that way. We need action and more action to get better city housing.

Senator Wagner and I had hoped for a new law at the last session of the Congress. We who believe in better housing have not been defeated. I am confident that the next Congress will start us on our way with a sound housing policy. We shall certainly get it if on November 3rd you vote to send to Washington the kind of government which I am confident you want—a government which will work and will continue to work for . . . better homes in every part of the nation."

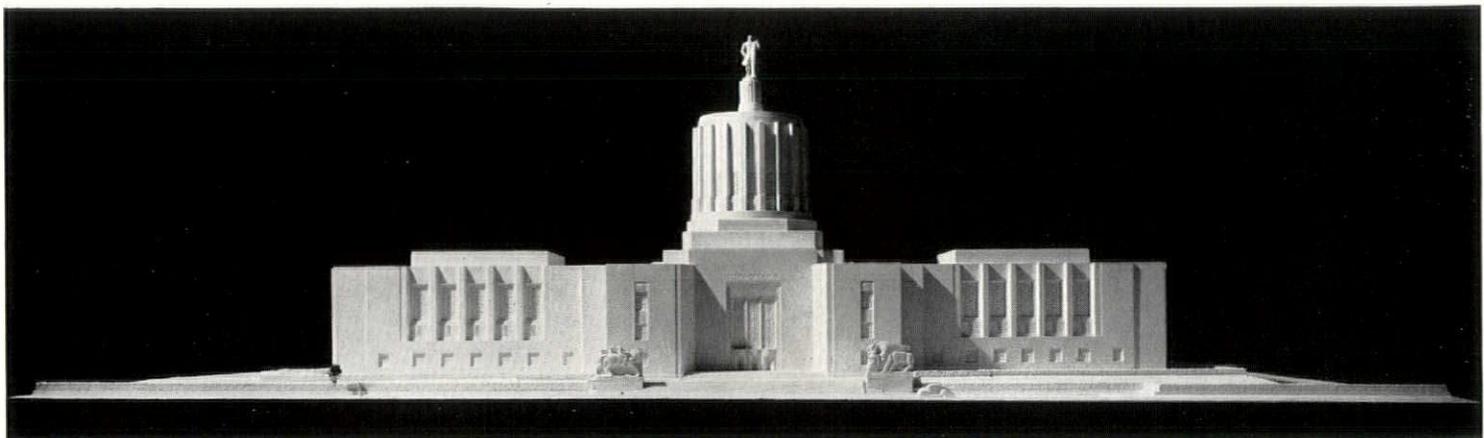
From these words, spoken by President Roosevelt just a week before his re-election, the National Public Housing Conference concludes that . . . "in the name of the party he leads, the President has pledged that party to a definite public housing plan. There can be no appeal from the people's endorsement of such a plan; no hesitation in this Congress about carrying out the people's mandate.

Mr. Lewis and Mr. Green

All industry was wondering last month if John L. Lewis and William Green were about to end their feud for labor supremacy—if the Committee for Industrial Organization might not soon be joined with the American Federation of Labor? But when unions got together for discussion, all hopes for an early solution went glimmering. Mr. Lewis and his C. I. O. groups were summarily dismissed from the American Federation of Labor for an indefinite period. And Mr. Lewis showed no signs of displeasure. Rather, he was like a 200 lb. son who hears his 110 lb. father say, "I'm gonna spank you."

And it is not hard to see Mr. Lewis' point of view. For even though the A. F. of L. is twice the size numerically of Lewis' group, Mr. Lewis naturally cannot give way to labor unity without an explanation that will save his face before his own unions.

Thus, the two rival labor factions continue to play war and show no signs of ending the estrangement.



The winning design for the Oregon State Capitol designed by Trowbridge & Livingston and Francis Keally, Associate Architects, became more of a reality in the eyes of proud Oregonians after they had seen this model in plaster by the Rochette & Parzini Studio



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specifications can be embodied in the piping surely—economically—permanently.

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Modern Houses for \$4,500

According to Seward H. Mott, chief of the land planning section of FHA, "experience has shown that it is entirely practical to build and finance modern homes costing \$4,500." The remaining difficulty, says Mr. Mott, is to find suitable sites.

It is with this question of sites in mind that FHA has recently begun a series of land subdivision conferences in most of the major cities of the country. These conferences are pointing out that there are certain requirements which every subdivision must meet if it is to qualify as a sound area in which to build and finance homes. Mr. Mott summarizes them thus:

1. There must be convincing evidence of a healthy and active demand for homes of the type contemplated and at the price asked.

2. The topography, soil, drainage, and surroundings must be appropriate for the kind of development anticipated.

3. The subdivision must be easily accessible to schools, employment, and shopping centers.

4. It must be served with appropriate utilities and street improvements.

5. It must conform to all planning and subdivision regulations and to sound planning practice.

6. The character of the development must be established and protection provided through suitable zoning and deed restrictions.

7. There must be a sound financial set-up. Taxes and assessments must not be out of line.

On the other hand, Mr. Mott points out that deed restrictions necessary for the protection of such residential developments must be carefully made. He recommends the eight restrictions:

1. Limitation of type of residence permitted, single, double, or row.

2. Approval of the design of all structures by a competent committee.

3. Control of placement of house on lot by side-line and set-back limits.

4. Prevention of re-subdivision of lots.

5. Prohibition of offensive trades or nuisances.

6. Prevention of temporary dwellings.

7. Protective restrictions to run 25 years or more.

8. Suitable enforcement provisions.

Home Loan Facts

For almost a year now the Federal Home Loan Bank Board has been gathering and distributing statistics on the cost of building the same typical house in the various sections of this country.

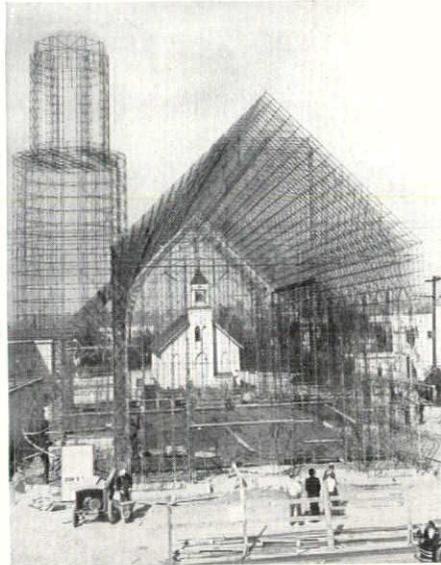


PHOTO: WIDE WORLD

Small round rods interwoven to form a network of steel are welded into single unit to comprise walls, roof and floor joists of St. Augustine's Catholic Church in Culver City, California. Pre-fabricated and patented by A. M. McLellan of Los Angeles, panel sections in this technique are about twelve by twenty feet

The purpose of these reports has been to give a true picture of movement of costs within each city and a reliable comparison of costs among all reporting cities.

The house on which costs are reported is a detached 6-room home of 24,000 cubic feet volume. Living room,

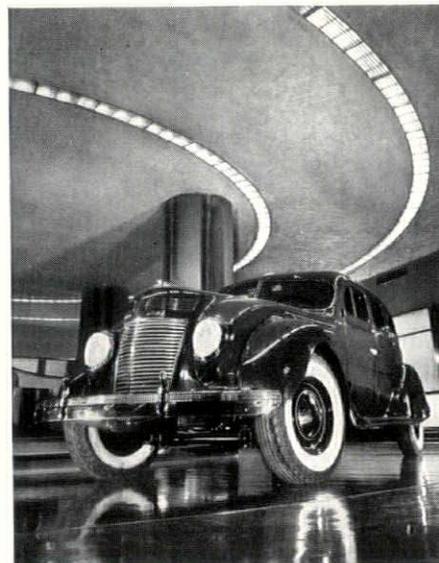


PHOTO: F. S. LINCOLN

Cars displayed on a revolving floor are the big feature of the Chrysler showrooms in New York. Reinhard and Hofmeister, the architects, pointed up the displays by a clever use of lighting and by a discreet color treatment

dining room, kitchen and lavatory on the first floor; 3 bedrooms and bath on second floor. Exterior is wideboard siding with brick and stucco as features of design. Best quality materials and workmanship are used throughout. However, it must be remembered that the house is *not* completed ready for occupancy. It includes all fundamental structural elements, an attached one-car garage, an unfinished cellar, an unfinished attic, a fireplace, essential heating, plumbing and electric wiring equipment, and complete insulation. It does not include wall-paper or other wall or ceiling finish on interior plastered surfaces, lighting fixtures, refrigerators, water heaters, ranges, screens, weather stripping, or window shades. Land cost also is omitted.

Figuring on this basis the Federal Home Loan Bank Board has computed building costs on the standard house ever since January. Latest report, that for October, shows that in 10 of twenty-five cities the building costs went up 1 per cent or more, while in 3 cities the cost went down 1 per cent or more, and in 12 cities costs remained approximately the same.

The largest increases were reported from the States of Washington and Oregon. Building costs in Spokane went up 8.1 per cent, or 1.9 cents per cubic foot; in Seattle 5.1 per cent; and in Portland, 4.8 per cent. Casper, Wyoming reported an increase of 3 per cent. These increases in Western cities were believed due to rising labor costs.

On the other hand, Indianapolis registered the greatest cost decline. Here the index showed a fall of 4.1 per cent. Following it were Atlantic City with 1.5 per cent and Fargo, North Dakota, with 1.4 per cent.

Comparing costs between cities, the Federal Home Loan Bank Board finds that Great Falls, Montana, reported the highest cost with \$6,540. It was followed by Casper, Wyoming, with \$6,445 and by Des Moines, Iowa, with \$6,246.

Lowest costs were reported by Grand Rapids, Michigan, with \$5,138; Camden, New Jersey, with \$5,183, and Detroit with \$5,297.

Christmas Seal Sale

Everybody knows that the greatest joy is in the giving. Thanks to the Annual Christmas Seal Campaign, the gradual eradication of tuberculosis is a fact. Small children and grownups are able to find health and happiness because of the public response to the cry, "Buy Christmas Seals."

Must You Wait 100 Years Like Williamsburg?

[Which may be an impertinent question. But it's based on a pertinent fact.]



Have you been down to Old Virginia's Williamsburg since the Rockefeller Restoration? How did you like the color and general appearance of the brick? Did you sort of have a feeling it looked a good bit newish? Didn't the comparison between the mellowed age-old-look of the Wren Building and the President's House, only the more emphasize your first impression?

Was down there myself 'tother day with a Long Islander and his architect. Both of them have a leaning towards building what they called: "A true old Virginia Colonial residence."

During the course of our prowlings around together, we met up with one of the big-wigs of the town. As the back-and-forths between us got to going good, the Long Islander made a remark on the brick's new look.

"Well," replied the big-wig, "those brick are made of exactly the same materials, and in the same primitive hand-made way, those of the Wren Building were. In a hundred years or so, they will have mellowed up same as 'the Wrens'."

"Yes," up and remarked the Long

p.s.

You plumb-bob can't make rich warm colors out of James River or East coast mud-clay. You get dingy clouded effects. Being dingy isn't being old-looking. It's just being dingy.

p.s. p.s.

Our Old Virginians are made out of Blue Ridge Mountain shale combined with just a certain amount of a particular clay. Takes all of 30 days to make them.

Islander, "but none of us will be around these parts then." Which, doesn't it strike you, as being a tolerably pertinent observation? The upshot of all such is, if there's a true Old Virginia Brick to be had, that's born straight from the kiln with an honest-to-goodness 100-year-old-look, why wouldn't it be a whole lot like hoss sense to use them for a real particular job of yours?

Mr. Jefferson used that kind of brick in building Monticello. Yes, and made them himself at that, right there on the ground, under his vigilant eye.

wait a hundred years for them to time-tone and be perfectly content while it's going on.

As for you, doesn't it seem as how, a real brick Colonial house being built *now*, ought not to have too brand new a look? Shouldn't it kinder have an at-once-look-of-oldishness?

All right then, can you blame me for mentioning the fact of our making just such born-old bricks? Not only mentioning it, but calling your attention to the fact that we have both the Standard and the Jefferson sizes. Furthermore, that the Jeffersons are, so far as we have been able to discover, the only true Jeffersons being made down here in Virginia. Or anywhere else for that matter.

The University of Virginia thinks so well of them, that they have used over 3 million in their new buildings. Which fact goes to prove that they are just as acceptable brick for that sort of use, as in residences. Syracuse University up New York State way,

has the same feeling about it. They have used a whole passel of them. Dwight James Baum, you doubtless recall, is the architect.

Having said all of which, looks like it's about time I let our Old Virginia Brick do the rest of the talking.



SKETCH MADE "ON THE SPOT." OF THE RESTORED GOVERNOR'S PALACE, WILLIAMSBURG

Now don't any of you architect-folks get your backs up about our remarks pertaining to those Williamsburg brick. They are every way all right, for the kind of brick they are. They are that kind of brick. But Williamsburg can

HENRY GARDEN

Brick Maker for

OLD VIRGINIA BRICK CO.

with Mr. Jefferson as a Guide

OLD VIRGINIA BRICK

Old Virginia Brick Company
Salem, Virginia

TRENDS

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PHOTO: WIDE WORLD

"C'est magnifique; c'est vraiment epatant," exclaimed diplomatic Francois de Tesson, Under-Secretary of State for France, upon seeing the Flushing Meadow site for New York's 1939 World's Fair. From left to right are: Irvin Scott, Architect; Colonel John P. Hagan, Engineer; Jacques Greber, Chief Architect for the 1937 Paris Exposition; Grover Whalen, M. de Tesson and W. Earle Andrews

Architects Selected for Theme Tower

"To find a trade-mark or symbol for the Fair"—that is the task that has been delegated to Wallace K. Harrison and J. Andre Fouilhoux. For last month Grover A. Whalen, president of the New York World's Fair of 1939, signed a contract with these two well-known architects for the design of the Theme Building—intended to be "the most splendid and significant edifice" in the World's Fair project. And the contract, moreover, calls for a building to have an estimated cost of \$1,200,000. Preliminary designs must be finished within ten weeks, and final designs four weeks after so that work can begin immediately.

Interviewed as he came from Mr. Whalen's offices in the Empire State Building, Mr. Harrison said, "They have a wonderful theme here, and our problem is to find something that will express it quickly to those who approach. The essence of the Fair is the expression of the life of the future and that is the idea that we will try to develop in the most modern way, with the added consideration that, after all, this is a show and must be made thrilling." Asked by a New York Times reporter if he expected to encounter any difficulties from the nature of the site, Mr. Harrison replied that instead this might suggest to them a very light, delicate design, "something ephemeral, dainty."

The program of requirements in the contract sets forth that the building must provide 93,500 square feet of floor

space. The structure will stand on the highest spot of the exposition site, and will contain a great circular hall or theatre, 210 feet in diameter, which will house the "dioramas" and other schematic plans intended to show the relation between urban and rural life, and between production and distribution.

The architects were nominated by the Board of Design and approved by the Board of Directors of the Fair.

Bonds Rise

Driving steadily upward for more than three years, real estate bonds in the East reached an average value of \$424 last month, an increase of \$35 a share since January 1st according to Amott, Baker and Company.

This increase in face value represents a rise of nine per cent in average value since the first of the year. On January 1, 1936, the average price per \$1,000 of face value was \$389.

An October advance of 1.4 per cent was responsible for the new post-depression high level of these securities. This rise drove up average prices from the October 1st figure of \$418.

In a large measure, New York City issues brought about the advances. Amott, Baker uses 120 of these typical issues in compiling the averages. They rose 2 per cent in September and 2.5 per cent in October and were quoted at \$411 on the first of this month.

Issues with theatres as the underlying security made the greatest advance during October. These issues rose 2.4 per cent and command the highest price, \$672. Office buildings gained 1.3, advancing to \$473 in average price, and housekeeping apartments, which gained 1.9 per cent, are quoted at \$383.



PHOTO: WIDE WORLD

Another new bridge was opened last month, this time in Scotland. Over half a mile in length the new Kincardine Road Bridge has the largest swing span in Europe

FORD ROTUNDA WITH LINOTILE FLOORS, Dearborn, Michigan. This durable Armstrong's Linotile Floor, in two special shades of blue, forms an attractive sales background for the Ford cars. Architect: Albert Kahn, Inc., Detroit.

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LINOTILE enables you to create floors that attract favorable attention and bring new commissions into your office. Its richly colored individual tiles offer a versatile medium for distinctive floor designs in plain or marble colorings.

In addition, Linotile has all the practical advantages your clients expect in a floor. It is cheerful, comfortable, and quiet. The rich colors run through to the back—can't be worn off by scuffling feet. In the marble patterns, the non-directional swirl graining hides traffic marks. Linotile is inexpensive to install, economical to maintain. It is even more resistant to denting than battleship linoleum. With daily sweeping and occasional wash-

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Roof of Goldman Building, Denver, which is insulated with 1½" Armstrong's Corkboard supplied by the Stearns-Roger Manufacturing Company, Armstrong Distributors, and installed by Western Elaterite Roofing Co. Armstrong's Corkboard also insulates the roof of the Mountain States Telephone and Telegraph Building, shown in distant background.

Armstrong's Corkboard assures accurate temperature control . . . checks costly heat and refrigeration losses . . . in this air conditioned building occupied by
J. C. PENNEY CO.

INCREASING use of air conditioning has resulted in greater appreciation of the value of a permanently efficient insulation. To assure years of economical summer cooling and winter heating for the Goldman Building, shown above, architects Frank W. Frewen, Jr., and Earl C. Morris, of Denver, specified Armstrong's Corkboard for roof insulation.

This efficient insulation is ideal for all types of air conditioned and normally heated buildings. It provides *low* thermal conductivity plus

high moisture resistance. Its natural cell structure forms a lasting barrier to the passage of heat, and permanently resists the efficiency-destroying effects of moisture. As a result, Armstrong's Corkboard offers permanent insulation that assures efficiency and economical service year after year.

As roof insulation, Armstrong's Corkboard provides year round indoor comfort, substantial fuel savings, and aids accurate temperature control. It also serves effectively as insulation for the

walls, ceilings, and floors of cold storage rooms. For insulating refrigerated pipe lines, Armstrong's Cork Covering is equally efficient.

The lasting efficiency of Armstrong's Corkboard has been proved by its performance record in thousands of buildings during the past three decades. Experience gained by Armstrong in a wide range of installations is available to you through Armstrong's Architectural Service Bureau which will gladly advise on any insulation job. For complete information, see Sweet's or an Armstrong branch office or write Armstrong Cork Products Company, Building Materials Division, 926 Concord Street, Lancaster, Pa.



Armstrong's CORKBOARD INSULATION

THE PRONOUNCED TREND IN PRESENT DAY DESIGN has given rise to many novel and interesting treatments of glazed areas. Corner windows, window walls, picture windows . . . all invite the architect's careful consideration. Current emphasis upon the functional and decorative values of glass makes it increasingly important to use only the finest quality glass available. That is why so many modern buildings and homes are being glazed with L·O·F Polished Plate Glass. Its superior finish, crystal-like sparkling clarity and enduring brilliance make it the ideal medium for all purposes in which high quality is the deciding factor. Libbey·Owens·Ford Glass Company, Toledo.



Library of the George Oppen residence, San Francisco, looking toward the garden through a curved window area glazed with L·O·F Polished Plate Glass. Gardner Daily, Architect.

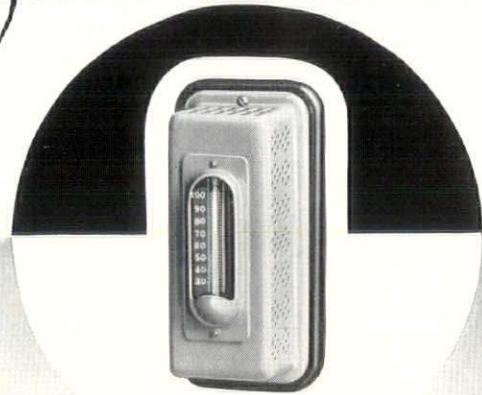


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The Watch Dog of Efficient Economy

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Sacred Heart Seminary, Detroit, Michigan. Architects: Donaldson & Meier. Mechanical Engineers: McColl, Snyder & McLean. Heating and Ventilating Contractors: Harrigan & Reid.

Fuel costs so much today that it is more than ever essential to prevent wasted dollars from rolling out of the windows! JOHNSON Control Apparatus acts as a positive, efficient check on waste. Carefully planned automatic temperature control is an assurance of correct temperature conditions indoors during the entire heating season.

The newer parochial and public school buildings, such as Detroit's Sacred Heart Seminary, are equipped with every desirable educational facility and all are consistent in their demand for one important asset—uniform temperature at all times. At Sacred Heart, 347 JOHNSON room thermostats con-

trol 532 JOHNSON valves on radiators, while five ventilating systems are commanded also by JOHNSON devices.

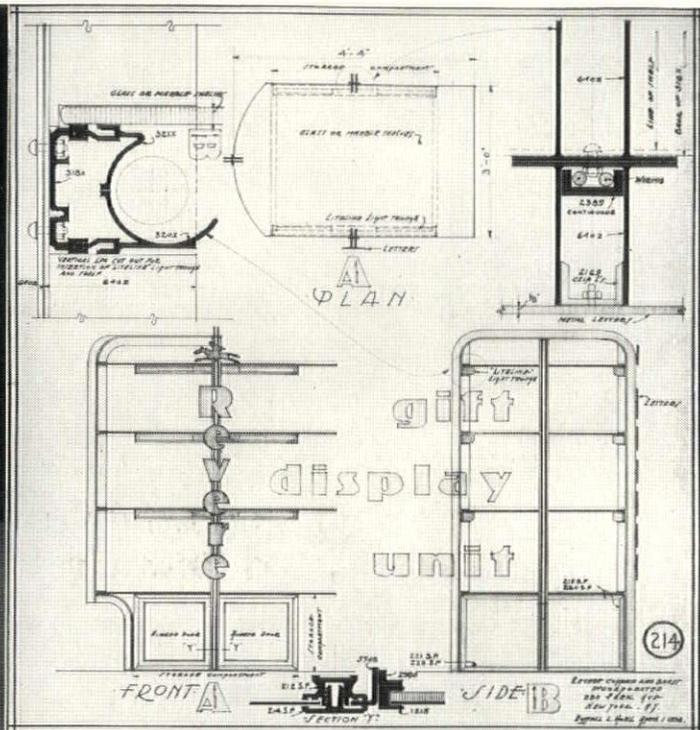
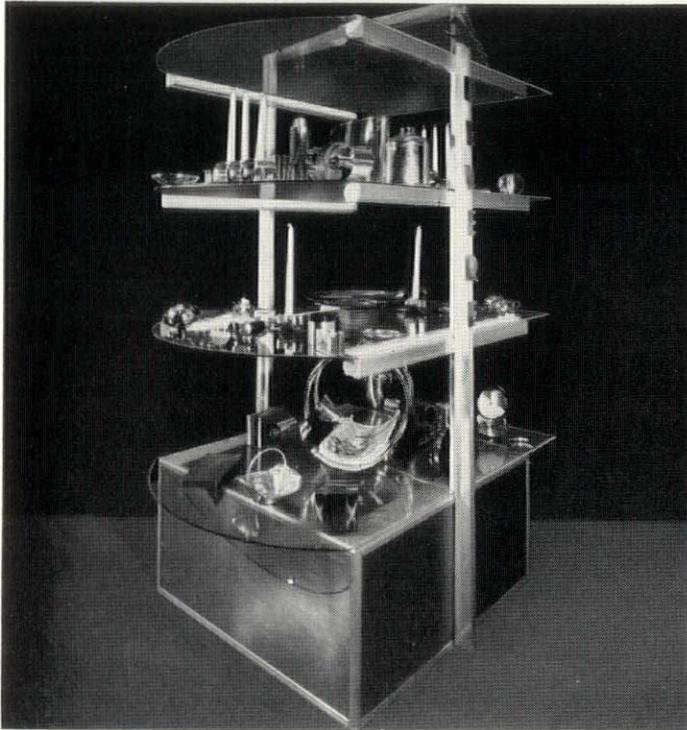
JOHNSON, oldest heat control apparatus company—dean of the industry—always has emphasized quality. Superior workmanship and engineering assure JOHNSON users the very best solution of any temperature or humidity control problem. Design, manufacture, and installation by a single organization with a background of more than fifty years. Johnson Service Company, Milwaukee, Wisconsin, and all principal cities.

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REVECON SECTIONS

THE DIVERSITY and adaptability of Revecon Structural Sections enables the architect to solve easily any problem of holding flat sheet materials over every type of superstructure, with no exposed attaching devices visible.

Any flat decorative metal sheet—window and structural glass, Lumar marble, resins or plastics, insulating and wall board, or other material—that is sufficiently rigid

to support itself on edge may be used in any standard thickness up to and including $\frac{1}{2}$ inch.

Revecon Structural Sections are effective and economical to use in a wide variety of applications.

The Revere Gift Display unit illustrated is an example of the Revecon Structural Sections as used to fabricate the chassis. The vertical members are

notched to support the new "Tuf-Flex" pink glass shelves. The latter are lighted from below by the new "LITELINE" Revecon extruded shapes assembled and adapted to receive the standard "Lumiline" tube lamp. A subdued colored glow is produced, effectively lighting the articles displayed.*

Inquiries are cordially invited from all who are interested in the utility of Revecon Structural sections for miscellaneous applications, as well as large architectural and building problems involving the use of flat sheet materials.

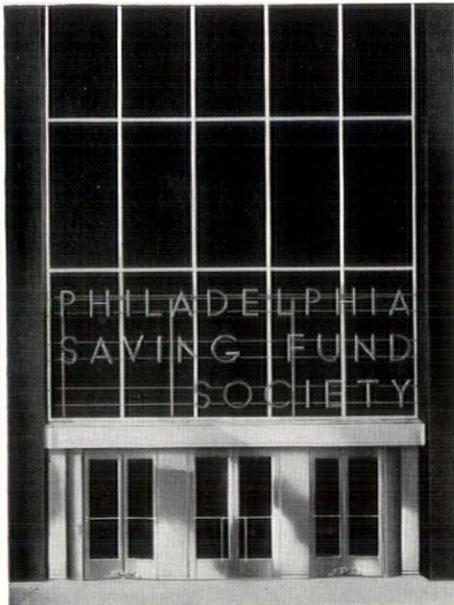
*Revere Gift Ware

Revere Copper and Brass

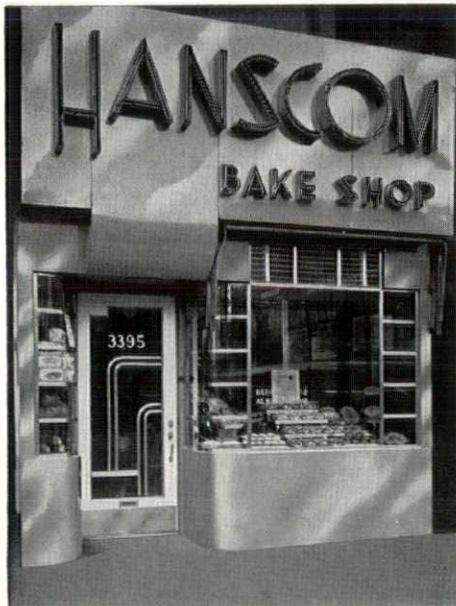


INCORPORATED
EXECUTIVE OFFICES: 230 PARK AVENUE, NEW YORK CITY

SEVEN FACTS FOR ARCHITECTS ABOUT U·S·S STAINLESS STEEL



FOUR YEARS OLD and still "brand new"! Had the architect specified any other metal this beautiful entrance of USS Stainless Steel would not look as "new" today as when it was installed four years ago.



THIS SMART New York bakery is making a lot out of a small location with a brilliant store front of stainless steel.

1. Stainless steel is the only commercial metal which, like glass, can permanently maintain its surface without a trace of rust or tarnish.

2. Architectural trim of USS Stainless Steel needs only an occasional washing to keep it bright and clean . . . to keep your building looking new and young.

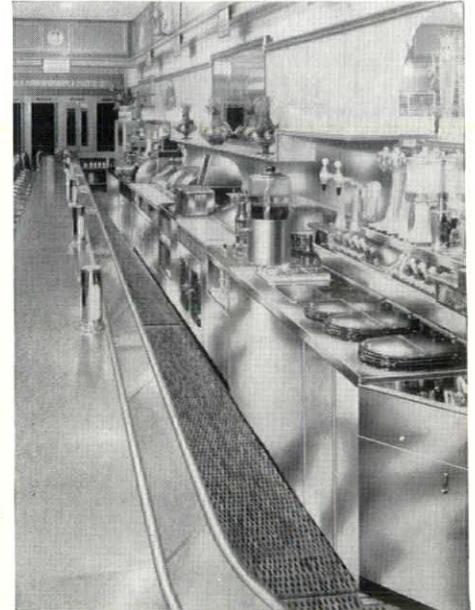
3. USS Stainless Steel is one of the strongest, toughest metals known to science. Even kick plates and mop strips will wear indefinitely under the hardest service, should outlast your building.

4. Design with thin sections of USS Stainless Steel is an excellent means of lightening heavy canopies, marquees, and hanging fixtures.

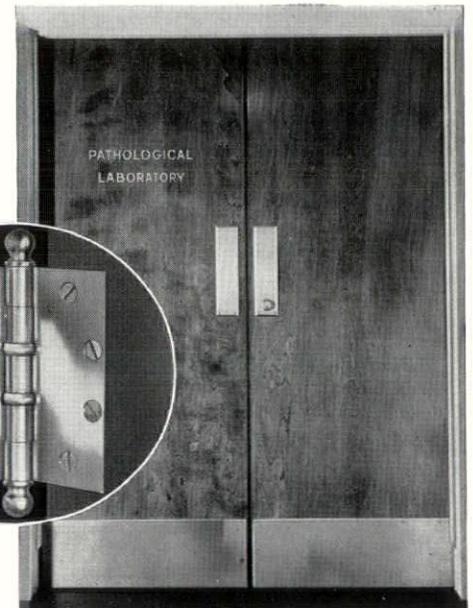
5. USS Stainless Steel is available in a wide variety of finishes including satin and polish lusters; in all common metal dimensions and forms except extruded shapes.

6. USS Stainless Steel can readily be fabricated by virtually every artifice of the metal worker. Leading architectural fabricators are now thoroughly familiar with the new properties of this new metal, and the best methods of working.

7. When all factors of cost are considered, you will often find USS Stainless Steel is not only the best but also the least expensive metal you can use. Don't forget that it practically eliminates all expense for polishing, replacement and repairs . . . that it looks "brand new" forever!



A NEW WAY to whet appetites! Inviting surroundings of clean, silvery USS Stainless Steel suggest tasteful food and pleasant refreshments.



HINGES OF USS Stainless Steel are so strong they never wear and let their doors sag; kickplates are so tough they should outlast the building. Both stay brilliant with only an occasional simple wash.

U·S·S STAINLESS STEEL

AMERICAN STEEL & WIRE COMPANY, Chicago and New York
CARNEGIE-ILLINOIS STEEL CORPORATION, Pittsburgh and Chicago
NATIONAL TUBE COMPANY, Pittsburgh



Columbia Steel Company, San Francisco, Pacific Coast Distributors · United States Steel Products Company, New York, Export Distributors

UNITED STATES STEEL

AT THE CLOSE OF THE YEAR

We are thankful for a number of things

FIRST, that the architectural profession is busy—and that there is every indication that offices will busier in the next twelve months;

- that manufacturers are more keenly aware of the necessity of telling the story of their products to the profession in terms that architects understand and appreciate;

- that the subscribers of *Architecture* have given such a whole-hearted endorsement to the combination of *American Architect* and *Architecture*;

- that the profession as a whole has said emphatically “We like the magazine”—for the fact that *American Architect* and *Architecture* has the largest number of architects as subscribers of any magazine in the field;

- that a very large number of architects (who must be very weary of selecting their favorite magazine) have given to *American Architect* and *Architecture* such a very hearty endorsement of its policy—a magazine edited *by* architects for architects—we are proud of this recognition and extend to each one our appreciation;

- that the editors have been able to keep a fresh point of view—and to have made plans for 1937 that are forward looking without riding hobbies—that are reverential of the past without being bowed down with the weight of tradition;

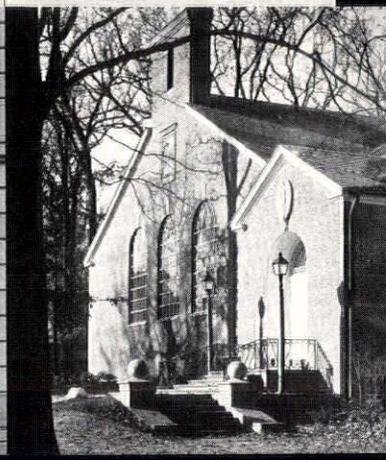
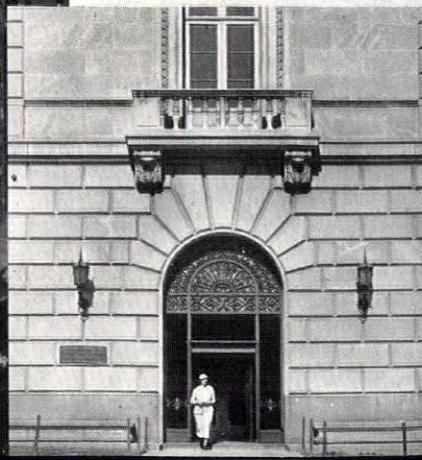
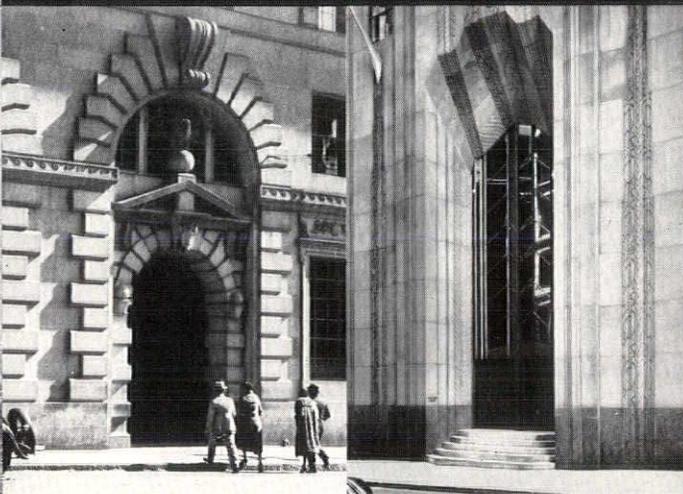
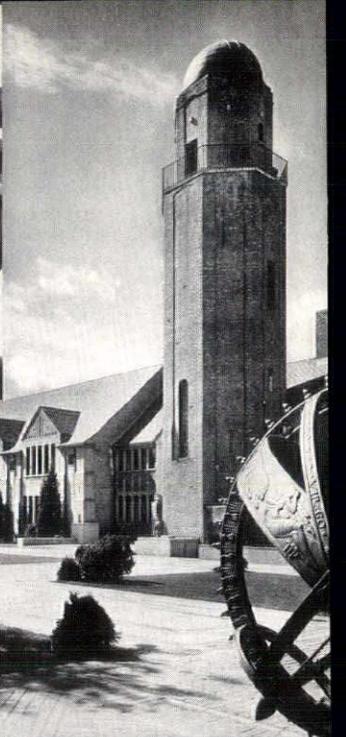
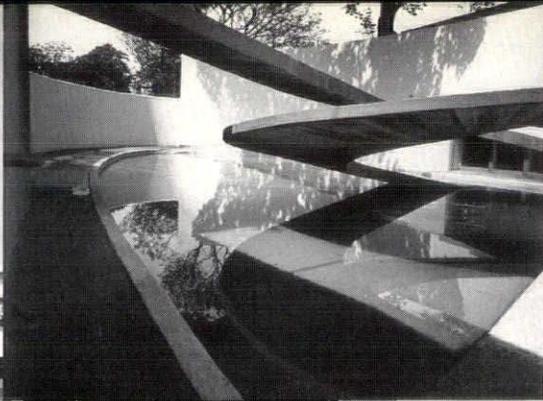
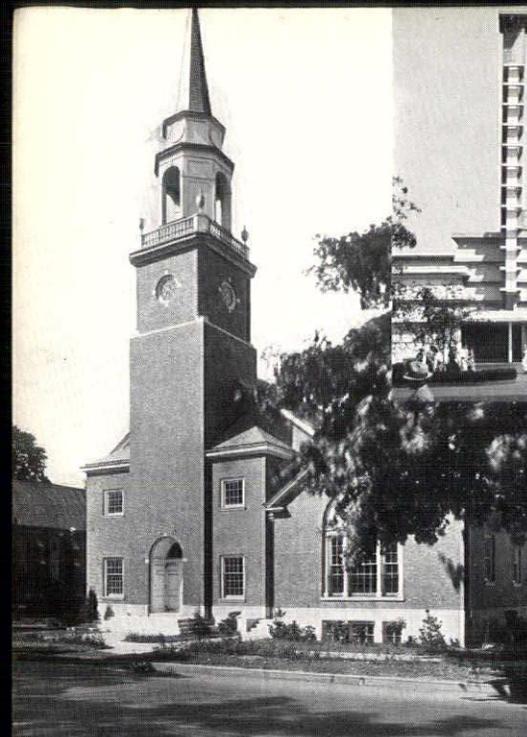
- that the election is over without the drums of war being sounded;

- that human relationships, individual achievements are still valued;

- and for that countless number of things—friends—appreciation of things done—criticism of a friendly sort—a sense of humor—and a spirit of tolerance.

- And even this far in advance—we wish one and all—a very Merry Christmas and a Happy New Year.

**AMERICAN ARCHITECT
and ARCHITECTURE**



NOT OF ONE MIND

Yet with the single purpose of bettering their profession at a time when the changing tide in the affairs of the profession can lead on to fortune

THE profession of architecture, you will hear from some quarters, is about to vanish from the earth; kiss it good-bye. The profession of architecture, you will hear from other quarters, is entering upon an era of greater power, greater influence, greater achievement than the world has yet witnessed; onward to leadership!

There is a rather wide range of thought and opinion between the two. It occurred to the Editors that it would be profitable to adduce some testimony. If we could get into type the thoughts of some of those whose judgment and experience qualify them to speak, perhaps the rest of us might the more clearly formulate our own findings and set a straighter course for 1937.

In the thought that few, if any, architects could be persuaded to rise and address us on the present status of civilization generally and architectural practice specifically, we set down a number of topics. The result was a long list; there are plenty of matters upon which any group of architects would fail to find themselves in general accord. Out of the formidable array of topics we selected five, limiting the discussion in this manner solely for the purpose of achieving an orderly procedure and of focusing attention upon one thing at a time.

With four specific questions and one wide-open general

one, we approached a number of men in whose opinions we thought the architects throughout the country would be interested. By personal interviews where possible, in some cases by letter, we have brought together this symposium. There are some questions on which the various opinions run fairly close together. Other questions show up more clearly the perplexities that confront the profession.

It is in answer to the final question, however, that the panorama of perplexity spread widely before us. "What is the biggest problem facing the profession today?" Running alphabetically through the list and attempting condensation into a word: Barney says, mastery of the profession; Cret, better work; Harrison, regaining leadership; Hays and Simpson, regaining leadership; Hentz, struggle to exist; Hewitt, more work; Holabird, better work; Hudnut, serving a wider public; Ingham, end bureaucracy; Lubetkin, better work; Saarinen, education; Shepley, education; Williams, a philosophy.

So there you are. But it is grossly unfair to interpret these men in a word or two. Read their answers to the five questions. Follow their thoughts through with them. Perhaps you may disagree with all of them. This is by no means a symposium to congeal thought on the profession's problems; it is hoped to start thought flowing.

PAUL PHILIPPE CRET, PHILADELPHIA

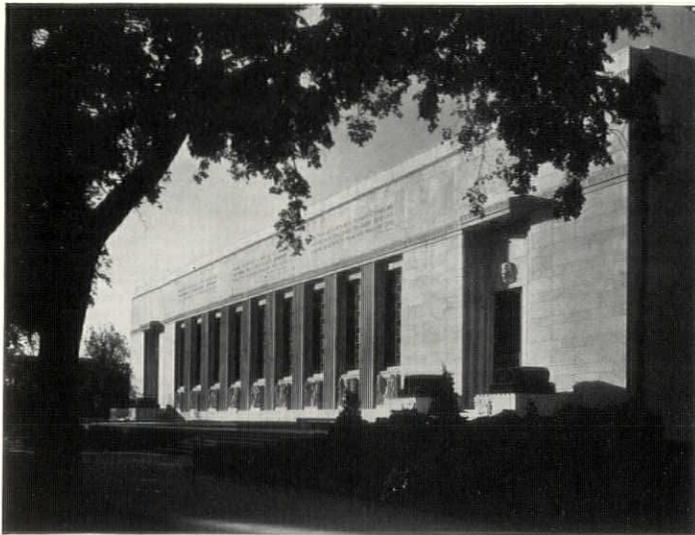


PHOTO: HORYDCZAK

FOLGER SHAKESPEARE LIBRARY

PAUL P. CRET, ARCHITECT. A. TROWBRIDGE, CONSULTING

How Can the Profession Increase the Competency of Its Members?

Would it not be pleasant if our professional organizations could make all of us first-rate men through one of the methods brought forth by this symposium? However, if we realize that the profession is nothing but the sum total of its members, question No. 1 amounts to this—How can the members of the profession increase *their* competency? And under this form, the answer is—by hard work, although this is much less pleasant than to have it done for us by someone else.

How Is Architectural Practice Changing?

It changes every eleven years. This must have some relation to the sun spots. In going over old files of architectural magazines, I find that in 1936, 1925, 1914, 1903, etc., as early as the files could carry me, the profession had arrived at a crossroad; the old order was doomed, and our training had to be fundamentally changed to suit the new conditions. Architectural practice has been changing ever since the advent of architects and clients. It changes from one country to another, from one region to another, from one office to another, and this is very fortunate.

How Can the Architect Increase His Service to Include More Than the 30% He Now Serves?

By making a "better mouse trap" than the one now supplied to the reluctant 70%. I realize that this answer is hopelessly out-of-date. Extolling the virtues of this or that type of publicity campaign may be the correct approach.

Is Individual Practice Under a Handicap as Compared with Group Practice, or Vice Versa?

Group practice has little to do with the practice of archi-

ture. It was invented by King Solomon when two or four women claimed the same baby, and he suggested to halve or quarter the kid. I am afraid it was not for the infant's best interest. It is not individual or group practice which is put under a handicap; it is architecture.

What, In Your Mind, Is the Biggest Problem Facing the Profession?

To do good work.

ELIEL SAARINEN, CRANBROOK

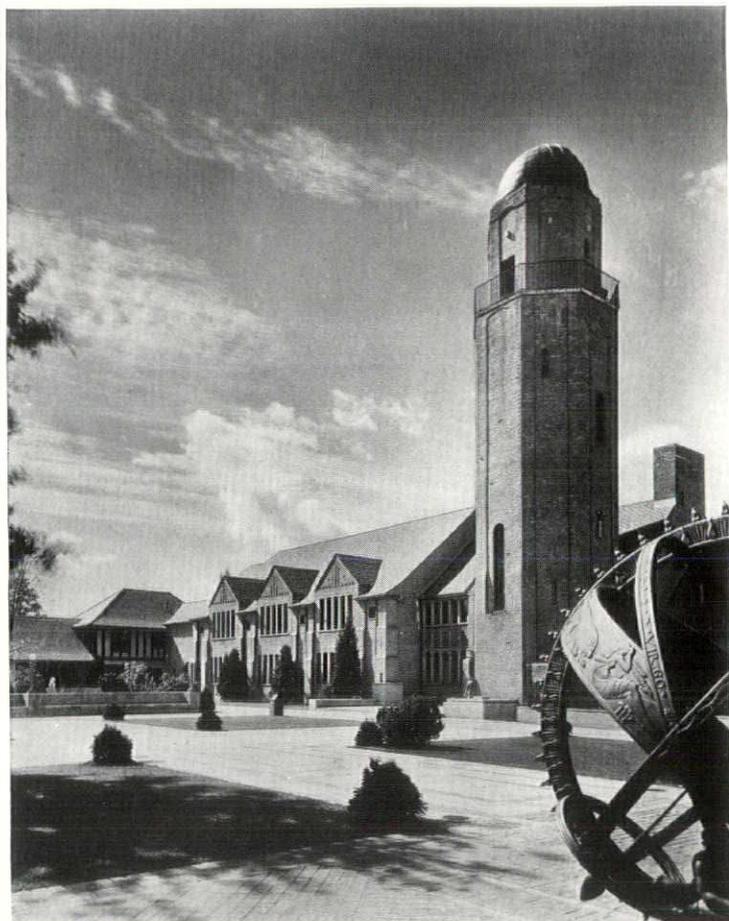


PHOTO: LINCOLN

CRANBROOK ACADEMY

ELIEL SAARINEN, ARCHITECT

How Can the Profession Increase the Competency of Its Members?

The competency of the profession will increase as it learns to think clearly, and that, I am afraid, will not come until we can start afresh, educating a new generation.

How Is Architectural Practice Changing?

It is changing in the only way it can change and continue to exist. What that way is I'll save for the fifth question.

How Can the Architect Increase His Service to Include More Than the 30% He Now Serves?

A broadly increasing service would logically follow a proper attitude and proper education of the architect. An architect, it is said, cannot afford to design and supervise a single house of low cost. Nor should he. But he *can* afford to do what he should be doing instead—designing a hundred houses properly correlated in a community.

Is Individual Practice Under a Handicap as Compared with Group Practice, or Vice Versa?

Art is not produced by a committee. Creative work must spring from the individual. He can bring to his aid what technical assistance is needed—we have no lack of it. The procedure may be somewhat slower; it should be. If speed alone is desired in creative design, you might try the assembly line principle of mass production.

What, In Your Mind, Is the Biggest Problem Facing the Profession?

I think that if you had placed this question at the head of the list, the answer to it would have saved my answering most of the others.

The biggest problem facing the profession is Education. If we solve that properly, there aren't any others of real significance.

Architectural education, in my opinion, has been wrong from its inception. Away back in 1536, when Buontalenti established the first academy of architecture in Florence, students were taught that the Greeks had found the ultimate answer. There was no use in trying to go beyond that. Their solution was final. Henceforth, we were taught, we should accept their findings and put a shell around the space we had to enclose—a shell composed of elements that we were to learn by rote so that we could reproduce them to the fractional part of a module.

The absurdity of that sort of practice is becoming recognized, but some of its implications are still with us. Architectural students should be taught to think of a specific building not as a floor plan of a certain area about which they erect facades, but as a unit correlated with the community in which it is to serve. It is never an isolated building, even though it is surrounded by vast acres of its own. It is a part of a web, the strands of which go far afield among other strands—social, economic. As long as men who call themselves architects fail to think beyond the individual plot lines we shall continue to have what we now look upon in bewilderment and shame, our "great" cities.

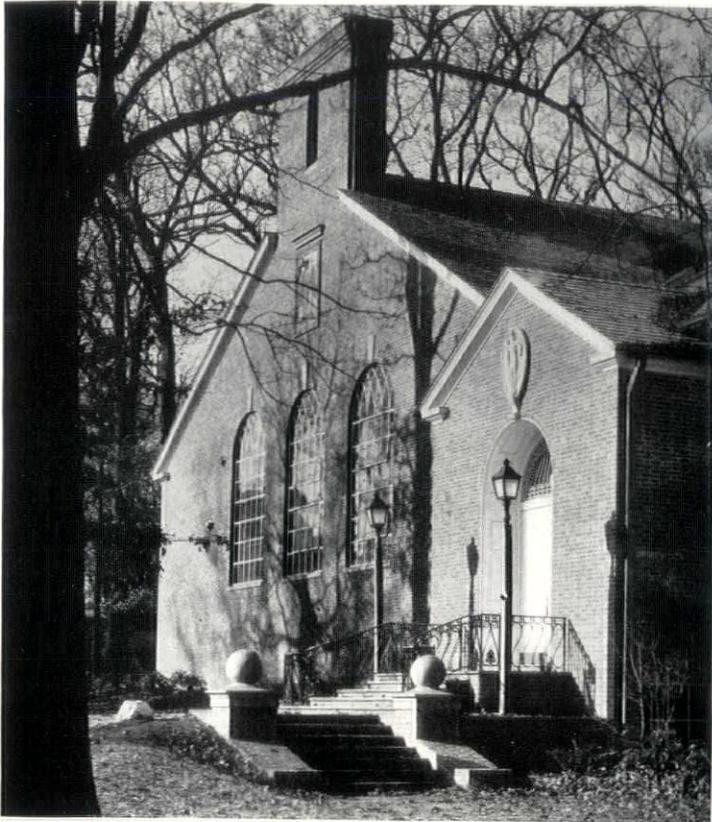


PHOTO: RITTASE

HAVERFORD PREPARATORY SCHOOL
W. POPE BARNEY, ARCHITECT

How Can the Profession Increase the Competency of Its Members?

First: By continuing the evolution now going on in many architectural schools toward a more inspiring and practical education for students of architecture. This can only be effected by men whose attitude combines the realistic and idealistic; men squarely facing changing conditions and enthusiastically accepting their challenge with elastic minds and with vision broad enough and long-range enough to distinguish between ephemeral fads and the fundamental and inevitable development of civilization.

Second: By giving every encouragement to the younger men to develop more freely after leaving school. By a generous desire on the part of the older practitioners and architectural associations to recognize and acknowledge merit and ability and pay honor to the men possessing them rather than to those who present no danger of becoming formidable rivals. So long as the older men allow fear of displacement to dim their recognition of youth's merit, so long will pettiness take a tragic toll of the architectural ability of the country.

Third: By a realization on the part of the mature architect that the changing conditions of the last two decades have rendered the one-time dilettante luxury-architect obsolete; that the profession today can only be adequately carried on by men of greater force, more many-sided abilities, more practical vision.

How Is Architectural Practice Changing?

As architecture is a clothing of the life of the people, it naturally varies with any changes in the life which produces it. No one whose memory reaches back even twenty years can deny that a great transformation has taken place in our tempo and our mental and physical environment during that time. There is no need to dwell on our changing structural methods which have come with the influx of new materials. This is already a twice-told tale.

How Can the Architect Increase His Service to Include More Than the 30% He Now Serves?

This is largely answered in answering the first question. By his ability to prove to the client that he can not only bring order and efficiency into the client's building, but also save his pocketbook and protect his interests, will the architect gain the confidence of a greater public. This means a much higher average of service than at present prevails. It means a much more earnest striving for perfection in economical as well as beautiful use of space.

Our claim upon the remaining 70% must be primarily on the basis of practicality. The contribution of beauty which an architect might make to this group is now, and, until the general taste of the country is raised significantly, will continue to be, an unappreciated asset.

Is Individual Practice Under a Handicap as Compared with Group Practice, or Vice Versa?

If the question means: Is the individual firm less able to produce good work than a group of firms: the answer is: emphatically NO! As architectural design is a profoundly individual expression, the externalization of a powerful inward vision, a building designed by, or passed upon by a group is about as interesting and vital as a composite photograph. It is in danger of becoming, in the words of Emerson, "A Mush of Concession." The amount of nervous and creative energy burned up in trying to harmonize many dissentient points of view would design twenty buildings of greater merit than the final lees and dregs remaining after the wine of fervor has been drained away in discussion.

On the other hand, if the question means: Is the individual firm at a handicap as compared with a group of firms "Hunting in a Pack" the answer is emphatically, YES! When the object of group practice is to build up a more formidable prestige in the gullible, public mind, an ungenerous and abominable advantage is taken of the individual non-group practitioner. There are anti-trust laws and anti-merger laws in business and the industries, and one of the most useful services the American Institute of Architects could possibly perform would be to protect the individual practitioner from entrenched groups and collective injustice. I recommend this for its consideration.

What, In Your Mind, Is the Biggest Problem Facing the Profession?

I think that mastery of the profession is the biggest problem facing the profession.

We hear much talk of the lack of commissions and opportunities for an architect to do his best work, or even any work. During the depression years, this has been an acute problem to almost all of us.

But the foundation upon which this condition rests is not

wholly economic, and we shall always have it with us to a certain extent until we solve the more fundamental problem of mastery of our job.

I think that the public is quite sufficiently "architect-minded"; the trouble is that it is poor-architect-minded. The way to correct this is not publicity, which only rouses the antagonistic to argument, but *performance* which silences argument, and it cannot be emphasized too often that the best publicity comes from the enthusiastic client.

In our increasingly complex civilization interesting side lines are constantly tempting us to fritter away time which should be concentrated on gaining and maintaining mastery of our craft. And the word "maintaining" requires emphasis, for many men are not maintaining it. To do this means constant and open minded study of changing developments. An architect cannot cease to be a student.

