

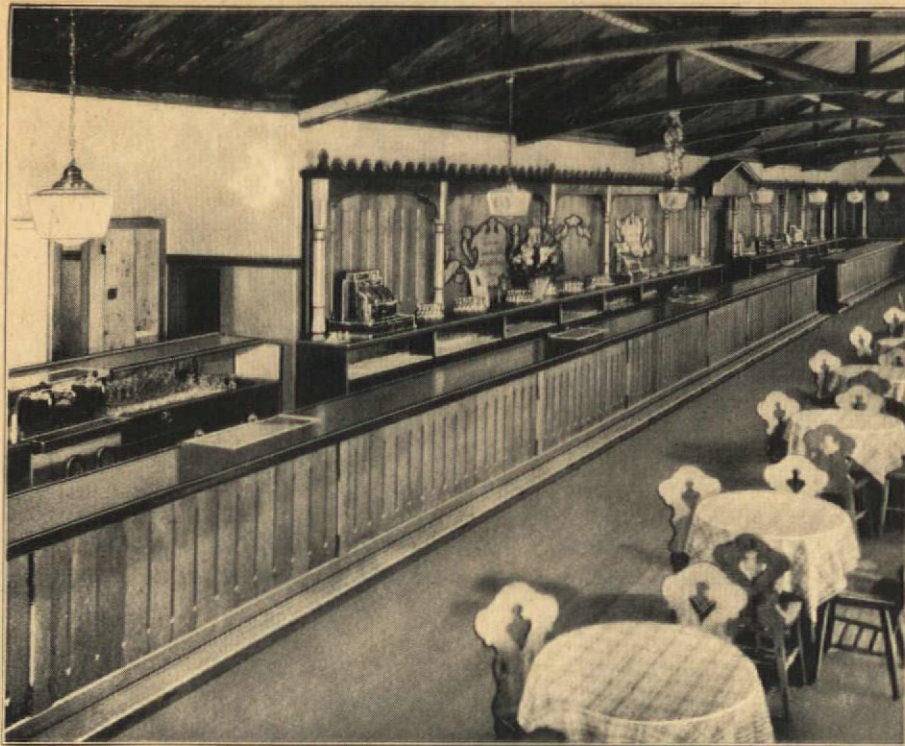
# THE ARCHITECTURAL RECORD

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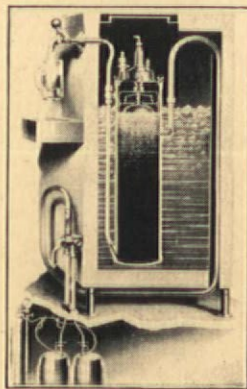


Longest Bar Installation Since Beer's Return.  
Handsome Renaissance Wooden Bar—Old  
Heidelberg Inn, Century of Progress Ex-  
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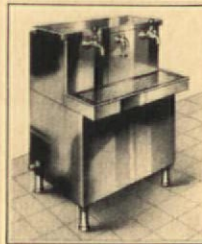
## Technical Advisors on the Design and Installation of **BARS** and **TAP ROOMS**

As manufacturers of every dispensing unit and accessory for beer drawing, the Liquid Carbonic Corporation is in an excellent position to cooperate with architects. On hotel, restaurant and club projects which include beer drawing installations, the architect may draw freely on Liquid's long experience. Technically, the Liquid Line offers a wide choice of equipment and materials. Layouts for custom-built bars are made by our staff of designers.

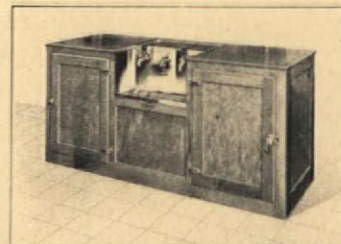
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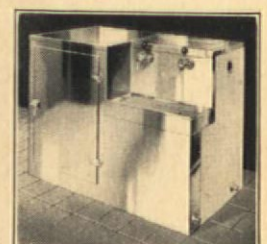
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Pressure Beer Draw-  
ing System



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Wurts

Insurance Company of North America Building in New York City. Shreve, Lamb and Harmon, Architects.

# THE ARCHITECTURAL RECORD

AUGUST, 1933  
VOLUME 74  
NUMBER 2

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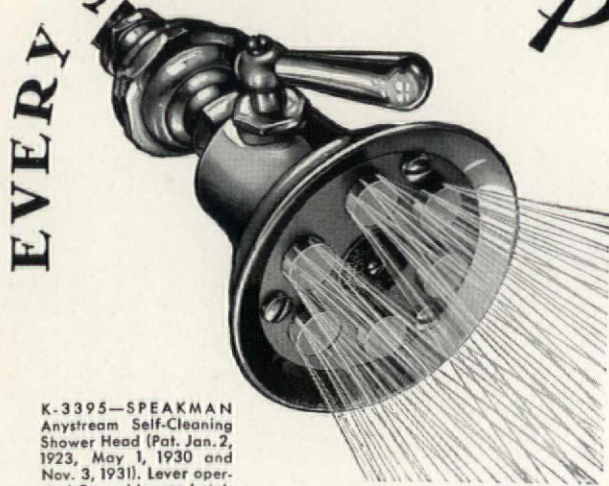
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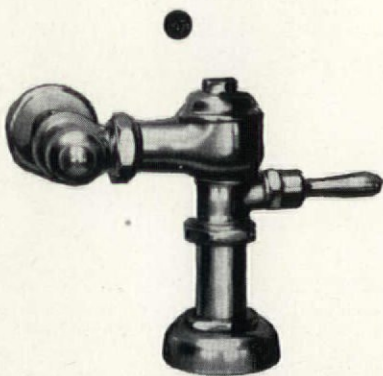
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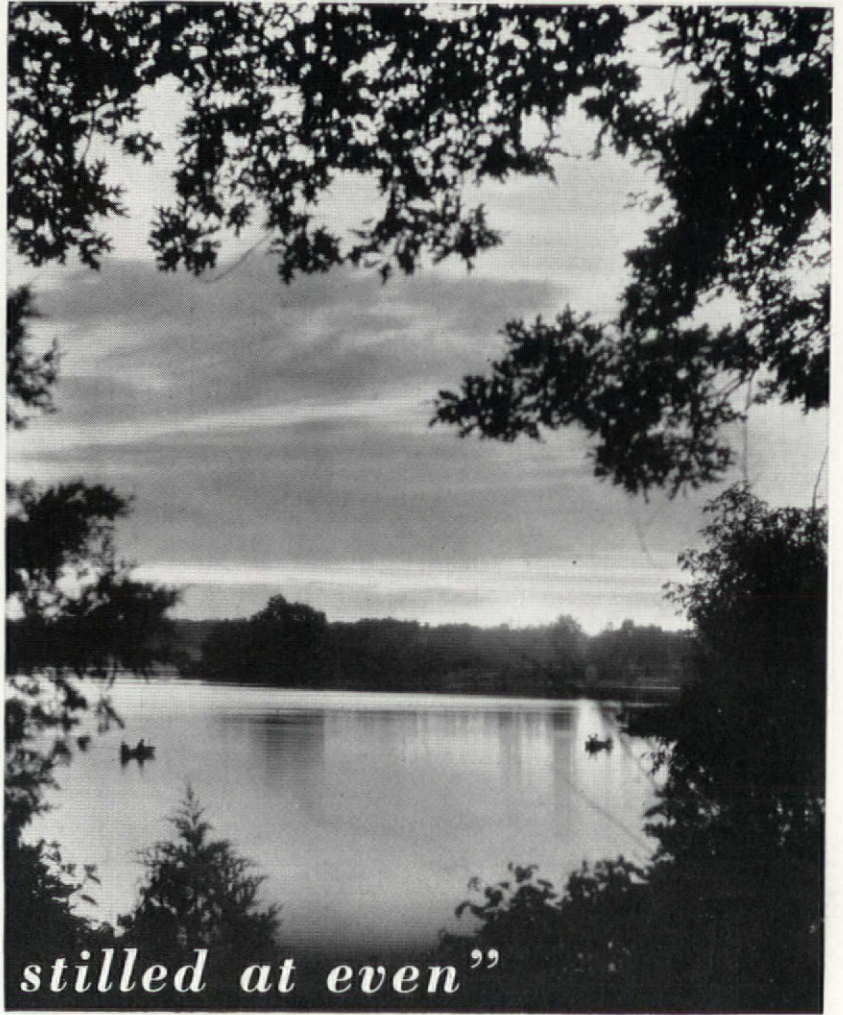
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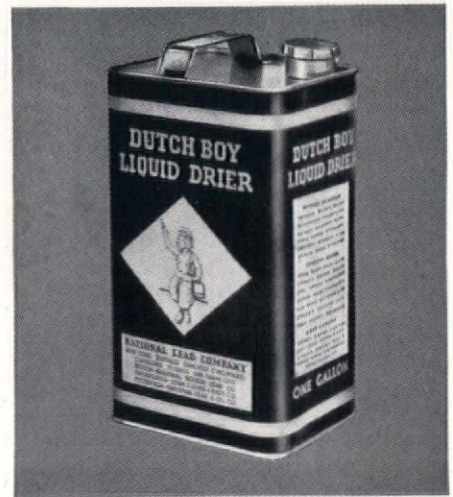
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**W**HEN Brixment is specified for mortar, the architect *automatically* cuts out a series of needless costs and wastes.

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easier, spreads further *and sticks to the brick*. This enables the bricklayer to throw up his head-joint without stooping to the board for more mortar—saves both time and material....

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Brixment has both strength and plasticity, and is waterproofed at the mill. Specify one part Brixment, three parts sand for any kind of unit masonry.

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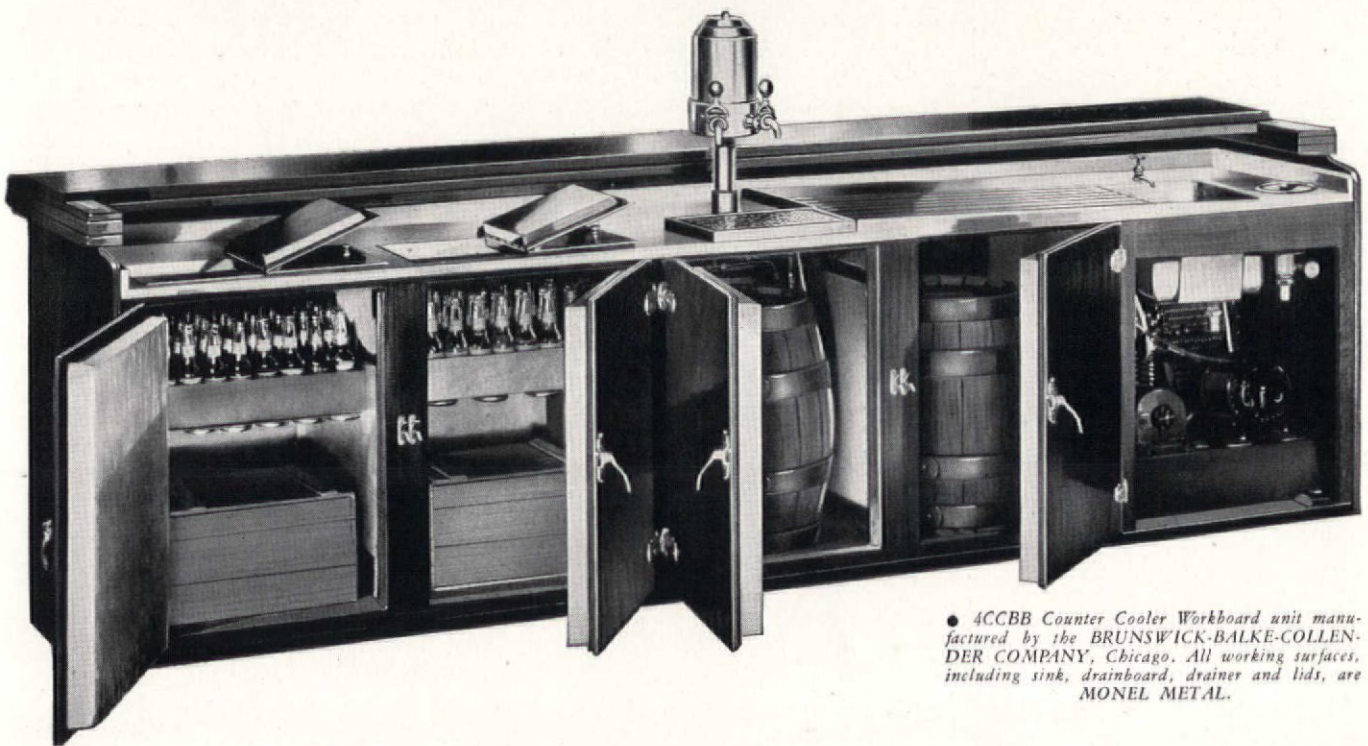


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know that beer sales are soon going to depend to a great extent on SERVICE, with all that much-abused word actually means. Beer must be properly cooled. It must be served promptly. Everything that touches it must be scrupulously clean.

See how Monel Metal meets these needs. It is modern. Its spotless, gleaming, silvery surfaces bespeak utter cleanliness. It is easy to *keep* clean. There's no surface coating to wear off. Monel Metal is solid metal, and solid value, clear through.

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# ARCHITECTS' ANNOUNCEMENTS

Seiichi Washizuka, architect, recently associated with the housing research division of the John B. Pierce Foundation, New York City, in connection with prefabricated construction studies, has returned to Japan. He is opening an office for the practice of architecture at 15 1-Chome, Edobashi, Nipponbashi-Ku, Tokyo.

Martin L. Hussey, architect, has opened an office for the practice of architecture at 3205 W. Six Mile Road, Detroit, Michigan.

George B. Coombe, architect, has announced the opening of an office for the practice of architecture at 1350 Hanna Building, Cleveland, Ohio.

Theard and Matthews, architects, 316 Balter Building, New Orleans, Louisiana, announce the dissolution of their partnership as of June 24. Albert L. Theard will continue the practice of architecture at 316 Balter Building, and Charles D. Matthews will likewise continue his practice at 310 Balter Building, New Orleans.

## HOUSING STUDY GUILD

The Housing Study Guild has recently been formed in response to the rapidly increasing recognition of housing as a keystone in our national reconstruction. The Guild is sponsored by Henry Wright, Albert Mayer, Lewis Mumford, Clarence S. Stein, and others. It will study current technical problems related to the planning, production and operation of housing enterprises, with a view to publication of its findings; it will render analytical services to housing practitioners and will serve as a clearing house for technical information within its field of interest. Correspondence may be addressed to The Housing Study Guild, Allen A. Twichell, secretary, 400 Madison Avenue, New York City.

## BRIDGE AWARD

A stainless steel plaque, designating it as the most beautiful monumental bridge built last year, was affixed on July 28 to the twin spans over the Hackensack and Passaic Rivers. The award was made by the American Institute of Steel Construction. The bridges were designed by Jacob L.

## CALENDAR OF EXHIBITIONS AND EVENTS

Until August 14	International Congress for New Building, Marseilles-Athens. Sessions to be held on board S.S. "Neptos." Subject of study: "The Functional City." Discussions under leadership of Gropius and Le Corbusier.
Until September	International Exposition of Modern Architecture and Modern Decorative and Industrial Art at Milan, Italy.
Until November 1	"A Century of Progress," International Exposition at Chicago.

Bauer, State Highway Engineer for the State of New Jersey.

The two bridges, cantilevered arches identical in design, were selected by a committee composed of Robert M. Carrere, architect; J. K. Smith of McKim, Mead and White, architects; Professor D. S. Trowbridge of the College of Engineering, New York University; C. W. Hudson, consulting engineer; and F. E. Schmitt, Editor of *Engineering News-Record*, all of New York.

## COURSE IN CITY PLANNING

A course in city planning will open next fall at the School of Architecture, Massachusetts Institute of Technology, according to an announcement by Professor William Emerson, Dean of Architecture.

At the same time announcement was made of a new scholarship in city planning, created from funds of the Carnegie Corporation, which will entitle a graduate of the new course to a year's research study in this country or abroad. By means of an additional grant from the Corporation, a program of research will be undertaken next year in the Institute's architectural department.

Such community problems as slum clearance, the adequate housing of industrial workers, and improved traffic circulation will be studied in the new course. While based primarily on a knowledge of architecture, the course will include principles of such closely allied fields as engineering, sociology, economics and law. Studies in practical design will be coordinated with lecture courses in highway construction and other engineering problems.

## NEW HOUSING ASSOCIATION

J. Soule Watterfield, vice-president of the Starrett Building Company, and chairman of the National Conference on the Renewal of Home Building, announces the formation of the National Association for Better Housing. "The purpose of this association," says Mr. Watterfield, "is to bring together for conference, study and common action, all those persons, businesses, trades and professions interested in bringing about better housing, sounder community planning and more extensive home ownership." Henry A. Guthrie is secretary of the Association with offices at 59 East Van Buren Street, Chicago.



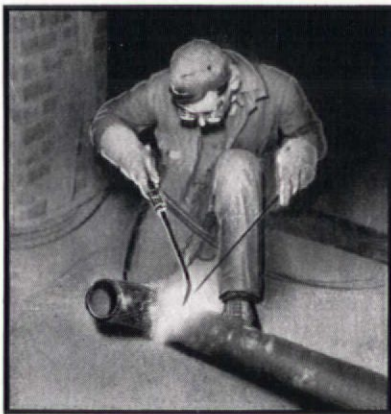
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By this method, the making of difficult assemblies is simplified, the obstacle of erection in inaccessible locations is overcome and the piping is made to conform accurately to plan without the forcing which is often necessary in joining threaded piping.

A neat, close-fitting piping system is the result—an installation that is literally “tailored” to fit—with the simple, easily manipulated oxyacetylene cutting and welding torch, the only tool needed.

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Terrazzo contractors will be glad to tell you how and why and to display samples. Or write

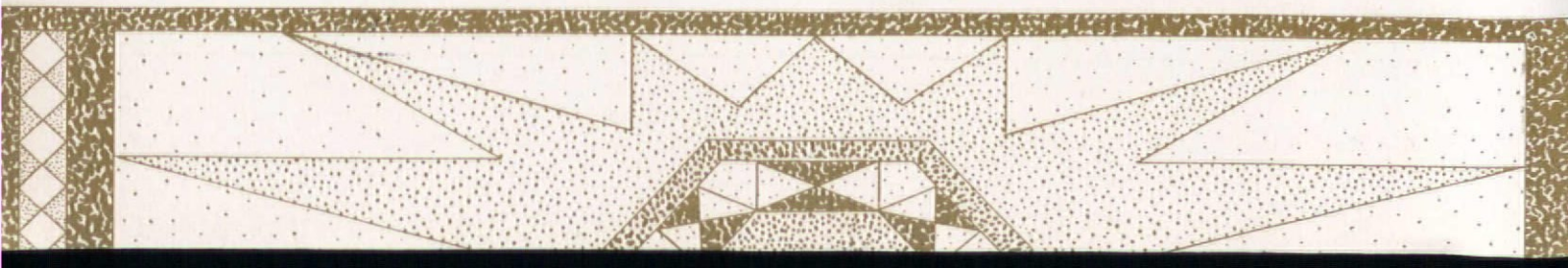
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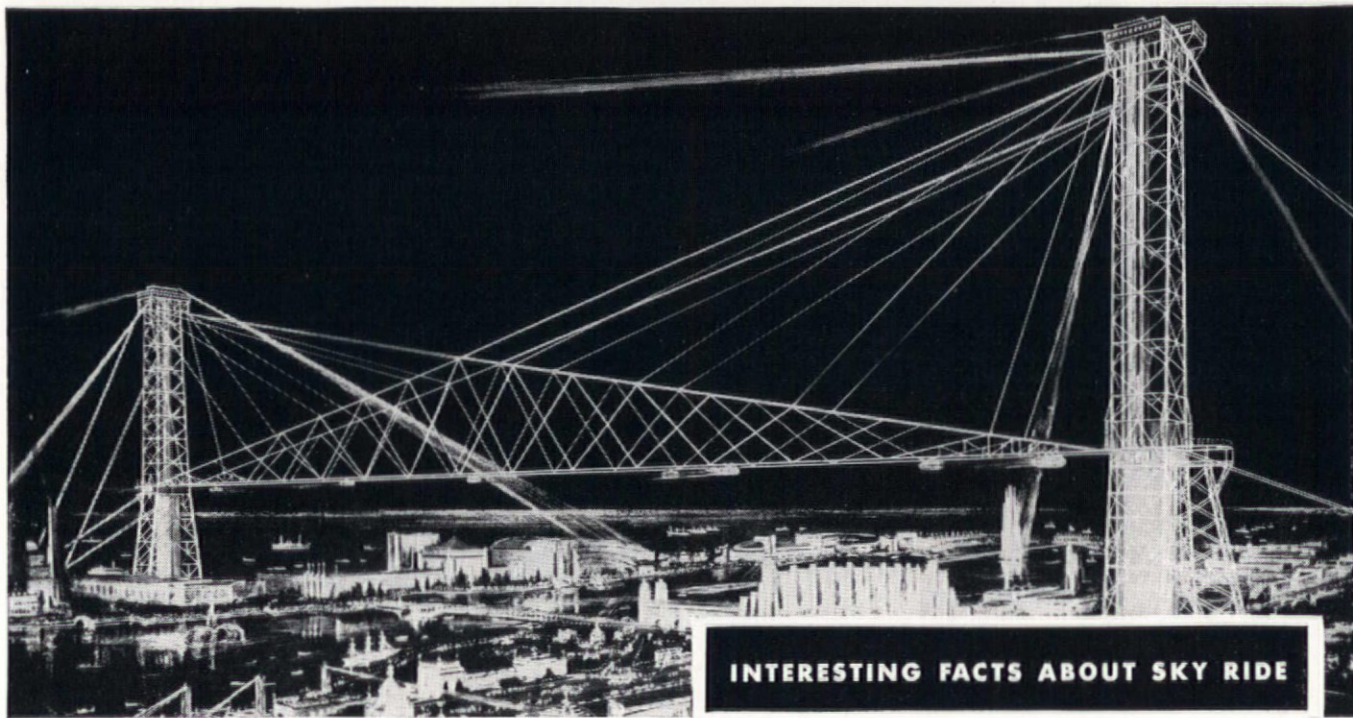
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When you take this magic ride, remember that a large part of its steel structure was painted with *Sublimed Blue Lead* for economical rust prevention

All the vertical members — a large part of the steel work of this fascinating project — was protected against rust with Sublimed Blue Lead — *the paint that is being accepted more and more as the most efficient rust inhibitive paint for all metal surfaces.*

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3. *Chemically stops corrosion*, because of great basicity.
4. *Brushes easily*, flowing out like enamel. Painters like it.
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### INTERESTING FACTS ABOUT SKY RIDE

● Two lofty towers that rise 628 feet in the air — one on the mainland south of Soldiers Field Stadium, one on Northerly Island  $\frac{3}{8}$  of a mile away — connected at the 200 foot level with steel cables that carry passengers in rocket cars across the fairyland of the Century of Progress Exposition: this is the magic Sky Ride! It will provide a supreme thrill to the many thousands of visitors to the Fair. It will be to the 1933 Fair what the Eiffel Tower was to the Paris Exposition of 1899 — what the Ferris Wheel was to the World's Columbian Exposition of 1893.

Observation platforms at the top of the twin towers will afford a wonderful panorama of a great metropolis and its hinterland. The Sky Ride will have a span between its towers of 1850 feet. (Brooklyn Bridge has 1595 feet.) It will carry 4800 passengers an hour over the Fair in rocket cars.

A group of big companies cooperated in building the Sky Ride. The Great Lakes Dredge & Dock Company did the work of sinking the foundations. The Inland Steel Company supplied the steel — which was fabricated by the Mississippi Valley Structural Steel Company. Elevators are by Otis Elevator Company. John A. Roebling's Sons Company furnished the cable and the rocket cars. Illumination was furnished by the Curtis Lighting Company. The Engineers were Robinson & Steinman. The Consulting Engineer was Joshua D'Esposito.

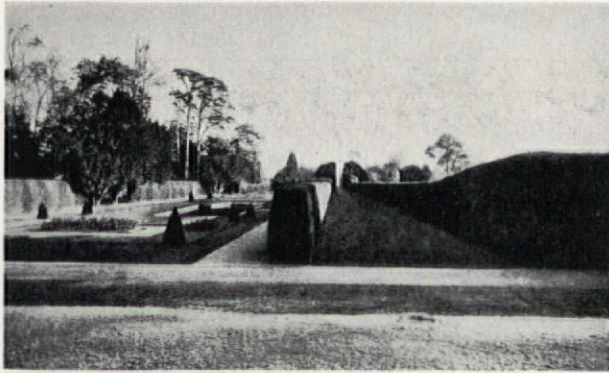
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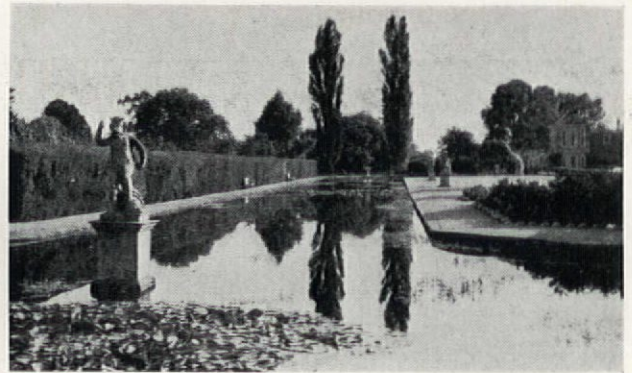


# THE ARCHITECTS' LIBRARY



From HOMES AND GARDENS OF ENGLAND

Grass walks at Holme Lacy, Herefordshire.



Water gardens at Westbury Court, Gloucestershire.

**HOMES AND GARDENS OF ENGLAND.** By Harry Batsford, Hon. A.R.I.B.A. and Charles Fry. Foreword by Lord Conway of Allington. B. T. Batsford, Ltd., London; and Charles Scribner's Sons: 597 Fifth Avenue, New York City. 62 pages. 175 plates and other illustrations. \$3.75

This book is the third of a series, by different authors, dealing with English country life, in this case expressed in the houses.

The authors provide a selection of illustrations representative of the progress of design in the periods from the Middle Ages to the Civil War and from the Civil War to the reign of Queen Victoria. The arrangement includes large houses as well as smaller and less familiar examples.

The volume is delightfully interesting inasmuch as the authors parallel the various houses with the men for whom they were built, and with the main movements of social history. A brief chapter is appended on gardens and parks, showing the gradual but decided change from the formal layout to modern landscaping design. A complete index is given, together with a map of England showing the position of the houses illustrated. There are also excellent notes on each house, giving situation, present occupancy or disposition, comments on previous ownership, and directions for location.

**PLANNING FOR THE SMALL AMERICAN CITY.** By Russell Van Nest Black in collaboration with Mary Hedges Black. Public Administration Service: 850 East 58th Street, Chicago. Publication No. 32. 90 pages, illustrated. \$1.

The small city with a population of 50,000 or less promises most in the future development of this country, the author of this compact monograph believes. He points to the too-formidable cost of remodeling the large cities to meet the new demands of good living, and suggests that attention be given first to the small city whose growth may be more easily directed along better lines and to entirely new towns built on new sites. The problem confronting such communities is twofold: the improvement of present-day conditions and the

anticipation of future needs.

The first part of the book treats of making the city plan: the general planning problem, planning beyond the city borders, steps in plan making, basic data essential for preparation and the legal background. A second division describes what modern planning offers the small city in street plan, parks and playgrounds, zoning, public buildings, airports, sewerage and water supply, railroads, housing and beautification. Carrying out the city plan is the subject of the concluding part.



From PLANNING FOR THE SMALL AMERICAN CITY

Master plan for a small city, designed by John Nolen and Associates.



# OVER THREE BILLION BUILDING DOLLARS ARE GOING TO WORK!

YES, the public works allotment is good news. But until operations get fully under way, there are still plenty of projects open to the alert architect. Aggressive selling will bring immediate business from the thousands of old office buildings, apartment houses, and residences that are considering modernization now, in view of rising costs.

For both new building and modernization work, Scovill Flush Valves recommend themselves to the architect. They are the only self-lubricating flush valves on the market today.



A patented feature which means smoother action and longer life. It is obvious that a permanently packed lubricant will increase the life and efficiency of a moving mechanism.

The Scovill Flush Valve possesses many other advantages. . . . A self-cleaning by-pass that automatically prevents clogging. Balanced-piston construction that cuts out water-hammer. And positive operation under low water pressures, given sufficient volume.

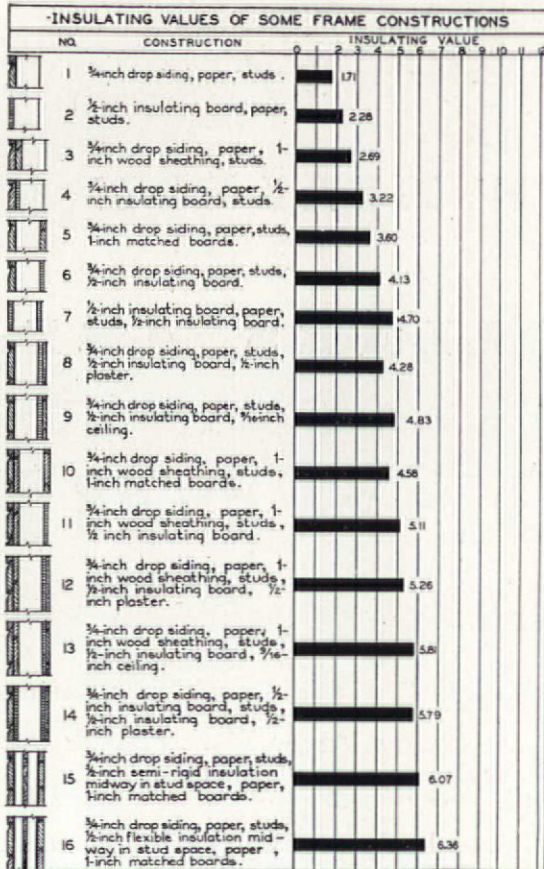
Specifications that include Scovill Flush Valves guard the standards of your work. Your client is assured of service, satisfaction, and long-term savings. You will find a Scovill Flush Valve in the model, finish and price range to suit every job. Send for the handy catalog giving full information. It is yours without obligation.

**SCOVILL MANUFACTURING COMPANY**  
PLUMBERS' BRASS GOODS DIVISION  
WATERVILLE • CONNECTICUT

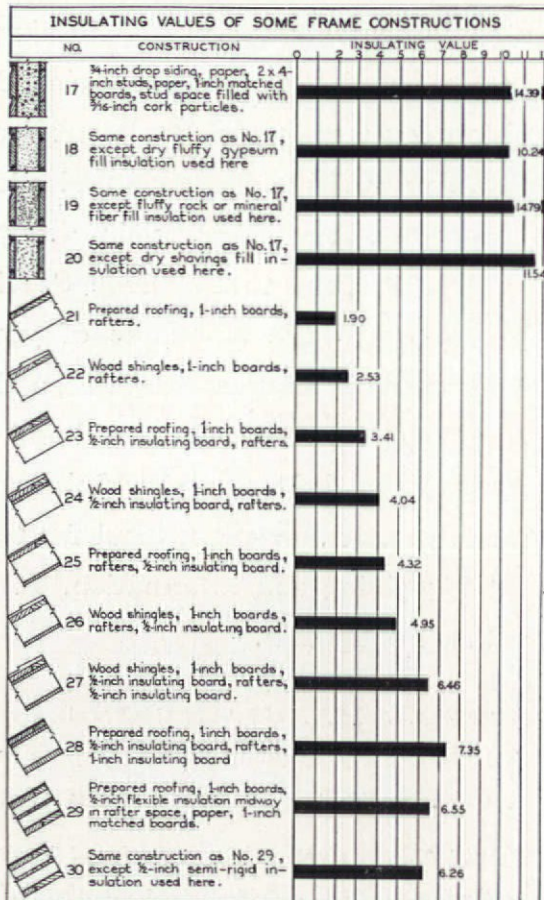
*Scovill Flush Valves—Shower, Bath and Lavatory Equipment—Tubular and Miscellaneous Plumbers' Brass Goods*

# SCOVILL

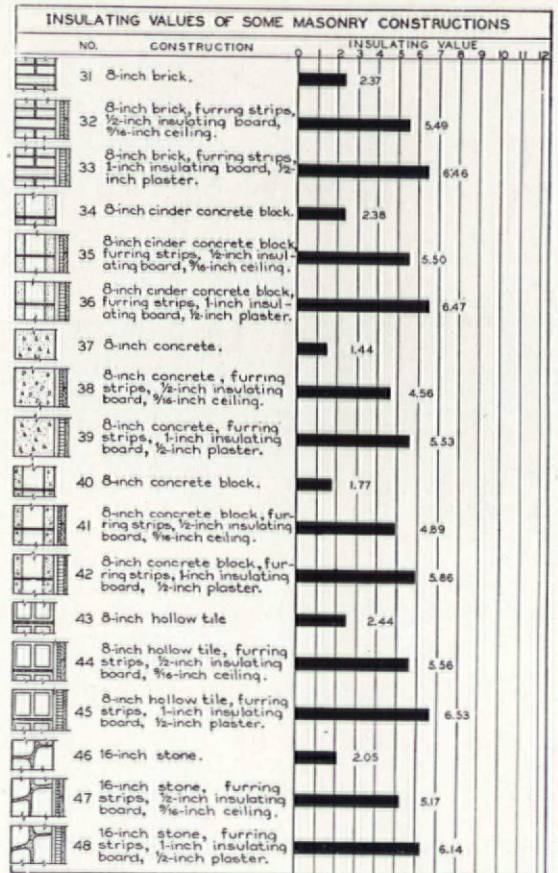




Tables from INSULATION ON THE FARM



In calculating values, actual rather than nominal thicknesses of wood were used.



**INSULATION ON THE FARM.** By Russell E. Backstrom, Insulation Specialist. Twenty-fifth report of the National Committee on Wood Utilization, U. S. Department of Commerce. 49 pages, illustrated. For sale by the Superintendent of Documents, Washington, D. C. Price, 10 cents.

Although intended primarily for use by farmers, this bulletin offers much insulation data useful to architects, particularly those whose country estate projects include the design of minor structures like dairy barns, poultry houses, beehives, storage houses for fruits and vegetables, and milkhouses. The volume is not limited to a discussion of wood-fiber products alone; the National Committee on Wood Utilization, as stated by Director Axel H. Oxholm in a foreword, recognizes that raw materials other than wood may be used with equal satisfaction for insulation purposes, and the current study accordingly describes the various types of manufactured and nonprocessed insulation as well as the general principles underlying their selection and application.

**THE FRENCH CATHEDRALS.** By Hélène Fouré (Ohio State University). Bruce Humphries, Inc.: 470 Stuart Street, Boston, Mass. 73 pages. 31 full-page plates. \$2.50

During the War, Mme. Fouré, when acting as an interpreter with the armies in Picardy, was asked by the British authorities to lecture in Amiens Cathedral; she has now summed up her lectures in this slender volume. The book, written in nontechnical language, treats of the symbolism of French cathedrals rather than the architectural design.



*Smart*  
*in Appearance*  
*Efficient in Service*

**THE MAGNALUX  
 LUMINAIRE**



**A**FTER an exhaustive study of American and European lighting practices, an outstanding illuminating engineer, who is also an architect, designed the Westinghouse Magnalux Luminaire.

In this attractive fixture he has skillfully combined beauty, maximum efficiency and correct distribution.

Its hyperbola-shaped basin, made of dense Galax glass, is available in plain and ornamental designs. A slender stem connecting the canopy and husk completes the simple lines, enhancing its appearance.

The reflecting properties of its Galax glass basin contribute to the unit's great efficiency which is above 90 per cent . . . unequalled by any other semi-indirect lighting fixture.

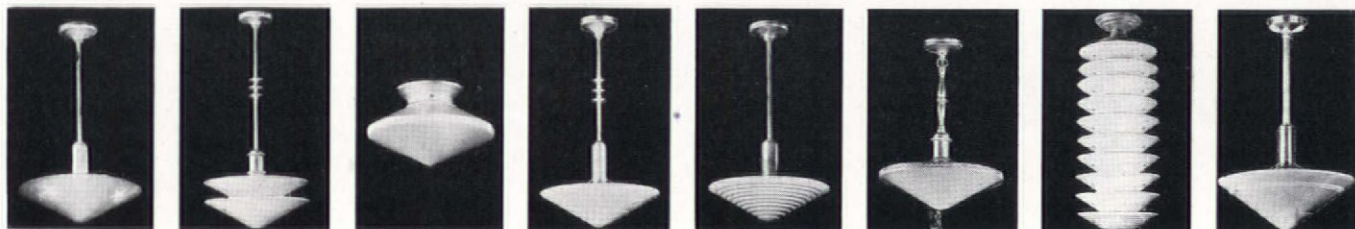
The light diffused through the basin and that reflected from the ceiling is so evenly distributed that one is not conscious of its overhead source.

Your Westinghouse Representative will gladly furnish further information—or simply address Westinghouse Room 2-N, East Pittsburgh, Penna.

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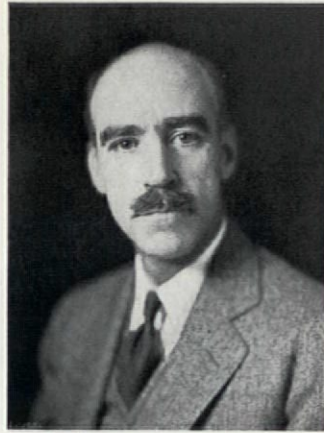
**WESTINGHOUSE**   
 ELECTRIC & MANUFACTURING COMPANY

**COMBINATION POSSIBILITIES OF MAGNALUX LUMINAIRES**





# Publisher's Page . . .

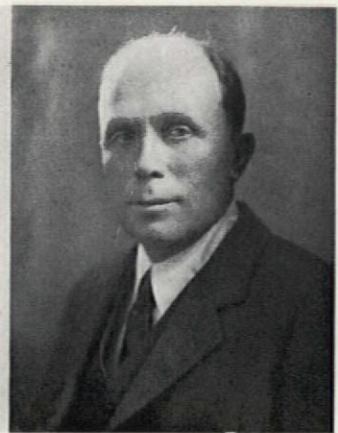


Kaiden-Keystone

WILLIAM F. LAMB



R. H. SHREVE



© Bachrach

ARTHUR LOOMIS HARMON

In this issue is featured the New York office building for the Insurance Company of North America, designed by the architectural firm of Shreve, Lamb and Harmon. This structure has been referred to by Lewis Mumford as a pattern for the office building.

The National Industrial Recovery Act was approved on June 16. The organization of the Federal Emergency Administration of Public Works was begun with the designation of the Administrator on July 8 and was completed in less than three weeks. As this is being written, substantial progress has already been made in the allocation of funds for such purposes as road construction, ship building, waterworks, sewage systems, and the like, for the design of which architects will not be generally employed. Most of the provisions of the Act relating to the \$3,300,000,000 public works program are permissive rather than mandatory. The developments of direct interest to architects will arise mainly under these provisions and will depend upon formulation of policies and allocation of funds yet to be made.

One permissive provision which seems to have received little general notice is to the effect that legitimate private building enterprises are entitled to apply for loans (not for subsidies). The magazine will therefore have an exceptional opportunity for serving subscribers by keeping them informed of interpretations, policies and other developments connected with the Emergency Administration of Public Works.



Sigurd Fischer

New home office of the Metropolitan Life Insurance Company, New York City. D. Everett Waid and Harvey Wiley Corbett, Architects

## In next month's issue—

A complete showing, with plans and many plates, of the new home office building for the Metropolitan Life Insurance Company in New York City. Accompanying articles describing the general problem and its solution and the technical features have been prepared by the architects, D. Everett Waid and Harvey Wiley Corbett.

A portfolio of schools, illustrating new tendencies in planning and equipment.

Other features include a portfolio of small houses, a country home for convalescent babies on Long Island, and additional progress information on the public works program and building recovery.





Zenitherm Floor in the Garden Restaurant at Bloomingdale's Department Store, New York City

Zenitherm comes in 21 colors, faintly mottled. It is  $\frac{3}{8}$  of an inch thick, and there are 15 standard sizes, ranging from  $5\frac{1}{2}$  inches to  $47\frac{1}{2}$  inches.

## Good taste

Good taste in floors and walls is an essential of architectural success, whether in a beautiful home, a restaurant or a *bier garden*. Zenitherm is designed for architects and their clients who demand good taste. Its smooth, mottled texture reflects a soft, refined beauty. Though as durable as stone, it has warmth and resilience. Its fire-resisting and insulating qualities make it ideal for all types of residential, commercial

and public buildings. Modernizing, too, becomes a simple procedure where Zenitherm is used. Its adaptability of design and ease of installation make it a favorite in the remodeling field. Zenitherm can be sawed and cut like wood, yet resembles the finest of continental building stones. Its range of 21 colors enables the architect to create walls and floors that are distinctive and yet meet the requirements of good taste.

# zenitherm

FOR FLOORS AND WALLS

STRUCTURAL GYPSUM CORPORATION

535 FIFTH AVENUE, NEW YORK

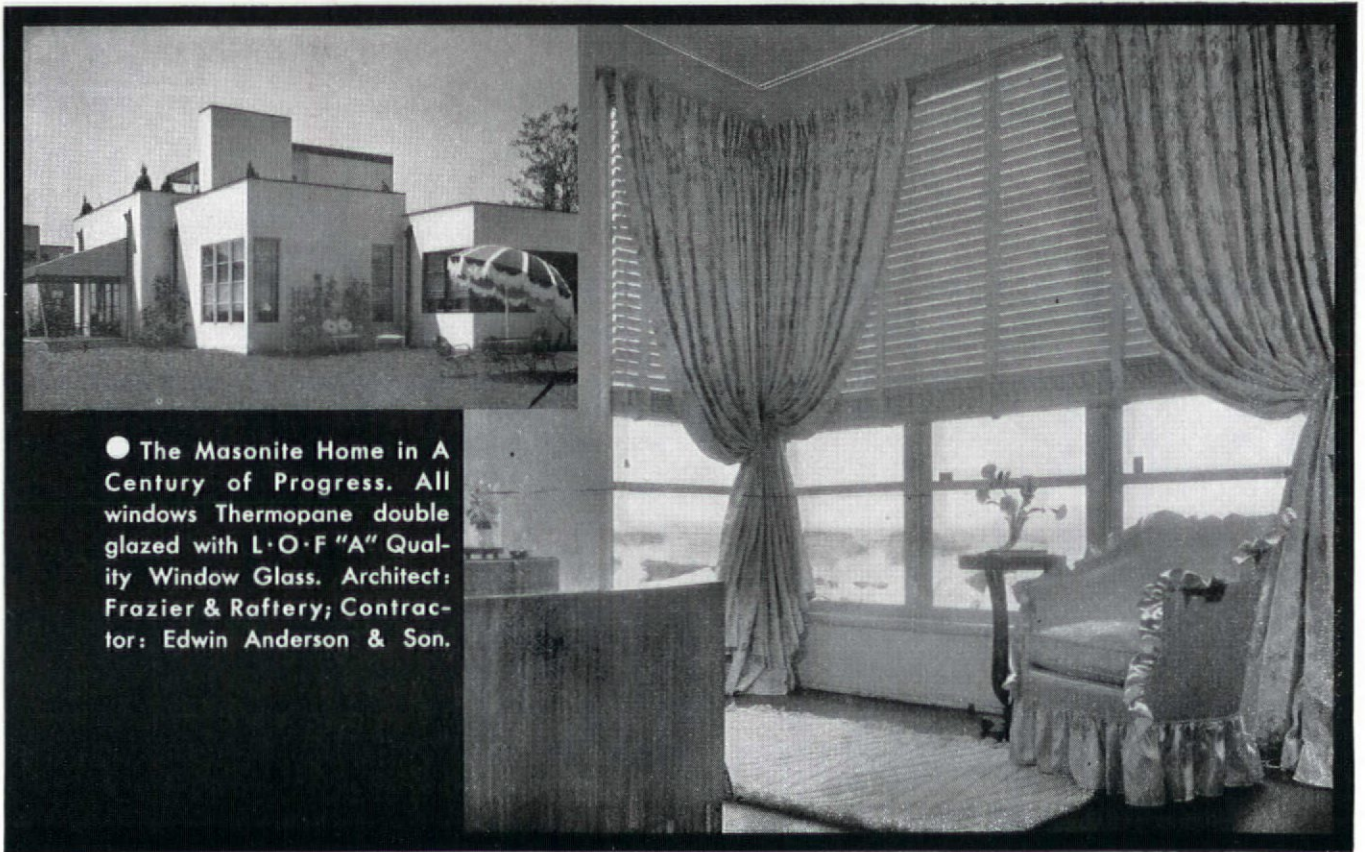
*A Unit of American Cyanamid Company*



Interest centers about a new architectural trend . . . and this new trend emphasizes glass. That is why the quality of glass has assumed a new importance. It must be the flattest, brightest, clearest and most evenly reflecting glass obtainable. Perhaps that explains why the majority of the buildings in the Home Planning

# THE WORLD'S FAIR

Section at A Century of Progress are glazed with L·O·F Polished Plate Glass, and Improved Quality Window Glass. A closed specification for L·O·F Quality Glass will insure your client's complete satisfaction.



