

ARCHITECTURAL RECORD

COMBINED WITH AMERICAN ARCHITECT AND ARCHITECTURE

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MARCH 1940

NUMBER 3

BUILDING NEWS

43

NEW BUILDINGS

44-59

Hotel and Offices in Florida	44-48
Beach Club in Rhode Island	49-52
Office Building in Texas	53-56
Specialty Shop in New York	57-59

NEW EQUIPMENT

60

NEW HOUSES (for occasional occupancy)

61-80

Lake Front Home in Oregon	62, 63
California Weekend Home	64, 65
Guest House, New York	66, 67
Ski Lodge in High Sierras	68, 69
House on the Potomac River	70, 71
Hillside Studio Near Los Angeles	72, 73
"Tropotype" Design in Florida	74
Country Lodge in Pennsylvania	75
Guest House in Palm Springs	76, 77
Winter Sports Lodge in Vermont	78-80

DESIGN TRENDS

81

A SURVEY: The Status of Recent Architectural Graduates	82-87
TO CIVILIZE IS TO BUILD: The New Frontiers of Architecture	88, 89
NOTES ON NEW BOOKS	90, 91
TRENDS IN BUILDING COSTS	92

BUILDING TYPES

93

STANDARDS FOR HOUSES

94-107

Standards for House Design	94-97
Standards for Lighting	98, 99
Standards for Heating and Ventilating	100, 101
Standards for Sound Control	102, 103
Standards for Sanitation	104, 105
Standards for Circulation	106, 107

ILLUSTRATED CASE STUDIES

103-120

(Index to Advertisements . . . Page 176)

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BEHIND THE RECORD

IF IT'S HOUSES you're interested in, have a good look at this issue. For pastime as well as profit, we recommend first the portfolio (pp. 61-80) on houses for *occasional occupancy*—"weekend houses" to the gentleman from Kentucky who likes to poke fun at our penchant for precise terms. From Oregon to Vermont, from Florida to California, we've selected ideaproving examples that will do your heart and hand good.

And then—if you'll excuse our sounding like a national park guide—let's turn to this month's *Building Types* section (pp. 93-120). As you know, economists, bankers, manufacturers, etc., are all predicting an accelerating pace for residential building. If the forecast presupposes constantly improved quality and ever-lower prices, we concur. It is our election-year platform that too many houses are going up without benefit of architect, and that this is a menace to future volume. Houses as a commodity, as a product, must compete with other products. This they will not do unless their *standards of performance* are constantly improved. And because attendant problems imply an increasingly scientific approach, we are convinced that architects are best qualified to meet this essential requirement.

Saying which, we refer you to the

(Continued on page 7)

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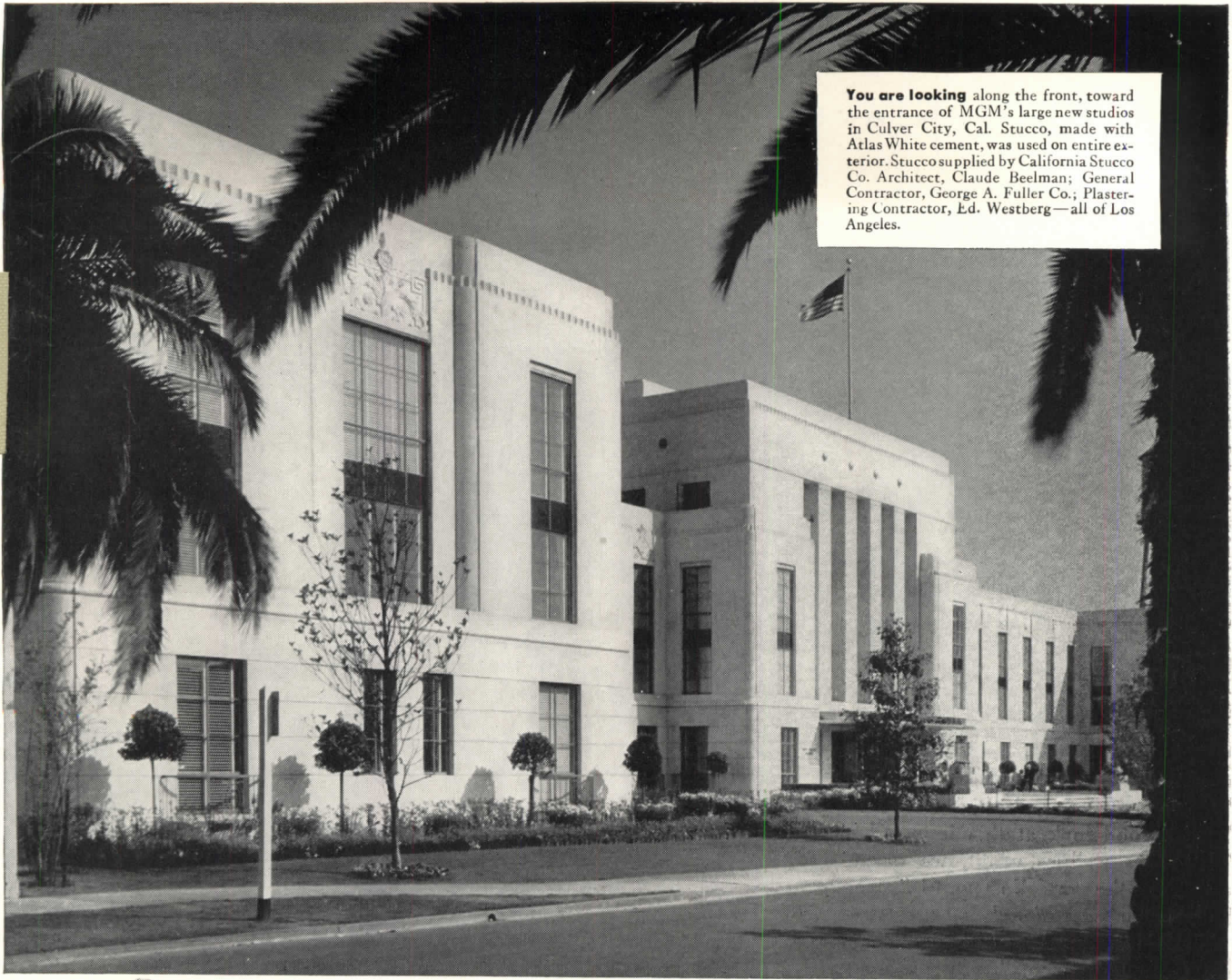
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BEHIND THE RECORD (continued)

forementioned study, wherein performance standards—compiled from authoritative sources—are presented for circulation, for heating and ventilating, for sound control, for lighting, etc. Pull no punches when you write in to tell us what you think of them. . . .

We hope that during this outburst readers not especially interested in houses haven't taken a walk, for there is on display in the *Building News* section an ingeniously combined *hotel and office building* in Miami . . . a *beach club* in Rhode Island (product of limited competition under AIA auspices) . . . an interesting *retail shop* in New York . . . and an uptown *office building* in Houston that attracts downtown clients. What's more, our survey to smoke out the frank opinions of recent architectural graduates is reported in full on pages 81-87, and Thomas S. Holden's much publicized talk before the St. Louis Chapter of the AIA and the St. Louis Engineers' Club is abstracted on pages 88 and 89.

Preview of April

VOCATIONAL SCHOOLS will be the *Building Types* feature next month. Here is an increasingly important type that presents many problems peculiar to itself. From authorities in the field we have assembled time-saving data on trends in industrial education . . . on future requirements . . . on relationships to the community . . . on performance standards for lighting, heating, sound control, communication, visual instruction (blackboards, motion pictures, etc.), instruction areas, etc. Included also, of course, will be illustrated case studies on some recent projects.

In *Building News* in April we, as usual, cover a broad front. Among other features will be the University of Southern California's new *College of Architecture and Fine Arts* . . . a striking new *fire station* in Miami . . . an interesting *retail shop* for one of the nation's largest music stores (e.g., a 77,000-record library was part of the problem) . . . and the "home office" building of the Seattle diocese.

Also in this section will be *New Houses and New House Units*, with the house department focusing on examples requiring three family- or owner-bedrooms, and the units concentrating on arrangements for—don't yawn!—*lounging*. The three-bedroom classification is another step in our deter-

mination to pre-file for readers as much house material as possible. And, as the old signs read: If you like the idea, tell others; if you don't, tell us.

The fillip to the April number will be a *Design Trends* study on *Steel*. It's required reading for those who take science calmly, and information preferred for those who thrive on it.

Public relations

UNLESS a magazine's correspondence no longer foreshadows developments, *public relations* will be topic number one when two or more architects get together in 1940. Especially do we expect this subject to come to the fore at AIA's meeting in May.

Concerted action cannot be taken too soon for us. Somehow, someday, the public must be made to realize that today's buildings, as a consequence of modern technology, require *more than ever* the services of competent architects.

From information at hand it appears that Pennsylvania is taking the lead in public relations activity. The Northwestern Pennsylvania Chapter of AIA is preparing to edit the building page of a forthcoming Sunday edition of the *Erie Dispatch-Herald*. And recently, at a joint meeting of the Philadelphia Chapter AIA and the T-Square Club, a Committee on Public Informa-

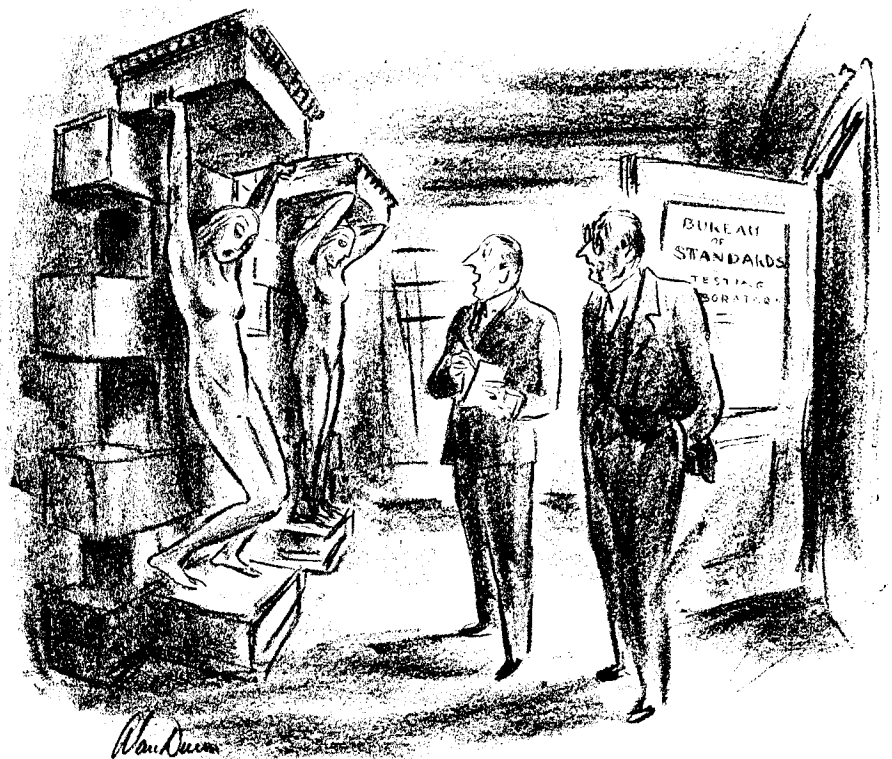
tion, headed by *D. Knickerbacker Boyd*, presented an informative exhibit entitled "How Architects Can Be Publicized".