Because this is a day of complicated techniques, the architect of big work must be the co-ordinator who delegates details to others. Too many architects have allowed sloth or mediocre ability to use this function of co-ordinator as an excuse for failure to master the fundamentals they essay to co-ordinate. Too many have insufficient knowledge of costs, of materials, of structure, mechanical equipment or lighting,

acoustics or electrical installation. They prepare contracts involving millions with only the vaguest conception of business law and go into commercial work or low-cost housing without realizing the necessity of research into real estate values and methods of financing. The man who, without contemporary mastery of these fundamentals, claims to handle them "in a big, broad way" is a smearer and bluffer who does not justify his title as architect ("master-builder"). Such a man prostitutes his profession. The recognition of this truth and the consecration of every ounce of energy to a fuller mastery of our job is the great task that confronts us. It is our major problem and in proportion to its solution will the profession regain the dignity and prestige it has so regrettably lost by its failure to keep abreast of the times.

These remarks lay stress only on the roots from which sound practice springs. They are incomplete without a word about the flower, creative design, the joy and reward of the practitioner. Standardization and the complexity of techniques bring a danger of swamping this creative expression. To keep pace with the engineer we must master these techniques. To surpass him, we must add the supreme gift: nobly conceived design. This is our unique contribution and the real justification of our high profession.

WALLACE K. HARRISON, NEW YORK

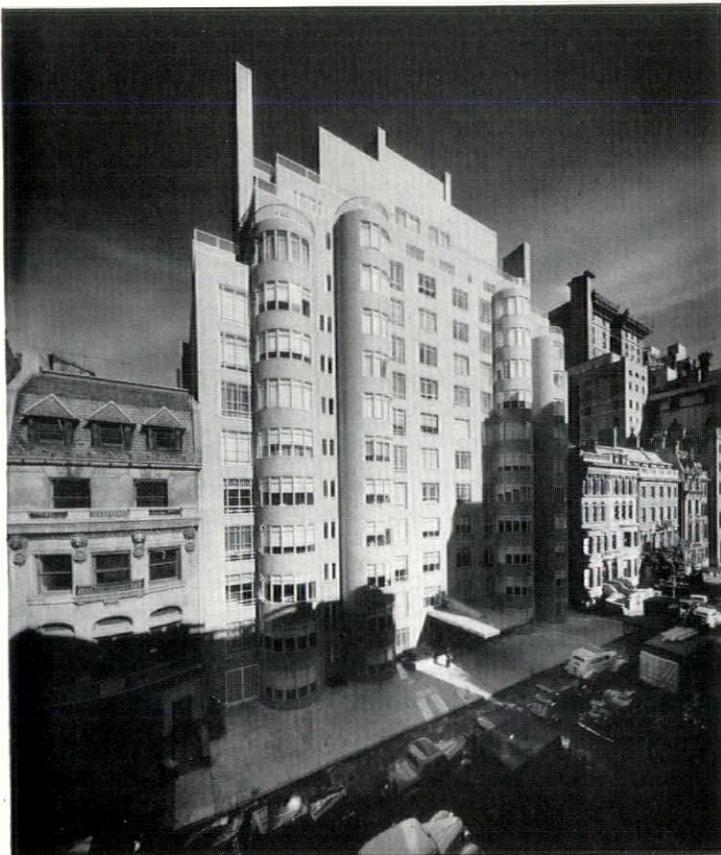


PHOTO: MC RAE

ROCKEFELLER APARTMENTS

HARRISON & FOUILHOX, ARCHITECTS

How Can the Profession Increase the Competency of Its Members?

It can naturally increase the competency of its members by a better educational system and more stringent regulations.

How Is Architectural Practice Changing?

It is impossible for me to answer as I don't know.

How Can the Architect Increase His Service to Include More Than the 30% He Now Serves?

I believe that the answer to number five includes this.

Is Individual Practice Under a Handicap as Compared with Group Practice, or Vice Versa?

I see no handicap for the individual who prefers to work alone. He must naturally accept the limitations of his own ability. A man is only six feet tall and has shoulders of about two feet in width, he can, with this equipment, do a certain amount of work. I believe that mental energy also has limitations. Therefore, as problems become more complicated there will of necessity be need for group practice.

What, In Your Mind, Is the Biggest Problem Facing the Profession?

In my opinion all of the previous questions are answered in answering number five. I believe that the position of leader in the community, once held by the architect, must be regained. The architect is essentially a builder and not a decorator or person primarily concerned with the style of things. As a builder he must take his place as the originator, developer, and planner of both better buildings and a better society to control those buildings.



PHOTO: HEDRICH-BLESSING STUDIOS

RACINE COUNTY COURTHOUSE
HOLABIRD & ROOT, ARCHITECTS

How Can the Profession Increase the Competency of Its Members?

One word, I should say, gives the answer to this question—Education. I do not mean that we have got to devise a new way of teaching architecture. What the student gets out of his architectural education depends upon the teacher rather than the method—the old story of Mark Hopkins on the other end of the log. New methods will be devised by new teachers. The teaching does not remain static.

How Is Architectural Practice Changing?

Architectural practice is getting better—at least I hope

it is. I see about me numerous examples of fresh thought, better and cleaner architecture. There seems to be no other evidence of a change in the form this practice takes.

How Can the Architect Increase His Service to Include More Than the 30% He Now Serves?

The architect can increase his services to a greater proportion of the population mainly through public education. It is a slow process, but eventually more and more of the public come to appreciate what the architect can do for them and become willing to pay the greater cost of a job well done. I think this is true even in small house work.

Is Individual Practice Under a Handicap as Compared with Group Practice, or Vice Versa?

This question of the individual as compared with the large organization is a matter of growth. A man starts out to do his work alone. While the volume is small he can manage it. If more work comes in than he can readily handle, he will—at least most men will—surround himself with other technicians rather than refuse the commissions. Perhaps most men feel that they could achieve better results from their personal decisions, but growth of practice makes this difficult. The ideal, of course, is an organization in which the various members think very nearly alike.

What, In Your Mind, Is the Biggest Problem Facing the Profession?

How can we do a better job? That covers it, I think. But it isn't a problem of the profession as much as it is a problem of the individual practitioner. Naturally it has a different face for each one of us. But, after all, isn't that what makes most of us up in the night—how can I improve my work?

J. BYERS HAYS and RUSSELL SIMPSON, CLEVELAND

How Can the Profession Increase the Competency of Its Members?

In our opinion, the profession can increase the competency of its members if it can make them conscious of their true position in the existing social order. Few architects understand this, or are aware of the problems facing them. The profession, to be successful, must offer ideas that will create need for its services. It must, therefore, always be in harmony with its times. The old atmosphere of professionalism, based upon the prejudice of hidebound tradition and speculation, must be cast off. Architecture is not a jig-saw puzzle in which one assembles a picture already cut out, but is always a development of new ideas. Furthermore, it is our opinion that the architectural schools are still overwhelmed with a class of mediaeval sinecurists, walking the straight and narrow path of traditional dogma and looking forward to next summer when they can go to Europe and make bad water color sketches.

How Is Architectural Practice Changing?

Architecture does not differ from any other profession or business. Changes in all things go hand in hand with our economical and social advancement. Too many architects accept this with reservations. Present day practice requires a renaissance of analytical and scientific thinking as opposed to legendry and superstition. There must be an urge to express ourselves and not necessarily follow what our forebears have bound us to. Our endeavors must be measured in the light of the present. We believe that the profession is only beginning to realize the fundamentals of building.

How Can the Architect Increase His Service to Include More Than the 30% He Now Serves?

By specialization, thereby enabling certain groups of men to delve into problems that do not normally permit a

reward of isolated attack by those in general practice. Architectural interest places too much emphasis upon the larger projects. Not one outstanding college specializes in domestic architectural education. Traditional styles are not adapted to mass production and the use of new materials. The profession must offer a service to this large field to meet the clients' demands at the clients' price.

Is Individual Practice Under a Handicap as Compared with Group Practice, or Vice Versa?

A harmonious and carefully arranged group practice has many advantages over individual effort. The scope of architectural practice is so broad that no one man can keep abreast of all its phases. Group practice permits the arrangement whereby different individuals are interested in and carry on the various phases of the work.

What, In Your Mind, Is the Biggest Problem Facing the Profession?

The biggest problem that faces the profession is to prevent its reduction to a very subordinate position in an increasingly scientific world. Architects have to realize that their profession is also an exact science. There has been a new meaning to the word art. Art must be a concrete attribute of the object instead of an abstract expression. The profession rightfully should assume leadership and direction of the entire building industry. We must be receptive to modern tendencies, and design for the use of new materials in place of traditional ones—thinking in terms of standardization of parts and mass production.



PHOTO: WAITE

HALL OF PROGRESS, GREAT LAKES EXPOSITION

HAYS, SIMPSON & HUNSICKER, ARCHITECTS

HENRY R. SHEPLEY, BOSTON



PHOTO: GOTTSCHO

NEW YORK HOSPITAL

COOLIDGE, SHEPLEY, BULFINCH & ABBOTT, ARCHITECTS

How Can the Profession Increase the Competency of Its Members?

The profession can best increase the competency of its members, in my opinion, by actively backing and entering into the spirit of the program of the Committee on Education of the A. I. A. for the preparation of architects for practice. They can do this by taking into their offices, graduates of high ability, energy and character with the purpose of giving them the varied experience and training which will fit them, not only to meet the exacting demands of practice of today, but for leadership in maintaining the prestige of the profession in the future.

How Is Architectural Practice Changing?

Architectural practice is changing to meet new and changed conditions and more severe and varied demands which are being made on it. It is trying to keep its head in a confusion of new materials, new methods and new approaches.

How Can the Architect Increase His Service to Include More Than the 30% He Now Serves?

The architect could serve a greater number in the community if he could evolve some way of satisfactorily handling the small house. The sale of stock plans, no matter how good they may be, does not seem to be the solution, nor does it seem to be the true function of the architect.

There are too many other agencies doing the same thing. Perhaps the selection of a stock plan and the adaptation of it to particular owner and situation, involving a limited service, either by an individual or a group of architects may be in the right direction.

Is Individual Practice Under a Handicap as Compared with Group Practice, or Vice Versa?

It does not seem to me in any case that group practice can interfere with individual practice. The small house may well be a special field in which group practice may flourish.

What, In Your Mind, Is the Biggest Problem Facing the Profession?

The biggest problem facing the profession, to my mind, is the training of future architects to carry on. The number of men of high calibre entering the schools is definitely diminishing, so that it seems particularly urgent for the present leaders to take those of the greatest promise into their offices and give them the training, experience and ability to think straight, which will qualify them to be the future leaders of the profession and the upholders of its prestige.

— HAL F. HENTZ, ATLANTA —

How Can the Profession Increase the Competency of Its Members?

By actively supporting the following program:

1. Enactment by all of the states of reasonably uniform registration laws, calling for examinations sufficiently exacting to test adequately the qualifications of the applicant.
2. Elimination of many of the far too numerous architectural departments in our universities and colleges, and the consequent strengthening of a few heavily endowed architectural schools, so located geographically as to provide adequate training for every section of the country.
3. Inauguration of the apprentice system of training.

How Is Architectural Practice Changing?

Changing as all professions must change to keep step with progress, the current fast tempo of social and economic change increasingly demands more of the architect. He must be socially conscious and economically informed. The question of utility and economic soundness of any building venture—sometimes subordinated in the past to architectural design—is logically of prime importance. The successful architect of today cannot ignore the investment dollar—he must harmoniously combine utility with beauty.

How Can the Architect Increase His Service to Include More Than the 30% He Now Serves?

By finding some practical method for the profession to serve the small house owner; possibly through participating in the preparation and distribution of pre-designed or stock plans. Houses erected from such plans may possibly, in comparison with their neighbors, arouse interest in and appreciation of the architect's services, on the part of a section of the public that knows nothing of our profession.

The active encouragement of such a program by the American Institute of Architects is essential to its success. The active interest of the architect in this vexing problem is a distinct social responsibility.

Is Individual Practice Under a Handicap as Compared with Group Practice, or Vice Versa?

NO! for architecture is fundamentally an art—a very definite art—and art cannot be adequately expressed by several working together, whether it be in architecture, painting or sculpture. It is almost impossible for a group of architects to work in complete accord. In group practice individual expression is of necessity under restraint.

There are some problems that lend themselves to group practice—world exposition groups—where for reasons of policy, several architects must participate as a group.

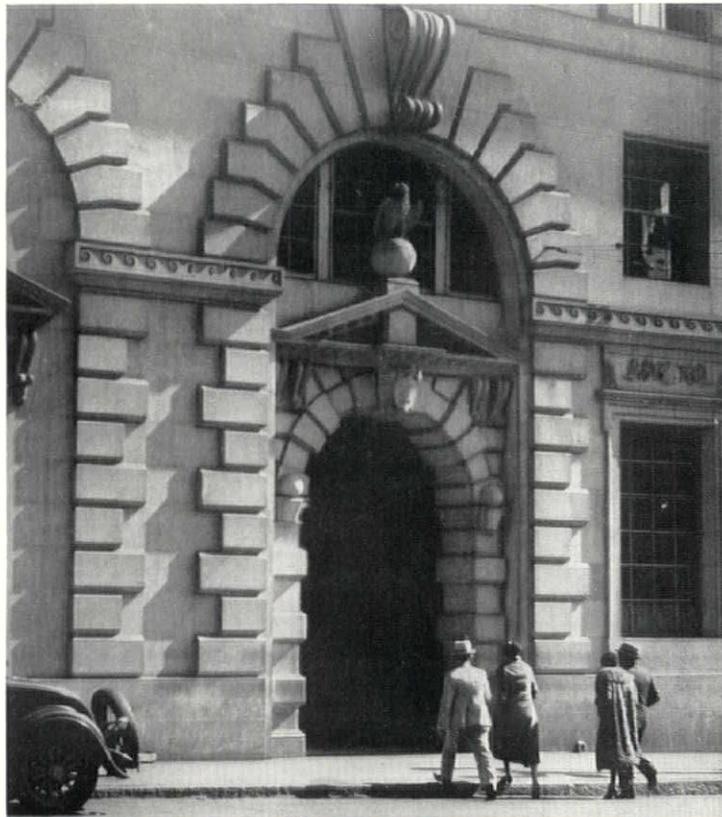


PHOTO: TEBBS

CITIZENS & SOUTHERN BANK BUILDING, ATLANTA

HENTZ, ADLER & SHUTZE, ARCHITECTS

What, In Your Mind, Is the Biggest Problem Facing the Profession?

This is a difficult one. Perhaps in view of the appalling recent years, it is the struggle to exist:—As a profession we are fearfully underpaid for our services. The doctor and lawyer of known reputation, because of years of patient service, command a far greater return than the young practitioner for similar cases. Not so with the architect, because of the firmly entrenched system of charging a uniform percentage of the cost of a building. There seems to be nothing immediate to be done about it. It involves educating the public, and gradually changing this fee based on cost system.



PHOTO: HOWSON

MINNEAPOLIS TELEPHONE BUILDING

HEWITT & BROWN, ARCHITECTS

How Can the Profession Increase the Competency of Its Members?

From experience, I believe that the discipline of making very complete working drawings, with other instruments of service to match, will compel greater competency. It will do more—it will secure closer bidding; it will do much to increase the owner's confidence and respect for the profession. Leaving too much to the goodwill and experience of

the contractor deprives the architect of some measure of his rightful status as owner's agent.

The Federal Housing Administration requires adequate plans and specifications as one of its prime requisitions, among others, for eligibility for insured mortgages. Private lending agencies responsible for investing depositors' and investors' money in building work, to be true to their trust, must insist on plans professionally and competently made.

How Is Architectural Practice Changing?

The years have brought many changes and improvements in the production of working drawings. Drawings are better systematized. They must be, in order to convey so much information undreamed of when I was a draftsman. Along with improved technique in the production of instruments of service, information as to materials and appliances has vastly increased. The proper relationship between owner and architect has been more strictly defined. I believe, on every job, little or great, the mutual responsibilities of owner and architect should be adequately set forth and agreed upon.

How Can the Architect Increase His Service to Include More Than the 30% He Now Serves?

More volume of business should be sought in the smaller house field. The insistence on the part of lending agencies on adequate drawings and specifications and contract documents would tend to enlist the services of competent professional men, provided also that in the financial setup, an adequate sum be set aside to compensate the architect. There is much research work to be done along this line. The architect, if he expects any of this volume, must learn to accomplish the desired result quickly and with a minimum of waste.

Is Individual Practice Under a Handicap as Compared with Group Practice, or Vice Versa?

I have had but one experience with group effort. I do not believe that there has been enough of this sort of thing done locally to handicap private practice or vice versa.

What, In Your Mind, Is the Biggest Problem Facing the Profession?

I believe that the biggest problem we as practitioners encounter is to obtain enough volume to insure the continuous support of a thoroughly trained office force. The burden of obtaining volume weighs heavily. The danger of such a situation is that it invites scamped professional service as well as other evils with which we are familiar.

CHARLES T. INGHAM, PITTSBURGH

How Can the Profession Increase the Competency of Its Members?

The competency of the profession is being increased slowly, to be sure, but manifestly. Architects are taking a broader view of the functions of their profession and there is evidence of increasing participation in civic design and in design of the products of our industries.

The principle of registration, once regarded with suspicion, has grown in favor, and the scope of architectural education is being broadened to meet its requirements.

The architect realizes that he must have what it takes to stay in the game, and as public appreciation of architecture increases and a higher degree of service is required, the architect will be trained to give it.

How Is Architectural Practice Changing?

Economic and social factors are receiving an increasing share of attention. In construction, new materials and methods challenge the ingenuity of the architect in their application to our buildings. Contract documents and business procedures have advanced in quality and importance in the architect's practice.

How Can the Architect Increase His Service to Include More Than the 30% He Now Serves?

A ready answer would be: "Make architectural service indispensable to the building public." "How?" "There you've got me." Perhaps we should begin by having architectural service associated in the public mind with the other factors in a building operation as an integral part of the project. A step in this direction would be to urge lending institutions to require adequate plans, specifications and supervision by an architect to protect their interests.

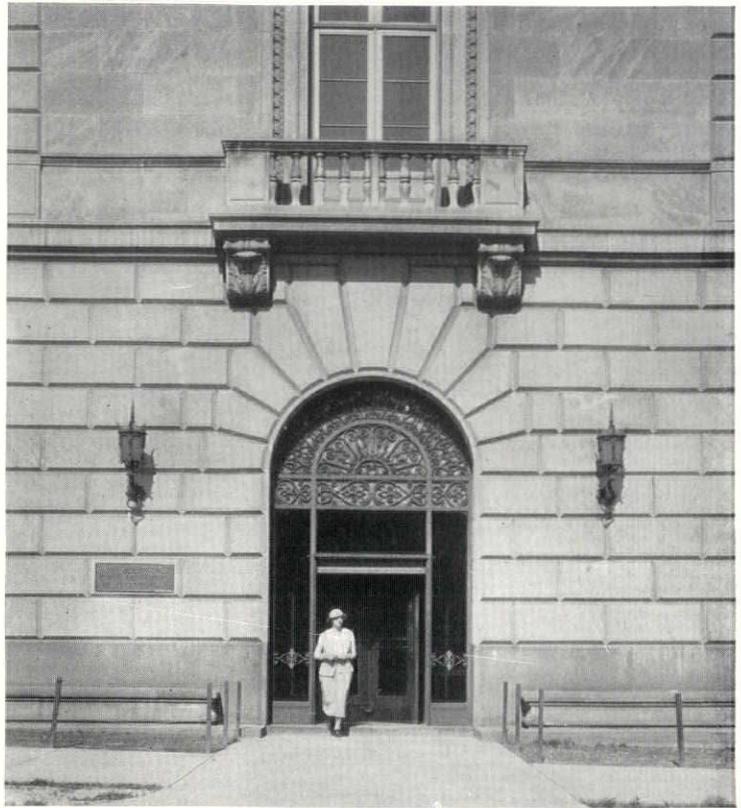
Is Individual Practice Under a Handicap as Compared with Group Practice, or Vice Versa?

The term "group practice" is understood to mean practice conducted by a group of technicians organized to handle a large volume of work and not to refer to the grouping of a lot of names on the entrance door.

In the boom times of happy memory there was a marked tendency toward group effort, and when the volume of work was large I suppose it had its advantages over individual practice. With the collapse of the boom, the resulting disintegration of many such organizations leads to the conclusion that they are a handicap in periods of depression.

What, In Your Mind, Is the Biggest Problem Facing the Profession?

The biggest problem facing the profession today, it seems to me, is the trend toward establishing and building up architectural bureaus—Federal, state, county, municipal, school district, industrial. The inauguration of public works as relief measures during the depression has given impetus to



BOARD OF EDUCATION BUILDING, PITTSBURGH
INGHAM & BOYD, ARCHITECTS

the movement through the practice of having such works designed and supervised by an impersonal body of architecturally trained men recruited at depression wages. If, with returning building activity, we cannot curb this tendency toward bureaucratic practice I have grave fears for the quality of our future architecture.

BERTHOLD LUBETKIN, LONDON

How Can the Profession Increase the Competency of Its Members?

It is difficult for me to answer these questions, since I am not an American architect and therefore can speak only of European traditions. Another difficulty is that I am a modern architect. It is unfortunate that in Europe the profession is not a homogenous body, but is divided into separate camps of traditionalists and modernists which in turn are divided into different schools of academic thought. However, since the problems presented here have a universal application, this must be my apology. Therefore, my answers must be considered entirely the viewpoint of a modern European architect.

It seems to me that the competency of the profession would be increased if various groups and private practitioners could constantly intercommunicate to compare their actual experiences in use of new materials and building techniques.

How Is Architectural Practice Changing?

Group practice is clearly a sign of change.

How Can the Architect Increase His Service to Include More Than the 30% He Now Serves?

There is no more room for expensive, inefficient academic buildings on the market than there is for ugly, unimaginative modern boxes. It is therefore small wonder that 70% of the work is now in the hands of speculative builders. The architect must prove to the public that he is a creative master, thoroughly conversant with the endless intricacies of his craft, and that he can build better, cheaper buildings.

Is Individual Practice Under a Handicap as Compared with Group Practice, or Vice Versa?

I prefer the system of group practice since it is to a certain extent, an arrangement to sponsor continuous self-education. It is important that the members of such groups

accept voluntarily certain discipline and therefore problems of personality, as far as the actual work is concerned, are subdued.

What, In Your Mind, Is the Biggest Problem Facing the Profession?

To my mind the biggest problem facing the profession is to teach the traditional architect to be, architecturally speaking, less of a gentleman and more of a craftsman. On the other hand, the modern architect might try to be a little more of the gentleman. He should abandon his theories of pure functionalism (in which incidentally he never really believed) and approach architecture as an artist who, at the same time, has a fundamental mastery of the technique of his art. It is essential that the modern architect be a master of the modern techniques of building and of materials if his buildings are to be more acceptable and more efficient. But it is also essential for him to remember that the tradition of his profession is intimately connected with a special imagination which should make his buildings reflect contemporary esthetics. During the last century so many new forms and materials have come into our lives that the creative architect cannot help but express them.

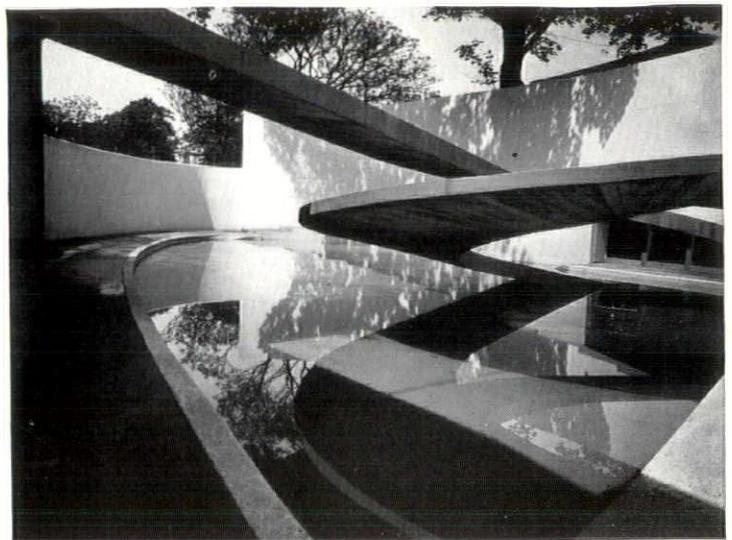


PHOTO: HAVINDEN—COURTESY OF MUSEUM OF MODERN ART

PENGUIN POND, WHIPSNADE ZOO, LONDON

LUBETKIN & TECTON, ARCHITECTS

EDGAR I. WILLIAMS, NEW YORK



VALLEY STREAM, N. Y. RAILROAD STATION

EDGAR I. WILLIAMS & C. B. F. BRILL, ARCHITECTS

How Can the Profession Increase the Competency of Its Members?

By a greater willingness on the part of the leaders in the profession to share their experience with and advise the younger men.

How Is Architectural Practice Changing?

Everything changes! Only revolution is static. New generations have new tools, new discouragements, new hopes. The photostat and blueprint machines displaced the old apprentice; increasingly large projects caused the development of the structural and specialty engineers; larger projects brought wider financial responsibilities which de-

veloped the business-man-architect who is at his height today dominating architecture in America. With but few exceptions, the architects of professional distinction are submerged or in Heaven. (I hope it is Heaven).

How Can the Architect Increase His Service to Include More Than the 30% He Now Serves?

By propaganda designed to prove to the potential client that in building a house he gets either a well organized space or one that is disorganized we might increase our service to include more than 30 per cent. In that way it can be proved to him that the architect is not merely supplying floors, walls and roof which go under the name of the house. I confess to an absorbing interest in architecture, not only to well-designed buildings themselves, but to the creative processes which produce them. Today we hear a great deal of loose talk about the machine age, functionalism, modern expression, etc. It is rare, however, to find an architect who is willing to express his clear convictions on architectural design. I know a great many architects, but I know few who seem to have any clear philosophies of architecture. For over forty years, American architecture has been a veneer of little patches of Italian, French, Gothic or Romanesque details instead of a more healthy, truly American vernacular. I do not get excited about the cantilever as a substitute for Romanesque detail. I think American architecture would profit by a wider discussion of architecture itself. Perhaps a true, accurate conviction on the part of one or two men might lead to a tremendous conviction in favor of the architect and good architecture on the part of the large buying public. If we architects do better work, we might even interest those who have jobs to give us.

Is Individual Practice Under a Handicap as Compared with Group Practice, or Vice Versa?

I have worked both as an individual architect and with

a group and as a result have inhibitions about group practice. To me the individual architect who is able to surround himself with competent adjuncts in the form of bookkeepers, specification writers and draftsmen is able to maintain a clearer point of view in the handling of architectural work.

What, In Your Mind, Is the Biggest Problem Facing the Profession?

Persuading a buying public that the architect's services are worth his money and having the architect prove it.

JOSEPH HUDNUT, BOSTON

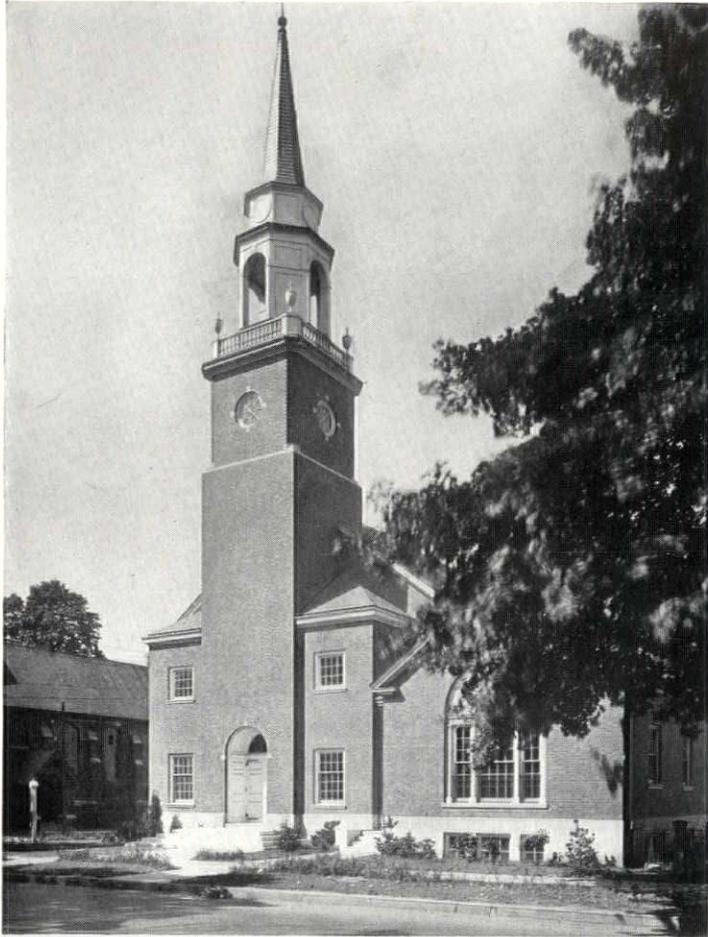


PHOTO: GILLIES

FIRST BAPTIST CHURCH, JAMAICA, N. Y.

JOSEPH HUDNUT, ARCHITECT

How Can the Profession Increase the Competency of Its Members?

There are plenty of competent architects. The trouble is that competent architects are too often denied an opportunity to demonstrate their competence. I am inclined to favor competitions as a method of discovering talent; but competitions should be made open, free and inexpensive. The public interest will be less injured by the occasional award of a commission to an untried designer than it is by the limitation of awards within a narrow group of ultra-conservative practitioners.

How Is Architectural Practice Changing?

The economic pattern of society is always changing and

with it the responsibilities and opportunities of the professions, including architecture. I think it inevitable that architecture should follow, step by step, the evolution towards collectivism which appears to be irrevocably in process throughout the world. Architects will be concerned more and more with communal enterprises; with institutions and industries, with government projects and town-planning, with the housing of civic and rural populations. The organization of architects into partnerships or other forms of association, the character of their clientele, the direction and scope of their activities, and (I hope) their ideology will undergo a corresponding transmutation.

How Can the Architect Increase His Service to Include More Than the 30% He Now Serves?

I think that the profession of architecture could be made more serviceable—without loss of dignity—by making more liberal the self-imposed conditions which govern its practice. There are many kinds of architectural service which do not demand the highest (and most expensive) kind of training and talent; could there not be a corresponding variation in the fees of architects? The majority of people cannot afford an architect.

Is Individual Practice Under a Handicap as Compared with Group Practice, or Vice Versa?

I think that, at present, and in America, conditions favor the individual practitioner; but it is probable that this will not be true in the future. It will be necessary to develop (probably by experiment) some rational form of group practice. Unless we are able to accomplish this on our own initiative, industry or government (or both) may do it for us.

In Boston, a large housing development is now being successfully designed and built by a group of seventeen architects.

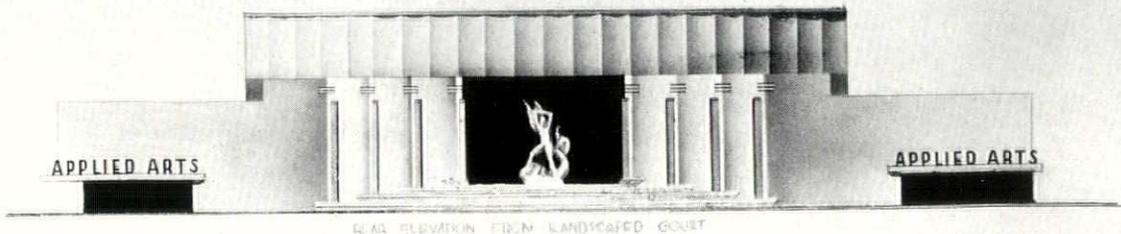
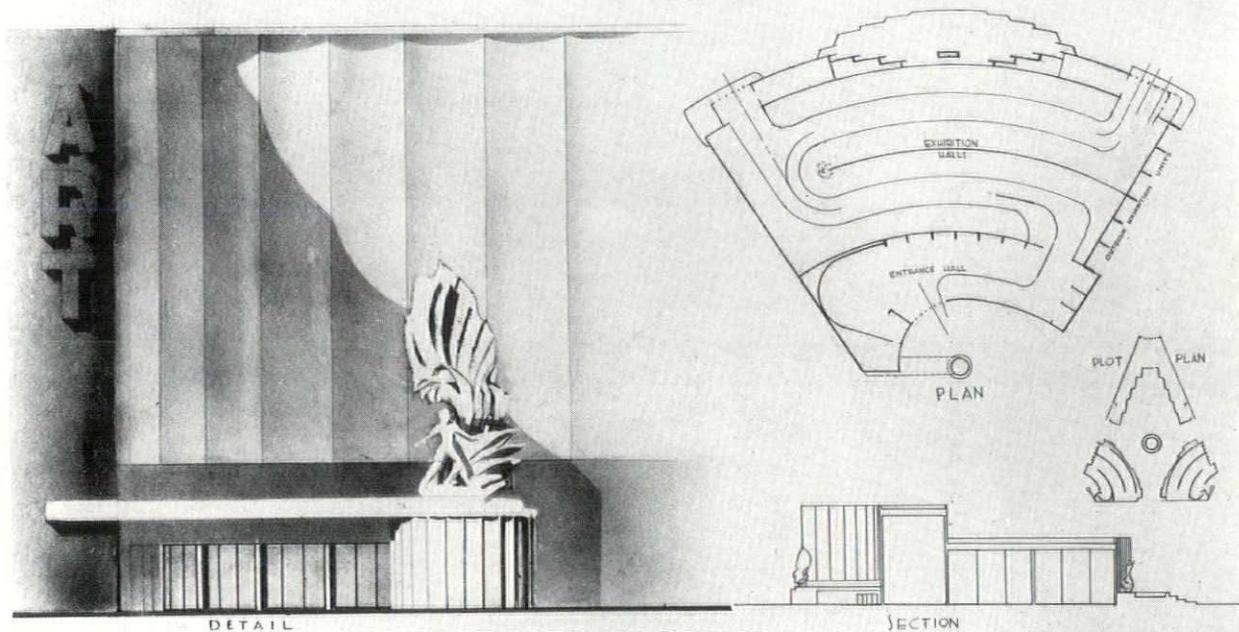
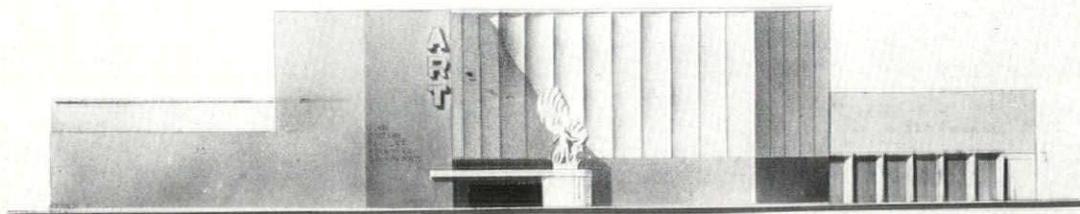
What, In Your Mind, Is the Biggest Problem Facing the Profession?

The most urgent problem is perhaps that already referred to in Question 3: the extension of architectural service so as to include all building projects.

There are, however, problems that transcend the immediate welfare of our profession. I am inclined to agree with Gropius that, among these, the most exigent is the problem of form-standards. I regard the battle for a functional architecture as won (ten years from now the principle will be universally accepted), but we must give this principle a more sustained application to typical programs, if that is practicable, so that there may develop patterns, which are capable of a general use. Such patterns (the temple, the forum, the cathedral, the chateau) have formed the necessary foundations of all the great traditions of architecture.

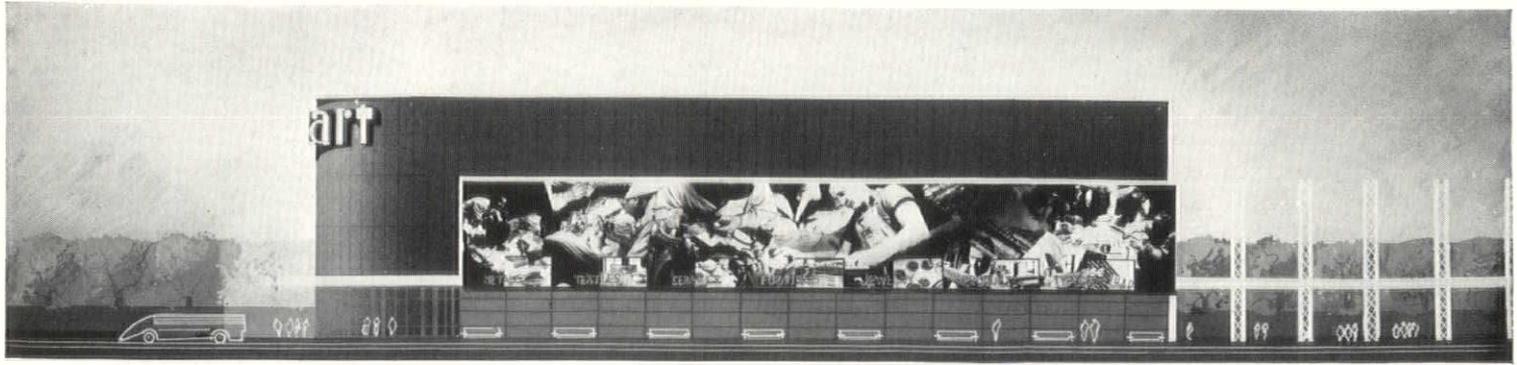
WINNING DESIGNS N. Y. WORLD'S FAIR COMPETITION

Restricted to architects within the Metropolitan area of New York, the program called for the design of one of three exhibition buildings to be erected on a triangular plot. . . . Other requirements were that the building was to be at about ground level, one story in height, the maximum vertical dimensions at the main entrance not to exceed 80 feet, and construction to be of a temporary nature

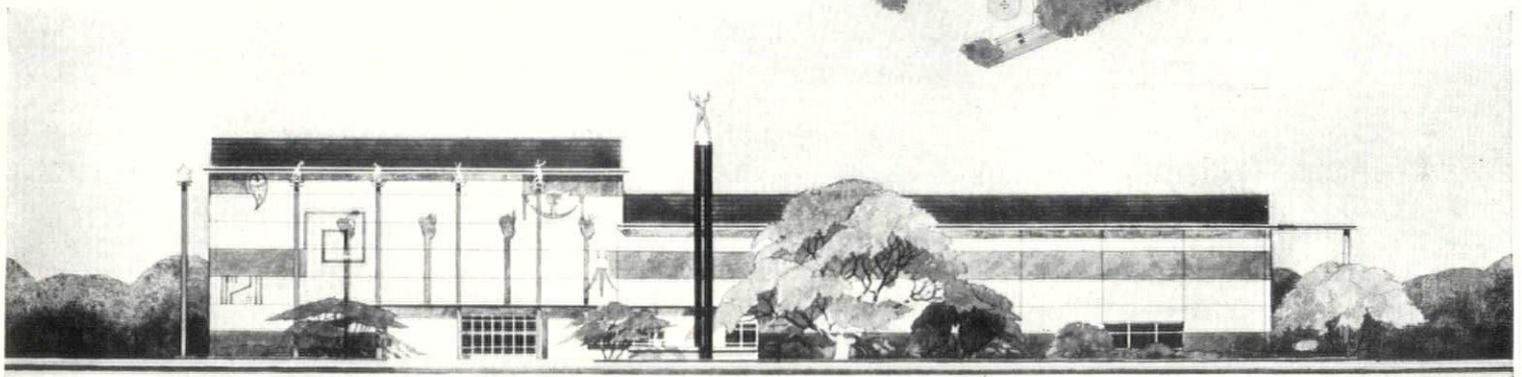
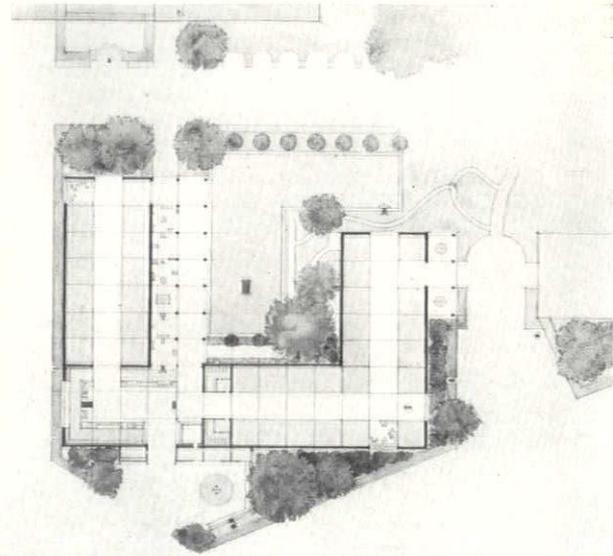
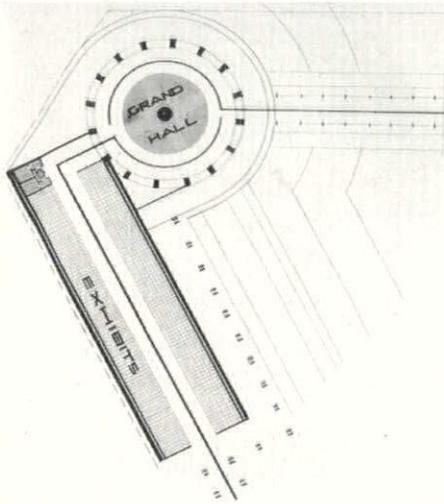


DESIGN OF GEORGE LYMAN PAINE, JR., SELECTED AS "MOST MERITORIOUS"

W. A. ELEVATION FROM LANDSCAPED COURT



SECOND PRIZE DESIGN BY PETER COPELAND



THIRD PRIZE DESIGN BY PERRY COKE SMITH

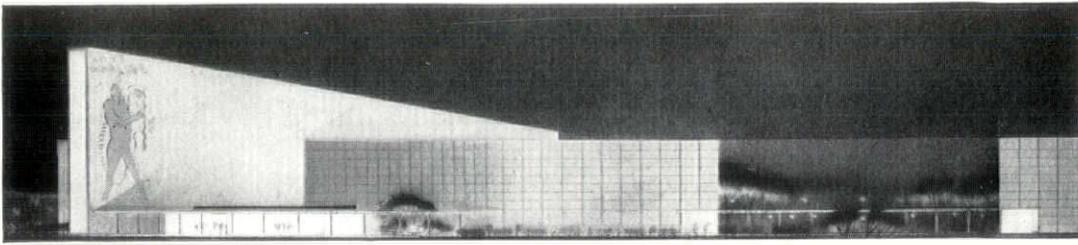
JURY OF AWARD:

Stephen F. Voorhees, Gilmore D. Clarke, William A. Delano, Jay Downer, Charles Butler, William F. Lamb, R. H. Shreve, Walter D. Teague, Louis Skidmore, Paul Cret, Robert D. Kohn, professional advisor.

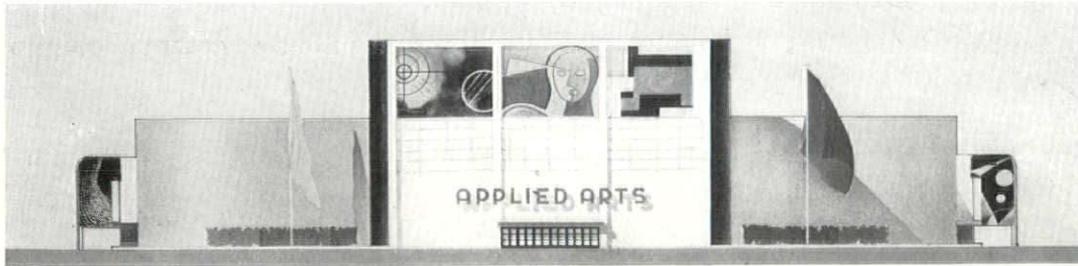
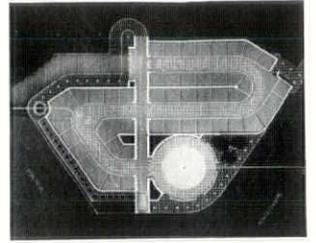
Winning Design: George Lyman Paine, Jr.; 2nd Prize: Peter Copeland; 3rd Prize: Perry Coke Smith; Honorable mention awards: Frederick G. Frost, Jr., Morris Ketchum, Jr. and Richard Boring Snow, Ralph E. Leff

and Max M. Feldman, Johnson and Birnbaum, William Muschenheim and Morrison Broun, Robert W. McLaughlin—Stamo Papadaki, collaborator, Leonard Dean, J. Gordon Carr, John Hironimus—George W. McLaughlin, collaborator, Landefeld and Hatch—Rene Chambellan, collaborator, Aspinwall and Simpson, Dwight James Baum, Frank E. Johnson—Charles F. Schillinger, collaborator, Joshua D. Lowenfish, Louis Allen Abramson, W. K. Harison and J. A. Fouilhoux, I. Woodner-Silverman, Francis Keally, Robert W. Cutler, Maximilian Bradford Bohn and Charles Beeston.

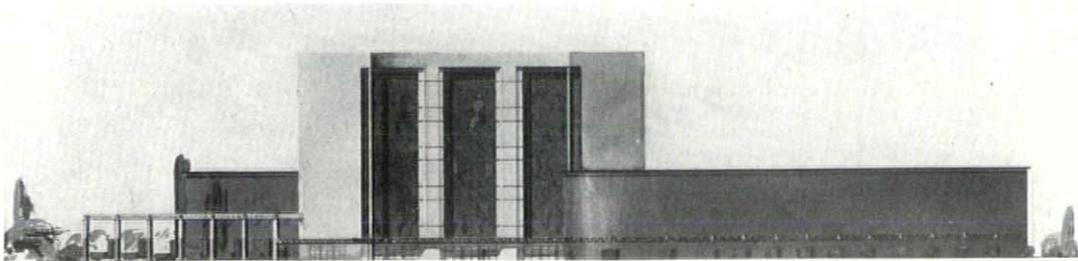
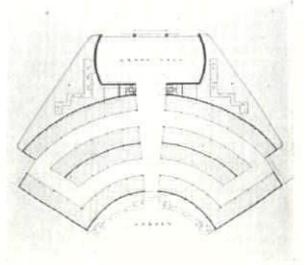
HONORABLE MENTION NEW YORK WORLD'S FAIR COMPETITION



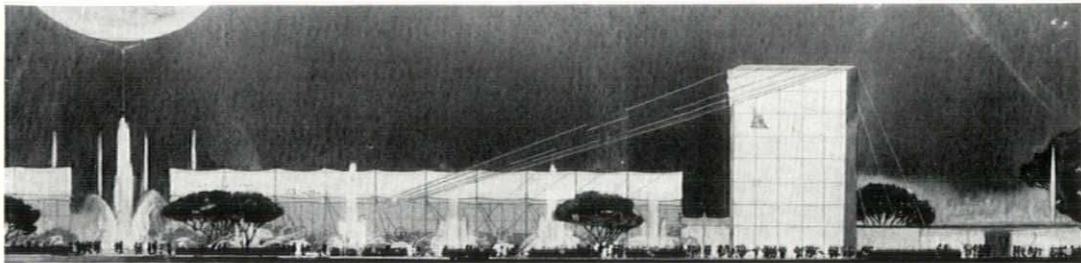
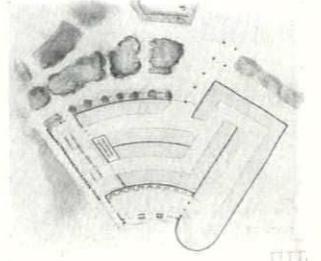
Frederick G. Frost, Jr.