● The Masonite Home in A Century of Progress. All windows Thermopane double glazed with L·O·F "A" Quality Window Glass. Architect: Frazier & Raftery; Contractor: Edwin Anderson & Son.

## LIBBEY · OWENS · FORD QUALITY GLASS



● LIBBEY · OWENS · FORD GLASS COMPANY, TOLEDO, OHIO, manufacturers of Highest Quality Flat Drawn Window Glass, Polished Plate Glass and Safety Glass; also distributors of Figured and Wire Glass manufactured by the Blue Ridge Glass Corp. of Kingsport, Tenn.



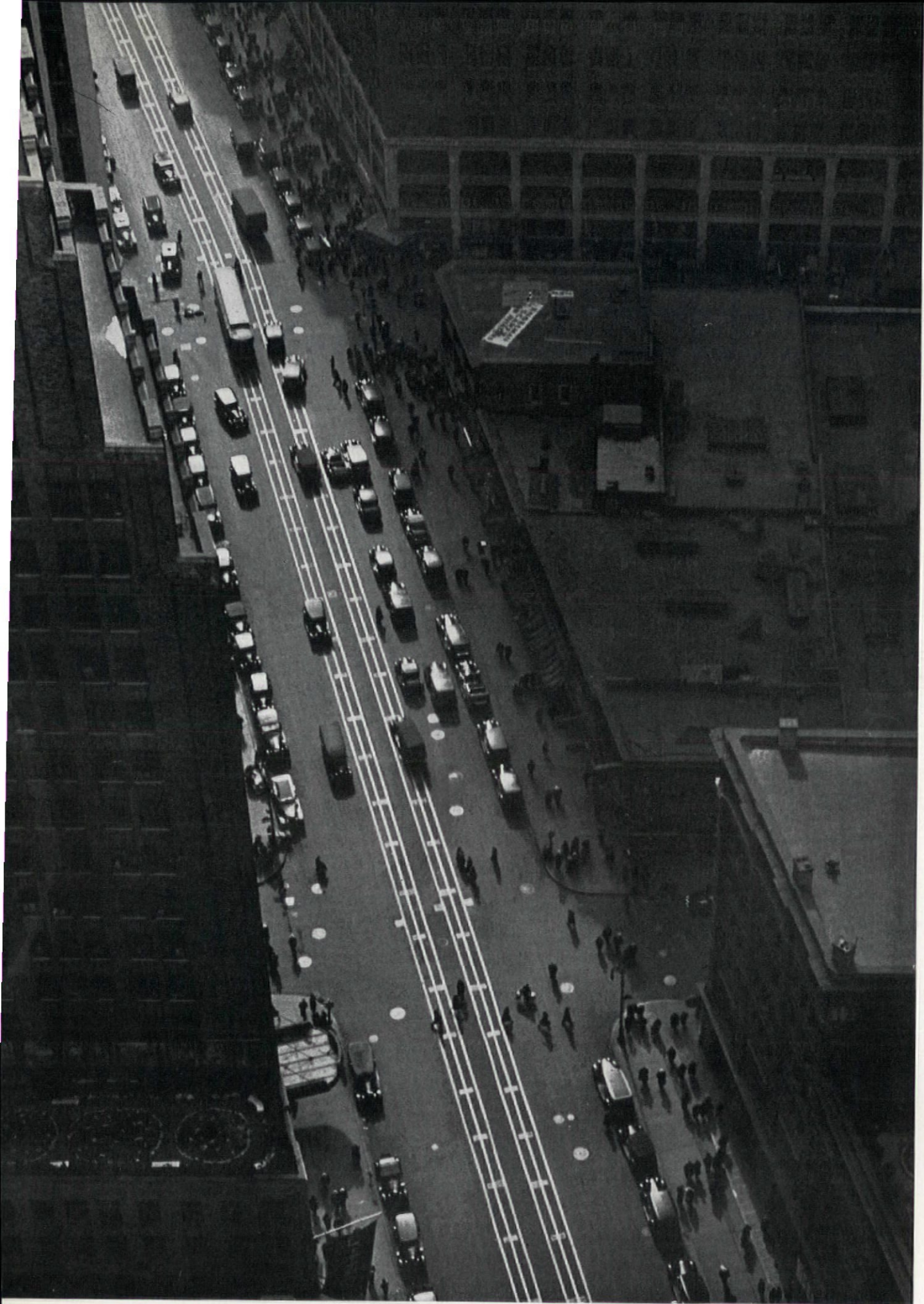
PHOTOGRAPHS OF NEW YORK  
BY SAMUEL H. GOTTSCHO

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LOOKING DOWN BROADWAY  
FROM A TIMES SQUARE BUILDING

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# THE ARCHITECTURAL RECORD

AUGUST, 1933

VOLUME 74 — NUMBER 2

## INSTRUCTIONS TO PRIVATE ARCHITECTS ENGAGED UPON PUBLIC BUILDING WORK

L. W. Robert, Jr., Assistant Secretary of the Treasury, in charge of the construction, repair and improvement of public buildings under the jurisdiction of the Treasury (post offices, other office buildings, hospitals, and the like, except army and navy projects), has compiled a set of instructions for private architects engaged upon building work under his jurisdiction. The set is in the form of mimeographed sheets stapled together and contains at a rough guess some 15,000 words. It is divided topically as follows: Section I, General Information. Section II, Architectural Design, Drawings, etc. Section III, Specifications, Samples, Administrative Procedure, etc. Section IV, Structural. Section V, Mechanical Equipment. Appendices.

Through the courtesy of Mr. Robert we are permitted to publish Section I, which contains information useful to architects who intend to apply for commissions. The constructions likely to be most numerous are hospitals, office buildings for government workers and for revenue uses, post offices, customs houses, dock buildings, camps and national park buildings.

### SECTION I: GENERAL INFORMATION AND PRELIMINARY PROCEDURE

1. Hon. L. W. Robert, Jr., Assistant Secretary of the Treasury, is in charge of public building work, under the general direction of the Secretary of the Treasury.

2. He establishes policies, determines what projects are to be assigned to private architects and acts for the Department in selection of architects.

3. It is a condition of appointment that the architect selected examine carefully the standard contract and consent to the conditions contained therein.

4. The standard fee for architects is 4.8 per cent including all engineering services but exclusive of supervision; 1.2 per cent is payable upon approval of the cabinet sketches; 2.7 per cent additional is payable upon approval of the working drawings and specifications; the balance in installments during construction for full-size drawings, checking of shop drawings, and correspondence, and upon request recommendations regarding approval of materials, samples and models. Extra allowance to the extent prescribed in the contract is made for travel and subsistence expenses for a number of visits to Washington (such allowance not made previous to the execution of the con-

tract). Supervision of construction is excluded from the contract, this duty being performed by Government construction engineers. A sliding scale of fees is established for very large projects. Fees of architects and travel expenses are not chargeable to the appropriation for the building.

5. Where the performance of additional service entitles an architect in accordance with the terms of his contract to additional compensation apart from the stipulated fee, it is customary to base such compensation upon satisfactory evidence of the actual cost to him of such additional service as shown by an itemized and notarized statement of his payroll expenditures, etc., names of employees, together with time and rates of pay in each case.

6. To this is added the percentage considered appropriate to the individual case to cover the architect's professional services and overhead expense.

7. Consequently it is important, especially in connection with such extra services, that accurate time card cost be kept from which the information required in such cases may be furnished.

8. Also it is the policy of the Department to regard any services, professional or operative (draft-



ing, specification writing, etc.) performed by a contracting architect or member of a contracting firm, as compensated by participation in the fee or professional service and overhead allowance, and to allow no payments in the itemized costs of additional work for drafting or similar service performed by a contracting party.

9. Engineers employed by the architects for structural and mechanical designs, drawings and specifications should not have any connection either directly or indirectly with, nor have any financial interest in, any concern providing or handling the products covered by the designs during the period the designs and working drawings were being developed.

10. While in Washington obtaining information and decisions on materials and arrangement of specific features affecting the preparation and development of working drawings, architects are particularly cautioned to obtain written confirmation of such decisions initialed by the official issuing same. A copy will also be retained by the Office of the Supervising Architect for use in connection with the check of the final working drawings.

11. Unless specifically authorized the architect must not publish anything relating to the project assigned to him.

12. Great expedition in the production of drawings and specifications is expected.

13. *The Office of the Supervising Architect* is located on the fourth floor of the Treasury Building; James A. Wetmore, Acting Supervising Architect (Room 440), directs all activities of the office; only personal communications should be addressed by name; all official communications should be addressed, "Office of the Supervising Architect, Treasury Department, Washington, D. C."

14. *The Technical Officer*, George O. Von Nerta (Room 439-A), is in charge of the four principal technical divisions. General information regarding the duties and responsibilities of architects should be obtained from him.

15. *Architectural Division* in charge of design and general working drawings; L. A. Simon, Superintendent; George W. Stone and P. I. Balch, Assistant Superintendents.

16. Obtain here general instructions as to procedure and sequence of same, and information relative to making contact with other Bureaus and Departments for space approvals.

17. Obtain space requirements; topographical survey, information regarding size of drawings, scale of drawings; examine samples of cabinet sketches; discuss general design; principal materials to be used; etc.

18. Tentative sketches, cabinet sketches and working drawings are to be delivered here.

19. *Architectural-Engineering Division* in charge of estimates, specifications, and building management. J. W. Ginder, Superintendent, and G. R. Roberts, Assistant Superintendent.

20. Obtain date of act making the appropriation; limit of cost of project; reservations and contingencies; amounts available for construction contract including mechanical equipment; estimated cost of elevators and conveying apparatus; estimated cost per cubic foot; obtain copy of guide specifications; list of Federal Specifications for selection of those that apply to construction. Federal Specifications are furnished upon request.

21. If topographical survey or soil investigation (test pits, test borings, test piles) have not been made, the architect will be authorized to have them made, and will be reimbursed for this work upon submission of vouchers.

22. Promptly upon the execution of his contract by the Department the architect is furnished the date of authorizing legislation, apportionment of funds, etc., in letter form, together with authority to obtain topographical survey and soil data, or such additional information of this nature as he may consider necessary, accompanied for his guidance by typical specifications for the work and a plot or description of the site, also a specimen sketch estimate form.

23. The above letter establishes on an estimated basis certain reservations which are deducted before the amount available for contract is established. No attempt is made, however, to cover by this list all reservations which it may be desirable to make for items which are not to be covered by the construction contract. Consequently there are furnished copies of Card, Treasury Department Form No. 8825, upon which the architect shall enter reservations for all of the items listed which are not to be included in the construction contract together with any additional items not listed but for which in the opinion of the architect reservations are desirable.

24. In the preparation of this card, which is to be deferred until completion of the working drawings and specifications, the tentative reservations given in above-mentioned letter may be modified to meet conditions as actually developed in the design.

25. This card shall be submitted with the specifications.

26. *Structural-Engineering Division* in charge of structural design. T. C. Brooks, Superintendent, and W. C. Lyon, Assistant.

27. Discuss questions relating to structural design including types of frames; floor construction; live load requirements; unit stresses; subsurface conditions and investigations; foundation design. See Section IV.

28. *Mechanical-Engineering Division* in charge of all branches of mechanical equipment. N. S. Thompson, Superintendent, and Robert Mayo, Jr., Assistant Superintendent.

29. The Administrative Section is located in Room 415, and the Engineering Section in Room 721 of the Washington Building, at New York Avenue and 15th Street.

30. The Mechanical Engineering Division in



charge of all mechanical equipment, including plumbing, sanitary and storm water drainage, heating and ventilating apparatus, conduit and wiring systems, interior lighting fixtures, clock and fire alarm systems, elevators, mail conveyors, built-in scales, etc.

31. Architects are to confer with the Engineering Section before working drawings are started. See Section V.

32. *Accounts Division.* H. S. Robinson, Superintendent of Division, and J. A. D. Garber, Assistant Superintendent.

33. Obtain information regarding travel expenses and the preparation of vouchers for same. Vouchers in payment for other services covered by the contract will be prepared in this division based upon statements to be submitted by the architects.

34. *Law Division.* H. S. Roome, Superintendent of Division, and E. R. Witman, Assistant Superintendent.

35. A copy of the proposed contract can be seen in this Division.

36. *Maintenance Division.* J. H. Shaefer, Superintendent of Division.

37. Obtain information of space requirements for the Maintenance force.

38. *Other Departments:* In large buildings the activities of many of the Executive Departments require space, and all Departments have a number of bureaus. The tentative drawings are required to be approved by the head of the bureau or some one designated by him; these bureaus are scattered in a great number of buildings in Washington.

The architect, or his representative, should consult the Chief Clerk of the Department concerned regarding location of the bureaus to be visited, in the event that this information is not obtainable from the Architectural Division.

39. Conferences with local officials regarding the arrangement of space is desirable but final approval rests with Departments in Washington. It not infrequently occurs that local officials, or their Bureaus or Departments, request space in excess of that allowed them by the Inter-Departmental Committee, or the Bureau of the Budget, and in such cases the architect should follow the Budget allotment unless in his opinion he can include such additional space without increasing the cost of the building beyond the available limit. This upon request will be explained more fully if presented during architect's visit to Washington.

40. *Progress Reports:* It is important to have at frequent intervals information on progress being made on the drawings and specifications; forecast of completion, etc. For this purpose, semi-monthly reports are to be submitted on blank forms supplied by the Office of the Supervising Architect; reports to be in duplicate, the envelope addressed to the "Technical Officer, Office of the Supervising Architect, Treasury Department, Washington, D. C.," without letter of transmission.

41. For information of statisticians who compile reports on labor conditions, architects are requested to report on their semi-monthly progress reports, the number of employees engaged in the preparation of drawings and specifications for the Government projects for which they are the architects.

## ARCHITECTS ELIGIBLE FOR FEDERAL WORK REGARDLESS OF MEMBERSHIP IN ASSOCIATIONS

The Special Board of Public Works, acting in conjunction with the various government departments concerned, is engaged in a review of proposed Federal building projects as this is being written (July 21). All such projects selected for execution under the National Industrial Recovery Act fall under the jurisdiction of the Treasury Department, with the Assistant Secretary of the Treasury, L. W. Robert, Jr., in direct charge. As was stated in last month's issue, it is the purpose of the Department to engage architects in private practice as far as possible to prepare plans and specifications for new constructions, repairs or improvements of buildings under the Recovery Act. In pursuance of this purpose, Mr. Robert has had a prequalification form or questionnaire sent to all members of the architectural profession found on lists of registered architects or (in states not requiring registration) on such commercial lists of architects as were available.

The circular letter accompanying the form reads in part: "If you desire that your name be placed on file, it is requested that you fill out the questionnaire at once and return it to this (Treasury) Department. This should be done even though you may be well known to the Department and even though you have an application already on file. It is requested that where the business of your office is under the direction of a firm, each member of the firm fill out a similar statement.

"Selection is generally made from architects maintaining an office in the city in which the building is to be constructed, and in some cases it has been found advisable to make it a condition that they associate with architects of wide experience in monumental buildings. . . . Any information you furnish will be held in confidence."

Copies of the questionnaire may be obtained from the Treasury Department, Office of the Supervising Architect, Washington, D. C.



# EXECUTIVES OF THE RECOVERY ADMINISTRATION

## Title I—*Industrial Recovery.*

Offices, Department of Commerce Building, 14th and E Streets, Washington, D. C.

General Hugh S. Johnson, Administrator.

John W. Power, Assistant to Administrator.

Robert K. Straus, Assistant to Administrator.

Dudley Cates, Assistant for Industries.

Edward F. McGrady, Assistant for Labor.

Donald R. Richberg, General Counsel.

Labor Advisory Board, Industrial Advisory Board, Consumers' Advisory Board, and Thirteen Deputy Administrators.

## Title II—*Public Works and Construction Projects.*

Offices, Interior Department Building, 18th and F Streets, Washington, D. C.

Harold L. Ickes, Secretary, Department of Interior, Administrator of Public Works.

Col. H. M. Waite, Deputy Administrator of Public Works.

L. W. Robert, Jr., Assistant Secretary of the Treasury, in charge of construction, repair and improvement of buildings for all departments of the Federal government. The Office of the Supervising Architect is under Mr. Robert, who directs its policies with regard to allocation of work to private architects.

Robert D. Kohn, Director of Housing Division created by Secretary Ickes to study slum-clearance and low-cost housing projects.

N. Max Dunning, Assistant Director of Housing Division.

Eugene Henry Klaber, Chief of Technical Staff, Housing Division.

As the Housing Division may have need for their services, either in Washington or in the field, the following consultants will be called in:

Henry Wright of New York.

Mrs. Edith Elmer Wood of New Jersey.

F. L. Ackerman of New York.

Jacob Crane, Jr. of Chicago.

Russell Black of Princeton.

Coleman Woodbury of Chicago.

Harold D. Hynds of New York.

Tracy Augur of Detroit.

Mrs. Helen Duey Hoffman of New York.

Frederick Bigger of Pittsburgh.

L. Seth Schnitman of New York.

A group to coordinate the slum-clearance and housing requirements of the different sections of the country, include:

Howard Green of Cleveland.

Alfred K. Stern of Chicago.

Mrs. Mary K. Simkhovitch of New York.

To assist him in the formulation of policies as Administrator of Public Works, Secretary Ickes has appointed a Planning Board to correlate public

works projects from a social and economic point of view. The Board, which will consider all types of work—Federal, local government and private—consists of:

Frederic A. Delano, of Washington, Chairman.

Wesley C. Mitchell, Columbia University.

Charles E. Merriam, University of Chicago.

Charles Eliot, 3rd, Executive Secretary.

Ten Regional Advisers, or direct representatives of the Federal Emergency Administration of Public Works, will report to the Planning Board on non-Federal projects submitted by State Advisory Boards from local public bodies seeking aid. The Regional Advisers are:

Region 1. Adviser—George W. Lane, Jr., of Lewiston, Maine. (Ralph L. Cooper of Belfast, Maine, appointed originally, was unable to serve.)

Boston will be the headquarters of the region which consists of Maine, Vermont, New Hampshire, Massachusetts, Rhode Island and Connecticut.

Region 2. Adviser—Edward J. Flynn of New York City. (Mr. Flynn is the Secretary of State of New York.)

New York will be the headquarters of the region which consists of New York, Pennsylvania and New Jersey.

Region 3. Adviser—Daniel J. Tobin of Indianapolis. (Mr. Tobin is a leader of labor, a former treasurer of the American Federation of Labor and has served on many trade union and Government committees.)

Chicago will be the headquarters of the region which consists of Illinois, Indiana, Michigan, Ohio and Wisconsin.

Region 4. Adviser—Frank Murphy of Wheaton, Minnesota. (Mr. Murphy is a lawyer, president of the Minnesota State Bar Association and a farm leader.)

Omaha will be headquarters for the region which consists of North Dakota, South Dakota, Nebraska, Minnesota, Iowa and Wyoming.

Region 5. Adviser—Dana Marshall of Portland, Oregon. (Mr. Marshall is editor of the Portland Journal.)

Portland will be headquarters of the region which consists of Montana, Idaho, Washington and Oregon.

Region 6. Adviser—Justus S. Wardell of San Francisco. (Mr. Wardell for many years was editor and publisher of the Daily Journal of Commerce, served in the Internal Revenue Department under President Wilson, and was a candidate for Governor of California in 1926.) San Francisco will be headquarters of the region:



which consists of California, Nevada, Utah and Arizona.

Region 7. Adviser—Clifford Jones of Spur, Texas. (Mr. Jones is former President of the West Texas Chamber of Commerce, President of Texas Technical College Board and business man of large experience in public works and has been active in civic movements and director of the Fort Worth and Denver Railroad.)

Fort Worth will be headquarters of the region which consists of Texas, Louisiana and New Mexico.

Region 8. Adviser—Vincent M. Miles of Fort Smith, Arkansas. (Mr. Miles is a lawyer, a graduate of the University of Virginia, an overseas infantry commander who took part in the St. Mihiel offensive and was in the army of occupation in Germany.)

Kansas City, Missouri, will be headquarters of the region consisting of Colorado, Kansas, Oklahoma, Missouri, and Arkansas.

Region 9. Adviser—Henry T. McIntosh of Albany, Georgia. (Col. Monroe Johnson, of Marion, Georgia, originally appointed, was unable to serve.)

Atlanta will be headquarters of the region consisting of Mississippi, Alabama, Georgia, South Carolina and Florida.

Region 10. Adviser—George L. Ratcliffe of Baltimore, Maryland. (Dr. Ratcliffe is a graduate of Johns Hopkins University, a lawyer, the former Secretary of State for Maryland and a banker.)

Richmond will be headquarters of the region which consists of Tennessee, Kentucky, West Virginia, Maryland, Delaware, Virginia, and North Carolina.

The regional advisers will not only accumulate, collate and submit to the Planning Board all available information useful to it, but will also serve the Federal Public Works Administrator in any manner required for investigating and solving such problems as may arise.

State advisory boards, consisting of three members for each state except Louisiana and Texas, for which four have been named, are to select a balanced program of useful public works for early submission to the Public Works Administration:

*Alabama*—Milton H. Fies, of Birmingham; Mayer W. Aldridge, of Montgomery, and Fred Thompson, of Mobile.

*Arkansas*—E. C. Horner, of Helena; Haley M. Bennett, of Little Rock, and John S. Parks, of Fort Smith.

*Arizona*—William Walter Lane, of Phoenix;

Leslie G. Hardy, of Tucson, and Moses B. Hazeltine, of Prescott.

*California*—Hamilton H. Cotton, of San Clemente; Franck Havenner, of San Francisco, and E. F. Scattergood, of Los Angeles.

*Colorado*—Thomas A. Duke, of Pueblo; Daniel C. Burns, of Denver, and Miss Josephine Roche, of Denver.

*Connecticut*—John J. Pelley, of New Haven; Archibald McNeil, of Bridgeport, and Harvey L. Thompson, of Middletown.

*Delaware*—Lee Layton, of Dover; Will P. Truit, of Milford, and William Speakman, of Wilmington.

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(Continued on page 32) advertising section)



# THE SELECTION OF PUBLIC WORKS PROJECTS

By HAROLD M. LEWIS,  
Engineer  
Regional Plan Association  
of New York City

Under the National Industrial Recovery Act financial assistance is offered to states, municipalities and other public bodies, such as counties, school districts and townships, for advancing useful projects. As architects in many communities are looking for standards by which to judge the fitness of available local projects, Mr. Lewis has been asked to draw upon his experience for a list selected from the point of view of city and regional planning. To his list may be added the following types of public building: Municipal buildings, court houses, town halls, fire houses, police stations, schools, colleges, libraries, hospitals, homes for the aged and needy, incinerators, airports; and other socially desirable projects.

During the past two years municipalities and states have been searching for any temporary work upon which the unemployed, at part time and at nominal wages, could be afforded an opportunity to stay off the charity rolls and maintain their status as useful citizens. Clean-up campaigns, grading and landscaping of public parks, and the construction and maintenance of the simpler types of public structures have provided the field for most of this activity. In many cases this type of work relief has netted municipalities little in the way of permanent improvements. The emphasis has been primarily upon employment and secondarily upon the effectiveness of the work done.

Now, under the provisions of the National Industrial Recovery Act, a saner type of public works is in prospect. Communities are looking for standards by which to judge the fitness of available projects. Those which have looked ahead sufficiently to work out and adopt plans for their future growth have a definite advantage. City and regional planning, where they have been practiced, point simply and logically toward those projects which can best be undertaken at this time.

The Regional Plan Association in New York City has recently completed an analysis showing the extent to which the Regional Plan of New York and its Environs, the first part of which was published four years ago, has been followed by public projects carried out or adopted since that date. In several cases, notably in highway construction, the Plan has already moved toward reality at a rate which would carry it all out considerably in advance of the end of the expected forty-year period.

Based on missing links in this record of progress, the Association has presented a list of forty-seven specific urgent projects for the relief of major traffic and transportation problems, new public parks and the conservation and development of certain areas either already blighted or subject to objectionable forms of development. This is an example of the way in which an unofficial regional plan will help in the selection of those public projects which can be advanced now. An officially adopted city plan makes the selection still easier.

Among the types of projects which would logically be prominent in immediate construction:

1. Missing connections in those main highway systems which have taken definite shape within the last ten years.

2. Railroad-highway grade separations.
3. Development of existing but unimproved park areas to provide facilities for active recreation, such as tennis, baseball, bathing, horseback riding, and the like.
4. Parkways which will retain for public enjoyment water courses and other scenic features and will promote a high type of adjoining residential development.
5. Large-scale modernization of outmoded residential and business buildings.
6. Rebuilding of depreciated areas on the edges of main business centers so as to replace old tenements by low or medium-cost housing.
7. Toll bridges and tunnels where prospective traffic should make them self-supporting.
8. Local street and roadway widenings and bypasses of business areas where they will result in the relief of traffic knots and improve the facilities for local business.
9. Extension of railroad electrification in metropolitan centers where the railroads carry a large commuting traffic.
10. Union terminals for freight and passenger traffic where they will result in greater efficiency and ultimate financial savings to both the carriers and the general public.

In addition to such construction programs emphasis should be placed upon the fact that planning ahead can now be done more effectively than ever before. In the states of New York and New Jersey particularly, permissive legislation is in effect whereby municipalities can establish official maps which will prevent the erection of new buildings in the beds of proposed streets.

The easy collection of large public funds and the clamor for appropriations and immediate construction is over, at least temporarily. A breathing spell is available during which well-balanced programs based on capital budgets within the reach of the separate municipalities, states or federal departments can be effected. Still better transportation, better housing, more widespread facilities for active recreation, a better balance between places of work and residence and higher standards of living for the average citizen should all be within reach. They will be within easier reach if all these developments fit into carefully prepared plans and where balanced budgets, government efficiency and an intelligent citizen-support are all in the first line of attack.

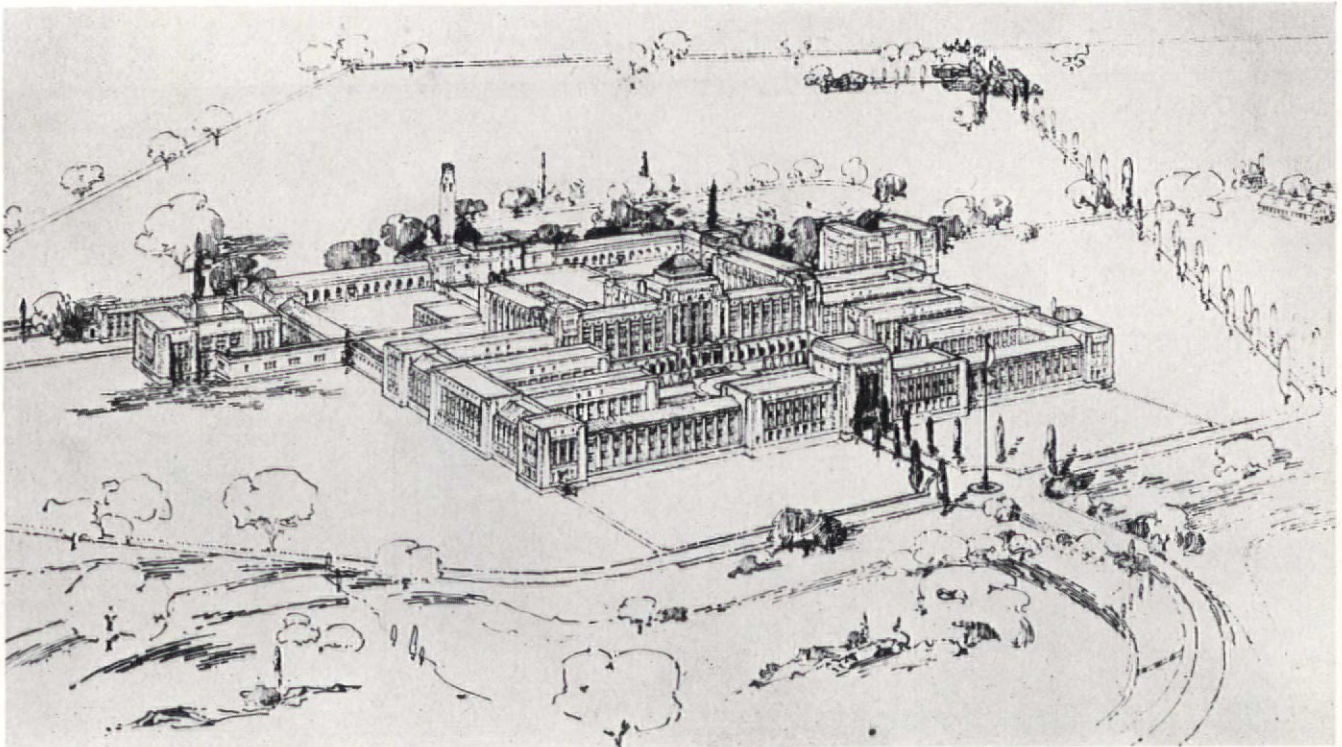


# GOVERNMENT BUILDINGS



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UNITED STATES PARCEL POST BUILDING  
NEW YORK CITY

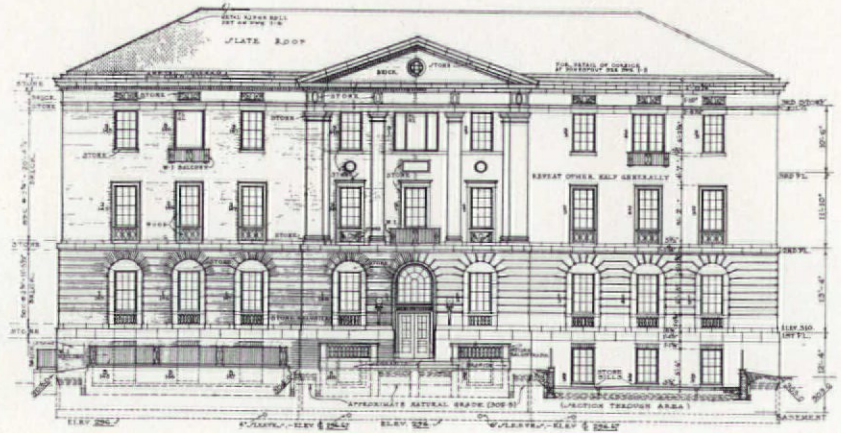


THE FIRST UNITED STATES NARCOTIC FARM  
LEXINGTON, KENTUCKY

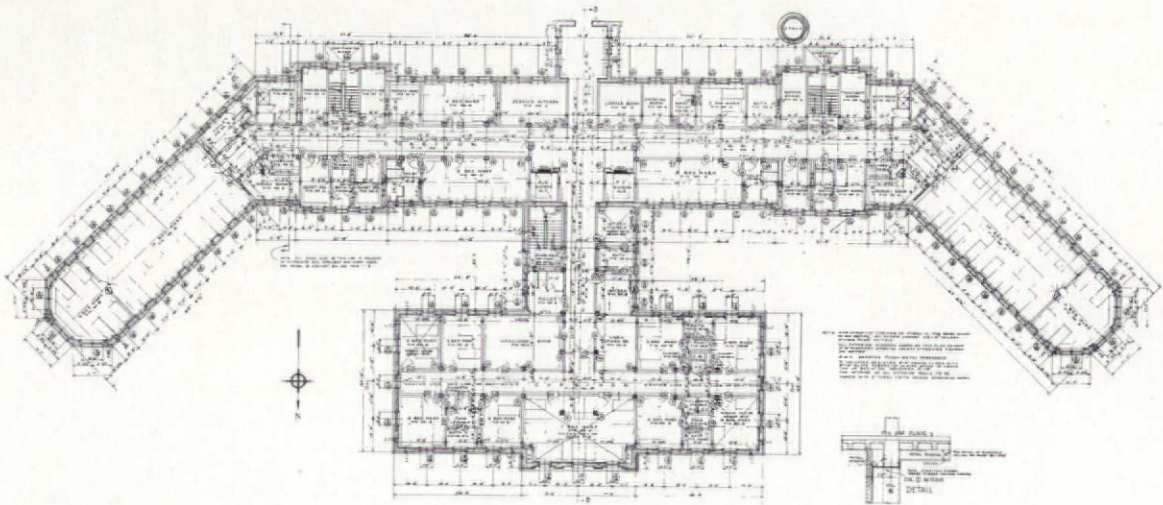


U. S. MARINE HOSPITAL  
CLEVELAND, OHIO

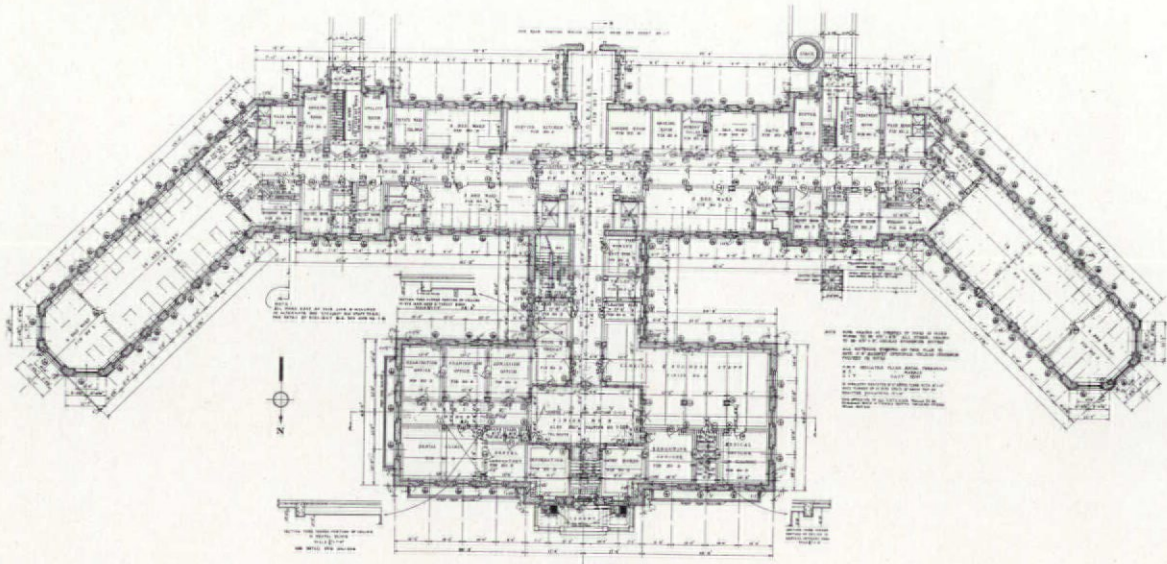
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ADMINISTRATION UNIT



SECOND FLOOR PLAN



FIRST FLOOR PLAN

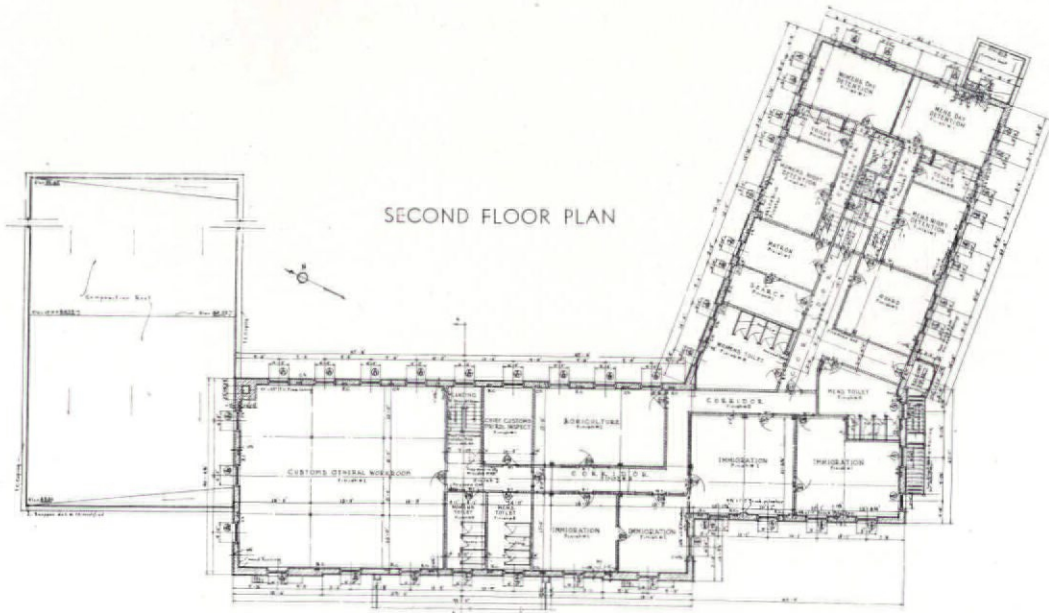




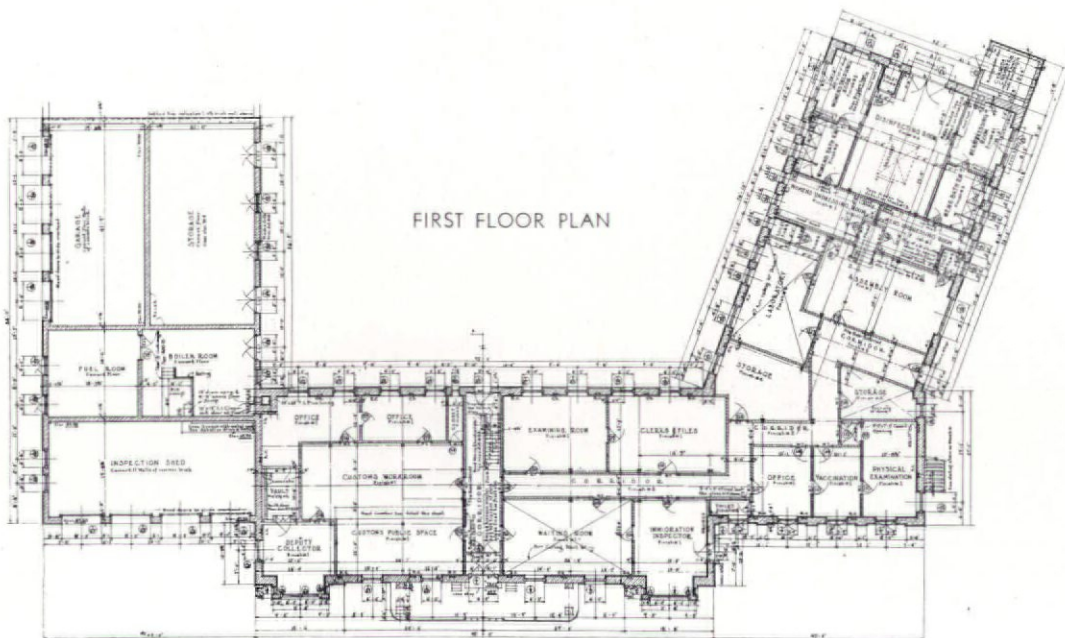
SOUTH ELEVATION

U. S. INSPECTION STATION  
SAN YSIDRO, CALIFORNIA

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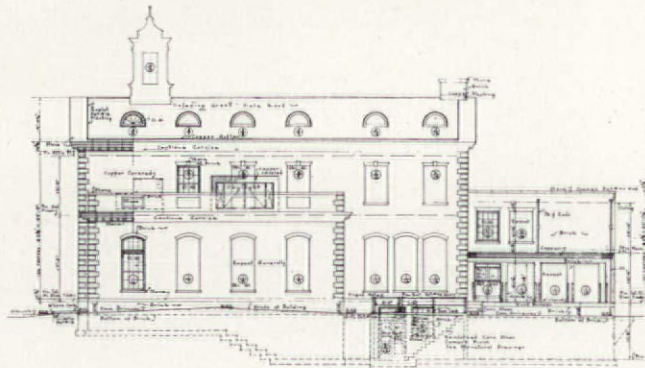
SECOND FLOOR PLAN



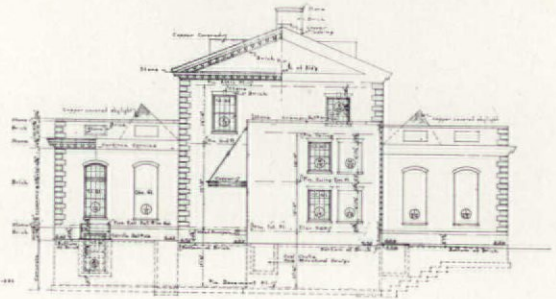
FIRST FLOOR PLAN



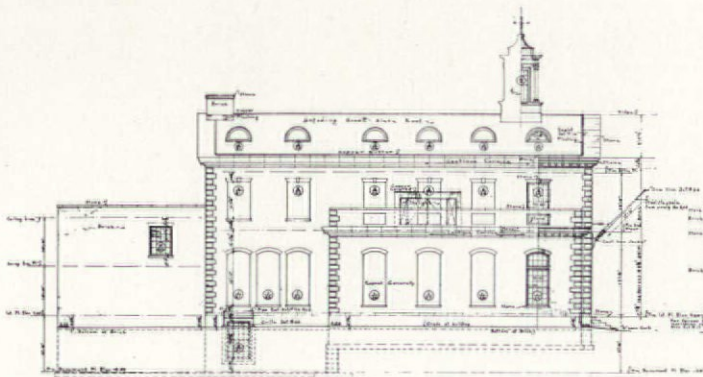
UNITED STATES POSTOFFICE AT PROVINCETOWN, MASSACHUSETTS  
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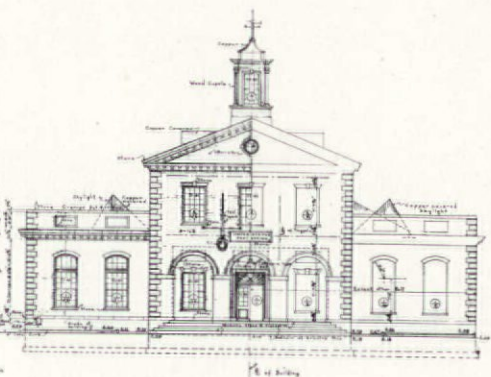
SIDE ELEVATION (SOUTH)



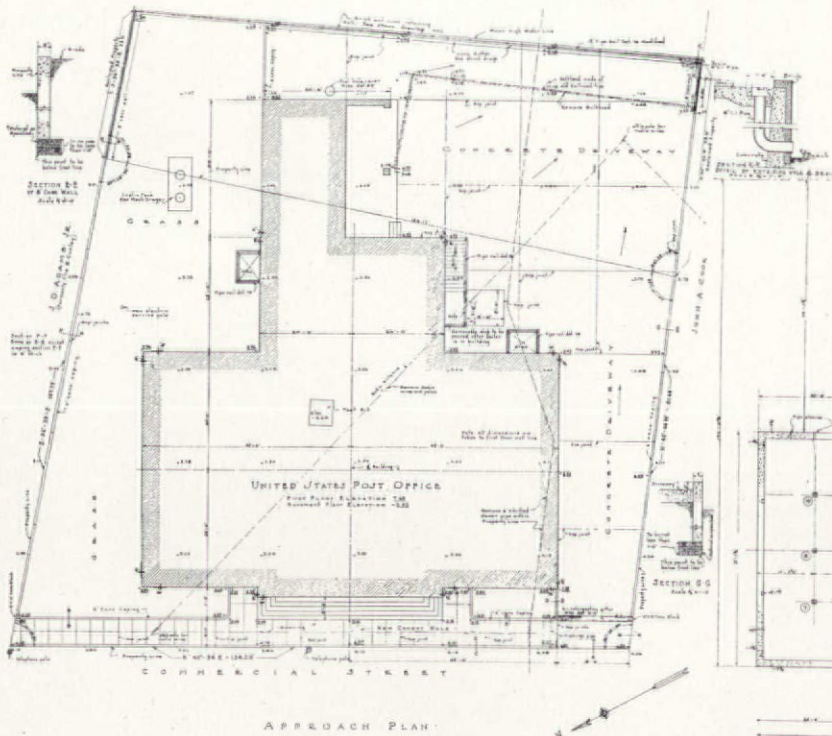
REAR ELEVATION (EAST)



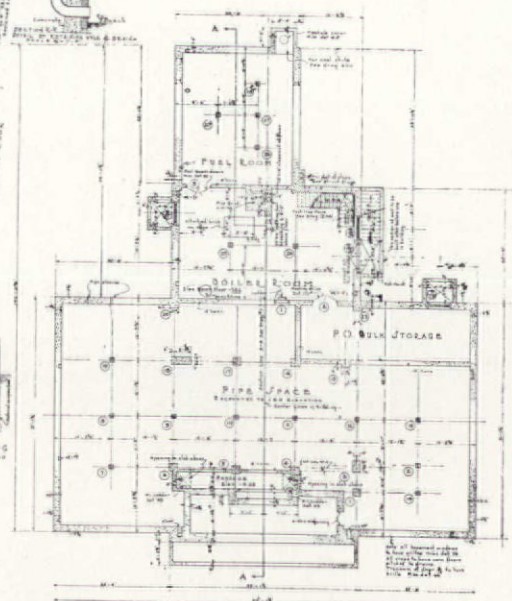
SIDE ELEVATION (NORTH)