If any clients of this department know of more commendable current activities, and will so inform us, we'll eat crow next month. Or if you have some constructive suggestions to offer, we've the white space to handle them.

Corrections

THE TROUBLES we have! Both the Seattle Chamber of Commerce and the *Seattle Post-Intelligencer* aided us in identifying the architects who designed the buildings shown in our January poll of "lay" voters (pp. 12,14). Yet some errors crept in. To cover them, we correct in full the credit lines involved: for the 146th Field Artillery, *A. M. Young* and *F. A. Naramore*; for the Chemistry Building, University of Washington, *F. A. Naramore* and *Grainger & Thomas*; and for the Washington Mutual Savings Bank, *C. A. Merriam*. Not illustrated but mentioned was the University of Washington Women's Dormitory, and it should have been credited: *D. J. Myers, J. Graham, Bebb & Gould*.

Also in January, page 73, in the fifteenth line from the end of column one, the designation "41 db" should have been "29 db".



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—Drawn for the RECORD by Alan Dunn

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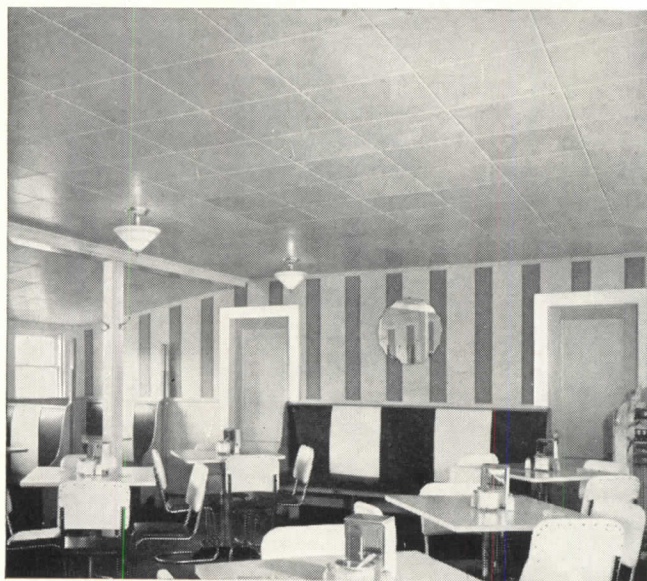
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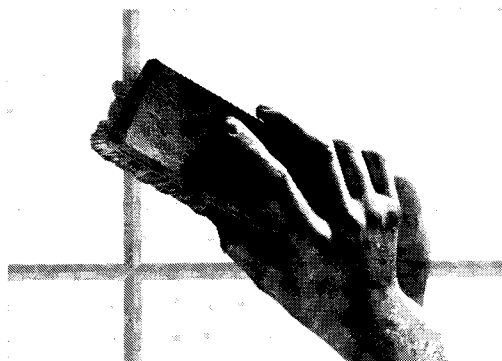
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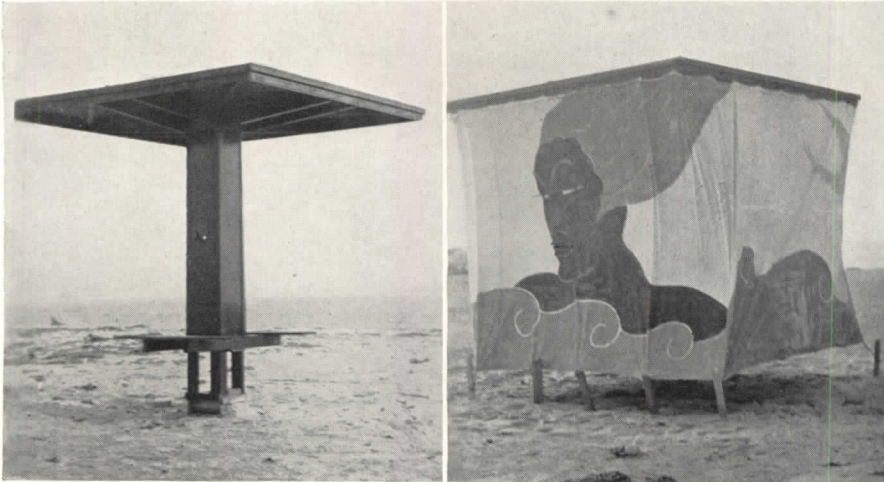


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MARCH 1940

WITH RECORD READERS



As a possible bit of documentation to the study presented in this issue (pp. 82-87) on what young architects are doing with their training, the RECORD offers this bath house designed last summer by Knight Dexter Robinson, who is now completing his postgraduate thesis at Harvard. Picture at left shows roof and central support, sunk deep in sand and constructed so that high water will pass through its base. At right, the curtain stored under padlock in a locker included in the support, is hung up handily as desired. The unit was prefabricated in two sections and bolted together on the site; framework is painted bright red.

SURVEY OF U. S. HOUSING TO ACCOMPANY POPULATION CENSUS

While the RECORD this month looks forward to new frontiers of architecture in general (pp. 88, 89), the U. S. Government prepares to establish the nature and needs of the work lying before American architects in the field of housing.

BENEATH THE steadily growing interest of the building field—and indeed, the entire American people—in housing, there has run an increasing demand for precise information on the scope of the housing need. Expressed in quantitative terms: *How many* dwelling units do we actually have and how many do we need? Expressed in qualitative terms: *What sort* of houses do we actually have and what sort do we need?

There have been many estimates—varying from the AIA's of 10,000,000 new houses for the next 50 years (AR 10/39, p. 9) to that of the CIO of 16,000,000 in the next decade (Amalgamated Journal, 2/11/39, p. 4). And there has been at least one survey—the now-famous Real Property Inventory of sixty cities.

Valuable as these and many other parallel efforts have been, they have lacked a most essential reference frame—an accurate national inventory of existing housing facilities. It is in this light that the forthcoming Census of Housing assumes extraordinary significance—for the architect and for

everyone else in the building field.

The 120,000 enumerators who will visit every American home during April in connection with the Decennial Census of Population will, at the same time they are gathering facts about the people themselves, take inventory of the places in which they live. Decision to conduct this long-needed inventory was made by Congress last year, but appropriation of funds for the purpose was deferred until the 1940 session. Final determination of the inquiry's scope, therefore, depends on the action at the present session of Congress.

Preliminary plans of the Census Bureau, formulated after many conferences with representatives of all sectors of the housing field—technical, economic, and social—call for a schedule of 31 questions, which fall into four main groups. Although the entire schedule is either implicitly or explicitly important to the building designer, architects will probably find most significant the tabulated answers to queries on physical characteristics of the structures in which America's

estimated 35 million dwelling units are located. Questions in this group concern:

Type of structure—one-family detached, one-family attached, two-family side-by-side, other two-family, three-or-more family structures, and structures with business (number of dwelling units in each).

Structure as originally built—residential structure with same number of dwelling units; with different number of dwelling units; nonresidential structure.

Exterior material: wood, brick, stucco, other.

Is this structure in need of major repairs? Yes or no.

Year structure was originally built.

Located on a farm? Yes or No.

When the replies to these questions are tabulated, they will provide architects with illuminating material for study of many important problems. What, for example, is the relationship between exterior material and need of major repairs? Or, what connection exists between year structure was originally built and need of major repairs?

A second group of questions relates to characteristics of dwelling units, which are of obvious significance to architects and others in the building field. Inquiries cover:

Number of rooms.

Water supply: in dwelling unit—running water, hand pump; within 50 ft. of dwelling unit—running water, other.

Toilet facilities: in structure—flush toilet for exclusive use, shared flush toilet, other; outside toilet or privy.

Bathtub or shower with running water in structure—for exclusive use; shared with other households.

Lighting equipment: electric, gas, kerosene or gasoline, other.

Estimated rental value of owner-occupied or vacant nonfarm dwelling.

Occupancy status of vacant dwelling: for

(Continued on page 12)

CALENDAR OF EVENTS

- **March 15**—Closing date reception of applications for 1940 Rotch Traveling Scholarship. Application blanks and information can be obtained from William Emerson, Secretary, 107 Massachusetts Ave., Boston, Mass.
- **May 1-3**—Spring meeting, American Society of Mechanical Engineers, Hotel Bancroft, Worcester, Mass.
- **May 4-12**—1940 National House & Garden Exposition, Coliseum, Chicago, Illinois.
- **June 27**—Closing date, reception of applications for 1940 Scholarship in Architecture, Syracuse University. Information can be obtained from Dean H. L. Butler, College of Fine Arts, Syracuse, N. Y.