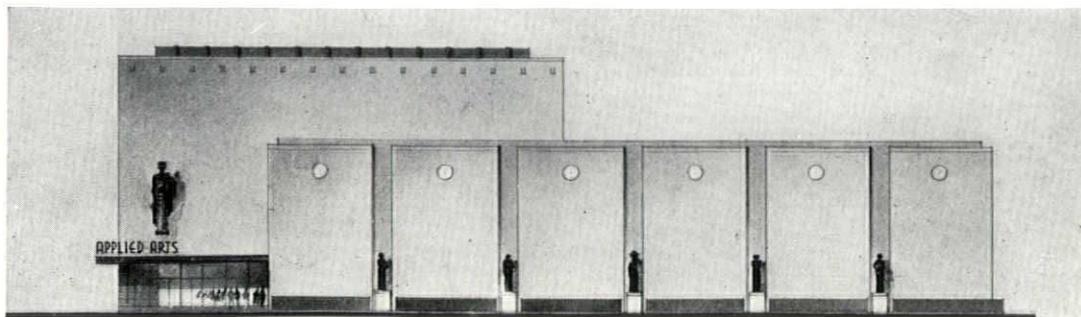
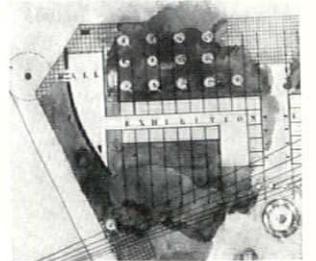
William Muschenheim and Morrison Broun



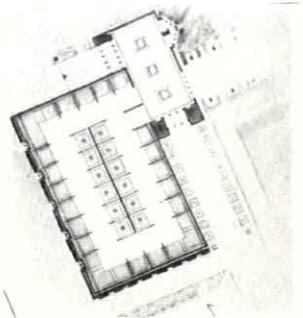
Robert W. Cutler



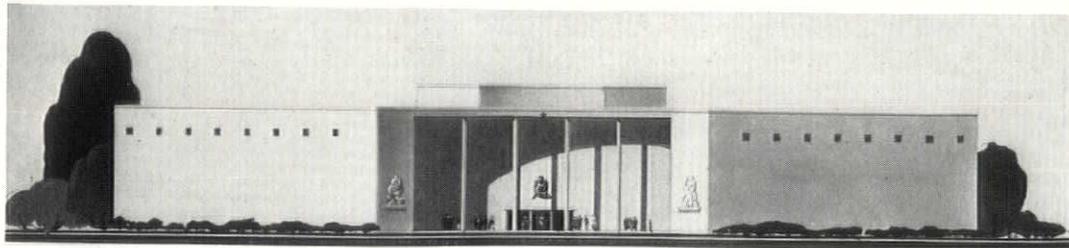
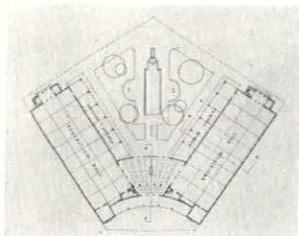
W. K. Harrison and J. A. Fouilhoux



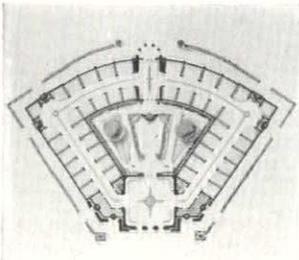
Johnson and Birnbaum



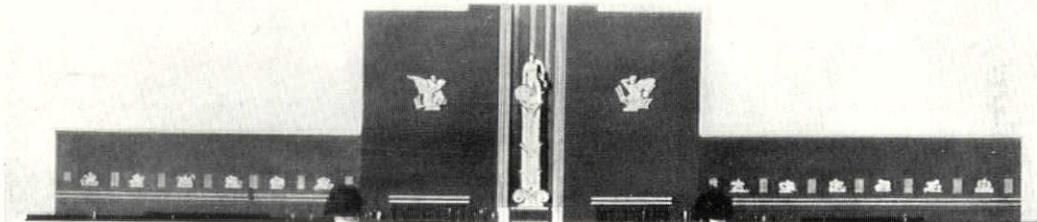
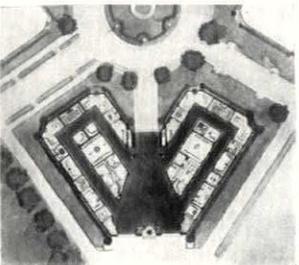
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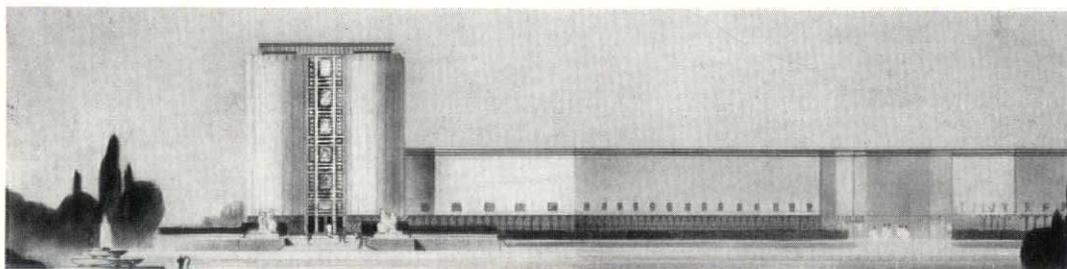
Leonard Dean



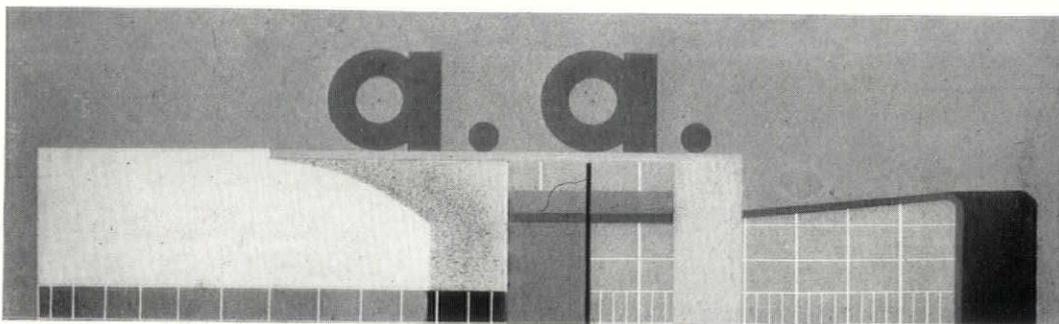
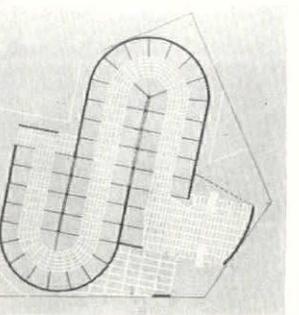
Dwight James Baum



Aspinwall and Simpson

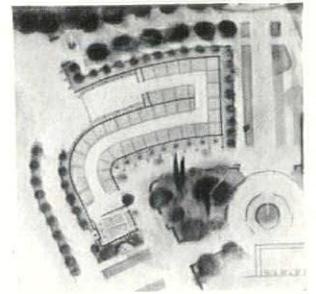
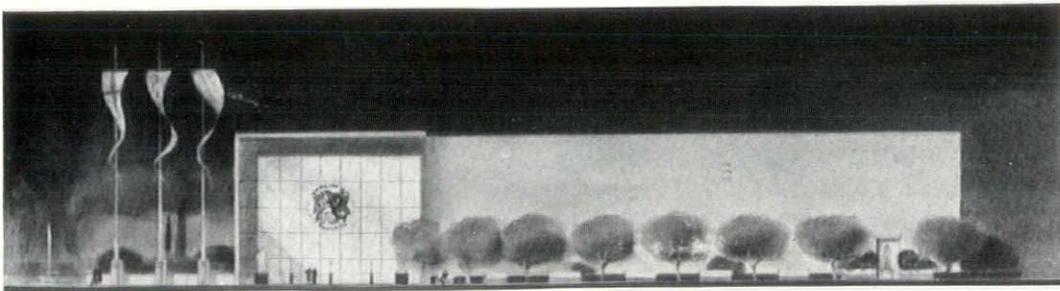


Frank E. Johnson, Charles F. Schillinger, collaborator

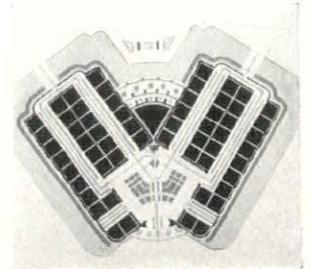
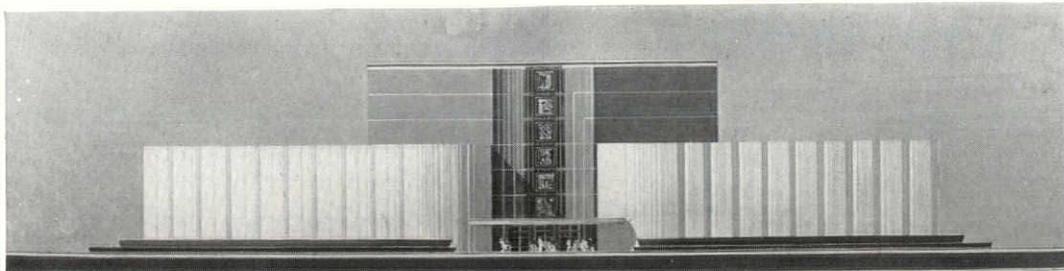


Robert W. McLaughlin, Stamo Papadaki, collaborator

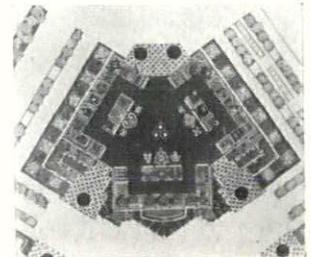
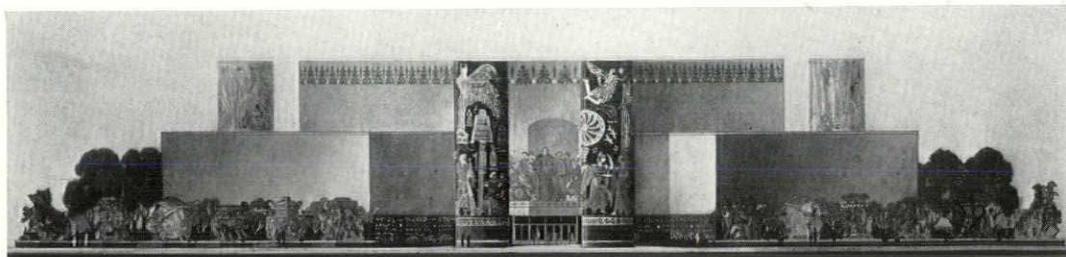
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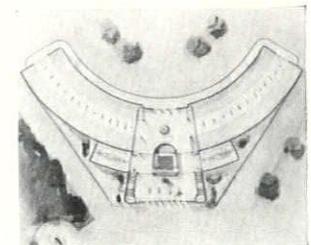
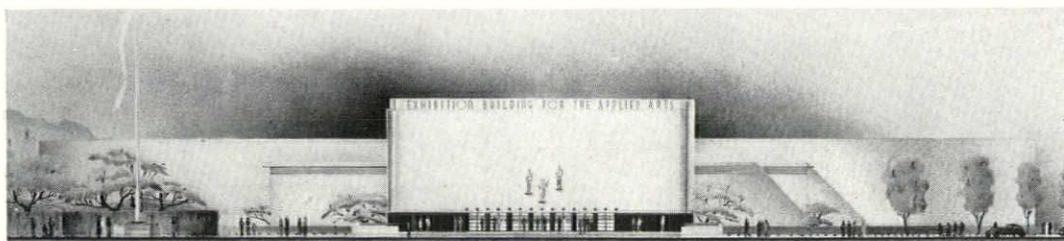
Maximilian Bradford Bohn and Charles Beeston



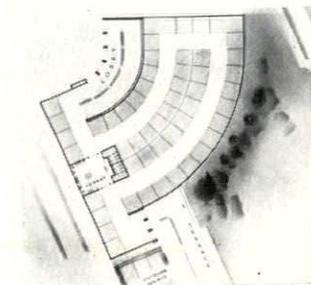
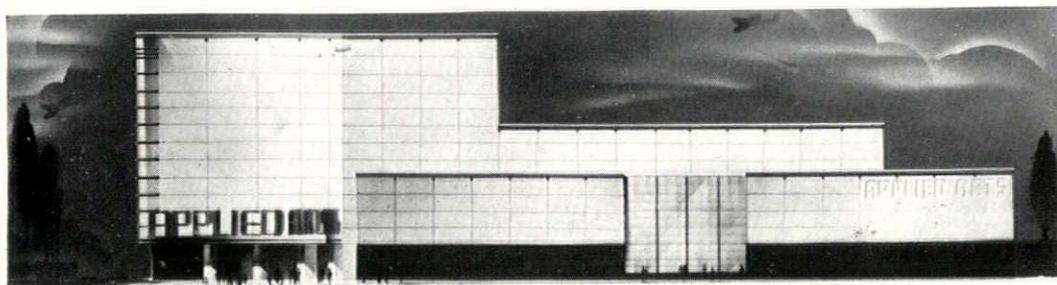
Joshua D. Lowenfish



Landefeld and Hatch, Rene Chambellan, collaborator

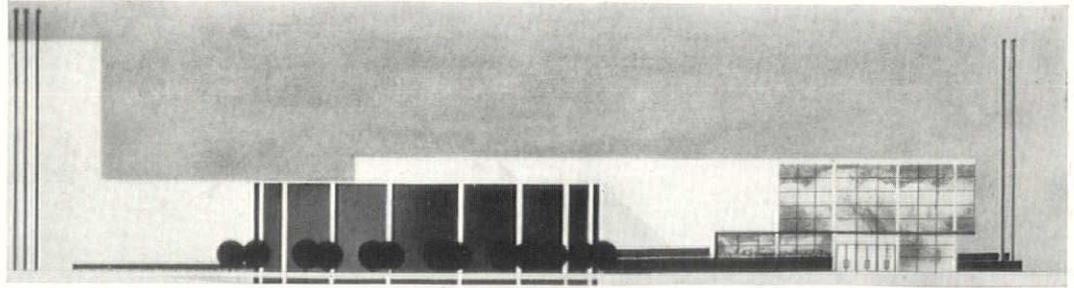
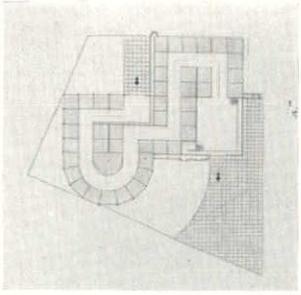


Louis Allen Abramson

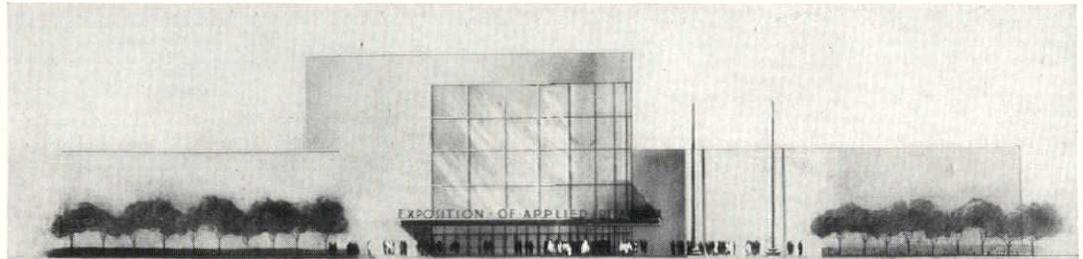
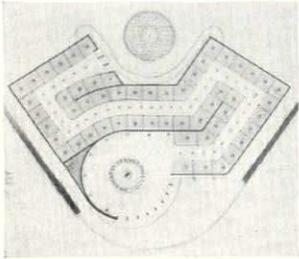


Ralph E. Leff and Max M. Feldman

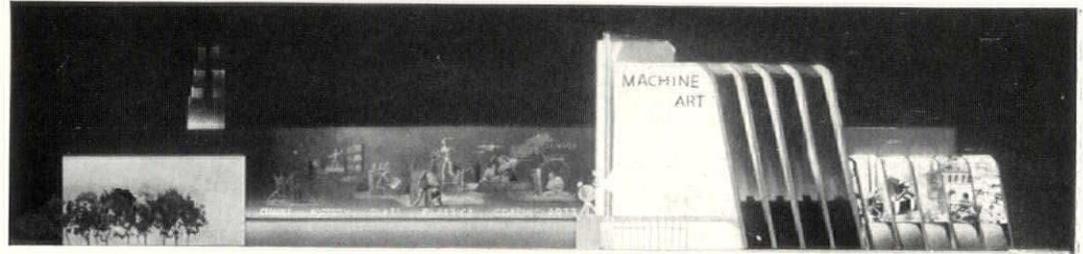
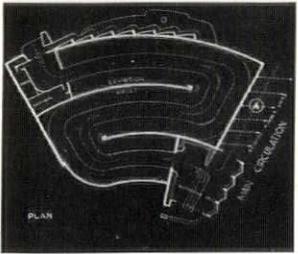
HONORABLE MENTION NEW YORK WORLD'S FAIR COMPETITION



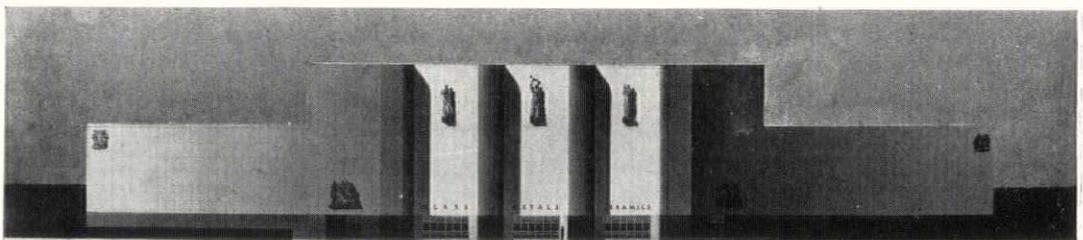
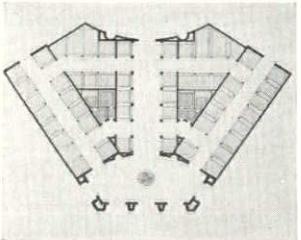
John Hironimus, George W. McLaughlin, collaborator



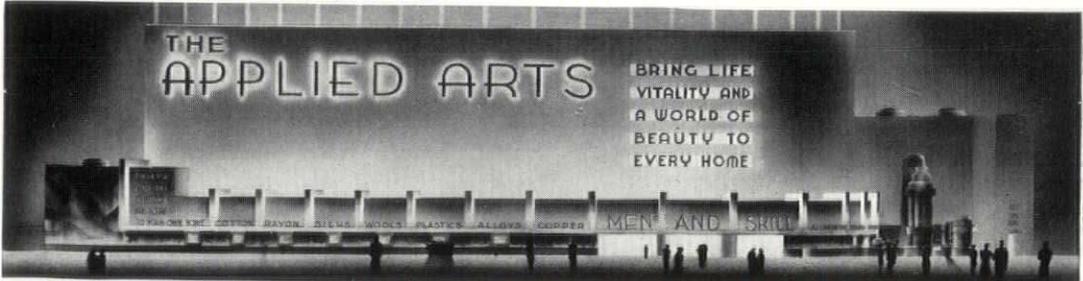
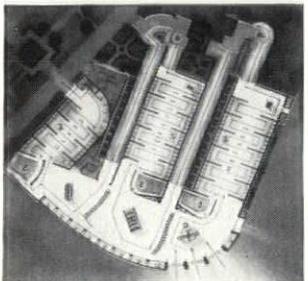
Morris Ketchum, Jr. and Richard Boring Snow



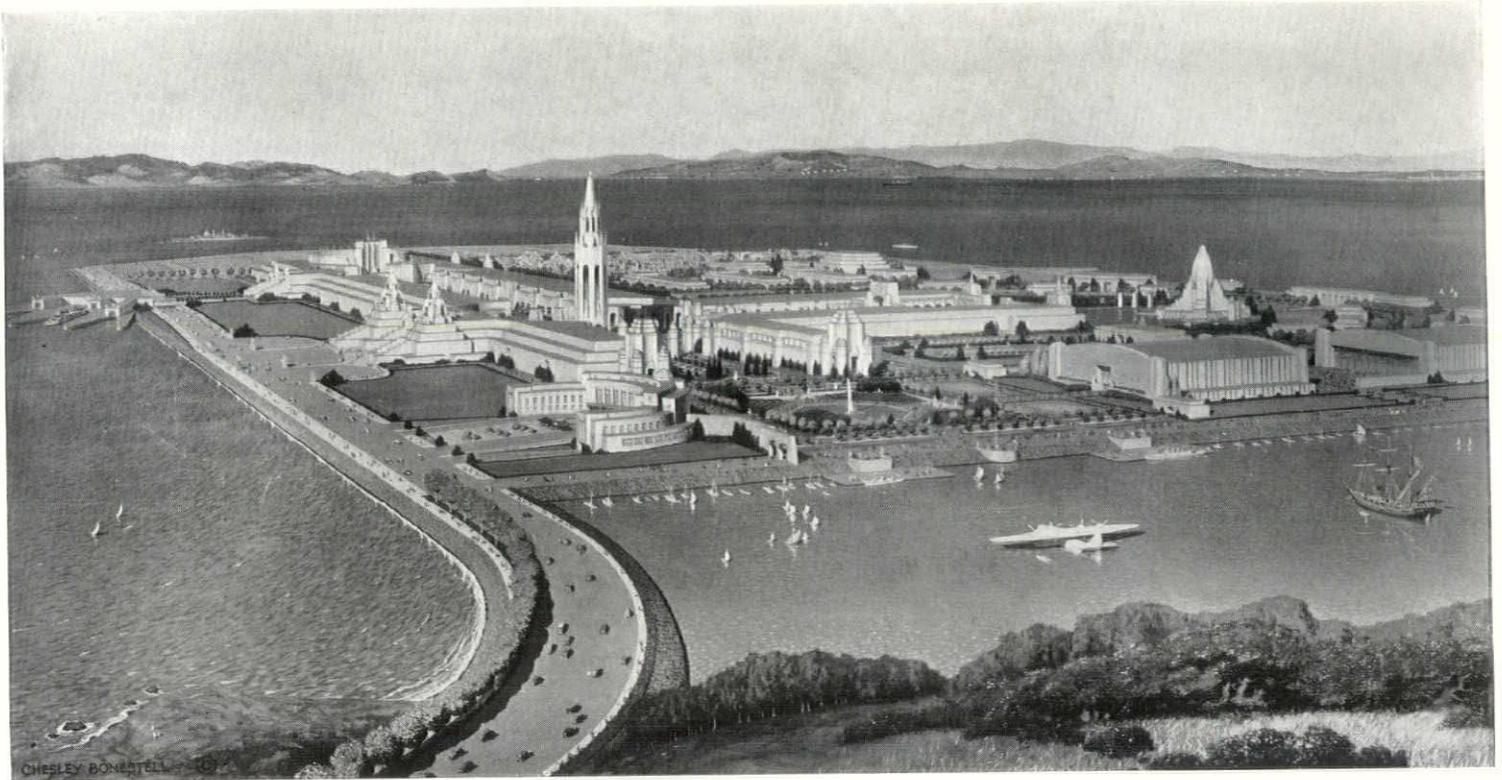
I. Woodner-Silverman



Francis Keally



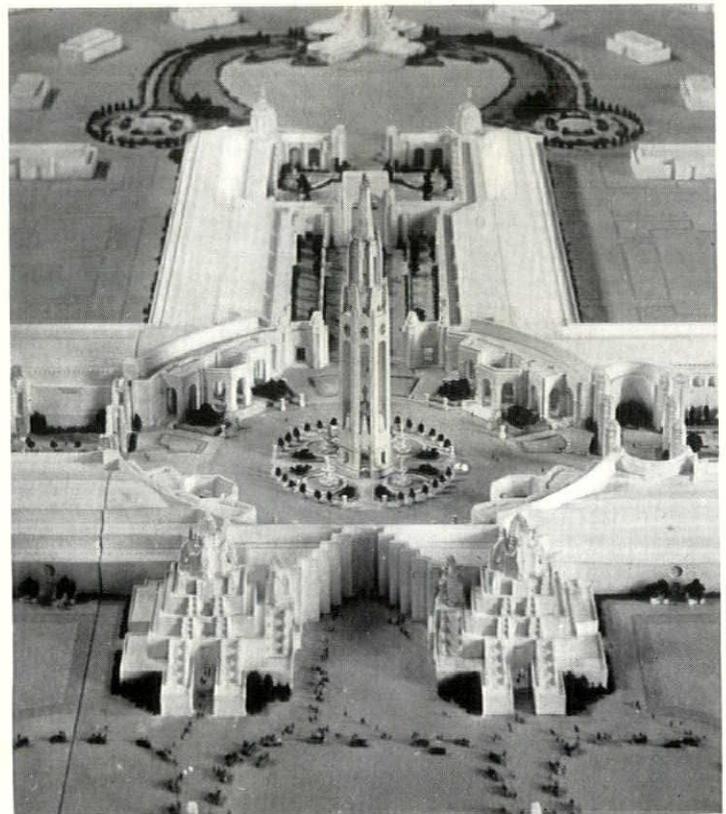
J. Gordon Carr



GOLDEN GATE INTERNATIONAL EXPOSITION

A PAGEANT OF THE PACIFIC—This will be the first international celebration to be held in San Francisco Bay Region since 1915 when the Panama-Pacific International Exposition marked the completion of the Panama Canal

OPENING in February, 1939, the Golden Gate International Exposition will mark the completion of the world's two largest bridges across the San Francisco Bay, the inauguration of trans-Pacific air service, and the progress of nations bordering the Pacific. Costing \$40,000,000, an attendance of between 15 and 20 million is expected which should enable the Exposition to meet all operating expenses and to retire all obligations. The Exposition site is a man-made island in the center of San Francisco Bay midway between San Francisco and Oakland. After the Exposition, the land will be used for a modern municipal airport and seaplane base, owned and operated by the City and County of San Francisco. Chairman of the Board of Directors of the San Francisco Bay Exposition, Inc., which will operate the Exposition, is Atholl McBean; President is Leland W. Cutler; Vice president in charge of construction, W. P. Day. The architectural commission is headed by George W. Kelham, and includes Lewis P. Hobart, Ernest Weihe, Timothy Pflueger, Arthur Brown, Jr., and William Merchant. View (above) as Exposition will appear from Yerba Buena Island; rendering by Chesley Bonestell. View (right) of model, showing main entrance gate, Exposition Tower, and Lake of All Nations in background.

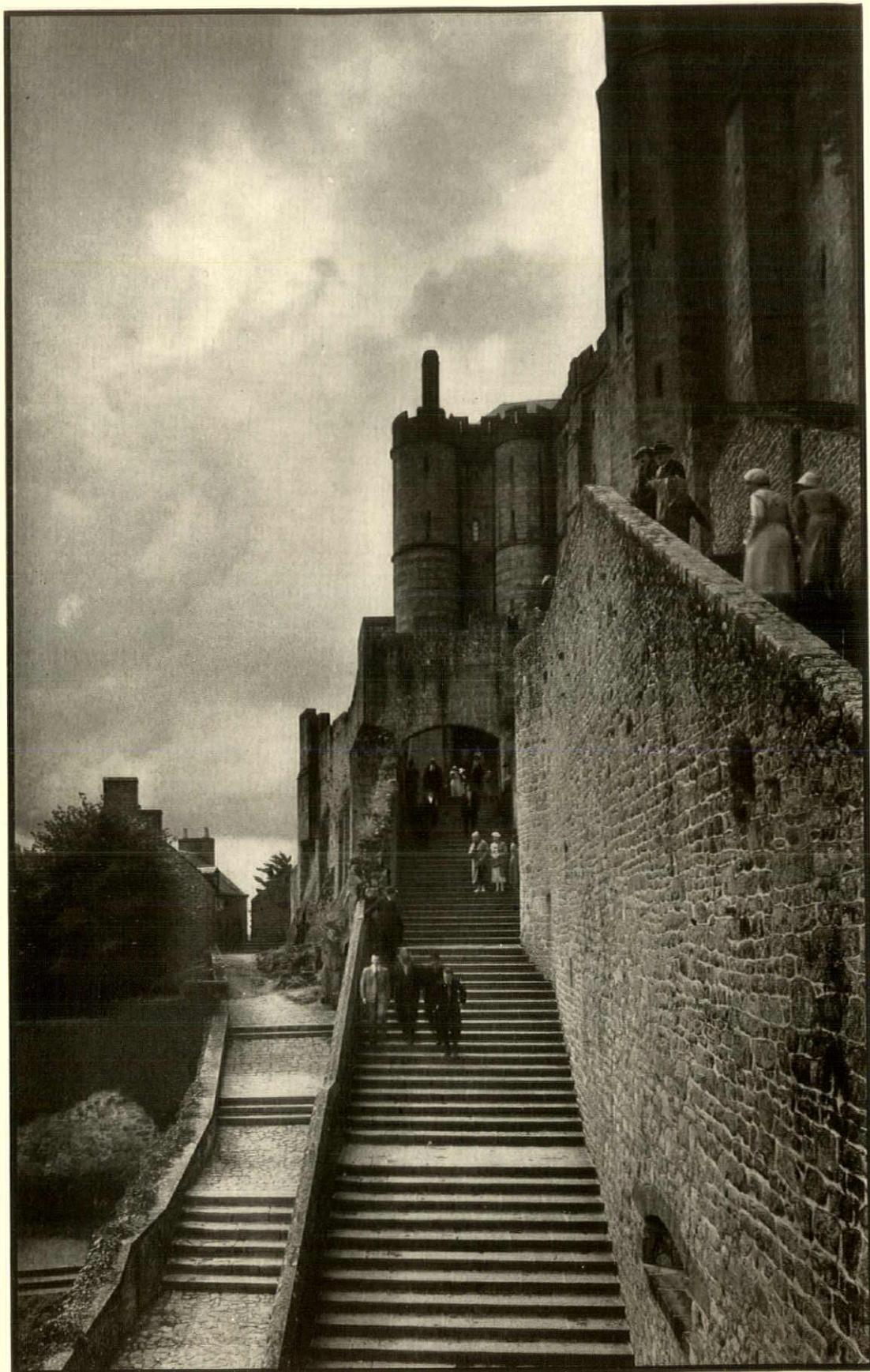




PHOTOS: © F. S. LINCOLN

MONT ST. MICHEL

Rising abruptly from the sea with, at high tide, only an artificial causeway to connect it and the mainland, Mont St. Michel is a glorious relic of the militant Church and State. In 708 St. Aubert was commanded by St. Michael during a visitation to build the first Christian church on the rock's apex. However, even before the establishment of Christianity the rock was a place of worship, first as a sanctuary for mystic Druid rites and later as a sea tomb for ancient Celtic sailors. During the 11th Century, Benedictine monks established a monastery, and from then until the 16th Century, Mont St. Michel's architectural growth was one of incredible splendor.



The Grand Stairway (above) leading to the gateway of the Abbey, was designed as a part of the fortifications. The terrace and rear wall of the Abbey (opposite page) are excellent examples of the characteristic strength and endless invention of the mount's architecture.





Magnificent vistas of sand and the racing seas of the Norman coast may be had from almost any spot on the mount. (Above) A view toward Oran. The museum (opposite page) is dramatically set atop a steep bluff. It was built by the French Government after 1874.





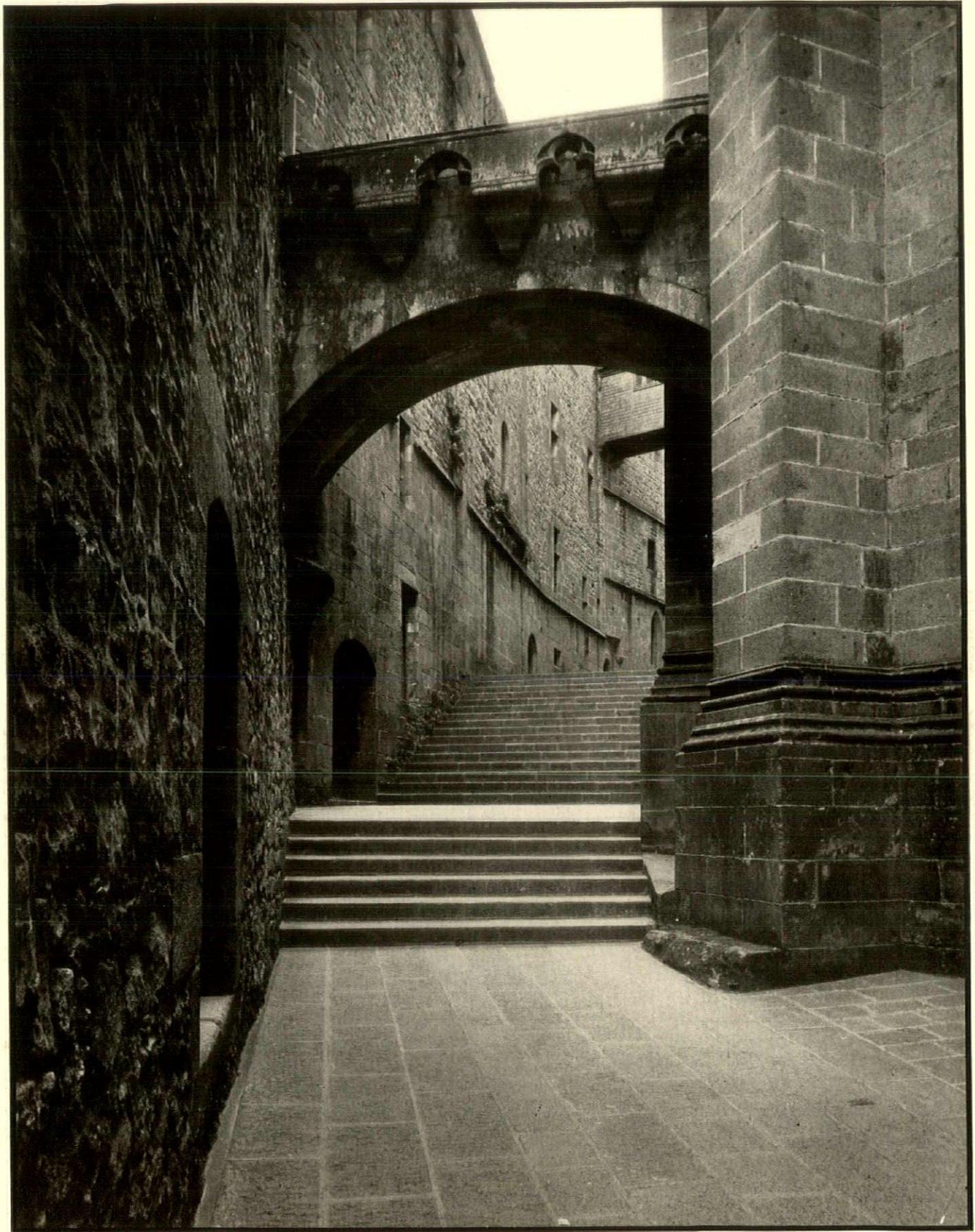
The Tour Gabriel (above), built by Gabriel du Puy in 1530, is one of the handsomest of the many towers in the battlements. Fourteen giant buttresses (opposite page) in the massive walls compensate for the thrust of the arches of the Abbey.







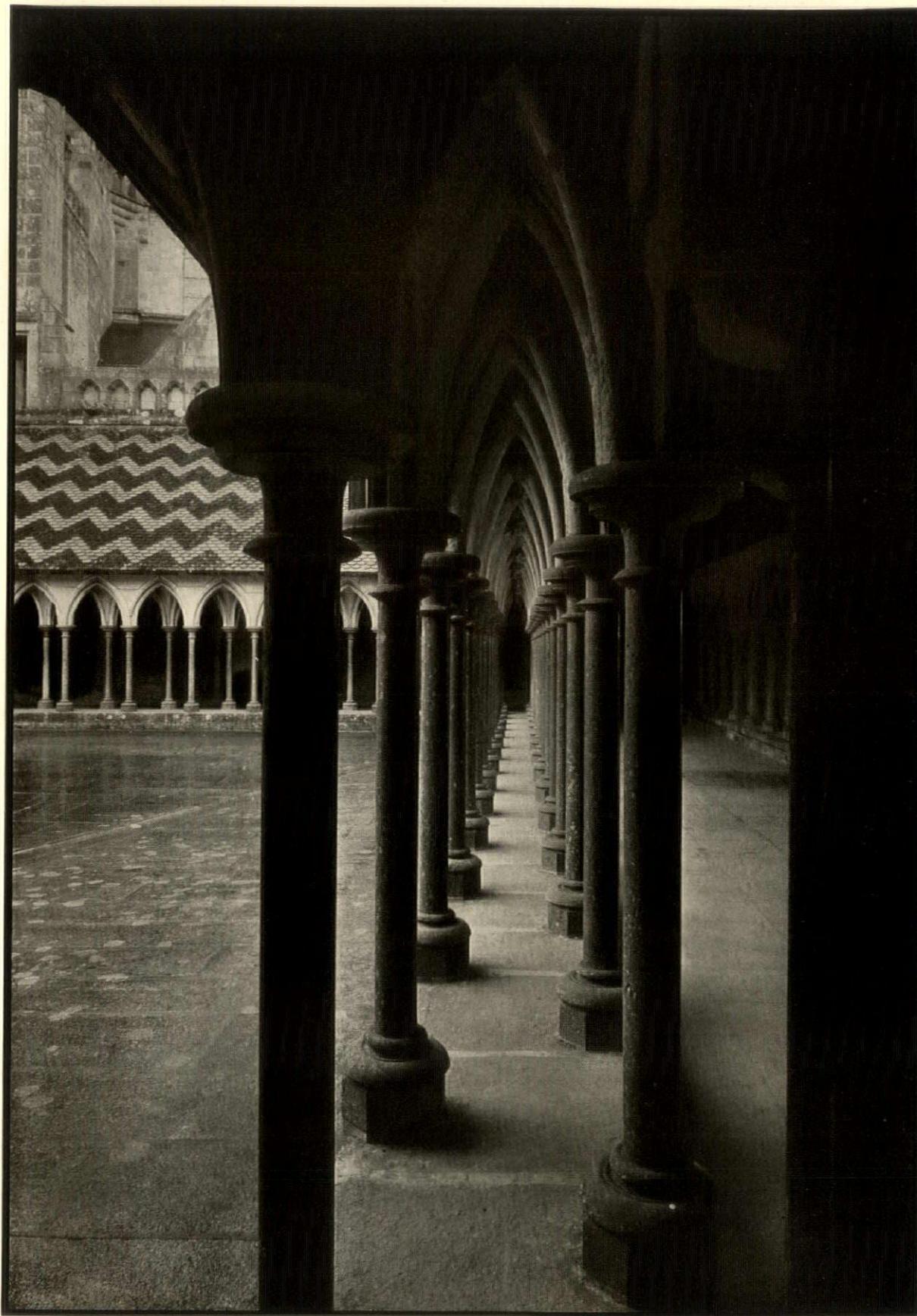
The west portal of the Church (opposite page) was erected in 1780 to fill the gap left by the ruined bays of the nave. Terminating the spire of the Merveille (above) is the upraised sword of a statue of Saint Michael, the archangel, by Frémiet.



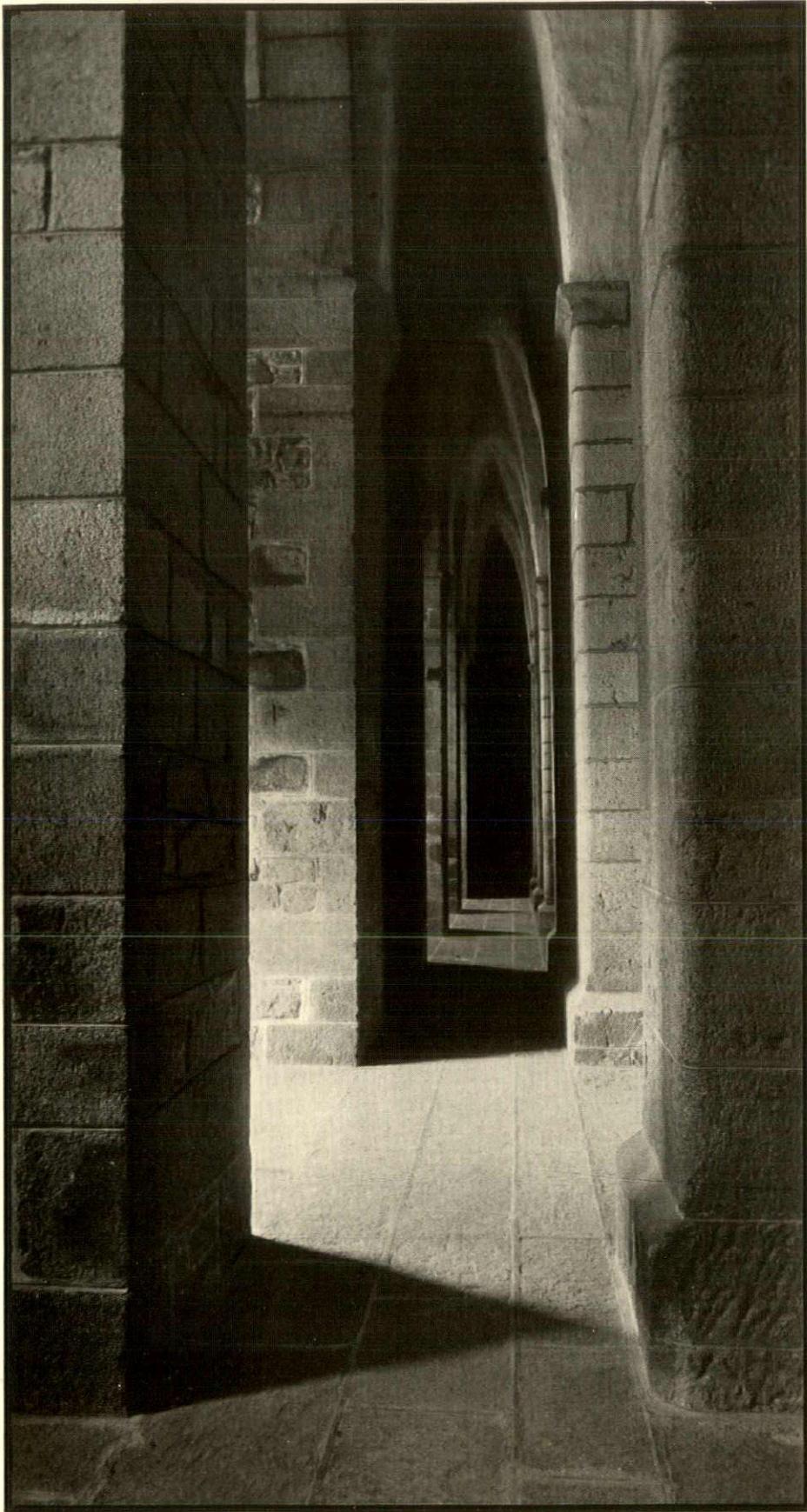
The bridge (above) spanning the Escalier d'Honneur was built in the 15th Century. Originally fortified it connects the Abbey with the lower church. The Crypt of the Aquilon (opposite page) is chiefly the work of the Abbot Robert de Torigni. It is dated 1112 and is an excellent example of transitional architecture with its six massive, heavily capiteled columns down the center of the room.





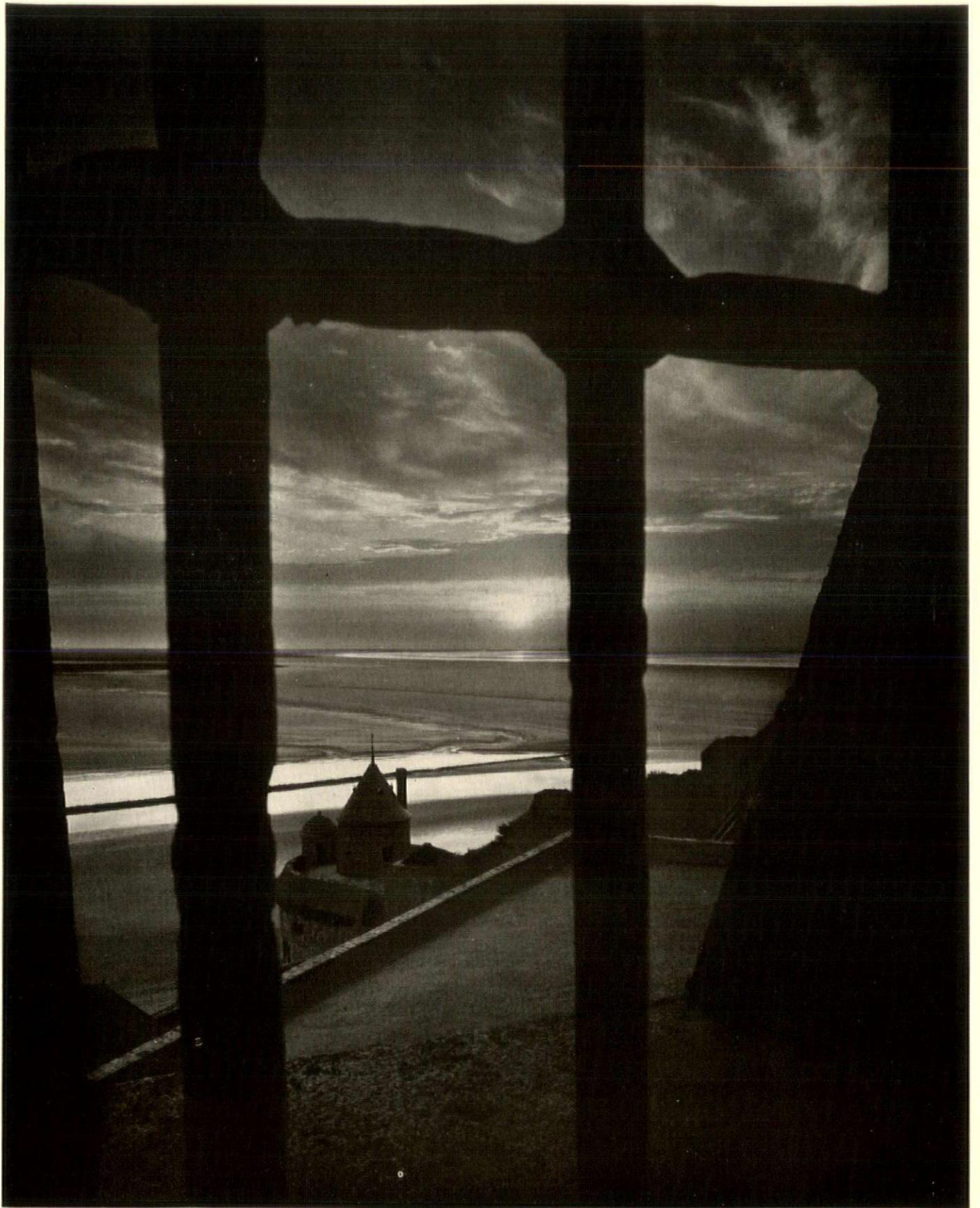


The Refectory (opposite page), finished about 1215 by Raoul, is one of the most beautiful rooms in the Merveille. Lighted by nine great mullioned windows, its splendid ribbed roof rests on six central monolith columns. The Cloister (above) finished about 1228 has a double row of pointed arches resting on 220 colonettes. Each bell-formed capiteled colonette is staggered to allow intercolumniation with the other.



One of the narrow passages (above) in the sub-structure. The Crypt of the Gros Piliers (opposite page), another of the works of Robert de Torigni, has nineteen columns, 25 feet high, of enormous thickness supporting the piers and pillars of the chancel of the church above.





The Tour Gabriel against a jewel-like setting of sea, sky and sand

SOLILOQUY OR ACTION . . . THAT IS THE QUESTION

"Whether 'tis nobler in the mind to suffer
The slings and arrows of outrageous fortune,
Or to take arms against a sea of troubles,
And by opposing end them? . . ."

REVIVALS of Hamlet are rife. They bring to mind that all-but-hackneyed quotation with its universal application to the constantly recurring problems in every phase of life, the life of a profession no less than the life of an individual. Because it has always seemed to us to be worth while to determine the nature and extent of our problems as a profession, to bring to bear the best thinking and most extensive experience possible to the solution of those problems, to plan a definite course of action, we have asked five questions of a representative group of architects. The questions themselves were phrased to obtain expressions on the general problems rather than to single out the more specific ones in an effort to arrive at particular problems or solutions. We had but one objective,—to stimulate the thinking of the individual architect, your thinking, along the lines that will be profitable to the profession as a whole (and consequently to the individual), to the end that the profession may be "of ever increasing service to society."

Now that there are prospective clients in the offing,—if not actually in the office,—it is easy to forget the more general policies of our profession because of the urgent and necessary personal problems of conducting a growing and, we hope, profitable business. Of course we are individualists, each one believing in his own ability as a creative designer, highly critical of the works of his fellows, each one inclined to do and go his own way. While it is well to consider one's self as a little apart from, and superior to, the common herd,—because it is ego-satisfying and compensates to a degree for deficiencies in some more mundane things,—still it has

its effects and repercussions, of a not wholly desirable nature, on the attitude of the general public toward us. The public, made up for us of clients (pleased or disgruntled,—actual or potential,—) is inclined to judge the entire profession by their own experience, or their friends' experiences, with a single practitioner. This to a much greater degree in the case of architecture than the other professions. For this reason, among others, the thinking and the action of the individual take on added importance to the group whether or not he considers himself apart from, or a member of, that group.

It is not difficult to see why, if only in self-interest, it is part of the duty of each member of the profession to give thought to the problems of policy-program-and-action of the profession-as-a-whole. For we are on the spot now, as before and during the depression, and it is up to us both individually and collectively "to take arms against a sea of troubles, and by opposing end them,"—or at least cripple them.

Our part as a publication is, for the moment, to bring out into the open the sea of troubles, to show that there are leaders in the profession who are giving constructive thought to them, to persuade you that your own thought and action are necessary also to any real solutions, to urge that you make them more effective by co-operating with local groups or organizations, with or without national affiliations.

The danger is that you may, by withholding your influence and support, give comfort to the enemy, help to defeat even your own purposes since what affects the profession as a whole affects each practitioner as well. Merely turning over these problems in the quiet corners of your mind avails little. You remember how the melancholy Dane's soliloquy ends,

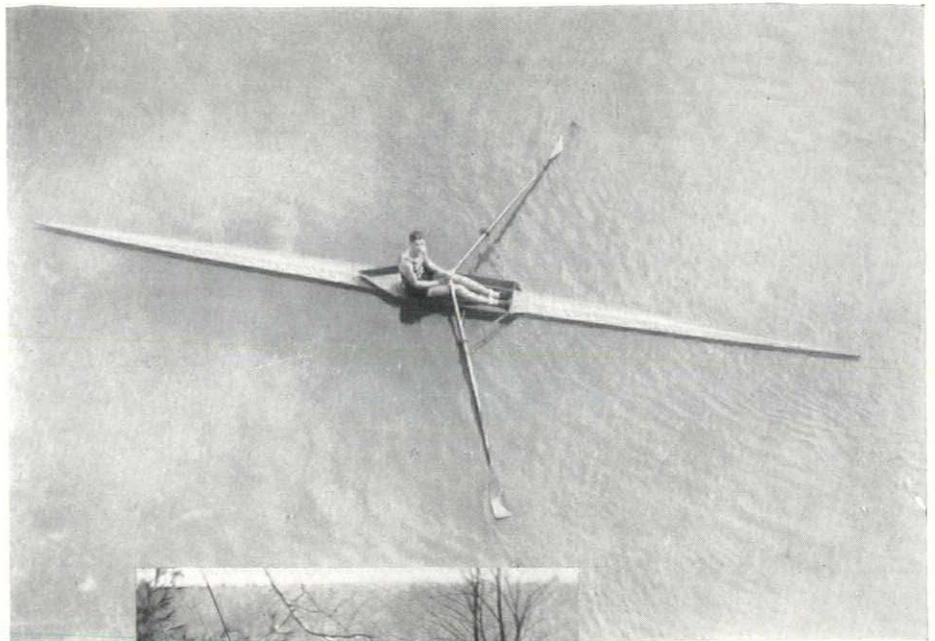
"And thus the native hue of resolution
Is sicklied o'er the pale cast of thought,
And enterprises of great pith and moment
With this regard their currents turn away,
And lose the name of action."

Kenneth L. Stowell

EDITOR



Theodate Pope Riddle's chief activity away from the drawing board consists in getting things built—for example her Avon Old Farms at Avon, Conn.