FRONT ELEVATION (WEST)



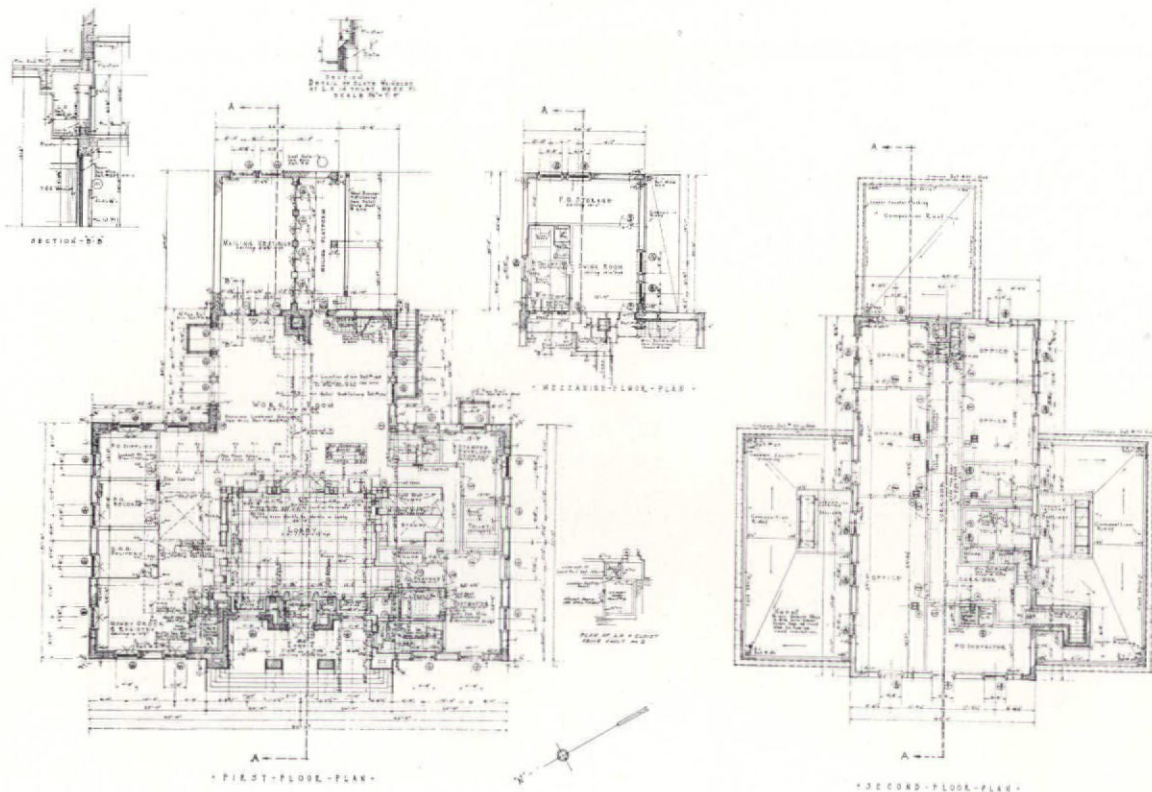
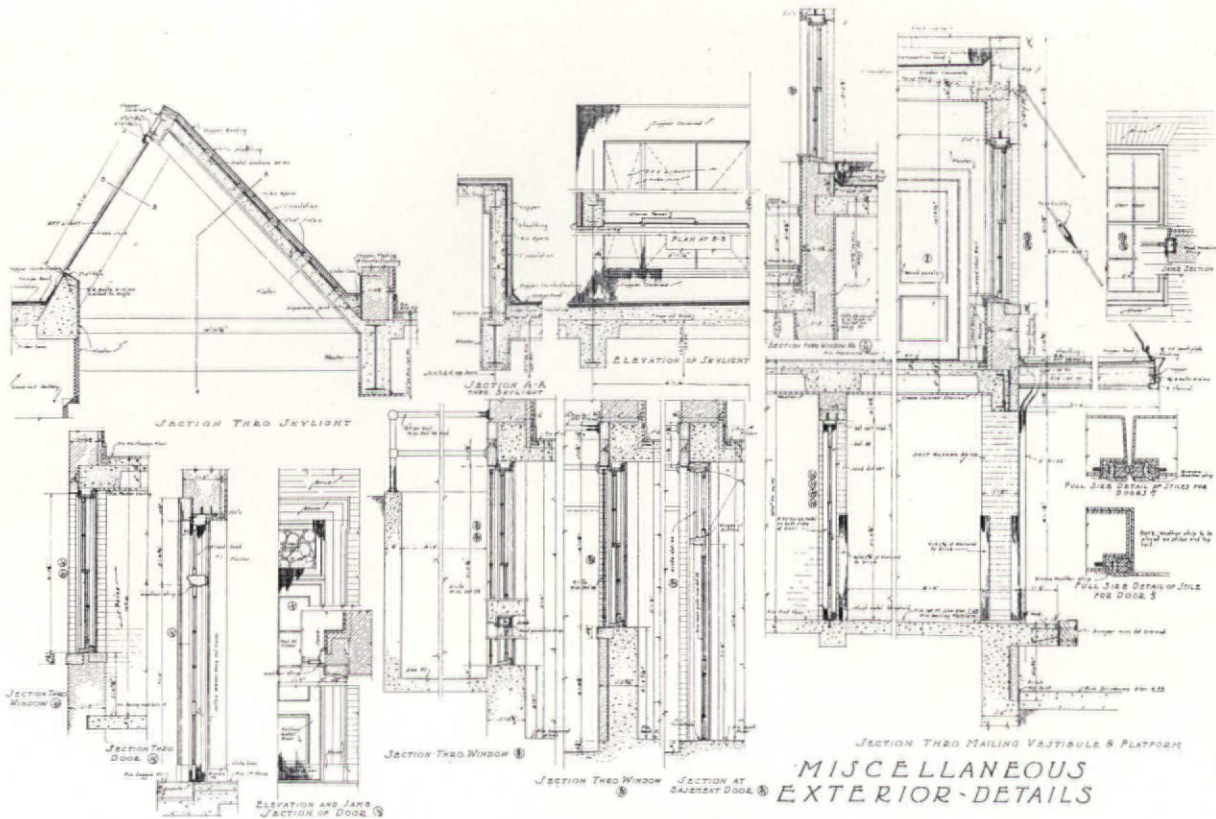
APPROACH PLAN



BASEMENT PLAN



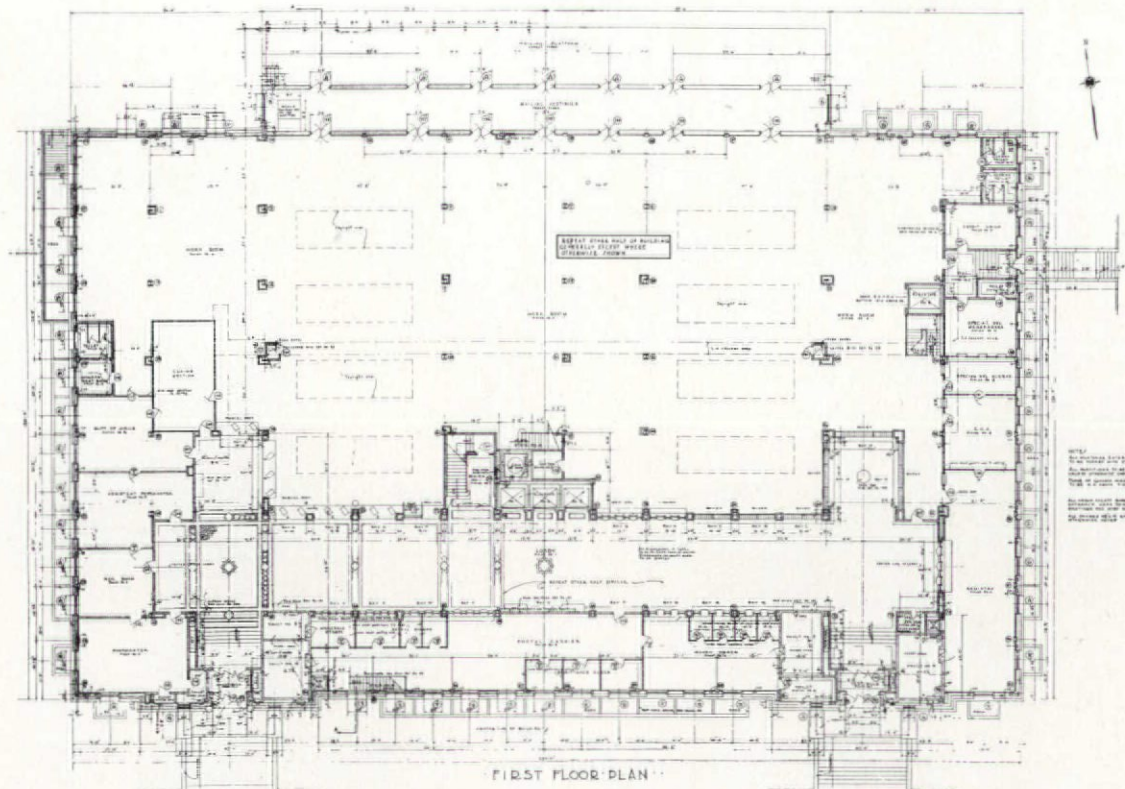
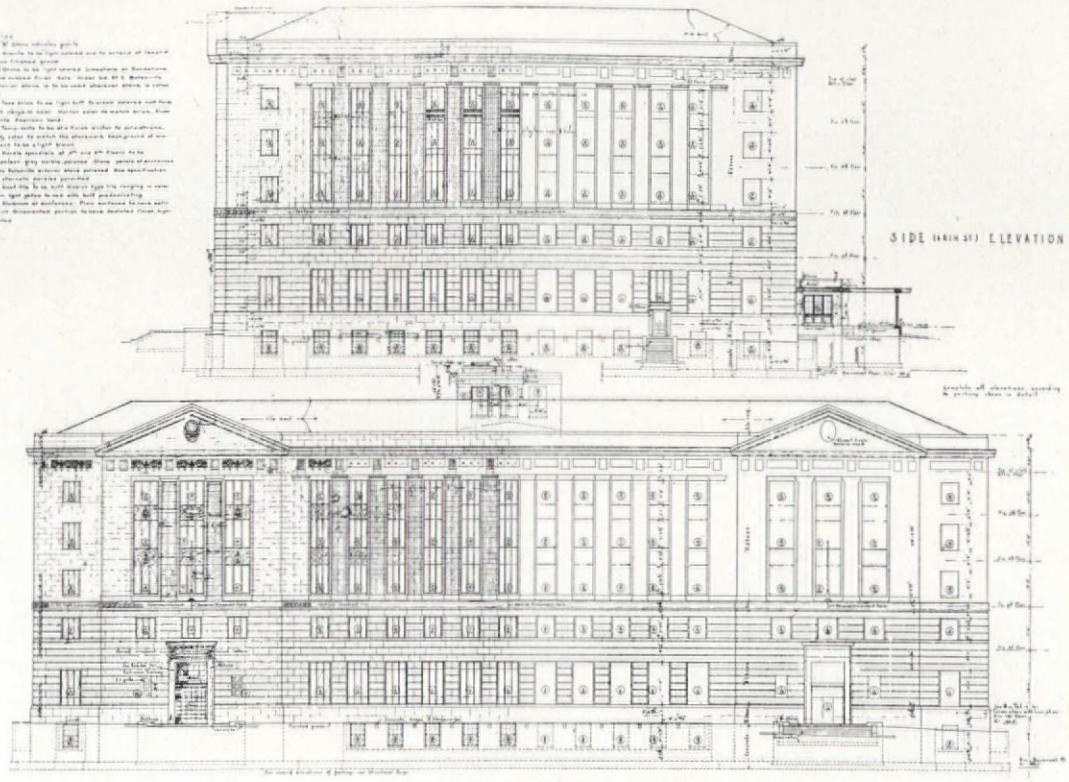
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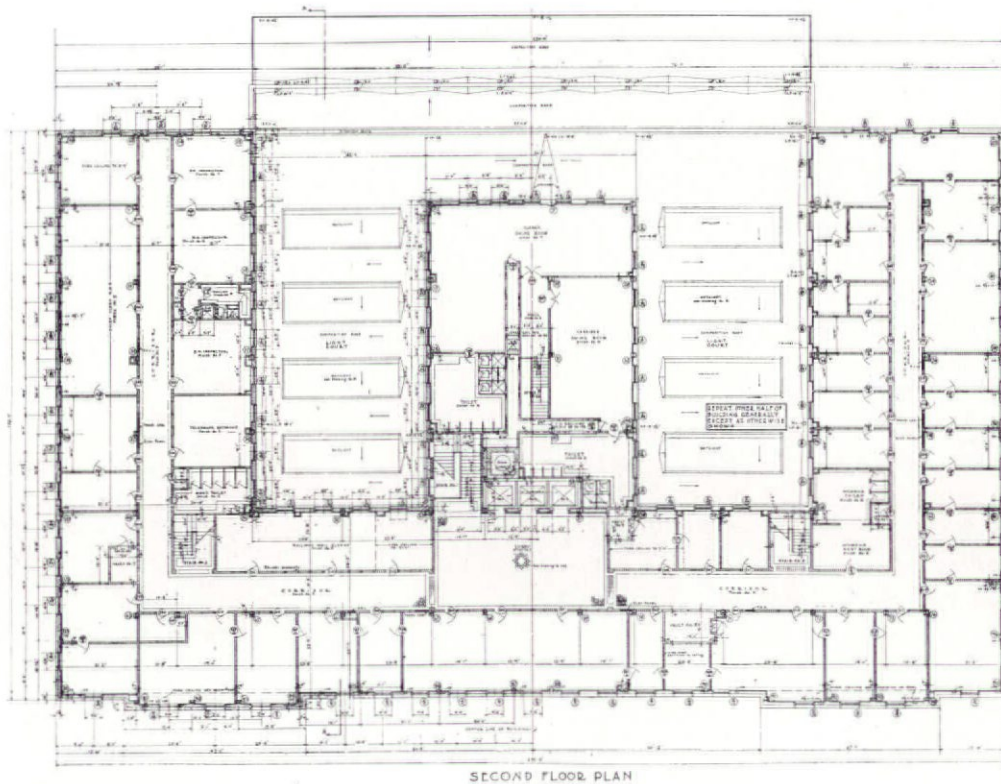
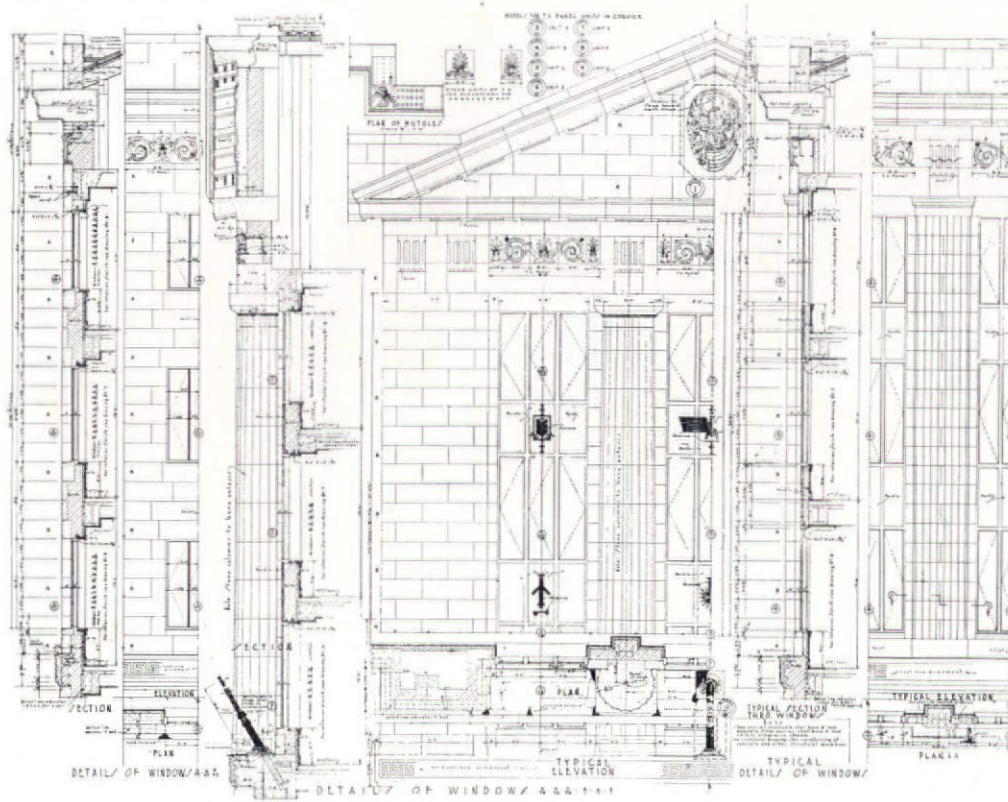
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 2. Details to be in light pencil and the surface of detail to be in heavy pencil.  
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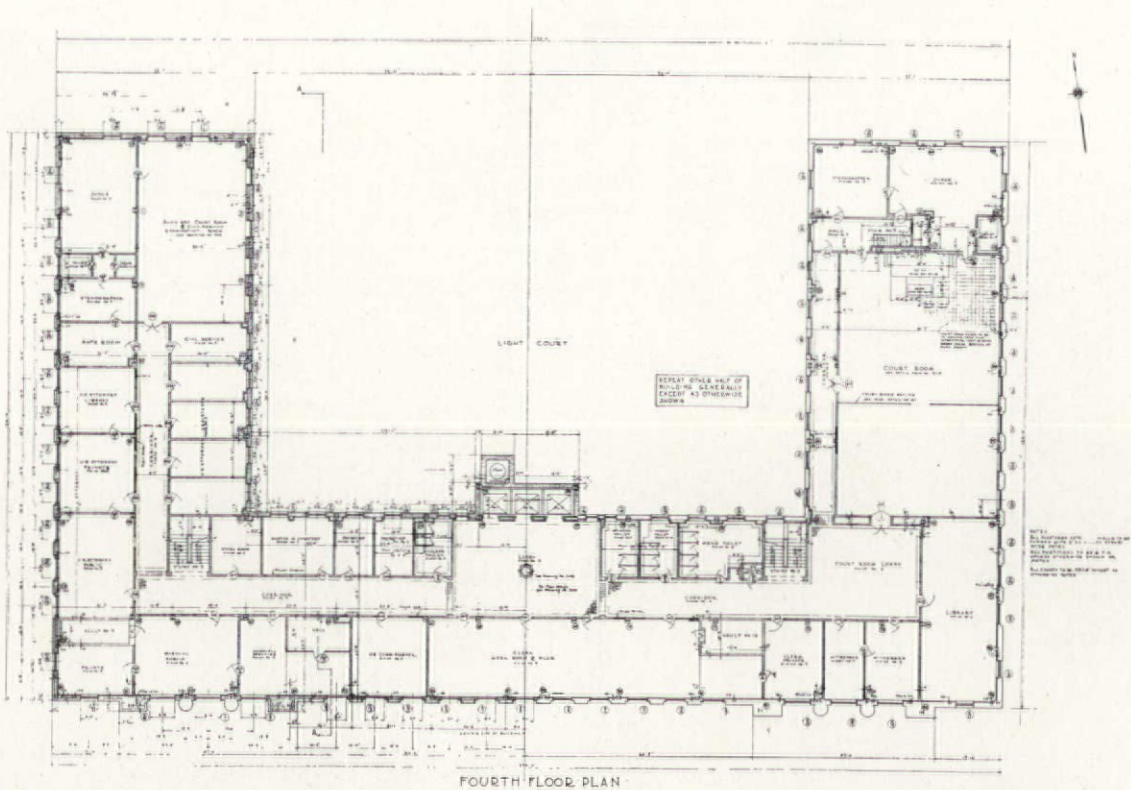
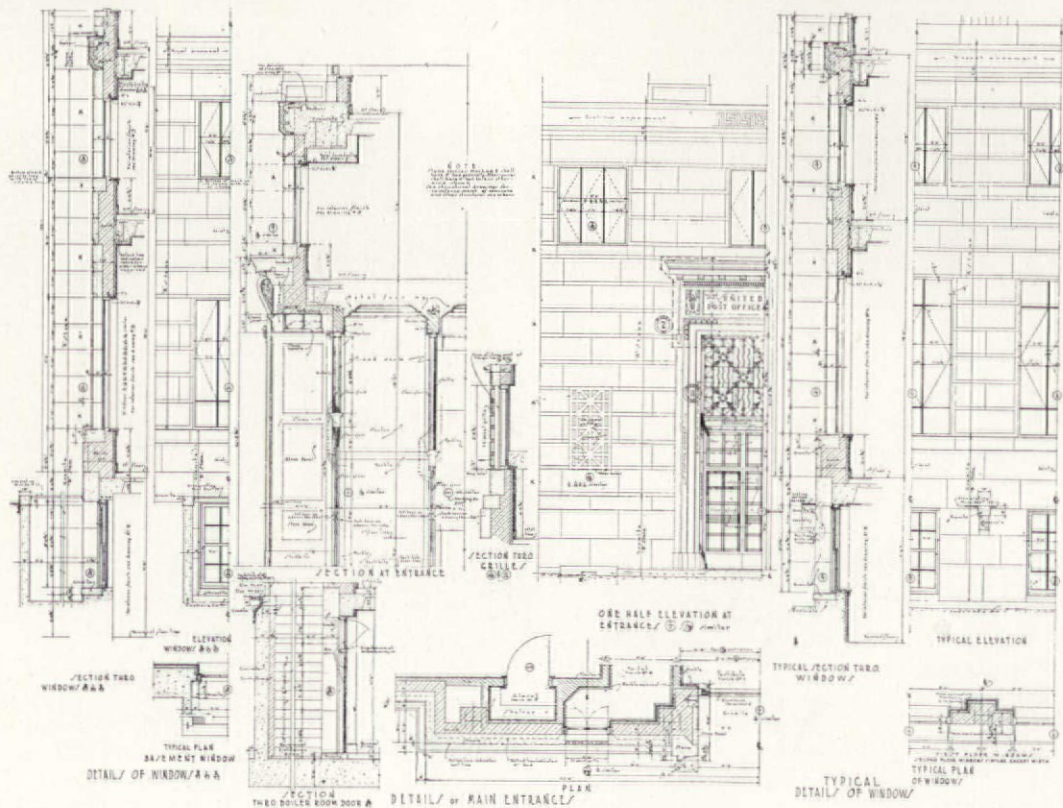


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# POLICIES GOVERNING HOUSING AND SLUM-CLEARANCE PROJECTS

The National Conference on Slum Clearance, held in Cleveland on July 6 and 7, is of special interest because the resolutions which it adopted were in accord with the views of Robert D. Kohn, head of the Housing Division of the Federal Emergency Administration of Public Works, as presented to the Conference through his authorized representative, A. Mackay Smith, of the legal staff of the Reconstruction Finance Corporation. One of the papers read also takes on special significance, because it was an analysis of the cost factors in housing projects made by Eugene H. Klaber, chief of Technical Staff under Mr. Kohn.

Thirty-three cities were represented in the registration of 417 persons attending the Conference, convened in response to invitations of Ray J. Miller, Mayor of Cleveland. Architects constituted the most numerous element among the experts present, the rest being mainly public officials, city-plan and housing specialists and real estate men. The Conference was called on the initiative of the city government of Cleveland and was the first of its kind in America. The resolutions read as follows:

## Preamble

This conference believes that the passage of the National Industrial Recovery Act, with its provision for federal aid in the construction, under public regulation or control, of low-cost housing and slum-clearance projects, offers the greatest opportunity yet afforded in this country for demonstration in this field. The conference desires to express confidence in those who have been and will be selected to administer the Act, and the following suggestions are respectfully submitted for their consideration and action in the belief that the Federal Administration will not be averse to learning the views and recommendations of the members of this conference who are deeply interested in this subject, and many of whom have given it continuous thought and study for many years.

## Section 1

The Federal Government, in preparing its budget and plan for the expenditure of the \$3,300,000,000 provided for in the National Industrial Recovery Act, or any part thereof, should allocate or budget to low-cost housing and slum-clearance projects a substantial portion of such amount preliminary to authorizing or making any considerable expenditure under the act.

Appropriation of funds for housing under the act should not be cut down or sacrificed to other public works projects for the following reasons:

- a. The removal of the social conditions represented by slum areas is one of the most pressing problems of today.
- b. Housing developments furnish the opportunity for the employment of labor and pur-

chase of materials to a greater extent than most other types of public works. Such developments and the replacement of obsolete housing thereby affected offers the greatest potential market for the building industry and related lines and the labor engaged therein for the present emergency and in future years.

- c. No other class of public works projects is more self-liquidating in character.

We urge upon city councils and administrations, as well as state housing authorities, that they aid, participate and cooperate in large-scale low-cost housing and slum-clearance developments to the full extent of their legal and financial powers.

## Section 2

We recommend that the Administrator of Public Works, in allocating and supervising the expenditure of funds for housing, appoint associates, aides and advisers who shall be chosen for their technical skill and experience in this field. Here is one place where party affiliations and political consideration should not be permitted to enter. The same principle applies equally in the selection of state and local aides and assistants.

## Section 3

Every large-scale housing project should be a part of and adjusted to a comprehensive plan of the city or region in which the project is located and in a selection of sites and general plan of development of any such projects the principles of city planning should be applied.

## Section 4

Projects to provide houses for low-income groups can succeed only with the cooperation of those who furnish land, materials, services, capital, and labor, to provide housing within the means of low-income groups.

These factors, as well as the soundness and honesty of the financial set-up in any project to receive assistance should be carefully scrutinized by government authorities.

It is the sense of this conference that regula-



tions should be adopted and enforced to insure that government-aided projects are used by income groups for whom they have been constructed and are properly adapted.

The Housing Administrator should be assured in the original plan that provision has been made for continuous, responsible and experienced management of the property so that the same shall be at all times self-sustaining and self-liquidating, and which will also maintain at all times a well-conceived community program of the tenants or owners.

The maintenance of uniform accounting systems for the keeping of all accounts and records of operation is most important to the ultimate success of any housing project. The records of such operations will furnish indispensable material for the guidance of all future housing projects, whether under public or private control.

#### Section 5

Speculative profit should not be countenanced in any housing project. No extortionate prices should be paid for land, keeping in mind that the more money that is spent for land the less is available for labor and materials. While the power of eminent domain is highly desirable for low-cost housing, we realize that recourse to such procedure may involve delay that would prove fatal to a project. In this emergency it is our belief that public opinion can be and should be aroused to impress owners of land with their duty to accept fair prices for their land as fixed by qualified, disinterested appraisers.

#### Section 6

No slum-clearance project should go forward without first taking into account the needs and wants of those who may be living in the areas to be cleared so that they may be properly rehoused during and after the period of construction. Great care should be exercised that slum clearance should not result in the creation of other and equally unhealthy and unsanitary slum areas in other sections of the city.

### COST FACTORS IN HOUSING

Mr. Klaber's paper, "What Price Land for Housing," pointed out that the constants (or approximate constants) to be determined in the financial set-up of a housing project are:

1. The amount of rent the particular income group can afford to pay.
2. Building cost, according to reasonable standards of design and specification.
3. Operating cost, including service and repairs.
4. Taxes and insurance.
5. Depreciation.
6. Maximum allowable density of occupancy.

#### Section 7

When slum clearance and sufficiently low-cost housing cannot otherwise be obtained this conference recommends the formation of nonpolitical state or local public housing authorities eligible to receive grants as well as loans for such purpose and that in states where local governments do not now have the power to establish such public housing authorities, legislatures of such states should, as soon as possible, pass the necessary enabling act.

#### Section 8

Little of permanent value in providing low-cost housing can be accomplished without an informed and aroused understanding of housing needs and the present opportunity. The Federal Administrator and both state and city authorities can be of great assistance in cooperation with community and business leaders in informing and developing a sound public opinion and maintaining public interest in housing programs.

#### Section 9

The conference indorses heartily the provision in the National Industrial Recovery Act for subsistence homesteads as a means of dealing with certain phases of housing closely related to the problems of unemployment and relief.

#### Section 10

The proper solution of problems of planning and housing in American communities requires continuous, fact-finding research and the coordination of many factors. Therefore, the conference urges that foundations and other agencies and individuals make funds available for planning and housing research institutes adequately financed to carry on this type of work in a comprehensive way over a period of years.

At the termination of this meeting the Chairman is authorized to appoint a committee of five which committee shall be empowered to add to its own number if so desired, to present this request to the proper agencies.

The variables in the financial set-up are:

1. Interest and return on equity.
2. Carrying charges (which depend on item 1).
3. Land cost.

Building charges and land charges should be segregated. To find the amount available for acquisition of land, there should be deducted from total available income (making adequate allowance for vacancies) all the constants plus fixed charges to ascertain the portion of income available to meet land charges. Available land income, suitably capitalized, becomes the amount available for land purchase, and represents all the project can afford to pay for land without subsidy.



## MR. KOHN'S STATEMENT

A. Mackay Smith, of the legal staff of the Reconstruction Finance Corporation presented and discussed the policies which Mr. Kohn would like to have the Conference consider in submitting a program for approval of the Administration. Declarations particularly indicating land policies for slum-clearance and housing projects were in substance as follows:

1. Housing projects will be preferred which do not increase the population densities of the areas in question.

2. No allotments of Government funds will be made to speculative building projects.

3. Housing should not be confined to urban regions and crowded centers but should also include sections where the price of land is such as to permit the furnishing of housing to the lower-income groups while maintaining adequate standards of design.

4. Since the purpose of the act is to furnish employment, projects involving a low ratio of land cost as compared with labor and material costs will be preferred; preference will also be given to projects which include land as part of the equity investment.

5. In considering the value of land offered for housing projects and the security, the Administration will proceed on the theory that housing is the best use of the land in question and that the value is established on the basis of reasonable earnings from the best use.

6. Municipalities and other public bodies may contribute equity to the project in the form of land, street vacations, and acquisition of adjacent land for park purposes. States, municipalities and other public bodies not authorized by law to undertake housing projects directly (such authority exists only in five states today, and is definitely limited in those states) may use the 30 per cent grants offered by the Government to assist private projects by creating parks, playgrounds, new streets and other public facilities.

The consensus of opinion of the Conference seemed to be that the National Industrial Recovery Act offered an opportunity for the replanning of American cities by solving the problem of how to clear slums and provide low-cost housing without making the city a landlord.

A copy of the Proceedings of the Conference may be obtained for \$3 from the National Conference on Slum Clearance, 1503 Builders Exchange Building, Cleveland, Ohio.

## TWENTY-EIGHT STATES OUT OF THIRTY-SEVEN REPORTED ON SHOW INCREASE IN BUILDING CONSTRUCTION OVER LAST YEAR

By L. SETH SCHNITMAN, Chief Statistician, F. W. Dodge Corporation

The recent improvement in new construction activity was sizably broadened during June. It will be recalled that in May there were 21 states in the territory east of the Rocky Mountains where current contracts for building, measured by floor space totals, were larger than those shown for May, 1932. The June building map (see page 90) showed 28 states out of a total of 37 with higher contracts than were recorded during June of last year. More significant even than this is the fact that almost without important exception the June map showed a continuous belt of improvement from the Atlantic seaboard, from Maine to Florida and westward to the Rockies.

States which failed to register advances over a year ago included Vermont, Rhode Island, New Jersey, Delaware, the District of Columbia, Alabama, Louisiana, Iowa, Wisconsin and North Dakota. Of these states Rhode Island, New Jersey, Alabama, Iowa and Wisconsin participated in the May improvement. It is thus seen that out of a total of the 37 states and the District of Columbia, 33 registered improvement in either May or June with 16 of them showing consecutive gains for May and June.

The revised construction contract total for the

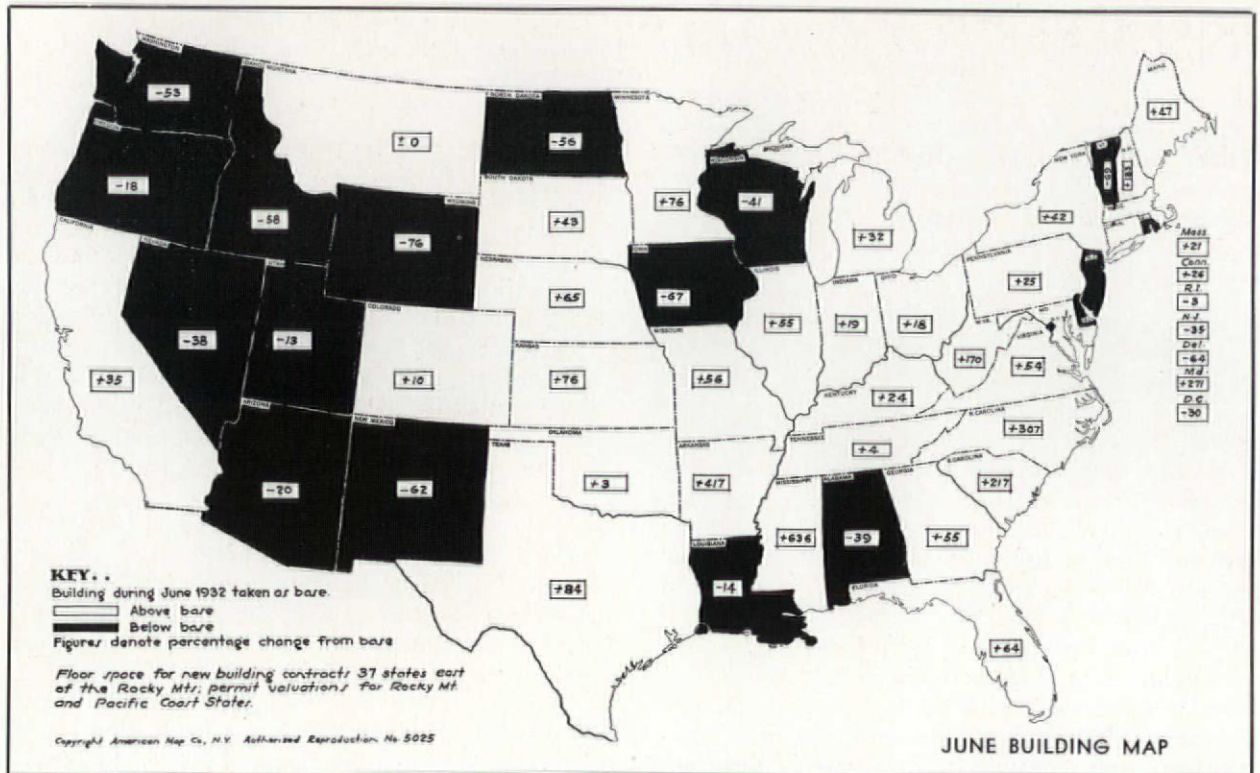
37 eastern states as a whole during June amounted to \$102,980,100; this was a gain of 33 per cent over the total for May. During June of last year the contract volume amounted to \$113,075,000.

Residential building contracts awarded during June totaled \$27,768,200 as against \$26,519,700 for May and only \$23,116,200 for June, 1932. This gain, both as respects the previous month and June of last year, is of significance since normally improvement in residential building is a precursor of general betterment in the construction industry.

During the first half of July residential building contracts in the 37 eastern states amounted to \$12,070,100. Reduced to a daily average basis this would indicate that July was running at a rate only slightly lower than the June rate but was at a level indicating a gain for the full month of more than 25 per cent over July, 1932. In June the gain over a year ago was only 20 per cent. Normally July produces a residential building contract total about 11½ per cent smaller than June. For the first half of July the decline customary at this time was only about 10 per cent.

Present indications point to a residential contract total for the final half of 1933 larger than the volume of \$113,208,700 reported in the 37





eastern states for the first half of the year; the increase should exceed 10 per cent. It appears probable, too, that the total for the final half of the current year should exceed the volume for the corresponding period of 1932 by at least 15 per cent.

Total construction contracts awarded during the first half of July were at a rate sizably lower than the June rate and were also below the rate of July, 1932. It is of importance to note that the falling off from July of last year occurred entirely

in publicly-financed work. Privately-financed construction for which awards were let in the first half of July indicated a rate for this class of work more than 50 per cent higher than in July, 1932.

Now that the Federal Public Works program is being launched it appears reasonable to expect an important pick-up in publicly-financed projects which will materially bolster the already improving conditions in private work. It will likely take 60 to 90 days before publicly-financed work can cross its respective totals for 1932.

**CONSTRUCTION CONTRACTS AWARDED IN 37 EASTERN STATES: 1932-1933**

	1932		1933	
	Residential	Total Construction	Residential	Total Construction
January	\$27,504,300	\$84,798,400	\$11,950,900	\$83,356,000
February	24,417,300	89,045,800	11,805,300	52,712,300
March	33,208,600	112,234,500	16,021,000	59,958,500
April	28,894,700	121,704,800	19,143,600	56,573,000
May	25,556,800	146,221,200	26,519,700	77,171,700
June	23,116,200	113,075,000	27,768,200	102,980,100
Total, half-year	162,697,900	667,079,700	113,208,700	432,751,600
July	19,740,900	128,768,700	*25,000,000	*95,000,000
August	20,766,800	133,988,100		
September	22,803,900	127,526,700		
October	21,855,600	107,273,900		
November	19,245,300	105,302,300		
December	12,957,500	81,219,300		
Total, year	280,067,900	1,351,158,700		

\*Estimate based on data for first half of month.



# INSURANCE COMPANY OF NORTH AMERICA

## NEW YORK CITY BRANCH BUILDING

SHREVE, LAMB and HARMON, Architects

The new building for the Insurance Company of North America was designed to house in one space several units of the New York City branch which hitherto had been scattered about in various buildings in the insurance district. The site which was chosen—at the corner of John, Gold and Cliff Streets, in the heart of this district—is very irregular. Consequently it was a difficult problem to produce a plan that would be properly adaptable not only to the owner's present and future needs, but also to those of other tenants in the building who, while all in the insurance business, would require units of greatly varying sizes.

The solution finally adopted shows two groups of elevators, six local and six express, serving twenty-five floors, arranged in the interior angle at the rear of the property and so placed that the elevator corridors provide access to as many units as possible on each floor. The number, the speed and the size of these cars should give, even when the building is fully occupied, unusually rapid and comfortable service. The stairways, toilets and other utilities are placed at the back of the Cliff Street wing in a compact group adjacent to the express elevators, a location which avoids the rapid setbacks on the Gold Street front, and so provides clear, unobstructed, usable area following the lighted perimeter of the building.

On the ground floor the main entrance is at the center of the John Street façade and leads to the elevator groups with access to rentable areas on either side. At the two street corners doorways lead directly to the main room of the Insurance Company of North America on John and Cliff Streets, and to a tenant, the Fidelity and Deposit Company, on John and Gold Streets.

The "North America" space, treated simply in marble and plaster, with the ceiling acoustically corrected, connects by stair and private elevator to the basement where there are private conference rooms, mailing rooms, a clinic with a special street entrance, and filing rooms, and to the third and fourth floors which are occupied by the owner's clerical force. Expansion of this area is provided for by the framing necessary to extend the private elevator to the seventh floor.

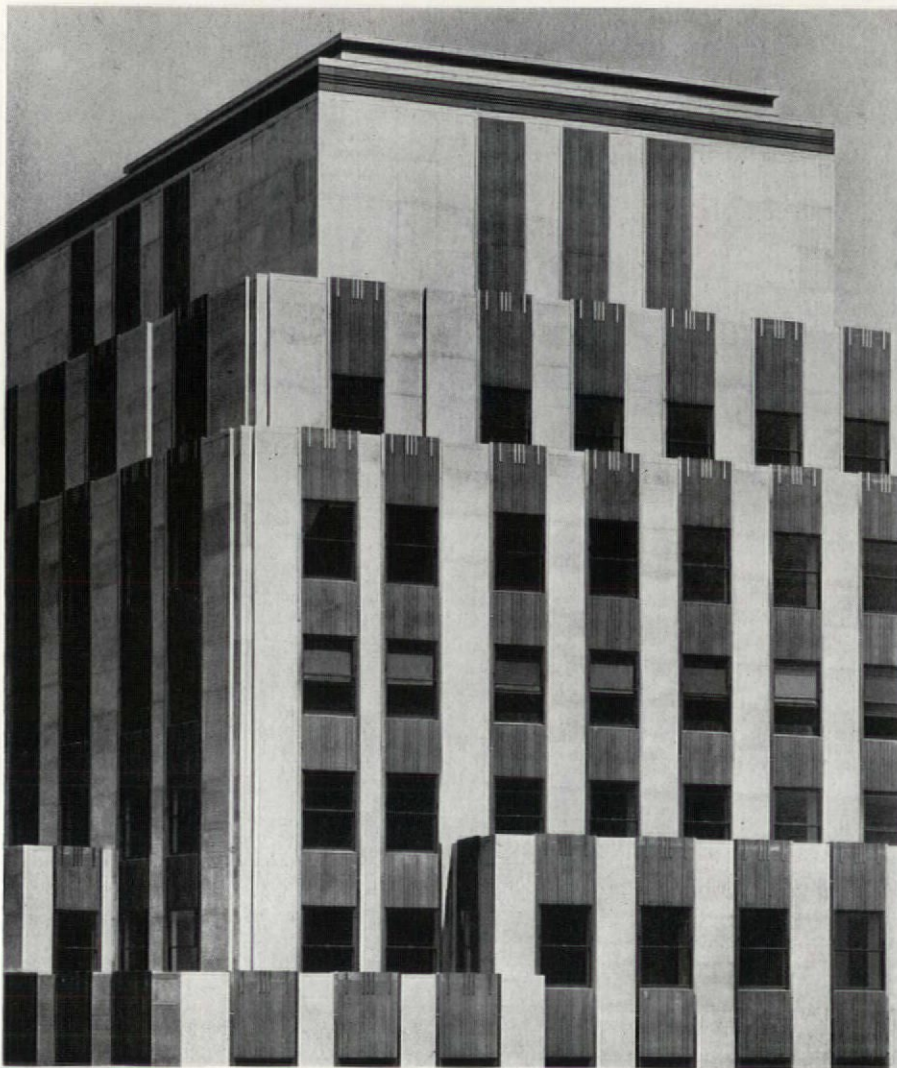
The typical floor was planned with the special requirements of the particular class of tenant



Wurts

always in mind: (1) a minimum number of columns spaced to provide for the proper arrangement of desks for large clerical departments, with a maximum of such area adjacent to the windows; (2) a comparatively small number of private offices, mostly inclosed in low partitions; (3) a proportionately large area, for filing and storage rooms, where daylight is not necessary, for which special framing was provided in the bays adjacent to the elevators and utilities; and above all, (4) flexibility of plan to provide for both large and small tenants. Each floor below the thirteenth has artificial ventilation with supply fans on the twelfth floor forcing the air through shafts (behind the elevators and toilets) to be tapped for duct extensions where needed. This is a simplification of the usual system, avoiding most of the horizontal duct work and consequent low headroom. Visible radiation is also eliminated; the radiators are inclosed flush with the walls.



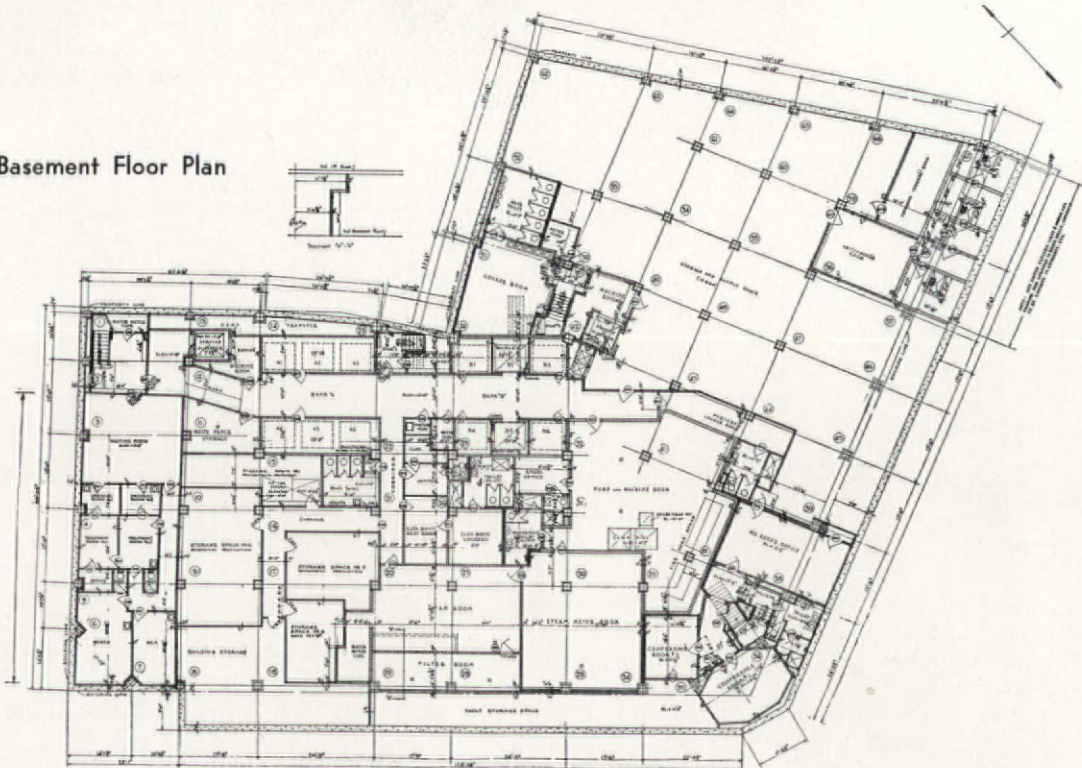


**INSURANCE COMPANY  
OF NORTH AMERICA**  
Branch Building

The exterior of the building is treated with simplicity. Dark gray granite is used for a low base course, with the doorways accented by the same material; above Rockwood stone accents the first floor slightly and then above this level simple stone piers are flanked by the chrome nickel steel strips which unite them to the windows and to the aluminum spandrels, both of which are placed outside the wall line.