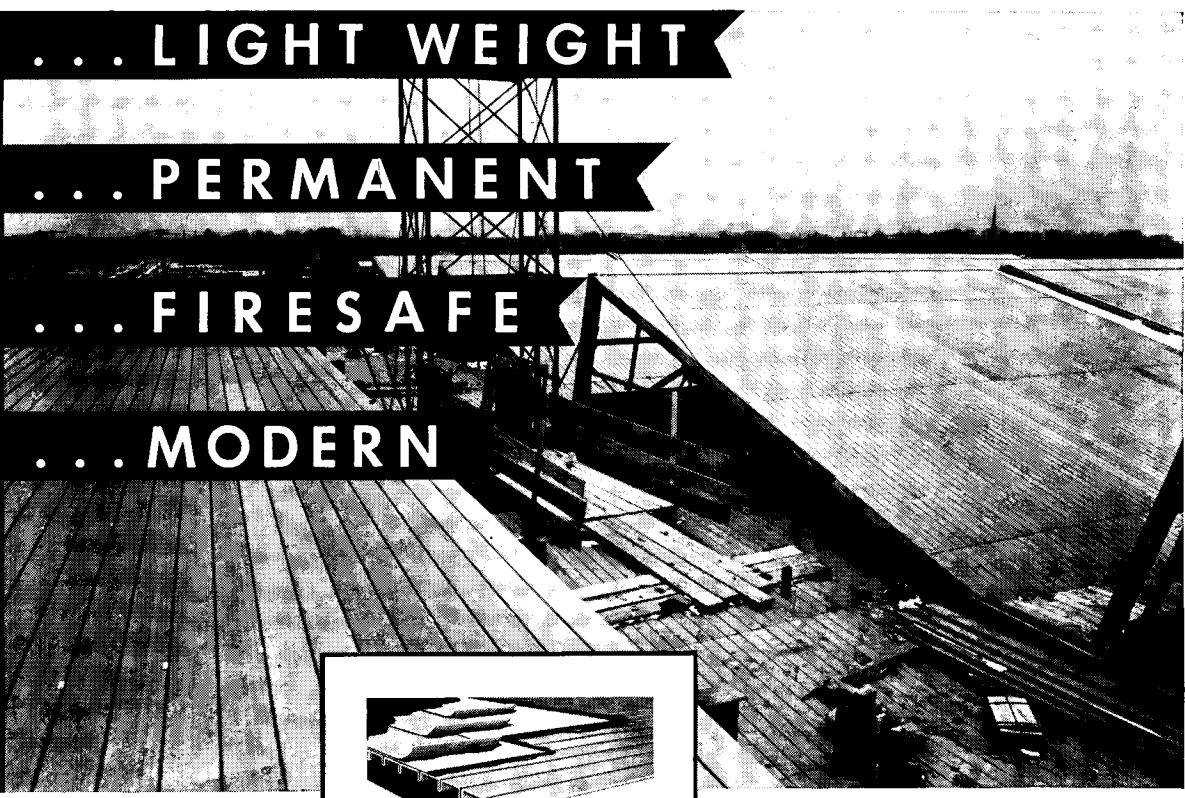
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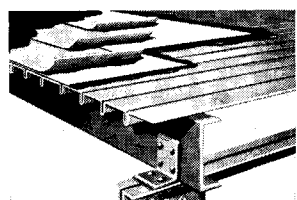
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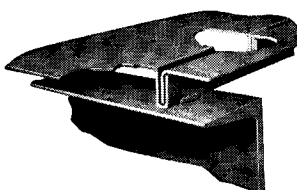
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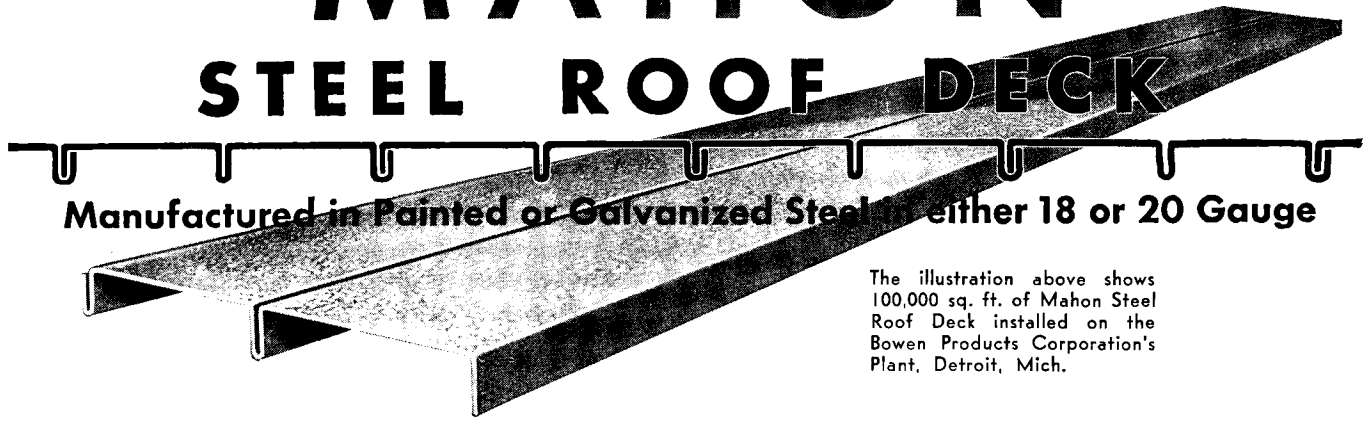
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WITH RECORD READERS

(Continued from page 10)

sale or rent—ordinary dwelling, seasonal dwelling; held for absent household—ordinary dwelling, seasonal dwelling.

A third group of queries deals with characteristics of *occupied* dwelling units. Answers when tabulated will provide useful information on:

Home tenure: owned, rented.
Color or race of head of household.
Total number of persons in household.
Refrigeration equipment: mechanical, ice, other.
Is there a radio in this dwelling? Yes or No.

Heating equipment: central steam or hot water, piped warm air, pipeless warm air, heating stove.

Fuel for heating: gas, coal or coke, wood, fuel oil, kerosene or gasoline, other.

Fuel for cooking: electricity, gas, coal or coke, wood, kerosene or gasoline, other.

Monthly rental of renter-occupied dwelling.

Rental value without furniture of renter—occupied nonfarm dwelling with use of furniture included in rent.

Cost of utilities and fuel paid for by nonfarm renter in addition to monthly rental.

Value of owner-occupied home.

If owner-occupied nonfarm, is property mortgaged? Yes or No.

Another group of questions is on the important subject of mortgage characteristics of owner-occupied nonfarm one to four-family structures. (Usefulness of these statistics will be enhanced when they are considered in conjunction with information obtained in other phases of the 1940 Census. The Business Census now under way, for instance, will report data on wage and salary income, on place of residence five years ago, etc.). This group includes questions on:

Present amount of outstanding indebtedness on first mortgage or land contract, and on junior liens.

Frequency and amount of regular payments on first mortgage or land contract.

Do these regular payments include principal reduction? Yes or No. Real estate taxes? Yes or No.

Interest rate on first mortgage or land contract.

Type of holder of first mortgage or land contract—building and loan association, commercial bank, savings bank, life insurance company, mortgage company, HOLC, individual, other.

Among the organizations supporting the Housing Census are the American Institute of Architects, the Associated General Contractors of America, the National Association of Real Estate Boards, the National Lumber Manufacturers' Association, the Portland Cement Association, and many others.

If the work is carried through as

planned, preliminary summaries of the basic facts on American housing will be made available by late summer or early fall, followed as rapidly as possible by detailed analyses.

Plans Progress for 1940 AIA Convention in Louisville

HUNDREDS OF ARCHITECTS, industrialists, and educators will assemble in Louisville, Ky., on May 21 to participate in the seventy-second national convention of the American Institute of Architects. Housing, city planning, and other national problems will be discussed in sessions lasting four days.

The Producers' Council, organization of the country's principal manufacturers of building materials; the Association of the Collegiate Schools of Architecture; and the National Council of Architectural Registration Boards will convene concurrently.

The Kentucky Chapter, AIA, of which *Elliott Lea* of Louisville is president, will be host to the delegates. Seventy-one chapters of the Institute, located in all parts of the country, will send representatives. The directors of the AIA will meet on May 19 and 20, with *Edwin Bergstrom* of Los Angeles, national president, officiating.

Developments in the architectural and the construction fields, state and municipal works, federal public works, industrial relations, building costs, preservation of historic buildings, national preparedness, foreign relations, registration laws, and education are among the topics which will come before the convention.

Reports will be received on the progress of a nationwide movement to raise the standards of design and construction of small homes, which is being carried out by the Institute and Producers' Council in co-operation with the Federal Home Loan Bank Board. Plans will be developed to extend a protective building service to small-home owners throughout the United States.

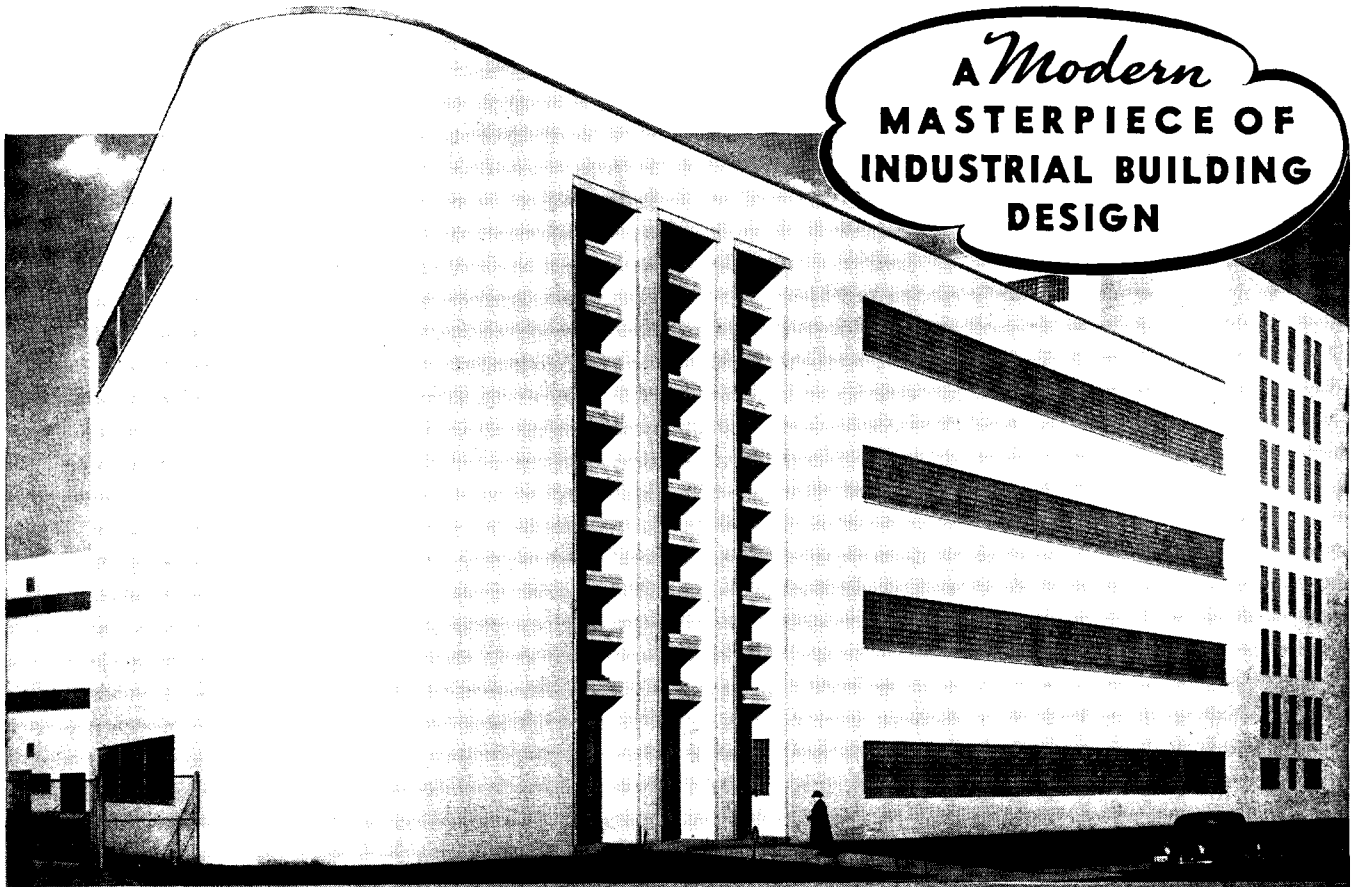
Committees of Kentucky architects are making the arrangements for the convention, which will also include a program of social events, public ceremonies, and trips to points of historic interest.