Chas. M. Stotz of Pittsburgh draws straight lines up and down the Allegheny River—or did until last spring's flood carried away his shell

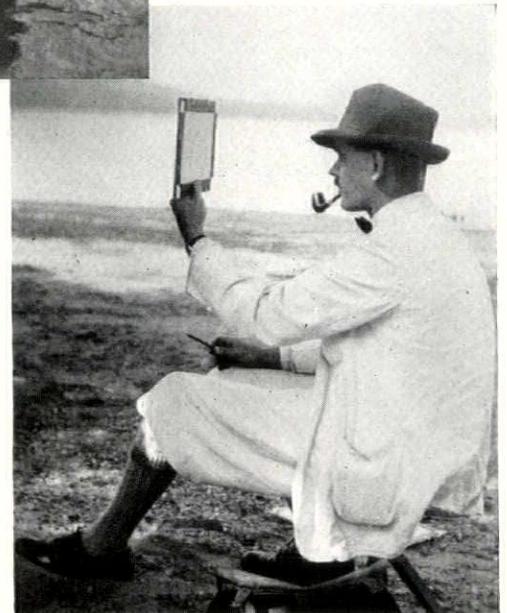
ARCHITECTS AND AVOCATIONS

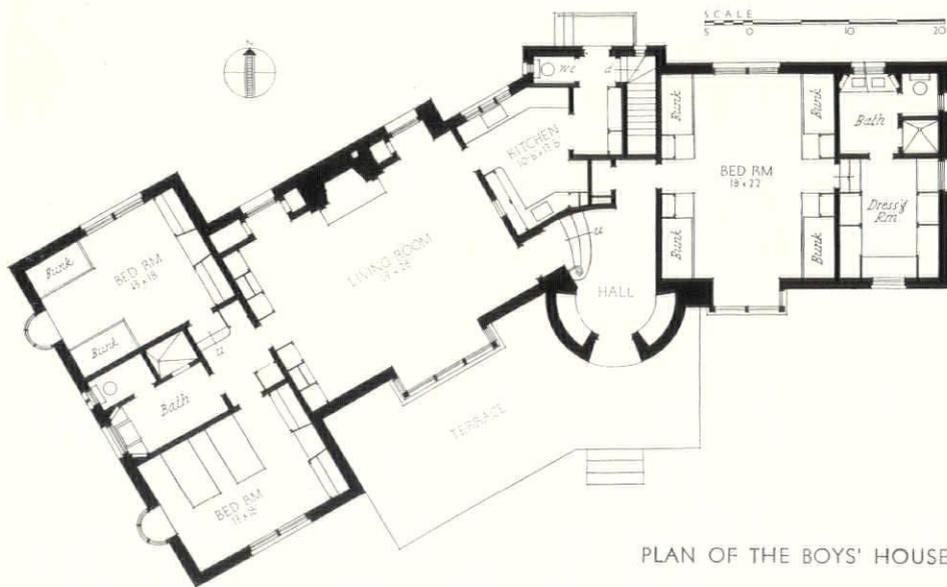
When Albert Kahn of Detroit pries himself loose from his large organization and takes his mind off the design of industrial plants, he is likely to wave a relieved farewell from the deck of an outboard steamer



Add to the roster of architects who fish for something other than clients the name of Miss A. W. Keichline, Bellefonte, Pennsylvania

The chief extra curricular activity of Charles Dana Loomis, Baltimore, has always seemed to us to be wide-range philosophizing, but the evidence here is that he is occasionally caught sketching





The Main House is not yet built, therefore, the Boys' House (above) serves as the main house with servants living in the garage building. The walls, painted white with slate blue trim, are of cement stone veneer on wood frame; the roof of Cedar Shakes bleached a weathered gray. The dining terrace and open air ovens (opposite page, below), are at the rear of the house, accessible from the kitchen. The Boat House (opposite page, above) consists of a 25' x 30' boat room, men and women's dressing rooms with shower and toilet accommodations, two bedrooms and bath on second floor. Construction is of Redwood boarding on wood frame

BATTSON RESIDENCE, ARROWHEAD LAKE, CALIFORNIA

ROLAND E. COATE, ARCHITECT

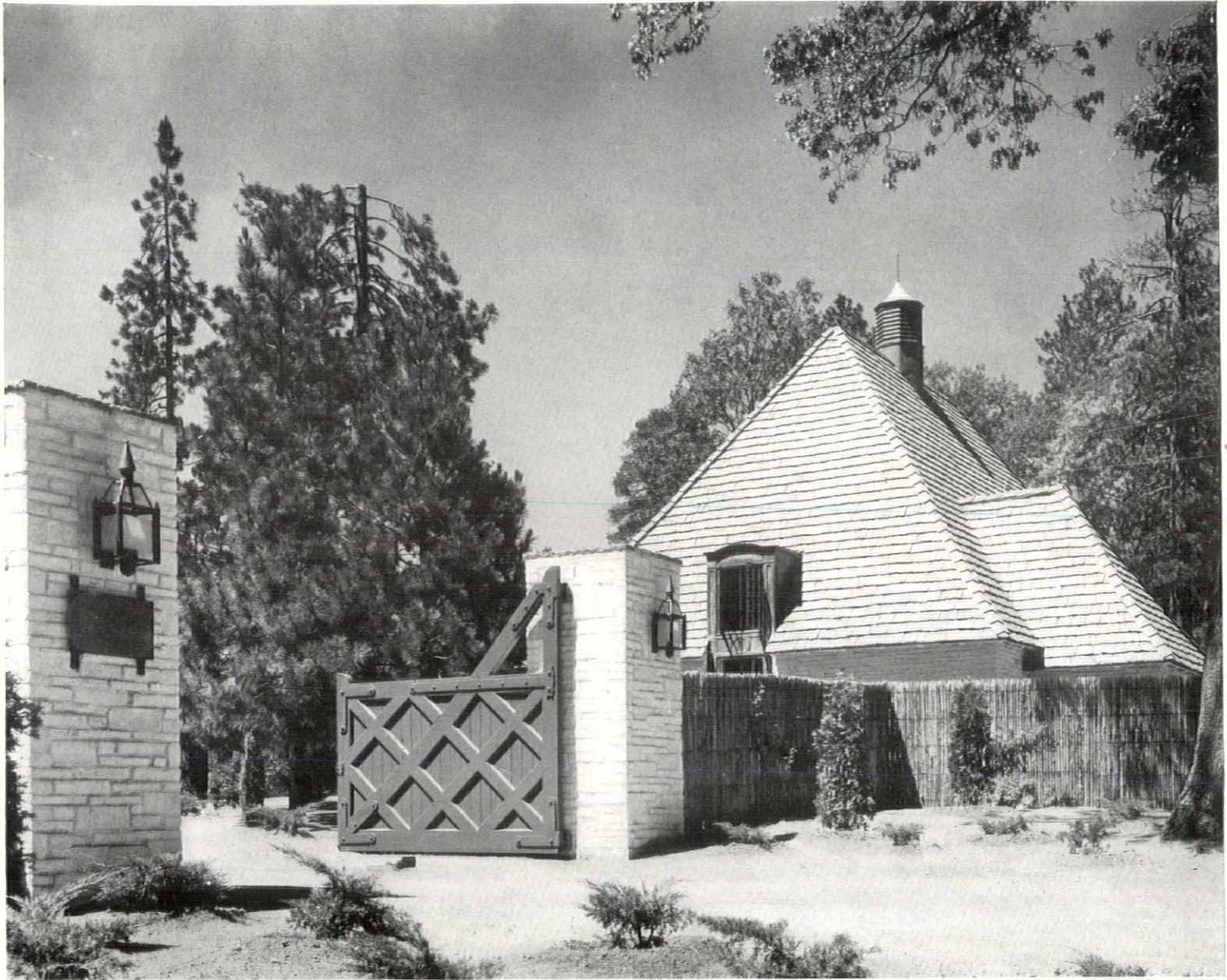
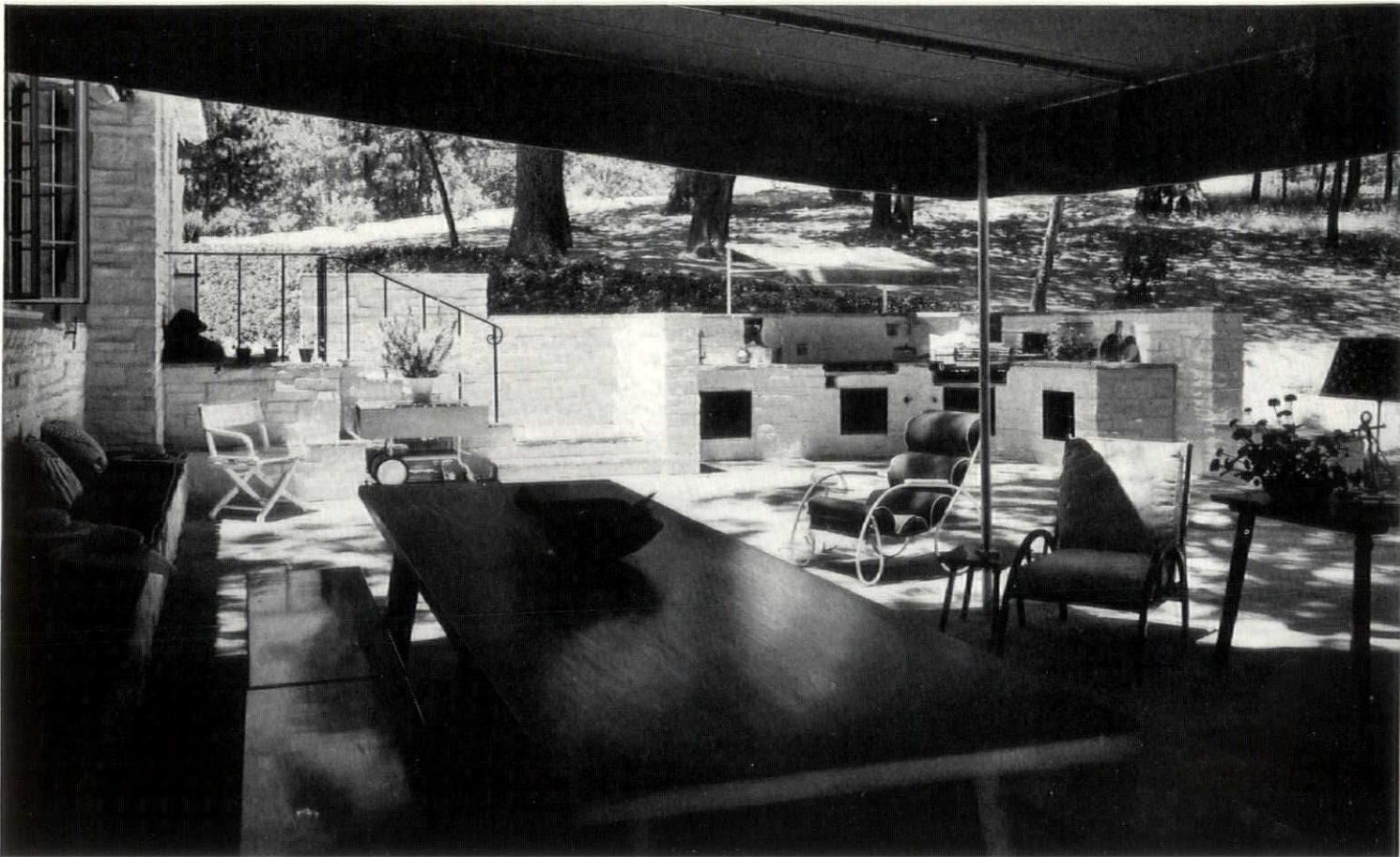
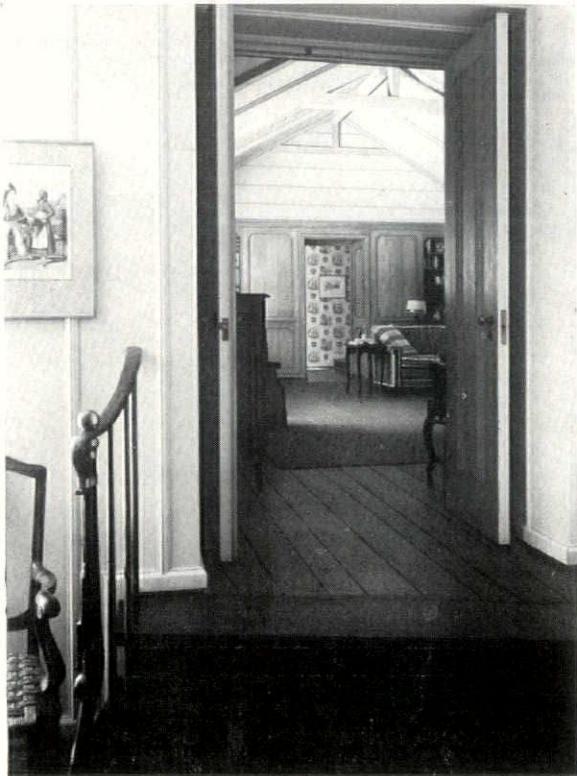
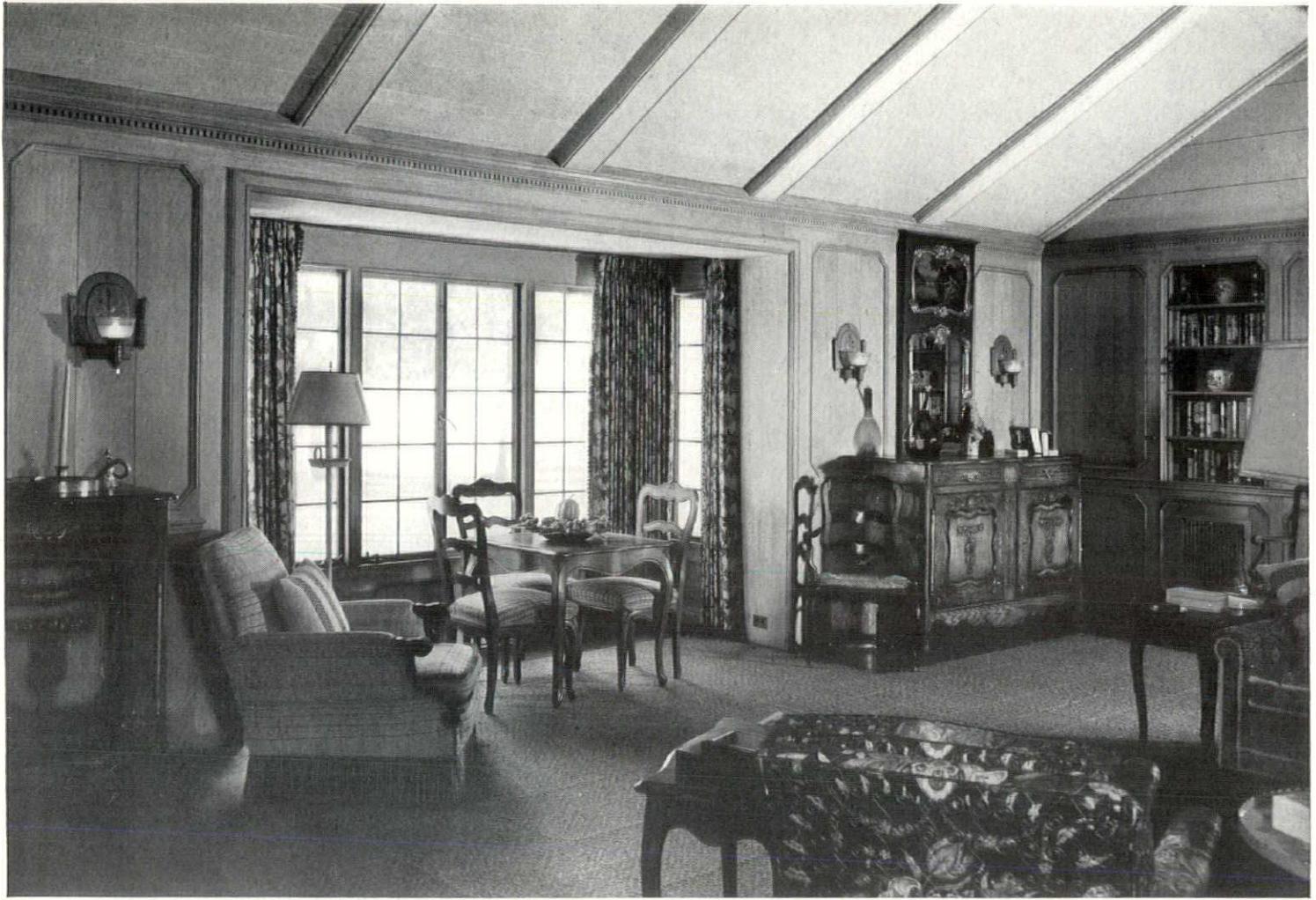


PHOTO: GEORGE D. HAIGHT

Located high in the San Bernardino Mountains on the shore of Arrowhead Lake, the approach to the estate is through the gates shown above. The garage building in the background consists of a four-car garage and five-car open motor shed, four servants' bedrooms and two baths on the ground floor and living room and kitchen on the second floor. Construction is of cement stone veneer on wood frame

RESIDENCE OF L. M. BATTSON
ARROWHEAD LAKE, CALIFORNIA
ROLAND E. COATE, ARCHITECT





View (above) of living room, which is of White Cedar paneling in a natural honey color. View (left) from entrance hall into living room. The hall is paneled in White Cedar painted white. An old musket forms the newel of the short flight of stairs to the living room

BATTSON RESIDENCE, ARROWHEAD LAKE, CALIFORNIA

ROLAND E. COATE, ARCHITECT



PHOTO: DELAR

**SWEDISH AMERICAN LINE OFFICES
NEW YORK CITY
REINHARD AND HOFMEISTER, ARCHITECTS**

SWEDISH AMERICAN LINE OFFICES

NEW YORK CITY

REINHARD AND HOFMEISTER, ARCHITECTS



PHOTO: SAMUEL H. GOTTSCHO

The main public space is designed to recall the chaste architectural forms characteristic of so much contemporary Swedish design. These include simple flowing lines, skilful proportion, an excellent use of wood-panelling including intarsia and an effective color treatment. Walls are paneled in two tones of bird's eye maple and pilasters are of bleached cherry. The large map in blues and reds is of carved glass. The floor of black terrazzo has a flame colored rug. This bright red tone is repeated in the field of the indirectly lighted plaster ceiling. The furniture is upholstered in dark blue leather

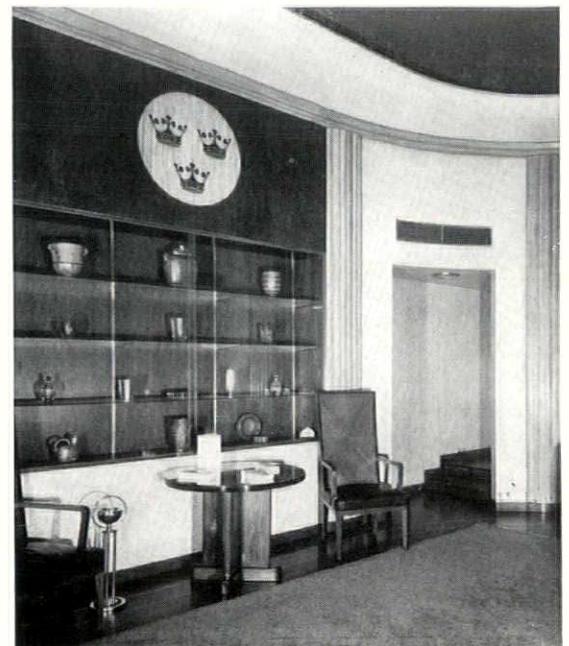
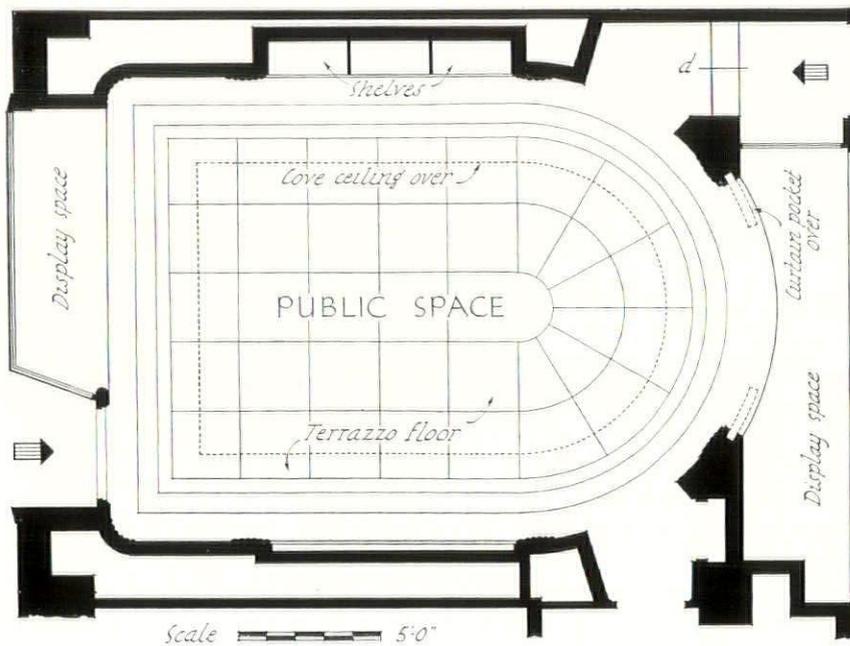


PHOTO: DELAR

400 PARK AVENUE— A VENTURE IN CHANGE

Current demands for smaller apartments brought air conditioning, stores and many new appliances to stimulate rentals in one of New York's better class buildings

BY LOUIS C. STONE



PHOTOS: WEILL & STONE

IN the recent apartment house renovation at 400 Park Avenue, Walker & Gillette, the architects, were faced with the interesting problem of re-planning a building that had growing pains. City properties, since they are held within comparatively close limits by building laws, tend to have a sectional homogeneity. In this way, land use becomes stabilized into residential, commercial, industrial or miscellaneous occupancies. However, the characteristics of space-use frequently undergo marked change. That is, an identical occupancy may become larger or smaller according to current demand. The problem of this particular job was to revise the floor layout in such a fashion as to keep it in an advantageous competitive position. In this particular case, the apartments were too large and had to be made smaller. However, the same type of tenancy is to be served.

Built twenty-five years ago, the twelve-story building contained an average of two apartments per floor. It was then a pioneer among the high class apartment buildings that have since lined the thoroughfare, erected by the New York Central Railroad through its real estate operating subsidiary, the New York State Realty and Terminal Company from designs by Warren and Wetmore.

Their creation is physically substantial. In its ground plan and land coverage, the building compares very favor-

ably with corner apartment houses completed a few months ago in the fashionable east 80's. The effect of the new Multiple Dwellings Law is evident alone in the setbacks and terraces of the more modern building; the plans are similar, as revised. And yet almost a generation has passed between the erection of the two.

During that time, the proximity of Park Avenue and 54th Street to the Grand Central Zone on the south, and the strong pull of the high grade retail shops on fashionable 57th Street to the north, have induced a demand for more stores of equal quality along the avenue. The new space utilization therefore provides for four new stores in place of the old ground floor apartments. And the apartments on the upper stories have been, in response to competition brought about by a change in the New Yorker's residential requirements, reduced in size.

Quantitatively, twenty rooms per floor of the old layout have been made to yield 23 rooms, subdivided into one apartment of five, and three of six rooms.

All apartments have three baths, a small, maid's room, modern kitchen and wood-burning fireplaces. The communicating bathrooms of the old plan, shared by two bedrooms through separate doors, have been made completely private, one to every bedroom.

Within the apartments, space use has been changed in logical reaction to functional requirements. Pantries as such have been eliminated entirely. A wing given over originally to servants' quarters has been converted into a complete five-room apartment.

The space of one living room, 17 x 40, has been made to yield part of a new living room, a complete dining room, full-sized kitchen and maid's room with separate bath.

Withal, this compression in space is relative, for the new rooms are still above average in size.

For the neighborhood, the five-room apartment created out of the servants' quarters seems not so successful. The plan shows two bedrooms, no dining room. The kitchen is quite a distance from the living room, making service awkward if the dining function is to be observed there. Perhaps a small chamber opening on to the small kitchen foyer might be used for dining, although not so planned.

The ground floor contains four stores. The corner store is 20 feet wide, the next 22 feet, the third a scant 19 feet, the fourth 26 feet wide. Already is the corner store tenanted, by an interior decorator. Quick to be on the spot, this shop is to its neighborhood what the delicatessen, the cut-rate dry cleaner stores are to cheaper sections. Back of the stores, along 54th Street, is a small doctor's maisonette, with separate entrance. The rest of the ground floor contains an odd apartment without kitchen, and in the less rentable portions in the rear are ten servants' rooms available for the extra help of the tenants at nominal rentals.

The basement has been revised to provide eight separate laundry rooms, a number of storage and locker rooms and a separate enclosed space for the new air conditioning equipment consisting of water heaters and coolers, condensers, pumps, compressors, etc.

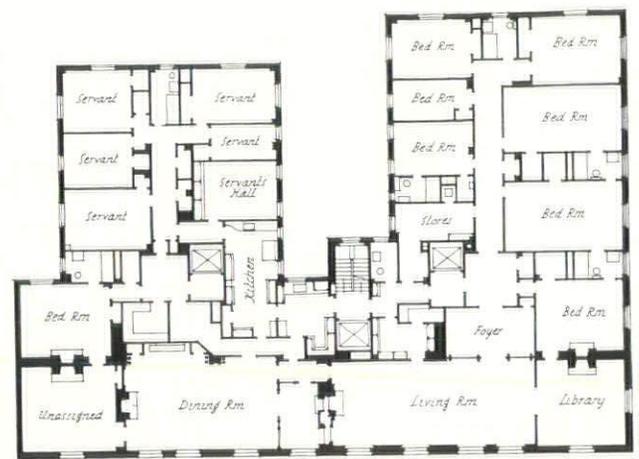
The changes in space utilization thus far reported compose a technique which, as recently as five years ago, would have been representative of the average way in which new competitive conditions were acknowledged by owners and solved by architects.

Today the problems of competitive planning and modernization are much more complex. This is due chiefly to the strides that have been made in recent years by manufacturers of building equipment. Much that is new must be considered from every angle, and those things selected and incorporated that will insure the building against early reversion to a state of obsolescence.

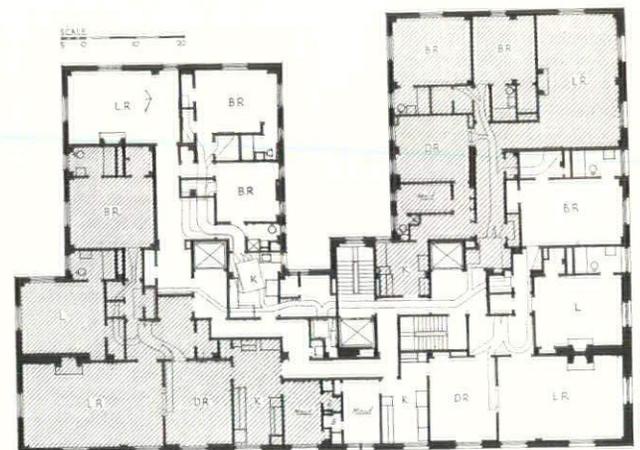
Indicative of this fundamental means of keeping space marketable is the fact, for instance, that the architects have retained the old two-pipe heating system, but changed the radiators from free-standing cast iron to recessed, enclosed fin-type. The elevator equipment is substantially the same, but bathrooms have been completely re-equipped, kitchens re-designed and furnished with modern cabinets, flat-top working surfaces over various fixtures, automatic gas ranges, over-sized electric refrigerators, modern sinks.

Electric wiring has been installed, heavy enough to deliver current economically for cooking in the future.

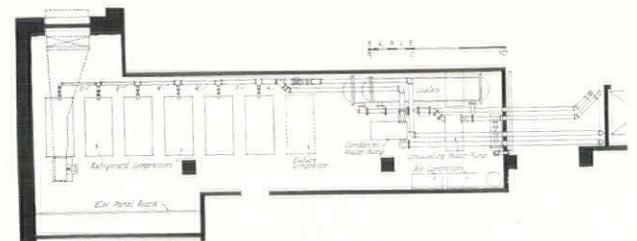
If space permitted, a tabulation of the improvements and equipment that have endured since the building was new, compared with the items added in this modernization operation would perhaps serve to illustrate effectively how the catalog of things available to the building industry has expanded. It would bring out also the fact that while some



Plan before alteration with one large apartment per floor



Altered plan with four apartments per floor plus air conditioning

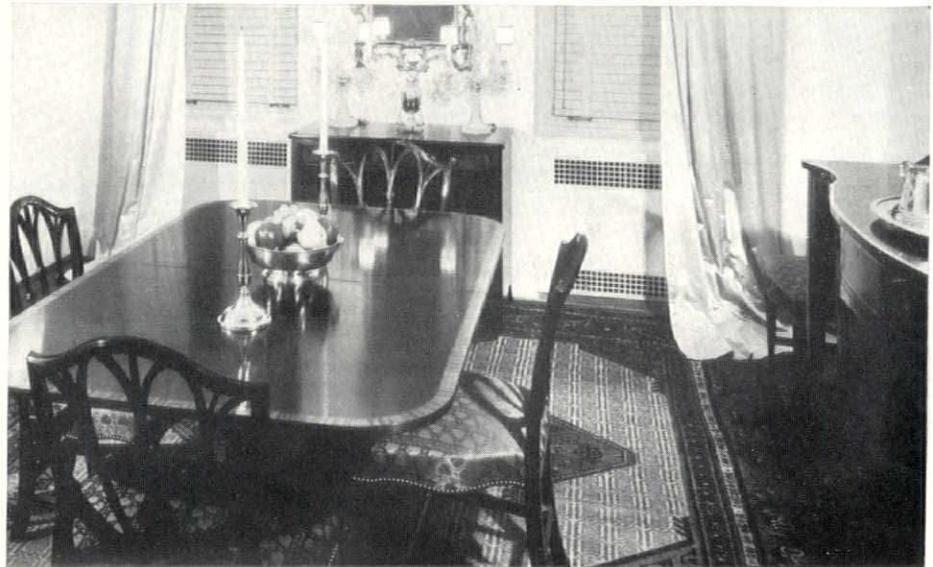
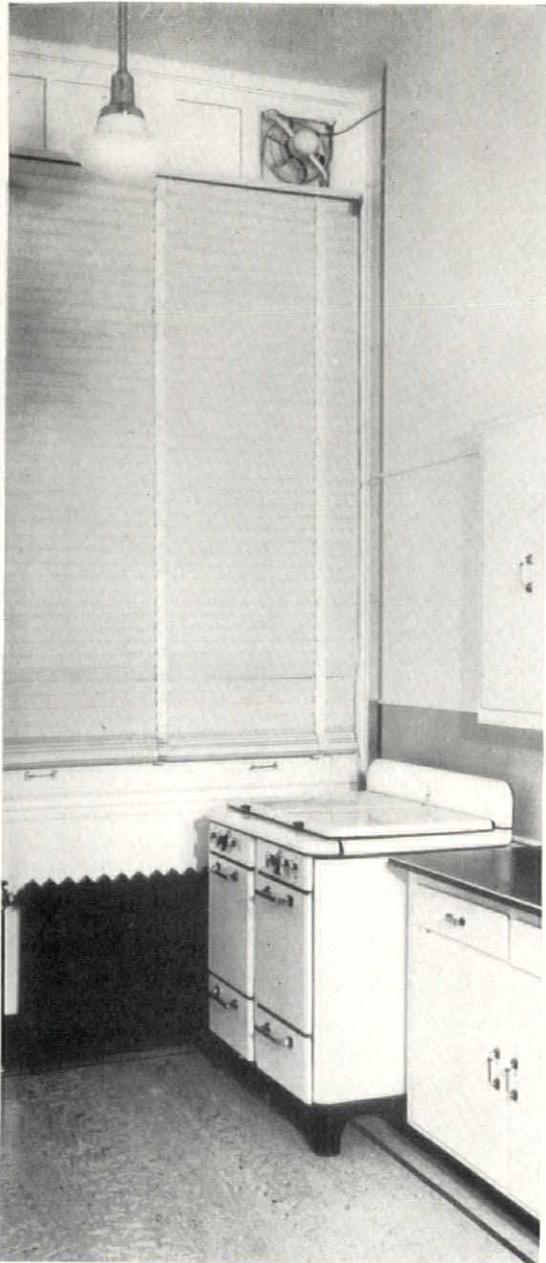


Plan of the source of the air conditioning system in the basement

of these things are as yet crown comforts for the few, their adoption for the mass market is only a matter of time. Outstanding in this class of equipment is air conditioning.

For three reasons, the forerunner-equipment with which this apartment house has been fitted in the interests of present competitive advantage and extended economic life will be described in some detail.

To begin with, the air conditioning service is operated in winter and summer. One-third of the air supplied to the apartments is drawn from the outside, through a duct that extends above the roof; two-thirds is re-circulated air. According to the Frigidaire engineers, many installations deliver air in proportions as little as one-tenth fresh, nine-tenths re-circulated. In restaurants, the proportions are as a rule, half-and-half, for obvious reasons. It is felt that the carburetion of air in the proportions used at 400 Park Avenue is good practice for residential purposes.



An essential part of the completion of the air circuit is, in this instance, the familiar, standard kitchen exhaust fan. Located as usual in the window head, the fan carries off what the engineers call "excess" air, reducing resistance to the incoming air and preventing infiltration of air at "cracks" between walls and windows, at floors and ceilings. The air circuit is thus kept under close control, designed to operate efficiently and with a maximum of comfort to the tenants.

As shown in the diagram (page 60) the air conditioning system consists of:

(a) a circulating medium (water) located in the basement;

(b) a distributing medium (air) heated or cooled, humidified or dehumidified, according to the season.

The exact temperature and humidity of the air can be controlled in every apartment at will by the tenant. Each

apartment has a separate unit designed and equipped to deliver filtered air, hot or cold, re-circulated and fresh in the proportions mentioned above. Registers with manually operated shutters enable the tenant to shut off any discharge duct. The individual units are located between hung ceilings either in closets or entrance foyers. The plans (page 60) illustrate the distribution of ducts and the placing of units and registers in the apartments.

Each of the apartment units consists of filters, blower and motor, coils for heating and cooling, drip pan, reversing

The temperature and humidity of such apartments can be controlled by the tenant. (Upper right) Discharge register in living room. (Lower right) Sun deflection of the venetian blinds were calculated in the air conditioning. (Left) While no direct conditioning ducts are used in the kitchens, fans are an essential part of the system

water valves, manual valves for spot adjustment. They can be serviced conveniently through flush, concealed metal hatches in the ceilings.

The photograph of the living room shows a discharge register near the ceiling. The dining rooms and master bedrooms are similarly equipped. Service quarters and kitchens are not air conditioned directly. Doors leading to the air conditioned rooms are fitted with louvers in the bottom panels to facilitate the re-circulation of air. Windows are newly weatherstripped, but not permanently sealed.

In the summer time, the inside air is maintained at a definite ratio to that of the outside. When the outer temperature (dry bulb) is 92F the inside is conditioned to 80F, with a relative humidity of 45 per cent; with 77F outside, the inside is held at 74F, with a relative humidity of 40 per cent.

Together with the kitchen exhaust fan, venetian blinds with which all windows have been supplied, are an essential part of the air conditioning installation. The engineers' calculations were based on their use. They deflect sun-heat, prevent overheating of objects in the rooms and avoid overloading the cooling system. The same results can be obtained by shading windows, painting them or by the use of awnings. An outline of the complete process for winter weather is as follows: outside air, drawn through an intake located on the roof with reference to prevailing winds, adjacent flues, exhausts, vents, etc., is filtered, humidified and pre-heated by means of a central unit also located on the roof. From there, at a temperature of about 70F it passes into individual apartment conditioners. It emerges in the apartments after being again filtered or heated and mixed with the re-circulated air.

The original heating plant, through the modern fin-type radiators mentioned before, carries the major part of the heat load. The air conditioning system—which is therefore of the auxiliary type—keeps the air in circulation and at a comfortable humidity, helps to maintain a temperature ranging between 70F and 80F by means of thermostatic controls.

Naturally, the major functioning of the air conditioning system is brought into play in the summer time. The diagram marked has been drawn especially for AMERICAN ARCHITECT AND ARCHITECTURE by the air conditioning engineers, to illustrate in simple, schematic form how the system operates throughout the seasons.

From the roof come two conditioning elements. One is water, circulated through a cooling tower and down to a condenser in the basement by means of a centrifugal pump. The other is fresh air, brought into the apartments in the manner outlined in the winter conditioning operation described above.

The re-circulated air comes into contact with the chilled water in each conditioning unit and is blown from there into the rooms by means of a fan running at constant speed. The air is mixed with outside fresh air that is drawn in by a variable speed fan past the filter, heater, spray and re-heater located in the central roof unit. The variable speed fan responds automatically, slowing down or increasing in speed as the static pressure in the distribution duct rises or falls, depending upon the amount of fresh air required for the sustained operation of the air conditioning units in each apartment.

A battery of six 20-ton compressors, condensers, two large water coolers (heat-exchangers) and pumps compose the cooling equipment which is enclosed separately in the basement. The water for cooling the compressed refrigerant is supplied from the cooling tower mentioned above. The same pipes furnish hot water or cold water to the air conditioners, depending upon the season.

Held to affect the efficiency of the air conditioning equipment very little, wood-burning fireplaces have been retained. The engineers recommend, however, that the dampers be kept closed during warm weather. Of the 253 rooms in the upper 11 stories of the building, about 165 receive direct air conditioning service at present. Although the ground floor apartments and stores are without air conditioning service now, provision has been made in the equipment to take care of the additional load when the time comes.

According to Messrs. Walker and Gillette, the overall cost of this modernization operation is close to \$500,000, which they say is less than half the reproduction cost as the building now stands. This comes to about 33 cents per cubic foot, based on a cube of 1,524,000. On the score of income, the anticipated annual rent roll from the air conditioned apartments alone is \$170,200; from the stores, \$29,500 (minimum guarantee); from the rest of the ground floor, \$2,300. These total to a gross of \$202,000.

Completed late in September, the height of the rental season was missed. Occupancy of the apartments is proceeding at a satisfactory rate, according to renting agents, William A. White & Co. The owners are very careful about tenants, and much study is being given to the problem of getting the right kind of merchants into the remaining stores. With no more than half of its economic life passed, 400 Park Avenue has been projected into the last half "play" under capable auspices, fitted to cope with competition as it comes, through regulation plan changes, anticipatory equipment utilization and modernization, all integrated by architectural ingenuity.

SPECIFICATIONS

Limestone Indiana Limestone	Radiator Enclosures American Radiator
Hardware Russell & Erwin	Heating and Plumbing
Elevators Otis Elevator Co.	Heating Master's quarters—living room, dining room, bedroom and bathroom—convector type radiators by American Radiator with American Radiator enclosures. Servants' quarters—kitchen, bedrooms, bath, etc.—American Radiator exposed convector radiation. Radiator valves and traps—Bishop & Babcock. Interior bathrooms and halls throughout building are provided with mechanical exhaust ventilation. Fans—Davidson Fan Co. All kitchens are provided with Ilgette exhaust fans mounted above the top portion of window.
Louvers and Doors (many of these had to be used because of air conditioning) Ventilouvre Co.	Plumbing Standard Sanitary Mfg. Co.
Structural Steel Bethlehem Steel and U. S. Steel	Air Conditioning Equipment Frigidaire
Metal Windows Detroit Steel Products Co.	Tile Architectural Tile Co.—walls Olean Tile Co.—floors
Roofing and Sheet Metal Work (Promenade tile on roof) Ludowici Celadon (Sheet metal work) Anaconda Copper	
Glass and Glazing Structural Glass Co.	
Rubber Tile (rubber floors in kitchen) Goodyear Rubber Co.	
Kitchen Cabinets Kitchen Maid Sales Co.	



PHOTOS: ROBERT M. DAMORA

For the past two years the happily collaborative talents of an architect and a painter have resulted in better appearance and better business for a well established chain of New York restaurants. Fairly standard in basic elements of form, each restaurant is decorated around a different theme. The most recent in this group uses as its central motif the historical contrasts of New York City. The façade, mainly of plate glass and satin finished chromium, has its structural parts decorated with glass mosaics in blue, silver and off white

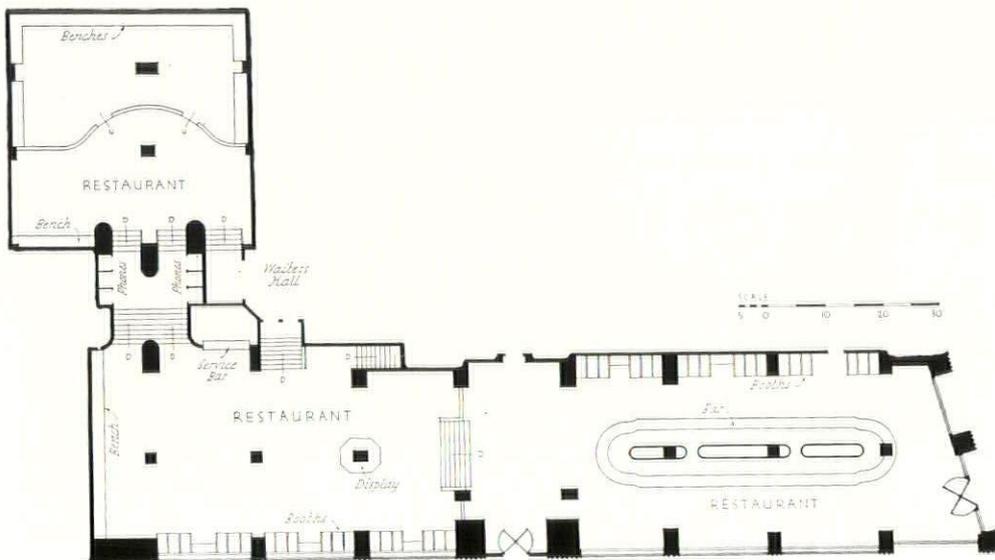
RESTAURANT LONGCHAMPS

NEW YORK CITY

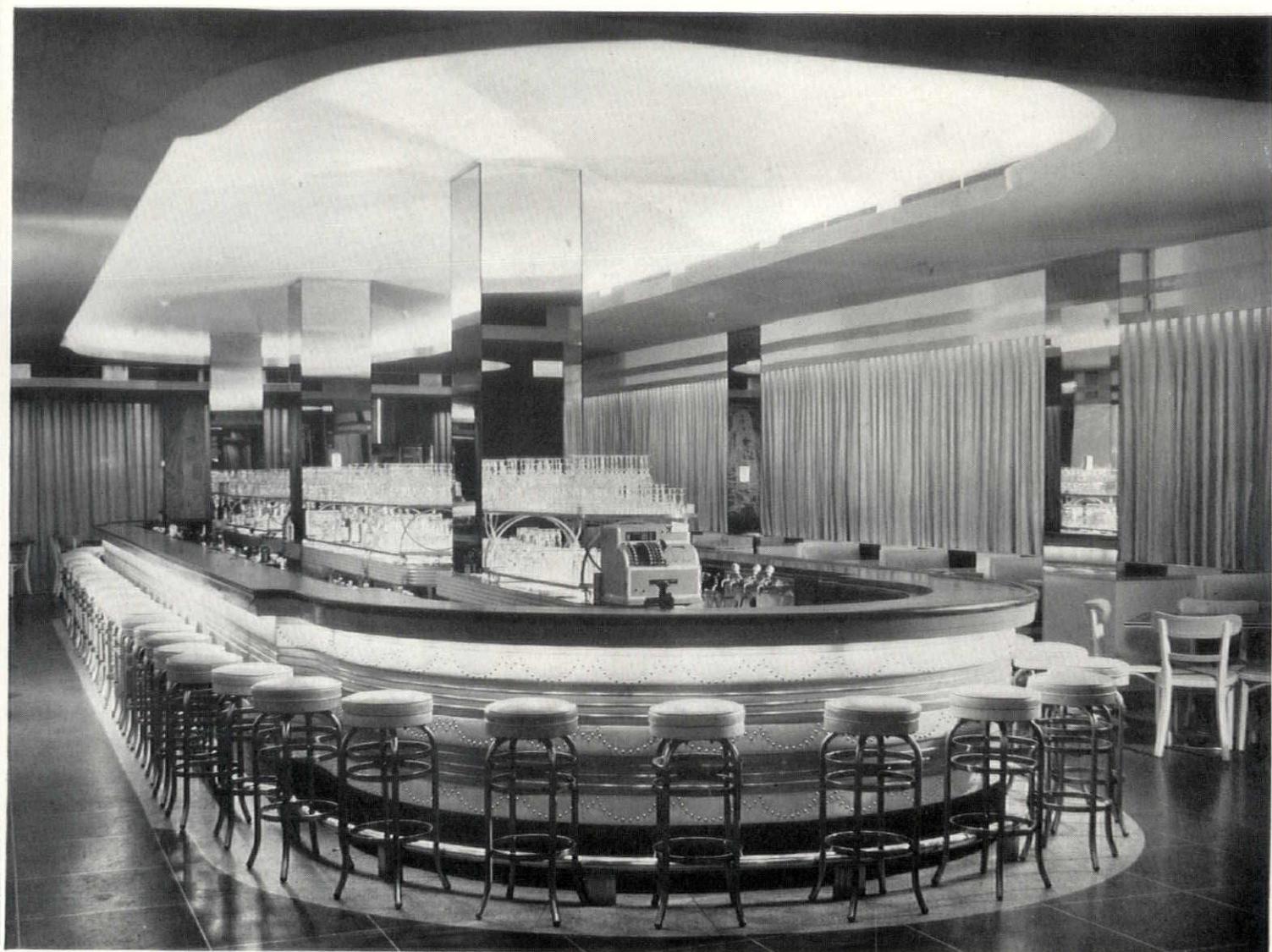
LOUIS ALLEN ABRAMSON • WINOLD REISS STUDIOS, ARCHITECTS AND DESIGNERS



RESTAURANT LONGCHAMPS, NEW YORK CITY ● LOUIS ALLEN ABRAMSON, WINOLD REISS STUDIOS



The L-shaped plan with two entrances lends itself to a sharp division of function. The bar running parallel to the side street is naturally in a conspicuous place, one restaurant is ideal for a hurried luncheon clientele while the more intimate Album Room in the wing attracts the more leisurely patrons. The main dining room (above) has fantastic, city of the future murals in blue, white and gold and a terrazzo floor in light blue, light red and maroon



ARCHITECTS AND DESIGNERS

A widespread use of rose colored mirror, indirect lighting and fabricoid on the furniture is characteristic of the entire job. The bar, topped with teak, has a tufted facing of alternate vermillion and white fabricoid stripes which is indirectly lighted. The back bar is of bronze and glass. Flooring is black and red terrazzo. The periphery of the ceiling is vermillion with an indirectly lighted white field. This same type ceiling is used in the dining room. Draperies are of red Cellophane





The feature of the Album Room is a collection of portraits of famous old-time New Yorkers by Winold Reiss. They hang on a cork wainscoting above which the walls are white. Ceiling is white and brown

PORTFOLIO OF CAST-IRON TREILLAGE



The Mercersburg Academy Mercersburg, Pa.

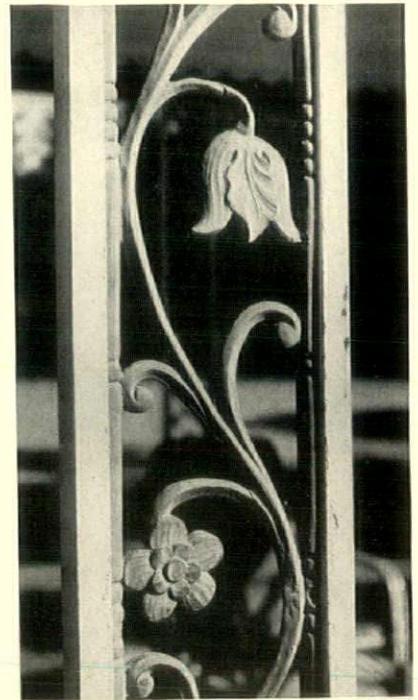
**PORTFOLIOS IN PREPARATION — Outdoor Paving,
January . . . Show Windows, February . . . School
Entrances, March . . . Porch Columns and Posts, April**

The Editors welcome photographs of these subjects. . . .
Forms close six weeks in advance of publication.
A list of the subjects that have appeared will be sent upon
request. Certain of these past Portfolios are available to
subscribers at 25 cents each; or five subjects for one dollar

**NUMBER 122 IN A SERIES OF COLLEC-
TIONS OF PHOTOGRAPHS ILLUSTRATING
VARIOUS MINOR ARCHITECTURAL DETAILS**



Gramercy Park West
New York, N. Y.



Mt. Kisco, N. Y.
Godwin, Thompson & Patterson



Old work in
New Orleans, La.



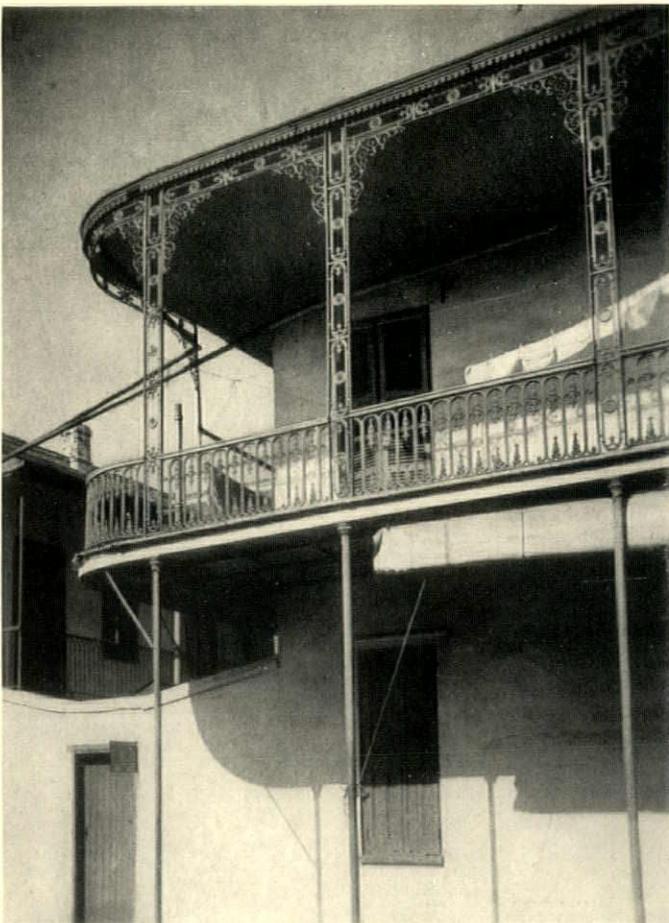
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New Orleans, La.



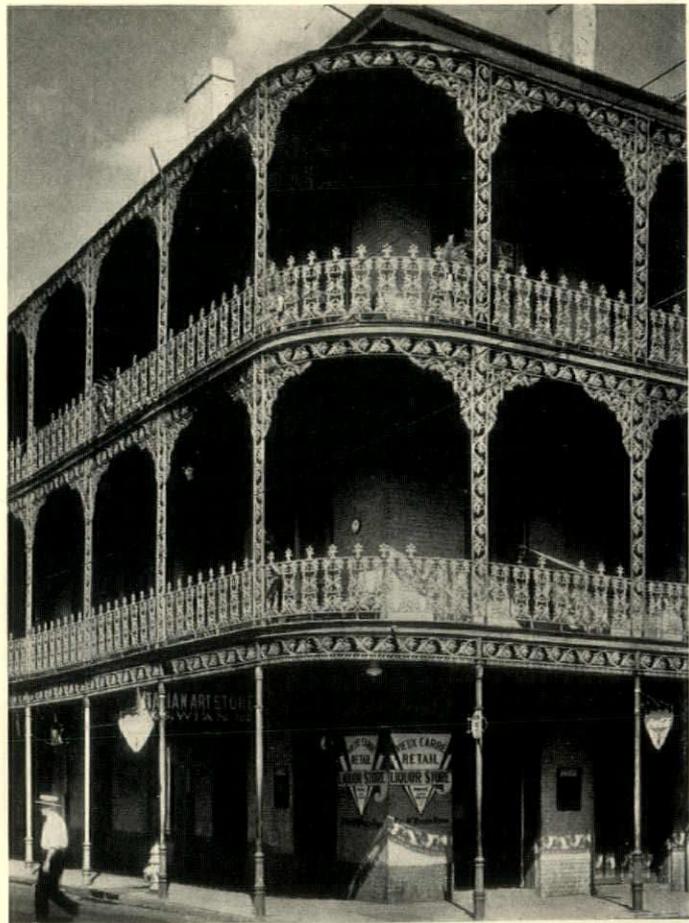
New York, N. Y.
Thomas H. Ellett



Los Angeles, Calif.
Roland E. Coate



Old work in
New Orleans, La.



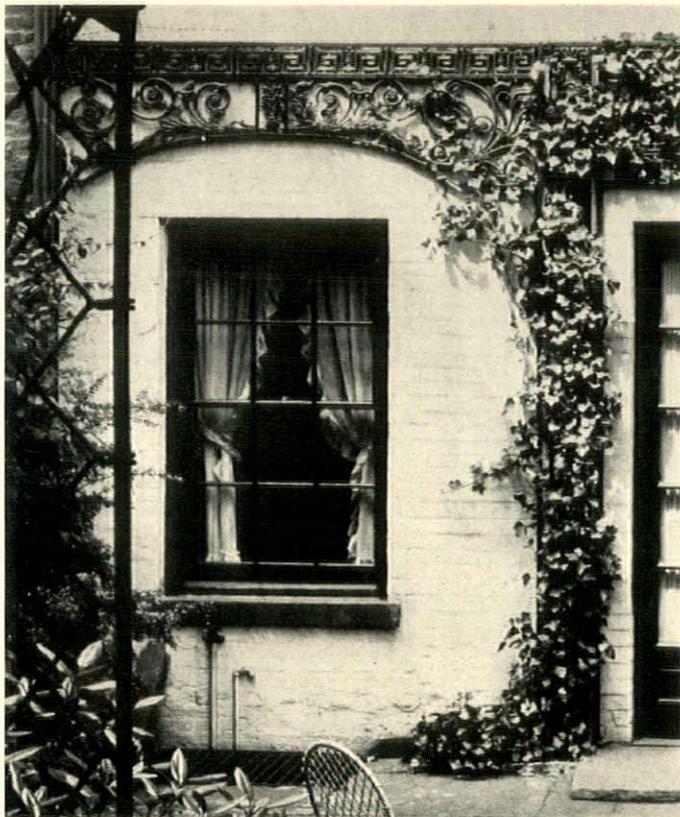
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New Orleans, La.



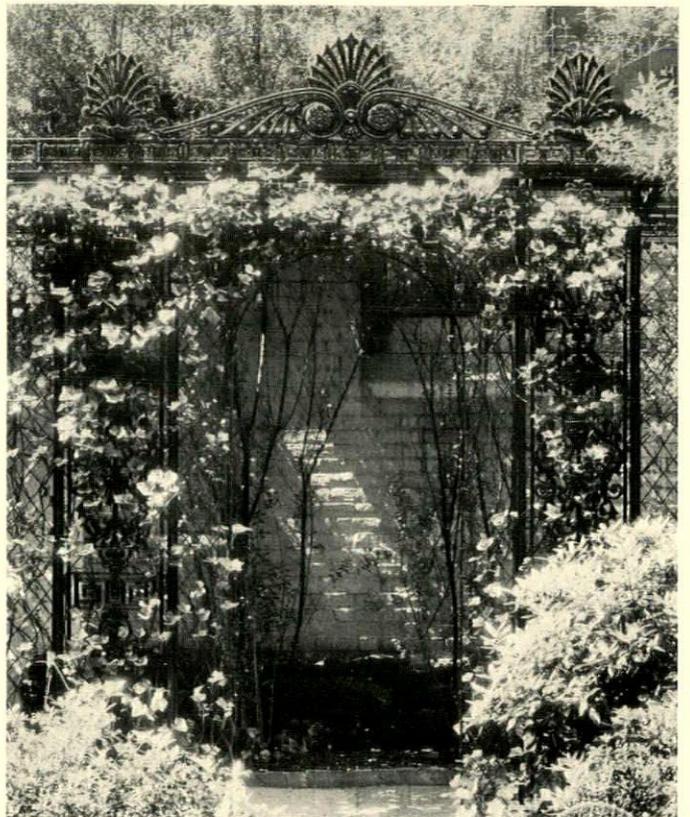
Old work in
New Hope, Pa.