F. S. Lincoln

Basement Floor Plan





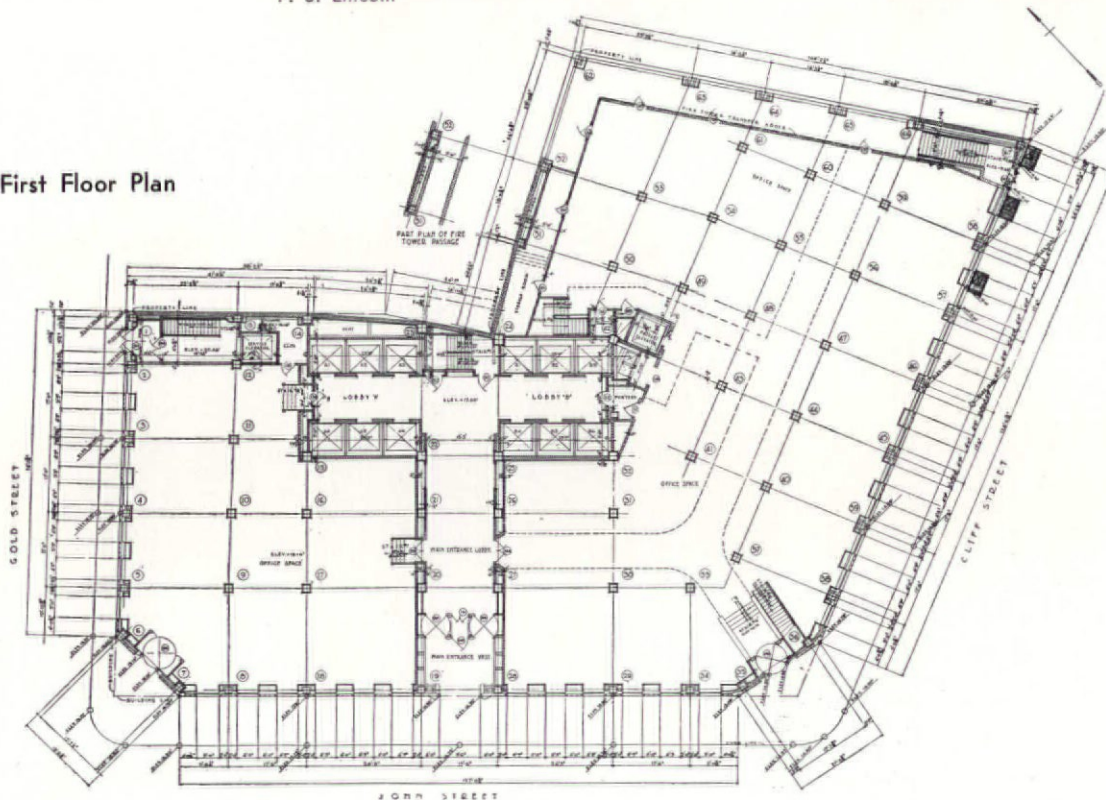
SHREVE, LAMB and  
HARMON, Architects  
New York City

In a district crowded as this, with narrow and crooked streets, it is impossible to get a comprehensive view of any building, and particularly of this one. Balance was achieved not in the building as a whole, but in its various façades; detail, such as there is, has been kept somewhat more delicate than usual, and certain spots, such as the doors, have been enriched as units by themselves with granite and bright steel and glass.



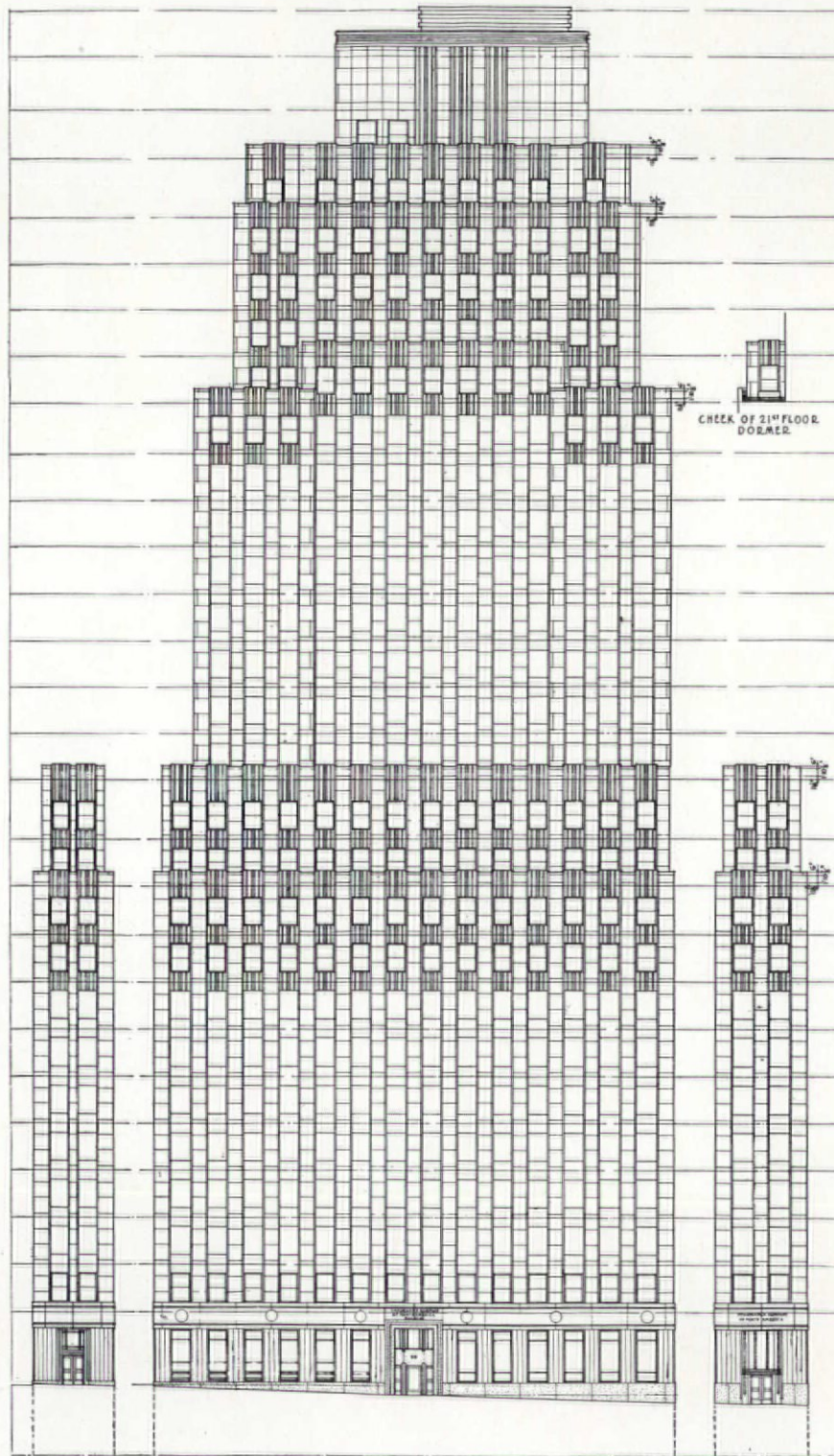
F. S. Lincoln

First Floor Plan





INSURANCE COMPANY OF NORTH AMERICA  
BRANCH BUILDING IN NEW YORK CITY  
SHREVE, LAMB and HARMON, Architects



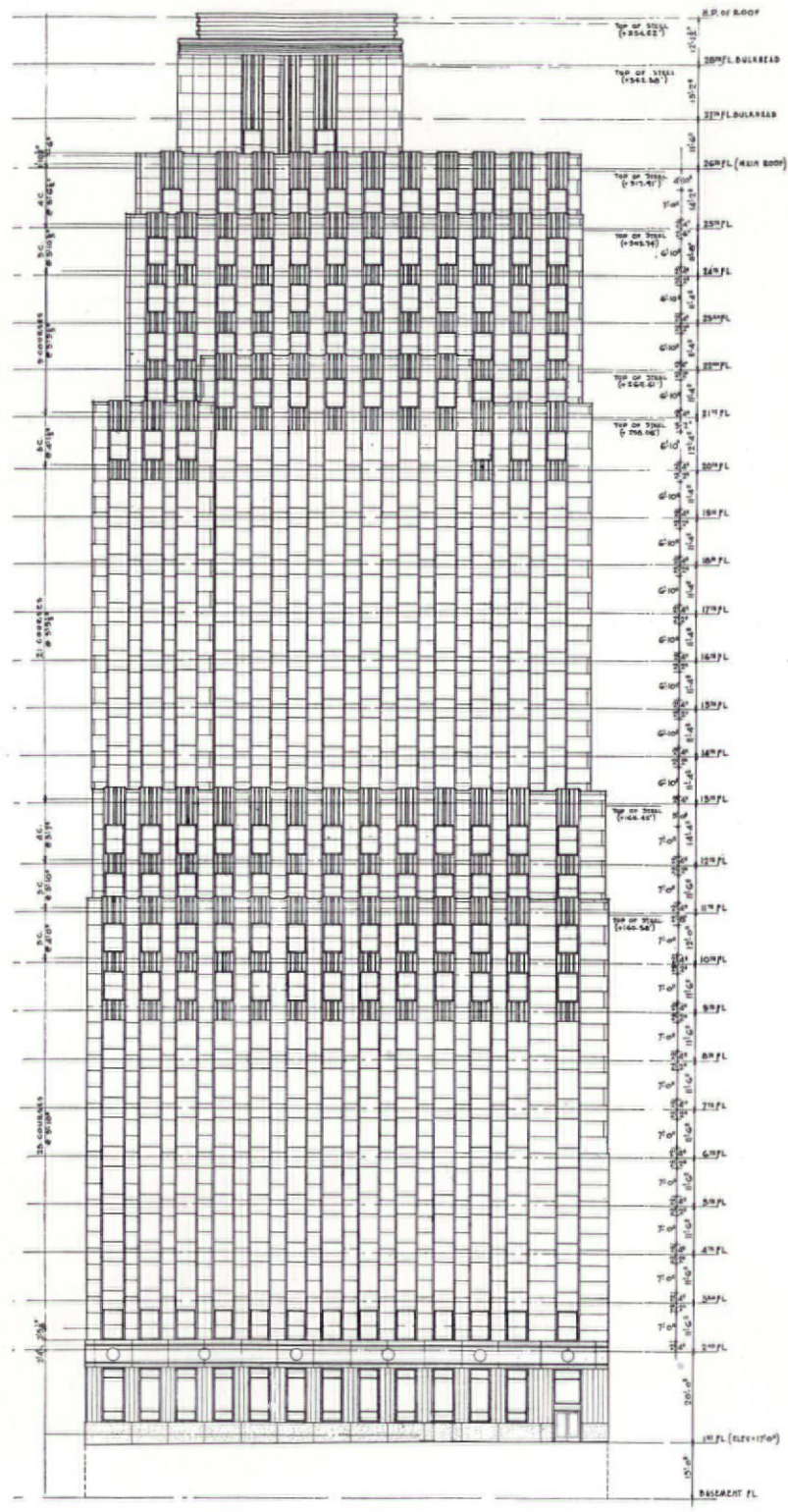
CORNER ELEVATION  
GOLD and JOHN STREETS

JOHN STREET ELEVATION

CORNER ELEVATION  
JOHN and CLIFF STREETS



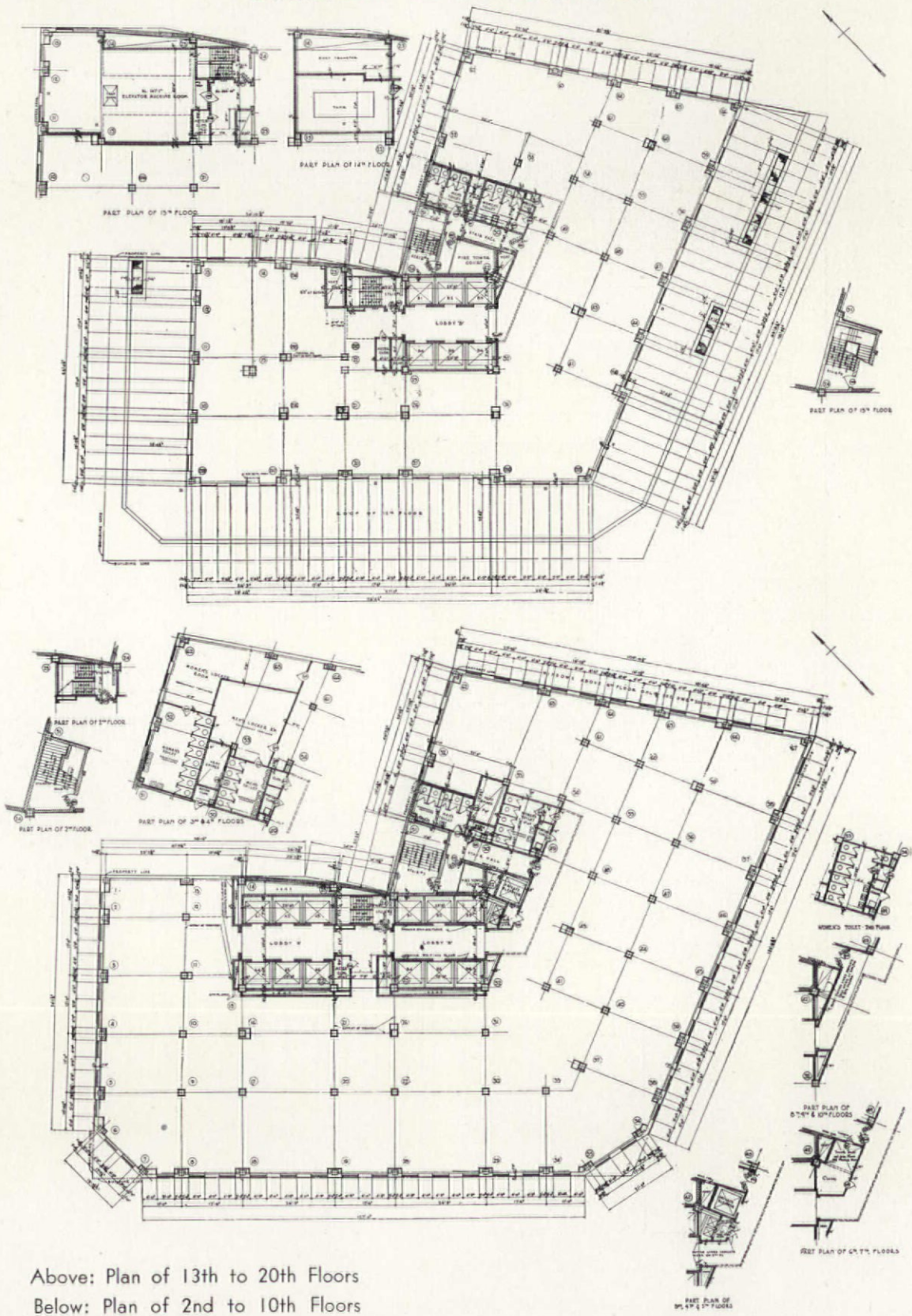
INSURANCE COMPANY OF NORTH AMERICA  
 BRANCH BUILDING IN NEW YORK CITY  
 SHREVE, LAMB and HARMON, Architects



CLIFF STREET ELEVATION



INSURANCE COMPANY OF NORTH AMERICA  
 BRANCH BUILDING IN NEW YORK CITY  
 SHREVE, LAMB and HARMON, Architects



Above: Plan of 13th to 20th Floors  
 Below: Plan of 2nd to 10th Floors





F. S. Lincoln

INSURANCE COMPANY OF NORTH AMERICA  
BRANCH BUILDING IN NEW YORK CITY  
SHREVE, LAMB AND HARMON, ARCHITECTS





F. S. Lincoln

Main Entrance Corridor Looking Toward John Street.  
INSURANCE COMPANY OF NORTH AMERICA BRANCH BUILDING IN NEW YORK CITY  
SHREVE, LAMB AND HARMON, ARCHITECTS





F. S. Lincoln

Exterior Vestibule of Main Entrance on John Street.  
INSURANCE COMPANY OF NORTH AMERICA BRANCH BUILDING IN NEW YORK CITY  
SHREVE, LAMB AND HARMON, ARCHITECTS





F. S. Lincoln

Main Entrance to Elevator Lobbies. Murals by Edward Trumbull.  
INSURANCE COMPANY OF NORTH AMERICA BRANCH BUILDING IN NEW YORK CITY  
SHREVE, LAMB AND HARMON, ARCHITECTS

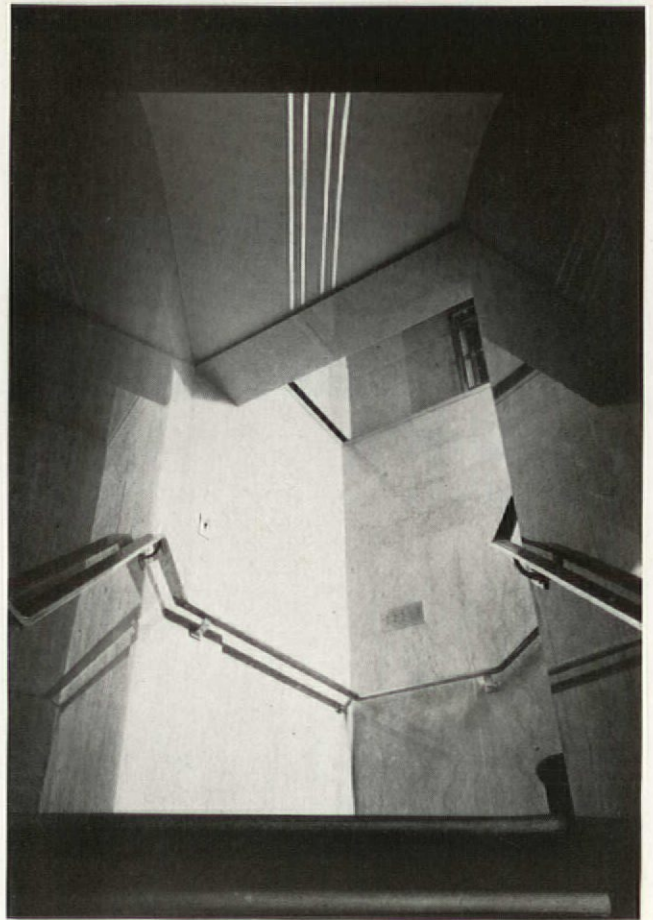




F. S. Lincoln

Entrance from General Offices to Main Entrance Corridor.  
INSURANCE COMPANY OF NORTH AMERICA BRANCH BUILDING IN NEW YORK CITY  
SHREVE, LAMB AND HARMON, ARCHITECTS





Lobby at Bottom of Stairs to Private Offices in Basement.

Private Office in Basement Which Connects Directly with Ground Floor Above.



F. S. Lincoln

INSURANCE COMPANY  
OF NORTH AMERICA  
BRANCH BUILDING  
SHREVE, LAMB AND  
HARMON, ARCHITECTS  
NEW YORK CITY





F. S. Lincoln

General Offices of the Insurance Company of North America on Ground Floor.  
INSURANCE COMPANY OF NORTH AMERICA BRANCH BUILDING IN NEW YORK CITY  
SHREVE, LAMB AND HARMON, ARCHITECTS



# FOUNDATION CONSTRUCTION

Insurance Company of North America  
New York City Branch Building

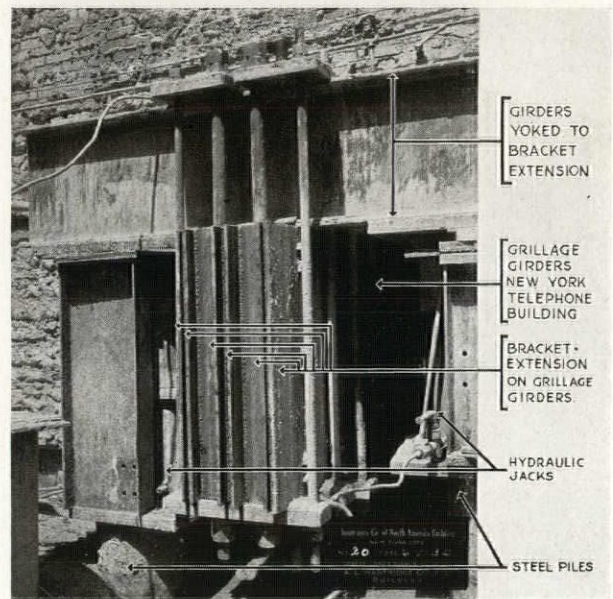
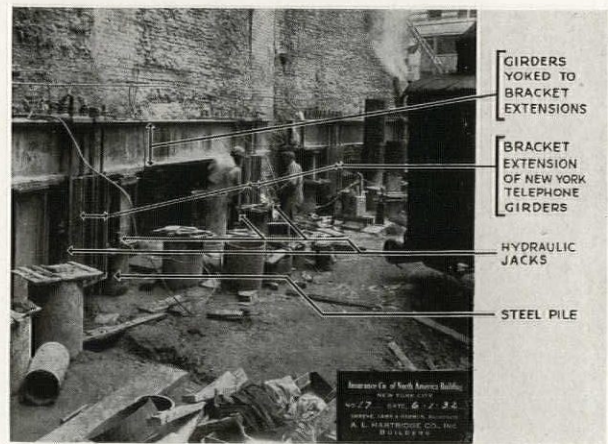
Rock underlies the site of this building about 80 feet below the curb. Directly over the bedrock is a stratum of hardpan and boulders from 5 to 10 feet in thickness, above which is fine wet sand commonly known in New York as "Bulls Liver."

For a building of this character a foundation extending to rock was considered desirable, and comparative estimates were made which indicated that a considerable saving in cost could be effected by the use of concrete filled steel pipe piles rather than caissons. Approximately 26,000 lineal feet of piling were driven over the area of the lot, the piles being 20 inches in diameter with  $\frac{1}{2}$  inch shell thickness and driven in 40-foot sections with outside sleeves to an average length of about 60 feet to cut-off.

Particular care was given to securing firm bearing on the bedrock and for this purpose approximately twenty core borings were made after representative piles had been driven to apparent refusal and had been blown out. These cores permitted relatively accurate plotting of the contour of the bedrock and were valuable in avoiding the possibility of mistaking overlaying boulders for bedrock. Considerable difficulty was of course experienced in penetrating the hardpan but satisfactory results were secured.

The most difficult feature of the foundation was the underpinning of the adjacent eight-story building of the New York Telephone Company which rested on spread footings. Vibration caused by pile-driving operations, it was realized, would tend to produce settlement in the fine sand underlying the Telephone Building. For this reason it would not be safe to depend on ordinary shallow underpinning. It was further believed that if the building were underpinned by the usual methods of jacking piles down under the foundations or installing caissons, the possible loss of ground might produce settlement in the interior of the building.

A method was therefore devised whereby the principal columns in the Telephone Building were temporarily supported: structural steel cantilever brackets were bolted to the grillage girders under the wall columns constituting extensions of the Telephone Building structure to be carried on piles driven on the adjacent property of the Insurance Company. Six of the permanent piles of the new building foundations were used for this purpose and six more temporary piles were installed in suitable locations. These piles were driven as far as deemed safe without endangering the Telephone Building, and were then brought to bearing to support the cantilever brackets by means of hydraulic jacks. The piles were then jacked down to sufficient resistance to carry the weight of the columns and this resistance was maintained by continuous



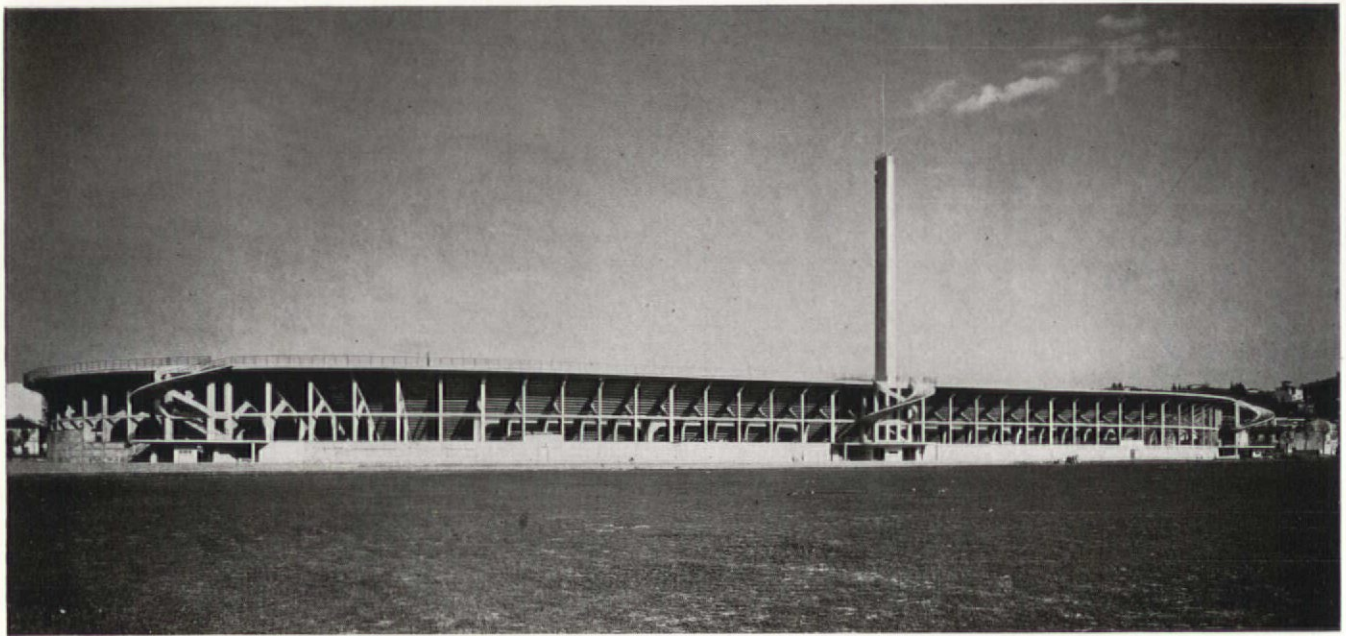
SHREVE, LAMB AND HARMON, ARCHITECTS

jacking operations during the entire period of pile driving. It later became evident that any settlement might affect the first row of interior columns of the Telephone Building. This was prevented by inserting jacks below brackets welded to the columns for this purpose, and above the concrete foundations. These jacks were also operated continuously and settlement was finally taken up by shims between the column base and the concrete footings.

After the completion of pile-driving operations on the new building and the construction of an underpinning wall extending below the new excavation, the old foundations of the Telephone Building were thoroughly grouted to fill any voids caused by settlement of the soil away from the underside of the foundation, after which the temporary jacks were released and the six permanent piles driven the remaining distance to rock. The method proved successful and the resulting permanent settlement of the Telephone Building was practically negligible.



# PUBLIC STADIUM IN FLORENCE, ITALY



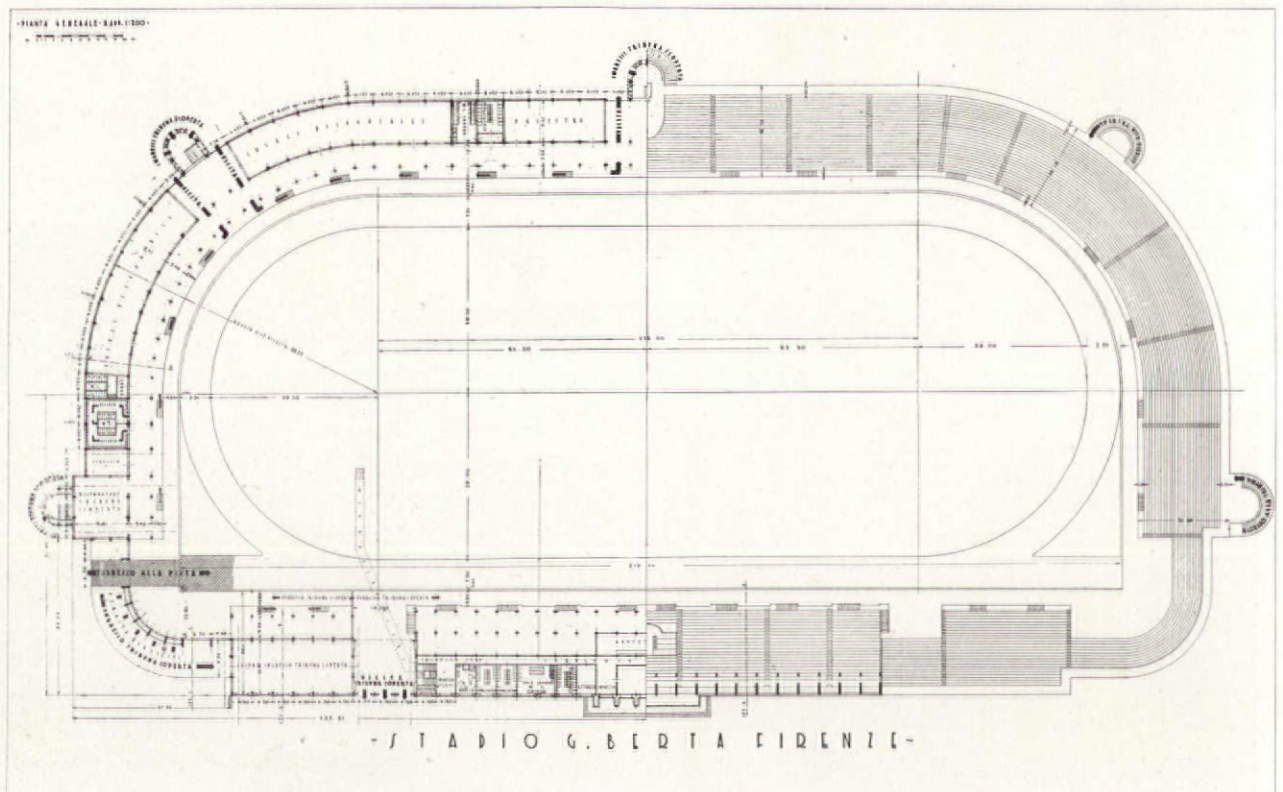
Barsotti

LUIGI NERVI, ARCHITECT





Barsotti



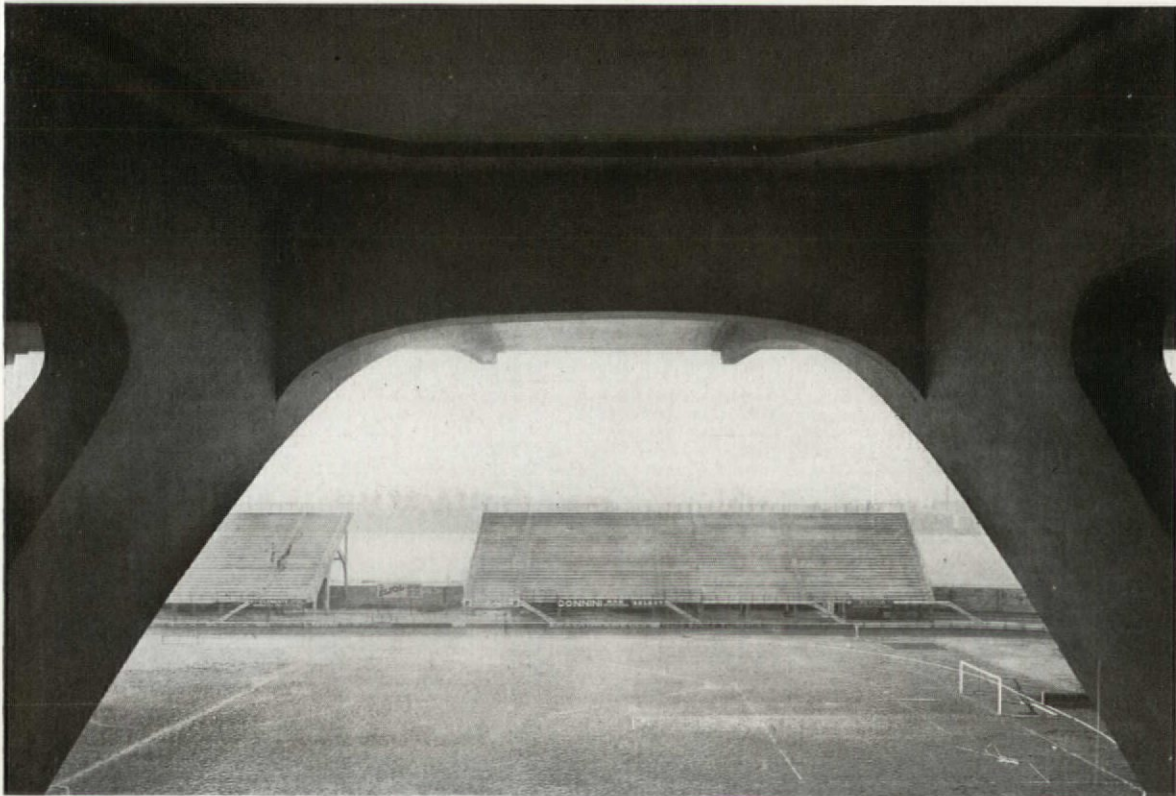
The Stadium, fully occupied, accommodates 35,000 spectators.

PUBLIC STADIUM "GIOVANNI BERTA" IN FLORENCE, ITALY—LUIGI NERVI, ARCHITECT





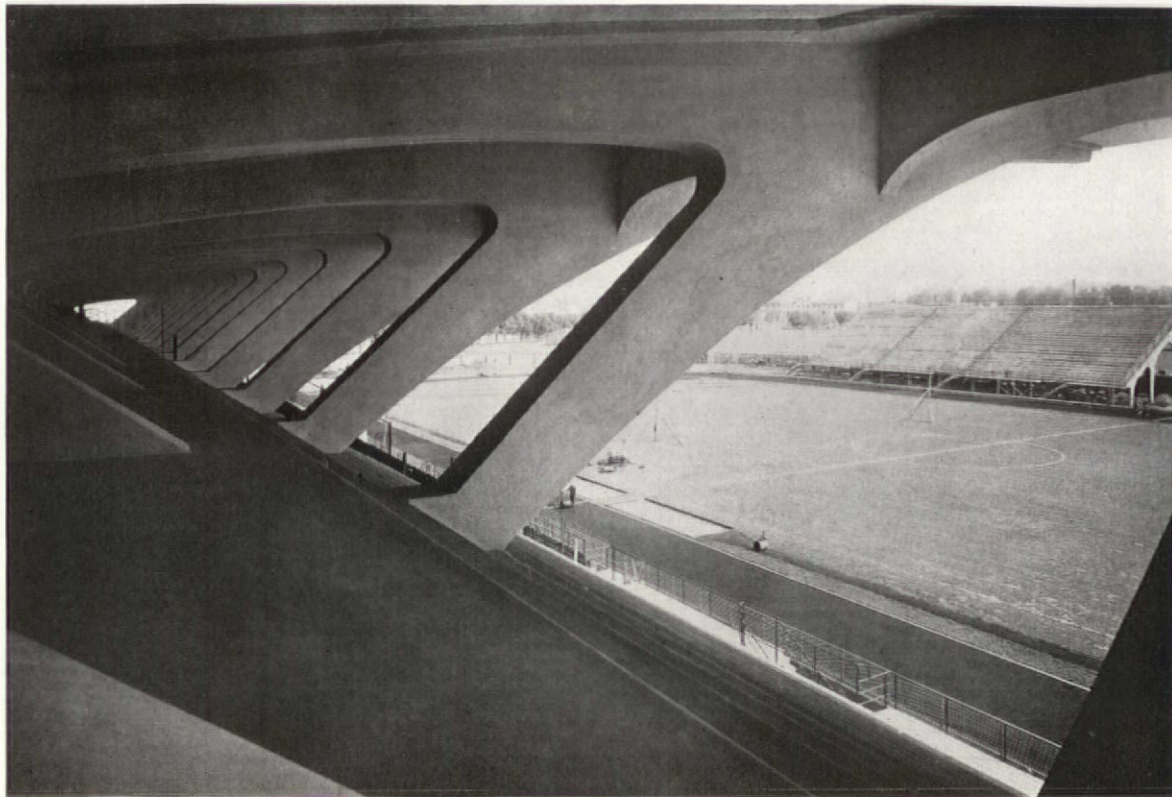




Barsotti

PUBLIC STADIUM "GIOVANNI BERTA" IN FLORENCE, ITALY—LUIGI NERVI, ARCHITECT

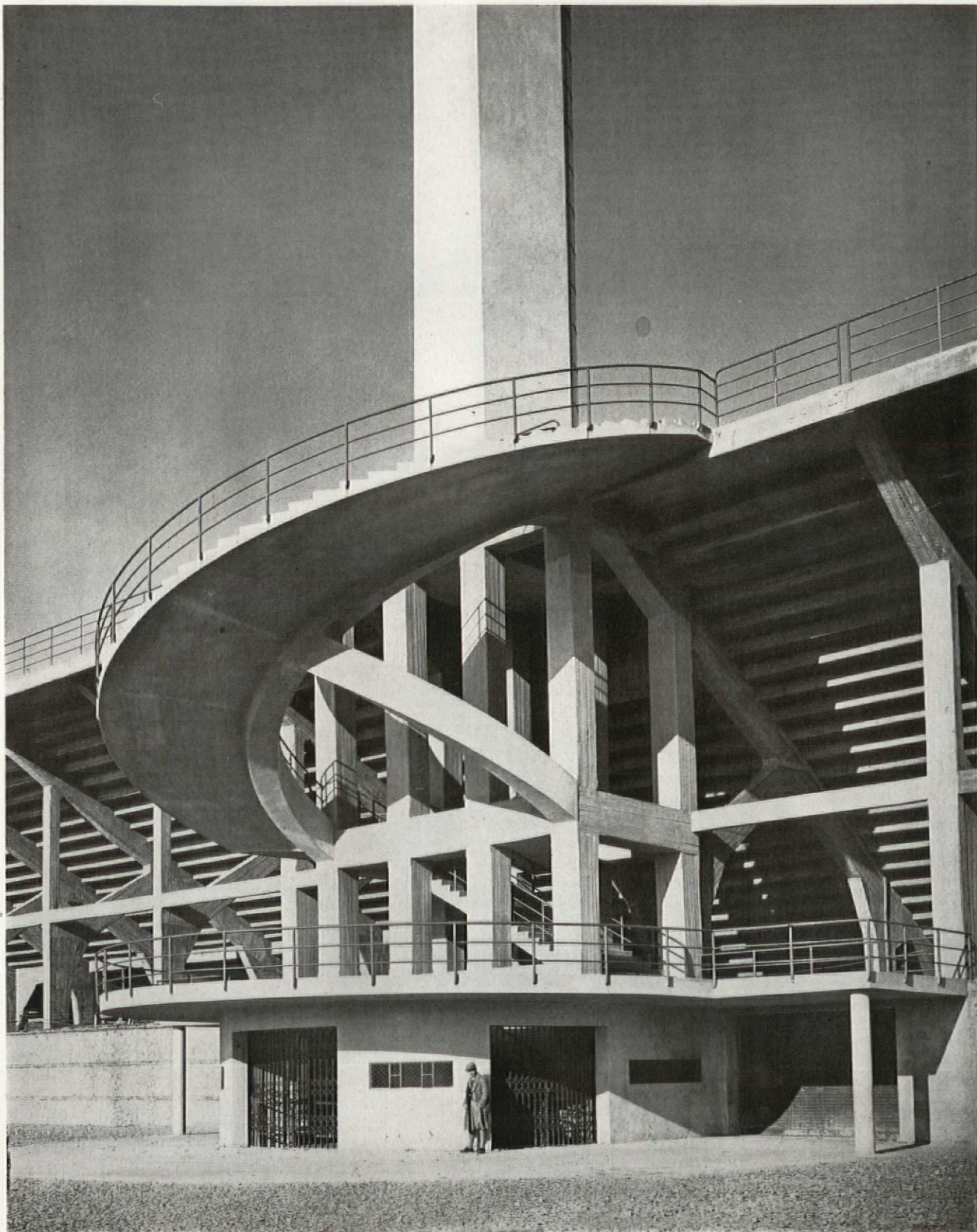




Barsotti

PUBLIC STADIUM "GIOVANNI BERTA" IN FLORENCE, ITALY—LUIGI NERVI, ARCHITECT





Barsotti

PUBLIC STADIUM "GIOVANNI BERTA" IN FLORENCE, ITALY — LUIGI NERVI, ARCHITECT





Barsotti

PUBLIC STADIUM "GIOVANNI BERTA" IN FLORENCE, ITALY — LUIGI NERVI, ARCHITECT





Barsotti

PUBLIC STADIUM "GIOVANNI BERTA" IN FLORENCE, ITALY — LUIGI NERVI, ARCHITECT



# MODERNIZATION and ALTERATION



F. S. Lincoln

RESIDENCE OF MRS. ALMA WERTHEIM IN WASHINGTON MEWS, NEW YORK CITY  
CONTEMPORA, INC., DECORATORS

The problem of redesigning this interior centered around the special needs of the client, a patron of music, arts and letters. The rooms had to be a harmonious setting for antique as well as modern pieces of furniture and decoration.

The studio is used as a music room and for living purposes. A slanting ceiling was substituted for the original double-story windows. A curved shield above the windows conceals the illumination, and the sloping ceiling serves as a reflecting surface.

Stairs lead from the studio to a master bedroom suite. The original brick chimney and mantel were redesigned in a simple manner and covered with an off-white shade of smooth plaster stucco. The painting over the fireplace is by Iskantor. Gray suede-cloth upholstery is used on the bright yellow wood benches built around the wall. The carpet is high piled rose beige.

A foyer on the right of the entrance hall opens on the dining room. A chief change made in this room was the redesigning of the fireplace: cream color stucco and lacquer red tiles provide a setting for a Georgia O'Keeffe painting. Window, floor and ceiling moldings are vermilion red. A heavy pile carpet is the same bright hue. The furniture, designed by Wolfgang Hoffmann, is of polished natural birch with upholstery of horsehair cloth in a plaid of black and white.





F. S. Lincoln

View of studio from stairs leading to bedroom suite over library.

RESIDENCE OF MRS. ALMA WERTHEIM, NEW YORK CITY  
CONTEMPORA, INC., DECORATORS



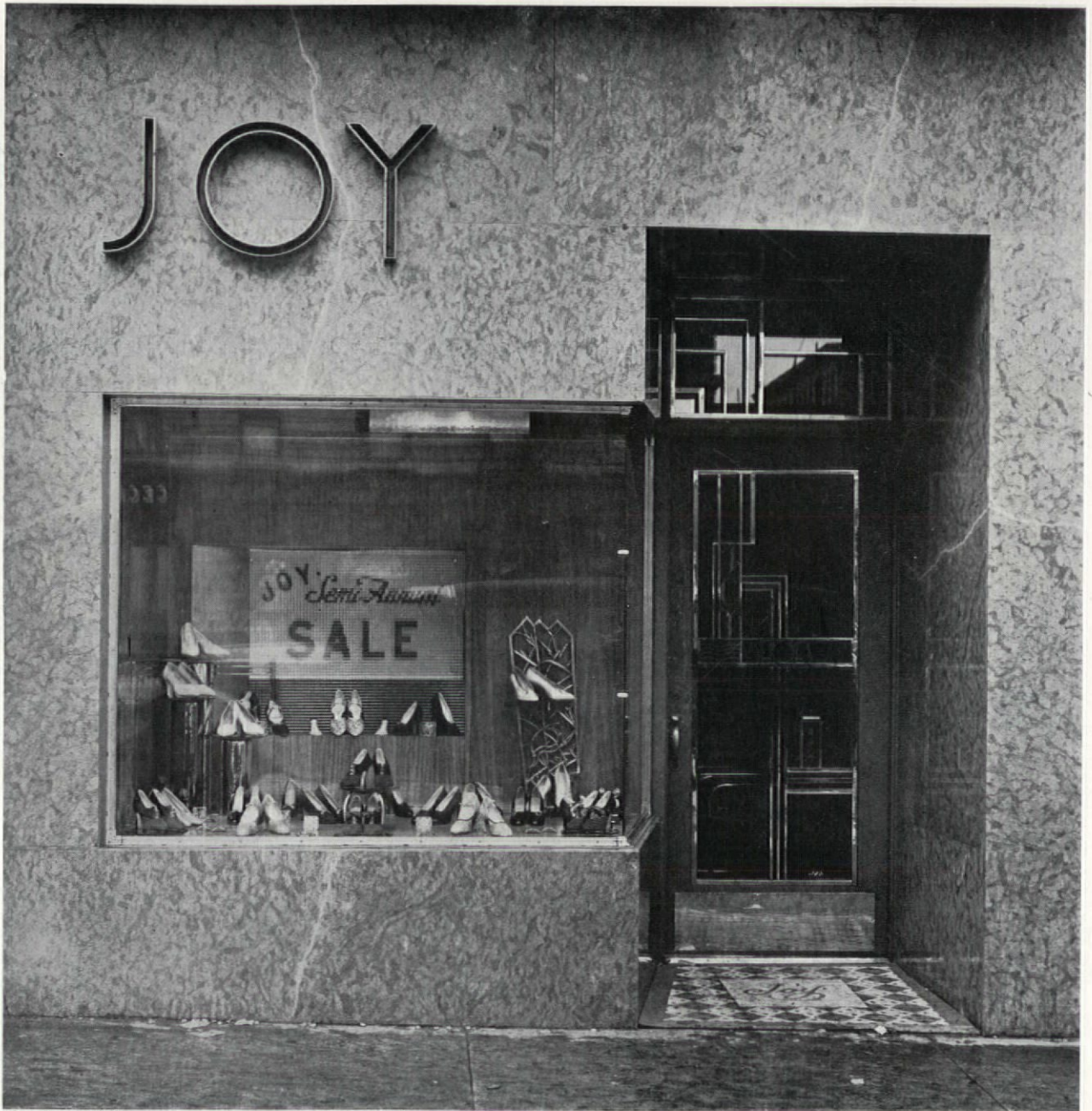


F. S. Lincoln

View of dining room from foyer on right of entrance hall.