AIA Document No. 285 Outlines Institute Work and Objectives

COINCIDENTAL WITH the Institute's call to convention, comes AIA Document No. 285, addressed to everyone prac-

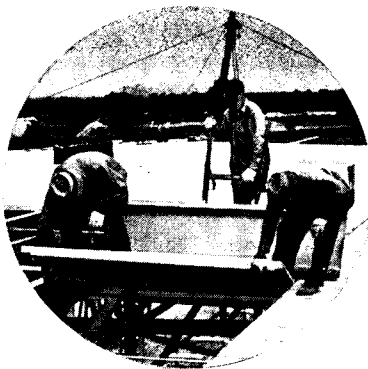
(Continued on page 14)

A Modern
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WITH RECORD READERS

(Continued from page 12)

ticing architecture in the United States, and setting forth the principles behind the organization, the nature and scope of its work, and the qualifications and responsibilities involved in membership.

In stating the AIA's broad objectives, the document declares "The Institute desires to be able to say to the national government, to the states, to city councils and commissions, and to the public, that when it speaks as a national society or through one of its chapters, or in collaboration with an affiliated state association, it speaks for the architects of the country or of the local community, as the case may be. This means that the architect who is qualified to render that full measure of professional service which the client is entitled to receive, and who practices his profession honorably, should make that contribution to the general welfare and to the advancement of his profession which Institute membership implies." The objectives of the Institute are "entirely professional. They are to promote the practical, the scientific, and the aesthetic efficiency of the profession, to advance education in architecture, the allied arts, and the sciences, and constantly to increase the service of the profession to society."

The document goes on to describe the work of some of the major Institute committees, whose members are representative of all sections of the country, and whose respective attentions are focused on such subjects as: allied arts; federal, state, and municipal public works; housing; architectural education and services; contract documents; industrial relations; structural service; registration laws; public information; preservation of historic buildings; civic design; organization of state societies; city planning; interprofessional relations, and competitions.

Benefits and services to Institute members, as individuals, are also noted, such as information and advice, relative to specific problems in professional practice, supplied on request; and the monthly receipt of *The Octagon*, through the pages of which AIA members are kept apprised of Institute activities and developments in matters of professional interest.

RECORD readers may secure copies of AIA Document No. 285 by writing to

Institute headquarters, 1741 New York Avenue, N.W., Washington, D. C.

AIA Bulletin Enjoins Profession Against Harmful Practices

AN EFFECTIVE EXAMPLE of the AIA's efforts in behalf of the profession are the following injunctions against undesirable practices, set forth in a statement officially endorsed by the Board of Directors, and recently announced by *Charles T. Ingham*, national secretary of the Institute.

"Distinctly inimical to the profession of architecture," it is declared, are the following procedures which the architect is called upon to shun:

"Offering his services on any basis other than those of competence and experience.

"Supplanting or attempting to supplant another architect after definite steps have been taken by a client toward employing the other architect.

"Engaging in the business of construction contracting during his practice as an architect.

"Investing in any enterprise or having any business relations or personal interests that may tend to discredit his freedom to act impartially and independently in the best interests of those who depend on his judgment and acts.

"Making knowingly any deceptive statement to his client of the probable cost of his building project or of the time of its completion.

"Making any guarantee of the cost or the time of completion of any project, or of the performance of any construction contract.

"Accepting or taking compensation, fees, or other valuable considerations in connection with his practice from others than his clients.

"Giving prejudiced advice; making unjust decisions or unwarranted interpretation of documents prepared by him; or failing to guard the interests of all engaged in the construction work, that full value under the contracts shall be given and received.

"Permitting the publishing of obtrusive or ostentatious advertising of his practice or achievements.

"Maliciously injuring the professional reputation, prospects, or practice of a fellow architect.

"Taking any part in any architectural competition any condition of which is contrary to the best interests of any of those concerned, the public, or the profession.

"Committing any act detrimental to the best interests of the profession."

In formulating the statement, the directors acted upon a report of the Institute's committee on bylaws, of which Mr. Ingham is chairman. Outlining the duties and responsibilities of architects, the statement says:

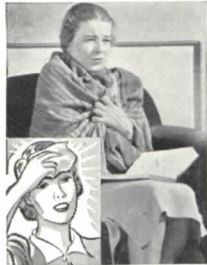
"The profession is one of the factors of

(Continued on page 20)



ASK YOUR ARCHITECT OR CONTRACTOR ABOUT this Marvelous New COMFORT HEATING

If you are building a home here is exciting news! Never before has there been available a genuine remedy for ups-and-downs in room temperature. Now Hoffman Hot Water Controlled Heat, a marvelously accurate new control system, positively ends over and under heating.



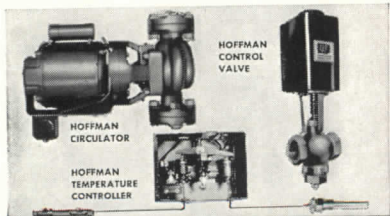
STOP ALTERNATE FREEZING AND ROASTING WITH AMAZING NEW CONTROLS

This system maintains a continuous circulation of heated

water to the radiators. Balanced, Dual Controls, actuated by outdoor as well as circulating water temperatures, measure out hot water from the boiler so accurately that radiators are always just hot enough! Your home is thus kept at an even, constant temperature throughout the heating season.

CHEAPER DOMESTIC HOT WATER

A Hoffman-controlled heating system is ideal for the addition of an Indirect Water Heater, which furnishes year 'round hot water at unbelievably low cost.



ADAPTABLE TO NEW OR OLD SYSTEMS
Any type of oil, gas or stoker-fired hot water system can be equipped with Hoffman Controls. So whether you are building or modernizing send the coupon for full information.

HOFFMAN Hot Water CONTROLLED HEAT

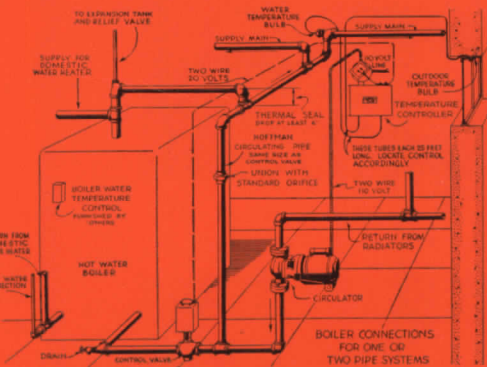
MARCH 1940

To 1940 Builders
HOFFMAN ADVERTISING BRINGS THIS GOOD NEWS-
"uneven heating is now a relic of the past!"

Hoffman Hot Water Controlled Heat is the heating system with sensational appeal to the home builder's urge for comfort... and economy. It offers Radiant Heat with a control of temperature never before available! It is the obvious selection for the more pretentious house, yet the small home is not barred by cost.

This dual-controlled system permits zoning of apartments, institutions, residences and factories, thereby assuring a distribution of heat in direct relation to either personal temperature preference or to the functional activities of the building. Economy of operation is thus a foregone conclusion.

By all means consider the advantages of this new method of heat control before you specify or install another system. Complete design data sent on request. Hoffman Specialty Co., Inc., Dept. AR-3, Waterbury, Conn.



Equipment consists of a Hoffman Circulator, Hoffman Control Valve and Hoffman Temperature Controller. Water is continuously circulated through the system, with its temperature kept in constant balance with the need for heat.

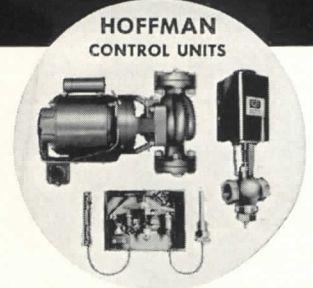
HOFFMAN
Hot Water
CONTROLLED HEAT

By the makers of Hoffman Valves, Traps and Pumps... sold everywhere by leading Wholesalers of Heating and Plumbing Equipment.

THIS UTTERLY DIFFERENT KIND OF HOT WATER SYSTEM GIVES UNIFORM HEAT ... MARVELOUS COMFORT



FOR YOUR NEW HOME ask your Architect or Contractor about this DUAL-CONTROLLED HEATING SYSTEM



Hot Water Heating can now be a source of more comfort than you ever dreamed possible. A revolutionary new kind of control system, called Hoffman Hot Water Controlled Heat, positively assures you of an even, comfortable home temperature from Fall to Spring.



Temperature just right for comfort

The operating units of this system maintain a continuous circulation of hot water to the radiators. Temperature of the circulating water is regulated by a set of dual controls to the exact degree required to keep your home at a constant temperature in any kind of weather. Radiators are never too hot—never too cold.