Greenwich, Conn.
William F. Dominick



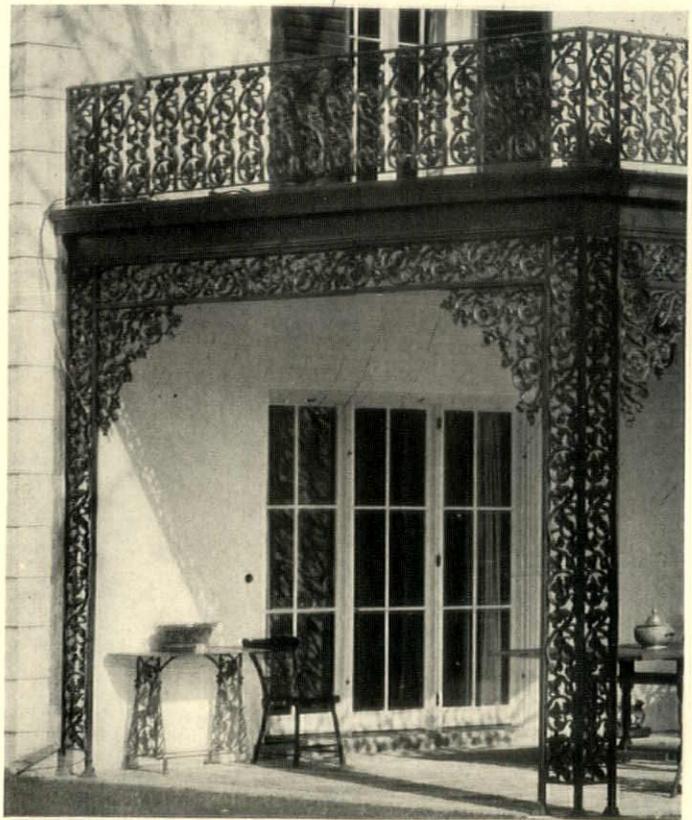
New York, N. Y.
Aymar Embury II



New York, N. Y.
Aymar Embury II



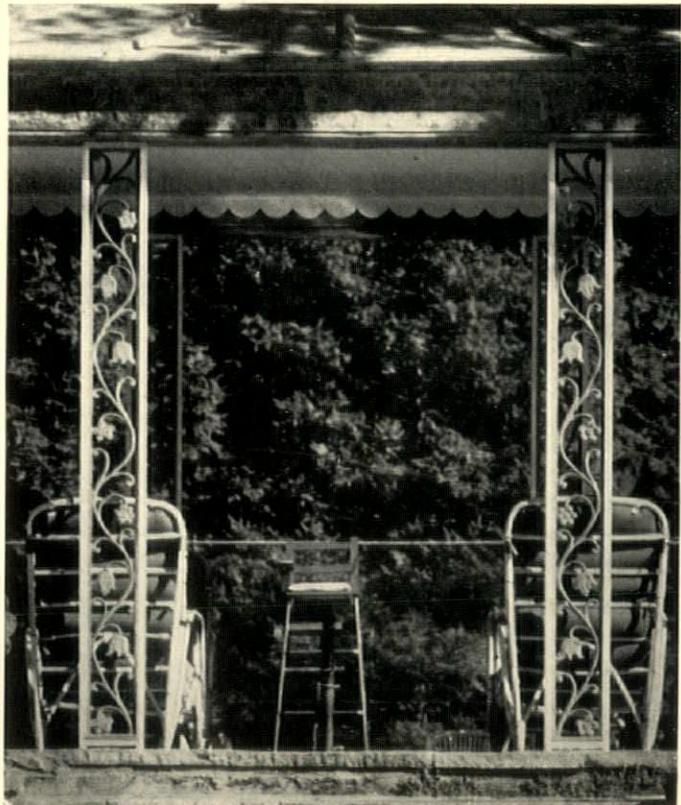
Riverside, Calif.
Garrett Van Pelt, Jr.



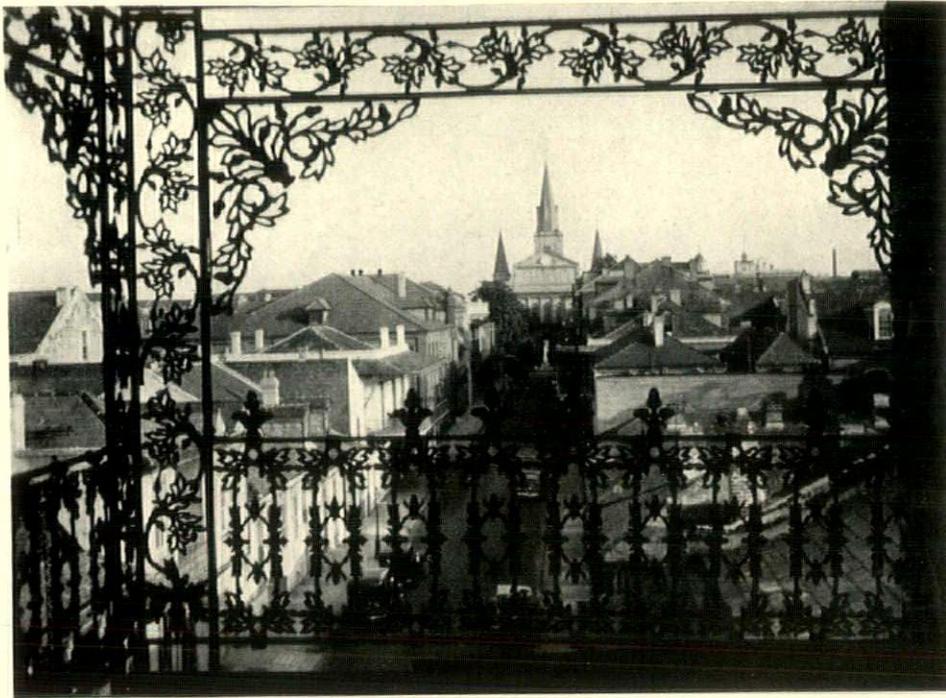
Locust Valley, N. Y.
J. Bradley Delehanty



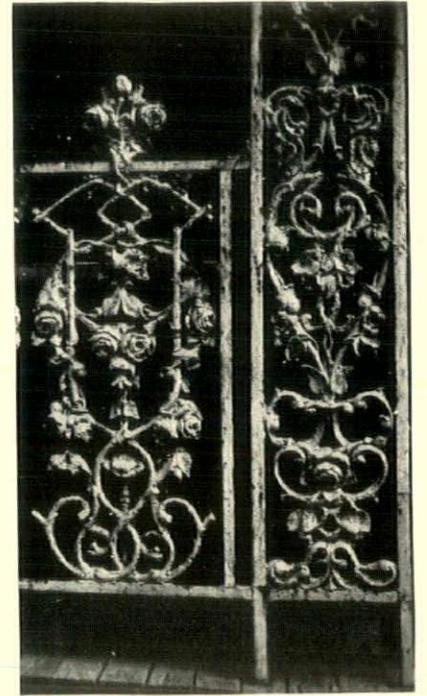
Pasadena, Calif.
Roland E. Coate



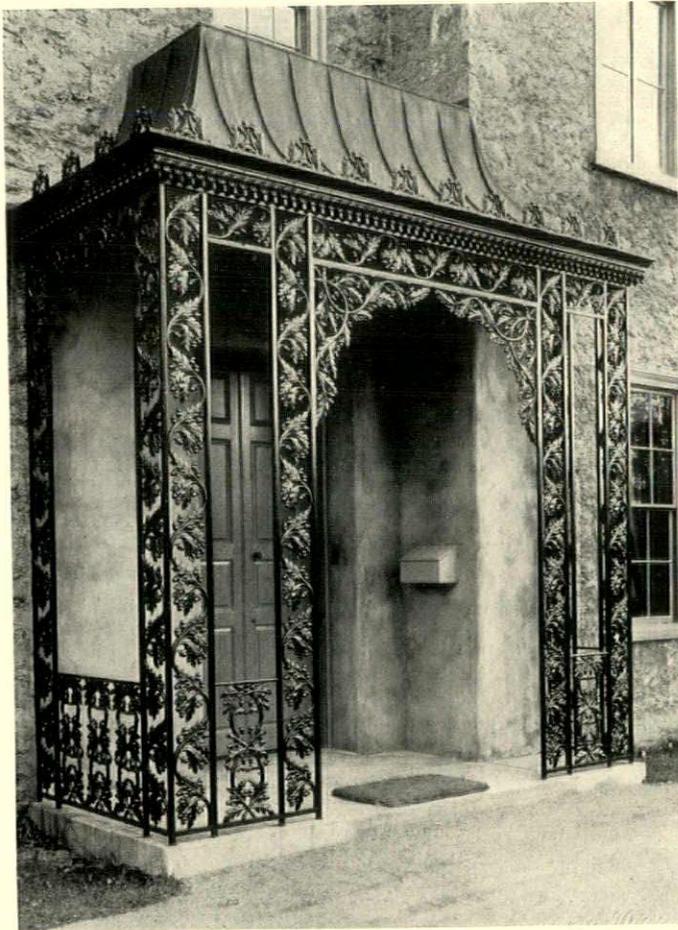
Mt. Kisco, N. Y.
Godwin, Thompson & Patterson



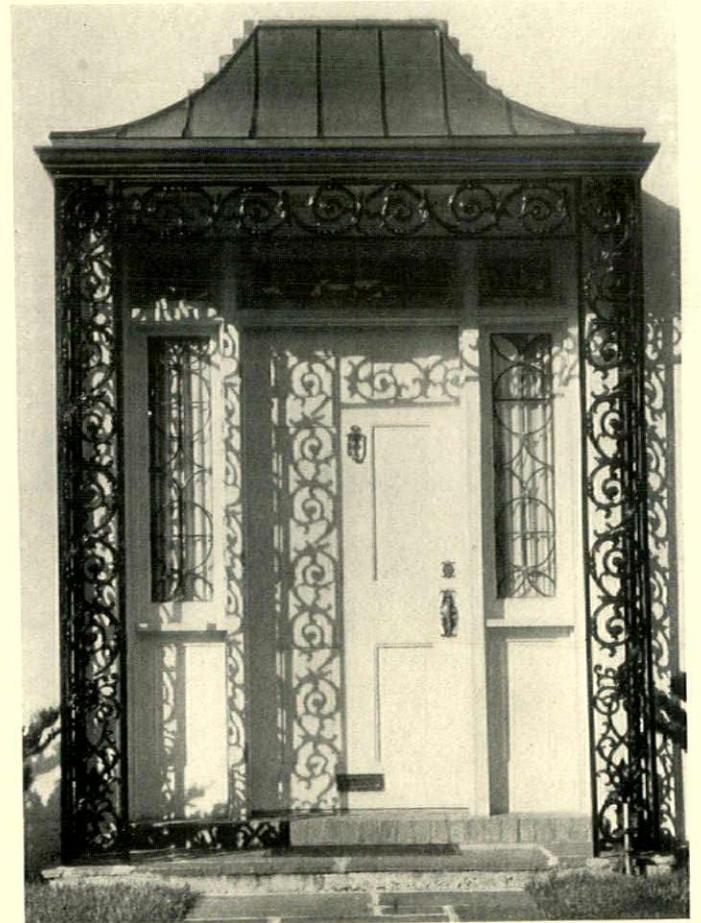
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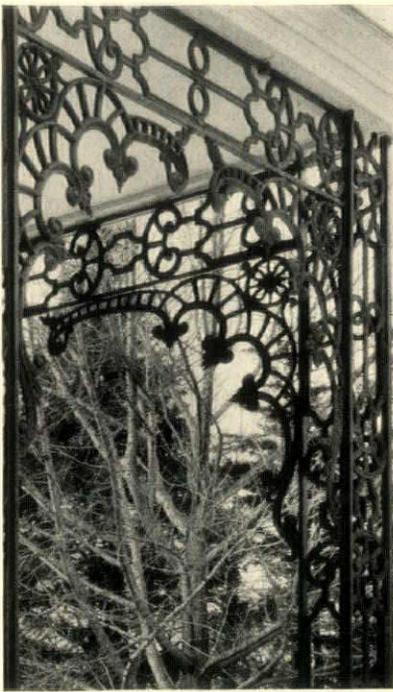
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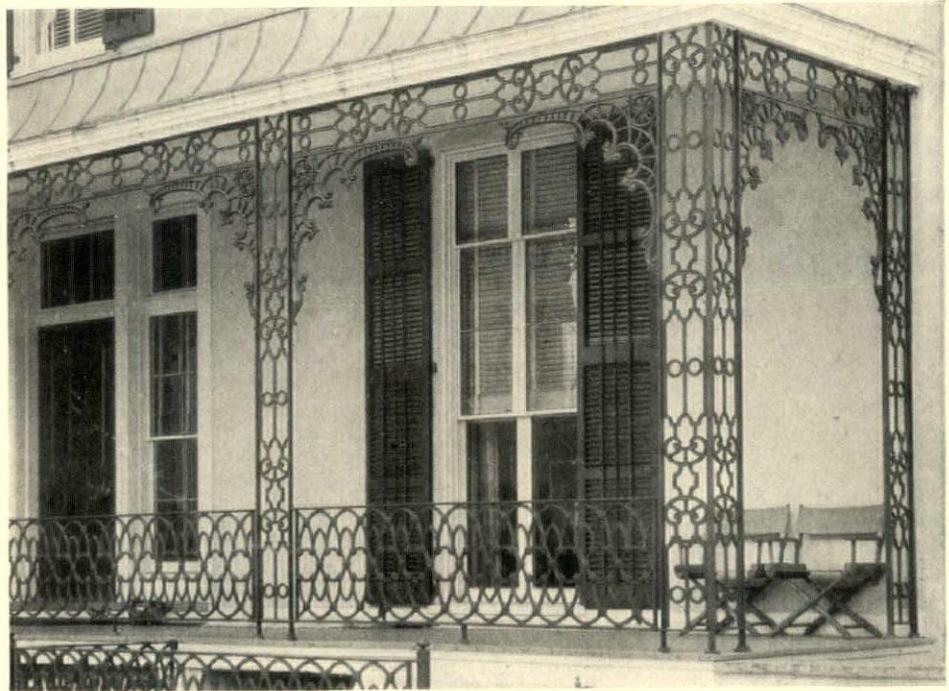
Philadelphia, Pa.
Mellor, Meigs & Howe



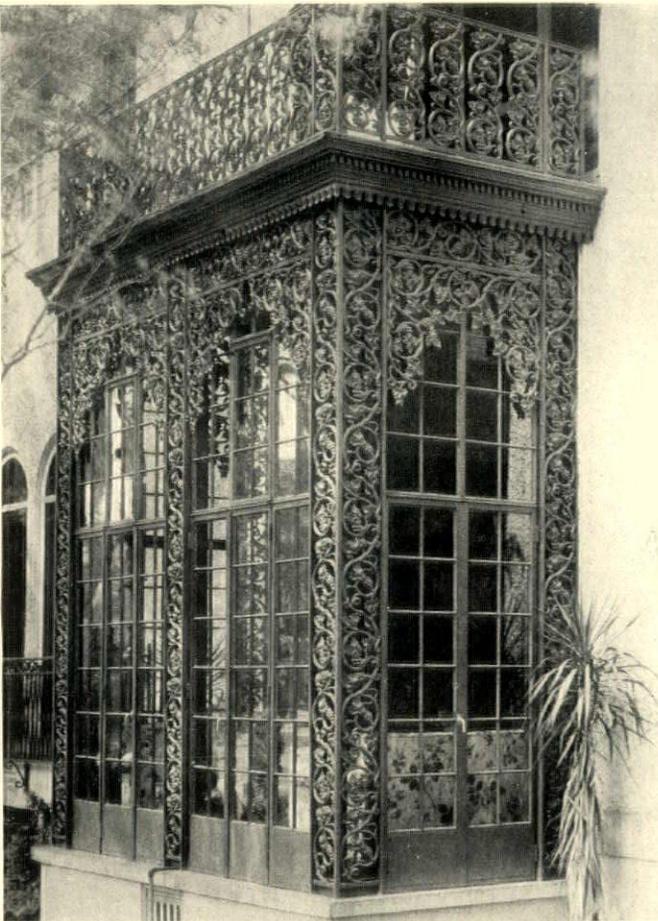
Washington, D. C.
Horace W. Peaslee, Gertrude Sawyer, J. H. Lapish



Detail of treillage
shown at the right



Abington, Pa.
Leigh French, Jr.



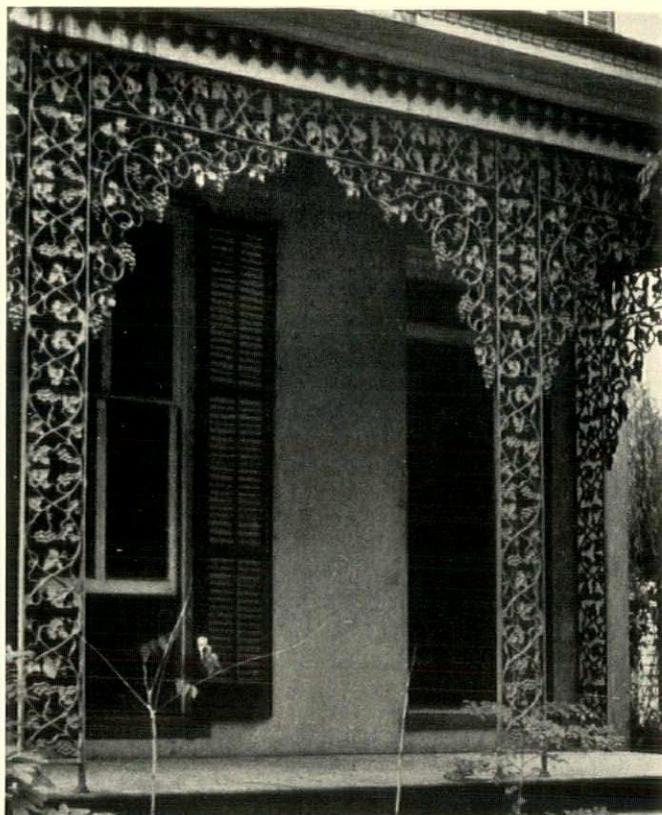
New Orleans, La.
Moise H. Goldstein



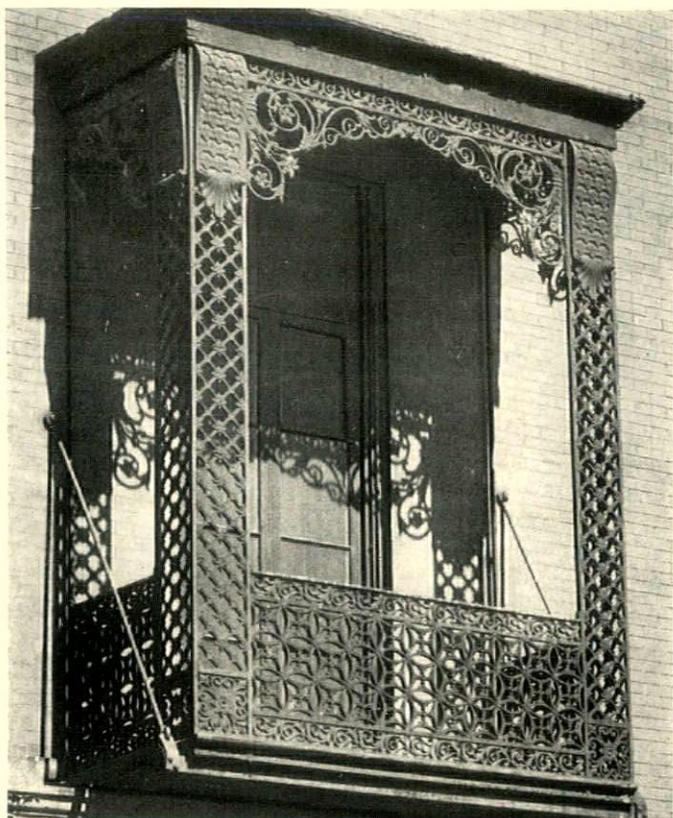
Ardmore, Pa.
William Woodburn Potter



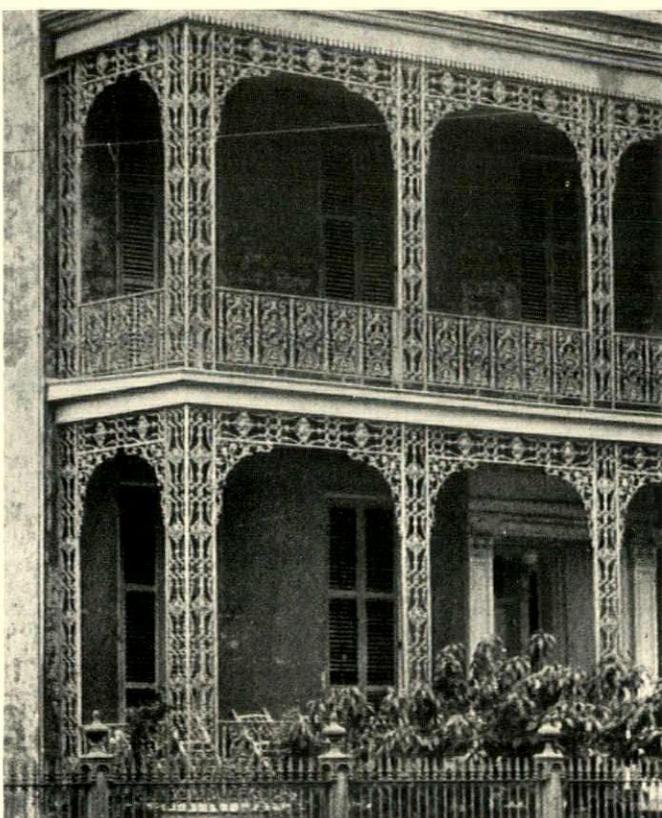
Miami Beach, Fla.
Russell T. Pancoast



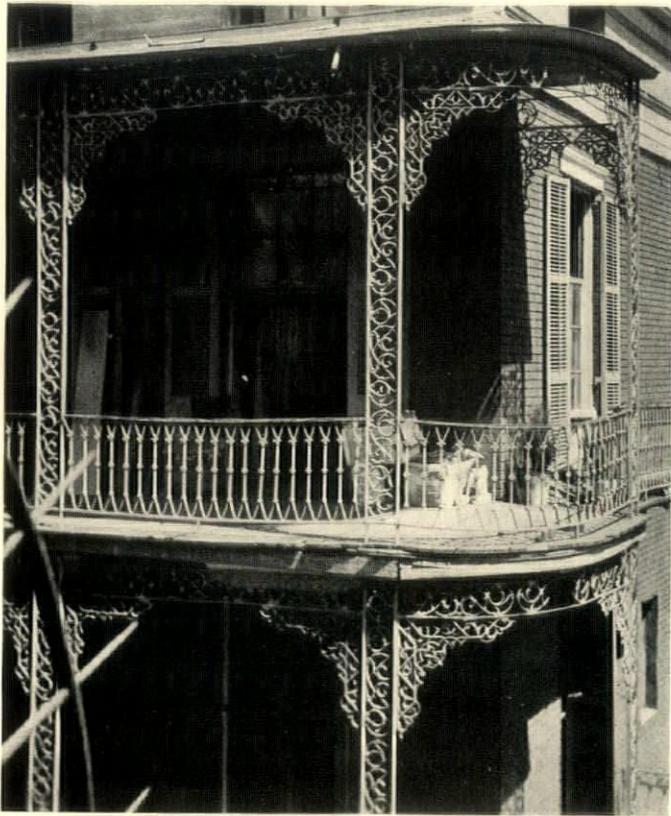
Old work in
New Hope, Pa.



Old work in
New York, N. Y.



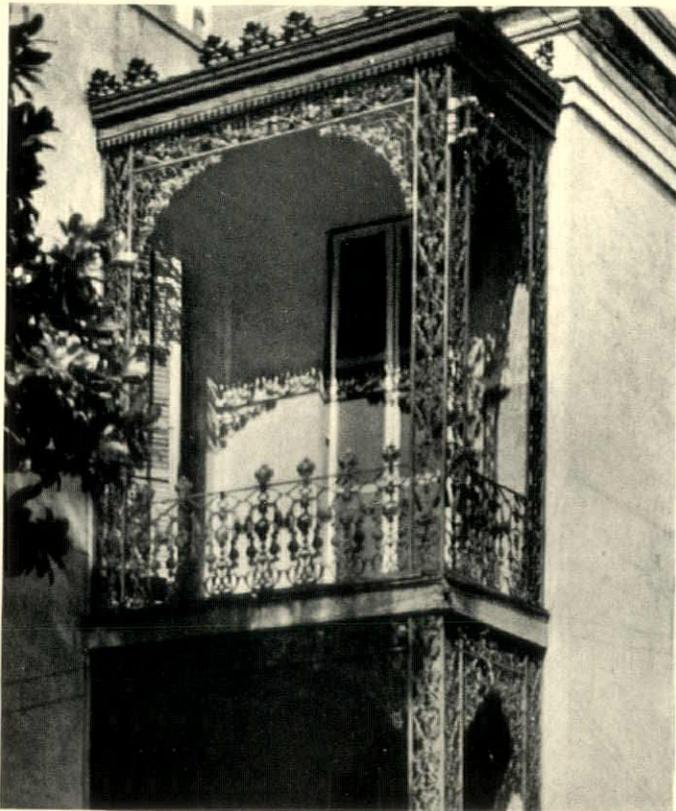
Old work in
New Orleans, La.



Old work in
New Orleans, La.



New Orleans, La.
Moise H. Goldstein



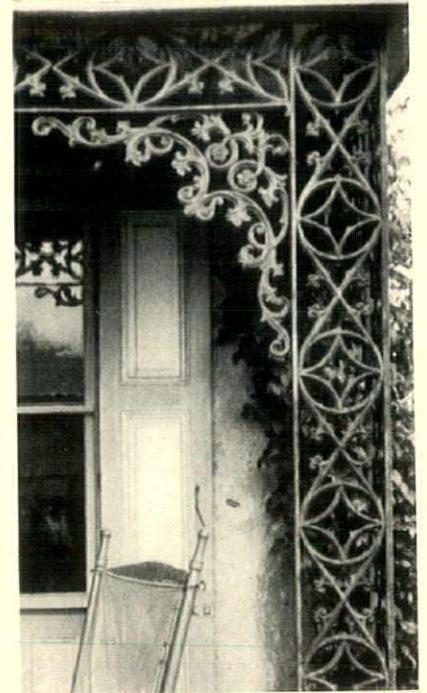
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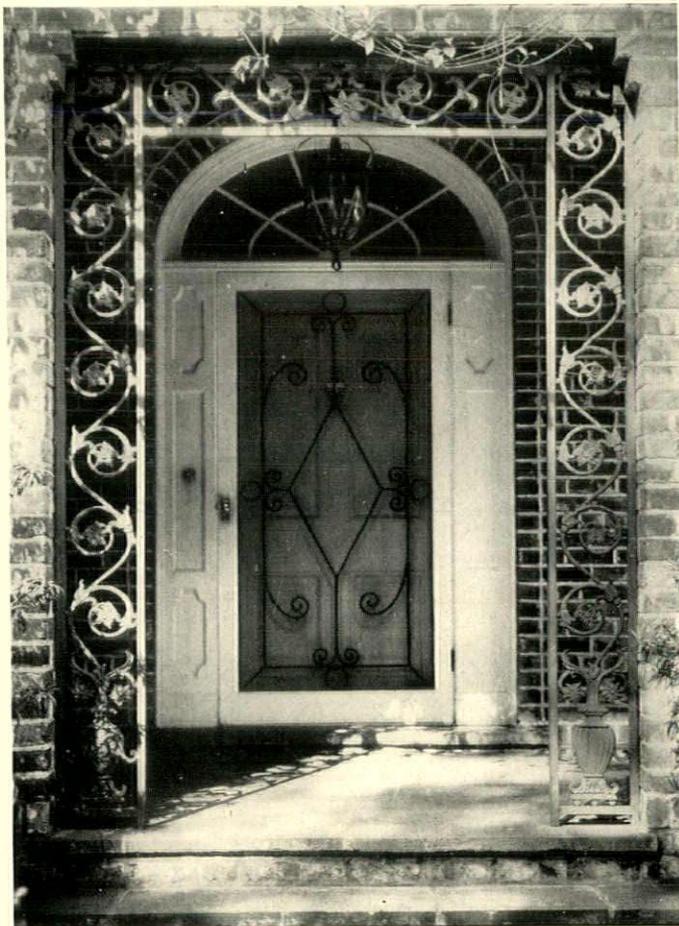
New York, N. Y.
J. Bradley Delehanty



Palm Beach, Fla.
Wyeth & King



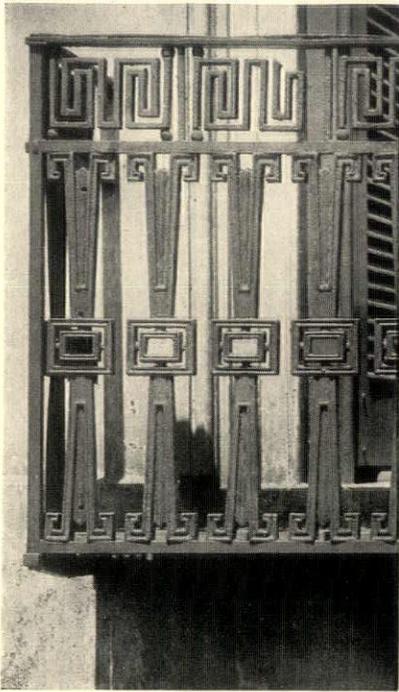
Old work in
New Hope, Pa.



New Orleans, La.
Moise H. Goldstein



East 18th Street
New York, N. Y.



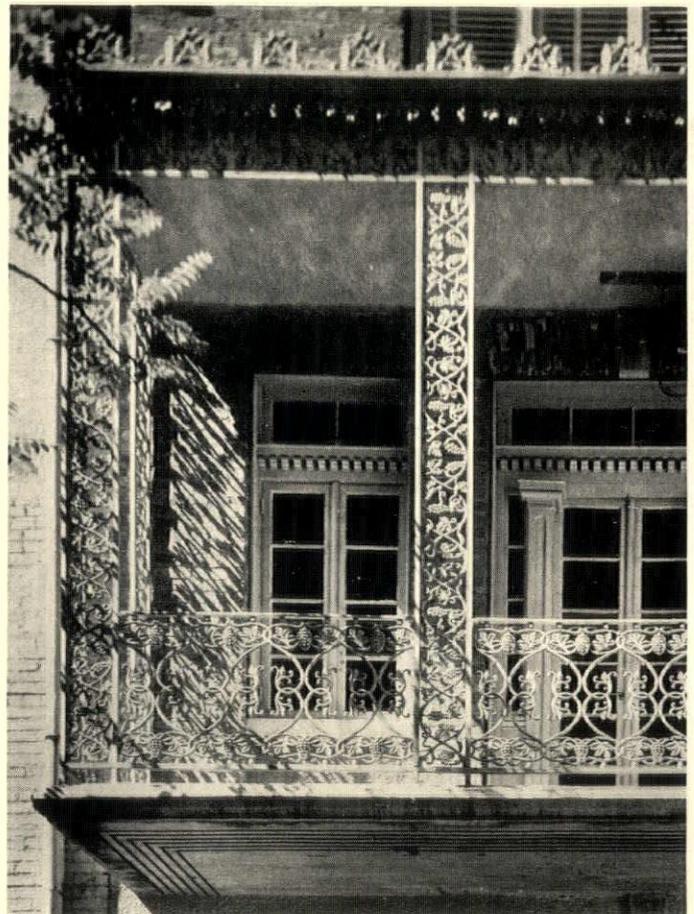
Old work in
Savannah, Ga.



Old work in
New Orleans, La.



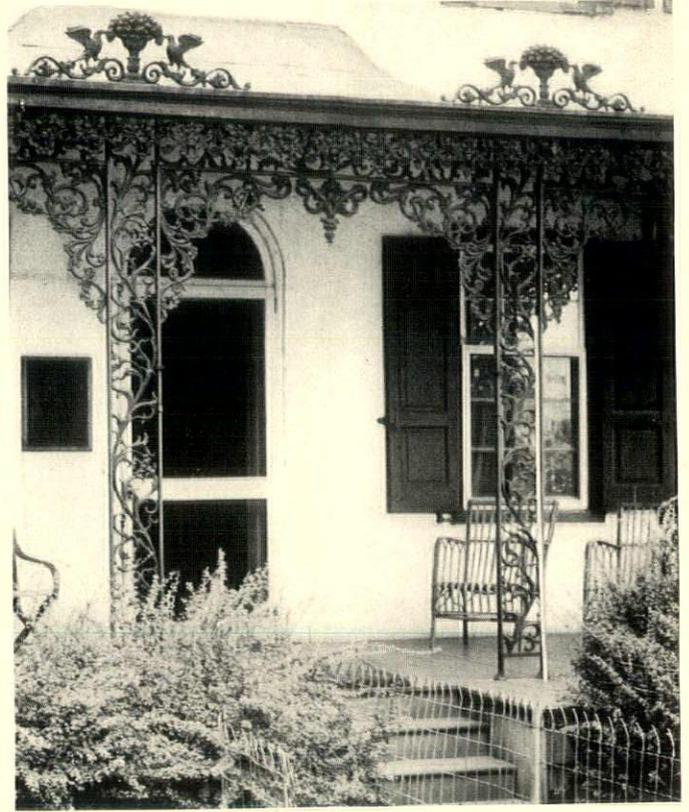
East 18th Street
New York, N. Y.



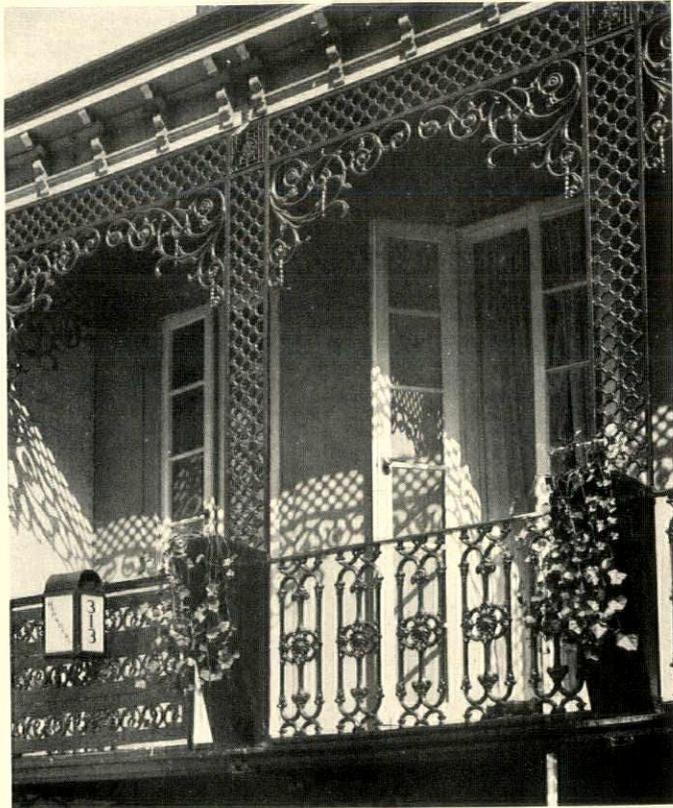
Old work in
New York, N. Y.



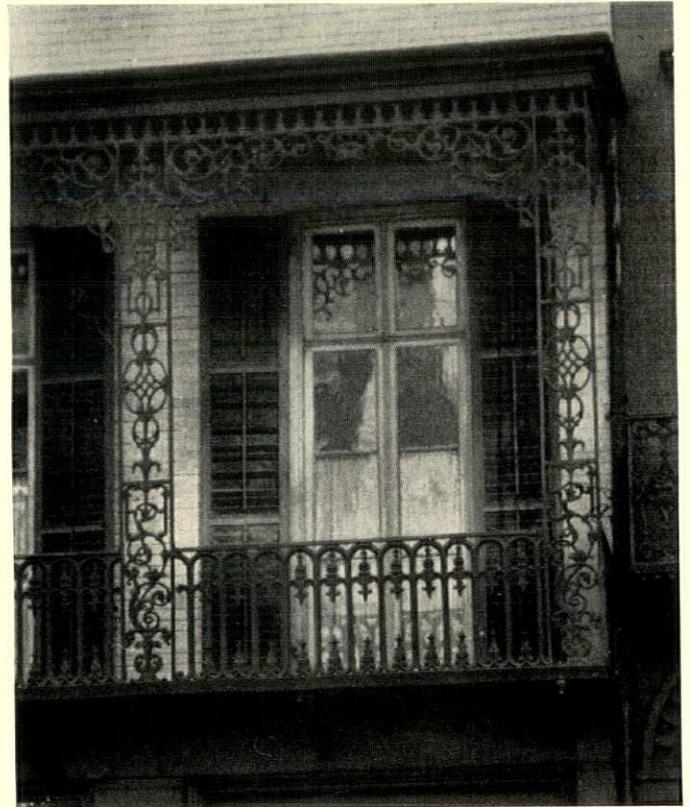
Locust Valley, N. Y.
J. Bradley Delehanty



Old work in
Abington, Pa.



Old work in
New York, N. Y.



East 30th Street
New York, N. Y.

Sunday, November 1.—The architectural professional organizations of New York State are up in arms. Eleven groups protested recently in a letter to the Governor against the selection of the State Architectural Bureau of the Department of Public Works to design the New York State War Memorial Building in Albany. The facts seem to be that Col. F. S. Greene, Superintendent of the Department of Public Works, an able and energetic engineer, has demonstrated to his own satisfaction that the State's architectural work can be designed and executed more expeditiously by his own architectural bureau than by spreading the work among private practitioners. Col. Greene has said as much very bluntly to the architects.

On the other hand, when a state is to erect a great memorial, it seems rather obvious that the state should take every means of assuring itself that the design will be the result of the best plans available. The fact that these plans may be a little slower in getting into action, and possibly a little more expensive, as Col. Greene claims, is insignificant in the final analysis. Twenty-five years from now no one is likely to ask whether this building was designed in a hurry and at low cost. They might very reasonably ask, "Why isn't it a better building?"

Once more it becomes rather clear that if the architectural profession would really get back of the principle of selecting architects for public works by competition, we should have fewer of these periodical arguments. The group of eleven organizations in its letter now urges the selection of architect, sculptor, painter by competition "or otherwise." If the profession had really gotten behind this principle long ago and established it in the public's consciousness, even so doughty a public servant as Col. Greene would not have tried to upset it.

Monday, November 2.—At a New York Chapter meeting the other day, Stephen Voorhees put into very succinct form the scope of the architect's work. Instead of concerning himself, as has too often been the case, merely with the physical phase of his problem, he should feel that his professional service is incomplete without a study of the problem under three heads: the social, the economic, the physical. He will not have reached a defensible solution unless he has considered the problem in relation to society as a whole, and the neighborhood in particular. Obviously economics must also control, for any investment in the building must justify itself. As to the third category, it has

THE DIARY

Henry Taylor

too frequently been taken into account as the sole consideration.

Cleveland, Thursday, November 5.—Lunched with J. Byers Hays, discussing architectural practice of today and its changing character. Hays feels that the architect himself is almost wholly to blame for his failure to assume the leadership in the building industry that his training and professional role should confer upon him. Such leadership, however, will certainly not be vouchsafed to one who is not abreast of the social, economic and technical factors that must direct, as they always have directed, the building of a structural environment. The building of today must be in the tempo of today, utilizing the advancing knowledge of materials, methods and function that science bestows. As with any other profession, or any business, for that matter, he who holds blindly to measures suited to another day and other needs, must be swept aside by the march of progress.

Walter McCornack's housing project, Cedar Central Apartments, is nearing completion, to be ready for occupancy early in the spring. Cleveland's other multiple housing project, Outhwaite Houses, in which Maier, Walsh & Barrett are using black and white brick, is in an earlier stage of construction.

Detroit, Friday, November 6.—Came up from Cleveland this morning on The Mercury, the new train which Henry Dreyfuss designed, from locomotive to ash trays, and in which the day coaches are far more luxurious than were the Pullmans of a few years back.

Found Albert Kahn busy as usual on large industrial work, with one hundred fifty persons in his organization. Mr. Kahn's unusually large library of architectural books caught my eye, and he spoke of the wide difference between the days, not so long ago, when many of these books were in constant use in the drafting room, whereas today they remain undisturbed on their shelves.

One has but to travel from the business center of Cleveland to its newer art center far out on Euclid Avenue, and from the business center of Detroit out Woodward Avenue to the automo-

tive center, to realize how deeply many of our large cities are suffering from the blight that follows lack of rational planning. It will take a major operation to repair the damage done through uncontrolled and haphazard growth.

Cranbrook, Saturday, November 7.—It would be a great thing for the architects of America if the Institute would accept Detroit's invitation to hold the 1937 convention within reach of Eliel Saarinen's magnificent achievement here in Bloomfield Hills. The influence of Williamsburg last year was admittedly benign. The influence of Cranbrook would, I think, be equally stimulating to the creative power of the profession. Mr. Saarinen showed Cranbrook to me today—the boys' school, the girls' school, his own house and some new work now under way. It is as delightfully refreshing as a spring garden.

Like most of us, I had heard glowing reports of Cranbrook from men who had visited it. Enthusiastic and glowing as these reports were, they now prove totally inadequate. One cannot describe the spirit of Cranbrook—it must be seen and felt. I can only urge every architect whose thoughts and aspirations are still active, to go to visit this place. If the A.I.A. Convention is not held here, make a separate pilgrimage to Cranbrook. And do not think for a moment that you can see it in an afternoon or a day. I have tried that and failed. However, the first half hour will convince you that it is a place in which one wants to wander about leisurely, drinking in the flavor of Saarinen's conception, his delightfully unexpected detail, and Carl Milles' sculpture. Surely one outstanding impression that you will get, as I have, is that here is architecture which fulfills its function socially, economically, and physically with constantly repeated evidence that those who made it had a grand time doing it.

Chicago, Monday, November 9.—Spent an hour with John Holabird, drawing from him, between telephone calls and office routine demands, his thoughts about the profession and its most insistent problems. In architecture as in most activities, I notice that it is the busiest men, shouldering the heaviest responsibilities, who find it possible to discuss, leisurely and unmoved by distractions, matters beyond the day's work.

Lunched with Earl Reed in a restaurant recently remodeled by Alfred Shaw of Graham, Anderson, Probst & White with the sparkling collaboration of

Edgar Miller. Earl Reed told me of his recent resignation as director of Armour Institute's architectural school, which resignation Dean Emerson of Massachusetts Tech calls a public calamity.

Chicago, Tuesday, November 10.—I had correlated my travel dates with the purpose of attending the Chicago Chapter's meeting tonight on the subject of architectural education, and I surely builded better than I knew. Dean William Emerson had come on from Boston, Eliel Saarinen from Cranbrook, and Roy Childs Jones from Minneapolis. George C. Nimmons, who served as chairman of the Institute's Committee on Education for many years, introduced each of the three—so if that isn't sufficient authority on architectural education grouped in one place, page Dean Hudnut. The audience evidently thought the subject rather well covered in the three totally different talks, for when the president threw the meeting open for discussion, the silence was unanimous.

Chicago, Wednesday, November 11.—Armistice Day had closed many of the offices here, but I was fortunate in finding F. W. Puckey in, and we held our own memorial service in reliving days far back at Massachusetts Tech. Francis W. Puckey, who by the way, is the thirty-fifth of that name in an illustrious line stretching, I should judge, from somewhere back near the dawn of English history, mused upon the days when the great Despradelles inspired our efforts at design. On one occasion when the patron dropped in at the drafting room in the small hours of the night, he discovered Puckey battling not only his design problem of the moment, but also the chill which followed the turning off of the steam heat. To keep his fingers from becoming too numb to draw, he had gathered into a cluster all the drop lights the cords of which would reach his table, and had them glowing under his smock, a ring of concentrated heat about his body. If the Institute were saving on its coal bill it was an unknowing spendthrift on electric current.

Pittsburgh, Thursday, November 12.—With Charles T. Ingham and William Boyd out to see the second unit they have recently added to Chatham Village. As evidence of the success with which the architects, with the collaboration of Clarence Stein and the late Henry Wright, had solved this problem of giving Pittsburghers a better place in which to live economically, on a hitherto un-

developed hillside, the second unit differs little from the first unit built four years ago. All dwelling units are occupied. Later, at luncheon, where we were joined by Charles F. Lewis of the Buhl Foundation, the latter told us that the investment in this housing—made with some natural misgivings by a conservative board—had, during the recent depression in all securities, proven the best thing in a large and carefully chosen portfolio.

Pittsburgh, Friday, November 13.—Lunched with Charles M. Stotz and Rody Patterson, attempting to find some daylight in the fog surrounding small house practice—apparently as murky in Pittsburgh as it is in Boston, New York, Washington, Buffalo and elsewhere.

Snowville, N. H., Saturday, November 14.—One does get around these days. Catching a three o'clock plane out of Pittsburgh, touching lightly at Philadelphia and Newark, I dined in New York before boarding the State of Maine express for Portland. And now, twenty-four hours away from Pittsburgh, I've lunched in Eastern New Hampshire and am on Kent Mountain looking north at the snow-capped Mt. Washington and the Presidential Range.

Thursday, November 19.—I was talking with Charles Butler some time ago about the procedure involved in the registration of architects, and he invited me to come and sit with the Board to witness a typical day's work. Today, therefore, I sat as a "friend of the court" and watched the procession of applicants. Mr. Edward B. Green of Buffalo is Chairman of the Board, the other members being Charles Butler and William P. Bannister of New York, William G. Kaelber of Rochester, and Professor Francke H. Bosworth of Cornell University; the last named was absent, engaged on some other work of the Board. I left the Board room at five o'clock with a deep conviction that the profession at large little realizes how much unselfish work is involved in this service on the part of men who interrupt their own practice to labor without remuneration in the perpetuation of a growing standard of qualifications under which the profession serves the public. At the present time there are, incidentally, many applications from men who started out as architects in their early days, but soon strayed from the fold into other activities. Falling upon hard times they now seek the help that registration would give them in gaining a higher rate of pay in WPA

or in architectural bureau employment. The members of the Board must weigh carefully and conscientiously the alternatives of refusing help within their power to a man who is down, as against their responsibility to keep the profession itself upon a high plane. I do not envy them their job.

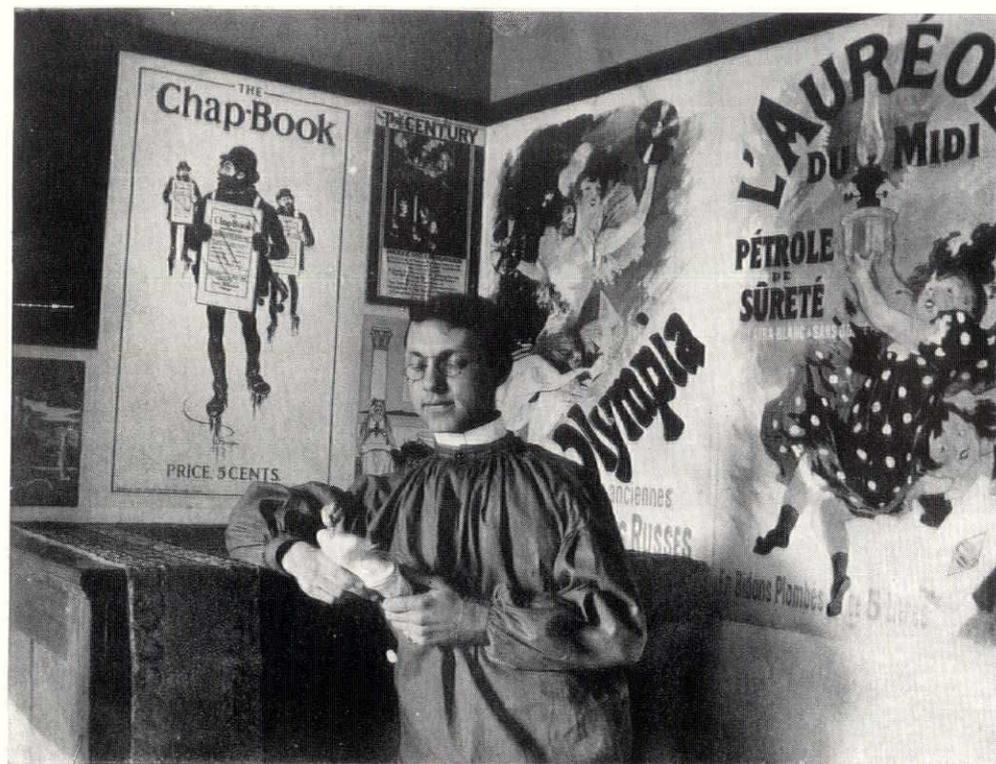
Friday, November 20.—Stanley R. McCandless, who is associate professor of lighting at Yale, spoke today at a luncheon meeting of the American Institute of Decorators. Hearing McCandless speak makes one wonder what the architects and decorators have been doing for these many years. Most of us surely are guilty of designing interiors under a blind assumption that we shall see this elevation of the room under the same lighting in which it was designed. That practically never happens. Professor McCandless' plea is for designers in general to consider four major categories, and to test any design by these measuring sticks: visibility (Can you see under the conditions?); comfort (Can you see comfortably?); both of these foregoing being in the province of the engineer; composition (Are your contrasts, proportions, balance of light and shade going to be radically changed by accidental lighting introduced as an afterthought?); atmosphere (It is perfectly possible, as has been proven again and again on the stage, to produce psychological effects by light which would be impossible by almost any other means).

Monday, November 23.—Charles Dana Loomis up from Baltimore, persuaded that possibly the best and only course for the profession to follow is a constant effort to raise the standard of its membership. Loomis has recently been put on the Registration Board for Maryland, and I imagine the stream of applicants appearing before him and his confreres may have had a good deal to do with prompting his conclusions.

Wednesday, November 25.—W. Duncan Lee, of Richmond, tells me of an interesting item that he has found in the diary of General Cocke for whom Thomas Jefferson built Bremo on the upper James River somewhere about 1814. Here is the item, which will perhaps stir up the embers of the battle between protagonists of flat roof and those of the pitch roof.

"September 19, 1836. Commenced taking off the roof of the House to be replaced by a new one, to get rid of the evils of flat roofing and spouts and gutters—or, in other words, to supersede the Jeffersonian by the Common Sense Plan."

Mr. Bragdon in a characteristic environment of The Poster Period, when Chéret, Steinlen, Willette, Toulouse-Lautrec, Dudley Hardy, the Beggarstaff Brothers, Penfield, and Bragdon himself were adding feverishly to "the poor man's picture gallery"



SALVAGED FROM TIME—II

Extracts from the Autobiography of **CLAUDE BRAGDON**

MY New York experience came to an end rather abruptly: One day Price said to me: "You ought not to be working for me, or anybody, because you have your own ideas. Here, carrying out mine, your talents are more or less wasted. I can get plenty of men, not nearly your equal, who can do my work well enough." I saw that there was something in what he said: in his office I could advance only through the sacrifice of my own individuality. Having no mind for this we parted, with mutual respect and mutual good will.

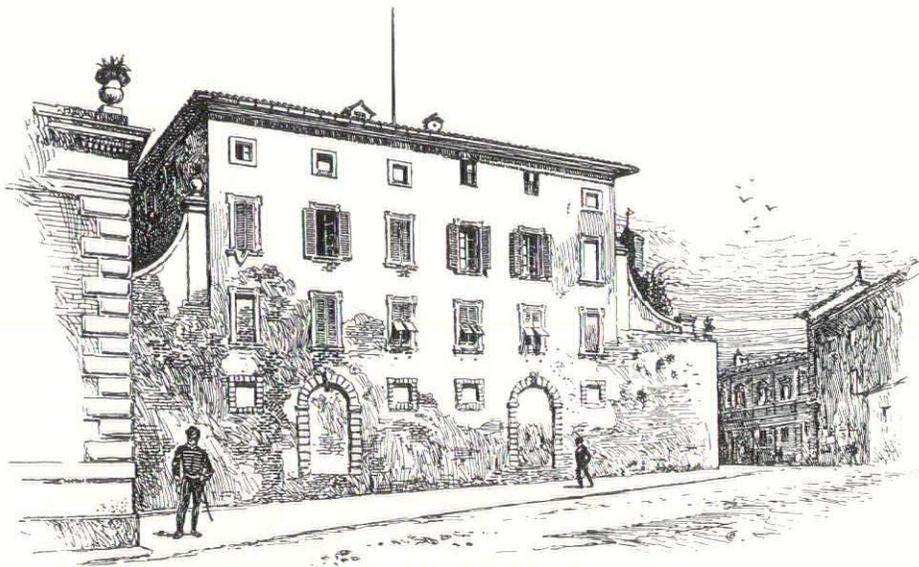
Too poor to put Price's suggestion into immediate effect, I accepted a position with Green & Wicks, then the leading architectural firm in Buffalo, at a salary of thirty dollars a week—an unheard-of figure for those times—the early nineties. There is not much to tell about the Buffalo interlude, which lasted a little over a year, for my life was monastic in its monotony. I took two rooms and a bath in a newly-built apartment house, for bachelors only, on the corner of Franklin and Tupper Streets. My breakfasts were served with

some formality by a gentleman's gentleman who took his vocation with great seriousness. At the end of each day I dined at the Hotel Iroquois in solitary state, and I spent the evening drawing or reading in my room or browsing among the books of the Buffalo Library. I had no social contacts except with the other draftsmen at the office, from choice rather than from necessity, for I was the recipient of a tentative hospitality on the part of several persons which I failed to reciprocate. In short, at that period of my life I was a thoroughly selfish, inhuman sort of a person. No monk in a Spanish cloister cherished more anti-social feelings than I did at this time.