RESIDENCE OF MRS. ALMA WERTHEIM, NEW YORK CITY  
CONTEMPORA, INC., DECORATORS

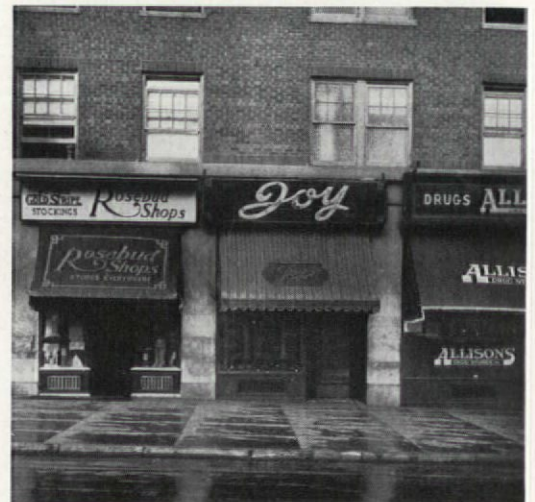




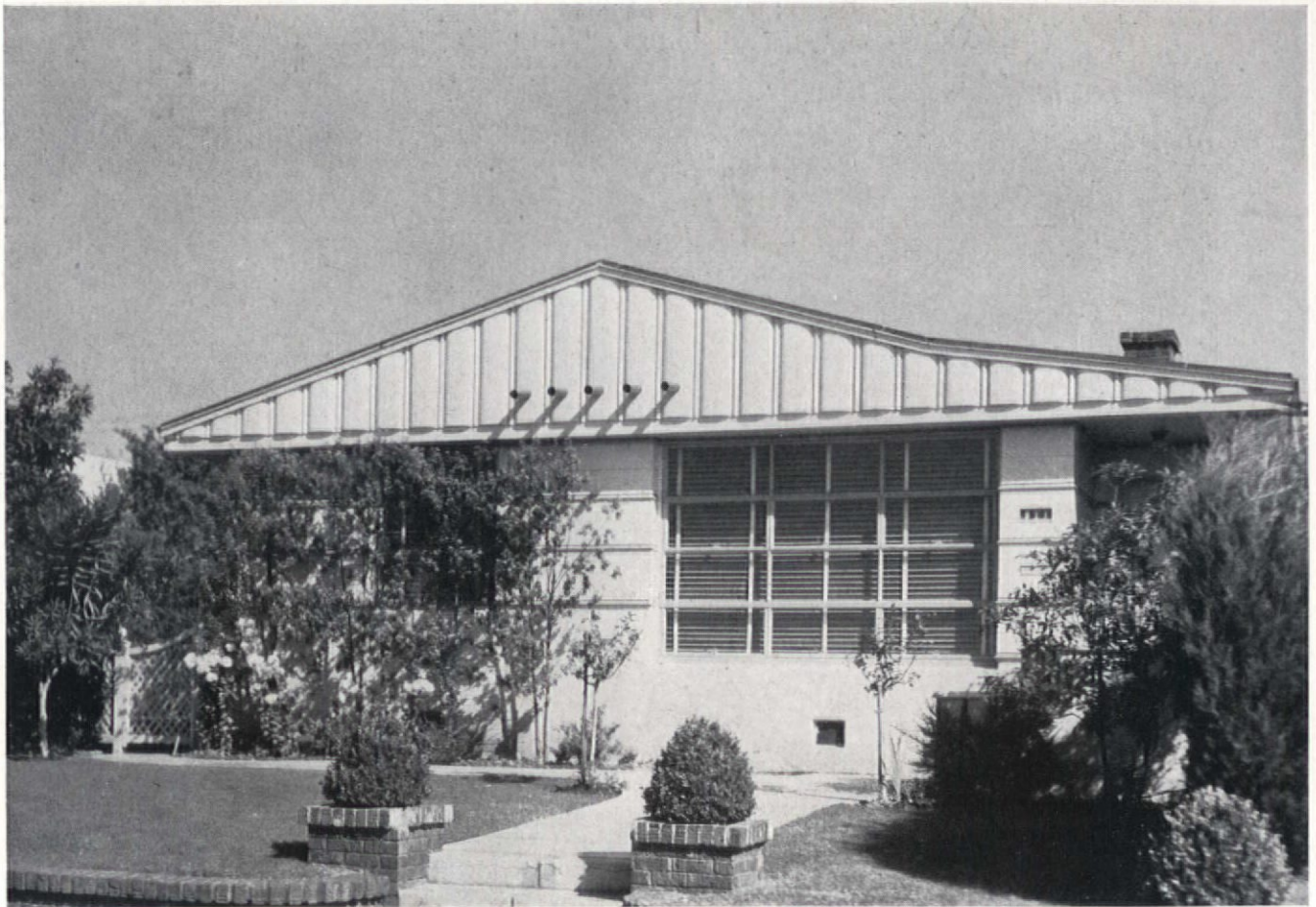
Courtesy, Mafco

The new exterior is of red marble. Blue glass inserts in the polished chromium-plated entrance door grille contain the street number and the shop name. The large lettering on the facade is of cast bronze with a chromium-plated finish.

A REMODELED SHOE SHOP IN NEW YORK CITY  
ERNST AUERBACH, DESIGNER

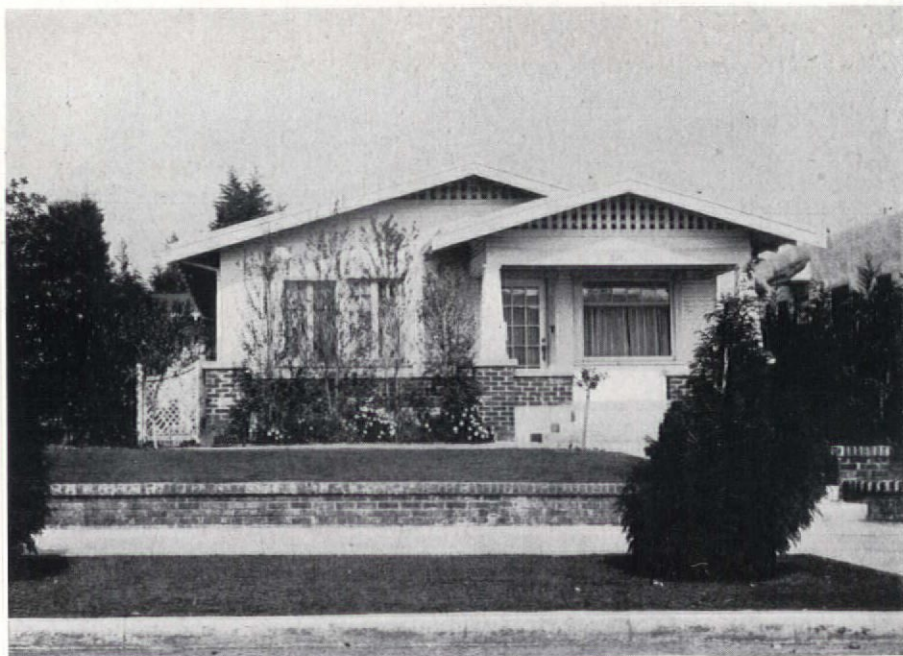






Mott Studios

BEFORE AND AFTER VIEWS OF A REMODELED  
HILLSIDE HOUSE IN HOLLYWOOD, CALIFORNIA  
DOUGLAS HONNOLD, ARCHITECT







Gottscho

WEEK-END HOUSE OF RICHARD B. SCANDRETT, JR., AT IDLEWILD, NEW YORK  
CHARLES O. CORNELIUS, ARCHITECT





Gottscho

The original house was an old stone structure, built around 1800-1820, with a central hall and rooms on each side. Sometime in the mid-nineteenth century the house was Victorianized with a heavy bracketed cornice, overhanging eaves, a large wood bay window projecting at the left of the main entrance and a front porch of one story. There were also huge dormer windows in the roof. Of the old work, there remained the original leading of side lights and transom in the front door and an interior staircase with mahogany handrail. Two rooms on the right of the hallway contained contemporary mantelpieces marbelized to imitate black-and-gold marble. A contemporary mantelpiece of simple form was in the dining room to the left of the entrance door.



WEEK-END HOUSE OF RICHARD B. SCANDRETT, JR., AT IDLEWILD, NEW YORK  
CHARLES O. CORNELIUS, ARCHITECT





The new living room.



Gottsch

Sleeping porch for bachelor guests.

REMODELED COUNTRY HOUSE  
OF RICHARD B. SCANDRETT, JR.  
IDLEWILD, NEW YORK

CHARLES O. CORNELIUS  
ARCHITECT

The house, while run-down in appearance, was in good condition structurally. Such important details as the main staircase and mantelpieces were untouched.

The chief work on the house was a complete replastering of walls and ceilings, the removal of a partition between the two rooms at the right of the entrance hall, making one large living room with two fireplaces, and the installation of a new wood cornice, over-window, valance boards, bookcases between the fireplaces, and concealed radiation. The original floors were of fine old wide pine which had been heavily painted; these were scraped and refinished.

In order to obtain necessary space, a wing was added to the left of the house. On the front of this wing is a two-story porch, quite deep. The lower portion of this porch which opens from the dining room is used for outdoor dining as well as lounging. The porch on the second floor contains 12 double-decker beds for 24 bachelor guests, and opens into a large dressing room with connecting bath. The rest of the wing on the first floor is occupied by a large kitchen and, opening from it, a garage for three cars; the space above this on the second floor is taken up with servants' rooms.

In addition to the guest rooms on the second floor there is on the third floor a dormitory with cubicles for 8 women guests.

Underneath the living room a tap room has been installed. The living and dining rooms are finished in a slightly rough plaster. The walls of the living room are a light yellowish-green, the wood trim a deep cream color and the mantels have their original black-and-gold marbleizing. The dining room walls are yellow of not too violent a shade, and the woodwork is painted a strong gray-blue; the interior of the wall cupboard is painted yellow.

The entrance porch and balustrade, stone steps and iron railings with newels are entirely new. The old porch, bay window and heavy dormers were removed.

At the rear of the house a path leads through a garden to a swimming pool which is raised on a terrace with bath houses at the rear. The property about the house consists of about one hundred acres which are gradually being developed.



# SMALL AND MEDIUM-COST HOUSES



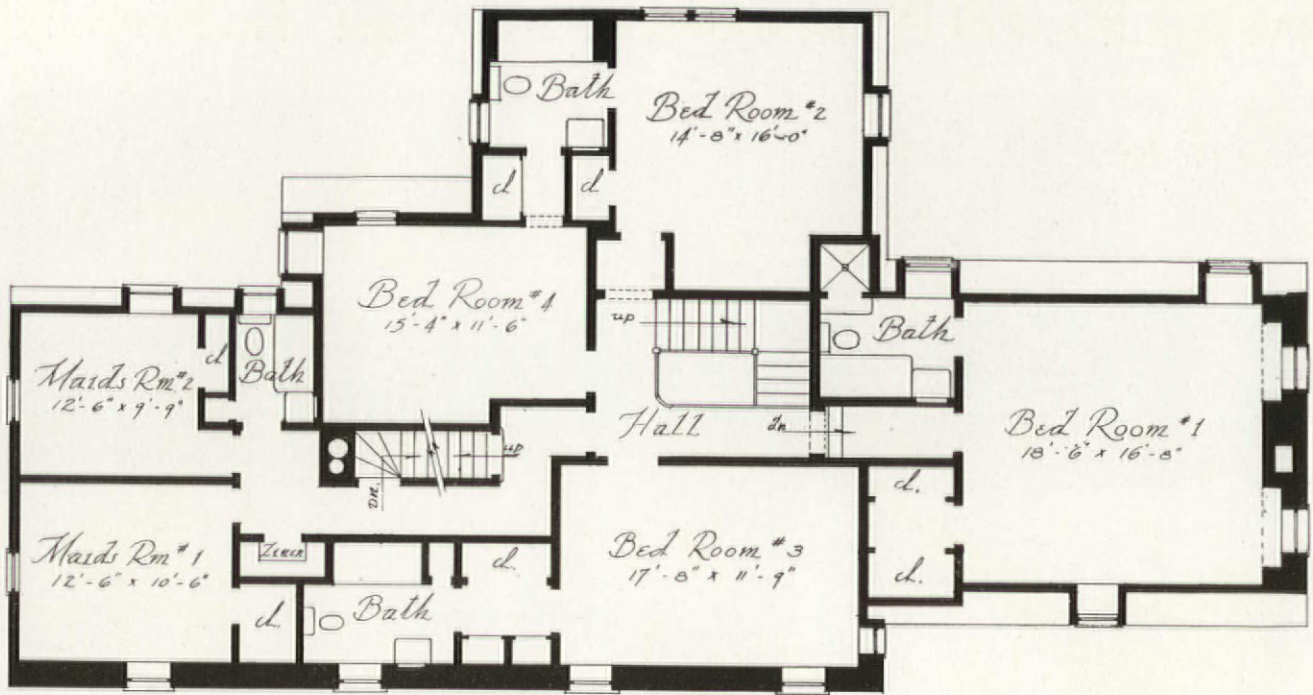
Costain

HOUSE OF CLIFFORD WALSH AT SCARSDALE, NEW YORK  
VERNA COOK SALOMONSKY, ARCHITECT—LUCILE SCHLIMME, INTERIOR DECORATOR

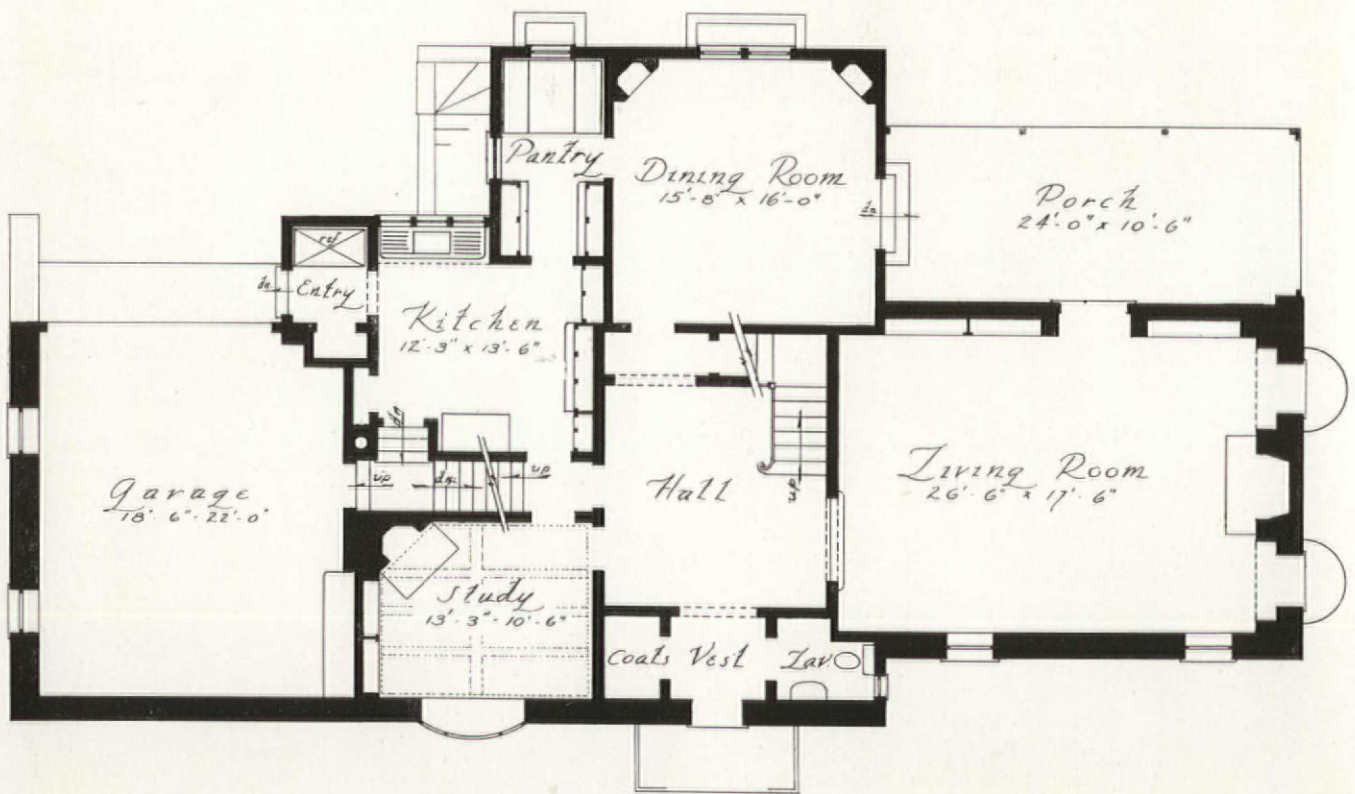
The construction is stone veneer. These stones all came from the excavation and are of flat-seam type, with rust faces which give quite a bit of warmth to the structure. In lines the house follows the early stone houses of Pennsylvania. One main gable end is of stucco, reminiscent of a method used in some of these prototypes.

The roof is of black slate laid in a slightly wavy fashion. The exterior trim is of pine, painted white. At the dormer pediments and at the porch smooth sheathing is used to create an air of simplicity. Weathered wood gutters are used with the leaders concealed in certain instances; this was done to eliminate too many vertical lines across the main body of the house. Where exposed leaders are used they are of lead-coated copper.





Second Floor Plan



Ground Floor Plan

HOUSE OF CLIFFORD WALSH AT SCARSDALE, N. Y.—VERNA COOK SALOMONSKY, ARCHITECT

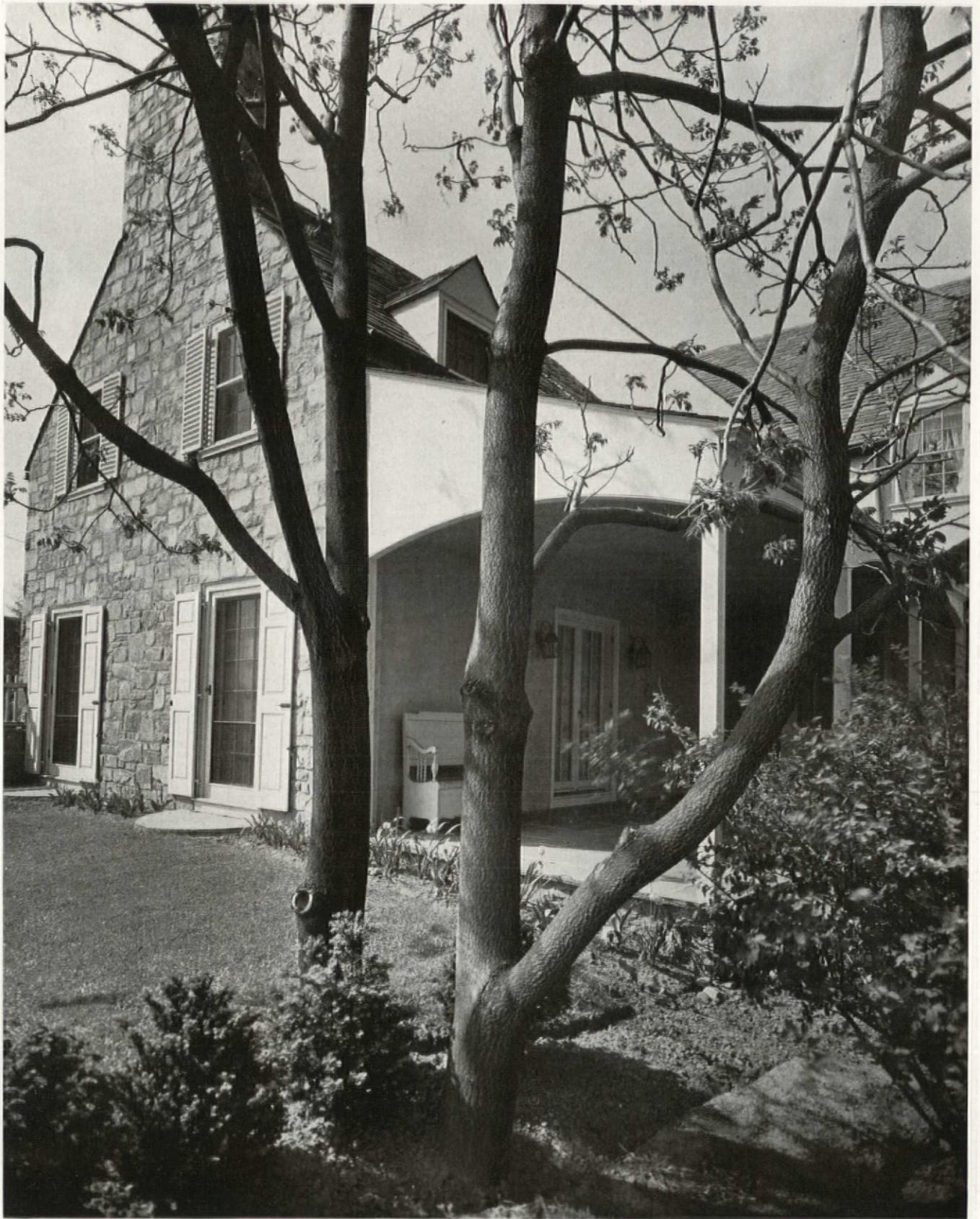




Costain

HOUSE OF CLIFFORD WALSH AT SCARSDALE, N. Y.—VERNA COOK SALOMONSKY, ARCHITECT





Costain

HOUSE OF CLIFFORD WALSH AT SCARSDALE, N. Y. — VERNA COOK SALOMONSKY, ARCHITECT





Costain

HOUSE OF CLIFFORD WALSH AT SCARSDALE, N. Y. — VERNA COOK SALOMONSKY, ARCHITECT





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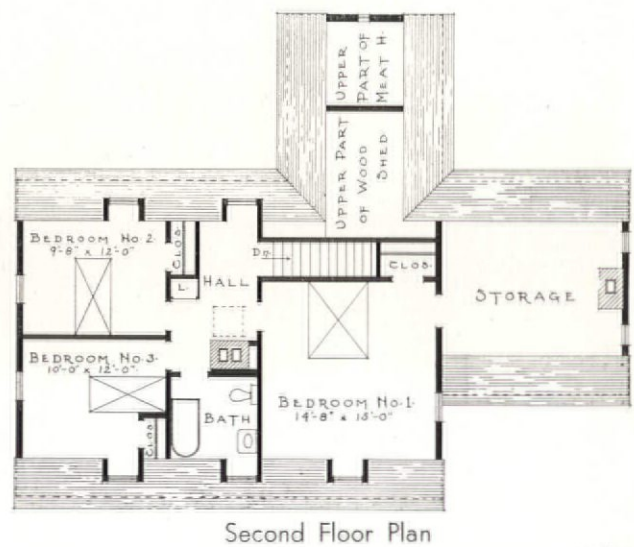
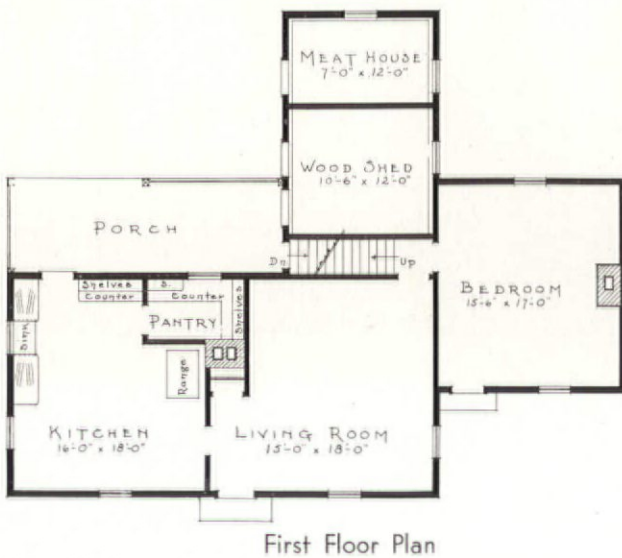
HOUSE OF CLIFFORD WALSH AT SCARSDALE, N. Y.—VERNA COOK SALOMONSKY, ARCHITECT





TENANT HOUSE ON ESTATE OF MRS. CAROLINE H. DUPONT IN KENT COUNTY, MARYLAND  
HENRY ATHERTON FROST AND ELEANOR RAYMOND, ARCHITECTS

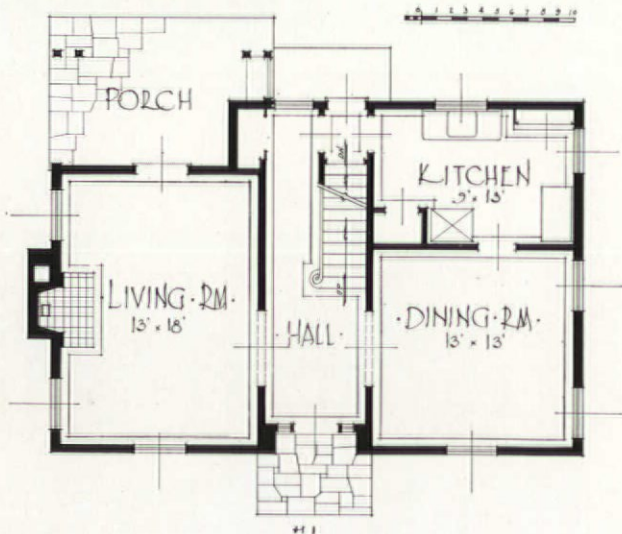
The house is of wood construction: the exterior walls of Western red cedar siding in random widths painted white and the roof of red cedar shingles. Blinds and doors are green. The interior is plastered in a smooth finish and painted. All sashes, blinds, interior doors and hard pine interior trim are stock. The finish floors are hard pine. Heating is by means of stoves in kitchen and living room and registers in the floors of the rooms above.



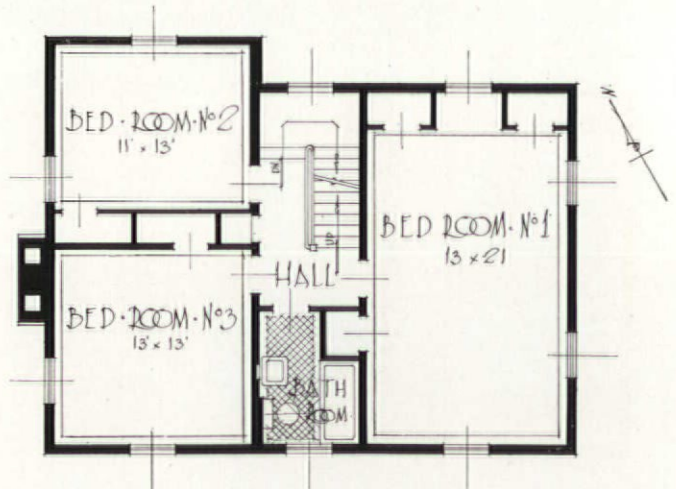




Biggs



First Floor Plan



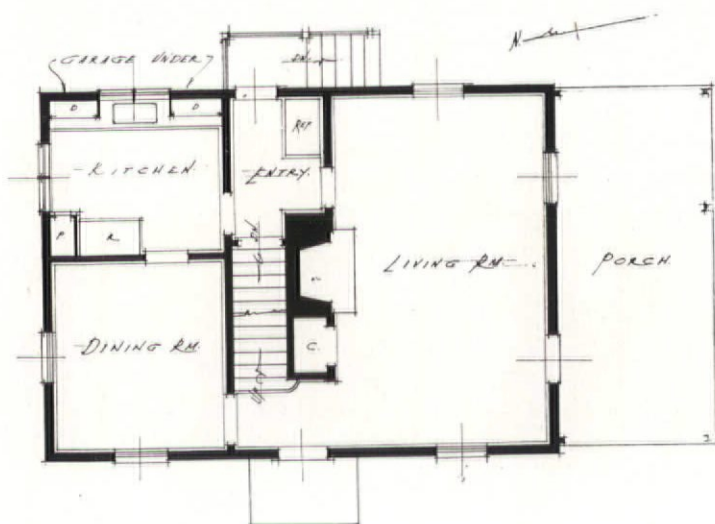
Second Floor Plan

HOUSE OF JAMES J. HENNESSY, UPPER MONTCLAIR, NEW JERSEY — ARTHUR E. RAMHURST, ARCHITECT

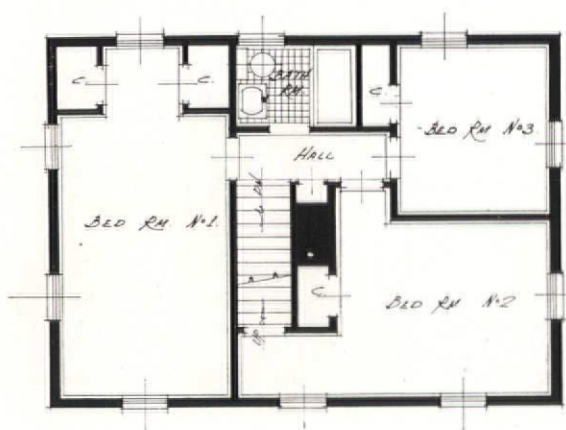




Biggs



First Floor Plan



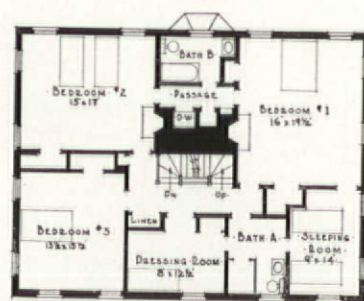
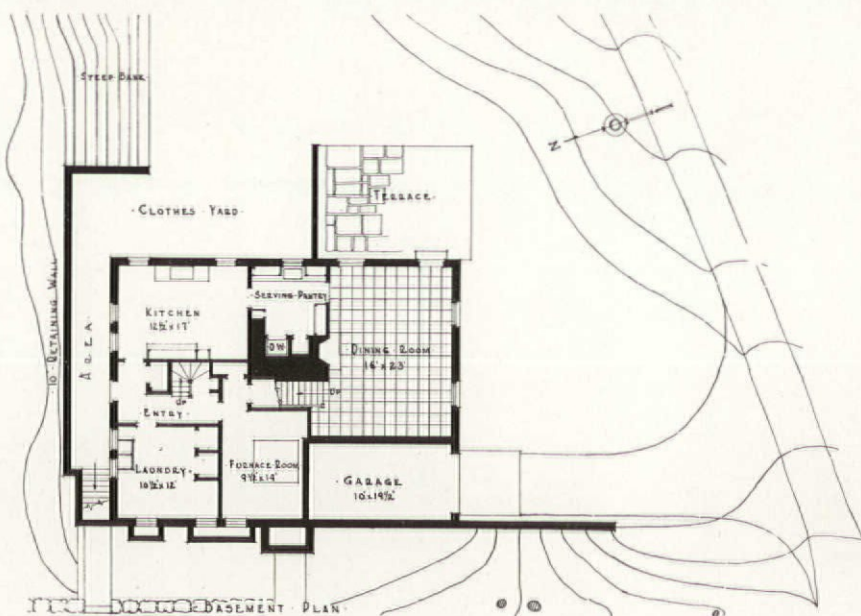
Second Floor Plan

HOUSE OF EDWIN M. TATE, MONTCLAIR, NEW JERSEY — ARTHUR E. RAMHURST, ARCHITECT





Weber



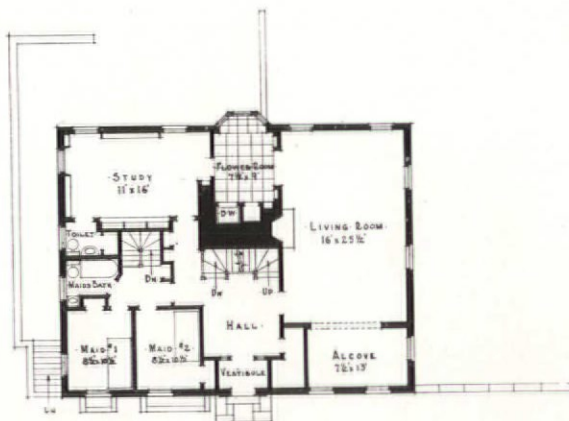
Above: Second Floor Plan  
Left: Basement Plan

HOUSE IN CAMBRIDGE, MASSACHUSETTS—GORDON ALLEN, ARCHITECT





Weber



First Floor Plan

Walls: brick veneer, whitewashed; basement story, oiled and not whitewashed. Roof: black slate. Floors: oak, slate, asphalt tile and Zenitherm. Interior walls: plastered. Insulation: outside walls and roof. Heat: gas, warm air.

Special features: The house faces west, directly opposite the side of Mount Auburn Cemetery, the desirable view being in the opposite direction. Hence the plan is arranged to have least outlook to the west and most to the south and east.

The fact that the extremely small lot slopes diagonally over eighteen feet from corner to corner resulted in the development of the basement and first floors as shown on the plans.

The sleeping room on the second floor is a substitute for a sleeping porch—a small room with three good-sized windows, two of which are of the Lunkin type which slides up into the wall thickness, leaving the entire opening free.

The total cost was \$25,000, not including architect's commission, or \$15.47 a square foot, and 49c a cubic foot.

HOUSE IN CAMBRIDGE, MASSACHUSETTS—GORDON ALLEN, ARCHITECT





Living room on first floor, directly over . . .

Dining room on floor below.



Weber

HOUSE IN CAMBRIDGE, MASSACHUSETTS—GORDON ALLEN, ARCHITECT

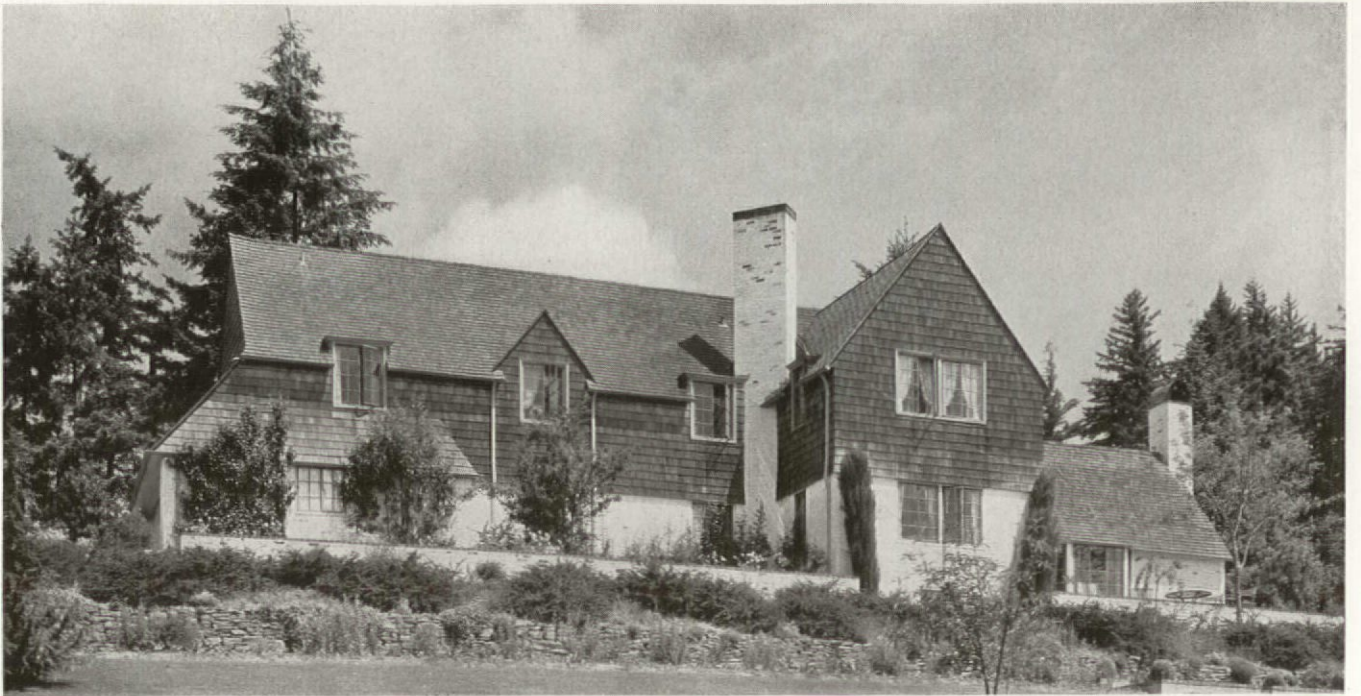




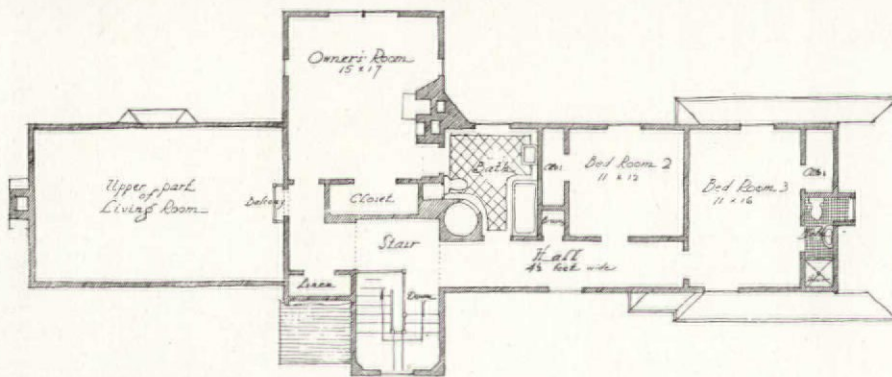
Weber

HOUSE IN CAMBRIDGE, MASSACHUSETTS—GORDON ALLEN, ARCHITECT

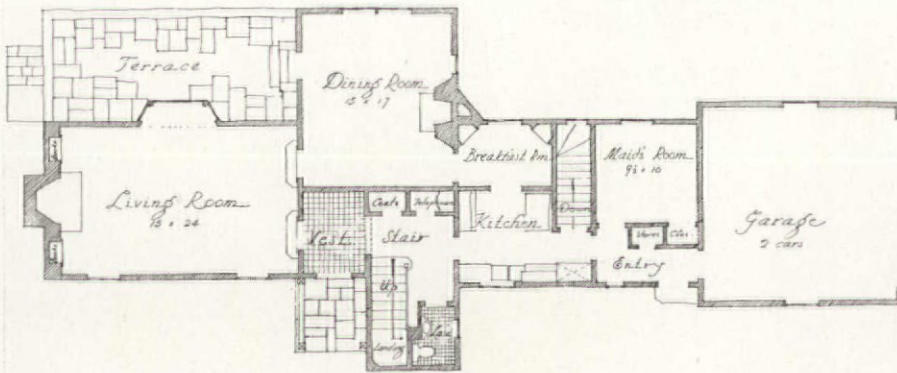




Jourdan



PLAN OF SECOND FLOOR



PLAN OF FIRST FLOOR

First story walls are constructed of second hand brick, the second story of handsplit shakes. Cost of the house: \$11,500.

HOUSE OF FRANK D. COHAN IN PORTLAND, OREGON — HAROLD W. DOTY, ARCHITECT





Jourdan

HOUSE OF FRANK D. COHAN IN PORTLAND, OREGON—HAROLD W. DOTY, ARCHITECT





Jourdan

HOUSE OF FRANK D. COHAN IN PORTLAND, OREGON—HAROLD W. DOTY, ARCHITECT





F. S. Lincoln



"THE IRIS GARDEN"  
 ESTATE OF Z. G. SIMMONS  
 GREENWICH, CONNECTICUT  
 ISABELLA PENDLETON  
 LANDSCAPE ARCHITECT  
 AND  
 JOHN C. WISTER, L. A.  
 IRIS CONSULTANT





F. S. Lincoln

ESTATE OF Z. G. SIMMONS AT GREENWICH, CONNECTICUT — ISABELLA PENDLETON, LANDSCAPE ARCHITECT





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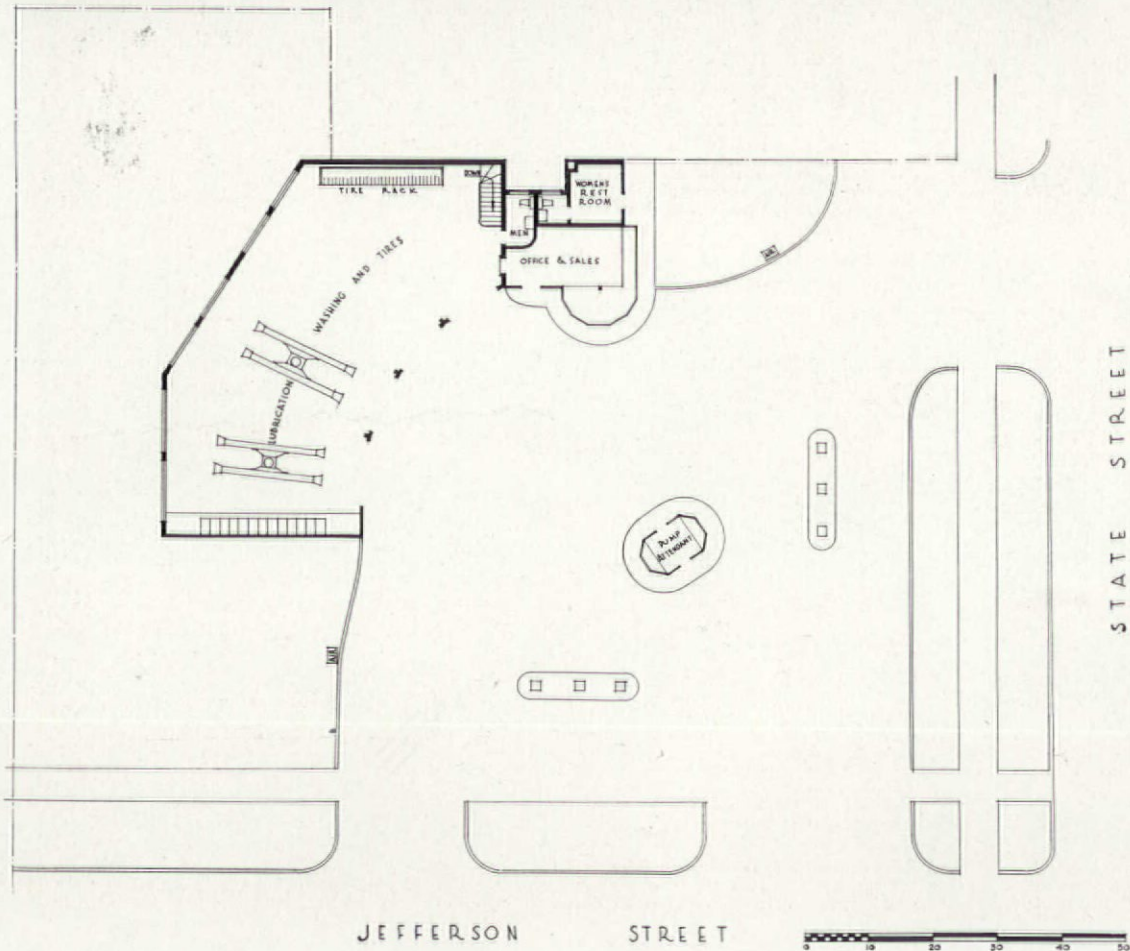


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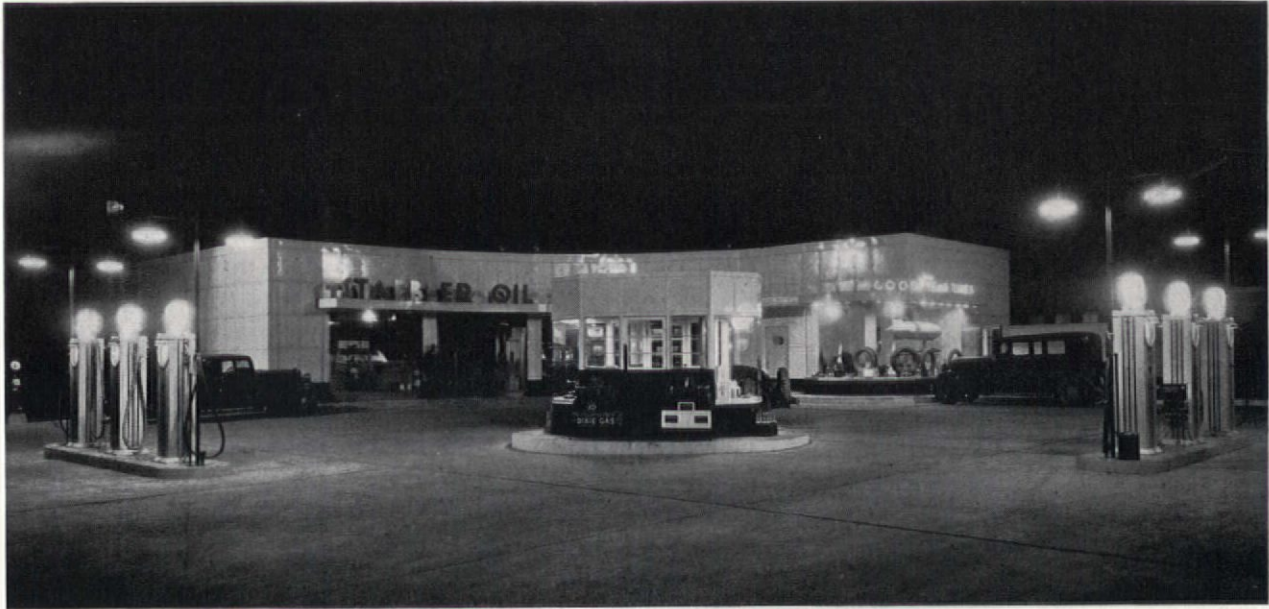
SERVICE STATION AT ANN ARBOR, MICHIGAN...