Any type of oil, gas or stoker-fired hot water system can be equipped with Hoffman Controls. Whether you are building or modernizing, get all the facts first on this comfort-economy system.

Low Cost Domestic Hot Water

Including an Indirect Water Heater with Hoffman Hot Water Controlled Heat Equipment will give you year around domestic hot water, at unbelievably low cost.



ALL THE HOT WATER YOU WANT...SUMMER AND WINTER

HOFFMAN Hot Water CONTROLLED HEAT

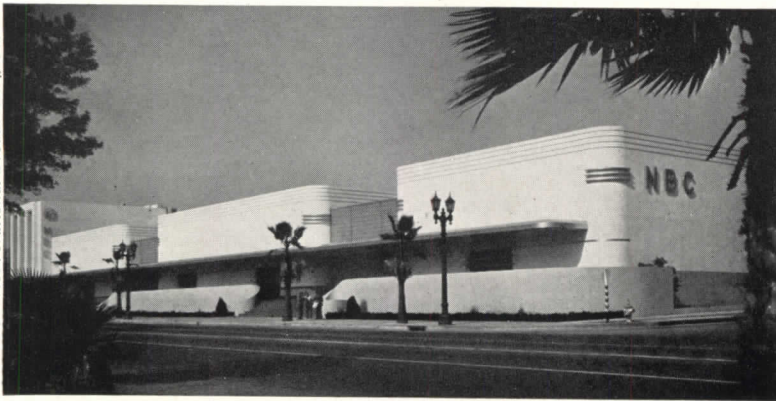
Shown above are two National ads from Hoffman's 1940 program in American Home, Better Homes & Gardens, House and Garden, The Saturday Evening Post, etc.

WITH RECORD READERS



SIXTEEN VOTES: the Los Angeles Union Railroad Station. J. H. Christie, H. L. Gilman, R. J. Wirth, Architects; John Parkinson and Donald B. Parkinson, Consulting Architects.

Parker Photo: Courtesy National Broadcasting Co.



FOURTEEN VOTES: the National Broadcasting Co. Building. The Austin Co. (Cleveland), designers and builders.

Parker Photo: Courtesy Copper and Brass Research Assn.



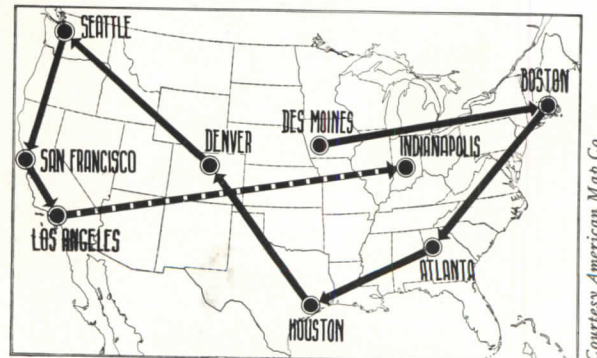
THIRTEEN VOTES: the I. Magnin Co. Department Store. Myron Hunt and H. C. Chambers were the architects.

"Lay" Votes Spotlight Los Angeles Buildings

SINCE IT IS frequently averred that all roads lead to Los Angeles, it seems to us appropriate that the actual terminus of a number of them, the new Union Station, should receive most votes from "lay" citizens as the city's outstanding example of recent architecture. It also strikes us as fitting and proper that in this city, to which reticence has seldom been any formidable handicap, the National Broadcasting Company Building (Hollywood) should carry off second honors.

The following group of Los Angeles "lay" (non-architect) citizens made up the panel on the basis of whose votes the buildings on this and page 18 are pictured: Dr. Ernest G. Bashor, Board of Health Commissioner; Elmer Belt, M.D., Director Urologic Clinic; Remsen D. Bird, President Occidental College; Ralph Block, writer; E. W. Cason, hotel broker; H. K. Clinton, advertising manager; James B. Cook, Secretary, Fruit Growers Exchange; T. B. Cosgrove, lawyer; Hamilton Cotton, manufacturer; Edward A. Dickson, financier; Frank P. Doherty, lawyer; E. Eisen, M.D.; Harold English, City Planning Commissioner; John A. Ford, mem-

(Continued on page 18)



Courtesy American Map Co.

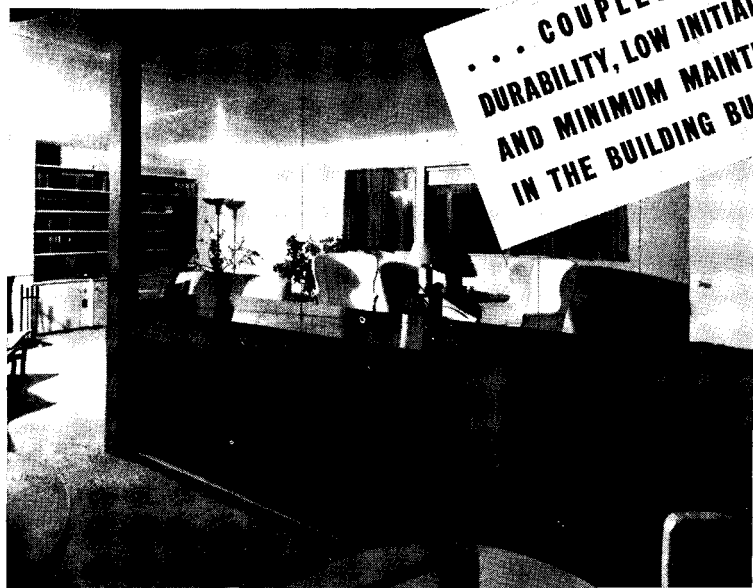
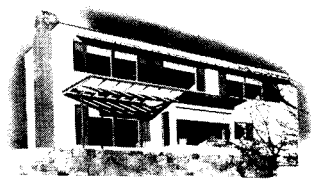
Indianapolis will be the next city visited.

WELDBORD

HOT-PRESS RESIN-BONDED

Hardwood PLYWOOD Paneling

... COUPLES BEAUTY,
DURABILITY, LOW INITIAL COST
AND MINIMUM MAINTENANCE
IN THE BUILDING BUDGET . . .



Walter Gropius
&
Marcel Breuer
Associated
Architects
—Photos by
Haskell



ARCHITECTS, DESIGNERS and BUILDERS have been quick to recognize the advantages provided by **WELDBORD**. Despite their low prices, these panels are fabricated by the most modern methods (hot-press-resin). Such strength and permanence are seldom found in conjunction with such lasting beauty. Even a superficial analysis of comparative costs will reveal the astonishing economy of their use.

BLUE LABEL WELDBORD—
the Utility Panel—for walls to be painted or papered—a charming “bright-finish” panel in ultra-low-cost projects.

@ **7** ¹/₂¢ PER SQ. FT.
F. O. B. nearest warehouse

DeLUXE WELDBORD—
the Decorative Panel, with book-matched faces of American Walnut, African Mahogany or Plain Oak.

@ **17** ¹/₂¢ PER SQ. FT.
F. O. B. nearest warehouse

Blue Label is manufactured with cross-grain faces for extra stiffness and to permit of tight-butt installation—expansion the short way of the panel is negligible.

DeLuxe is manufactured with long-grain faces for that extra beauty which makes hardwood so appealing. DeLuxe is available in standard plywood construction or over Masonite at the buyer's option, and mill-prefinished at a somewhat higher cost.

⎓ The “Plywood Handbook of Residential Construction” is FREE to Architects, Designers and Building Contractors — write for a copy. ⎓

UNITED STATES PLYWOOD CORPORATION

EXECUTIVE OFFICES: 616 WEST 46th STREET, NEW YORK, N. Y.
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BRANCH OFFICES AND WAREHOUSES: Baltimore • Boston • Brooklyn • Chicago • Cincinnati • Cleveland • Detroit • Los Angeles • Newark • New York • Philadelphia • Rochester • San Francisco • Seattle



Los Angeles Citizens Vote on Recent Buildings

(Continued from page 16)

ber County Board of Supervisors; *F. F. Hargear*, broker; *Henry Herzbrun*, lawyer; *David Kolts*, lawyer; *H. F. Metcalf*, Realtor; *G. H. Naegele*, bank vice-president; *E. S. Nelson*, manufacturer; *A. W. Ross*, Realtor; *A. B. Rud-dock*, civic leader; *W. A. Simpson*, builder; *Oscar A. Trippet*, lawyer; *J. B. Van Nuys*, real estate and investments; *Dr. Rufus B. Von KleinSmid*, President University of Southern California; *James W. Young*, M.D.

Other buildings receiving a number of nominations but less than the pictured winners were: the Academy Theatre (*S. Charles Lee*, Architect); California Fruit Growers Exchange (*Walker and Eisen*); Coulter Dry Goods Co. (*Stiles O. Clements*); Farmers Auto Inter Insurance Exchange (*Walker and Eisen*); Harris College of Architecture and Fine Arts and Elizabeth Holmes Fisher Gallery (*Ralph C. Flewelling*); Hollywood Recreation Center (*Walker and Eisen*); Music Corporation of America (*Paul R. Williams*); Ralphs Grocery Company (*Stiles O. Clements*); and Van de Kamp's All-Service Restaurant (*Van de Kamp's Eng. Staff, Designers*).

In the April issue, the RECORD will report on its "Gallup poll" in Indianapolis, where a panel of non-architects will each nominate several buildings, in his or her estimation noteworthy examples of recent architecture. The architects who recommend these citizens for polling are consulted impartially by the RECORD.



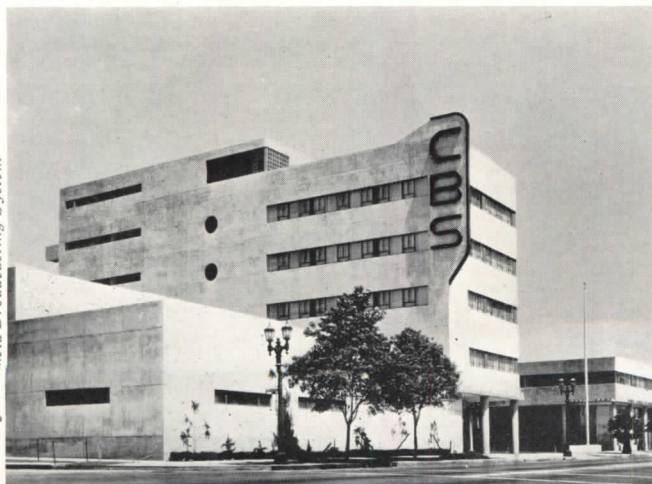
Underwood and Underwood

EIGHT VOTES: New Federal Building. Louis A. Simon, Supervising Architect, Gilbert Stanley Underwood, Associate.