I went back to Rochester, this time with a fairly well-filled purse, to go into partnership with Edwin S. Gordon and William S. Orchard, young draftsmen like myself. We rented a large, bright room in a building on Exchange Street and hopefully waited for clients. As these were slow in coming, we spent the hours of our enforced leisure in long discussions about Art, Woman, and the

Meaning of Life. Gordon, the only married man of the trio, had a particularly hard time that first winter, he and his wife subsisting largely on a potato diet. His was nevertheless the most buoyant and optimistic spirit. He repeatedly declared that poor and obscure as he might be then, the time would come when he would be doing work for George Eastman, Rochester's wonder-worker, the Kodak King. And this actually came to pass. Years afterwards the architectural firm of which Gordon was founder and head was engaged almost exclusively upon the many and large building operations of this great philanthropist.

After that first lean winter we succeeded in building up a sufficient practice, though there were times when one or another of us was forced into the field of industrial designing, or took temporary employment in the office of some other architect. When we had nothing else to do we went into competitions. One of these was for a new city hall for the city of New York, on the site of the present city hall. We



A leaf from Mr. Bragdon's first European notebook—
the Palazzo Commenda Vecchia in Siena, July 14, 1895

worked on it all one summer, and our design won a place among the first six out of a field of more than three hundred, entitling us to a prize of two thousand dollars. But the State Legislature passed a bill forbidding the destruction of the beautiful and historic old city hall, and the prize winners were forced to take legal action in order to get their money. This, after much delay, they finally accomplished, and we received our share minus the lawyers' fees.

I remember this period of my life as one of varied activities and diversified interests, one in which my ear was more attentive to the murmur of the outside world than to that of my immediate environment, for after my brief experience in New York, Rochester seemed insufficiently exciting. These were the Gay Nineties, when the century was hurrying to its close with an accelerating movement which finally precipitated us into this Age of Distrust. The decade was differentiated from the one which preceded and the one which followed it by phenomena peculiar to itself. The memory of these has been so submerged by the tidal waves of change that certain things are likely to remain unrecorded unless salvaged from time by memoirs such as these. Let me therefore communicate if I can some of the faint, fine flavors of this *fin du siècle*.

The Eighteen Nineties have been variously named "The Mauve Decade," "The Yellow Book Period," "The Purple Cow Period," and "The Poster Period." Let me try to explain what these cryptic and colorful titles mean. The color mauve is faintly suggestive of decadence, the absence of positive and vir-

ile qualities—"pink trying to be purple," as Whistler said. The Nineties were like that: affectedly refined and a bit anaemic. *The Yellow Book* was the name of an English quarterly the tone of which was given by Aubrey Beardsley, whose genius was perverse and morbid. "The Purple Cow" was just a glorious piece of nonsense, meaning nothing; the symbol, therefore, of a time in which nothing seemed to make sense or to be important. In the same spirit is the following quatrain also by Gelett Burgess:

The towel hangs against the wall
And somehow I don't care at all.
The door is open: I must say
I rather fancy it that way.

All this is obvious enough, but the Nineties as "The Poster Period" requires more explaining. A little earlier there occurred in France a revival of the graphic arts and the development of color lithography. As a result the hoardings of Paris blossomed with posters which gave them the name of "The Poor Man's Picture Gallery." Jules Chéret inaugurated the movement with a series of colorful posters full of the gay *insouciance* of Parisian night-life, and these so captivated the popular fancy that other distinguished artists turned to the poster as a medium of expression. Revelling in a new-found freedom, they made a brave and various display of virtuosity. There were fresh-faced children and sinister black cats by Steinlen, arch-satirist of *Gil Blas*; chic shepherdesses and wistful pierrots from the subtle crayon of Willette, Watteau reincarnate; cafe and music hall types done

a la Japonais by Toulouse-Lautrec, past-master of elimination; and Grasset's stained glass and tapestry figures turned to the uses of the advertiser. Jossot, Vallotton, Relier-Dumas, and all that brave company of the *Salon des Cent* were here represented. From Paris the gay contagion spread to other centers: the drabness of London thoroughfares was relieved by the red and black and white of Dudley Hardy's "Gaiety Girl" and the Beggarstaff Brothers' (Pryde and Nicholson) "Beef-eater" and "Don Quixote" posters. Edward Penfield started the craze on this side of the water with his distinguished series of posters to advertise *Harper's Magazine*, creating an excitement which stirred others to emulation, myself among them, with the result that I produced several Chap Book posters for Stone & Kimball, and one for Harper & Brothers. This announced the publication of George du Maurier's novel *The Martian*, and oddly enough it precipitated my meeting with Gelett Burgess, because when I submitted my original drawing its patch of violet sky prompted the art editor to remark: "By the way, the author of 'The Purple Cow' is in the other room; wouldn't you like to meet him?" This meeting marked the beginning of a friendship which has lasted to this day.

In 1895 I dissolved partnership with Gordon and Orchard, and translating all the money I had in the world—about six hundred dollars—into traveller's cheques, I embarked for Europe on the Atlantic Transport liner *Manitoba*. This was a cattle boat carrying also about sixty first cabin passengers, and the crossing took twelve days. I was seasick part of the time, but I so loved the ocean that I wanted never to get to land. The only celebrity on board was William Faversham, who endlessly amused our little party with well-told tales of his adventurous life. Only the other day I saw his gigantic simulacrum on the screen of Radio City Music Hall, decked out in the trappings of the Duke of Wellington in *Becky Sharp*. I suppose that is as near as we shall ever come to meeting again this side of the grave.

I spent a month in London making measured drawings at the South Kensington Museum, strolling about the streets and parks, taking long rides on the tops of buses, and absorbing new images of beauty in the British Museum and the National Gallery. Then I crossed the Channel and had a tourist's glimpse of Paris in a brief pause on my flight to Italy, which had all along

been my chief objective, and to which I looked forward with a lover's eagerness.

Arrived in Turin I experienced my first fulfillment. The occasion was nothing; the items which composed the picture, commonplace; but they worked their potent magic for all that: a high-perched, bare, lofty, tile-paved chamber; a cat sunning herself on the warm tiles of the roof across the way; a woman looking into the street below out of a near-by window, her folded arms embracing her shrugged-together breasts; my first meal, out on a little balcony—green tomato salad, rough red wine, sweet crusty bread. It was all so different from anything I had ever experienced, and yet somehow like a home-coming—I cannot describe it otherwise.

I wore old clothes, carried all my possessions in a canvas telescope bag, patronized only third class hotels, but I had never lived so comfortably or so well. In Siena, for a lira a day, I rented a great room in the palazzo Piccolomini-Bandini, commanding a view of stairways, terraces, and neglected gardens operatic in their scale and grandeur; and in Venice, for a price no greater, I had a room in the rear of Santa Maria della Salute the windows of which overlooked the Giudecca and the more distant Adriatic. Though I visited all the cities of the Lombard Plain, and Pisa, Genoa, Bologna, Florence and Rome, I stayed longest in Siena and Venice because I loved them the best.

In my very first hour in Siena I plunged down some steps under an archway into the great shell-shaped Piazza del Campo. There, sure enough, rose the Tower del Mangia out of the top of the Palazzo Publico, like a feather in the hat of a captain; and ranged all about in the form of a huge semi-ellipse were many-storeyed Gothic palaces between which the narrow streets seemed to have fairly forced their way in order to empty themselves into the great shallow basin of the Square.

Guided by the lofty black-and-white-barred campanile, I made my way in its direction and entered the famous Cathedral of Siena by way of a side door. At the hour the interior was in semi-darkness, but Perin del Vaga's great circular window at the end of the nave still glowed with rich color, and above the ribbed wall and clustering columns I could distinguish the ultramarine vault, like some lesser firmament powdered with golden stars. In the vicinity of the choir some sort of service was in progress: a group of worshippers led by a black robed priest intoned at intervals in unison; lighted candles twinkled on the altar, and the smoke of in-

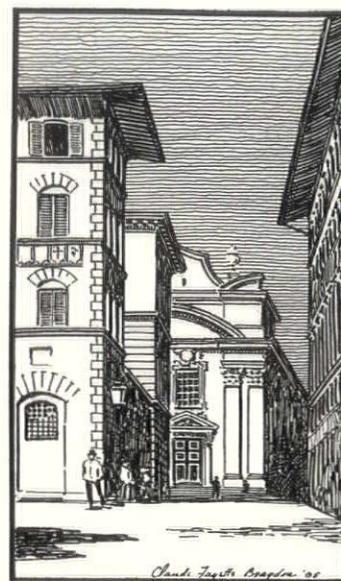
cense lingered in the heavy air. Two beggars loitered at the entrance waiting to waylay belated sight-seers like myself; near them a solitary artist was working feverishly to complete his drawing before the daylight died.

Such were the first impressions of two weeks so full of similar reactions to strange beauty that I had great difficulty in tearing myself away. After the ponderous doors of my palace had swung behind me for the last time, I looked back so often at sights which I had come to love that I almost missed my train and had to run for it.

Venice is a shattered rainbow built into a city: there for the first time I got out my color box—I had been drawing only in black and white before. Imagine tints of pearl and faint flesh-color, pinks like the inside of a sea-shell, gray-greens, pale sapphires, tender violet, with here and there a red or brown or ultramarine as deep and thick as velvet. Weave them all into a ribbon of color welded to forms strange and enchanting, and conceive the whole mirrored and multiplied in rippling sea-green water under a sky where flocks of feathery clouds chase one another all day about the horizon. This is as near as I can come to describing my impression of the Grand Canal—of Venice.

I used to have my dinner at a little open-air restaurant on the Giudecca, so near the water that it was like being on the deck of a boat save for the grape-arbor overhead. The descending sun would bathe the towers, domes and palaces in orange light, and then the shadows would creep stealthily along the quay, playing strange tricks with the imagination. Every sound over the oily water would reach the ear subtly transformed and magnified, so that the dip of a distant oar seemed like the recurrent sobs of a woman, and the bells from some far-off church tower, like a funeral knell. The sun, gone down in a fanfare of red and yellow, left only the streaks of bloody fingers to betray his passage, and by the time I had finished my coffee it was dark. Oppressed by the melancholy induced by a greater burden of beauty than I could bear, I would flee for refuge to the thronged Piazza.

It was at a time of some prolonged religious fiesta, and there were fireworks in the harbor and the band played on the Piazza every night. I used to land from the *traghetto* at the Piazzetta and wander up and down and around until I was fairly drunk with music and multitude: until I experienced that strange form of intoxication which is perhaps the effect of the meeting and

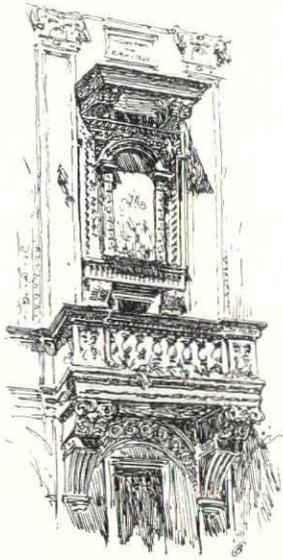


An early drawing of Mr. Bragdon's for a booklet cover

mingling of one's aura with the auras of so many others. It is a form of stimulation which to a sensitive and impressionable nature is both fascinating and dangerous.

Just as Rome has its malaria, so Venice afflicts one with some nameless malady of the soul. What is more depressing than withered flowers, the remains of a feast, or souvenirs of bygone pleasures? Venice is a city of pleasure-houses fallen to decay—or so at least I found it. The illness I speak of never attacked me on the Piazza or on the Grand Canal, for there the stream of life was strong and warm, but only when I floated or wandered in unfrequented ways where the seaweed stained the unfooted steps of palaces without a name; where traceried windows were boarded up, where ruinous stairways mounted upward not to sumptuously furnished chambers but to the noisome barracks of the poor. Venice was like Vivian: she cast a spell. My imagination and my creative faculty seemed to be stimulated, but the power of performance was gone. Yes, I was getting soft! By the rock-bound coast of New England and the stone-strewn pastures of northern New York, Venice was no place for a Bragdon! So I packed up my belongings and fled northward.

I spent the month of September in Paris. For a franc a day I rented an attic room five flights up, over a wine shop. It was on the left bank, opposite the Island, and my dormer window exactly framed the exquisite flèche of the historic Sainte Chapelle. Whenever I looked down on the scene below, Paris



From the European sketch book—Balcony of the Stracciatori Guildhouse, Bologna

clutched me by the throat. To the left stretched the grand procession of bridges and the long, gray, many-windowed Louvre; to the right towered the grim mass of the Cathedral of Our Lady, the boulevard's traffic eddying about its base like some brawling torrent at the foot of a cliff. The elephantine buses rumbled on the bridges; the cabs sped swift and silent underneath the chestnut trees; the kiosks flared licentious images; men and women sat and drank at little round tables, chattering endlessly, gesticulating wildly, while the band in a near-by café played gay and languorous waltzes which mingled discordantly with the manifold noises of the street.

I had two friends in Paris—Americans like myself—and we devoted our serious attention to the discovery of places where the dinners were both cheap and good. After a week or so of this sort of vagrancy we settled upon the Café Léon, where one could get a six course dinner and a pint of wine for a franc and a half. Our life thereafter became one long waiting for meals. To pass the time we went for our mail at Cook's; we flattened our noses against the window to read the *New York Herald*; we sat long over small bocks in front of cafés, watching the changing figures of the crowd; and we spent an hour or so of each day at the Louvre, palace of art and of encounters. Sometimes we went book and poster hunting along the quays and bought queer trash for no other reason than because it was cheap. We hung over the parapets which lined the river and

watched the clumsy footed horses being watered and the meek black poodles being clipped, all the while keeping a fascinated eye upon a boat in mid-stream where two men pursued an occupation more or less remotely related to the morgue.

All this was merely by way of passing the time: the serious business of each day was dinner, and at the appointed hour we gathered at the Café Léon with appetites which only "wine red" and "beefsteak very bloody" could appease. We sat so long after this meal that when we emerged the streets were festal and alight, teeming with intimations of mysterious pleasures. My friends would usually go their way, which was toward the boulevards, and I mine, which was back to my attic, for my funds were getting low. Sometimes, however, we spent the evening smoking and talking on Philip's little balcony at the Hotel Quai Voltaire, the stars shining above, the river quivering with lights below, and the mile-long palace of departed kings showing above the dense black foliage of the opposite shore. Or again we would all get into a cab and be driven to the Café Chat Noir to witness one of those shadow plays presented nightly in its little theatre.

This theatre had none of the appearance of one: it was a high, square room, seating about a hundred people, and it contained nothing in the way of furniture and decoration except chairs, an upright piano, and a frieze of Chéret's gay-colored posters without lettering. The extinguishing of the lights revealed the stage: a luminous parallelogram in the wall directly over the piano and of about equal width. Within this frame, to the accompaniment of appropriate music, was enacted a shadow play by means of moving images of an altogether unique kind.

What gave these performances their importance was the eminence of the talent enlisted: the cleverest draftsmen in Paris strove to outdo one another in this novel medium of expres-



From the European sketch book—A Minaret from St. Mark's, Venice

sion. The artists' designs were cut out of sheet metal and introduced into the proscenium opening where they appeared as silhouettes against a lighted background. Animation was achieved by means of supplementary mobile units in the shape of such things as boats, carriages, animals, persons, sometimes articulated after the manner of the two-dimensional Javanese puppets and manipulated by hand from below. The chief interest dwelt in the beauty of the designs, some of them extraordinarily intricate, and the creation of the illusion of perspective, atmosphere, action, by these simple means.

The shadow play which I remember best was an epitome of the life of Napoleon called "L'Etoile," by Caran d'Ache, the famous caricaturist and a consummate draftsman. The little lighted rectangle above the piano became in turn a plain filled with maneuvering troops, a battlefield of contending armies, a crowded boulevard along which passed the carriage of the Emperor. One saw Napoleon on camelback crossing the desert, on horseback surrounded by his marshals, on foot alone before his smoking camp-fire, gazing seaward from the rock of St. Helena, and in countless other presentments. It was an evening which I remember with delight. Although made on an entirely different principle, these shadow plays were closely akin to the animated cartoon of today for the reason that both are products of the artist-consciousness dealing freely with material of its own invention in its own individual way. (To be continued)

AUTOMATIC COAL BURNERS

By H. VANDERVOORT WALSH

AUTOMATIC coal burners offer the means of burning efficiently the less costly grades of coal, with the minimum of hand labor. They provide an even supply of heat capable of delicate control by thermostats.

Unlike the attendant who stokes fires by hand, these machines are on the job all the time. When heat is needed in the building, they supply fuel to fires immediately. When the building is warm enough, they bank fires. No opening and shutting doors to cut down efficient combustion is necessary to carry on these operations. Properly adjusted to feed coal and air in correct proportions, they show an increase of efficiency from 10% to 25% over hand-firing of the same boilers or furnaces.

Because of this greater efficiency, these machines can burn the cheaper grades of coal. For example, domestic types of burners, designed to use anthracite, can burn the grade known as Buckwheat No. 1 or Buckwheat No. 2 (Rice). These grades usually cost about \$7.00 to \$7.50 a ton, as compared to larger sizes of coal needed for hand firing which cost about \$12 to \$14 a ton. Bituminous screenings, specially prepared and dustproofed, can also be smokelessly fired by automatic bituminous coal burners.

Savings due to lower fuel cost and more efficient burning are particularly noticeable with those models required for the average size commercial building where a considerable coal tonnage is burned during a heating season. Installations of this kind have developed from 40% to 50% returns on the investment.

Most domestic coal burners operate only intermittently. When not in operation the fire in the pot or retort is banked and gives off a gentle heat which keeps the heating system from chilling. This is an advantage in maintaining a more uniform heat in the building, not equalled by the average type of oil or gas burner.

Usually complaints about automatic coal burners can be traced to use of the wrong coal or to wrong installation. Burners designed to operate with anthracite coal do not always work satisfactorily with bituminous coal. Likewise the Barley and the Rice sizes of anthracite will not burn with the same efficiency as the Buckwheat. If the heating plant is undersized, this may be very noticeable. Besides these examples of the use of the wrong coal, inspections have revealed many impossible conditions for operation, such as piles of ashes which slide down over the motor, flooded cellars or coal containing stones and nails.

During the last few years, thousands of service engineers have been trained by companies interested in coal production and utilization and leading stoker manufacturers maintain staffs of field engineers to insure correct installation.

A large percentage of automatic coal burners are sold for home use, although commercial installations can be made to fire all types of boilers. Larger size stokers must justify themselves more on the basis of economy of operation than on labor saving. Owners of large buildings must employ

firemen or janitors to operate the heating plant and if the stoker can show savings such labor can often be released for more productive work.

OPERATING COSTS OF COAL BURNERS COMPARED

A group of manufacturers made a survey in a few mid-western cities to determine the economies developed by stokers installed in commercial and industrial buildings. They concluded that in fuel costs, compared to hand-firing, there was an average reduction in fuel cost of 39%, and an annual return on the total investment in stokers of 39%. The average reduction in coal tonnage was 23%. Savings were somewhat higher where other fuels had previously been burned. Figuring the annual return on the investment in stokers on the entire group of plants studied, they calculated that it was 47%, with an average saving in fuel costs of 49%.

To develop highest efficiencies, it is important that coal burners be properly installed, with sufficient head room and combustion space. During the past two or three years, boiler manufacturers have brought out boilers for stoker firing with ample combustion space built into the boiler. However, most boilers designed for hand firing, and already in use, are suitable as they stand, for the installation of coal burners on a floor setting. In other cases it may be necessary to install the coal burners in a pit setting, or raise the boiler, in order to give proper combustion space and top efficiency. These changes are easily made, at relatively small expense, in accordance with engineering standards approved by leading stoker manufacturers and the Stoker Manufacturers Association.

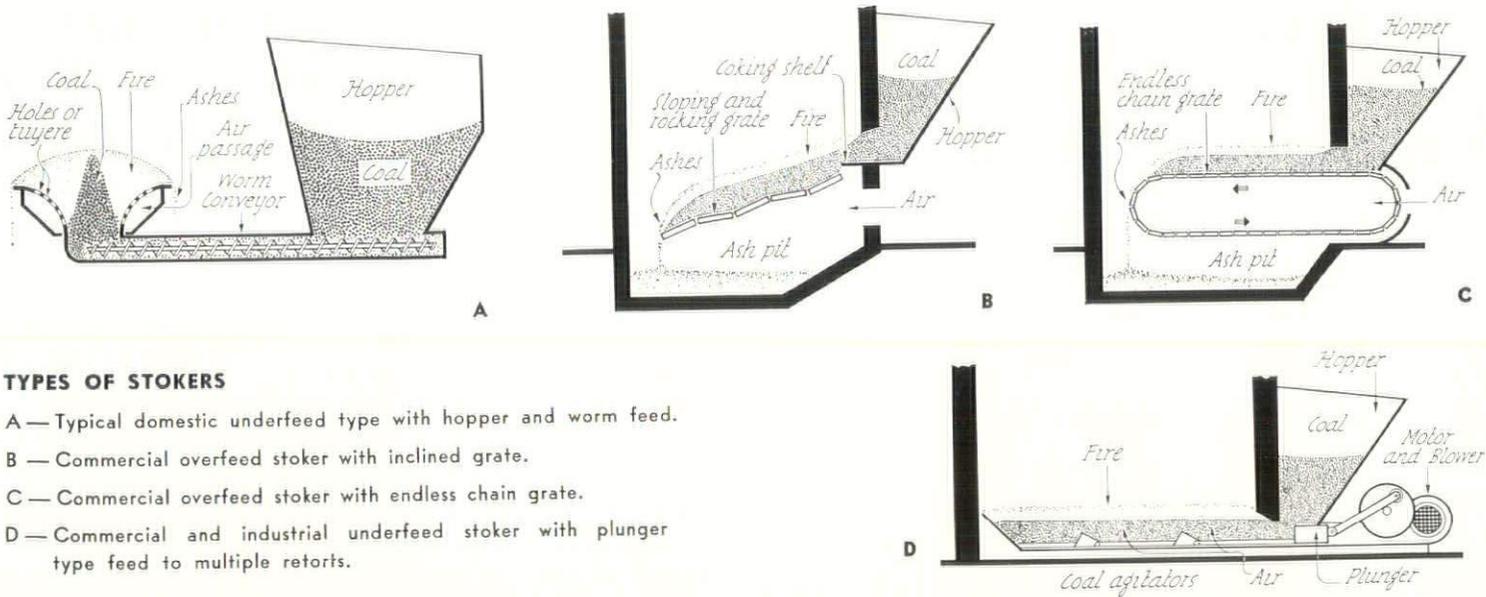
In making comparisons, it is necessary to take into account the cost of electricity used in operating the mechanism. For seasonal estimates of the cost of running a domestic stoker, it has been found that from 20 to 30 kw-hr is about the average per ton of coal burned. Some installations have shown results as low as 10 kw-hr. For estimating the electric consumption of oil-burners, an allowance of \$25 per season is commonly made.

A fair comparison must consider that the initial cost of installation of stoker, oil or gas burners should be written off in ten years. The interest on this investment should also be included as well as the allowance for servicing estimated as ranging from \$5 to \$20 a year.

Without taking all of these matters into consideration, the comparison of fuels on the basis of their heating value may mean very little.

Any formulae developed for estimating comparisons are also full of assumptions. For example, the ones quoted here assume that hand-fired coal boilers are 50% efficient, that boilers fired with automatic coal burners are 60% efficient, that oil fired boilers are 70% efficient and that those fired with gas are 80%.

The calorific value of the fuel must also be assigned and



TYPES OF STOKERS

- A—Typical domestic underfeed type with hopper and worm feed.
- B—Commercial overfeed stoker with inclined grate.
- C—Commercial overfeed stoker with endless chain grate.
- D—Commercial and industrial underfeed stoker with plunger type feed to multiple retorts.

this is open to difference of opinion. Values used here are 13,000 Btu for a pound of coal, 141,000 Btu for a gallon of oil and 535 Btu for a cubic foot of gas.

By substituting these assumed values in the following formulae and also the local cost of the different fuels, a comparison can be made in costs. The costs of the fuels assumed here are \$12 a ton for coal in the hand-fired boiler, \$7.50 a ton for the coal for stoker, 8 cents a gallon for oil, and 60 cents a cubic foot for gas.

Cost in dollars per million Btu is estimated as follows:

Hand-fired Boiler

$$\frac{500 \times \$12 \text{ per ton}}{13,000 \text{ Btu per lb.} \times 50\% \text{ efficiency}} = \$9.2$$

For Automatic Coal Burner

$$\frac{500 \times \$7.50 \text{ per ton}}{13,000 \text{ Btu per lb.} \times 60\% \text{ efficiency}} = \$4.8$$

For Oil Burner

$$\frac{1,000,000 \times 8 \text{ cents per gal.}}{141,000 \text{ Btu per gal.} \times 70\% \text{ efficiency}} = \$8.1$$

For Gas Burner

$$\frac{1,000 \times 60 \text{ cents per cu. ft.}}{535 \text{ Btu per cu. ft.} \times 80\% \text{ efficiency}} = \$1.40$$

TYPES OF AUTOMATIC COAL BURNERS

The Stoker Manufacturers Association has classified stokers into four sizes according to the number of pounds of coal they burn per hour.*

Class 1. For domestic use only.

Consume up to 60 pounds of coal per hour.

Class 2. For apartments and small commercial buildings.

Consume from 60 to 500 pounds of coal per hour.

Class 3. For general commercial buildings and small high pressure steam plants.

Consume from 500 to 1200 pounds per hour.

Class 4. For large commercial structures and high pressure steam plants.

Consume from 500 to 1200 pounds per hour.

According to the way the coal is fed into the fire, there are two types of stokers, one called the "under-feed" and the other the "over-feed."

Those domestic coal burners which have an ash removal conveyor are primarily designed to burn small sizes of anthracite known as Buckwheat No. 1 or Buckwheat No. 2. The coal is moved into the retort in the boiler through the bottom by a conveyor tube in which is either a revolving worm or a reciprocating plunger. This is an underfeed type. Since bituminous coals do not reduce to a feathery ash, on most models designed to burn them, the ash removal worm is usually omitted. They are, however, underfeed types and the grade of bituminous coal called "washed pea" or "prepared stoker screenings" is recommended for use in them. Clinkers are removed through fire doors or dumped into the ash pit for later removal. In clinker form the residue of bituminous coal is about 70% less bulky than ashes resulting from hand-firing.

The majority of stokers installed in small commercial buildings and apartments are also of the underfeed type. The ash removal feature may be omitted if a paid janitor is in charge who can take out the ashes through the pit door at the rear, or side.

For the same class of building an overfeed type of stoker with an inclined grate is often used. As the coal drops from the bottom of a hopper it is pushed in at the top of the grate. As it burns rocking steps of the grate move it downward towards the back of the boiler. When it reaches the rear it has been reduced to ashes that drop off into a pit. This type of stoker is usually not fully automatic in control.

*Starting with January, 1937, the Bureau of the Census will use a revised form for reporting stoker sales, the most important feature of which, from our point of view, is that sales of anthracite burners are for the first time to be reported separately. To quote from report of the Committee of Ten, Oct. 30th: "Instead of reporting residential stokers up to 100 pounds of coal per hour, Class 1 in the new form will show residential size stokers as having a capacity under 61 pounds of coal per hour and will show the sales of bituminous and anthracite burners separately. Class 2 for small apartment houses, flats and general small commercial heating jobs will be rated as having a capacity of 61 to 100 pounds of coal per hour; Class 3 for apartment house and general small commercial heating jobs will be shown as having a capacity of 101 to 300 pounds of coal per hour; Class 4 for large commercial and small high pressure steam plants (small industrial) will be rated as having a capacity of 301 to 1,200 pounds of coal per hour; and Class 5 covering high pressure steam plants (industrial sizes) will be everything from 1,201 pounds of coal per hour and over."

Another type of overfeed stoker makes use of a moving, flat grate. As coal is pushed onto this grate, which is like an endless chain, it is moved inward and gradually consumed. At the back of the boiler the grate bends down to return to the front again, and ashes are dropped off into a pit. This type is found only in larger industrial plants.

A third type of overfeed stoker, the pneumatic spreader, was recently introduced. It floats steam size coal into the furnace on a stream of high velocity air. The fines burn in suspension and the larger pieces fall on the grates, where they burn in a shallow layer. The pneumatic spreader is especially adapted to the firing of power and process boilers for industrial uses.

For large commercial installations and high pressure steam plants stokers are all underfeed type with multiple retorts. Plungers which force the coal in are assisted by moving distributors that spread the coal. Removal of ashes is through the back.

DETAILS OF THE OPERATION OF DOMESTIC MODELS

The coal burners which are marketed today for use in private homes are all underfeed types. Most of them use a revolving worm in a conveyor tube to move the coal into the retort. A few use a plunger or piston drive. The latter requires a hopper for the coal directly in front of the boiler. The former may do away with the hopper and draw the coal in from the bin through an extended conveyor. In both cases the mechanism is intermittently operated by a motor.

As for ash removal, some models, designed for anthracite, catch the ashes as they drop over the sides of the retort, sweep them with a revolving iron finger into another conveyor tube and outward into the ash cans.

Models designed to burn bituminous coal do not always have this ash removal mechanism because the smaller percentage of ash makes it unnecessary. The hard clinker that is formed by burning this coal is not easily broken up and removed by mechanical methods. It can be handled manually through the fire door—a quick, comparatively simple operation.

BURNING THE COAL

The main job of the stoker is to burn the coal efficiently. The underfeed types force the coal up through the bottom of a circular retort. As it reaches the top, it begins to burn, and the air needed for combustion is blown into the fire through holes called *tuyeres* around the rim. The upward movement of the incoming coal gradually forces the burn-

ing coal at the top out to the rim of the retort. Eventually the coal is reduced to ashes which fall over the edge.

Air is blown by a fan through tubes leading into the tuyeres around the retort. To prevent gases of combustion from getting back into the hopper an air injector tube is run from fan to coal tube. Best results in combustion call for about 220 cubic feet of air to each pound of coal burned per hour. About two thirds of this supports combustion and the other third supplies necessary excess air.

Practically all domestic stokers which use anthracite are designed to use Buckwheat No. 1 which ranges in size from 5/16" to 9/16". They do not burn Buckwheat No. 2 as efficiently. If the heating plant is undersized, it is advisable not to use this smaller coal. The finer grade, known as Barley, or Buckwheat No. 3, should not be used at all, since it tends to clinker and burn in spots.

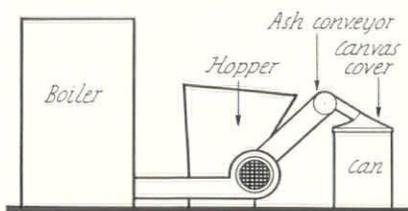
When a stoker has been adjusted to burn a certain size coal efficiently, another size should not be used, unless new adjustments are made.

Another factor which has to do with the efficiency of burning coal is the distance that the top of the retort is placed below the dome of the boiler. In general, the best distance has been found to be 29". In most cases the stoker grate should be approximately the level of hand-fired grates. If the stoker is adjusted to a certain size boiler, and it is desirable to pass the coal conveyor under the floor to the bin, the whole boiler should be depressed with the stoker, so that the height of the internal parts will remain the same as designed.

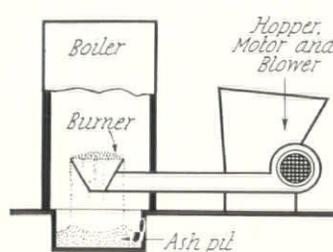
Overfeed stokers for larger installations are suitable for burning the small sizes of anthracite or breeze coke and also bituminous coals, the characteristics of which make it desirable to burn the fuel without disturbing it. The arch of the furnace should be at front to ignite incoming fuel.

The overfeed stoker with the flat moving grate is suited to all types of coking fuels but preferably to those of low volatile content. The grate action has a tendency to keep the fuel bed broken up allowing for a free passage of air. This constant agitation is not so desirable for badly clinker-ing coals. Like the other stoker, this needs the arch of the boiler at the front to ignite the volatile gases.

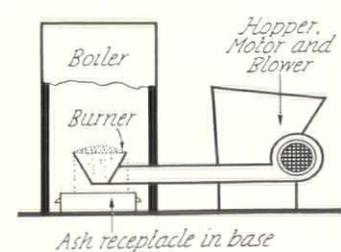
Underfeed stokers for small commercial installations which have dead plates on which the fuel rests while combustion is completed, require coal that reduces to a clinker at the furnace temperature. This type requires the ash to be removed through the fire door with the least disturbance to the fuel bed.



Stoker for anthracite with automatic conveyor for ashes, depositing in covered can



Stoker for anthracite for use in buildings where janitor labor permits hand ash removal from pit. Also representative of bituminous coal and coke stokers of underfeed type where clinkers must be removed manually



Similar to last, except for provision of a removable ash receptacle instead of ash pit

METHODS OF ASH REMOVAL, DOMESTIC STOKERS

Those models of underfeed stokers that have shaking grates permit the air by natural draft from the ash pit to pass up through the outer rim of the bed. A large part of the ash is shaken down into the pit beneath, while the clinker is removed through the side doors.

FLY-ASH PROBLEM

Improper adjustment or operation of a stoker may produce excessive fly ash which passes up through the boiler and covers the heating surfaces tending to reduce their efficiency as would an insulator. It may filter through crevices in the doors of the furnace and fill the cellar rooms with a gray dust.

To prevent the escape of fly-ash into cellar rooms, the boiler used with a stoker should have ground doors or doors sealed with cement which is removable when cleaning is necessary.

Excessive fly-ash may be caused by too high velocity of air through the fire, inadequate furnace height and excessive natural draft. The first can be corrected by adjusting the air flow, the second by selecting the proper model of boiler for the stoker and the third can be overcome by an automatic draft control, which is easily installed on the breaching.

During the heating season, this fly-ash should be cleaned out of the passages in the furnace at least twice. It is possible in some communities to get the local coal dealer to clean out the boiler and flues with a large vacuum cleaner made for this purpose. This should be made a part of the necessary service for an installation of a coal burner.

ELECTRIC CONTROLS

Most domestic coal burners are controlled by a thermostat and operated intermittently. When the temperature in the house drops below 70 F. the switch on the thermostat is thrown and the motor energized. Coal begins to feed into the retort and air is blown through the tuyeres. Smouldering coals in the retort begin to brighten up and the rising stream of new coal at the center moves them upward, until gradually the entire bed of coal is ignited. Even after a prolonged period of twelve hours of inactivity, the fire can be regenerated in this manner.

In mild weather, however, there may be periods of inactivity so long that the fire in the retort goes out completely. To prevent this a thermostat may be installed on the stack which activates the motor, if the heat from the banked fire gets too low. A time mechanism may also be used which will start the stoker at regular intervals regardless of the

thermostat. When bituminous coal is used a combination of time control and stack control is used.

When the house is warmed and the temperature goes above 70 degrees, the thermostat will break the circuit and the motor will stop operating the coal and air supply. The fire in the retort then is banked, but always a small fire continues. This gives off a gentle heat to keep the system from becoming completely chilled.

Automatic "day and night" thermostats are available, which enable the home owner to maintain one temperature level during the day, and a lower level during sleeping hours. The change is made automatically in the morning and at night by an electric clock time switch.

Lack of adequate air circulation in a room has a tendency to create what is called "cold-70". This results when the temperature at the floor is lower even though it is 70 degrees at the thermostat level. About sunset on winter days, this condition is most noticeable.

The right types of heating plant will overcome this "cold-70". The system best adapted to overcoming this "cold-70" condition is warm air with forced circulation. A vapor vacuum system comes second, but where this is too costly, a hot water system is recommended. To speed up the response of the hot water system a small electrically operated pump should be installed on the main. This pump should also be connected to the thermostat, so that it will be actuated at the time the stoker begins to operate.

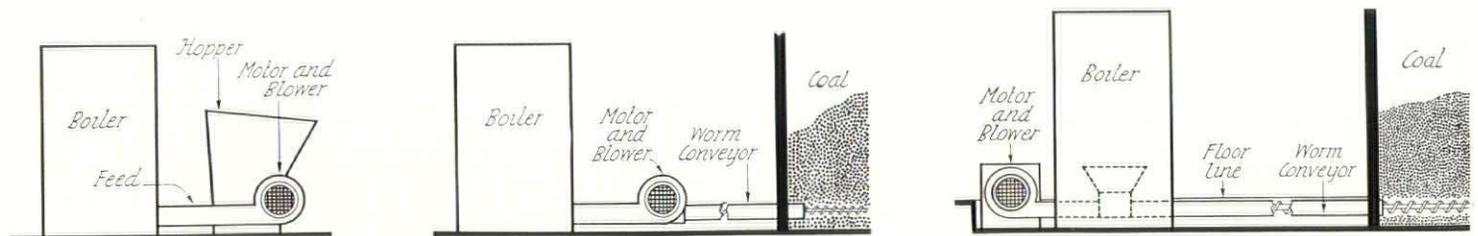
It has been observed that an intermittently operated coal burner set to maintain a temperature of 70 degrees F in zero weather will operate approximately 32% of the time. It has likewise been noted that a continuously operated stoker will operate at an average point equivalent to 32% of its maximum rating.

Motors must have sufficient capacity to run the entire unit continuously at the maximum rating of the burner without overheating. They should also be free from interference to radio reception.

Some manufacturers use a capacitor motor. These motors may have built-in overload protection which makes overloading impossible. Others use an overload clutch built into the belt drive pulley, or an easily replaced soft steel pin which shears if some foreign object gets into the coal supply. Some manufacturers use both a capacitor motor with built-in overload device and a shearing pin or release clutch.

SUMMER HOT WATER

For summer operation of the stoker to supply domestic

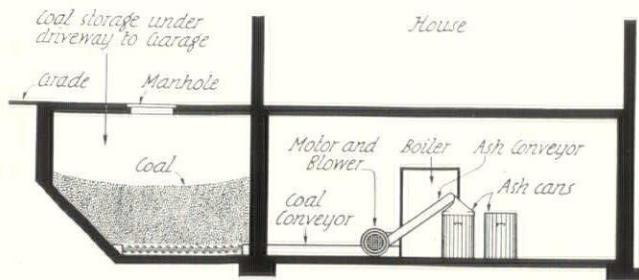


METHODS OF FEEDING FUEL TO DOMESTIC STOKERS

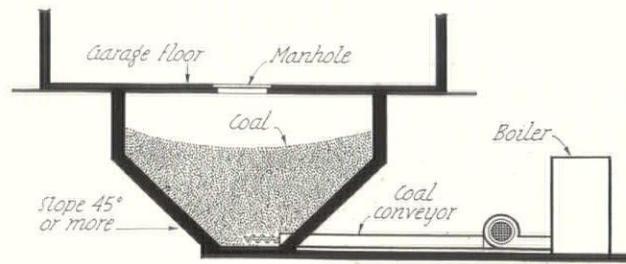
Hopper filled manually from bin at periodic intervals. In large installations a battery of hoppers may be filled by gravity from overhead bins and a traveling chute

Automatic worm screw-feed, above floor level from bin to retort

When worm screw feed from bin must be depressed below floor level the whole boiler and stoker mechanism must usually be depressed. Blower and motor may be on either side of boiler, according to make.

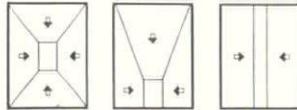


Typical installations with bin outside of foundation for direct unloading from driveway. Also may be within foundation walls with chute for gravity delivery



Optional location when attached garage permits use of space beneath for fuel storage. Load bearing roof of bin serves as floor of garage and manhole is sheltered from rain and snow

LOCATION AND TYPE OF FUEL STORAGE BIN



All bins serving automatic screw feed stokers should have steeply sloping sides of one of the patterns shown to avoid hand trimming of fuel when supply is low. Minimum angle of sloping walls is 45°

hot water, an aquastat should be installed on the boiler. This will shut down the stoker before steam is generated but will start it when the water gets too cold. When a hot water heating system is installed, valves should be placed on mains to keep water from circulating through radiators in summer months.

A boiler which has built in hot-water supply coils is the neatest arrangement as no storage tank will be required. But the auxiliary hot water heating unit tapped into the side of an ordinary boiler is very satisfactory. Hot water of the boiler circulates out and through this heating unit giving up its heat to warm the water in the boiler.

ARCHITECT'S ADVICE ON THE SELECTION OF COAL BURNERS

If the client is planning to buy a domestic stoker for anthracite, he should note whether it conforms to the commercial standards of the National Bureau of Standards.

He should also note whether it has been approved by the Anthracite Institute Laboratory or by the Bituminous Coal Research, Inc.

The manufacturer should show reliability and it would be well to see whether he is a member of the Stoker Manufacturers Association.

The dealer from whom the stoker is purchased should have a good local reputation and offer satisfactory service to his customers.

Besides pointing out all of the above, the architect might call attention to desirable features of a mechanical nature on the different models. For example he might point to the fact that a particular make provides a certain type of conveyor tube with a stainless steel worm to resist corrosion and prolong wear. In another case the mechanism to prevent damage if a wire or a nail gets into it may be particularly desirable.

IMPROVED METHODS OF STORING COAL

Particularly is the matter of storage facilities a point to consider in conjunction with the domestic stoker designed to burn Buckwheat No. 1 or No. 2. Being smaller than ordinary grades used for hand-firing, this coal will not slide

down the usual coal chute unless it inclines at an angle of more than forty-five degrees. From this it is obvious that the best way to fill a bin is to pour coal directly into it through a manhole in the top. This arrangement is possible if the bin is under the driveway or floor of the garage.

It has been the custom to give the floors of coal bins a gentle slope, but this is of no value when filled with buckwheat. The bin should be designed like a large hopper with sides sloping down to the middle at very steep angles or the floor should be made flat. In this latter case, as coal is drawn out it will settle down like a funnel, the slope of which will be the angle of repose. The surrounding coal can then be kept as a reserve supply or pushed over on top of the conveyor inlet.

To weigh down dust, buckwheat is delivered in quite a wet condition. All excess water settles to the bottom of the bin and may run out on the floor. In a first class job some provision should be made to drain it off.

Before the long conveyor tube was developed it was suggested that the ideal coal bin would be one located on the first floor above the stoker. From the bottom of this bin a chute could be extended down to the hopper of the machine. Then by opening the gate, the hopper could be filled without shoveling.

But with the advent of the conveyor tube which can be extended in any direction to the coal bin, the first floor bin is not such an attraction, since the advantages of filling the cellar bin are greater. Conveyors can be secured in standard lengths varying in steps of 1' from 5' to 20' or more.

Unless the conveyor must cross a passage, it is better to keep it above the cellar floor. If it is depressed in a trench below the floor, the whole boiler should be depressed the same amount. This may not be possible in an old installation.

There is no special minimum distance that the coal bin should be kept from the burner, but in general a distance of four to five feet is reasonable.

In designing the coal bin allow about 40 cubic feet per ton of the small size coal. In locating its position in relation to the boiler consider the type of stoker and its devices, whether it feeds from the side, front or rear, and whether it is cleaned from the side or rear.

Squash Racquets and Squash Tennis Courts

PURPOSE

This sheet presents information on the construction of courts for squash racquets and squash tennis including recommendations for heating, ventilating, lighting, soundproofing and painting. Data have been obtained from the Metropolitan Squash Racquets Association, Inc. of N. Y., and from leading professionals and builders.

GENERAL

Squash racquets and squash tennis are played on enclosed courts of identical dimensions with such differences of marking as appear on the drawings. Both games are most often played as singles but can be played less strenuously as doubles. Singles and doubles courts vary in size; one court cannot be used for both. Dimensions of playing surfaces (floor and four walls) must be exactly as shown on drawings.

Courts may be located anywhere within multi-story buildings or in independent structures. The room containing the court may be of any height greater than the minimum enclosure noted.

Construction and finish of playing surfaces should follow specifications outlined below, to assure a uniform rapid game. Above playing limits, wall and ceiling construction may be any type which will provide a light-reflecting finish

Access to courts (in order of preference) may be (1) by a specially constructed flush door located as near center of back wall as possible, (2) by a sliding ladder which may be raised during play, (3) by as narrow a trapdoor as is practical, located in the floor parallel and close to front wall on center line of court, (4) by a flush door placed anywhere in side or rear walls. Door must never be placed in front wall.

Spectators' galleries are of necessity small. While requirements vary, at least one of a group of courts should have a large gallery, with several rows of seats, for exhibition play. Other galleries may provide a single row of seats or only standing room.

Best location is behind and above back playing wall; next best, outside and above side playing walls. Dressing rooms, if adjacent to court and above playing surfaces, may have plate or safety-glass windows for observation. Continuous benches of the stadium type provide maximum seating space.

CONSTRUCTION

Playing surfaces, including portions of all four walls as well as floor, should be constructed over an extremely rigid base, preferably masonry. For frame construction, 3" x 6" studs are recommended. If well braced, 3" x 4" studs may prove stiff enough. Wood surfaces should be of maple, air dried. Kiln dried lumber will absorb too much moisture and may buckle when swollen. Floors must always be wood, as masonry floors quickly tire players. Plaster walls may be used for low-cost, non-regulation courts. Their finish should be Portland Cement Plaster, with finish coat of White Portland mixed with white sand; or three coats of Keene's Cement made with white sand. Masonry backing is required for plaster walls as lath will not provide sufficient reinforcement over frame construction. Wire lath may be stapled to masonry to provide a good bond.

Finish of playing surfaces must be absolutely smooth and true. Wood should be planed, traversed, scraped and sandpapered. Plaster should be smoothly troweled and tool marks should be entirely eliminated.

Door must be finished similarly to playing surface on court side, and may be built up on a solid-panel flush door or on any desired base. Hardware should be invisible or flush.

Telltale is made of sheet metal and must give forth a ringing sound when struck. (See details in drawings.) Telltale may be made removable if court is to serve for handball, as a gymnasium, or similar purposes.

Painting. All wood playing surfaces should be sized and given three coats of flat white paint. Lines are all 1" wide and are painted red. After painting lines, wood walls and floors should be given at least two coats of clear white shellac, rubbed smooth between coats. Plaster playing surfaces need not be painted except for lines. Telltale should be painted white on vertical surface and red on bevel.

MECHANICAL EQUIPMENT

Illumination should be uniform, without glare, and should provide a minimum intensity of 30 foot candles at floor. Indirect reflectors, placed as indicated in drawings, are recommended. Cove lighting, recessed or diffused direct fixtures or any other adequate artificial source is satisfactory. Natural lighting by skylights or clerestories produces variations of intensities and is not recommended. Windows or skylights must be outside all playing surfaces, preferably at rear of court and should be double glazed with diffusing glass to prevent heat transfer and eliminate glare. All fixtures should be fitted with wire guards to prevent loss of the ball in play.

Heating and Ventilating. Low temperatures—40 to 50 F—are ideal for play and in most courts heating is unnecessary. When needed it can best be combined with a ventilating system designed to clean air and to provide 10 air changes per hour in courts without galleries. Ventilation through windows or skylights is undesirable. Air should be supplied through grilles in telltale (see detail) and exhausted through registers at rear of court above playing walls.

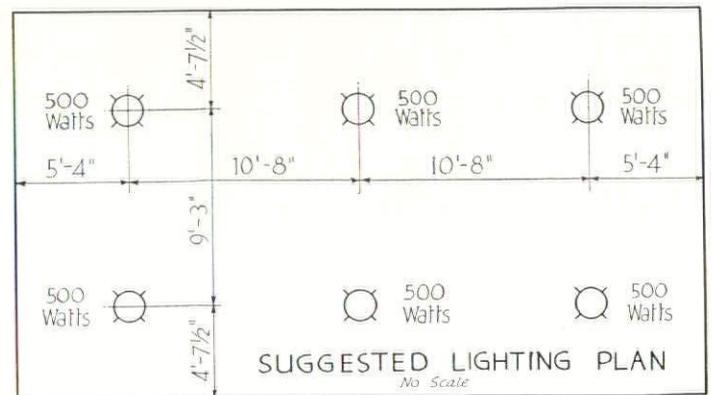
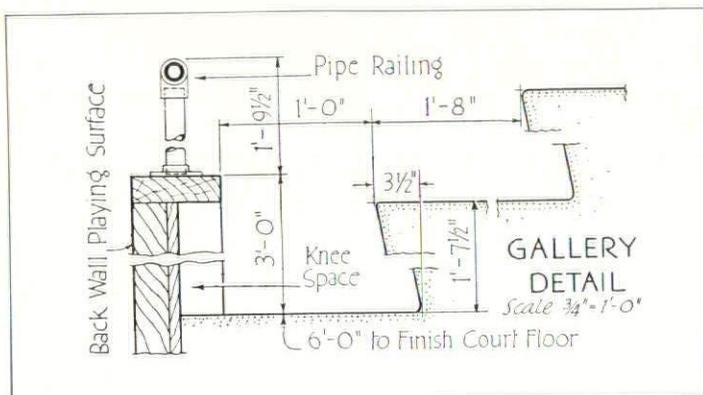
Air should not be humidified. Summer air conditioning is rarely used, but is practical if extension of playing season justifies expense.

Insulation and furring of all walls and ceilings placed against outside walls or roofs is desirable to maintain even temperatures and reduce possibilities of condensation on playing areas.

Soundproofing is usually not necessary if court is enclosed with masonry walls. Noise of play can be muffled by lining ceiling and areas above playing walls with one of the many sound-absorbing materials.

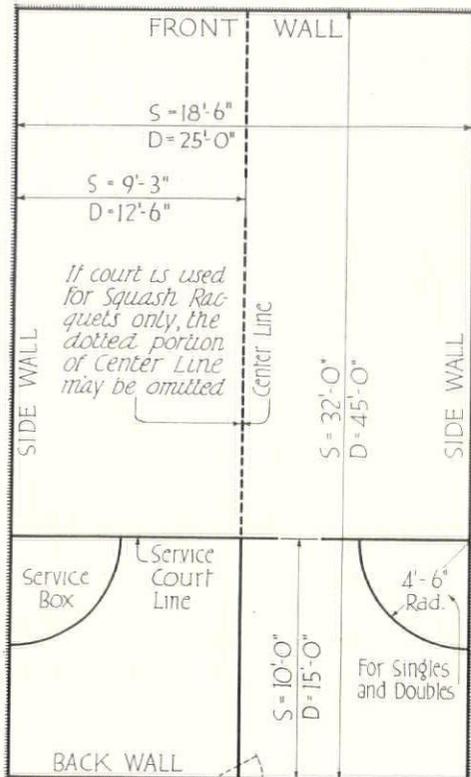
Miscellaneous. Call and emergency bells are recommended for all courts. The first, located outside playing surfaces, announces playing periods through automatic or manual operation. Emergency signal buttons may be located in the telltale.

In conjunction with the courts, dressing rooms, showers and locker rooms with usual storage facilities should be provided. (See also "Spectators' Galleries" above.)