Exterior walls: Enameled iron sheets bolted to light steel framework; joints covered by enameled iron battens held in place with bolts which have enameled iron heads. Rear walls on property line: Cement blocks to comply with local building code. Roof: Built-up roofing on wood joist, with 4 inches of rock wool insulation. Canopy: Enameled iron face and soffit with metal roof.



...WOODWORTH AND LOREE, ARCHITECTS



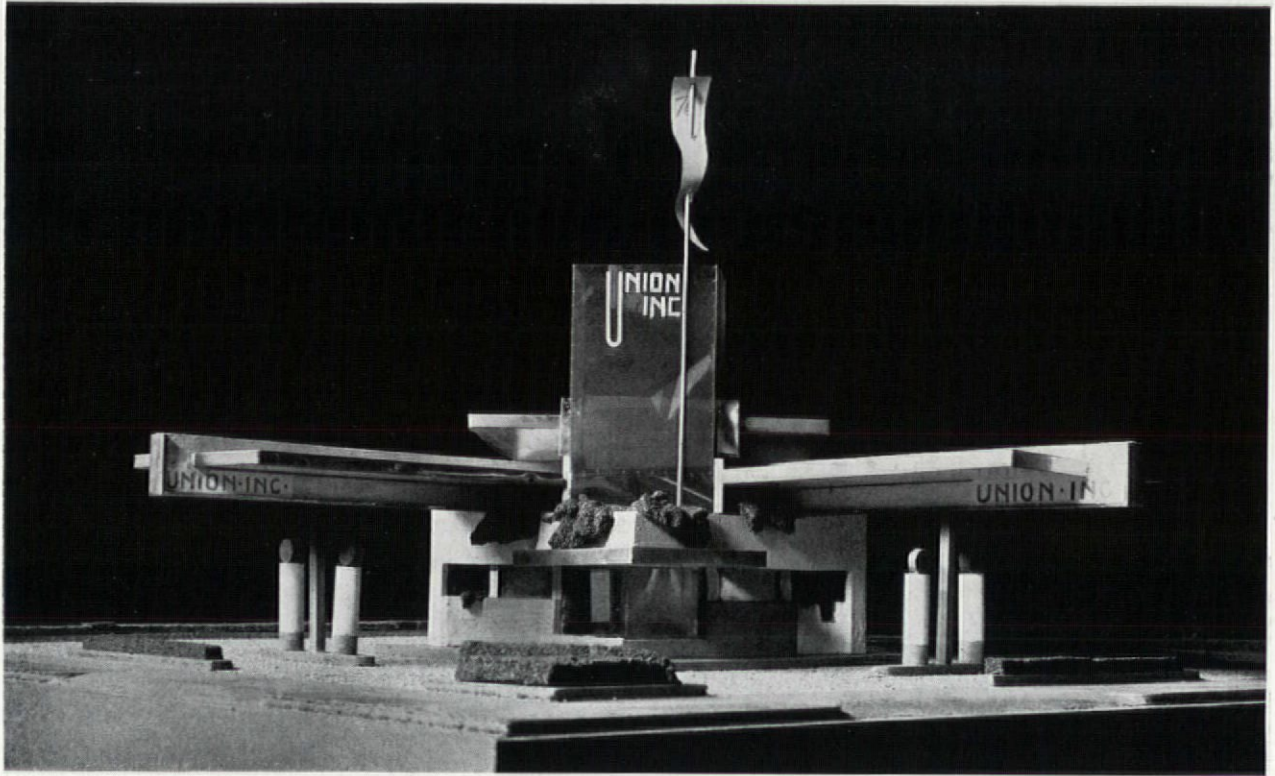
Color: Walls of light ivory with base of dark blue enameled iron; canopy and door to salesroom, yellow; wood letters on canopy painted red and Neon sign blue. Plate glass set in aluminum. Floors: Cement throughout. Interior walls and ceilings: Cement plaster on metal lath. Women's rest room walls papered with Salubra. Heating by fan units; basement boiler fed by automatic stoker.



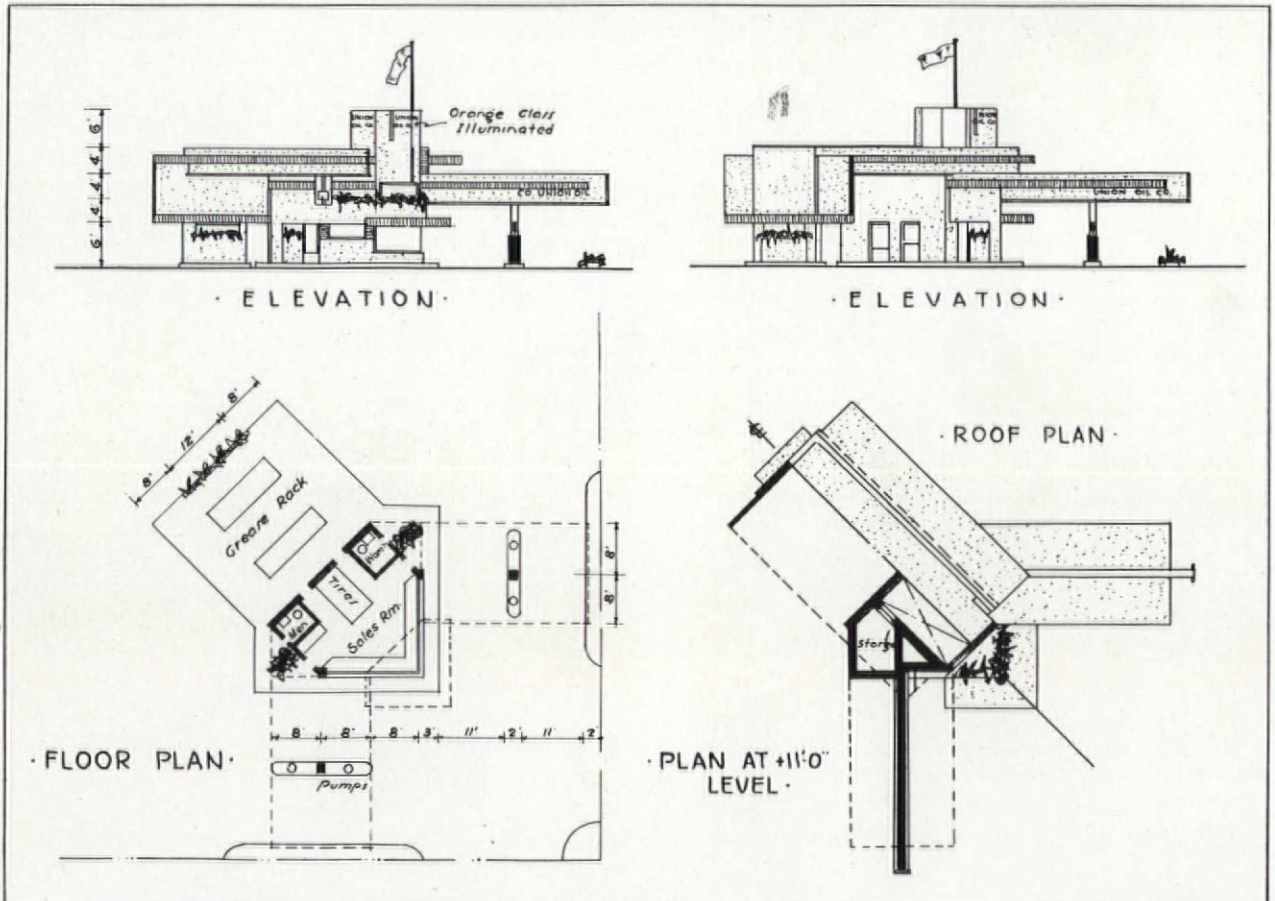
# A GASOLINE STATION

DESIGN AND MODEL BY  
R. M. SCHINDLER, ARCHITECT

Reinforced concrete is intended for this station. The projecting canopies are supported by central beams which permit light construction and also provide space for display signs. Color illumination is to be used in the glass tower.



W. P. Woodcock



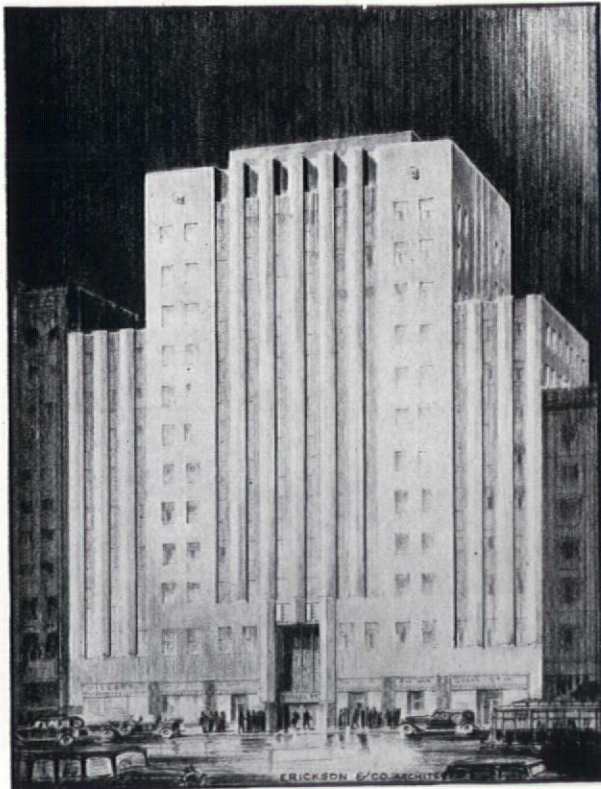


# ILLUSTRATED NEWS



Keystone

Professor Walter Gropius, well-known German architect, who recently celebrated his fiftieth birthday.



Medical Arts Building in Duluth, Minnesota, recently completed at a cost of one million dollars. It was 83 per cent occupied on May 25, the formal opening date. Designed by Erickson & Company, architects and engineers.

## A.I.A. FRAMING NATIONAL RECOVERY CODE

Acting for the nation's architectural profession, and in close association with the building industry, the American Institute of Architects, of which E. J. Russell of St. Louis is president, has decided to file a code of fair practice under the provisions of the National Recovery Act.

William Stanley Parker of Boston has been appointed chairman of a Code Committee of the Institute, other members of which are: Frederick Mathesius, Jr., New York; William G. Nolting, Baltimore; Horace W. Peaslee and Francis J. Sullivan, Washington.

Through the Construction League of the United States, the building industry is also framing a code. Stephen F. Voorhees of the New York Chapter of the Institute heads a Code Committee of the League. The other members of the League Code Committee are: F. P. Byington, Willard T. Chevalier, C. H. Dabelstein, and Colonel J. P. Hogan, all of New York; A. E. Horst and William Steele III, Philadelphia; P. W. Donoghue, Washington.

## TECHNICAL BOARD TO REVIEW LOAN APPLICATIONS

It is reported that Hunley Abbott, president of Abbott, Merkt & Company, New York engineers and architects who designed the Port Authority's Inland Terminal Building, has been appointed to the Technical Board of Review under Colonel H. M. Waite, Deputy Administrator of the Federal Emergency Administration of Public Works.

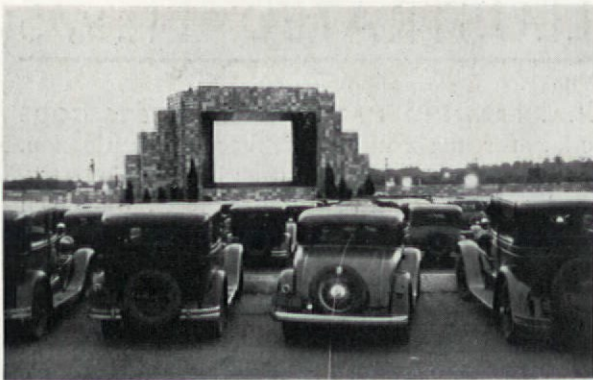
The Technical Board of Review is a board of consulting engineers acting in a quasi-judicial capacity to review applications for loans on projects which have been adversely reported on by the regular organization, or which have been protested.



Keystone

The largest building stone ever cut—a block quarried at Baalbek, Syria, in the eighth century. The monolith measures 12 feet wide, 15 feet high and 70 feet long. It was never used and still remains at the edge of the quarry.





Parrish & Read

The first Drive-In Theater has been opened in Camden, New Jersey. Covering an area of 250,000 square feet, this movie theater accommodates 400 automobiles or about 1,600 persons. Controlled directional sound allows distant observers to hear as well as those near the screen, and cars can drive in and out on wide terraces without disturbing the audience.



Wide World

English railroads have fitted up coaches for camping parties. Each coach, equipped with two bedrooms, living room and kitchen, accommodates six persons and may be chartered at reasonable rates which include transportation to and from camp sites.

#### NEW OLDEST DATED HOUSE IN U. S. FOUND

In a ruined dwelling of Pueblo Indians, in Arizona, has been found timber cut about the year 708 A.D., according to Dr. Harold S. Colton, director of the Museum of Northern Arizona. The building of this Indian home is now the oldest date in United States history. The earliest date heretofore established was 784 A.D., found in another Indian pithouse by the same museum.

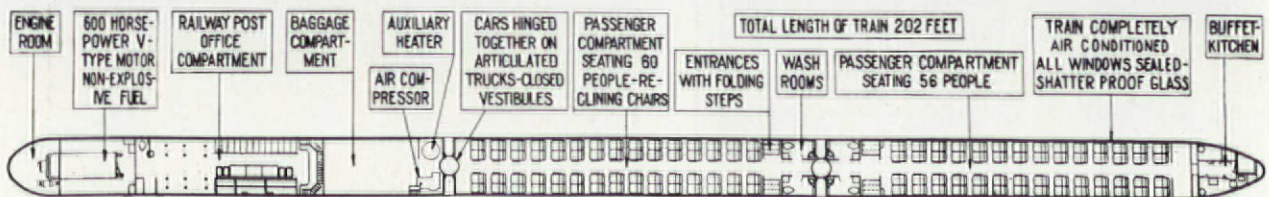
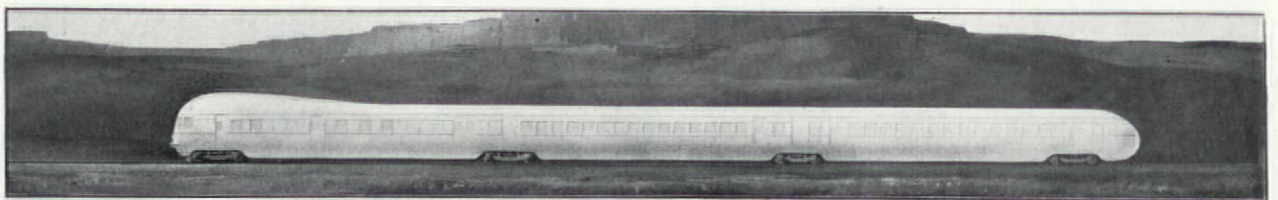
The house was built, Dr. Colton reports, in the earliest period when Pueblo Indians inhabited the Southwest. The period is called "Pueblo One" by prehistorians. Earlier than the Pueblos in the Southwest were Basket Maker Indians who lived there long before the Christian era.

The important piece of timber was dated by matching its annual rings with an unbroken series of tree rings from present date extending back more than 1,200 years. Despite the charred condition of the wood, the tree rings could be matched with rings dated 623 A.D. to 708 A.D.

The house was excavated under direction of Lyndon L. Hargrave and the timber was dated by John C. McGregor of the Museum staff. Dr. A. E. Douglass, outstanding authority on the tree ring method of dating Southwestern ruins, reviewed the date.

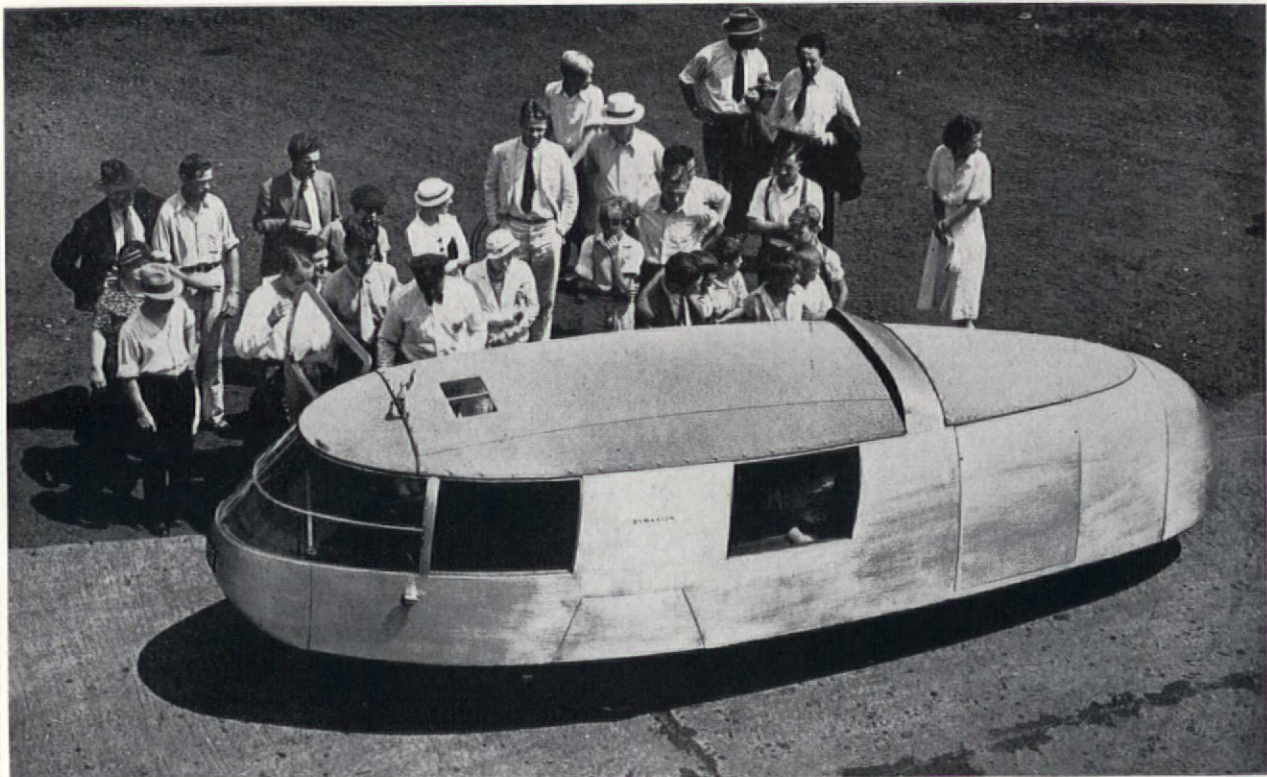
#### SHOP WINDOWS USED IN BALTIMORE LIBRARY

Window displays have been successfully used at the Enoch Pratt Free Library in Baltimore to attract passers-by inside to read the books. Gretta Smith, director of the exhibits, reported at a recent meeting of the American Association of Museums that the library's twelve large display windows are filled with new exhibits every two or three weeks. Book exhibits are obtained from the library itself, and societies and museums lend material to illustrate the subjects. The exhibits are fitted to holidays, current events and subjects of general interest. The shop windows were developed by the librarian, Joseph L. Wheeler, who first tried out his plan in temporary quarters before the new building was completed.



A streamlined train is now under construction for the Union Pacific. It will be a duralumin, lightweight train of three closely jointed units or cars, together weighing not more than 80 tons, the present weight of one Pullman sleeper. The train will be capable of a maximum speed of 110 miles an hour.



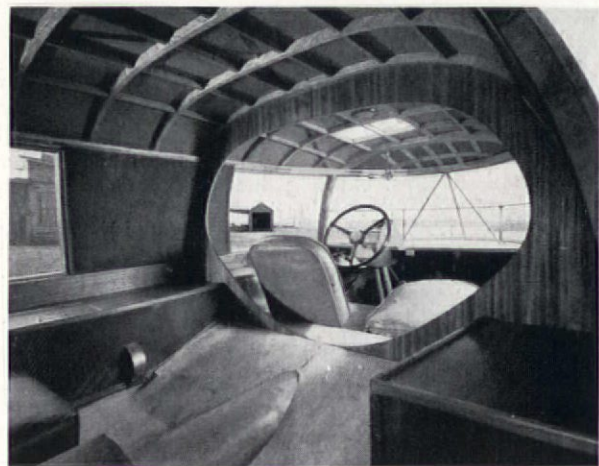


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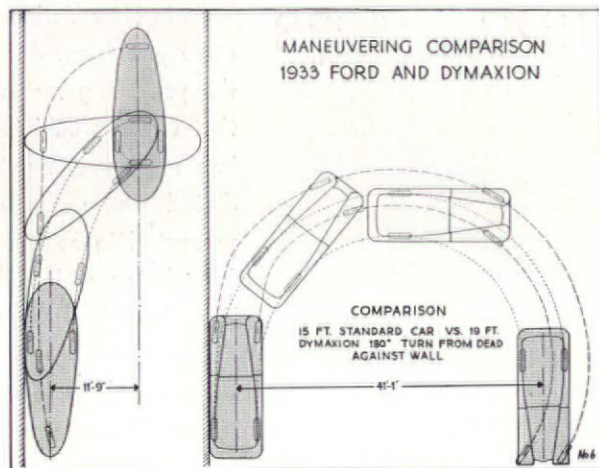
**THE FIRST DYMAXION TRANSPORT UNIT**—a three-wheel, fully streamlined vehicle—was demonstrated publicly July 21 at the development laboratory of the 4D Company in Bridgeport, Connecticut, prior to its departure for exhibit at the Chicago World's Fair. The car was designed and built by Buckminster Fuller, with Starling Burgess as collaborating engineer. It is to go into immediate commercial production, and ultimately to be part of the shelter services embraced by the Dymaxion House, a structure with floors supported tensionally from a central utilities tower and intended for reproduction.\*

The Transport Unit has three compartments: in the bow, seats for the driver and companions; in the middle, additional seats, or cabin bunks and equipment if converted for cross-country touring; astern, the engine, isolated by a soundproof, fire-proof partition. The car is propelled by the two front wheels abreast maximum beam; the single stern wheel serves as rudder. This wheel arrangement makes feasible a true streamline shell without increased roadpath and affords increased kinetic stability. The air resistance of the Dymaxion is approximately one-fourth that of the standard sedan, which uses 80 per cent of its power at 60 miles an hour in overcoming wind resistance. (The wind resistance increases as the square of the speed.) The Dymaxion is proof against braking skid or swerve because of its frontal braking on nonsteering wheels. Expected gasoline consumption: 40 miles per gallon.

\*See page 180, August, 1930; page 282, October, 1931, and pages 259, 278, 279, October, 1932, issues of THE ARCHITECTURAL RECORD for illustrations and description.



Interior of the Dymaxion Shelter-Mobile.







Following his early education at the Imperial and Royal Academy of Fine Arts, and at the Polytechnicum, in his native city of Vienna, Joseph Urban designed numerous buildings in Egypt and various European countries before coming to the United States in 1912. Here he gained fame by his operatic and stage settings, and then resumed the practice of architecture, building many residences, clubs, office buildings, theaters and schools. Among his recent works are the Paramount Theater and the Bath and Tennis Club at Palm Beach, the Atlantic Beach Club on Long Island, and in New York, the Ziegfeld Theater, the International Magazine Building, the St. Regis Hotel Grill Room and Roof Garden, the Central Park Casino, and the New School for Social Research. He was designated by the Soviet Government to compete in the design for the Palace of the Soviets. This past year he designed the Joseph Urban Room of the Congress Hotel in Chicago, completed an apartment for Katharine Brush, the novelist, and was director of exterior color and consultant on lighting for the Century of Progress Exposition in Chicago.

## Joseph Urban 1872 - 1933

When Joseph Urban came to this country and was occupied with the designing of stage sets such as had never been seen before in America, the architects in New York were sailing along under the banner of the Beaux Arts. The more prominent ones among them held the position of arbiters in regard to the prevailing tastes in archaeology. There was little realization at that time that Urban would invade their field and show how much more life there was in a more unconventional approach. Although the American public had repudiated similar efforts made theretofore, it could not fail to succumb to work presented in so irresistible a form. This was achieved because Urban, apart from being endowed with largesse of personality and comparatively free of inhibitions, had the greatest care and love for his work, coupled with a particular mastery in the use of materials, forms and colors. He not only in this way succeeded, but through his success cleared the way for new endeavor. The architectural profession owes a great debt to him for this contribution.

WILLIAM MUSCHENHEIM



## THE SELECTION OF BUILDING INSULATION

By THEO. F. ROCKWELL, Instructor in Heating and Ventilating,  
Carnegie Institute of Technology

### PART TWO: CALCULATION OF HEAT ECONOMIES \* (Part one of this article appeared in the July issue, pages 65-71)

The annual heat saving resulting from use of insulation may be expressed by the following equation:

$$\text{Heat saved/year} = [H_u (t - t_a) N] - [H_i (t - t_a) N] \quad (2)$$

where

$H_u$  = heat loss from uninsulated house  
B.t.u./hr./deg.F.

$H_i$  = heat loss from insulated house  
B.t.u./hr./deg.F.

$t$  = inside air temperature deg. F.

$t_a$  = average outside air temperature during heating season deg. F.

$N$  = number of hours in heating season.

The cost of the fuel to produce this heat may be determined from the following equations:

$$\text{Coal} \quad x = \frac{500 \times c}{C_c \times E_c} \quad (3)$$

$$\text{Oil} \quad y = \frac{1,000,000 \times p}{C_o \times E_o} \quad (4)$$

$$\text{Gas} \quad z = \frac{1000 \times g}{C_g \times E_g} \quad (5)$$

where

$x$  = cost of coal in dollars/1,000,000 B.t.u.

$c$  = cost of coal in dollars/ton.

$C_c$  = calorific value of coal B.t.u./lb.

$E_c$  = over-all efficiency of coal-fired heating plant.

$y$  = cost of oil in dollars/1,000,000 B.t.u.

$p$  = cost of oil in dollars/gallon.

$C_o$  = calorific value of oil in B.t.u./gallon.

$E_o$  = over-all efficiency of oil-fired heating plant.

$z$  = cost of gas in dollars/1,000,000 B.t.u.

$g$  = cost of gas in dollars/cu. ft.

$C_g$  = calorific value of gas B.t.u./cu. ft.

$E_g$  = over-all efficiency of gas-fired heating plant.

If  $U_u$  and  $U_i$  be substituted for  $H_u$  and  $H_i$  re-

spectively in equation (2), the result will be the heat saved per year per square foot of wall or ceiling. The new equation may be plotted as shown in Figure II. Each curve represents a different value of  $(U_u - U_i)$ .

The quantity  $[N (t - t_a)]$  was used as the abscissa so as to make the chart more flexible. It may be used for either walls or ceilings and for any reasonable value of inside air temperature  $t$ .<sup>\*</sup> The chart is used to show the fuel savings resulting from the use of insulation, which is expressed in dollars per year per square foot of wall or ceiling area.

The savings for walls and ceilings should be determined separately because the conditions for each are not exactly parallel. The temperature drop<sup>\*</sup> through the ceiling is always different than that for the wall, and the addition of the same amount of insulating material to the standard ceiling causes a greater relative change in resistance than it does in the standard wall<sup>†</sup>.

When using the chart for walls,  $t$  is taken as the inside design temperature and  $t_a$  as the average outside temperature for the heating season. When using the chart for ceilings having an unheated attic space above them,  $t$  is taken as the air temperature at the ceiling and  $t_a$  as the average attic temperature. The average temperature for unheated attic may be safely determined from the following equation:

$$t'_a = t - \frac{(t - t_a)}{2} \quad (6)$$

where

$t'_a$  = average attic temperature deg.F.

$t$  = breathing line temperature deg.F.

$t_a$  = average outdoor temperature for heating season deg.F.

The use of lower values of  $t'_a$  than given by equation (6) would tend to show greater annual savings than would probably result in practice.

<sup>\*</sup>The loss through ceilings is generally based on a higher air temperature than at the breathing line.  
<sup>†</sup>See Tables III and IV.



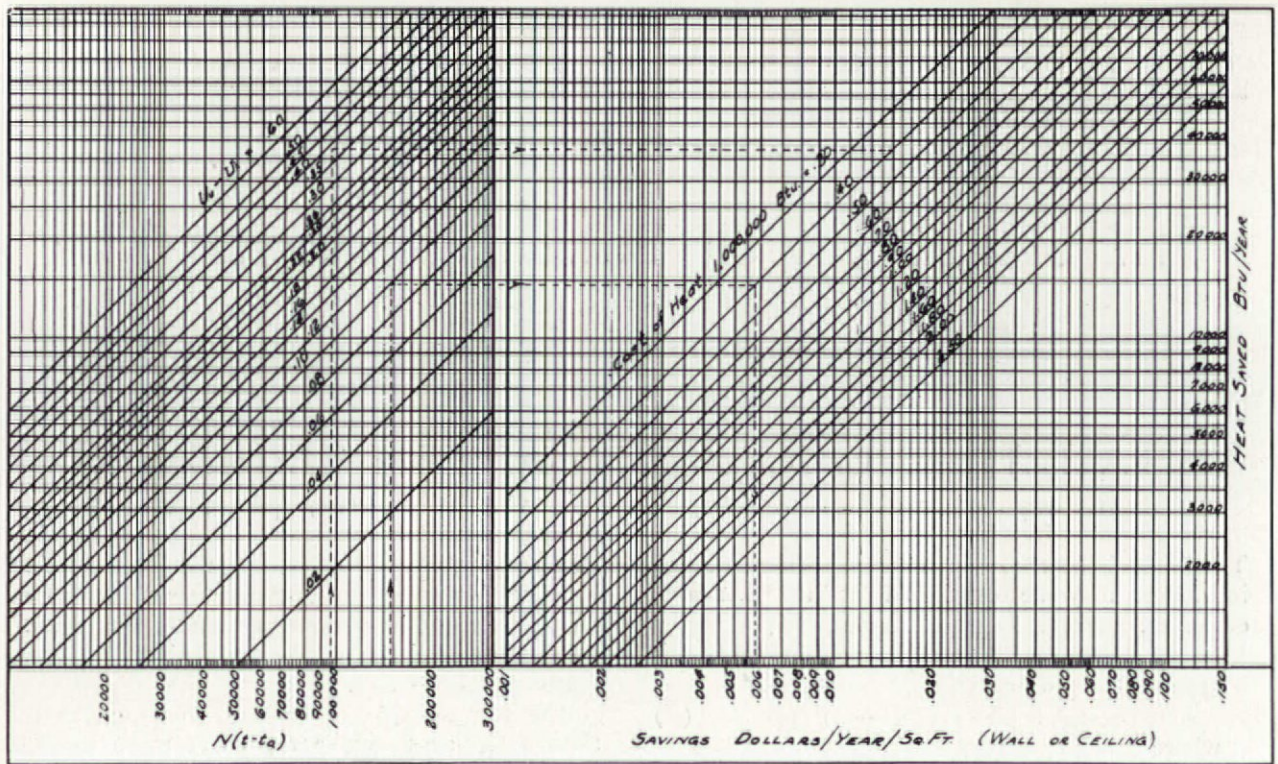


FIGURE 11: CHART FOR THE DETERMINATION OF ANNUAL SAVINGS RESULTING FROM THE USE OF BUILDING INSULATION

After the quantity  $[N(t - t_a)]$  has been determined, locate its position along the X axis of the left hand chart. Move vertically upward to the curve which expresses the proper value of  $(U_u - U_i)$  where  $U_u$  is the coefficient of the standard wall and  $U_i$  the coefficient of the insulated wall. Then move parallel to the X axis to the curve in the right hand chart which shows the cost of heat per 1,000,000 B.t.u. Read the value of heat saved on the X axis of the right hand chart. (See dotted line on chart.)

#### Amortization of Costs

It is reasonable to expect a well-built house to have a useful life of 25 to 30 years. But it cannot be considered good judgment for an architect or engineer to recommend any added capital expenditure beyond that for minimum requirements which cannot be amortized in far less time than this. This is especially true of building insulation.

Most houses are built with some borrowed capital, and in these cases interest and other financing charges absorb a considerable portion of the ultimate cost of the house. The engineer cannot predict with absolute certainty what the fuel costs will be for a 25-year period; nor is it certain that the owner will maintain and operate his heating plant in such a manner as to realize the efficiency which the engineer may use in calculations for estimating the savings. Also, if the owner does not adequately care for his building, the heat losses may be expected to increase with age.

Because of these reasons, I believe that any added investment for the purpose of reducing heat losses should produce sufficient savings to pay for itself in eight years or less. To do this requires an annual fuel saving in dollars which is equal to at least one-sixth or one-fifth of the net cost of the insulation, depending on the interest rate\*.

The use of insulation will also permit the installation of a smaller-sized heating plant, and the cost of insulation may be fairly credited with the saving on the initial cost of the plant in order to determine the net cost of insulation. Considerable care must be exercised in determining the amount to be credited.

A fair price for steam heating systems ranges from \$1.75 to \$2 † per square foot E.D.R. installed, but a reduction in the amount of surface for a given building will not produce a saving at this rate per square foot.

The principal saving will result from a reduction in the amount of heating surface and the size of the boiler. In a house or small building the size and length of pipe will not change materially, and the number of valves and traps will generally be the same. In larger buildings where more than one radiator is installed in a room, a greater saving is possible when the number of radiators may be reduced.

For example, the two-story house of standard construction would require 460 sq. ft. E.D.R. At

\*See Appendix A.  
†See Fig. V, Appendix.



\$1.75/sq. ft. the system would cost \$805. If the house were insulated so as to reduce the size of the plant to 400 sq. ft. E.D.R., it is not correct to assume that the new plant would cost only \$700 (400 x \$1.75). The insulated house would still require the same number of radiators, which means that the same amount of pipe, fittings, valves and traps would be used as for the uninsulated house. The radiators would be smaller and perhaps a boiler one size smaller could be used. The difference in price would then be:

60 sq. ft. at .46 =	\$27.60
1 Boiler Section =	15.00
	\$42.60

This is considerably less than \$105 indicated above. The correct way to determine the possible saving is to have a reliable contractor furnish an estimate for both plants.

The cost of insulating the house to produce the above results would be \$116 for the walls and \$52 for the ceiling or a total of \$168. Deducting the

saving in the cost of the heating system leaves \$125.40 as the net cost of insulation. One-sixth of this is about \$21, or the annual fuel savings in dollars which must result if the investment is to be justified.

The average length of the heating season for the Pittsburgh district is 5088 hours and the average temperature is 41° F. A good grade of coal can be purchased for \$5 per ton, which, in the average domestic plant, equals a cost of about 40 cents per 1,000,000 B.t.u.\* These conditions indicate the following savings:

Walls $U_u - U_i = .246 - .146 = .1$	
Ceilings $U_u - U_i = .62 - .224 = .369$	
Walls . . . . . 1540 x .0056 =	\$ 8.65
Ceilings . . . . . 700 x .015 =	10.50
	Total annual saving . . . . . = \$19.15

This saving does not quite equal the \$21 required above, and it would take an extra year to pay for the insulation. The combination of conditions indicates that some less expensive form of insulation would be more desirable.

## IMPROVEMENT IN HEATING EFFECT RESULTING FROM USE OF INSULATION

In the first part of this paper, the discussion was confined to the justification of the use of insulation solely on the basis of resulting fuel economy. There is, however, another important argument for the use of insulation. The returns from an investment made for this reason are not readily predictable if they are to be measured in dollars, but appear rather in the form of greater satisfaction to the persons occupying the house.

Houghten and McDermott (6) in their recent study of cold walls found that the surface temperature of the walls of a room has a decided effect on the occupants' feeling of comfort. The results of this investigation show how the dry bulb temperature of the air must be increased in order to offset the cooling effect of lower wall temperature. For example, they found that to produce the same feeling of comfort that exists in a room with both walls and air at 70° F., it is necessary to raise the air temperature to 72° F. when the wall temperature falls to 60° F. If the wall temperature falls to 45° F., an air temperature of 79° F. is necessary.

One's feeling of comfort largely depends on the rate of heat emission from the body and the

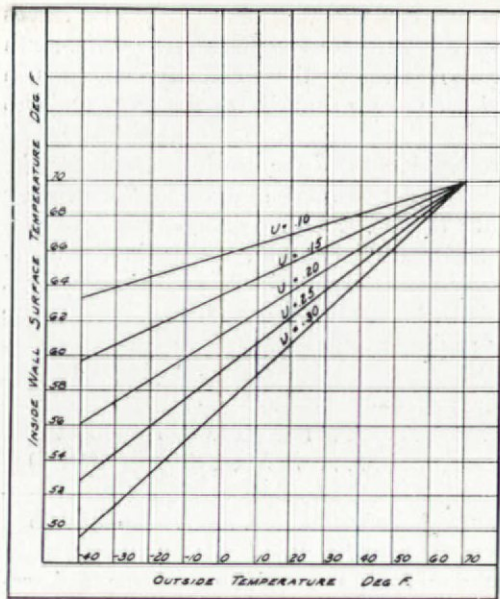
proportions lost by the three processes—radiation, convection, and evaporation. Obviously, if the loss by radiation is raised by increasing the temperature difference between the body and the walls, some of the other losses must be reduced. For winter conditions the easiest to reduce is the convection loss, which may be accomplished by raising the dry bulb temperature of the air.

While the total heat emission may be controlled by this process, there are two decided disadvantages to its use. First, breathing air at temperatures above 75° F. and at the usual low winter relative humidities irritates the nose and throat passages of most persons, which in combination with the cooling effect of cold walls produces a feeling that is far from comfortable. Second, the higher air temperature increases the heat losses above those assumed in the design of the heating plant, which is followed by greater fuel consumption.

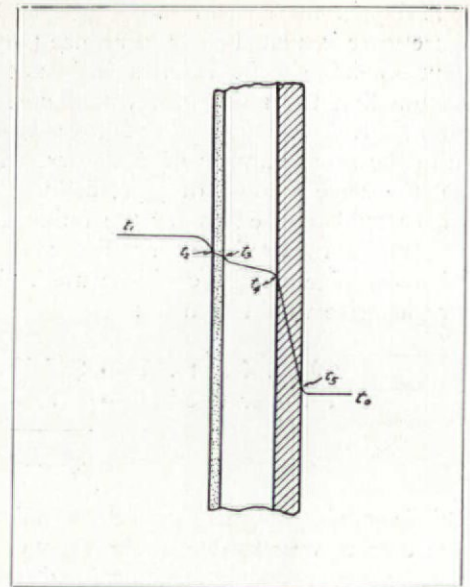
In the opinion of the investigators at the Research Laboratory of the A. S. H. V. E., the average person is not sensitive to a cooling effect until it becomes greater than that produced by a 2° F. drop in dry bulb temperature of the air. Under this consideration the wall temperature may fall to 62° F. while the air temperature is held at 70° F. before the chilling effect will become noticeable.

\*Equation (3).  
(6) *Cold Walls and Their Relation to the Feeling of Warmth*. F. C. Houghten and Paul McDermott. Heating, Piping and Air Conditioning, January 1933.





(LEFT)  
FIGURE III: EFFECT OF OUTSIDE AIR TEMPERATURE ON INSIDE WALL SURFACE TEMPERATURE. Inside Air Temp. — 70° F.  $f_i = 1.65$



(RIGHT)  
FIGURE IV: TEMPERATURE DROP THRU AN INSULATED WALL

The curves in Fig. III show what inside wall surface temperatures may be expected for different values of  $U$  and different outdoor temperatures when the inside dry bulb temperature is kept at 70° F. The chart may be used in selecting the amount of insulating material that should be added to the standard wall construction to prevent extremely low inside surface temperatures.

Increased comfort, resulting from use of insulation, is the principal argument advanced in this part of the discussion for such use. But some additional monetary savings also result from the use of the insulating material. The higher air temperature necessary to offset the low surface temperature of the uninsulated wall represents additional fuel consumption which can be eliminated by the use of insulation. The amount of fuel saved because of reduction in overheating is difficult to predict because of the many variables. For this reason it was not included in the previous cost analysis.

## SUGGESTED PROCEDURE FOR DESIGN OF WALLS

It is extremely important in an analysis of estimated fuel savings that one fact always be kept in mind: all estimates of fuel savings are based on the proposition that the inside temperature shall not exceed a set level during the heating season. This is generally taken as 70° F.

Overheating, whether it be from lack of control or intended to overcome the chilling effect of cold walls, results in extra fuel consumption. This operates to reduce the estimated annual savings in dollars.

The necessity for overheating because of cold walls may be eliminated by designing walls with the proper resistance. By referring to Fig. III the designer may determine what wall resistance

### Wall Construction

The material composing the inside surface should be sensitive to changes in temperature of the inside air. This will permit a comfortable heating effect to be more quickly developed when the building is being heated in the morning\*.

To produce this effect several conditions are essential. The material from which the inside surface is constructed must combine relatively high conductivity with low heat capacity. This will permit a rapid rise in temperature of the entire mass of material. If air space construction is used, the temperature of the air space must be comparatively high in order to reduce the transfer of heat through the inner surface material. This requires that both the outside air and the basement air be excluded from the air space, and that the major part of the resistance be placed toward the outer surface of the wall. Figure IV shows the temperature drop through a wall of this kind. Plaster on metal lath possesses the necessary properties for the inside surface material.

is necessary to prevent an inside surface temperature less than 62° F.† for the expected minimum outside temperature for the locality. From his analysis of current prices (Tables III and IV) he may then select the insulating material which will provide the desired resistance at the least cost.

The cost of heat may be determined by equations (3), (4) or (5), and the estimated annual savings by using the chart in Fig. II. The time required to pay for the investment can then be estimated by considering the prevailing interest rate.\*\*

\*This will also be an advantage, if the building is to be air cooled in summer.

†See page 151.

\*\*See Appendix A.



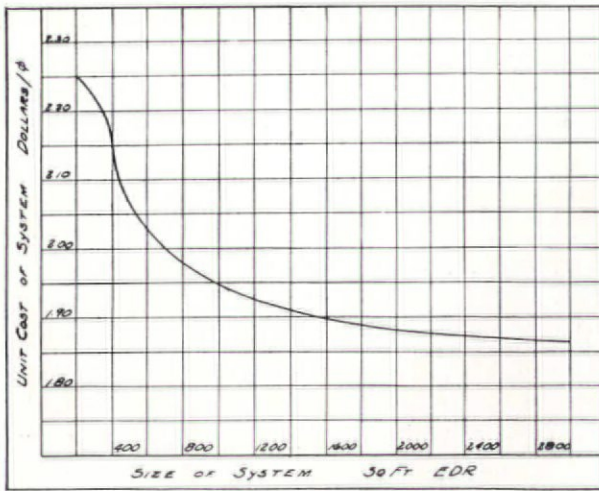


FIGURE V: PROBABLE CURVE OF UNIT PRICES OF TWO-PIPE VAPOR HEATING SYSTEMS

## APPENDIX: SOURCES AND TYPICAL CALCULATIONS

A. The following prices were used in determining the cost of the various types of wall and ceiling construction. They are the prices prevailing in Pittsburgh for the fall and winter of 1932-33. They represent the cost of the material in place and include a fair profit for the contractor. A uniform price rise in the building material market should have but little effect on Tables III and IV.