New Pictures, Ltd., Courtesy Copper and Brass Research Assn.

SIX VOTES: May Co. Department Store: Albert C. Martin and Samuel Marx were the architects.



Courtesy Columbia Broadcasting System

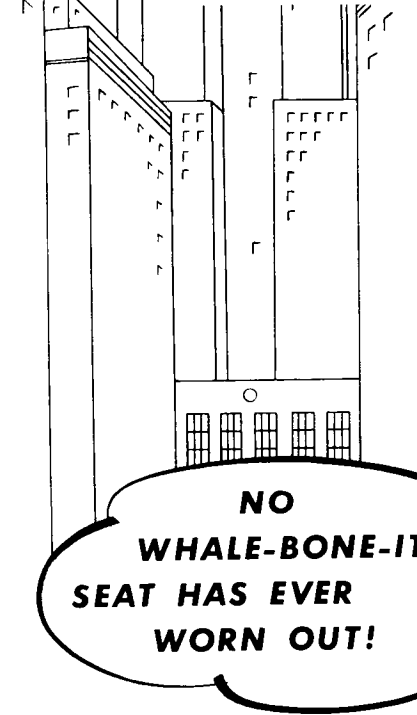
SIX VOTES: Columbia Broadcasting Building. William Lescaze, Architect; Earl Heitschmidt, Associate.



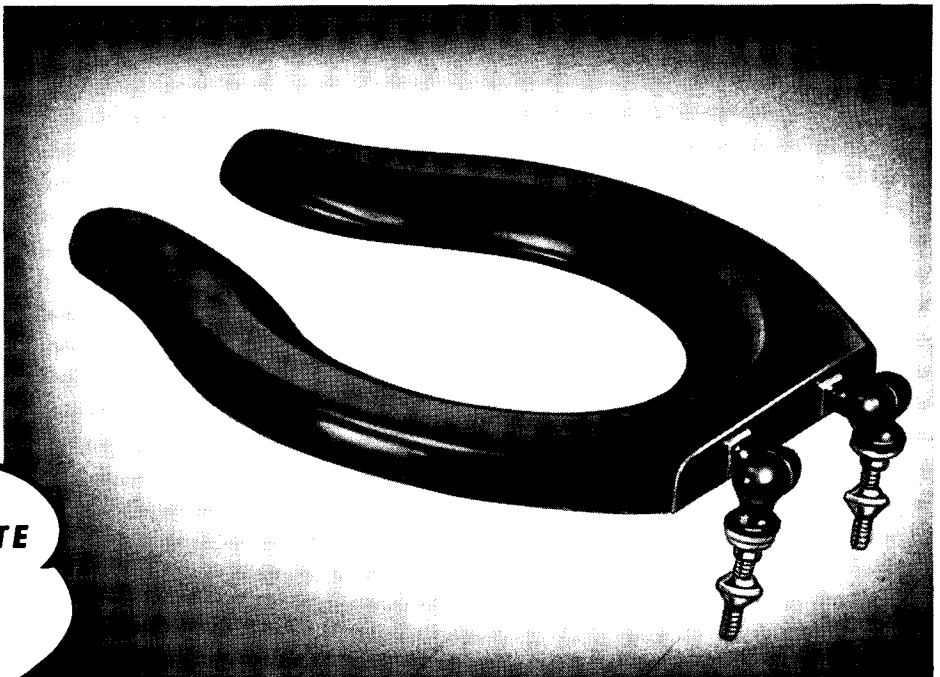
SIX VOTES: The Los Angeles Times Building. Gordon B. Kaufmann was the architect.

Brunswick

WHALE-BONE-ITE SEATS GIVE PERMANENT SATISFACTION



**NO
WHALE-BONE-ITE
SEAT HAS EVER
WORN OUT!**



WHEN you have a factory job on the boards—an institutional, commercial, or public building—you will, by simply writing “Brunswick Whale-Bone-Ite Seats” into plumbing specifications, have a better satisfied client. With those three words, you are protecting him against closet seat replacement costs. That statement is backed by 25 years of performance. Since Whale-Bone-Ite Seats were first introduced, over a quarter of a century ago, not one has ever worn out.

Architects everywhere acknowledge the Whale-Bone-Ite as the perfect closet seat for any building. It's engineered to resist wear and abuse. Made of an exclusive plastic composition with a hardwood core of patented construction, it is practically indestructible.

The laminated core, the hinge plate of heavy-duty corrugated brass, and the tough Whale-Bone-Ite are moulded in one operation

**WHALE-BONE-ITE SEATS
ARE ESPECIALLY
SUITED FOR**

- Commercial,
- Industrial and
- Public Buildings
- Hospitals
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- Theaters
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- Boats
- Trains
- Railroad Stations

into an integral unit of permanent rigidity. No screws or dowels are used; there are no joints to loosen.

Improved Sanitation • Good Appearance
There are no seams in Whale-Bone-Ite construction; no crevices where dirt can hide. All surfaces are smooth—wholly impervious to moisture. Repeated sterilizing will do no harm, yet a cloth dampened with alcohol is all that's needed for thorough cleaning.

Whale-Bone-Ite Seats are carefully styled. Their smooth lines and lustrous, rich ebony finish add a note of distinction to toilet room appearance. They will not fade or discolor with age.

Because Brunswick quality exacts no premium, you can assure your clients of greater value for plumbing dollars by specifying Whale-Bone-Ite Seats. Refer to your Sweet's Catalog Service for a showing of models for every type of closet, or write for a catalog.

Brunswick
PYRALIN SEATS

In planning a bathroom or powder room, with Brunswick Pyralin covered seats you can successfully achieve desired decorative effects; and at the same time deliver more for the plumbing budget.

With a tough “armor plating” of DuPont Pyralin, these seats will stay bright, and are easily cleaned. The gleaming surface will not wear off or dull. Brunswick's core construction and seam welding process eliminates warping, cracking and chipping.

Made in white, black, and an almost unlimited range of plain and sea pearl colors—in styles for every closet bowl.

THE BRUNSWICK-BALKE-COLLENDER CO.

623 South Wabash Avenue

Plumbing Fixture Division

Chicago, Illinois

Every business man wants a QUIET office



Quiet is essential to the dignity and comfort of this private office. Hence this sound-absorbing ceiling of Corkoustic.

PLAN QUIET ROOMS BY SPECIFYING CEILINGS OF *Corkoustic*

NOISE is especially disturbing to business men and their employees. And, what's more, it is an expense because it reduces efficiency. That's why you increase client-satisfaction when you specify sound-absorbing ceilings of Armstrong's Corkoustic for office buildings. This cork acoustical material is also ideal for schools, hospitals, restaurants, and other busy public buildings because it soaks up unwanted noise. Corkoustic B6 has a sound-absorption coefficient of 82 per cent at 512 cycles.

You will also find Corkoustic useful for churches, auditoriums, radio studios, theatres, and other places where acoustical correction is neces-

sary. Easy and inexpensive to keep clean, it can be repainted without impairing its sound-absorbing efficiency. Other important qualities of this moderately priced material are its high light-reflection value, its insulation value, and its attractive texture. The rich factory-applied pastel colors make Corkoustic a pleasing interior finish.

Send for Booklet

Let us send you all the facts about Corkoustic. A file-sized, illustrated booklet "Tune Out Noise" is yours for the asking. "Sweet's" also contains complete Corkoustic data. Armstrong Cork Company Building Materials Division, 1245 State St., Lancaster, Pennsylvania.

Armstrong's ACOUSTICAL MATERIALS

CORKOUSTIC



TEMCOUSTIC

WITH RECORD READERS

(Continued from page 14)

the building industry, and for its livelihood depends on those who build, but derives its compensation from fees for rendering professional services and not from the sale of labor or materials of construction.

"Its services are personal services, founded on mutual trust between those who render them and those from whom they are rendered, and on the principle that the best interest of those to whom the services are rendered is paramount.

"Advice and counsel constitute the services of the profession. Given in verbal, written, or graphic form, they are normally rendered in order that buildings with their equipment and the areas about them, shall be well suited to their purposes; well planned for health, safety, efficient operation, and economical maintenance; soundly constructed of materials and by methods most appropriate and economical for their particular uses; and have a beauty and distinction that lift them above the commonplace.

"Architects should unite in fellowship with the other members of the profession in their professional organizations, and do their full share of the work of those organizations. They should accept mentorship of the young men who are entering the profession, leading them to a full understanding of the functions, duties, and responsibilities of architects.

"They should inspire the loyal interest of their employees, providing suitable working conditions for them, requiring them to render competent and efficient services, and paying them adequate and just compensation therefor. They should seek opportunities to be of constructive service in civic affairs, and, to the best of their abilities, advance the safety, health, and well-being of the community in which they reside, by promoting therein the appreciation of good design, the value of good construction, and the proper placement of structures, and the adequate development and adornment of the areas about them.

"Every architect should, as a member of that profession, do his full part to forward the objectives and maintain the dignity and solidarity of his profession. It is incumbent on him, in the conduct of his practice, to maintain a wholly professional attitude towards those he serves, towards those who assist him in his practice and in giving form to his conceptions, towards his fellow architects and the members of other professions, and towards the practitioners of other arts, and to respect punctiliously the hallmarks that distinguish professional practice from nonprofessional enterprise."