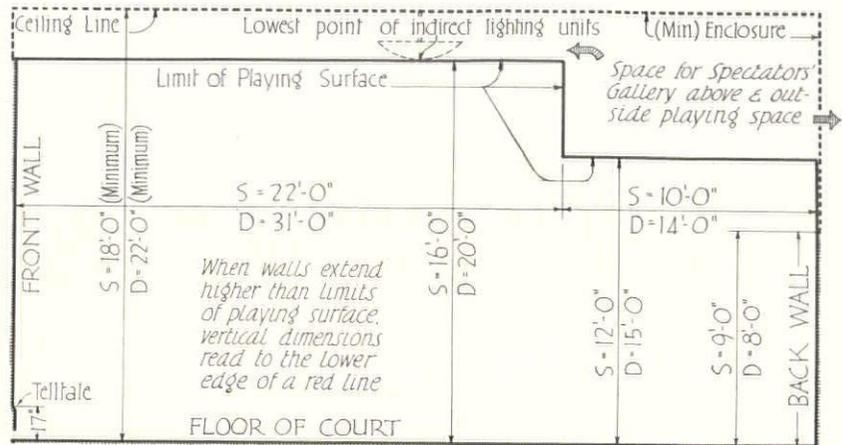


Squash Racquets and Squash Tennis Courts

Serial No. 67
DECEMBER 1936

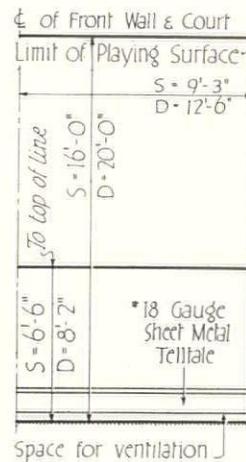


S = Singles Court D = Doubles Court
SINGLE OR DOUBLE COURT
Scale 1/8" = 1'-0"



ELEVATION OF SIDE WALLS
Scale 1/8" = 1'-0"

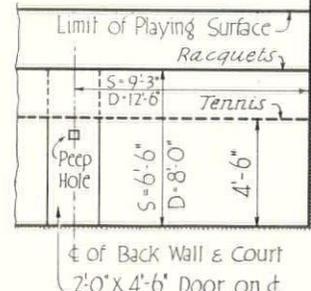
NOTES
All dimensions shown are to Finish Walls & Floor (Playing Surface) and to bottoms of lines unless otherwise noted.
Walls & Floor painted white; lines 1" wide painted red.
Scale for Details 3/8" = 1'-0" unless otherwise noted



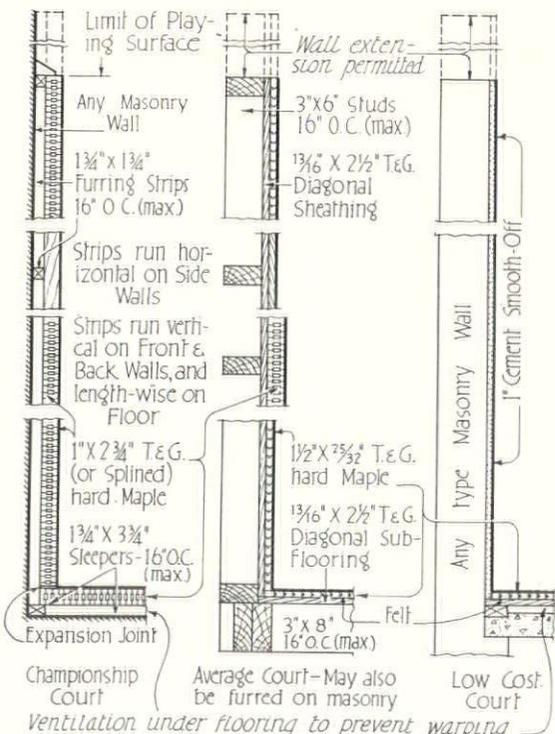
FRONT WALL
(ONE-HALF ELEVATION)
Scale 1/8" = 1'-0"

Space for Spectators' Gallery above & outside playing space

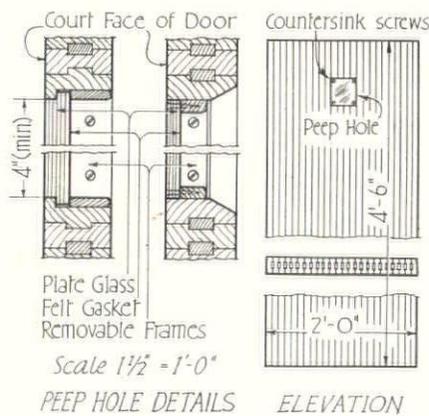
If court is used for Squash Racquets only, the 4'-6" Line may be omitted & the height of door increased to 6'-6"



BACK WALL
(PART ELEVATION)

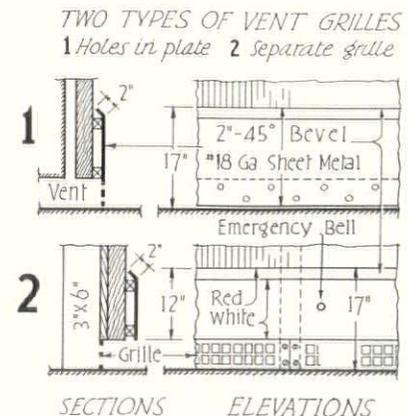


SECTIONS THRU FLOOR & WALLS



Court face of door must be flush with and finished same as Back Wall. Use invisible or flush hardware.

DOOR DETAILS



2" wide-45° Bevel is to be painted red; rest of telltale, white. Telltale shall give forth a ringing sound when struck by ball

DETAILS OF TELLTALE

FINISH WOODWORK — Cabinet Work — I

PURPOSE

Information on this sheet can be used as a general guide in the selection of wood, character of workmanship and types of joints for the detailing and specification of cabinet work. Drawings show only typical conditions and therefore cover a wide range of applications. They are intended to indicate principles of good joining rather than solutions to specific problems.

For more information see T-S.S. Serial No. 69.

SELECTION OF WOOD

For painted surfaces wood must be fine grained, free from knots, sap or pitch and easy to work, with a surface that will not raise. Eastern white pine is ideal. Due to its scarcity, other woods are usually employed. Whitewood, redwood, and California, Idaho and Ponderosa pine are satisfactory materials. Basswood, poplar, sugar pine and gum are less satisfactory. The pines are often knotty but are used for paneling. Birch is harder and is adaptable to more expensive work containing carvings and mouldings.

For natural finishes woods with a decorative grain, as oak, walnut, mahogany and numerous imported woods, are most adaptable. These can be stained, oiled, varnished or waxed. So can gum, redwood, and white, Idaho or Ponderosa pine.

Seasoning is a requisite for cabinet work. All woods should be thoroughly kiln-dried and cabinet work should never be installed until all moisture within the building has been dissipated and plaster is bone-dry.

WORKMANSHIP

Differences between various classes of woodwork lie entirely in the workmanship; that is, in the character of the joining and finish. Types may be divided as follows:

Carpentry is least expensive, being done entirely on the job by more or less skilled mechanics.

Millwork is to some extent prefabricated. Mouldings, certain types of joints, and all exposed surfaces are run through machines and may or may not be assembled and machine-sanded before delivery, depending on the grade of work. Work must usually be scraped and sanded on the job. Joints are almost always assembled with finishing nails or screws and are of simplest type, avoiding undercuts, etc., requiring multiple machining or expensive workmanship.

Cabinet Work ("Joinery"), the most expensive class of architectural woodwork, is almost always shop-assembled, scraped and sanded. Joints must be absolutely accurate, depend principally on glue for strength, and consequently require expert craftsmen and expensive machinery. Work should be hand sanded after installation.

Furniture. A distinct class of work not usually related to architectural construction. Some methods, types of joints, etc., are adaptable to cabinet work.

All four classes overlap to some extent. Millwork and cabinet work are particularly considered here. In these classes, joints should be inconspicuous, of a type to control or eliminate shrinkage, and should conceal end wood unless part of the design. Surfaces and profiles should be clean cut and free from defects. Means of installation should be concealed.

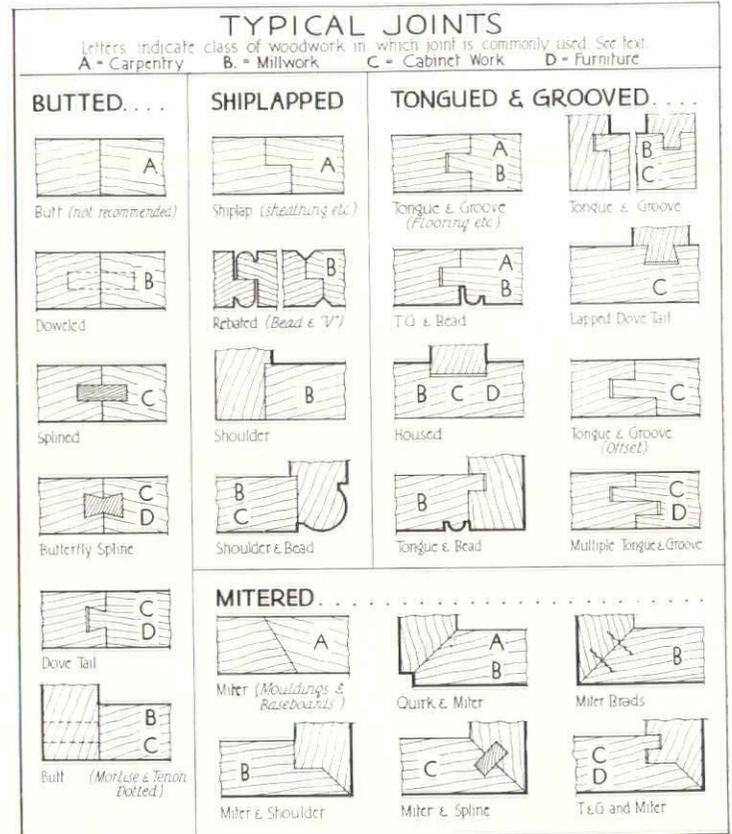
CHARACTERISTICS OF JOINTS

Joints may be divided into four general types: *Butted*, *Shiplapped*, *Tongued-and-grooved*, and *Mitered*. Used in their simple basic form, none is satisfactory for cabinet work except the tongued-and-grooved type in certain instances. However, when variously combined or when reinforced with gluing and dowels or splines, satisfactory joints can be developed.

Butt joint. A simple but weak joint that opens easily and may show end wood when used at angles. Strength and range of use is greatly increased by use of the *mortise and tenon* and *dowels* and even more when a *straight spline* is included. Use of a glued *butterfly spline* with a butt joint produces an extremely strong joint. These variations are widely used to produce large flush surfaces of solid wood or backing for veneers.

Shiplap joint. Stronger than a butt joint but subject to opening from shrinkage. Rarely used in a simple form in cabinet work except for door rebates. It is often moulded to conceal shrinkage in quirks or combined as a *miter and shoulder* for corners. Another variation is the *shoulder joint*.

Tongue-and-groove joint. A strong joint, widely used for re-entrant angles. Effect of wood shrinkage is concealed when



the joint is beaded or otherwise moulded. In expensive cabinet work glued dovetail and multiple tongue-and-groove are used.

Miter joints are weak and difficult to fit if used alone. Joints with *miter brads* are sufficiently strong for short lengths. Joints made in combination with other forms, as a *tongue-and-groove miter*, are tight and sturdy.

USE OF JOINTS

Use of certain types of joints depends to a large degree upon the type of work and workmanship involved. The following notes indicate use of joints in various categories, but cannot be regarded as an inclusive check list.

For panels, shelving, etc. or wherever the end of one piece butts against the face of another; *housed joint*, with or without cover mould, or some type of *tongue-and-groove* joint. Omit glue to avoid splitting due to swelling or shrinkage.

For joining stiles and rails; *mortise and tenon*, glued in better work. Dowels may be used or hardwood wedges may be driven and glued into ends of tenons in high grade work.

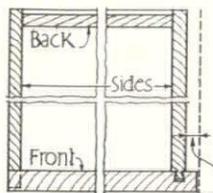
For re-entrant corners: *shoulder joints* for inexpensive work. *Tongue-and-groove* is sturdier. Both should be glued, are often screwed together and may be glued to a rough frame.

For external corners: simple *miter* and *quirk and miter* both lack strength. *Miter brads* are practical only for short lengths. *Miter and shoulder* glued and face-screwed or nailed is satisfactory (generally "millwork"). *Miter and spline* is preferable. In high grade work exterior corners are reinforced by gluing to a corner post or short lengths of blocking.

Glued joints: when screws, nails, etc., can not be used, or when fine work is to be veneered, strength of the joint depends on accuracy of milling and total glue surface. Glue surface may be tremendously increased by using multiple or offset tongues and grooves, by forming miter cuts into waves, multiple shoulders, tongues and grooves, etc. Such work is cabinet work. If done by a reliable cabinet maker, a guarantee should be obtained and joint detail and composition of glue left to him.

Mouldings should be applied in continuous lengths if possible. Use simple miter for necessary joints, cope re-entrant angles unless extensively undercut, miter external corners.

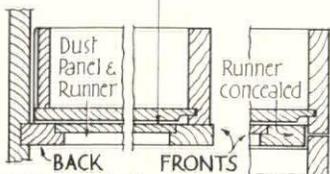
FINISH WOODWORK – Cabinet Work – I



SECTIONAL PLAN

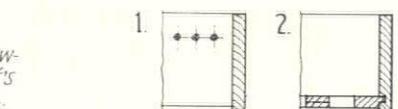
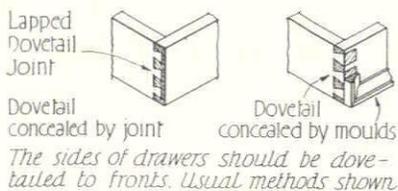
When any type of patented drawer slide is used, consult man's catalogue for this dimension. The lapped front conceals slide.

Dust Panels & top face of drawer Runners should be flush.

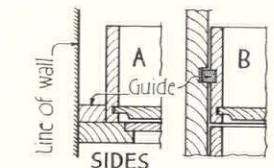


Bottom rabbeted to front and sides; secured to front only.

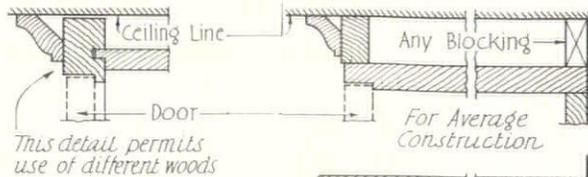
Runners & Guides preferably hardwood; Panels either veneer or solid.



- 1 Bottomless - For towels, etc.
- 2 Flush Lattice Bottom - Permits air circulation for linens, etc.

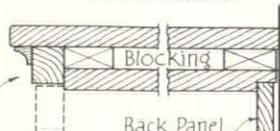


- A Guide at side of drawer, fastened to Drawer Runner
B Guide (Hardwood) rabbeted into side of Drawer.

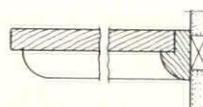


Thus detail permits use of different woods

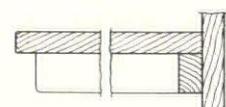
Detail where Cabinet does not extend to Ceiling



CORNICE

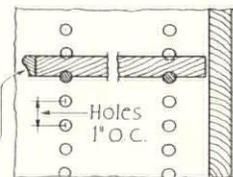


Shelf on cleats fastened to grounds in plaster wall

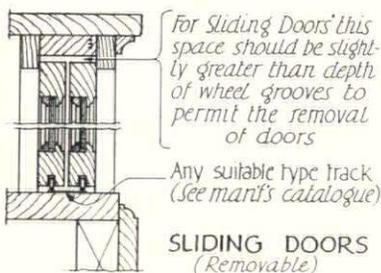


Shelf on nailing strips

When any type of patented Shelf-Adjusters are used, consult man's catalogue for recommended dimensions. Shelf edge may be Hardwood. Adjustable Shelf on Wood Pegs



SHELVES



SLIDING DOORS
(Removable)

For Sliding Doors this space should be slightly greater than depth of wheel grooves to permit the removal of doors.

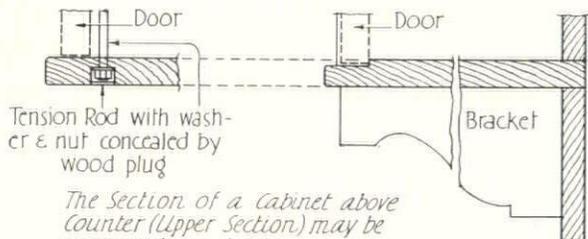
Any suitable type track (See man's catalogue)



Flush Front Panel Doors



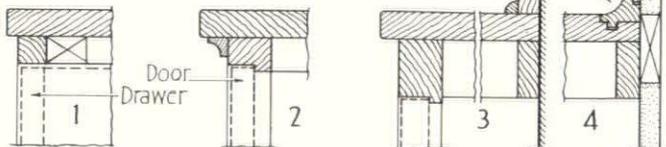
Door with Mirror
Removable Mouldings



The Section of a Cabinet above Counter (Upper Section) may be supported as shown.

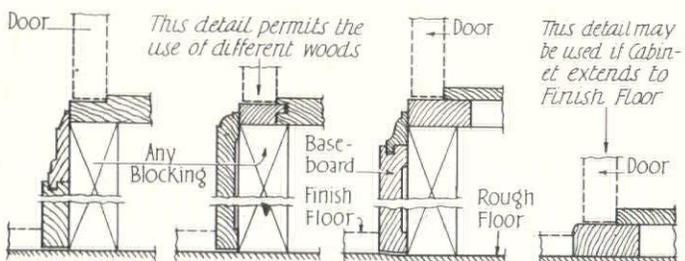
SUPPORTS

- 1 With drawer below
- 2 With moulding
- 3 With Backboard
- 4 Backboard with Cove Corner



COUNTERS

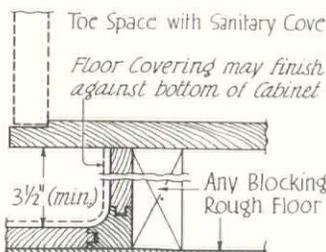
DOORS



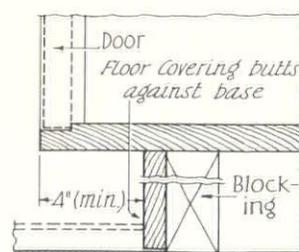
BASES

This detail permits the use of different woods

This detail may be used if Cabinet extends to Finish Floor

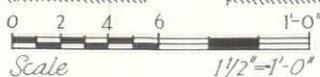


Toe Space with Sanitary Cove
Floor Covering may finish against bottom of cabinet



Door
Floor Covering butts against base

TOE SPACE



PURPOSE

Information on this sheet outlines methods of assembly and installation of common cabinet work. Solutions of typical problems are presented without attempting to detail specific cabinets. For additional information see T.S.S. Serial No. 68.

ASSEMBLY

High grade cabinet and veneered work is assembled as far as possible at the shop. Joints are glued and blocked, and sometimes secured with finishing nails or screws. Carpentry and millwork are generally put together with finishing nails if of soft wood, or with screws if of hardwood. Hardwood should be drilled to prevent splitting before using nails or screws, and heads should be countersunk and concealed by cover moulds, moulding quirks, or putty, plastic wood or other filler, colored to match the finish. No nails, screws or joints should be visible as they are intentionally incorporated in design.

Shrinkage and warping. Effects can be largely eliminated by proper detailing and construction. *Wide flat surfaces* (solid or veneered) should be made up of several narrow strips glued and doweled, splined, or dovetailed together. Cleats may also be screwed or keyed to backs of wide surfaces. *Joints in corners, sheathing, etc.* should be concealed within quirks of moulds (as in moulded tongue-and-groove) or return faces (shoulder joints). *Panels* should be rigidly secured on one side only, and are often left entirely loose. Housed joints, not glued, permit panels to expand and contract without splitting.

Large moulded surfaces (such as cornices or mantels) should always be shop-assembled and delivered with scribe-moulds (see "Scribing" below) loosely tacked to assembled units.

INSTALLATION

All grades of woodwork should be back painted before erection.

tion, preferably before delivery to the job. Satisfactory priming coats are aluminum paint or white lead in linseed oil, thinned with turpentine or mineral spirits.

Preparation. On frame walls plaster may be limited to one or two coats, may be recessed between studs or may be omitted. In the latter case, building paper should be used between woodwork and studs. On masonry, plaster may consist of one or two coats or may be omitted. Masonry surfaces, particularly exterior walls, should be waterproofed or woodwork should be protected by a layer of waterproof paper and should always be furred out. When finish of the interior of cabinets is plaster, either plain or canvas covered, the final coat of plaster is applied after erection of cabinet.

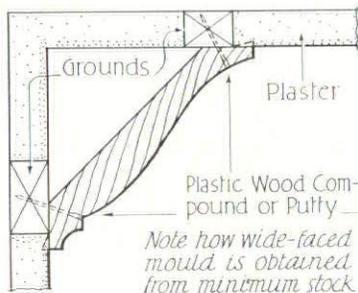
Grounds of soft wood for attaching cabinet work must be accurately located, are secured directly to framing members or furring, and must be concealed.

Blocking of rough lumber is erected for supporting raised floors, large or complex cornices and all large or heavy types of cabinet work interior of which is to remain concealed. Blocking must be accurately placed and is secured with nails.

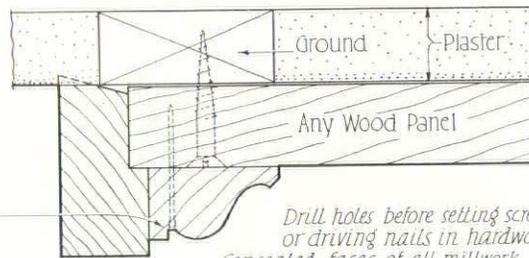
Shimming. Minor irregularities in blocking, furring, or placement of studs may be corrected by using shims (wedge shaped pieces of wood, often shingles) to bring completed work to plumb and level lines. Shimming should be concealed.

Scribing is the practice of fitting edges of cabinet work accurately to all irregularities of finish plaster, masonry or other abutting surfaces. Wood mouldings, panel frames or cabinet returns to be scribed should be provided with a beveled edge.

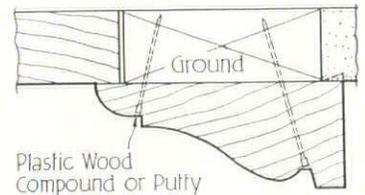
Prefabricated woodwork is generally delivered knocked down for assembly on the job and is erected similarly to custom-made work. Consult manufacturers' data.



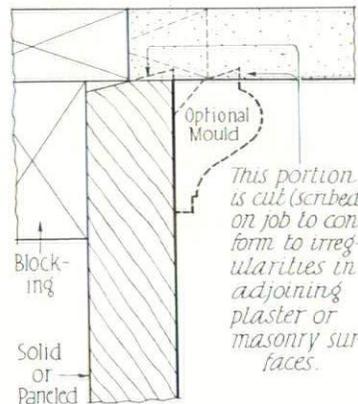
NAILING TO GROUNDS



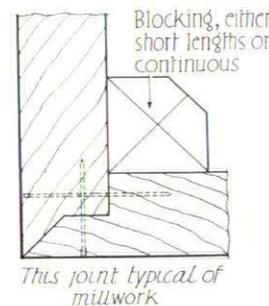
CONCEALING ATTACHMENT OF HARDWOODS



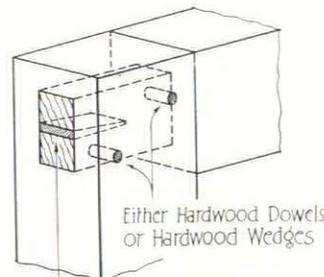
NAILING IN QUIRKS



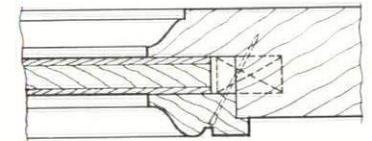
SCRIBING AGAINST PLASTER OR MASONRY



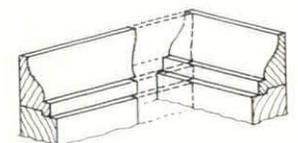
GLUING AND BLOCKING



SECURING MORTISE & TENON



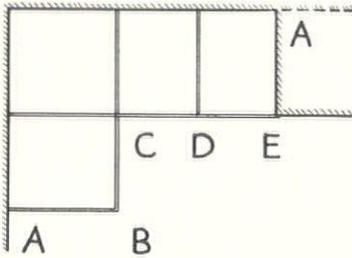
NAILING PANEL MOULD



COPING MOULDINGS RE-ENTRANT ANGLE

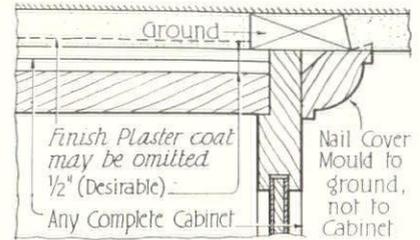
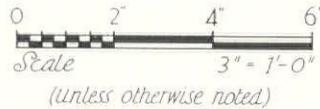
FINISH WOODWORK – Cabinet Work – II

Serial No. 69
DECEMBER 1936

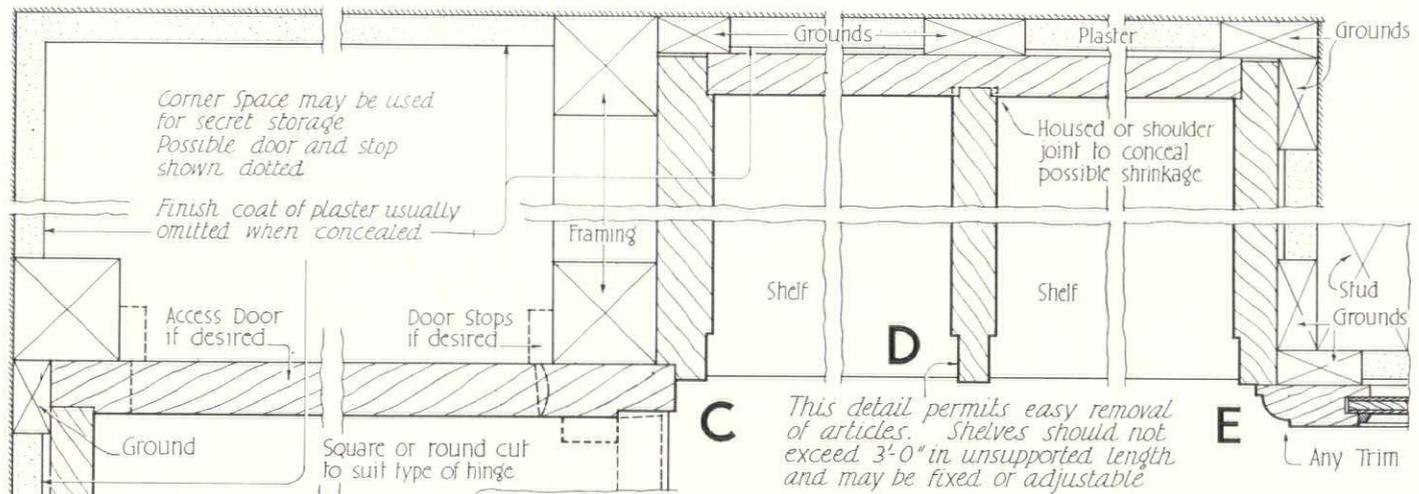


DIAGRAMMATIC PLAN
(No scale)

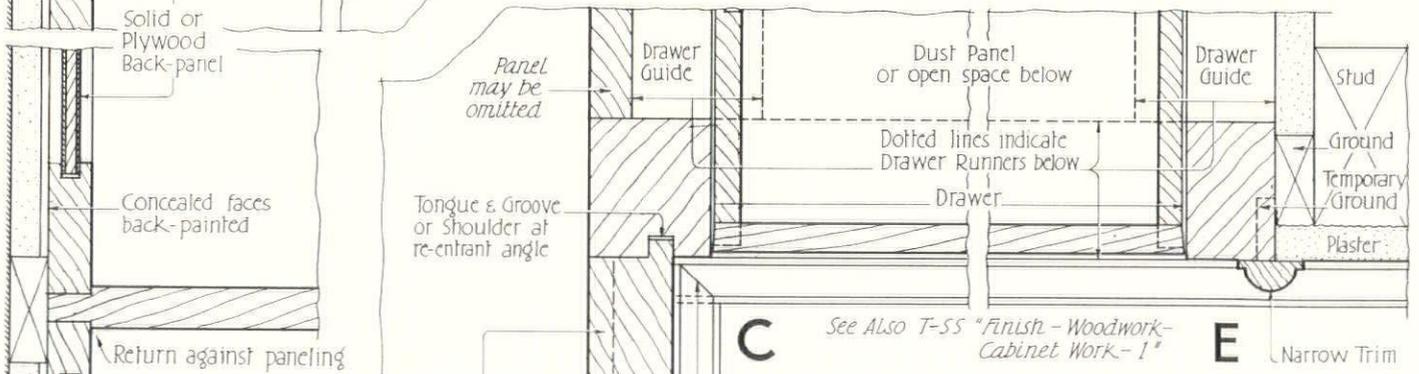
TYPICAL CABINET CONSTRUCTION



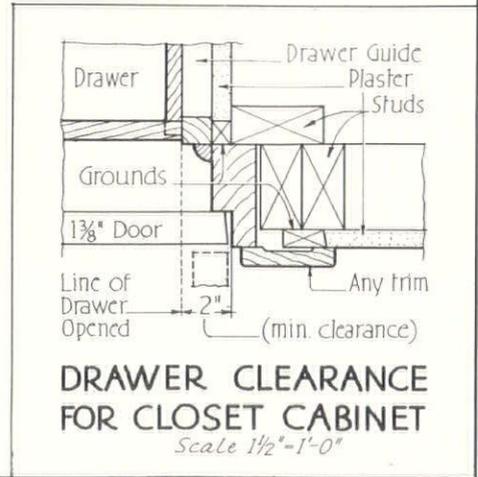
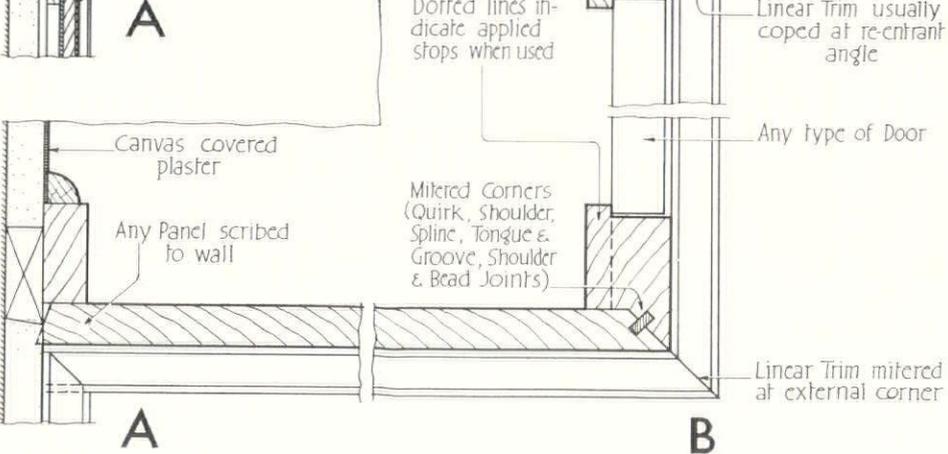
Grounds are carefully located before erecting
A
GROUND & COVER MOULD



C This detail permits easy removal of articles. Shelves should not exceed 3'-0" in unsupported length and may be fixed or adjustable



C See Also T-55 "Finish - Woodwork - Cabinet Work - I"



DRAWER CLEARANCE FOR CLOSET CABINET
Scale 1/2" = 1'-0"

TECHNIQUES

METHODS • MATERIALS • RESEARCH • PRACTICES

CONSTRUCTION

NEW PANELING MATERIAL

C-X Texboard, a new paneling material, is made by applying a cabinet wood veneer of walnut, mahogany and avodire to a Celotex base. Each unit is an individual plank with a grain and figure different from that of every other. It is produced in planks 6" and 9" wide, 8' and 10' long, and ¼" thick. The Texboard planks have beveled-edge shiplapped joints. All attachment to the wall is made under the shiplap joint so that no nail heads are apparent. The necessity for batten strips is entirely eliminated. This material can be installed without removing baseboards, mouldings or window casings. The planks are said to be flexible enough to conform to the wall surfaces and permit bending around archways and moderate curves. A product of the Celotex Corporation, Chicago. **691M**

WOOD CASEMENT OPERATOR

A newly designed angle drive operator for wood casements, which works through the screen, is especially convenient for opening, closing and automatically locking wood casement windows where wide inside stools are used. The inside screen is simply notched at the place where the operator fits half way into it. The operator channel is fastened to the casement. The distance required between the screen and the window is 1½ in. The operator is reversible, fits any sash 15" wide or wider, and may be used on every type of modern wood outswing casement window. It is also made adaptable for attaching to marble, tile and concrete window sills. Casement Hardware Company of Chicago manufactures this operator under the trade name "Win-Dor." **692M**

NEW GLASS FOR GYM WINDOWS

A new plate glass, claimed to have exceptional strength and toughness, has been introduced for use in gymnasiums, armories and similar buildings. It is designed to replace wire-glass, usually used with interior and exterior wire guards. This new glass, called herculeite, is a highly polished, transparent plate glass which is said to be strong enough to support five times the weight that ordinary plate glass can carry and will bend five times as far before breaking. It is claimed to have high resistance to impact, but if shattered disintegrates into fragments about the size of a pea, more or less rectangular in shape and with apparently blunt edges.

Announcement of this new glass was received from Pittsburgh Glass Institute, New York. **693M**

FLASHING BLOCK

A new flashing system has been patented by Architect L. A. O'Brien of Winston-Salem, N. C., after a year of practical experimentation. The system consists of a simple but ingenious flashing block, the size and appearance of an ordinary brick. It is longitudinally grooved for the insertion of the flashing which, bent into a transverse V, fits into a hollow square. When the flashing is pulled taut against the block, it locks, making a permanent waterproof joint. No special blocks are required for corners as they can be cut on the job, and there is no extra cost for laying. The blocks are practical for any type of construction where flashing is required and may be used at any location in a masonry wall. They are not noticeable in finished walls. **694M**

ELECTRICAL



LIGHTING FIXTURE

Capturing a new note in modern indirect illumination, a new bedroom and sunparlor lighting fixture adds much to the decorative ensemble of a room. Embellished with sprays and drops of crystal balls which sparkle with brilliance, it affords an atmosphere of luxuriousness to the room it illuminates. A "cheerio" glass bowl blends with the toned white and gold finish. There are three lights, and the fixture hangs 15" from the ceiling. This is a product of Lightolier Company, Jersey City, New Jersey. **695M**

400-WATT DOME REFLECTOR

Applicable for general industrial lighting applications, a new dome type, low mounting reflector for use with the 400-watt high intensity mercury lamp has been designed. The reflector is equipped with a monax glass cylinder which surrounds the lower portion of the lamp, providing a 72½° angle of cut-off. It is designed for mounting heights of 10 to 18 feet. The reflector is drawn from 22 gauge iron sheet, porcelain enameled. A glass collar of monax homogeneous glass is supported by three steel cadmium plated supports locked securely in the top portion of reflector. A special mogul skeleton socket is rigidly mounted in the hood to properly position the lamp in the reflector. Produced by Westinghouse Electric & Mfg. Company, East Pittsburgh, Pa. **696M**

FINISH

TINTED UNDERCOATS

The Devoe & Reynolds Company, New York, announces the development of tinted undercoats to supplement the regular white undercoat. Previously, it was necessary to tint the undercoat to the approximate shade of the topcoat. With these two neutral shades, which can be used with any standard color scheme, Devoe claims to have eliminated this step. The Number 540 Buff Undercoat may be used under all Ivory, Cream, Yellow, Buff, Brown and Red shades. Number 541 Gray is used under all Gray, Blue, Green and Black shades. Made with non-penetrating oils, the new undercoats are claimed to seal wood pores and old paint surfaces perfectly, building a solid foundation for topcoat. **697M**

COUNTER EDGE MOULDING

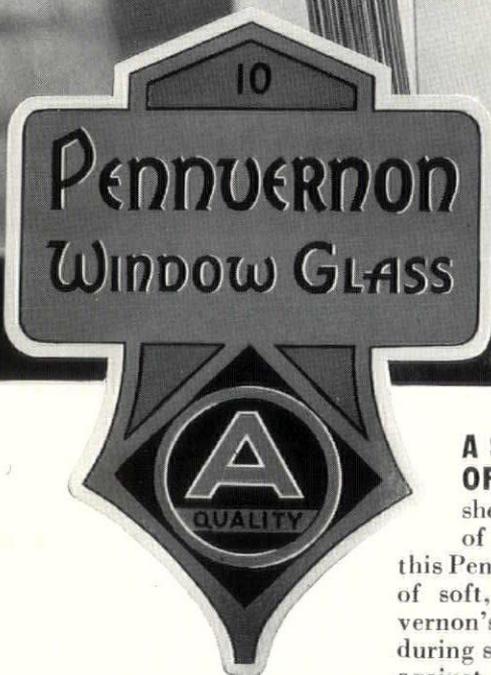
A new metal moulding to trim and protect the edges of counters, table tops, etc. is being manufactured by Pyramid Metals Company, Chicago. It is made of stainless steel, and comes in sizes to fit counter tops varying in thickness from ¾" to 2". Screws are used on the bottom of the flange so that none are exposed on the face or top to mar the appearance of the moulding pattern. **698M**

HEATING

HEATING SYSTEM FOR SMALL HOMES

The introduction of a new, complete heating system for the very small home has been announced by Excelso Products Corporation of Buffalo, a division

Specify "PENNVERNON"...not just "window glass"

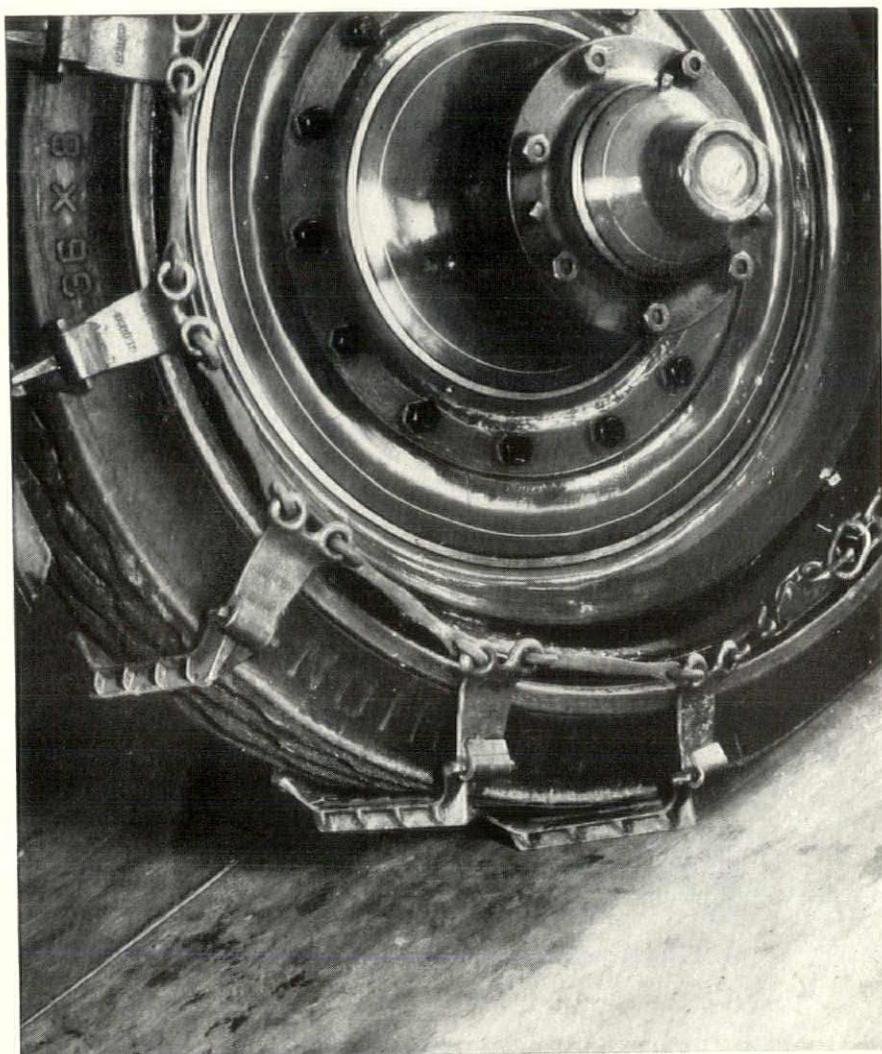


A SHEET OF PAPER... A SHEET OF GLASS... and then another sheet of paper! Between every light of Pennvernon Glass and the next, this Pennvernon Craftsman places a sheet of soft, absorbent paper. Thus Pennvernon's original excellence is preserved during shipment and storage... protected against moisture, chemicals, scratching.

Our new booklet, called "The Making of a Leader", describes in dramatic pictures the manufacture of Pennvernon Window Glass. To get your free copy of this interesting book, sign and mail this coupon to

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PLATE GLASS COMPANY
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'TORTURE TEST' FOR ZERO-PLACED CONCRETE

In cold weather, concrete hardens slower, has to be heat-protected until it is strong enough to withstand freezing. That is why 'Incor' 24-Hour Cement is a 'natural' for winter construction. 'Incor' hardens five times as fast as ordinary cement. That means 4 advantages: (1) concrete is safe from freezing days sooner; (2) heat-protection costs are 60 to 70 per cent lower; (3) form costs and overhead expense are reduced; (4) winter work proceeds at summer speed, with steadier work for labor. And 'Incor' makes better concrete, too. Example:

With outside temperature 17° below zero, inside 45° above, 'Incor' concrete floor was placed in Central Fire Station, Wakefield, Mass. Just 44 hours later, a heavy fire-truck rolled over the freshly-placed surface; 2-ton wheel-loads pounded chisel-sharp, steel-flanged chains (see above) against the new concrete without mar. No hardener or admixture was used or needed. In spite of low temperatures, 'Incor' cured thoroughly in less than two days; daily hose-washing shows the concrete is strong, dense, watertight.

Better concrete, in a fraction of the usual time, at lower cost—convincing reasons for changing to 'Incor'* on work now in progress. Write for free copy of new "Winter Construction" book—address Lone Star Cement Corporation, Room 2211, 342 Madison Ave., New York . . . 'Incor' and Lone Star sales offices in principal cities.

*Reg. U. S. Pat. Off.

'INCOR' 24-HOUR CEMENT

NEW CATALOGS...

Readers of AMERICAN ARCHITECT and ARCHITECTURE 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

Oak Flooring

32... A specification manual for Nofma Certified Oak Floors has been issued by National Oak Flooring Manufacturers Assn., Memphis, Tenn. It explains how to specify Nofma Oak Flooring according to the architectural style of the building, how to specify floor construction, sub-floors and sleepers, how to specify laying and nailing, and how to specify methods of finishing, sanding and scraping. Filing size; A. I. A. File 19-E-9.

Steel Joist Construction

33... The Steel Joist Institute, Chicago, has just issued a new and revised edition of its handbook, "Steel Joist Construction." This 36-page booklet presents engineering standards and the code of standard practice of the Institute, covering the design and application of open web steel joists of both the all-steel and nailer types, together with safe load tables for each type. Filing size; A. I. A. File 13-G.

Roofing

34... The problem of how to reduce maintenance expense on industrial roofs is discussed in a new 28-page booklet issued by Johns-Manville, New York. Graphic information is given on how roofing felts should be laid, how flashing should be applied, how the joints in the coping should be protected, and other aspects of roofing.

Shelter

35... The *mulguf*, an air-conditioning device used by the Egyptians; penthouse gardens in the Babylon of Biblical times, and the hypocaust, a centralized heating system used in the houses of imperial Rome, are among the items described in "Shelter," an illustrated pamphlet dealing with the historical development of safety and convenience in the home, issued recently by The Ruberoid Company, New York.

Refrigeration

36... A new bulletin issued by Carrier Corporation, Newark, N. J., presents its complete lines of compressors, cold diffusers and evaporative condensers. Auxiliary equipment for special applications are also shown. Several pages of installations, diagrams and testimonials show the varied uses of this equipment.

Gas Power Units

37... The features of the Deluxe Gas Engine Power Units, used for driving air-conditioning equipment, pumps, generators and for all general power purposes within their power range, are described in a four-page, filing-sized catalog issued by Waukesha Motor Co., Waukesha, Wis.

Pipe Fittings

38... A new 144-page illustrated catalog (No. 4) issued by Grinnell Co., Inc., Providence, R. I., covers the complete line of cast-iron, malleable, steel and bronze pipe fittings made by this company. Filing size; A. I. A. File 29-B.

Casein Paint

39... National Chemical & Mfg. Co., Inc., has issued a new 24-page booklet on Luminall, a paste casein paint. Part I sets forth the optical and mechanical advantages of casein paint. In part II are shown the various types of buildings which use Luminall. A color chart and application data are included in this section. Filing size; A. I. A. File 25-B-22.

Lighting Fixtures

40... A new booklet issued by Lightolier Company, Jersey City, N. J., pertains to a discussion of the selection of proper lighting equipment for the home. It takes up each room separately, gives recommended lighting requirements, and shows a variety of Lightolier fixtures available for each particular room.

Glass Enclosures

41... Glass enclosures for garden rooms, conservatories, sunshine rooms, play rooms, are discussed in an 8-page catalog issued by Lord & Burnham Company, Irvington, New York. Plans for three garden room layouts, specifications and equipment required are given.

Aluminum Furniture

42... Warren McArthur Corporation, New York, has published a 72-page, filing-sized catalog illustrating and briefly describing its line of anodic aluminum furniture. Dimensions and list prices are given.

Summer Air Conditioning With Well Water

43... A complete discussion of summer air conditioning with well water is contained in a new 20-page brochure recently issued by Crane Company, Chicago. Methods of summer air conditioning, conditions needed for human comfort, comparative costs, planning the well water cooling system, selection of cooling coil, are some of the items covered. Tables of coefficients of heat transmission, infiltration data, and typical installation diagrams are also included.

Gas-Fired Air Conditioning Units

44... Descriptions of the construction features and equipment of AGP Gas-Fired Air Conditioning units are contained in an 8-page, filing-sized catalog issued by American Gas Products Corp., New York. Ratings, dimensions and specifications are included.

NO POSTAGE REQUIRED ON THIS CARD

AMERICAN ARCHITECT and ARCHITECTURE

December, 1936

New York, N. Y.

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 "Techniques."

Numbers

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

Check here for FREE copy of "WHEN YOU BUILD" booklet.

Name

Firm name

Address

City

Occupation

These NEW Catalogs may be obtained through

AMERICAN ARCHITECT and ARCHITECTURE

Stokers

45 . . . Recently off the press is a new 28-page booklet (No. 1619) published by Link-Belt Company, Chicago, on its automatic coal stokers for industrial and commercial use. The book is well illustrated, reproduces letters from users, and gives much pertinent data.

Acoustical Tile

46 . . . Complete details about Acoustone, a fireproof acoustical tile with a textured stone finish, are given in a new brochure issued by United States Gypsum Company, Chicago.

Oil-Burning Boiler

47 . . . Catalog No. 1562 issued by The H. B. Smith Co., Westfield, Mass., gives data on the 160 De Luxe Special Smith Oil-burning Boiler. Sectional drawings and mechanical specifications are included.

Unit Heaters

48 . . . Catalog No. 125 issued by Ilg Electric Ventilating Co., Chicago, is a complete manual on Ilg Unit heaters, giving data on construction features, specifications, ratings, dimensions, piping methods, installation, etc. Filing size; 48 pages; A. I. A. File 30-D-11.

Vertical Steel Boiler

49 . . . National Radiator Company, Johnstown, Pa., has issued a four-page, filing-sized catalog (SB-153) illustrating and describing its National Premier Oil-Fired Vertical Steel Boiler.

Old English Thatch Roofing

50 . . . Complete descriptive data on Old English Thatch Roofing are given in a new portfolio recently issued by Thatched Roof Manufacturing Corp., Stamford, Conn. Six pen and ink drawings show various styles of residences with roofs of this material.

Structural Redwood

51 . . . Standard grading and dressing rules for Structural Redwood, with structural design data, illustrations and miscellaneous information are contained in a 24-page filing-sized publication recently released by California Redwood Association, San Francisco.

Thermometers and Pressure Gauges

52 . . . The Brown Instrument Co., Philadelphia, has published catalog No. 6703 covering the complete line of thermometers and pressure gauges for indicating, recording and controlling. It describes the classes of units, explains their outstanding constructional features, enumerates their uses, and presents a detailed description of each instrument of the line.

Pumps

53 . . . A new 8-page bulletin (W-313-B1) illustrating and describing the Mixflo centrifugal pump has been issued by Worthington Pump & Machinery Corp., Harrison, N. J. It contains a complete description of the parts of the pumps, together with technical information concerning modern trends in hydraulic design. Photographs, sectional drawings and dimension tables are included.

Copper Tube Boilers

54 . . . The advantages and features of Bryan Copper Tube Boilers for use with gas, oil or coal fuels are outlined in Catalog No. 6-A published by The Bryan Steam Corporation, Peru, Ind.

Gas Water Heaters

55 . . . Handley Brown Heater Co., Jackson, Michigan, has issued 28-page catalog (Form A-30) illustrating and describing its line of Gas Water Heaters. Construction and operation features are described. Dimensional data are given.

Footlights

56 . . . Major Equipment Co., Chicago, has issued an 8-page, filing-sized, catalog illustrating and describing its line of Major Footlights fitted with Alzak Reflectors.

Cold Storage for Furs

57 . . . Bulletin No. 192-B issued by Frick Company, Waynesboro, Pa., pertains to cold storage for furs and describes Frick refrigerating equipment used for the purpose.

Meteorological Equipment

58 . . . An abridged catalog of 16 pages depicting the entire line of meteorological equipment for weather, water resources, upper air explorations, air conditioning surveys, soil conservation projects, etc., manufactured by Julien P. Friez & Sons, Inc., Baltimore, Md., has recently been published. Each item in the line is illustrated.

Cooling Tower Equipment

59 . . . Cooling tower equipment for use with Westinghouse Type CLS condensing units is presented in an 8-page bulletin (No. W.H.750) issued by Binks Manufacturing Company, Chicago. Dimensions, engineering data, selection tables, etc., are included.

Mahogany

60 . . . The second edition of "The Mahogany Book" has been issued by the Mahogany Assn., Inc., Chicago. The book follows the same general form as the previous edition, but incorporates considerably more historical information and more technical data on the botanical classification and wood characteristics. The book also includes a chronological table of furniture periods, and 32 illustrations of the various figures in mahogany.

Garage Doors

61 . . . The Kinnear All-Steel Rol-Top garage door is illustrated and described in Bulletin 11 recently released by The Kinnear Mfg. Company, Columbus, Ohio. A diagram showing general assembly of the door is included. Brief data on the Rol-Top Motor Operator for garage doors are also given. Filing size; A. I. A. File 17-A-2.

Insulated Glass Areas

62 . . . A system of insulating windows and other glass areas to eliminate frost, ice and attendant problems due to excessive condensation of moisture in air conditioned buildings is discussed in a booklet prepared by Reese Metal Weather Strip Co., Minneapolis.

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NEW YORK, N. Y.

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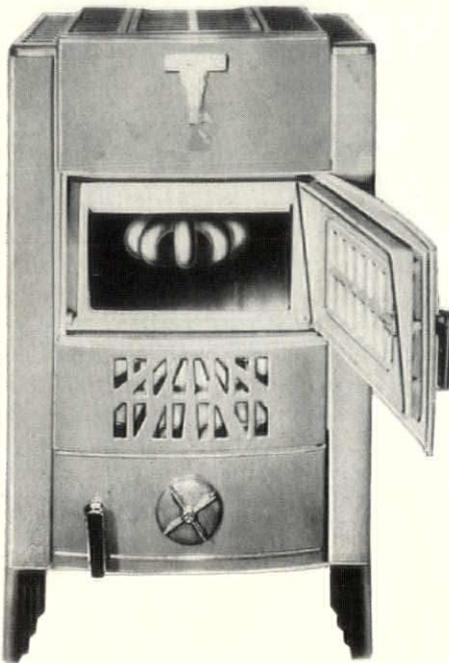
AMERICAN ARCHITECT
and ARCHITECTURE

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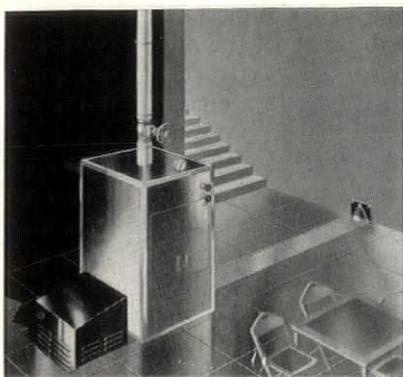
New York, N. Y.