Material	Selling Price	Total Cost/sq. ft. in Place, Dollars
2x4" Studs.....		.06
3/8" Fir Sheathing.....		.066
Lap Siding.....		.088
Wood Lath.....		.033
3/4" Plaster.....	70 cents/sq. yd.	.078
1/2" Plaster.....	50 cents/sq. yd.	.061
3/8" Plaster Board.....		.06
1/2" Rigid Insulation.....	\$75/M. sq. ft.	.075
as plaster base or sheathing		
3/4" Rigid Insulation.....	\$65/M. sq. ft.	.090
as sheathing		
1/2" Rigid Insulation.....	\$55/M. sq. ft.	.085
between studs		
1/2" Blanket Insulation.....	\$55/M. sq. ft.	.075
between studs		
1" Blanket Insulation.....	\$85/M. sq. ft.	.105
between studs		
1" Flaked Gypsum (18/cu. ft.).....	\$22/ton	.026
2" Flaked Gypsum (18/cu. ft.).....	\$22/ton	.052
3" Flaked Gypsum (18/cu. ft.).....	\$22/ton	.078
3 5/8" Flaked Gypsum (18/cu. ft.).....	\$22/ton	.093
3" Cellular Gypsum.....	\$35/ton	.083
3 5/8" Cellular Gypsum.....	\$35/ton	.099
1" Rock Wool (20 lb./cu. ft.).....		.05
2" Rock Wool.....		.08
3" Rock Wool.....		.12
3 5/8" Rock Wool.....	15 cents/sq. ft. installed	.15
Joists.....		.12
3/8" Pine Flooring.....		.06

## CONCLUSIONS

1. It can be demonstrated that the addition of insulation in some form to buildings having a wall coefficient of .25 or more will pay for itself within a reasonable length of time, i.e., not more than eight years.

a. For localities where the weather conditions are not extremely severe and where fuel prices are low the use of board form insulation in place of some structural part of the house supplies the necessary resistance at lowest first cost.

b. As the length of the heating season increases and the price of fuel increases, it becomes more profitable to use a material which is intended for use as insulation only.

2. Money spent for reducing the heat loss from a house should be applied in the following order:

- Weatherstripping.
- Insulate roof or ceiling.
- Insulate walls.
- Double windows.

3. Heat insulation material is not necessary in floor construction except where the floor extends over an unexcavated area or the lower side of the floor is exposed to the opposite air.

4. Architects should keep an up-to-date record similar to that in Tables III and IV for the prices prevailing in their locality in order that they may quickly compare the cost of various insulating materials.

5. The amount of resistance necessary to maintain a satisfactory inside surface temperature (62° F.) is a satisfactory criterion of the amount of insulation that should be incorporated into a wall.



**B.** The cost of a square foot of wall or ceiling was determined as shown in the following typical calculations:

**No. 1 Standard wall**

2" x 4" Studs in place.....	.06
7/8" Sheathing " ".....	.066
Building Paper " ".....	.01
Lap Siding " ".....	.088
Wood Lath " ".....	.033
3/4" Plaster " ".....	.078
<b>Total.....</b>	<b>.335</b>

**No. 2 Substitute 1/2" Rigid Insulation for Lath**

2" x 4" Studs in place.....	.06
7/8" Sheathing " ".....	.066
Building Paper " ".....	.01
Lap Siding " ".....	.088
1/2" Rigid Insulation " ".....	.075
3/8" Plaster " ".....	.061
<b>Total.....</b>	<b>.360</b>

The difference between the cost of the standard wall and the cost of the insulated wall is taken as the net cost of the insulation.

Wall No. 2.....	.360/sq. ft.
Wall No. 1.....	.335/sq. ft.
<b>Cost of insulation.....</b>	<b>.025/sq. ft.</b>

**SHORTAGE OF ONE-FAMILY HOUSES IN QUITE A FEW CITIES**

The semi-annual survey of the National Association of Real Estate Boards shows a predominating upward trend in real estate activity. The survey tabulates reports from the Association's member boards in 245 cities.

In 33 per cent of the cities of over 500,000 population there is a shortage in single-family dwellings. Not one of the cities in this group showed such a shortage six months ago. Under-supply of one-family houses is indicated in 12 per cent of all the cities. This is 5 per cent more than showed such a situation in February. Many cities report that with any return to normal buying power they would have a dwelling shortage. Where over-supply exists there is often at the same time an actual shortage of new, modern houses, the over-stock being heaviest in large old houses.

The National Industrial Conference Board in its report on the cost of living of wage-earners for June, has the following statement with regard to rents: "Declines in rents were reported from only 18 of the 172 cities from which quotations were received; increases in rents, from 9 cities; and no changes, from the remaining cities. The level of rents in June was 12.4% below that of a year ago, and 31.1% below that of June, 1929."

**C.** The necessary annual saving may be determined from the following equation:

$$R = \frac{Pi}{1 - \frac{1}{(1+i)^n}}$$

where P = the initial investment  
 where i = rate of interest/period.  
 where n = the number of periods in which the debt is to be paid.  
 where R = the periodic payment of principal and interest.

Assume that \$100 has been expended for insulation, the interest rate is 8 per cent per year, and that the debt is to be retired in 8 years with payments made at 6 month intervals.

$$R = \frac{100 \times .04}{1 + \frac{1}{(1 + .04)^{16}}}$$

R = 8.60

The yearly saving would have to amount to \$17.20 per \$100 invested in order to retire the debt in 8 years.

**MATERIAL PRICE MEASURING ROD\***

The prices in this tabulation enable one to visualize at a glance the main trend of the material market. Their significance does not extend beyond that point, and the explanation below should be read carefully.

**F. W. Dodge Corporation Composite Prices as Indicated in Explanation—**

Material	This Month	Month Ago	Year Ago
Portland Cement...	\$2.10	\$2.08	\$2.00
Common Brick....	11.75	11.73	11.85
Structural Steel...	1.60	1.60	1.60
Lumber.....	15.60	15.55	15.67

Prices given in this comparison are composite and do not in all cases refer to one item. For instance, the price of structural steel is the composite of prices of shapes and plates f.o.b. Pittsburgh; the price of lumber is a composite of five items of Southern pine and five items of Douglas fir f.o.b. mill; the price of cement is a composite of prices in fourteen different cities per barrel, carload lots, to contractors; price of brick is composite in fourteen cities per M, delivered on the job.

\*As previously published in *General Building Contractor*.





BEAUTY *and* SERVICE  
*Made Lasting*

The stairway and balcony railings in the Music Hall of Rockefeller Center will keep their silvery lustre. For here, imperishable beauty and enduring service have been made certain through the marvelous qualities of NATIONAL U S S 18-8 Stainless Tubes. These seamless tubes of chromium-nickel alloy steel are made with different surface finishes and in a variety of shapes, diameters, and wall-thicknesses. A surprising range and freedom of ornamental treatment is possible with them.

NATIONAL engineers will gladly cooperate in determining the most effective application of the material to any particular use. Correspondence is invited.

NATIONAL TUBE COMPANY  
PITTSBURGH, PA.

*Visit the exhibits of the Subsidiary Manufacturing Companies of United States Steel Corporation, in the GENERAL EXHIBITS BUILDING—A CENTURY OF PROGRESS EXPOSITION, Chicago.*

ROCKEFELLER CENTER, New York City  
*Builders and Managers:* Todd, Robertson, Todd Engineering Corporation and Todd & Brown, Inc. *Architects:* Reinhard & Hofmeister, Corbett, Harrison & MacMurray; Hood & Fouilhoux. *Mechanical Engineer:* Clyde R. Place. *All of New York City*

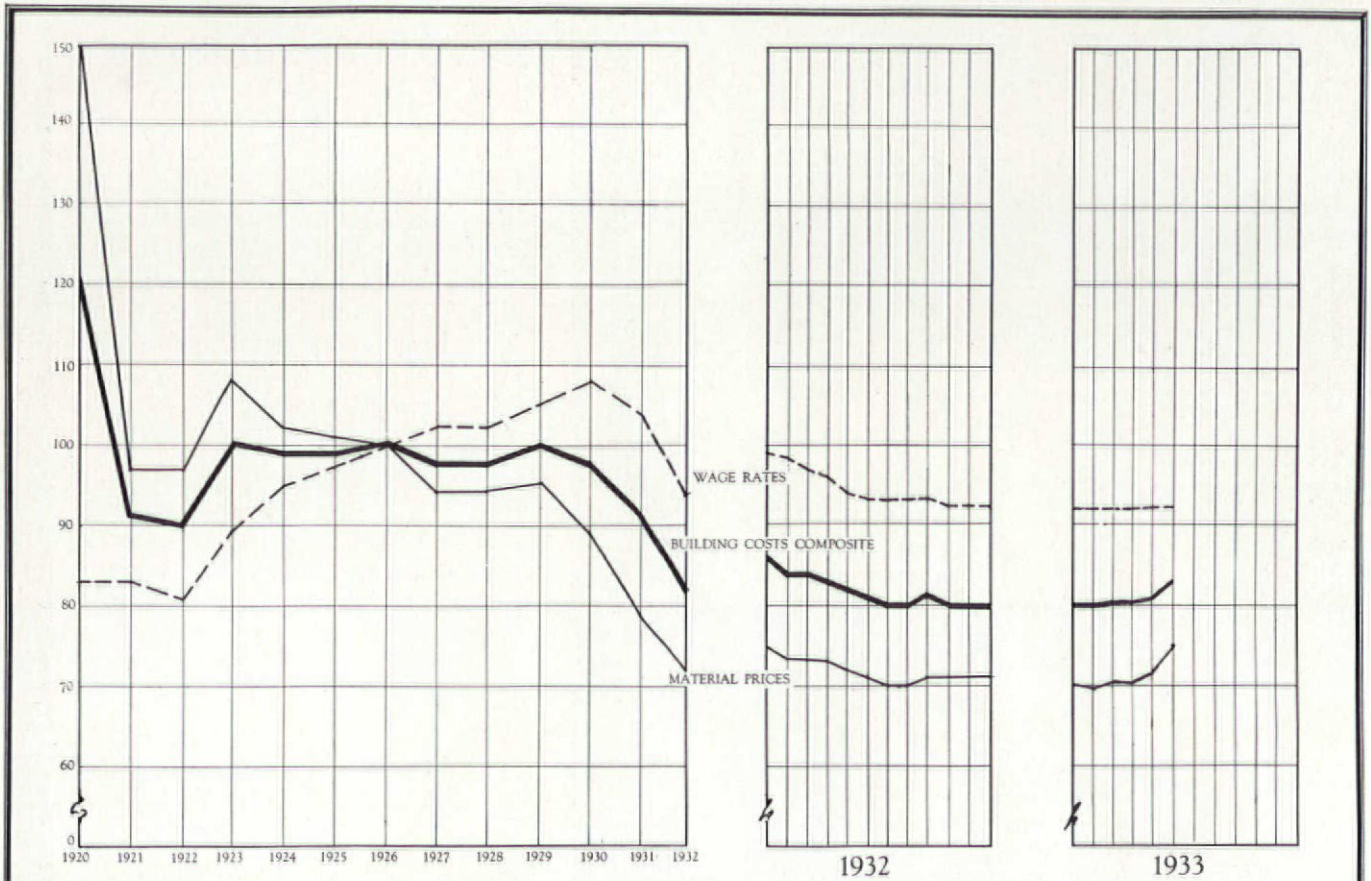
**NATIONAL USS STAINLESS**  
**AND HEAT RESISTING PIPE AND TUBES**

*(U S S Chromium-Nickel Alloy Steels are produced under the licenses of the Chemical Foundation, Inc., New York, and Fried. Krupp A. G. of Germany.)*

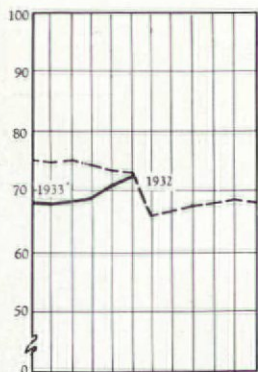


# MATERIAL PRICES, BUILDING WAGE RATES AND BUILDING COSTS COMPARED

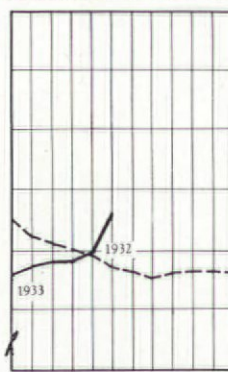
1926 Monthly Average = 100



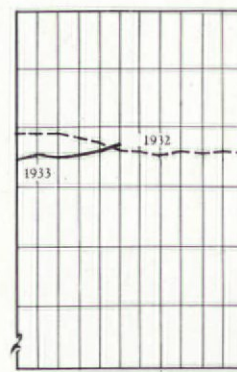
## WHOLESALE PRICE INDEXES



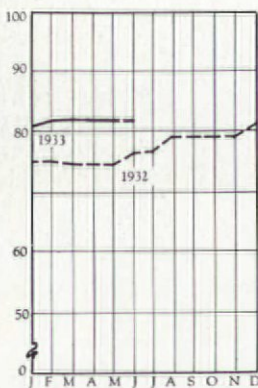
PAINT MATERIALS



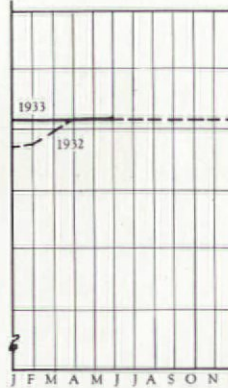
LUMBER



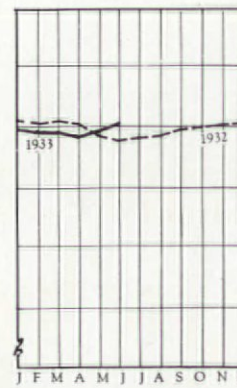
BRICK AND TILE



CEMENT



STEEL



OTHER MATERIALS





## Design and comfort appropriate to its setting

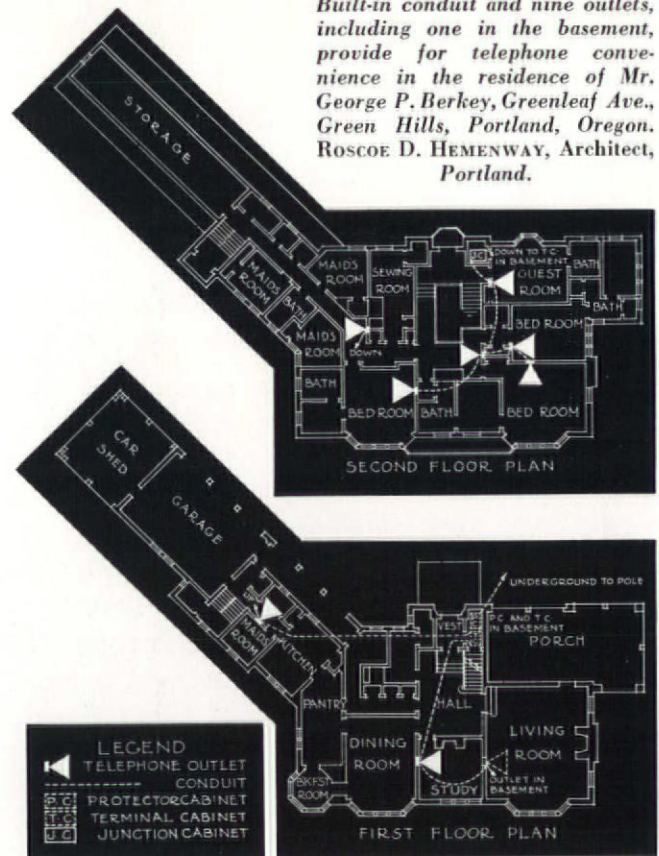
ON THE crest of a wooded hill, beneath tall old trees, architect and owner have fitted this low, rambling home most comfortably into its natural setting. And comfort is the keynote of its interior planning. Everywhere is adequate space. There are separate personal apartments for family and guests — with telephones carefully located for privacy and convenience.

The telephone arrangements were planned and included in the blueprints, with the assistance of the local telephone company. Nine outlets are placed for maximum accessibility. Built-in conduit in walls and floors eliminates unsightly wiring, allows for future additional outlets, and insures against most service interruptions.

Pre-planned telephone convenience is an important factor in the livability of the modern



*Built-in conduit and nine outlets, including one in the basement, provide for telephone convenience in the residence of Mr. George P. Berkey, Greenleaf Ave., Green Hills, Portland, Oregon. ROSCOE D. HEMENWAY, Architect, Portland.*



home. Your local telephone company will gladly help you work out its details in projects of any size or character. Just call the Business Office and ask for "Architects' and Builders' Service." No charge or obligation, of course.



# WAGE SCALES IN THE BUILDING TRADES

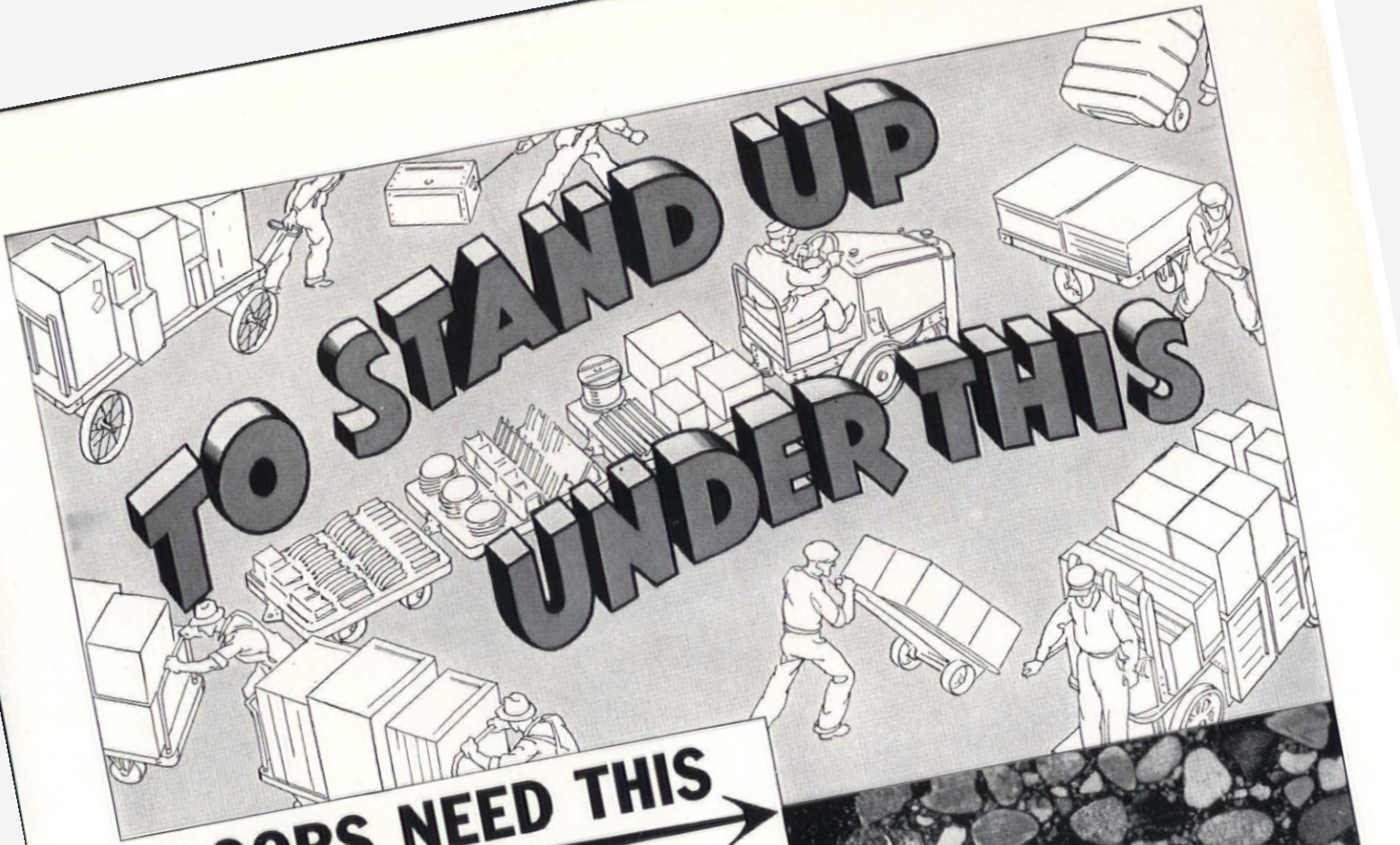
Information Furnished by National Association of Builders Exchanges and Compiled by Division of Statistics and Research,  
F. W. Dodge Corporation, as of July 15, 1933

	Asbestos Workers	Bricklayers	Bricklayers' Tenders	Carpenters	Cement Finishers	Electricians	Hoisting Engineers	Iron Workers —Ornamental	Iron Workers —Structural	Laborers	Lathers	Painters	Plasterers	Plasterers' Tenders	Plumbers	Roofers— Composition	Roofers— Slate & Tile	Sheet Metal Workers	Steamfitters	Stone Masons	Tile Setters	Tile Setters' Helpers	
Akron.....	\$1.00	\$1 25	\$0.45	\$0 70	\$0 70	\$0 75	\$0 70	\$0 60	\$0 60	\$0 40	*\$0 87½	\$0 65	*\$1 00	\$0 62½	\$0 85	\$0 80	\$0 80	\$0 80	\$0 85	*\$1 25	*\$1 25	*\$0 50	
Atlanta.....	1 00	1 40	1 30 45	70	1 25	1 10	1 00	1 85	1 25	25	1 00	75	1 25	45	1 25	80	80	1 00	1 25	1 25	1 25	40	
Baltimore.....	1 00	*1 00	1 00	65	*1 00	*1 00	*1 25	*1 37½	*1 37½	37	*1 25	*90	*1 25	1 00	*1 00	75	75	*1 12½	*1 00	1 00	1 25	72	
Boston.....	1 25	*1 30	70	*1 17½	1 17½	*1 25	1 17½	*1 20	*1 20	70	*1 25	*1 12½	*1 37½	*95	*1 25	*1 17½	*1 05	1 17½	*1 25	*1 30	*1 30	*95	
Buffalo.....	1 12½	*1 12½	1 00	90	*1 00	1 00	1 00	1 12½	1 12½	40	1 00	*1 00	1 00	1 00	1 00	50	1 00	1 00	*1 00	*1 12½	*1 18¾		
Chicago.....	1 37½	*1 37½	*1 31¼	1 31¼	1 31¼	1 31¼	1 31¼	1 25	1 25	.82½	*1 37½	*1 37½	1 37½	1 37½	1 40	1 37½	1 37½	1 37½	1 37½	1 37½	1 37½	1 00	
Cincinnati*	1 15	1 25	70	1 20	1 02½	1 25	1 25	1 25	1 25	.45	1 31¼	1 15	1 37½	.70	1 25	92½	1 07½	1 07½	1 25	1 25	1 00		
Cleveland*	80	1 17½	1 25	.90	.90	1 00	1 00	1 00	1 00	.57½	.85	.80	.99¾	1 37½	1 25	1 15	1 37½	1 12½	1 25	1 25	1 25	80	
Columbus.....	1 00	1 30	62½	89	80	1 00	1 15	1 25	1 25	.40	1 00	.80	1 00	62½	1 00	80	1 00	.80	1 00	75	1 25	50	
Dallas††	10 50	10 00	.50	8 00	10 00	*11 00	10 00	10 00	10 00	.35	10 00	*9 00	*10 00	*50	12 00	8 00	9 00	*10 00	12 00	10 00	*12 00	†75	
Dayton*	1 25	1 30	.80	1 90	1 15	1 55	1 25	1 35	1 35	.35	1 10	1 00	1 25	80	1 15½	85	1 00	1 00	1 15½	1 30	1 50	60	
Denver††	9 00	12 00	6 50	10 00	10 00	10 00	10 00	10 00	10 00	4 00	11 00	*10 00	12 00	7 00	11 00	8 00	8 00	9 00	9 50	12 00	13 00	10 50	
Des Moines.....	1 00	1 25	.65	1 00	1 00	1 00	1 00	1 00	1 00	.55	1 00	1 00	1 25	75	1 25	1 12½	1 12½	1 12½	1 25	1 50	1 25	80	
Detroit.....	1 37½	1 25 max.	.55	80	70	1 25	.60	1 00	1 00	.50	1 00	1 00	1 25	.70	1 00	.70	80	80	1 25	1 25	1 00		
Duluth.....	85	1 00	.35	45	.75	.90	80	.80	90	.45	.85	.75	1 10	1 00	1 00	70	70	75	.95	1 00	1 25	.80	
Erie.....	1 00	1 00	.45	.80	.80	*1 00	.90	.80	90	.35	90	70	1 00	50	1 00	60	90	.90	*1 00	1 00	.80	50	
Grand Rapids.....	65	80	40	.60	.65	.90	.75	80	1 00	.35	80	60	80	40	90	50	.70	70	.90	1 25	1 25	50	
Houston.....	1 00	1 00	1 00	1 00	1 00	95	1 00	1 00	1 00	.50	1 00	.62½	1 00	.75	60	1 00	1 00	1 00	1 00	1 00	1 00	1 00	
Indianapolis.....	1 32½	1 62½	90	1 22½	1 17½	1 50	1 37½	1 45	1 45	.40	1 37½	1 25	1 57½	1 00	1 00	90	1 27½	1 22½	1 50	1 62½	1 50	60	
Kansas City.....	90	1 32½	.80	1 00	1 00	1 00	1 00	1 00	1 00	.60	1 00	1 00	1 06¼	80	1 00	.92½	.92½	1 00	1 00	1 12½	1 25	62½	
Los Angeles††	10 00	8 00	6 00	7 00	8 00	7 00	8 00	9 00	10 00	4 00	10 00	7 00	9 00	6 00	9 00	7 00	7 00	8 00	10 00	8 00	6 00	†75	
Louisville.....	1 12½	1 00	50	80	1 00	1 00	1 00	1 00	1 00	.35	1 12½	.90	1 00	50	1 12½	50	.85	85	1 12½	1 25	1 00	50	
Memphis.....	1 00	1 37½	50	50	50	1 00	.75	75	.75	20	1 00	75	1 25	50	1 25	.40	1 12½	1 12½	*1 25	1 37½	1 25	50	
Milwaukee.....	1 00	1 00	.75	.92½	1 00	1 25	1 00	1 05	1 05	.60	1 00	1 00	1 00	75	1 00	1 00	1 00	92½	1 00	1 00	1 00	75	
Minneapolis.....	1 06¼	1 10	.65	.85	.85	.90	.80	.90	.90	.45	.85	.80	1 10	70	95	70	.70	.80	95	1 10	1 25	.65	
Nashville.....	1 00	1 00	.65	1 00	1 00	1 00	1 00	1 00	1 00	.30	1 00	80	1 00	30	1 00	.65	.65	.65	1 00	90	1 25		
New Haven*	1 20	.50	.80	1 06¼	1 20	1 00	1 27½	1 37½	1 37½	.60	1 27½	1 00	1 20	.60	1 06¼	65	1 50	1 06¼	1 06¼	1 20	1 20		
New Orleans.....	.65	.80	.55	.75	1 00	1 25	1 25	1 25	1 25	.35	.75	1 00	1 25	75	1 25	40	1 15	90	1 25	1 50	1 25	.35	
New York City††	11 20	13 20	8 00	11 20	11 20	13 20	11 20	13 20	11 20	6 60	11 20	11 20	12 00	8 50	12 00	10 28	12 62	11 20	11 20	13 20	11 50	8 50	
Oakland††	6 40	9 00	5 60	7 20	7 20	8 00	9 00	7 20	9 60	5 00	8 00	7 00	8 80	6 00	8 00	6 40	6 40	7 50	9 00	9 00	8 00	5 00	
Oklahoma City††	8 00	8 00	4 00	6 00	8 00	6 00	8 00	8 00	8 00	3 50	.80	8 00	8 00	4 00	8 00	6 00	6 00	8 00		11 00	†62½		
Omaha.....	1 32	1 00	45	80	90	1 00	1 00	.90	90	.35	1 00	.80	1 00	.45	1 00	.72½	87½	87½	1 00	90	1 00	60	
Philadelphia.....	1 00	1 50	1 00	1 05	1 25	1 18½	1 37½	1 37½	1 37½	.40	1 37½	.62½	*1 37½	1 04	1 00	1 2	1 25	1 04	1 25	1 25			
Pittsburgh.....	*1 50	*1 50	*1 25	*1 56¼	1 43¾	*1 37½	1 37½	70	*1 50	*1 18¾	*1 50	1 50	*1 25	*1 50	*1 25	*1 50	*1 31¼	*1 50	*1 40	1 33¼	88		
Portland, Ore ††	8 00	*9 60	7 20	7 20	*7 20	*8 00	9 60	8 80	8 80	7 20	*8 80	7 04	*9 60	*7 20	*8 80	7 20	7 20	*8 00	*8 80	*9 60	8 00	6 40	
Reading.....	70	80	75	75	85	.75				.35	.75	.70	85	.75	90		80	80	.90	.75	90	50	
Richmond.....	60	.65	40	.35	.50	.80		.20	.70	.15	20	1 00	60	60	1 00	.25	.25	1 00	1 00	1 25			
Rochester.....	.91	1 12½	55	*90	*1 12½	*1 15½	.90	70	*1 00	.70	1 00	.55	.90	*90	*1 12½	.55	*1 06¼	*80	*80	.90	*1 06¼	*1 12½	47½
Salt Lake††	6 50	7 20	3 00	62½	.90	1 00	1 00	1 00	1 00	4 00	8 00	7 00	1 25	.80¼	1 00	.90	1 00	1 00	1 00	1 12½	8 00	4 00	
San Antonio††	6 00	6 00	2 00	2 00	3 00	3 00	4 00	1 75	5 00	1 50	4 00	3 00	4 00	2 00	5 00	5 00	4 00	3 00	5 00	3 50	4 00	2 00	
San Francisco.....	6 40	9 00	7 00	7 20	7 20	9 00	9 00	9 00	9 00	5 00	8 00	7 00	8 80	7 50	8 00	8 00	8 00	7 20	8 00	8 00	8 00	5 00	
Seattle††	8 00	9 60	5 28	7 20	7 20	*8 80	8 00	8 00	8 80	4 75	*8 80	*4 50	*9 60	*6 40	*8 80	7 20	7 20	8 00	*8 80	9 60	8 00		
Sioux City.....	90	1 00	.75	.75	1 00	1 00	1 00	.35	.90	.90	.90	1 00	1 00	1 00	1 00	1 00	1 00	.90	1 25	1 00			
St. Louis.....	1 25	1 50	1 00	1 25	1 31¼	1 67½	1 47	1 47	1 47	.87½	1 25	1 25	1 50	1 06¼	1 43¾	1 17½	1 25	1 25	1 43¾	1 25	1 25	.76½	
St. Paul.....	1 18	1 10	.85	.85	.90	.80	.90	.90	.90	.45	.85	.80	1 10	.70	.95	.70	.70	.80	.95	1 10	1 25		
Washington, D C	*1 50	1 75	.75	*1 37½	1 25	*1 65	*1 37½	*1 65	*1 65	.75	*1 62½	*1 37	*1 75	*75	*1 50	*1 37½	*1 37½	*1 50	*1 50	*1 25	*1 50	.75	
Wichita.....	60	1 25	.40	.75	1 00	87½	.75	1 00	1 00	40	1 25	.87½	1 25	.50	1 00	1 00	1 00	1 00	1 12½	1 25	1 00	40	
Youngstown††	*1 37½	12 00	6 80	10 00	9 00	11 00	10 00	12 00	12 00	12 00	10 00	12 00	6 80	11 00	10 20	10 00	10 00	10 00	10 00	10 00	10 00	70	

NOTE — Where two figures are shown they are the minimum and maximum. All figures are for hour rates except as indicated. ††8-hour day. †Rate per hour. \*On 5-day week basis. Asterisk after city indicates all trades on five-day week basis.

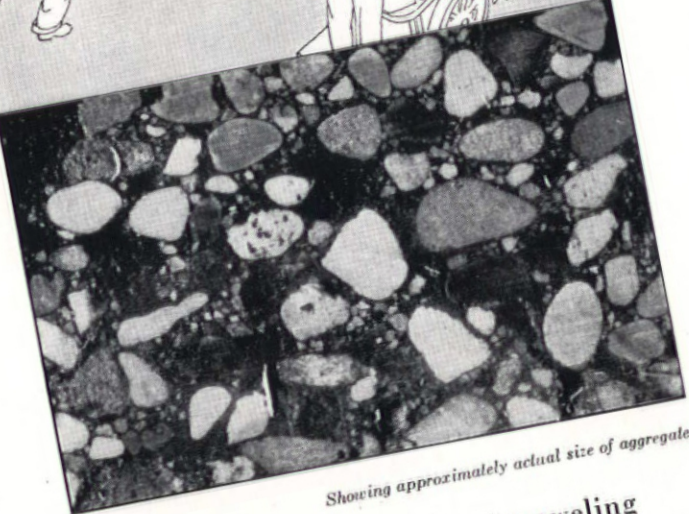
ABOVE DATA ARE WAGE SCALES AND DO NOT NECESSARILY INDICATE ACTUAL WAGE RATES BEING PAID IN THE RESPECTIVE TRADES.





**FLOORS NEED THIS** →

**Coarse Aggregate at the Surface Means Wear Resistance...and Makes Floors Last Longer » »**



*Showing approximately actual size of aggregate*

People expect concrete floors to stand up under any service. They will if you top them properly.

Here is the method—tested and proved on hundreds of floors. (1) Specify a topping mix of two parts coarse aggregate ( $\frac{1}{8}$  to  $\frac{3}{8}$  inch grade) to one part of cement and one part coarse grained sand. (2) Go easy on water—not more than five gallons per sack of cement. (3) Float at once. Then give it a rest of 30 or 40 minutes—until all water

sheen disappears—before steel troweling to the desired smoothness. Cure the floor under a wet surface.

That's all there is to it! Of course, you want good workmanship and adequate supervision. But this method takes no longer—costs no more . . . Requires no hard-to-get materials. Yet it adds immeasurably to the life of a floor . . . We have complete specifications for you. A request will bring a copy. Address your inquiry to Room 38.

**PORTLAND CEMENT ASSOCIATION**  
 33 WEST GRAND AVENUE, CHICAGO ★  
 CONCRETE FOR PERMANENCE



# MANUFACTURERS' ANNOUNCEMENTS

Architects are invited to use the coupon on this page as a convenient means of obtaining manufacturers' publications describing in detail the products and materials mentioned.

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## DEVELOPMENTS IN NETWORK SYSTEMS

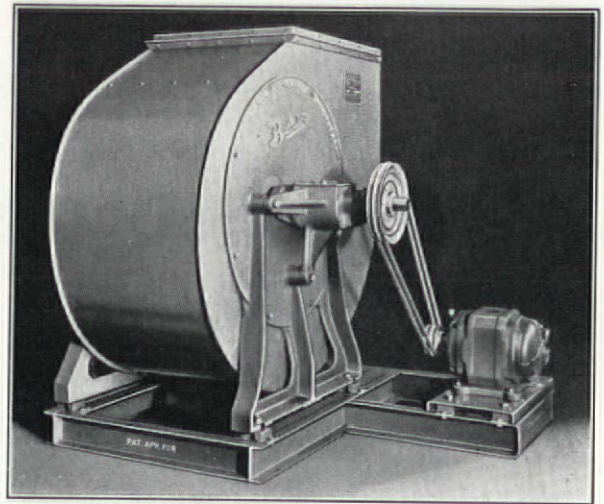
Westinghouse Electric & Manufacturing Company has released a bulletin describing the network system used in the 40-story Gulf Building in Pittsburgh, wherein various advantages were successfully coordinated in a manner to obtain a complete approved secondary network installation. This new development does away with the central switch customarily used to disconnect all current supply. The principle of zoning the building by groups of floors, each zone having its service switch, was adopted. This arrangement permits service in all parts of the building except the zone affected in event of fire. The concentrated light and power loads in the basement and top floor locations are supplied through conventional switchboards, one in the sub-basement and one on the thirty-ninth floor, but these boards are comparatively small, the method of zone service switches having done away with the usual large main switchboard at a substantial saving of space and cost of equipment. Copies of the bulletin giving complete details of system installation are available.

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## STURTEVANT AIR CONDITIONING

Air conditioning, as defined by B. F. Sturtevant Company, is "controlling the atmosphere by means of heating, humidifying, de-humidifying, cooling, cleaning or filtration, and positive circulation of air; plus accurate coordination of these factors, all within the same apparatus or system." The new catalogue, available on request, from which this definition is quoted, describes and illustrates Sturtevant equipment—unit installations to complete, individually designed central systems—which can provide complete air conditioning for any type

or size of building, for comfort conditioning or processing work. For conditions necessitating a central system installation, The Sturtevant Cooling & Air Conditioning Corporation, Division of B. F. Sturtevant Co. offers years of experience entirely in this class of work. Installations handled by the subsidiary as well as by the parent company are described in the new Sturtevant catalogue.



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## "COMFORT CONDITIONER" COOLS AND HEATS

Buffalo Forge Company, Buffalo, N. Y., announces a new unit for room cooling and heating, called the "Comfort Conditioner." While designed chiefly for restaurant and office use, the Comfort Conditioner is also adapted to stores, auditoriums, small theaters, etc., as it provides a comparatively inexpensive method of cooling in warm weather and heating in winter. Two extended surface copper coils are provided—one for steam or hot water for heating, the other for cold water, brine, methyl chloride or freon for cooling. Heating coil can be omitted if desired with reduction in cost of unit. The Comfort Conditioner is made in three sizes, 2, 4, and 6-ton cooling capacity, with B. t. u. range of 24,000 to 72,000 per hour, average temperature drop of 28°. Heating coils have B. t. u. range of from 77,500 to 232,000 per hour. All units are fully inclosed so that no moving parts are visible. Piping connections are all made at the back. Casing is nonsweating, sound-absorbing insulating board, trimmed with metal angles and corners. The fans are quiet, multiblade type driven by V-belt. Outlets are of sound-absorbing design, and the unit is almost silent in operation. The Comfort Conditioner may be used in rooms where people are moving about—it requires only twenty inches headroom.

### To Obtain Further Information

about any products mentioned, indicate the number or name of product and send to THE ARCHITECTURAL RECORD, 119 West 40th Street, New York, N. Y.

.....  
.....  
Name \_\_\_\_\_  
Position \_\_\_\_\_  
Street \_\_\_\_\_  
City and State \_\_\_\_\_





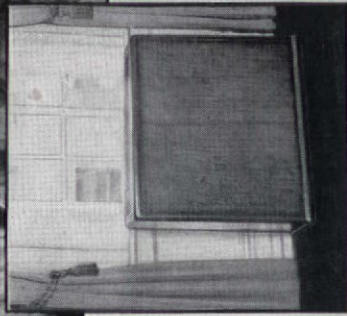
**RESTAURANTS . . . COFFEE SHOPS . . . HOTEL SHELTON**

**STORES . . . HOMES**

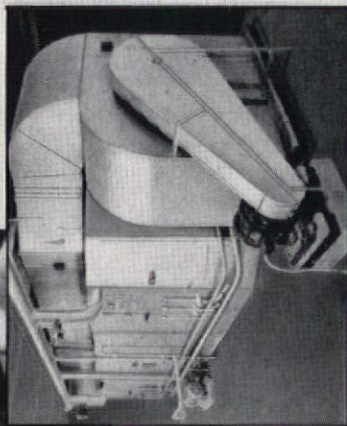
**OFFICES . . . RECREATION ROOMS**

**FACTORIES . . . WAREHOUSES . . . GARAGES**

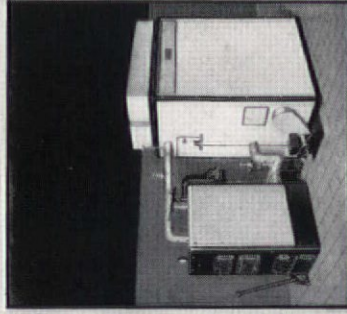
**THEATRES . . . AUDITORIUMS**



Sirocco Conditioner Series "Q" for Business



Central Sirocco Systems for Air Conditioning in Industry



Sirocco Conditioner Series "R" for Homes

# FOR EVERY PROBLEM OF AIR CONDITIONING

Write to the

**American Blower Corporation**

AMERICAN BLOWER CORPORATION, DETROIT, MICHIGAN  
 CANADIAN SIROCCO CO., LIMITED, WINDSOR, ONTARIO  
 BRANCH OFFICES IN ALL PRINCIPAL CITIES

**American Blower**  
(1260)  
 VENTILATING, HEATING, AIR CONDITIONING, DRYING, MECHANICAL DRAFT  
 MANUFACTURERS OF ALL TYPES OF AIR HANDLING EQUIPMENT SINCE 1911

AMERICAN BLOWER CORPORATION, 6000 Russell Street, Detroit, Michigan  
 Please send me:  Bulletin No. 2127 on the Sirocco Conditioner Series "O" for business.  Bulletin No. 3523 on Central Sirocco Systems for industry.  Bulletin No. 1127 on Sirocco Conditioner Series "R" for homes.

Name \_\_\_\_\_ Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_



804

**ANNOUNCING A NEW LINE OF RCA  
VICTOR SOUND SYSTEMS**

The RCA Victor Company, Inc., announces a complete new line of Centralized Sound Equipment embodying latest developments and methods for the pickup—control—amplification—distribution and reproduction of sound. Units of the sound systems are standardized and interchangeable in as far as is practically and economically possible. All standard types of microphones, amplifiers, loudspeakers, etc., are available as standard stock items to cover the requirements under any given set of conditions, whether it be public address, stage program reinforcement, centralized radio, phonograph program reproduction, motion picture sound, or in fact, any type of sound system. The standard centralized sound systems range from small portable or permanent systems to the largest types for indoor or outdoor use. Where stock apparatus cannot satisfactorily meet given requirements, facilities are available for manufacture and design of special equipment on short notice. Through a national organization, the RCA Victor Company is prepared to make surveys of individual installations and submit recommendations without obligation.

805

**SOLKA ROOFING QUESTIONNAIRE**

The Brown Company, manufacturers of Solka, a highly refined cellulose used principally as a felt base for prepared roofings and asphalt shingles, is releasing a bulletin answering 26 commonly asked questions about the product's composition, values, resistance to tearing and weathering and buckling. Typical questions and answers follow: "What do Solka Fibres look like under a magnifying glass?" "Clean, long, wiry with hooked ends; when felted together these fibers are closely interwoven and interlocked." "How much more asphaltic saturation does Solka Base absorb?" "Absorbs 35% to 60% more asphalt than do rag felts."

806

**KEWANEE-BUILT BOILERS**

Embodied in the design and construction of Kewanee Firebox Boilers are these features: substantial riveted joints; heavy stays and braces for flat surfaces; spacious firebox for the best combustion of any kind of fuel; tubes of sufficient size and length to handle flue gases effectively, and these tubes are so arranged in relation to each other and to the boiler shell to promote free circulation of water; proportionate heating surface and grate area; ample steam space to insure dry steam and a water content sufficient to hold the water line steady. Detailed analysis of each of these features is contained in Catalogue 90, just released by the Kewanee Boiler Corporation, copies of which are available on request.

807

**THERMOPANE INSULATION GLASS**

Thermopane, manufactured by Charles D. Haven of Milwaukee, Wisconsin, consists of two layers of glass with a sealed air space between. The space contains dehydrated air. This air is sealed in by special bonding materials, making the product airtight, water-tight and dust proof. It is used in windows and door openings in place of a single sheet of glass to provide heat insulation and reduce or prevent moisture or frost formation. It is also used for sound insulated partitions and doors, refrigerator display cases and for many other purposes. Made from flat glass, of any kind, strength or texture having at least one flat, smooth surface, it can be furnished in rectangles, triangles and diamonds or with curved outline in sizes up to 48". The manufacturer should be consulted before larger sizes are specified. The architect may specify the make or brand of glass if he has a preference. If no brand is specified the manufacturer will use a suitable brand selected A quality window glass.

808

**BURGLAR ALARM CONTROL SWITCH**

The Hart Manufacturing Company of Hartford, Conn., produces a switch, operating on the remote control principle, that is capable of flooding with light an entire house and even adjoining buildings from one central point. It is known as Diamond H, type H, Multi-circuit Remote Control Switch and is capable of controlling as many as forty-eight individual circuits. It is especially valuable as used in residences. The switch is generally located in the owner's bedroom, affording an easily accessible means of protection.