Raymond Hood Honored Posthumously by N. Y. Chapter, AIA
POSTHUMOUS AWARD of the New York AIA Chapter's Medal of Honor to *Raymond M. Hood*, who died in 1934 at the age of 53, has been announced by *Frederick G. Frost*, Chapter president. Awarded "for distinguished work and high professional standing," the

(Continued on page 136)



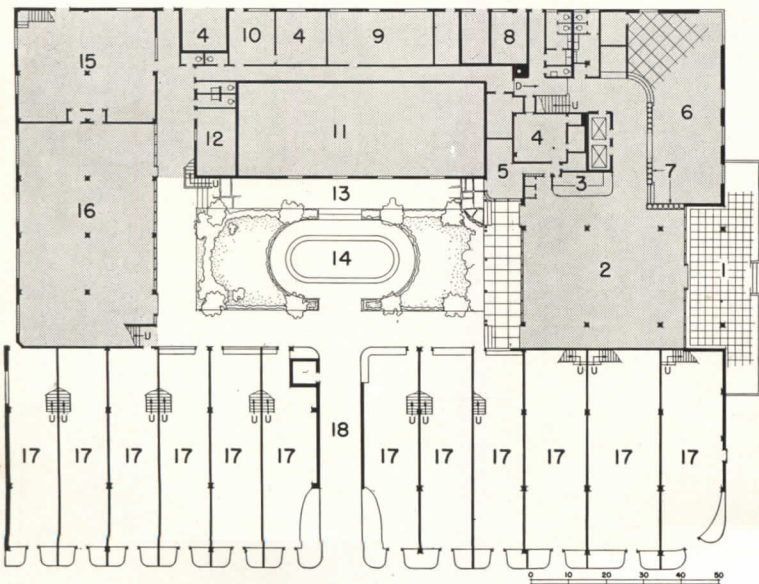
St. Thomas

MANY FACILITIES INTEGRATED UNDER ONE ROOF IN NEW HOTEL

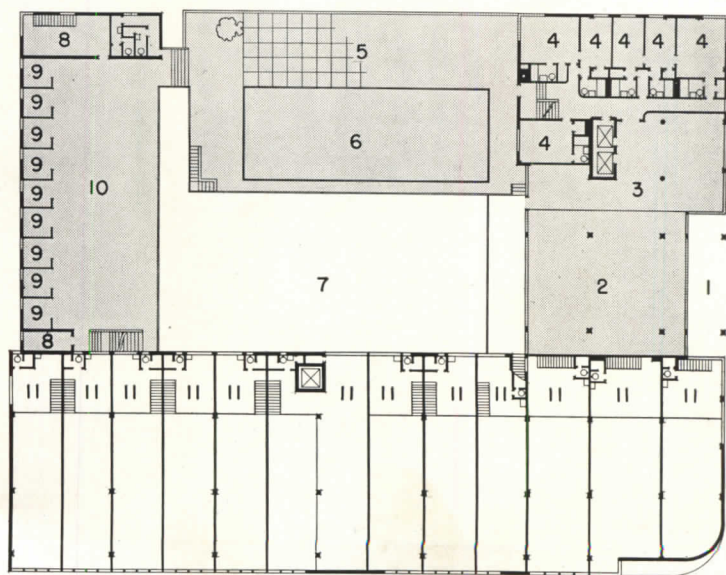
BUILDING NEWS



Photos by St. Thomas

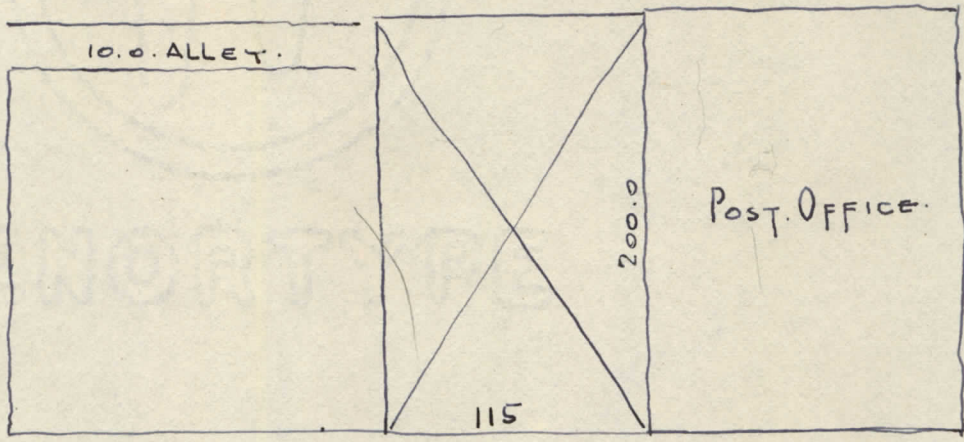


Main floor: 1. Portico. 2. Lobby. 3. Desk. 4. Service. 5. Office. 6. Recreation Room. 7. Aquaria. 8. Boiler. 9. Diesel motors. 10. Workshop. 11. Pool. 12. Filters. 13. Terrace. 14. Dance floor. 15. Kitchen. 16. Dining Room. 17. Shops. 18. Arcade.



Second floor: 1. Portico. 2. Upper lobby. 3. Balcony (writing and card rooms). 4. Guest rooms. 5. Pool terrace. 6. Pool. 7. Court. 8. Service. 9. Cabanas. 10. "Beach." 11. Shop balconies.

DITTO



STATE ST.

MAIN ST.

← slope. 3 RD. ST.

Lexington ~~St.~~ Hotel.

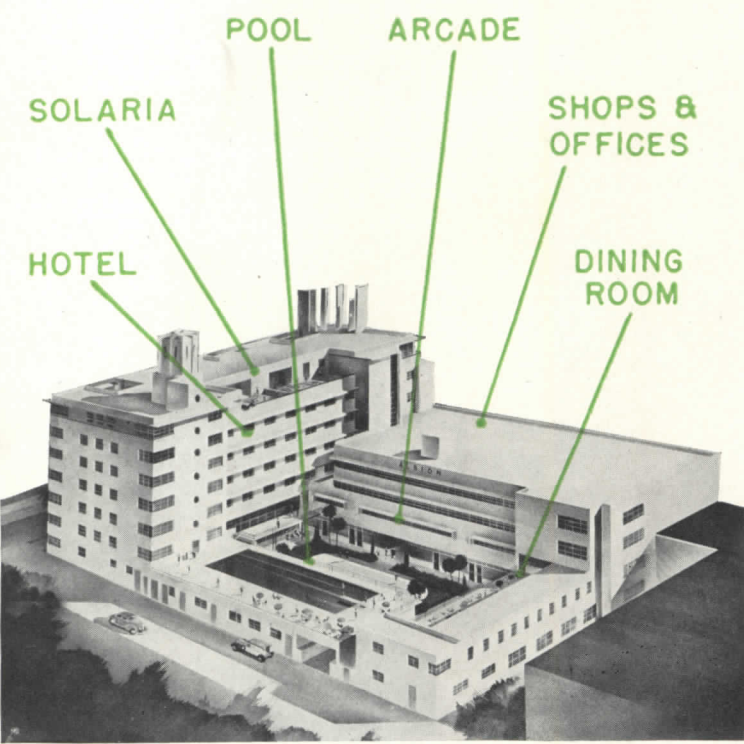
approx 75 Rms.
more showers than tubs.

Building 100x150.

DITTO

MIAMI: THE ALBION HOTEL AND OFFICE BUILDING

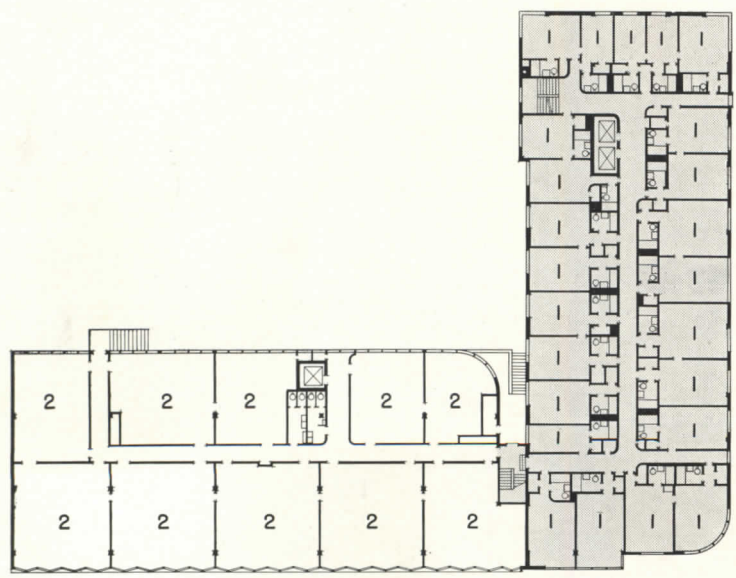
illustrates an important trend in commercial structures—that of guaranteeing and broadening potential income by broadening the variety of facilities in the project. Although some of the Albion's features may be limited in application to subtropic resort areas, in general it represents a distinct contribution by the architects, IGOR B. POLEVITZKY and T. TRIP RUSSELL.



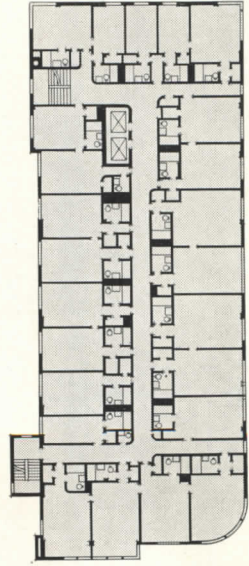
THE PROJECT actually consists of three major units—the Albion Hotel itself, the patio, pool, and restaurant, and the shop and office block along Lincoln Road. Each of these units is relatively self-contained, while being organized around the central courtyard so as to provide easy circulation and simple construction. Noteworthy in this connection is the detached restaurant with its patio, open-air dance floor, and terraces: this unit is equally accessible to the hotel and the outside. Interest is further concentrated on this area by the raised swimming pool with its cabanas and “beach”.

The hotel itself incorporates many features of plan and equipment which indicate close study of local conditions. A majority of its guest rooms lie along a quiet side street and overlook the ocean. Here fenestration is of special design: banks of horizontally pivoted awning-type wood sash—“eminently satisfactory”, according to the architects, in a land of sudden rains and high humidity. Most of the windows are protected by cantilevered concrete hoods. The top floor is given over to a series of suites, each with its own terrace. Likewise on this level are two solaria for guests.

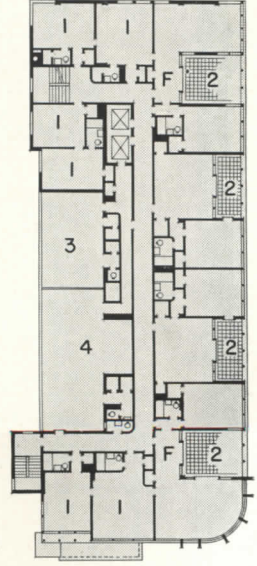
Like many of the newer Florida structures, the Albion is Diesel powered. Only the restaurant and office block are air-conditioned, direct radiation being used elsewhere; all bathrooms are mechanically vented.