TECHNIQUES

METHODS • MATERIALS • RESEARCH • PRACTICES



of American Radiator Company. The system, known as Celvic, is described as a modern heating system supplying humidified warm air and radiator heat. It is said to require no more fuel in operation than the ordinary stove or base burner. One of the particular advantages claimed is its adaptability to new or old homes without expensive installation charges. The Celvic system combines products which have been manufactured separately by the American Radiator Company into a complete small home heating system. The heart of the system is the Excelso Phaeton Heater. This heater is installed in the firepot near the dome and absorbs heat from the fire, assuring necessary hot water radiation for the second floor rooms. Humidified warm air heat is supplied for the first floor and radiator heat for the second floor. **699M**



MECHANICAL FIRE-TENDING

The new Anchor Bin Feed Kolstoker is furnished in either the Draw Con-

veyor or the Drive Conveyor type. In the Draw Conveyor type, the screw conveyor draws the coal from the bin and conveys it under the floor through the feed tube to the burner. A reverse screw arrests the movement of the coal toward the stoker power unit and forces it up through the burner to the fire. In the Drive Conveyor type, the power unit of the stoker drives or pushes the coal from the bin toward the boiler, instead of drawing it from the bin as in the Draw Conveyor type. The stoker power unit is located behind the bin. The bin itself functions as a gigantic hopper, holding several weeks' supply of coal. The new units may be used with any type of heating plant. They are manufactured by Anchor Stove and Range Co., New Albany, Indiana. **700M**

MIDGET SWITCH

For use on oil burners and other applications where midget switches are desired, a new line of front operable, general purpose Type D safety switches has been announced by Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa. The switches are extremely small in size, sturdy in construction and pleasing in appearance. Front operation and compact design make their use possible in many places where side operating switches cannot be used. They are available in two-pole NEC and plug fuse types; also two and three pole solid neutral. Terminals and fuses are easily accessible and ample wiring space is provided. The cover may be sealed and provisions are made for locking switch in "off" position. **701M**

ELECTRIC WATER HEATERS

A new line of Electric Water Heaters of modern design has been introduced by The Standard Electric Stove Co., Toledo, Ohio. Models available range in capacity from six to one hundred twenty gallons. All heaters are of the same design, the only difference between the units being in the dimensions. Either switch or outside control is furnished. The new low base of the heaters permits installation of the large units in low basements. **702M**

AIR CONDITIONING

GAS-FIRED AIR CONDITIONING UNIT

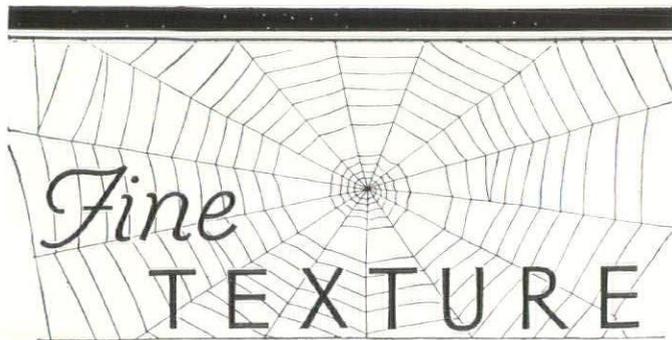
The exterior appearance of the new Gar Wood Gas-Fired Tempered-Aire Unit recently announced by Gar Wood In-

dustries, Inc., Detroit, is similar to that of the company's oil-fired Tempered-Aire model. The scientifically designed concave and convex surfaces absorb the intense gas heat through the "scrubbing principle." Practically all of the heat that is generated is trapped and used. Little heat is wasted up the chimney. The unit is entirely automatic in operation. In addition to supplying forced, warm-air heat at low operating cost, the gas-fired unit provides air ventilation and circulation, air humidification and filtration, and blower cooling in the summer. **703M**



FLOOR UNIT AIR CONDITIONER

The new Fitzgibbonsaire is a floor unit air-conditioner for installation with a Fitzgibbons Boiler for oil, gas or stoker firing. It is designed for the "split system" method of conditioning. The outstanding features of the unit are its compactness, appearance, and the fact that it need not be placed directly along side of the boiler but in any location within the home where it is expedient for it to be used, since steam lines can be carried from the boiler to the Fitzgibbonsaire just as easily as they are taken to the radiators in the remainder of the home. Ten different capacities, ranging from 91,300 Btu to 461,700 Btu, are available. Fitzgibbons Boiler Co., Inc., manufacturers of this new floor unit plenum chamber, also announce that its Boiler Air Conditioner for split-system residential air conditioning is now available in four sizes ranging in capacities from 102,000 Btu to 163,100 Btu. **704M**



Upon the texture of the lead depends all the essential qualities of the drawing pencil.

The "Koh-I-Noor" has always been famous for the fine texture and the dense structure of its lead, the result of scientific principles accurately applied to every phase of the lead making process.

And the "Koh-I-Noor" is what it is—a smoother, more uniform, longer lasting pencil, because of this finer texture.

Artists naturally turn to the "Koh-I-Noor" when they want a pencil in which their confidence may be complete.

17 DEGREES OF HARDNESS

LEARN MORE of the LEAD PENCIL

A new 48-page booklet just off the press, written by Arthur L. Guptill and Clarence C. Fleming, tells of the discovery of graphite in 1565 and describes the many steps in manufacturing up to the present day modern method. Mr. Guptill's helpful hints on the use of various mediums will prove valuable to everyone.

25 cents per copy

Gentlemen: Enclosed please find 25c. (stamps or coin) for a copy of your new booklet, "The Pencil" Since 1565.

NAME

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OCCUPATION

Koh-I-Noor Pencil Company, Inc.

373 Fourth Avenue New York, N. Y.

ROME PRIZE COMPETITION

The American Academy in Rome has announced its annual competitions for fellowships in architecture, landscape architecture, painting, sculpture, musical composition and classical studies.

In architecture the Katherine Edwards Gordon fellowship is to be awarded, in sculpture the Rinehart fellowship provided by the Peabody Institute of Baltimore, Md., in musical competition the Horatio Parker fellowship and in classical studies the Jesse Benedict Carter Memorial fellowship.

The competitions are open to unmarried men (in classical studies to men and women) not over 30 years of age who are citizens of the United States. The stipend of each fellowship is \$1,250 a year with an allowance of \$300 for transportation to and from Rome and \$200 to \$300 to fellows in the fine arts for materials and incidental expenses. Residence and studio are provided without charge at the Academy, and the total estimated value of each fellowship is about \$2,000 a year.

The Academy reserves the right to withhold an award in any subject in which no candidate is considered to have reached the required standard.

The term of the fellowship in each subject is two years. All fellows have opportunity for extensive travel and for making contacts with leading European artists and scholars. Fellows in musical composition also have opportunities to conduct and hear renditions of their own works, and the Academy has a fund for publishing some of their compositions.

The Grand Central Art Galleries of New York City will present free membership in the Galleries to the painter and sculptor who win the Rome Prize and fulfill the obligations of the fellowship.

Entries for competitions will be received until February 1st. Circulars of information and application blanks may be obtained by addressing Roscoe Guernsey, Executive Secretary, American Academy in Rome, 101 Park Avenue, New York. When writing for these documents the applicant should specify the subject in which he desires to compete.

PRODUCT-DESIGN WINNER

First prize in the annual Electrical Manufacturing Magazine's second annual Product-Design Contest has been awarded to Richard H. Nelson of Moline, Illinois, Secretary-Treasurer and Director of Product Design of the Herman Nelson Corporation. The award consists of the first prize certificate and a check for \$200. Mr. Nelson was adjudged the winner because of the advanced design and engineering embodied in the Herman Nelson Conversion Oil Burner. This unit is part of a complete line of Heating and Air Conditioning equipment designed by Mr. Nelson and just introduced this year.

The winning product was in competition, not only with other heating equipment, but appliances of all types in which electrical design plays an important role. In making their decision, the three judges—Donald Deskey, Gilbert Rohde and E. R. Searles—considered skill and resourcefulness in the handling of materials and parts, and the development of fundamental engineering and performance factors, as well as the styling of the cabinet.

Simplicity in both design and engineering is the principal feature of the Herman Nelson Oil Burner. Mr. Nelson

It's spring the year 'round—



**WITH A NORGE
FINE-AIR CONDITIONING
FURNACE UNIT**

In the home of today—and certainly the home of tomorrow—more is expected of a heating plant than heat. Properly conditioned air is not a future desire, it is a present demand.

For the home selling for from \$5,000 to \$50,000 Norge offers the *complete* solution to the problem of air conditioning. The Norge Fine-Air Conditioning Furnace Unit warms, filters, humidifies, circulates the air in every room in the house, provides plenty of hot water. It may be used to circulate filtered air in Summer. Its heating efficiency is over 80% as compared with 20% to 45% in the old-fashioned heating plant which does nothing but provide heat.

The more you study the Norge Fine-Air Furnace, from the standpoint of engineering and construction, the stronger will be your conviction that it is truly the Winter air-conditioning system of the future. And it may easily be supplemented with Norge cooling equipment if lower Summer temperatures are desired than are effected by the forced circulation of air.

For more complete information about Norge heating and air conditioning, get in touch with the Norge distributor in your vicinity or write direct to us.

NORGE HEATING AND CONDITIONING DIVISION
Borg-Warner Corporation, Detroit, Michigan

Get the complete story of Norge Home Appliances for apartment or home installation. There are distinct advantages in standardizing on Norge equipment—apart from the exceptionally high quality of the products themselves.

NORGE

ROLLATOR REFRIGERATION (DOMESTIC AND COMMERCIAL) • GAS AND ELECTRIC RANGES • WASHERS AND IRONERS • WHIRLATOR OIL BURNERS FINE-AIR FURNACES • AIR CONDITIONING • CIRCULATOR ROOM HEATERS



designed the unit to meet requirements of a market analysis which showed that a modern oil burner should be flexible both as to size and adaptation for existing heating plants, reasonable in initial cost and installation, efficient with the use of low cost fuel, quiet in operation, and styled to prevent clashing with other units in the basement. It is manufactured in four sizes with capacities to handle the smallest as well as the largest homes and is equally adaptable for either a warm air furnace or boiler installation. All sizes embody the same advanced principles of engineering and design.

ARBITRATION IN ARCHITECTURE

As tier upon tier of massive buildings are again arising in the great cities, as new homes are being built or old homes remodeled, as factories are expanding, the public little realizes that here is an industry and here are owners enjoying security from delay, litigation and ill-will. In no other industry has the business man more generously and capably provided for the public and private welfare of those who put up buildings and those who live in them.

This security is provided through a standard contract used by owners, architects, contractors and sub-contractors which carries arbitration provisions. In 1857, the American Institute of Architects was founded; in 1911 it issued its first edition of standard documents, determining the general conditions, status and relationship of architect, contractor and owner, which provisions have been modified from time to time; in 1936, in keeping with the progressive spirit in the industry, it has revised the arbitration provisions of

its standard contract to offer even greater security to its members and to the public through improved arbitration machinery.

How this machinery protects the architect and saves time and money for his client who need not resort to litigation, may be seen from the following cases taken from the files of the American Arbitration Association.

The Board of Trustees of an institution in New York State engaged an architect to design a group of buildings. The buildings were to be erected as the money was raised, but the architect prepared an ambitious design for the entire scheme, which was duly approved. One building had been completed when there were changes of personnel among the trustees, the work was stopped and the architect's fee remained unpaid.

The case was brought to arbitration and the arbitrators, two business men and a distinguished architect, awarded the claimant the major part of his fee.

Another architect was engaged to design buildings on a country estate for a well-known business man. The service buildings were completed first and the owner then went abroad. On his return he decided that the cost of carrying out the architect's plan for the main residence would be excessive. He engaged another firm of architects to complete the work, and their plans were approved.

The original architect claimed a fee for the preliminary work of designing the house, contending that the new architect had succeeded in submitting an approved plan only because it was founded on the claimant's own design.

The three arbitrators, a lawyer, a manufacturer and an



Old stick-out-in-room type radiator.



40% smaller Burnham Slenderized Radiator—recessed.



Slenderized Radiator with Radiant Front Panel.

A Radiator *Before and After*

THE photographs tell the story. The stick-out-in-the-way old type radiator. The substituting of the Burnham Slenderized Radiator—recessed. The same radiator with our Panel Front, giving both radiant and convected heat.

So shallow are these Slenderized Radiators

that they can be recessed between the studs and still be flush with wall. They heat 40% quicker, even though they are 40% smaller than the old style tube type. Made in 3, 4, 5 and 6 tubes. Cost no more than other radiators. Send for Catalog. Get the full facts. See for yourself.

IRVINGTON
NEW YORK

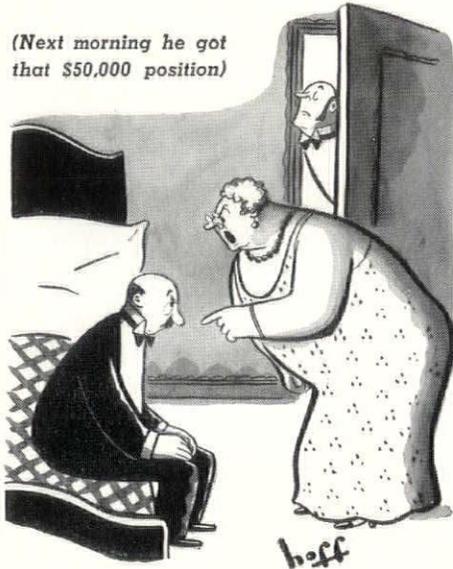
Burnham Boiler Corporation

ZANESVILLE
OHIO

*Representatives in All Principal Cities
of the United States and Canada*

... And then his Wife told him a secret of Success

(Next morning he got
that \$50,000 position)



A confession interview with Montmorency Perkins, Long Island's most British Butler

"It was an embarrassing moment for me last night," said Perkins, "when I overheard a most intimate boudoir tête-à-tête between the Master and the Mistress. They had just come in from a party.

"'You acted so strange tonight,' the Mistress leered. 'You crawled in your shell and sulked all evening.'

"The Master broke down and sobbed his bitter secret. 'I've got Scratchitus. I'm a wreck. I suffered from it all day.'

"'Well, you poor dumbbell,' the Mistress hissed, 'don't you know what to do for Scratchitus (gritty pencils)?'

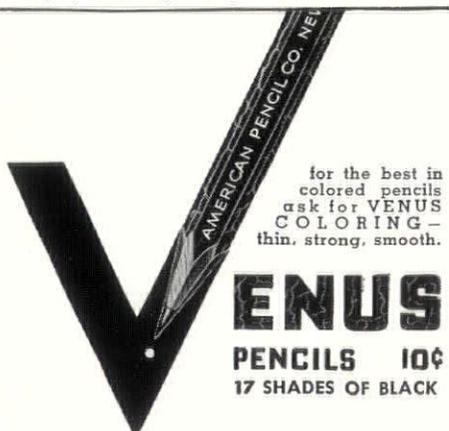
"'No,' gulped the Master. 'Father never told me.'

"'Tomorrow throw away those gritty pencils you use and buy Venus Pencils,' the Mistress wheedled. 'They'll free you from your terrible inferiority complex. Every he-man uses Venus Pencils.'

"'Well, it was the only way out for the Master. Next day he began using Venus Pencils.'

"'In the afternoon he telephoned the Mistress that the President of the Company had promoted him to General Manager.'

**Montmorency Perkins who has butted in many of the best homes, was not paid one cent for this revelation. Thanks Perkins—we hope you don't get caught eavesdropping.*



• This advertisement appears
in Collier's and Time.

The advertisement on the left is not
written to you.

It is not necessary to tell architects and
engineers about the smoothness of
Venus Pencils.

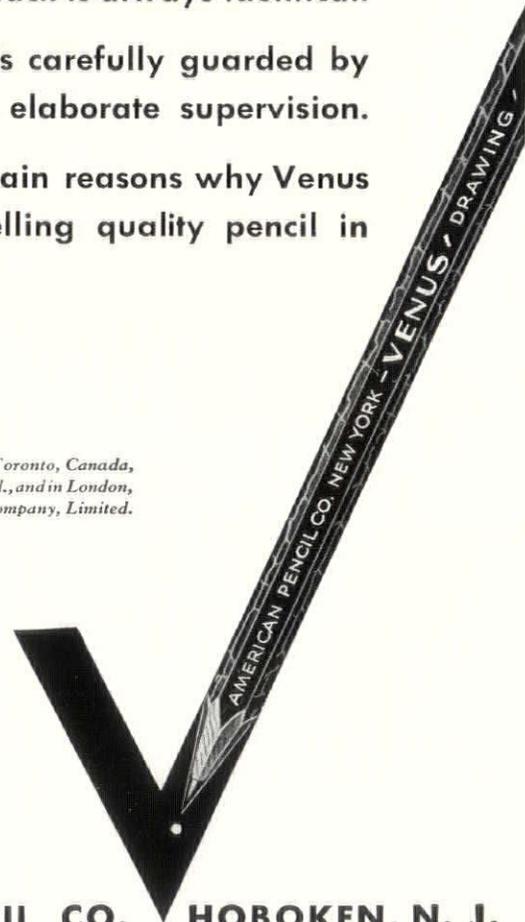
Another Venus superiority, accurate
grading, is more important to profes-
sional men.

Every pencil in each of Venus' seven-
teen shades of black is always identical.

This uniformity is carefully guarded by
costly tests and elaborate supervision.

It's one of the main reasons why Venus
is the fastest selling quality pencil in
the world.

Venus Pencils are also made in Toronto, Canada,
by the Venus Pencil Company, Ltd., and in London,
England, by the Venus Pencil Company, Limited.



AMERICAN PENCIL CO. HOBOKEN, N. J.

architect, awarded the claimant a large part of the fee claimed.

• • •

It is interesting to note that the American Arbitration Association will publish the first number of the Arbitration Journal in January. This magazine is to appear quarterly and the first issue will be reviewed in the January issue of AMERICAN ARCHITECT AND ARCHITECTURE.

HAFFNER RESIGNS

The resignation of Jean Jacques Haffner, Nelson Robinson, Jr. Professor of Architecture in Harvard University since 1921, was announced recently by Dean Joseph F. Hudnut, of the Harvard Graduate School of Design. He will practice architecture in France.

Professor Haffner was born at Sainte Marie aux Mines Ht. Rhin, in Alsace, and graduated from the Ecole des Beaux-Arts in Paris in 1908, at which time he became Architecte Diplome par le Gouvernement Francais. Among other honors at the Ecole, he won First Prize in the Concours Chevenard, the Concours Roux, and the Concours Rougevin. He also won the Prix Stillmann and the Gold Medal of the Societe Centrale des Architectes. In 1919 he won the Grand Prix de Rome and in 1921 he became Architecte des Bati-ments Civils.

During the war, Professor Haffner served four years, during which time he was severely wounded and received three citations. During the greater part of the war, he served as Lieutenant of Engineers in the French army, and was almost continuously in the front-line trenches until 1917,

when he became an instructor in the American Army Schools in France. In 1923 Mr. Haffner was awarded the Legion of Honor for his services in the French Army.

In 1921 Mr. Haffner came to Harvard and since that time he has had general charge of the courses in Architectural Design in the Department of Architecture. The instruction in Design which has been based upon that of the Ecole des Beaux-Arts has been developed to a standard unexcelled by that of any other architectural school in America, and Professor Haffner has taken a place among the most successful teachers of architecture.

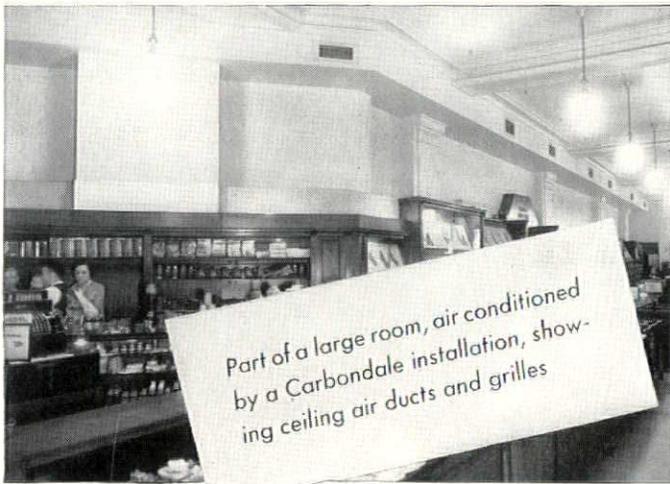
"His influence has been an inspiring one throughout his career here and his loss is a severe blow to the School," Dean Hudnut said. "He has made a host of friends, not only among his students, but among a vast number of his colleagues in the profession of architecture throughout this country.

"Mr. Haffner, who is still a young man, will continue the practice of architecture in France. He has felt for some time now that his affairs required his presence in that country, and he now wishes to devote all of his time to them."

ERRATA

In September, pre-fabrication system C.41, the Frameless Steel House, was credited to the Insulated Steel Construction Co. of Cleveland. This company is now located in Middletown, Ohio. C.43, the Steelox House, is no longer sponsored by the Steelox Company of Chicago. Steelox is now the trade name for all homes sold by Steel Buildings, Inc.

Get ready for 1937 AIR CONDITIONING



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SEATTLE
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WASHINGTON

NEW PLASTER BASE DATA

For Your Information and Reference

AMERICAN ARCHITECT
TIME SAVER
STANDARDS
K3.3.1

Serial No. 482
NOVEMBER 1936

REYNOLDS ECOD FABRIC LATH

MATERIAL

Reynolds Ecod Fabric* (Welded Wire Fabric) is a plaster and finish base for both interior and exterior installations. It is available in three types and two finishes to meet a wide variety of structural requirements.

Ecod Fabric is composed of a wire fabric woven through a backing of a heavy waterproof kraft paper. Wires of cold drawn steel 15, 0.011 inch, which form the paper into corrugations, are welded to transverse V-shaped ribs spaced 4" on center. The ribs serve as stiffeners and with the wires produce efficient reinforcing keys for plaster or stucco.

Plain Ecod Fabric has a backing of double thick kraft paper waterproofed by coating. Its use is recommended as a plaster base on interior partitions and lower floor ceilings and for all other parts of a structure where thermal insulation or weather-proofing may be unnecessary.

Metallated Ecod Fabric* has a backing of polished sheet aluminum similar to Reynolds Metallation Type C, which is heavy kraft paper surfaced on one side with aluminum. This is added to the use as a plaster base in its protective as an insulating material when installed with the Metallation backing facing a good air space in exterior walls, roofs or upper floor ceilings. For detailed data on the insulating properties of Metallated Ecod and Reynolds Metallation see T. S. M. 5.1.

Asphalt Felt Ecod Fabric has a backing of asphalt saturated felt. Its use is recommended as a water and weather proof base for slabs and walls of masonry walls.

Finishes. All types of Ecod Fabric are furnished with galvanized or copper layered steel wires and ribs. Selection depends upon requirements of local codes and the corrosive character of the plaster or stucco to be used. Galvanized finish is generally to be recommended.

Notes. For the usual building installations both plain and metallated Ecod Fabric is furnished in sheets 31 1/2" x 10' packed flat in cartons containing 50 sq. yds. For use on installations necessary with metal framing members sheets are available in 5' x 10' lengths. These are slotted for tie-wires and are packed flat in cartons containing 100 sq. yds.

CHARACTERISTICS

Reynolds Ecod Fabric is fireproof, water resistant and more fire proof. It will not become brittle and is not subject to distortion by sun or moisture. Although the backing will burn, Ecod Fabric is highly fire-resistant when plastered. When gypsum plaster is applied to a full 1/2" thickness, 2 1/2

hours of a one-hour fire rating is afforded. Reynolds Ecod can be furnished with a flame-proof back on most local fire regulations.

The wires and ribs of the welded fabric serve to reinforce as well as lay the plaster, thus insulating the possibility of cracking while stimulating both marks on the finished surface. The heavy paper backing insures economical coverage by preventing droppings. It also tends to prevent disintegration due to dampness and backing behind the plaster. The material can be easily bent to any angle and cut to conform to job conditions.

INSTALLATION

General. Sheets of Ecod Fabric should be framed horizontally and will span three spaces between framing members that are 16" on center. In all cases the material should be installed with differing ribs on the side to be finished or exposed. Vertical joints should lap at least 6". They should occur only over structural members, should be staggered, and should be made with rib stiffeners overlapping. Horizontal joints should lap at least 6". For exterior Ecod Fabric sheets should lap horizontally to the wall construction. For exterior the lap should be toward the weather. Sheets meeting at corners or angles should overlap.

When installed over wood framing members Ecod Fabric can be applied with 1/2" concrete. Also, nails driven through all ribs to each joist or stud. All joints shall be carefully overlapped ribs to assure a continuous reinforcement. Drive nails straight and flush to edges of ribs but not deeply enough to distort ribs.

Interior Installations. Normally, setting sheets are secured first. Top wall sheets can then be installed to overlap an apron bent from the ceiling. If desired the top row of wall sheets may be installed with an apron bent into the ceiling prior to application of the ceiling sheets.

Plaster grounds over Ecod Fabric should be at least 1/2" thick. No special care is necessary to produce a completely satisfactory plastering job behind the great variety of plaster and finish practices. Plaster should be applied in accordance with manufacturer's specifications.

Tie-in Installations. For suspended ceilings and over framing members that will not permit hailing Ecod Fabric can be secured by 1/4" cross nominal galvanized tie wires. Sheets of a special size are slotted to receive the wires which should be tied to each rib at every support. Framing members for metal

K3.3.1

REYNOLDS ECOD FABRIC LATH

furring when required) should be spaced 24" o.c. according to standard practice. Tie-in installations are not necessary with non-combustible framing members such as those of the Reynolds Metallation system of framing which, though metallic, permit direct setting.

Exterior Installations. It is important that sheets be installed with a weather ship lap. This will allow possible moisture condensation to drain away from the wall construction and will tend to prevent capillary attraction with a resulting damage from moisture.

Block and masonry veneer may be laid in masonry walls reinforced by Ecod Asphalt Felt Fabric. Fill the void between masonry and Ecod with mortar waterproof cement type preferred as the masonry is laid to assure complete interlocking of ribs and exposed wires, and thorough bonding with masonry. Ecod should be applied to Ecod in a full 1/2" coat according to manufacturer's specifications.

AMERICAN ARCHITECT
TIME SAVER
STANDARDS
K3.3.1

Serial No. 482
NOVEMBER 1936

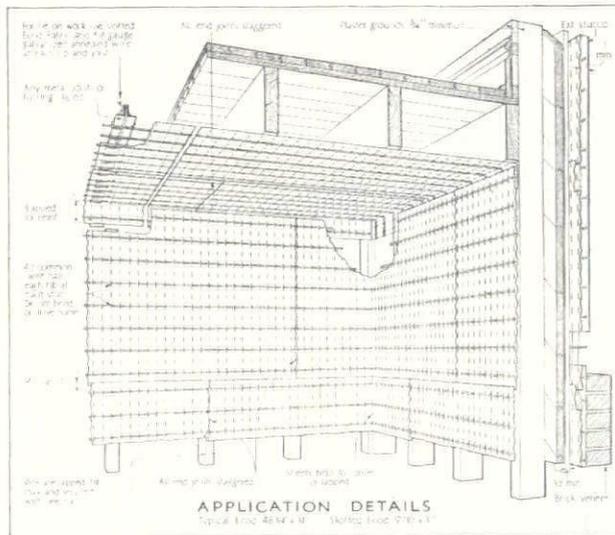
Ecod Fabric applied over sheathing should be furred out at least 1/2".

Whenever Ecod Fabric is applied directly to exterior wood framing, the latter should be built-up construction structurally braced so that shrinkage of transverse members will not set up strains in the rigid masonry veneer or stucco finish. With non-combustible, non-shrinking structural members which will prevent direct setting, such as the Reynolds Metallation system of framing, this provision is unnecessary.

WHERE TO BUY

Reynolds Ecod Fabric Plain and Metallated, is stocked for quick delivery by leading lumber and building supply dealers throughout the United States.

Information may be secured locally or inquiries may be directed to the nearest Reynolds district office or to the address below.



REYNOLDS CORPORATION 19 RECTOR ST. NEW YORK, N.Y.

ECOD FABRIC LATH

Right: Shows typical installation of Ecod Fabric over wood framing. The fabric is applied over studs and joists, with a 1/2" concrete or plaster finish. The ribs are staggered and overlap.

Below: Shows typical installation of Ecod Fabric over metal framing. The fabric is applied over studs and joists, with a 1/2" concrete or plaster finish. The ribs are staggered and overlap.

Reynolds Ecod Fabric* presents so many advantages as a plaster base that its use by architects and builders has shown a phenomenal increase in the last few years. Reference data, however, have been comparatively limited. To remedy this, we have prepared a Time-Saver Standards Sheet on Reynolds Ecod Fabric, giving established facts about its efficiency and approved methods of installation. We are glad to offer copies of this Time-Saver Standards

Sheet to all architects, so that their offices may be fully informed on the subject of this increasingly popular material.

Reynolds Ecod Fabric is furnished plain for use as a lath, metallated for combination lath and insulation, and backed with asphalt-felt for waterproofing. For detailed data on insulating properties of Metallated Ecod Fabric and Reynolds Metallation*, see Time-Saver Standard Sheet M 5.3.1.

If you are not regularly enrolled to receive Time-Saver Standard Sheets, use this coupon or your letterhead for copies of the Ecod Fabric issue.

*Trade Mark Reg. U. S. Pat. Off.

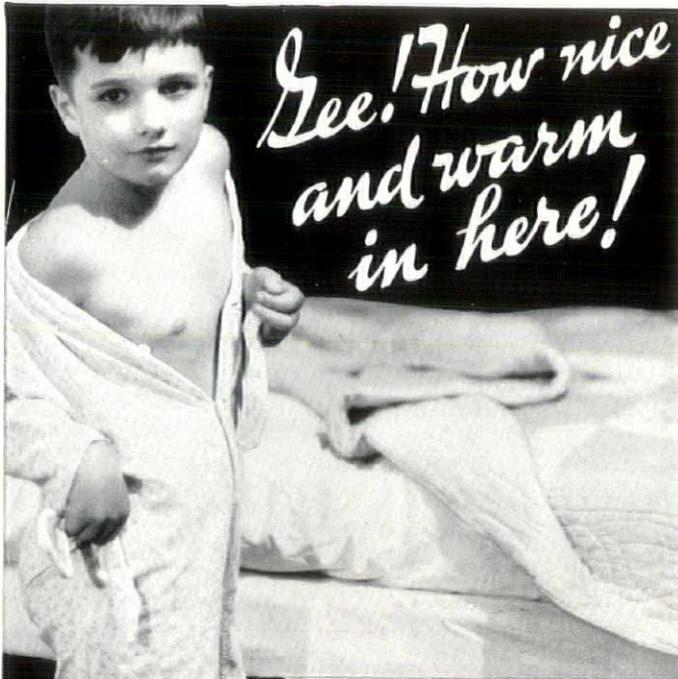
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19 Rector Street, New York

REYNOLDS CORPORATION,
19 Rector Street, New York

Name

Address

Number of copies desired



*See! How nice
and warm
in here!*

NO more dread of a cold, uncomfortable bedroom! The architect who planned *this* home made sure there would be no hard-to-heat rooms... made sure of cold-weather comfort for the entire family... all this and more, at a saving of up to 50% of fuel bills! He specified Gimco Rock Wool insulation!

Most Effective House Insulation Known

Gimco is processed from pure stone. More than 90% of its volume consists of trapped air in tiny air cells. Installed wall-thick, its conductivity is only .067 BTU's... an efficiency unsurpassed by any other building insulation.

Gimco won't pack down, dust out, disintegrate or deteriorate. It is moistureproof, verminproof, fireproof. And once installed, it lasts forever. It never needs to be replaced—never replenished.

May we send you complete data about Gimco Rock Wool, and explain how our local Gimco dealers will cooperate with you? Just write General Insulating & Mfg. Co., Alexandria, Indiana.



Simple to blow Gimco Rock Wool into empty wall and ceiling spaces in present homes



Gimco Rock Wool Seal Bats are easily installed in buildings under construction

Gimco
ROCK WOOL

HOUSE INSULATION
Made by the world's largest exclusive manufacturers of Rock Wool Products

of Middletown, Ohio. The manufacturers of C.46, Universal Housing Corporation, are no longer in business. The system of A.7, Copper Houses, Inc., manufactured by Kennecott Copper Corporation has been improved.

Through oversight, the author, R. C. Weinberg, neglected to say that the Penniman House in Wilmington, Delaware (September, 1936—page 53), was erected and financed by Rupert & Fulenwider, Inc., of Wilmington, Delaware. Photographer of this house was Earl A. Brooks of Wilmington.

In error the name of Eugene Schoen and Sons was omitted as designers of the Hotel Ambassador dining room shown in the Armstrong Cork Products advertisement on page 9 of the September issue.

On page 79 of the October issue, we credited the products illustrated to Textolite Corporation. Textolite is actually a plastic product of the General Electric Co. On page 85 of the same issue, we met our nemesis in the guise of a decimal point. In other words the cost given of \$43.5 per cubic foot should have been 43.5c per cubic foot. The illustration at the top of page 25 credited to Berwyn, Md., was designed for Greenhills, Ohio.

On page 77 of the November issue, the memorial tablet in the Chapel of the Intercession, New York, credited to Mayers, Murray & Phillip was designed by the late Bertram Grosvenor Goodhue.



Photo by Albert Rothschild

Smyser-Royer Co. cast iron veranda design No. 69 as used at Green Acres Estates, Long Island, N. Y. Medium price dwellings selling for approximately \$8,450.

CAST IRON VERANDAS by Smyser-Royer

For houses large and small, Smyser-Royer Co. cast iron verandas may be utilized with remarkably attractive effects.

Your inquiries are invited. Estimates, prices, or a complete catalogue of designs will gladly be furnished on request.

Main Office and Works York, Pa.
Philadelphia Office Architect's Building, 17th & Sansom Sts.

SMYSER-ROYER COMPANY



Upon receipt of proposals you may select the lowest quotation if you have previously assured yourself that all bidders are competent and trustworthy. No others should be permitted to bid in any event. But be sure there are no misunderstandings about what is and is not included. A lawyer should prepare the contract.

Your responsibility continues throughout construction, for if any questions arise as to what the plans or specifications mean the contractor will tend to follow the cheapest course. If you insist on interpretations or changes not in accord with the contract you will be charged extra. If you and the contractor disagree you should mutually appoint an arbitrator unless you want to tie up the job with legal red tape.

Employing an architect

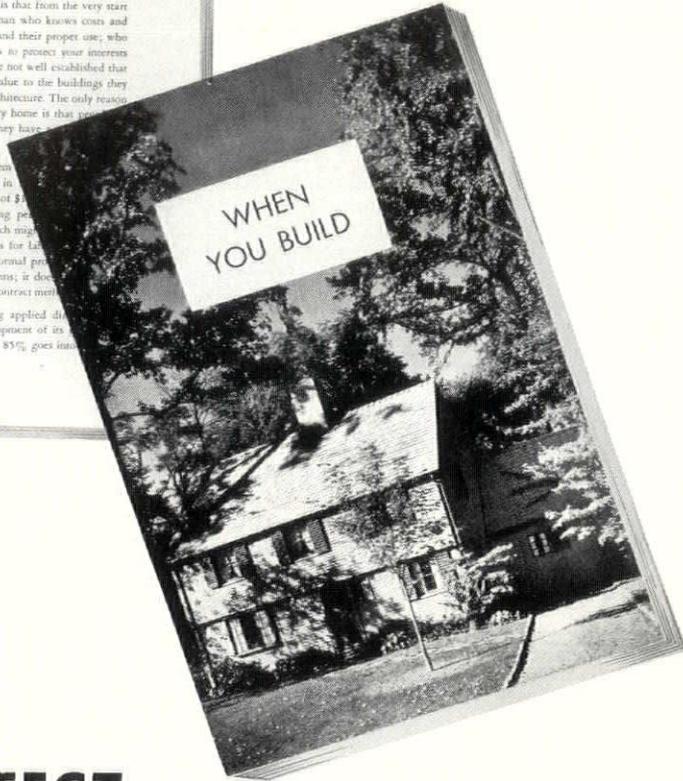
is the fourth alternative. It has the very definite merit of placing all your major problems in the hands of a man whose life work it is to know how to design and build houses well. Forget for the moment that an architect is skilled in design—not he has any esthetic ability whatever. His reputation on this score has blinded many people to a realization of his primary importance as an expert on materials, equipment and methods of construction. You can more or less take it for granted that a good architect will design a good looking house; that he will place it on the lot most advantageously, and that when you move into your home you will be utterly proud of its appearance.

But what is of much more importance is that from the very start you will have a friend to guide you—a man who knows costs and financing methods; who knows materials and their proper use; who knows building law; and who knows how to protect your interests at every stage of your operation. If it were not well established that the services of architects contribute real value to the buildings they design, there would be no profession of architecture. The only reason architects are not universally used on every home is that they do not realize their value until too late, or they have not recognized their architect's services are expensive.

Let us look at this side of the problem. Architectural services on a small house, say in the \$10,000 range, will cost you about 10% of a fee of \$1,000, plus incidental expenses for insurance, building permits, and financing costs (if you obtain a loan) which may amount to more. All of the rest of your money goes for labor, materials, and the normal contractor's profit. This normal profit is based on the work the contractor actually performs; it does not include the cost of planning as in the case of the single contract method.

Instead of 75% of your money being applied directly to the construction of your house and the development of its site, in the case of a speculative builder, at least 85% goes into

Prepared by the editorial staff of *American Architect and Architecture*. This book explains to prospective builders the economy of employing a professional architect in every building or alteration project. If you have not received a copy, send for one today.



16,000,000 PEOPLE HAVE BEEN TOLD:

BUILD NOW!—AND CONSULT AN ARCHITECT

Three years ago AMERICAN ARCHITECT undertook a promotion campaign better to acquaint the public with the services offered by an architect.

Month after month full page advertisements have appeared in *House Beautiful* and *Town and Country*—with total circulation of 200,000. Both these magazines are associated with AMERICAN ARCHITECT AND ARCHITECTURE.

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Good Housekeeping, with its consulting staff of four prominent architects, has reached millions of

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AMERICAN ARCHITECT AND ARCHITECTURE as its fundamental publishing policy holds to "a journal written by architects for architects." We believe it is this policy which in a national investigation just completed regarding the reading preference of the profession brought to AMERICAN ARCHITECT AND ARCHITECTURE a highly favorable position. We hope we may continue to be so regarded by our readers and pledge our every resource to render service through every available channel.

We believe that architects the country over are alive to the opportunities that the changing conditions offer. As a part of the profession we hope we may continue to receive from you your interest, your frank criticism, and when we deserve it, your commendation.

THE EDITORS.

AMERICAN ARCHITECT AND ARCHITECTURE, 572 MADISON AVENUE, NEW YORK



One unit of the Moreland Courts Apartment Group, at Shaker Square, Cleveland, Ohio

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ANNOUNCEMENTS

The firm of Baskervill & Son, Architects, Central National Bank Building, Richmond, Virginia, announces the admittance of F. Milton Garey and Henry T. Huband to partnership.

Julian Ellsworth Garnsey, Mural Painter, announces the removal of his studio to 71 West 45th Street, New York City.

Erwin Knoesel, Architect and Designer, announces the opening of an office at 5205-A Chippewa Street, St. Louis, Missouri, and requests manufacturers' catalogs and samples.

Harry Ray Nay, Architect, announces the opening of a new office in the Hawley Building, Wheeling, West Virginia.

Maurice Abramovitz, Architect, announces the opening of his office at 35 Newbury Street, Boston, Massachusetts, and requests manufacturers' catalogs and data.

Sommer and Krol announce the opening of an office for the practice of architecture at 3730 N. Magnolia Avenue, Chicago, Illinois, and request manufacturers' catalogs and data.

The Treadwell Engineering Company, Inc., announce the opening of offices, as consulting and supervising engineers, at suite 410, Architects' Building on Fifth Street in Figueroa, Los Angeles, California. They request manufacturers' catalogs.

Louis Bouché, Allen Saalburg and Everett Henry, Mural Painters, announce a partnership at 18 East 48th Street, New York City. These three well-known painters working as one group, purpose to function together and as individuals.



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OBITUARIES

Ernest Robert Graham died recently at his home in Chicago. He was 67 years old. Mr. Graham for nearly half a century, one of the outstanding architects in Chicago, was for many years the senior partner of Graham, Anderson, Probst & White. Born in Lowell, Michigan, he attended the public schools there and later received degrees from Coe College in Iowa and from Notre Dame University. In 1888 he became associated with the late D. H. Burnham of Chicago. As assistant to Mr. Burnham he had a great deal to do with the planning of the World's Columbian Exposition in 1893. He also

served as assistant director of works during the construction and operation of that Fair. Inspired by Burnham, his constant interest was the development of better architecture in the city of Chicago. Among the buildings he planned there were the Merchandise Mart, Field Building, Wrigley Building, Field Museum, Shedd Aquarium, Continental Illinois Bank Building, Union Station, Marshall Field & Co. stores, the new Postoffice, Pittsfield Building, State Bank of Chicago Building and the Chicago Civic Opera House. Among other important buildings for which Mr. Graham was architect, were the Equitable, Flatiron, Chase National Bank and the No. 80

Maiden Lane Buildings in New York City; the Union Station and General Postoffice in Washington, D. C., and the Union Trust, the Union Station and the Terminal Tower Buildings in Cleveland. Mr. Graham also planned many department stores in various sections of the country, including John Wanamaker and Gimbel Brothers in New York and Philadelphia, Filene's in Boston, the Higbee Company and May Company Stores in Cleveland. He was also the architect for the Selfridge & Co. store building in London. Mr. Graham was constantly active in Chicago affairs. He served as an adviser to the Cook County assessor. He was also a trustee of the Field Museum and a vice president of the Shedd Aquarium. Mr. Graham was the donor of the Ernest R. Graham Hall of Historical Geology in the Field Museum. He also presented to the Field Museum one of the two largest collections now in this country of Coptic textiles. Mr. Graham was a member of the Chicago, Mid-Day, Commercial, Racquet, Tavern, Old Elm and Shoreacres Clubs in Chicago and of the Metropolitan and Bankers Clubs in New York.



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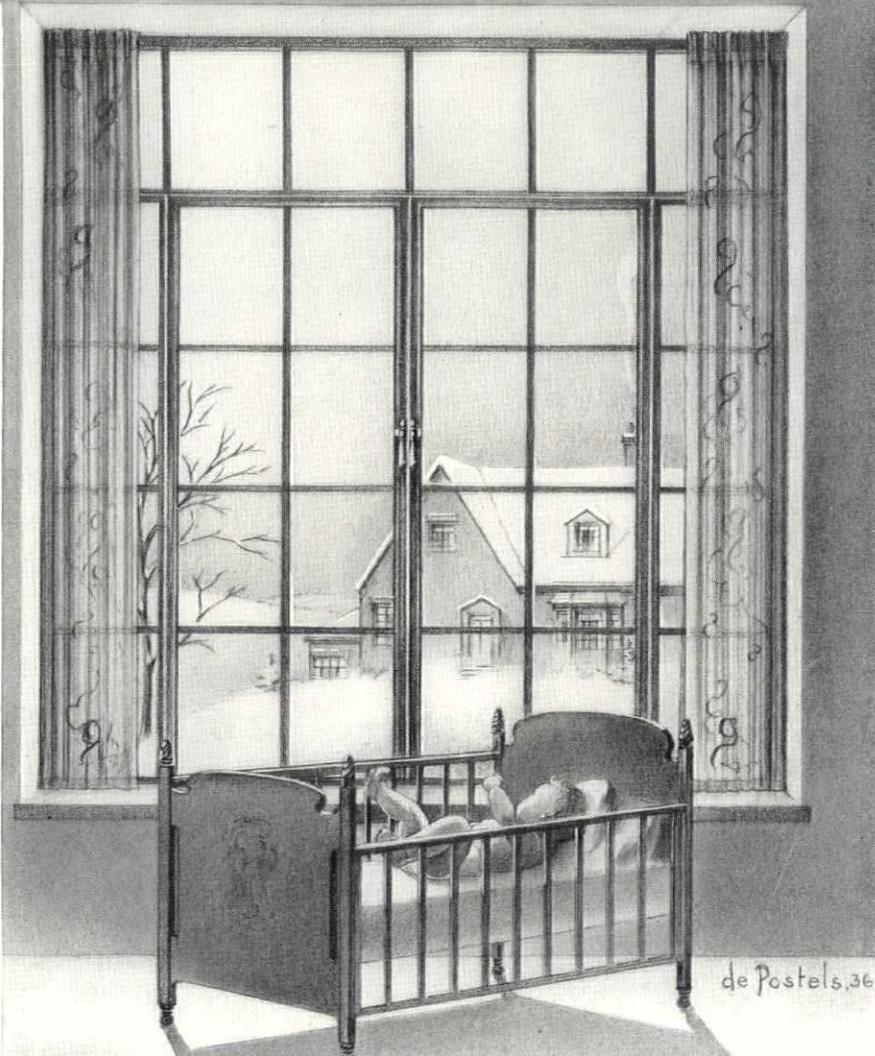
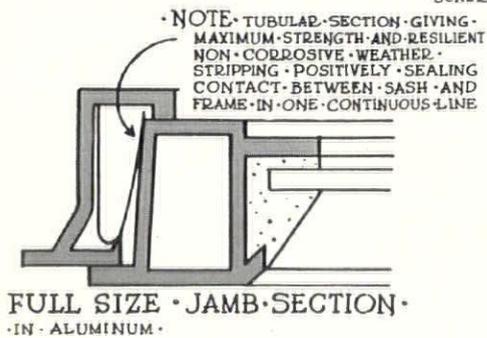
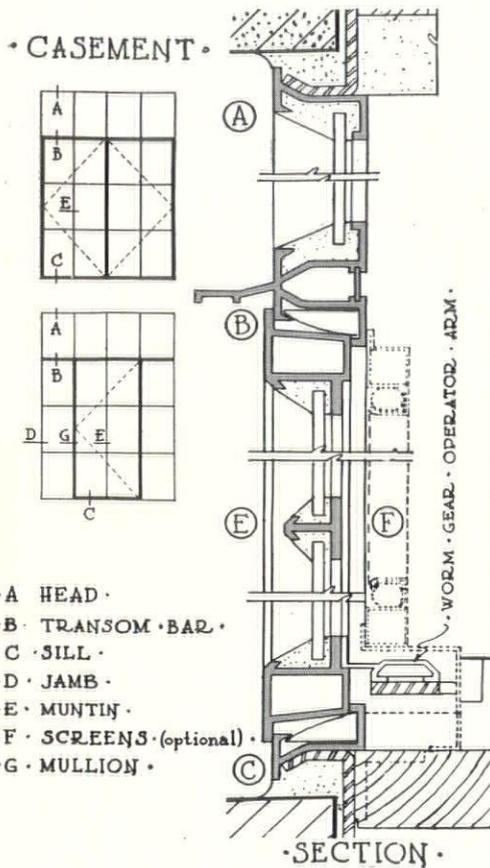
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Lorado Taft, noted sculptor, died recently at his home in Chicago. Mr. Taft was born in Elmwood, Illinois in 1860. He became a sculptor after being inspired by assisting his father to fit together the shattered pieces of a statue which had been imported for the University of Illinois Museum. He studied at the L'Ecole des Beaux Arts in Paris and on his return to America taught at the Art Institute in Chicago. His first important commissions were work for the World's Fair of 1893. Mr. Taft specialized in the allegorical type of sculpture and many of his works are to be seen in various state capitols and colleges. Among outstanding works is the heroic figure of Blackhawk, above the Rock River in Illinois, and "The Fountain of Time" on the midway of the University of Chicago. Mr. Taft was also in the public eye for his championing of the town square type of statue of the civil war soldiers and for his articulation on the subject of modern sculpture, especially the work of Barncusi and Epstein.

Paul Revere Henkel, architect, died recently at his home in New York. Mr. Henkel was 57 years old. He was born in Brattleboro, Vt., and studied architecture in New York where he practiced for more than thirty years. He had been associated with G. F. Pelham in the design of several apartment houses.

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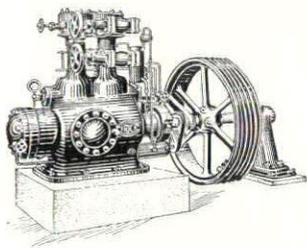
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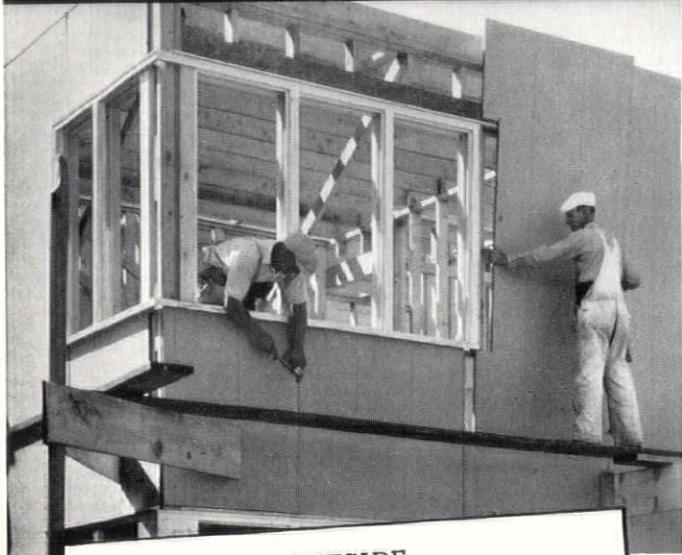
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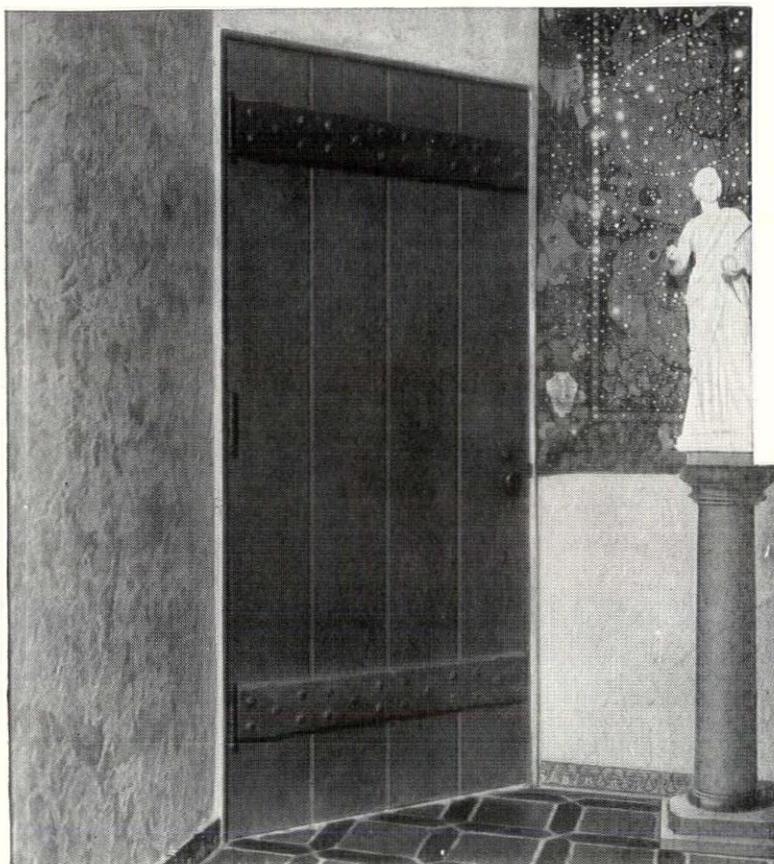
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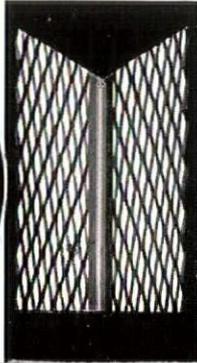
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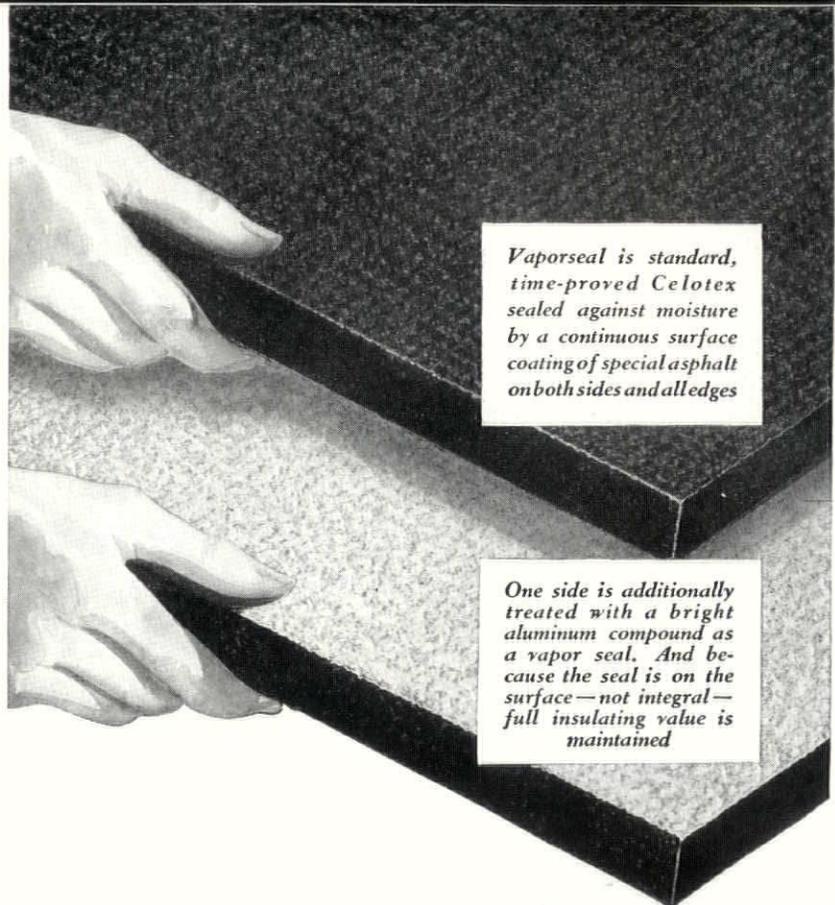
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