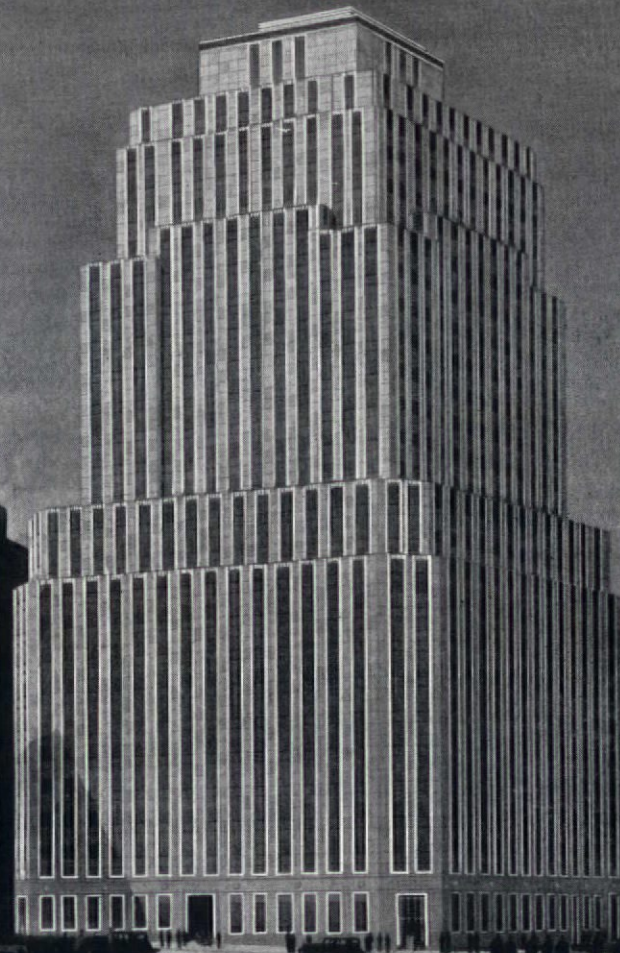
809

**BAR-Z PARTITIONS**

Bar-Z Studs, track for floor and ceiling, shoes for attaching the studs to the track, and reinforcing metal lath are the four simple elements that go into the construction of Bar-Z Partitions, light in weight, fireproof, and low in cost. The studs are full 16-gauge with substantial flanges. They are punched out to form a truss-like design, retaining practically all of the strength of the original channel. These studs provide openings for tying the metal lath on both faces of the partition. A reinforcing diamond mesh lath is used which has solid steel ribs welded to both sides of the lath 7" center to center. By means of these ribs a rigid plastering base is obtained which spans the 24" from stud to stud without the necessity for a thick coat of plaster. The lath, known as Bar-X Lath, is tied to the studs at the point where the reinforcing ribs intersect the studs. Extension shoes provide for irregularities on the floor and ceiling, making cutting and fitting unnecessary. Bar-Z Partitions are an addition to the Steelcrete line of the Consolidated Expanded Metal Companies.



**THE YEAR'S  
OUTSTANDING  
ARCHITECTURAL  
ENDURO  
INSTALLATION**



INSURANCE COMPANY OF NORTH AMERICA BUILDING, NEW YORK • Architects: Shreve, Lamb & Harmon, New York; Engineer: H. G. Balcom; Gen. Contractors: A. L. Hartridge Co., New York; ENDURO Fabricators: United Metal Products Co., Canton, O., The Gorham Co., Providence, R. I., Wm. H. Jackson Co., New York

More than 35,000 pounds of ENDURO, Republic's Perfected Stainless Steel, now gleams from the latest Gotham skyscraper, recently completed—the new Insurance Company of North America Building. ENDURO was selected for this magnificent building by the architects, Shreve, Lamb and Harmon, New York, as a result of their completely satisfactory experience with the same trim on the Empire State Building.

ENDURO trim totalling more than six miles in length will be used for 30 windows on the ground floor, for horizontal decoration in the spandrels, for

trim in main and service entrances, for vertical exterior window trim, for spandrel inserts at the tops of parapets and for pent house decoration.

This new building will be a worthy companion to the Empire State and Chrysler Buildings, both striking examples of the effectiveness of ENDURO for architectural decoration, and both standing tributes to the unchanging beauty of this lifetime stainless metal.

The architectural uses of ENDURO are many. For details, refer to Sweet's Architectural Catalogues, or write for a copy of Booklet No. 217.

Licensed under Chemical  
Foundation Patents Nos.  
1316817 and 1339378.

**ENDURO**  
REPUBLIC'S PERFECTED  
STAINLESS STEEL

CENTRAL ALLOY DIVISION . . MASSILLON, OHIO  
**REPUBLIC STEEL CORPORATION**  
GENERAL OFFICES  YOUNGSTOWN, OHIO





## "WHO HAS USED DURIRON?"

The roster of buildings in which Duriron has played an important part includes structures of all types. Here are just a few:

- TIMES-STAR BUILDING, Cincinnati.**  
*Samuel Hannaford & Sons, architects.*
- MEHARRY MEDICAL COLLEGE, Nashville.**  
*Gordon & Kaelber, Rochester, architects.*
- THEODORE ROOSEVELT JUNIOR HIGH SCHOOL, Peoria, Ill.**  
*Hewitt, Emerson & Gregg, architects.*
- JEFFERSON COUNTY COURT HOUSE, Birmingham, Ala.**  
*Holabird & Root, Chicago, and H. B. Wheelock, Birmingham, architects.*
- NEW PENNSYLVANIA STATION, Philadelphia.**  
*Grabam, Anderson, Probst & White, Chicago, architects.*
- ALLEGHENY GENERAL HOSPITAL, Pittsburgh.**  
*York & Sawyer, architects.*

Duriron has been used because it is cheapest in the long run against attacks by acids and corrosives.

Send us your blueprints and we will make suggestions for the economical use of acid-proof Duriron drain-pipe, exhaust fans and ducts. We are specialists in the problems of corrosion and our advice is yours for the asking.

**THE DURIRON COMPANY, INC.**  
404 North Findlay Street Dayton, Ohio

# DURIRON

## ACID PROOF

# DRAIN PIPE



### 810 ETERNIT TIMBEREX

This ageless, fireproof, asbestos cement shingle, textured to resemble weathered cypress is offered by Eternit, division of The Ruberoid Company. Noteworthy points about the product are: (1) tapered, of built-up construction, giving strength and resiliency, (2) double sets of nail holes, permitting use of irregular shingle courses, (3) available in five colors. Color samples, specifications and detailed descriptive matter will be furnished on request.

### 811 INLAND STEEL

An elaborate and colorful brochure by the Inland Steel Company traces the progress of that company from its inception, about the time of the Columbian Exposition in 1893, to its present power as symbolized by its important contributions to the structural achievements at the current Century of Progress Exposition. Progress that has been made in processing methods is told in a series of striking pictures. How Inland contributes to the operating equipment of a wide variety of industries, how at the same time it adds to the beauty of home and office is pictorially related in an artful, interesting manner.

### 812 INSULATION WITH CORINCO CORKBOARD

Cork Insulation Co., Inc., New York, catalogue, forty pages profusely illustrates and describes the modern methods necessary for effective insulation of cold storage warehouses, breweries, packing houses, ice plants, dairies, ice cream factories, etc., with an adequate, permanent sheet corkboard cover-



# • U N I T Y •



## IN TEMPERATURE CONTROL SYSTEMS

Like an arch built piecemeal, without regard for the whole, an unrelated collection of automatic temperature control devices is useless. Only the **JOHNSON SERVICE COMPANY** offers correlated devices, intelligent application, careful installation—all necessary to successful operation. An automatic temperature system may be truly the "*Brain*" of the heating, ventilating, and air conditioning installation. But it achieves that end only when each device bears the proper relationship to every related part of the system. No haphazard arrangement of

control apparatus can compete with a unified, correlated **JOHNSON SYSTEM**. No other organization can offer such undivided responsibility, such continuity of service.

**JOHNSON** is **Manufacturer, Engineer, Contractor**, not merely selling temperature and humidity control devices, but a contracting organization for complete *Systems, Installation, Service*. **JOHNSON** engineers and mechanics, especially trained, operate from more than 30 branch offices in the U. S. and Canada. Truly a unified organization!

*In the picture above, showing a part of the business district of Columbus, Ohio, the Ohio State Office Building (right), American Insurance Union Citadel (center), and the Columbus City Jail and City Hall (left) all are equipped with the **JOHNSON Dual System of Automatic Temperature Control**.*

**JOHNSON SERVICE COMPANY**

*Main Office and Factory*

**MILWAUKEE, WISCONSIN**

*Branch Offices in All Principal Cities*

**JOHNSON**  
HEAT CONTROL





**For a**  
*thoroughly modern job*  
**SPECIFY**  
**Pittsburgh Steeltex**

● For new construction, remodeling or renovizing, it is, of course, desirable to use strictly up-to-date materials. For interior plaster, the modern way is to use Ribbed Pittsburgh Steeltex Lath. This will assure a decidedly fine plastering job at a cost comparable with ordinary construction. Ribbed Pittsburgh Steeltex Lath insulates, deadens sound, eliminates lath marks, minimizes cracks, and strengthens framework. It is a lifetime investment. Fill out and send in the coupon below for complete information.

**PITTSBURGH STEEL CO.**  
Union Trust Building • Pittsburgh, Penna.

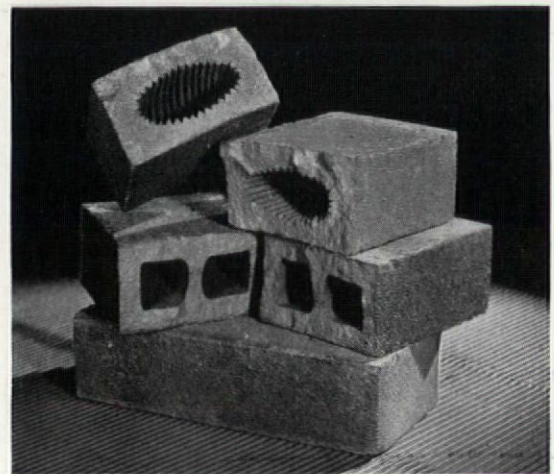
Gentlemen: Please send me information on Pittsburgh Steeltex:

- Interior Lath     Exterior Stucco Base     Partitions  
 Floor Lath     Have your representative call

Name .....

Address .....

ing and cold piping and fittings. Information is given regarding the economic and protective advantages of Corinco Corkboard and how it meets every requirement to obtain maximum insulation efficiency.



813

**NEW AIR-CORE FACE BRICK WITH CLOSED ENDS**

Note: Reprinted from Manufacturers' Announcements, July Architectural Record, containing typographical error in name of manufacturer.

A new face brick, hollow in the center but solid in all six of its surfaces, is offered by the Fiske Brick and Granule Company as a solution to the problem of creating a lighter brick without opening at the end. Unlike cored brick, the new product, according to its originators, offers no complications in handling and requires no increased amount of mortar in laying. The weight is at least 20% less than ordinary solid brick. Freight costs, and hence costs at the job are correspondingly reduced. In laying, the lighter weight is an advantage, reducing fatigue of bricklayers and producing more accurate and rapid work. Tests at Massachusetts Institute of Technology shows that the compressive strength is maintained within limits which fully meet with the requirements of building codes.

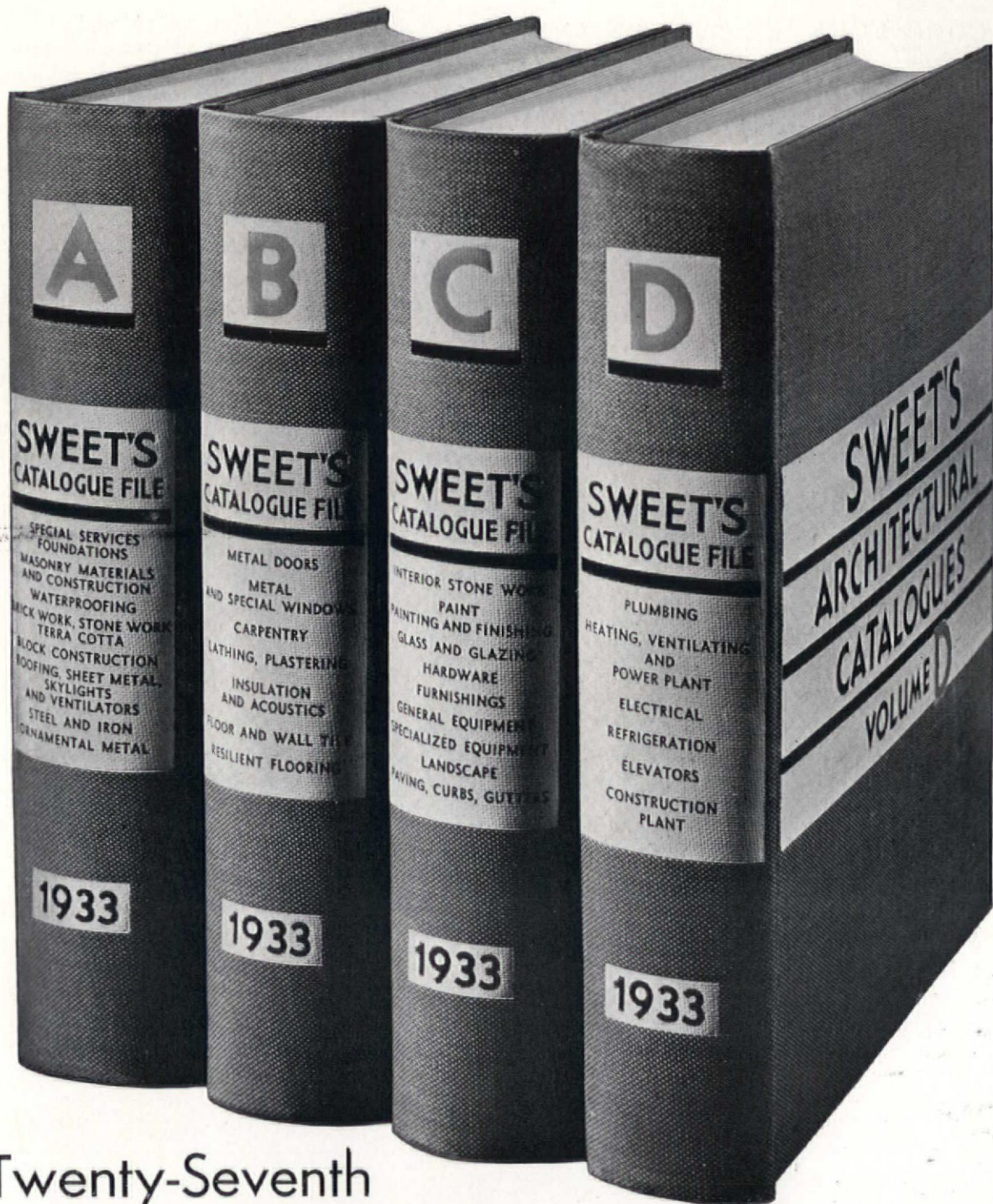
Further information on this product and a list of licensed manufacturers may be obtained from the Fiske Brick and Granule Company, 18 Newbury Street, Boston, or by writing to THE RECORD.

**TRADE ANNOUNCEMENTS**

**FARIES MANUFACTURING COMPANY**

The Faries Manufacturing Company of Decatur, Illinois, recently purchased the assets of the Henkel Edge-Lite Corporation of Chicago, Illinois. The new division will manufacture and market the Edge-Lite bathroom cabinets and mirrors which provide correct bathroom illumination through the proper adjustment of sliding arms on each side of the mirror. Edge-Lites have been used recently not only in new hotels, apartments and residences but also in remodeling and modernizing.





## The Twenty-Seventh

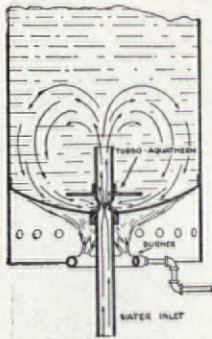
THE current edition of the SWEET'S file is the twenty-seventh in an unbroken annual series. Through good times and bad, through all the ups and downs in the building industry, the cooperative action of hundreds of leading manufacturers and thousands of architects has made it possible for SWEET'S to render this service each year for over a quarter of a century—a splendid example of what can be accomplished when many work together toward a common goal. The twenty-eighth (1934) edition, now being compiled, will be sent into the field under conditions more favorable than any the industry has seen since 1929. Nearly three hundred manufacturers have already placed orders for their catalogues in the new edition and more are doing so daily.

**SWEET'S CATALOGUE SERVICE**  
 Division of F. W. Dodge Corporation, New York



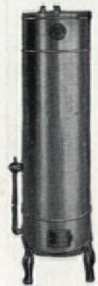
GONE FOREVER—Discolored and Dirty

## HOT WATER with THE NEW DAHLQUIST TURBO



THE TURBO

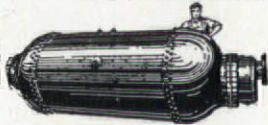
A new Dahlquist patent which prevents mud from accumulating in the boiler and does away with costly burnouts. SAVES GAS



Super Aquatherm Gas Underfire

It is Theodore W. Dahlquist's latest invention doing away with sediment in the water—reduces cost of gas—prevents costly burnouts—and keeps hot water clean. The patented TURBO placed in all Dahlquist boilers uses 50% less gas, and gives a continuous supply of clean, fresh sediment-free hot water day and night.

Write for full particulars. Architects and heating engineers may rely entirely on Dahlquist workmanship and experience, whether for range boilers, automatic storage boilers or heavy pressure boilers.



**DAHLQUIST MFG. COMPANY**

50 WEST 3RD STREET

SO. BOSTON, MASS.

### DRESSER BUYS GAS BOILER COMPANY

S. R. Dresser Manufacturing Company has acquired the facilities and business of the Bryant Heater & Manufacturing Company. The purchase of this Cleveland concern, by the world's oldest builder of pipe couplings, was consummated on June 15. Operation of both companies is now under Dresser direction.

### HART & COOLEY AND TUTTLE & BAILEY COMBINE

Tuttle & Bailey of Brooklyn, New York, manufacturers of cast metal registers and ornamental grilles, and Hart & Cooley of New Britain, Connecticut, manufacturing wrought steel registers and grilles, have consolidated. Several years ago the William Highton & Sons Co. of Nashua, New Hampshire, was absorbed by the Hart & Cooley Company and the business centralized at New Britain. The extensive experiences of each company are now combined to offer to the architectural profession more complete service in manufacture, engineering and design than has ever before been possible.

The contract business will be handled by Tuttle & Bailey, Inc. Executive offices will be located in New Britain, Connecticut. Main sales offices will be continued at Brooklyn, N. Y. and at New Britain. Branch offices will be maintained in Boston, Philadelphia, Chicago and Kansas City with local representatives in other cities. Henceforth all manufacturing for the trade in the United States will be done at the New Britain plant. Manufacturing for Canadian trade will be continued by Tuttle & Bailey Mfg. Co. Ltd. at the Fort Erie North, Ontario plant.

The stock register business, comprising the manufacture of warm air registers and furnace accessories, will be located in the plants of the Hart & Cooley Manufacturing Company at New Britain, Connecticut, Holland, Michigan, and Tuttle & Bailey Mfg. Company, Limited, Fort Erie North, Ontario.

### RECOVERY ADMINISTRATION EXECUTIVES

(Continued from page 77, editorial section)

*Mississippi*—Hugh L. White, of Columbia; Horace Stansell, of Ruleville, and Birney Imes, of Columbus.

*Montana*—James E. Murray, of Butte; Raymond M. Hart, of Billings, and Peter Peterson, of Glasgow.

*Nebraska*—John Latenser, Jr., of Omaha; James E. Lawrence, of Lincoln, and Dan V. Stevens, of Fremont.

*New Hampshire*—Harold Lockwood, of Dartmouth College; Robert C. Murchie, of Concord, and John E. Sullivan of Somersworth.

*New Jersey*—Edward J. Duffy, of Temack; William E. White, of Red Bank, and Walter Kidde, of Montclair.

*New York*—Peter G. Ten Eyck, of Albany; John

(Continued on page 36, advertising section)

# AMERICAN USS STAINLESS AND HEAT RESISTING STEEL SHEETS AND LIGHT PLATES



**For the Building Field**

Insist upon USS STAINLESS Steel Sheets—produced in a number of grades and finishes, and adapted to a wide range of applications. Write for literature and full information on the following alloys—

USS CHROMIUM-NICKEL Steels, *Austenitic*: 18-8; 18-12; 25-12.  
USS CHROMIUM-ALLOY Steels, *Ferritic*: 12; 17; 21.

USS Chromium-Nickel Alloy Steels produced under license of Chemical Foundation, Inc., New York, and Friedl. Krupp A. G. of Germany.

This Company also manufactures high grade Black and Galvanized Sheets, Tin and Terne Plates for all known uses.

**AMERICAN SHEET AND TIN PLATE COMPANY, Pittsburgh, Pa.**

SUBSIDIARY OF UNITED STATES STEEL CORPORATION



## THE CUTLER MAIL CHUTE

TO INSURE standard, dependable equipment installed promptly at moderate cost, the Cutler Mail Chute should be specified by name. If desired, approximate estimates will be furnished in advance.

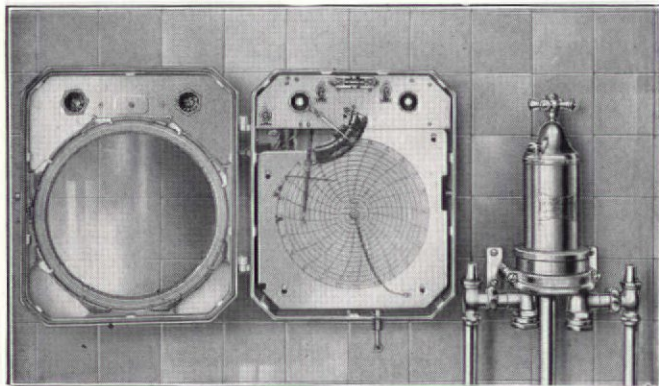
If preferred, a stated sum may be allowed to cover this item.

Full information, details, specifications and estimates on request.

**CUTLER MAILCHUTE CO.**

General Offices and Factory  
ROCHESTER, NEW YORK

## Continuous Flow Baths



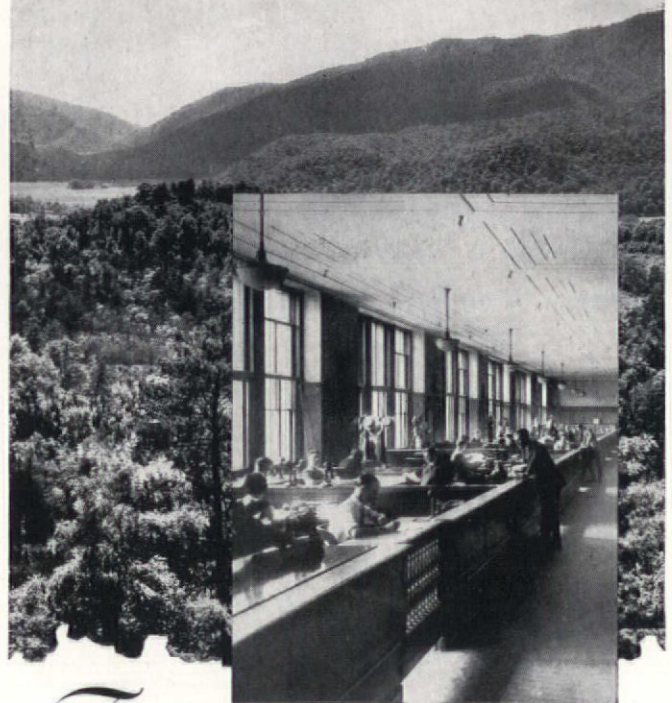
### Leonard HYDRIATRIC Suite

Reg. U. S. Pat. Off.

When you specify a Leonard Hydriatric Suite you have a choice of six designs in cases and twelve different combinations. Write for catalogue F which is Standard A. I. A. File size. In Sweet's Catalogues

Manufactured by  
**LEONARD-ROOKE CO.**  
INCORPORATED  
Providence, Rhode Island

## MADE-TO-ORDER CLIMATE



EWING GALLOWAY

*For single room  
or entire building*

Skyscraper or barbershop . . . railroad train or restaurant . . . office or department store . . . factory or home. For every kind and size of place there is Sturtevant Air Conditioning Equipment . . . exactly suited for the purpose.

In the comprehensive Sturtevant Line there are units for individual rooms and applications as well as apparatus for complete central systems . . . all up-to-the-minute in design and construction, and incorporating the fine engineering for which Sturtevant long has been famed in the field of air conditioning.

Let us put our 20 years of air conditioning experience at your disposal. At your request a Sturtevant Engineer will gladly visit your office . . . to supply full information and to cooperate in any way possible.



Sturtevant Cooling and Air Conditioning Corp., a division of B. F. Sturtevant Co., is organized for engineering and installing complete systems in both the Comfort and Industrial fields.

**B. F. STURTEVANT CO.**  
HYDE PARK · BOSTON, MASSACHUSETTS

*Specialists in complete air conditioning  
with refrigeration since 1912*





EVANS  
"Vanishing  
Door"  
WARDROBE

**CLASSROOM WARDROBES**  
*High in Quality—Low in Cost*

Made to set in a recess flush with the wall. Plaster back, ends and ceiling. No partitions, but with mullions between pairs of doors. Blackboards if required. Five-shelf bookcase instead of clothing equipment at no extra charge when desired.

The "Vanishing Door" hinges on which the doors are hung are made with double pivoted arms and swing the doors back into the wardrobe entirely out of the way. Simple—trouble-proof—and last as long as the building.

Wardrobes are furnished complete in the knock-down, with all woodwork cut to size, and only need to be nailed in place. The hinges are easier to put on than common butt hinges. The entire cost of installation is small.

*We make many other types of school wardrobes, fully illustrated and described in 1933 Sweet's, Volume C, pages 774-781.*

Class X  
equipped with either "Jamb" type (as illustrated) or "Floor" type hinges. This is Class P wardrobe if made with flush doors.

**W. L. EVANS**

WASHINGTON, INDIANA, U. S. A.



**Are You  
Going to  
Washington  
to Start the  
Wheels of Your Industry?**

**W**HETHER it be in connection with conferences on Industrial Codes or the administration of the \$3,300,000,000 Public Works Program, the Willard is your logical headquarters—adjacent to

General Johnson's Office  
Office of Secretary of Interior Ickes  
Home Loan Bank Headquarters  
Farm Loan Board  
Public Works Budget Hdqtrs.  
New Commerce Building  
Office of Postmaster General Farley  
White House Offices  
Railroad Administration



*The*  
**WILLARD HOTEL**

*"The Residence of Presidents"*

14TH AND PENNSYLVANIA AVE.

WASHINGTON, D. C.

H. P. SOMERVILLE, *Managing Director*

**RECOVERY ADMINISTRATION EXECUTIVES**

*(Continued from page 32, advertising column)*

T. Dillon, of Buffalo, and Paul M. Mazur, of New York City.

*Nevada*—Robert A. Allen, of Carson City; William Settlemyer, of Elko, and Ed. Clark, of Las Vegas.

*New Mexico*—J. D. Atwood, of Roswell; Henry G. Coors, of Albuquerque, and Miguel A. Otero, Sr., of Santa Fe.

*North Carolina*—Dr. Herman G. Belty, of Chapel Hill; John Devane, of Fayetteville, and Frank Page, of Raleigh.

*North Dakota*—Henry Holt, of Grand Forks; Stephen J. Doyle, of Fargo, and Thomas Moody, of Williston.

*Ohio*—William A. Stinchcomb, of Cleveland; Rufus Miles, of Columbus, and Henry Bentley, of Cincinnati.

*Oklahoma*—John H. Carlock, of Ardmore; Frank C. Higginbotham, of Norman, and Walter A. Lybrand, of Oklahoma City.

*Oregon*—Bert Haney, of Portland; C. C. Hockley, of Portland, and Robert N. Stanfield, of Baker.

*Pennsylvania*—Joseph C. Trees, of Pittsburgh; A. E. Malmed, of Philadelphia, and J. Hale Stine-man, of Lancaster.

*Rhode Island*—William S. Flynn, of Providence; John Nicholas Brown, of Newport, and William E. Lafond, of Woonsocket.

*South Carolina*—L. P. Slattery, of Greenville; Burnet R. Maybank, of Charleston, and Thomas B. Pearce, of Columbia.

*South Dakota*—Leon P. Wells, of Aberdeen; Herbert E. Hitchcock, of Mitchell, and S. H. Col-lins, of Aberdeen.

*Tennessee*—Colonel Harry S. Berry, of Nash-ville; Roane Waring, of Memphis, and W. Baxter Lee, of Knoxville.

*Texas*—Colonel Ike Ashburn, of Houston; S. A. Goeth, of San Antonio; John Shary, of Mission, and R. M. Kelly, of Long View.

*Utah*—William J. Halloran, of Salt Lake City; Ora Bundy, of Ogden, and Sylvester Q. Cannon, of Salt Lake City.

*Vermont*—Frank H. Duffy, of Rutland; P. E. Sullivan, of St. Albans, and Lee C. Warner, of Bennington.

*Virginia*—B. F. Moomaw, of Roanoke; J. Win-son Johns, of Charlottesville, and Robert B. Preston, of Portsmouth.

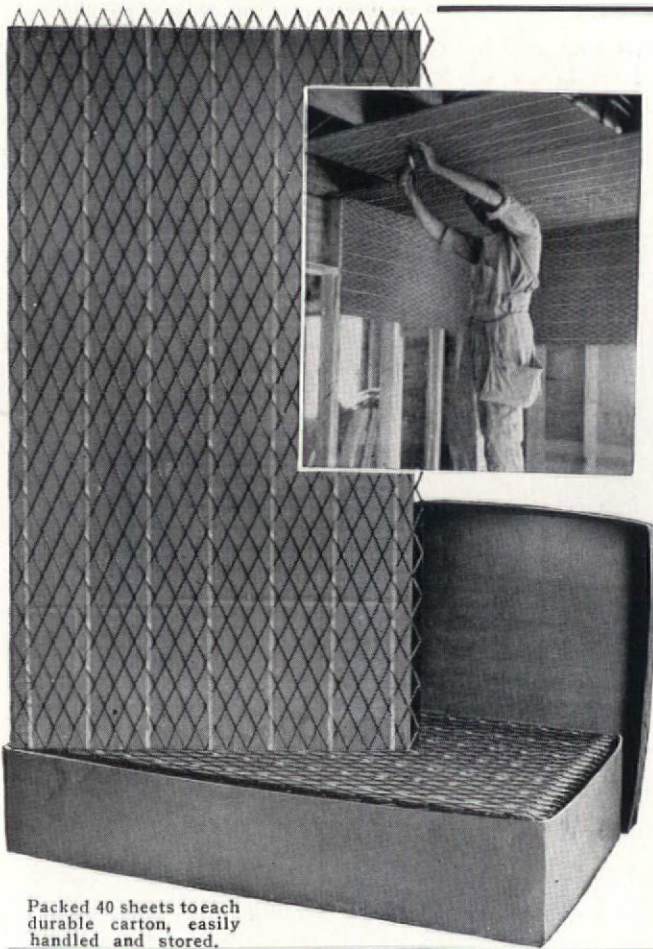
*Washington*—William A. Thompson, of Van-couver; C. W. Greenough, of Spokane, and Roy Lafollette, of Colfax.

*West Virginia*—D. H. Stephenson, of Char-les-ton; William P. Wilson, of Wheeling, and Van A. Bittner, of Fairmount.

*Wisconsin*—Walter G. Caldwell, of Waukesha; William G. Bruce, of Milwaukee, and John Donag-hey, of Madison.

*Wyoming*—Patrick J. O'Connor, of Casper; Leroy E. Laird, of Worland, and John W. Hay, of Rock Springs.





Packed 40 sheets to each durable carton, easily handled and stored.

# TRUSCON INSULMESH

PATENT APPLIED FOR

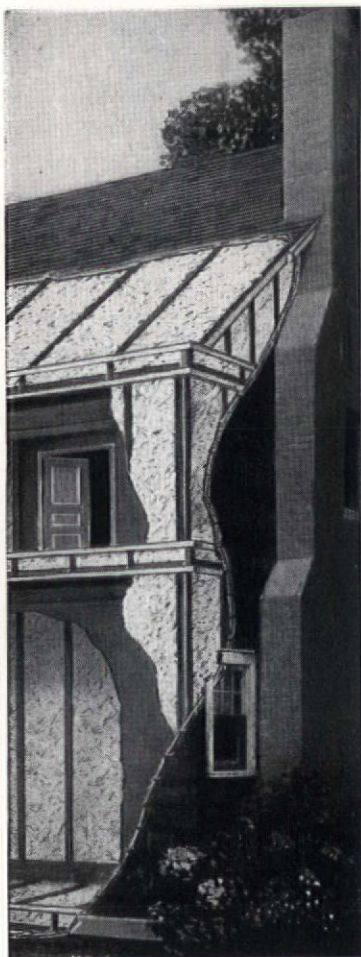
## The Insulating, Reinforcing, Sound Deadening Plaster Base

A remarkable combination of quality and economy—providing positive insulation with all the advantages of metal lath. Insulmesh strongly resists heat, cold and sound, gives steel reinforced strength and assures a beautiful, permanent plaster job without streaks or cracks.

Sheets are rigid, easily handled, easily cut to size and quickly erected. The heavy gauge steel mesh extends beyond one side and one end of each 27" by 48" sheet so that the metal overlaps at all joints. The mesh becomes thoroughly embedded by the scratch coat which goes on rapidly due to the mechanical key formed. Architect, plasterer and owner all benefit for with all its advantages Insulmesh is economical in every detail.

Write for sample and complete data.

TRUSCON STEEL COMPANY, YOUNGSTOWN, OHIO  
Sales Offices in all Principal Cities



## INSULATE WITH U. S. MINERAL WOOL

The effectiveness of an insulating material is gauged by the amount of dead air it holds in suspension.

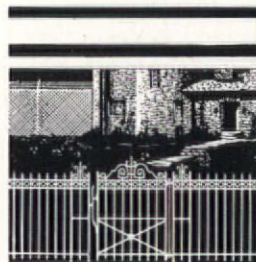
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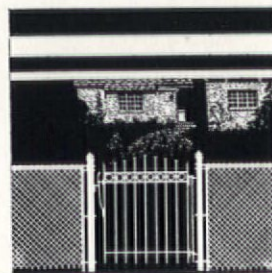
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# Why George Ernest Robinson

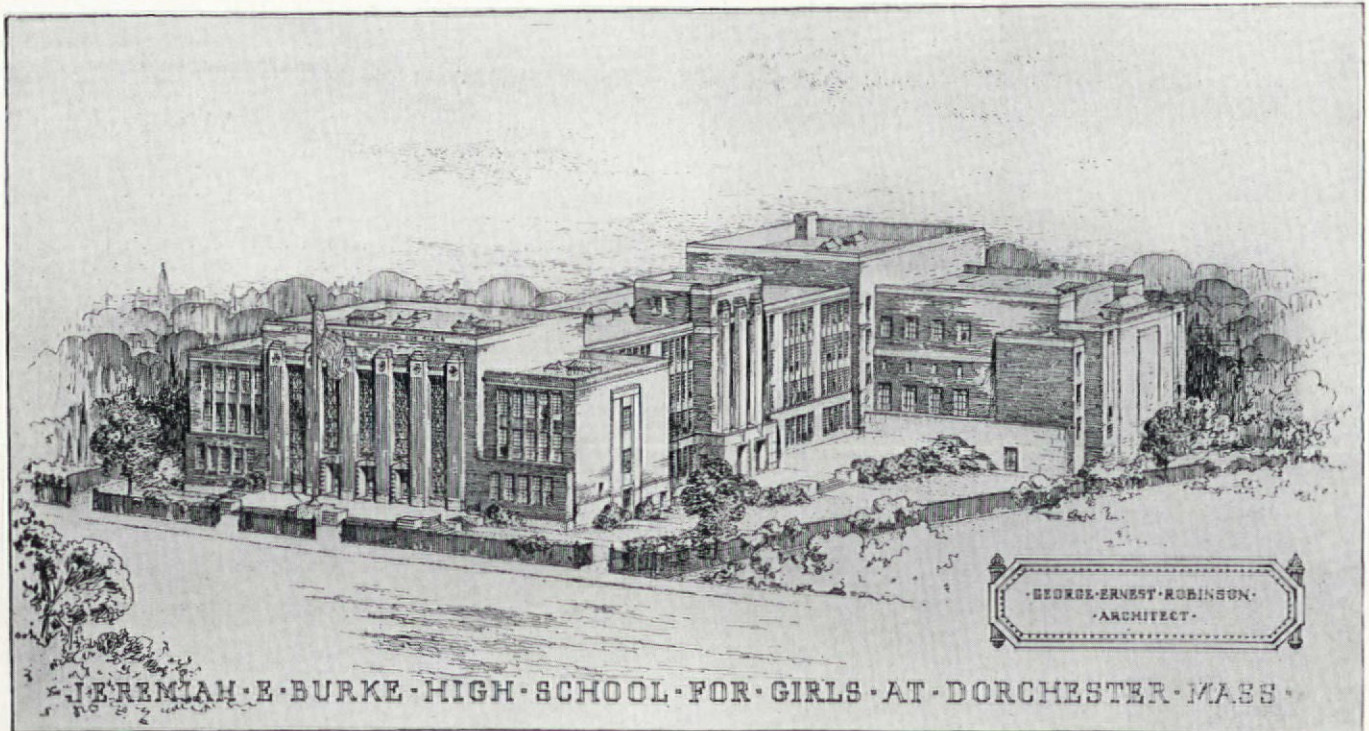
From a \$1,400,000 high school in Dorchester, a seven door fire department station in the City of Boston, to the Leper Asylum Hospital at Lo Ting in Southern China, such is the scope of the architectural practice carried on for more than twenty years by George Ernest Robinson, of Boston.

Two of the many interesting commissions executed by this architect are illustrated on this and the facing page. Mr. Robinson was born in South Boston. He was graduated from the Massachusetts Institute of Technology in 1911, and ever since, with the exception of one winter spent in Canada, he has practiced architecture in his native city. In September 1924, his partnership was concluded, and from that date on, has been doing business under his own name.

Could the work of this single veteran architect be assembled, it would form a large community and include almost every type of structure found in a community. Besides numerous schools and fire stations, Mr. Robinson's work, more than 75 major projects, includes:

Park buildings in Malden, Mass., seven post offices throughout New England, banks in Boston, industrial buildings representative of many industries, churches, theatres, hospitals, hotels, apartment houses, residences, garages, offices and stores, a police station, a bakery and an electric light station.

Dodge Report Service is proud to have the good will and friendship of George Ernest Robinson. We are glad of opportunity to recognize this distinguished architect, and we thank him for his statement which appears on the opposite page.



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The Dodge reporters who have called upon me have always been gentlemanly, courteous and well drilled. We are glad to cooperate with them because we feel it is necessary for all of us to work together in the interests of building. I hope your efforts to make the building industry better will go forward for a long time.

Yours very sincerely

*Geo. Ernest Robinson*

GER:MPK

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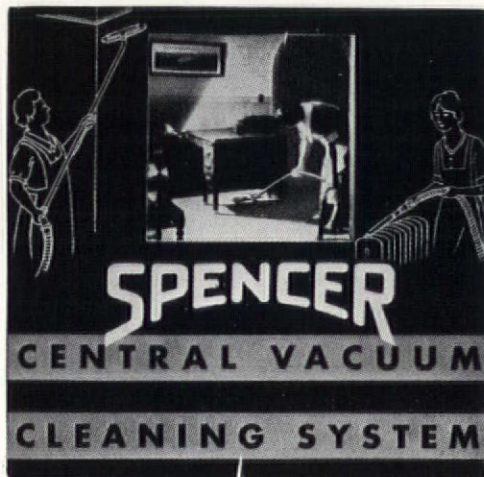
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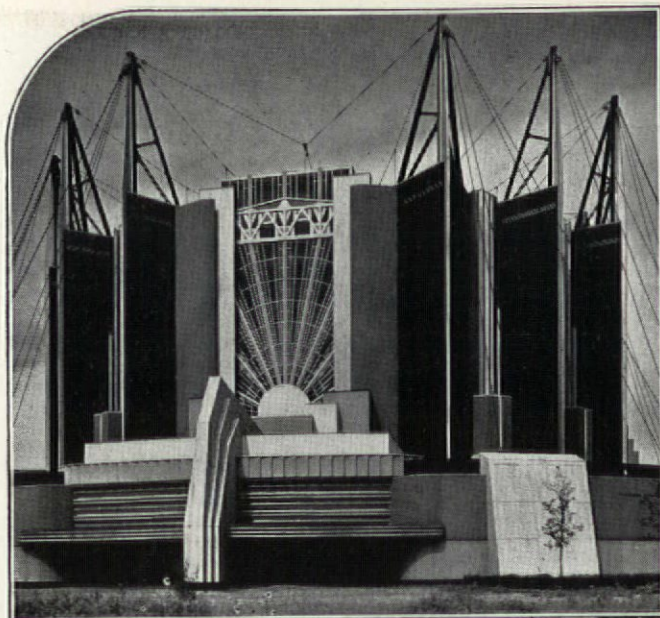
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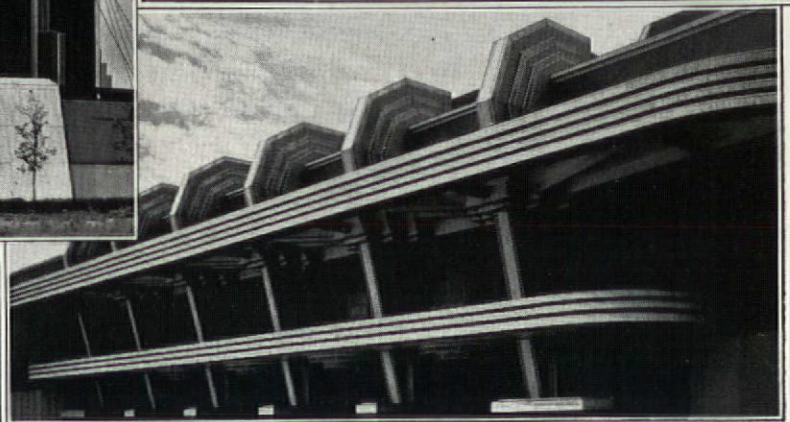






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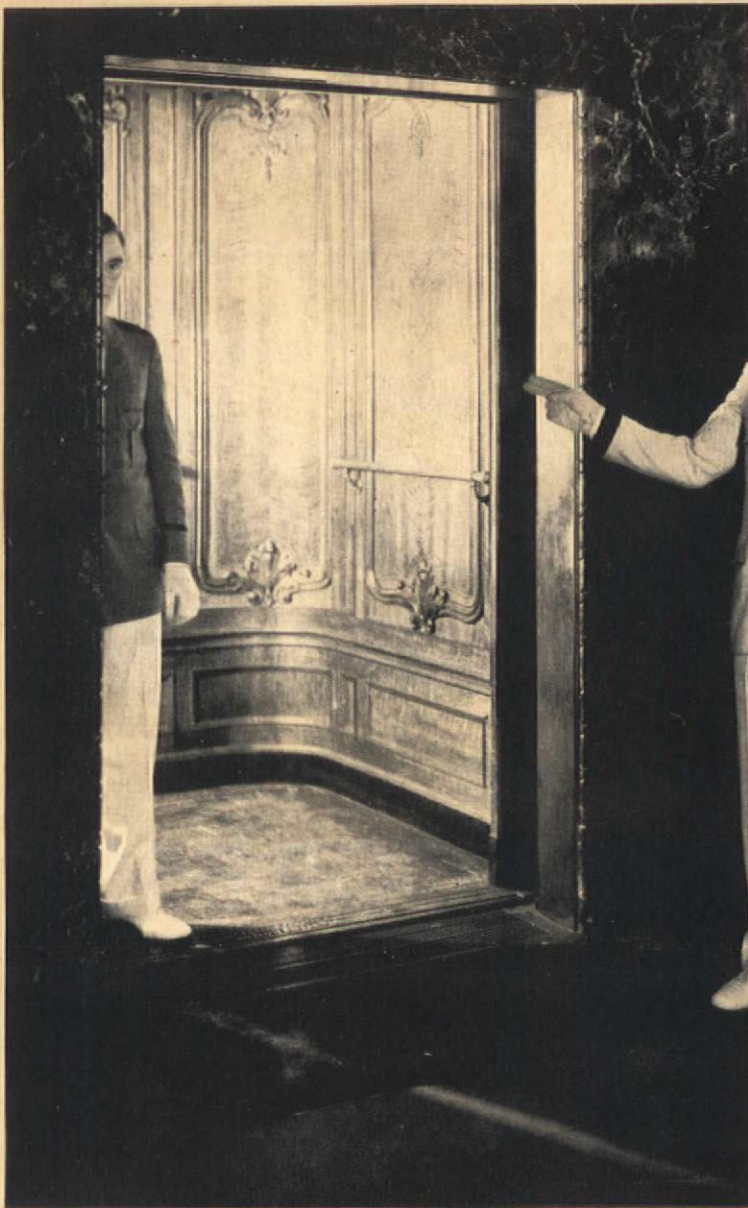
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