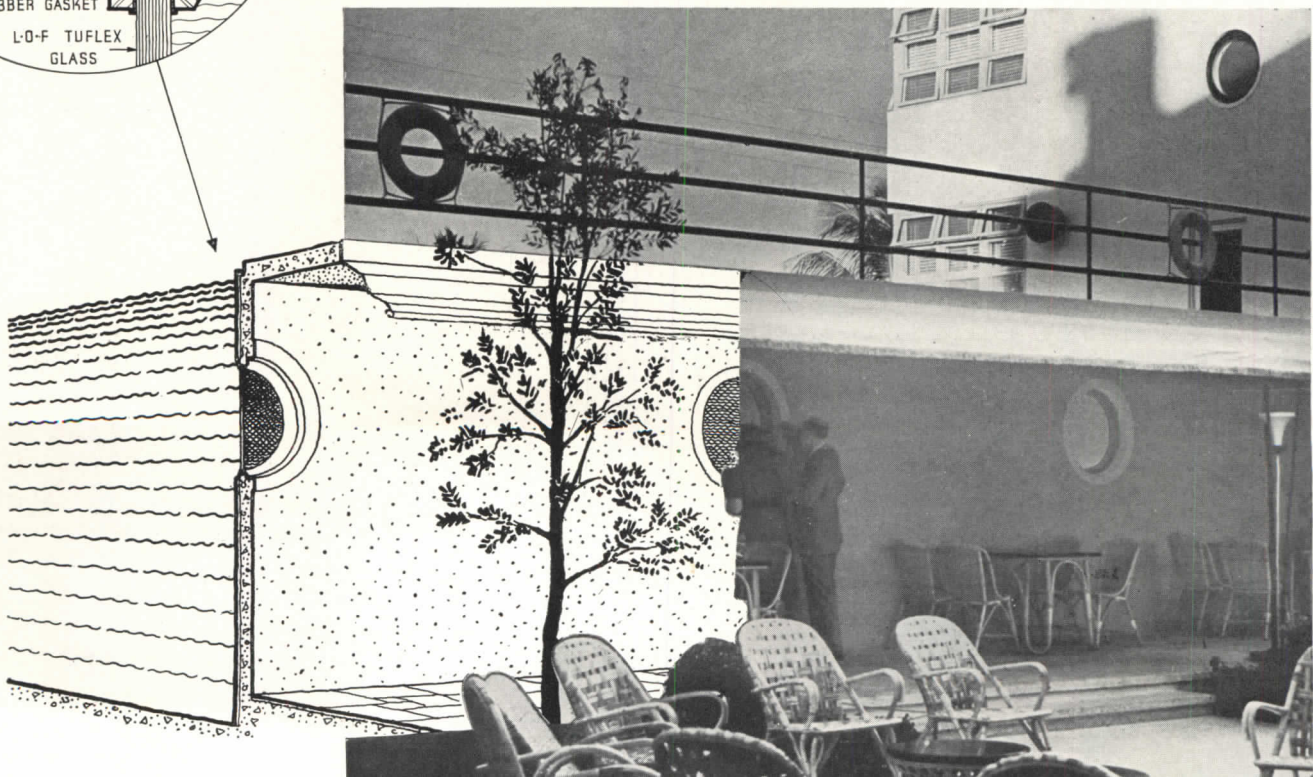
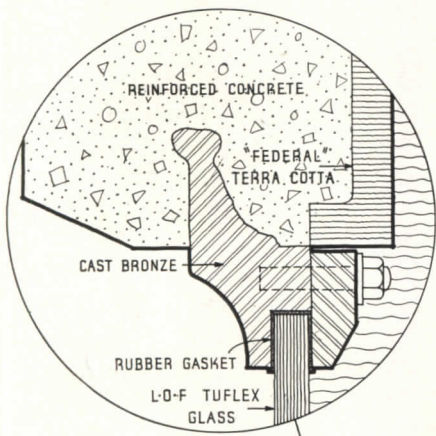
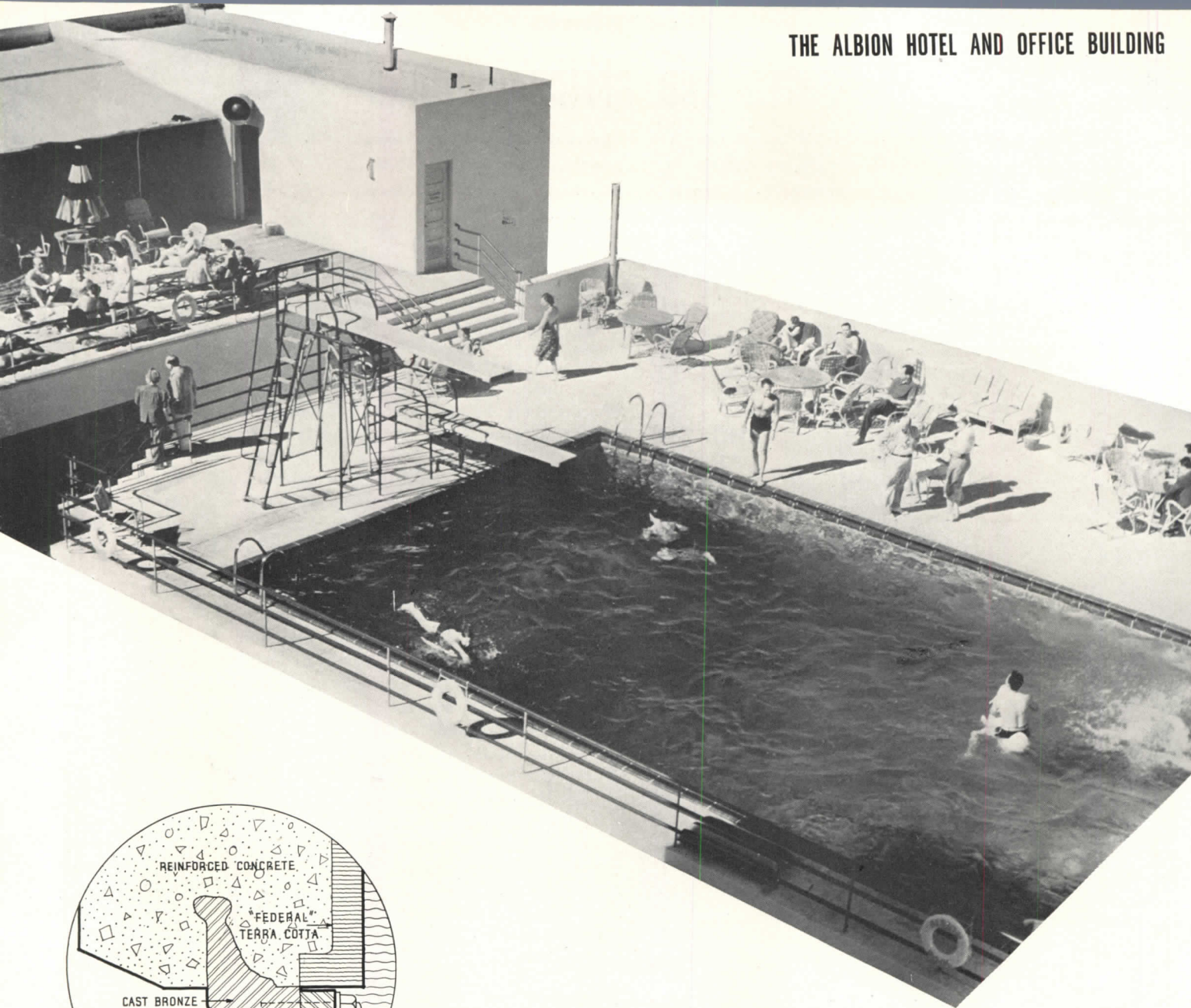
Third and fourth floors: 1. Standard guest rooms. 2. Offices.



Fifth and sixth floors



Seventh floor:
1. Guest rooms. 2. Terrace suites. 3 and 4. Men's and women's solaria.

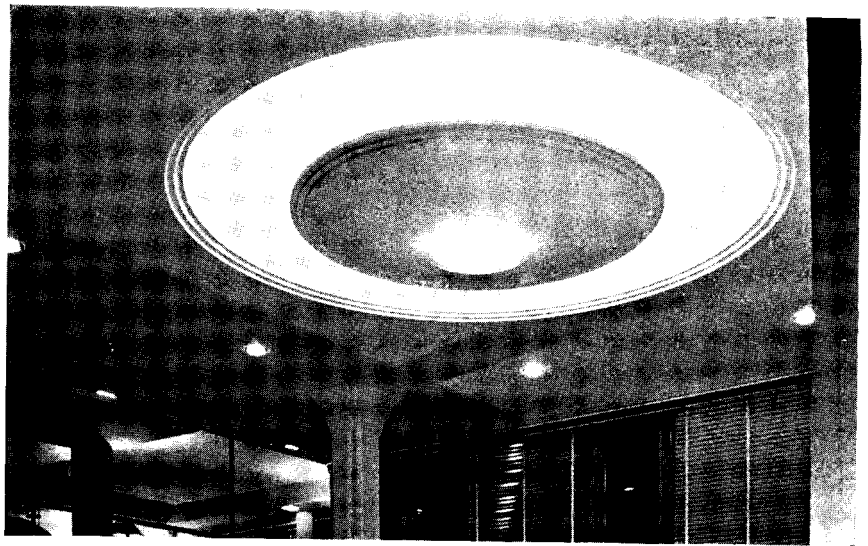


THE PUBLIC AREAS of the Albion lie approximately half out and half indoors; only in this sense can the relatively small lobby, writing, and card rooms be understood. But in addition to these are the patio (centered by a terrazzo dance floor and surrounded by flagged terraces), the dining room, and—on the next level—the pool and cabanas. To emphasize this close relation between inside and out, the architects have made a wide use of glass: the patio wall of the dining room and both patio and street wall of the lobby are almost entirely glass. Even the patio wall of the pool is punctured with specially glazed portholes (see facing page). Local soil and ground-water conditions make an above-surface pool more economical than the usual type. Interesting in this connection is the way in which the architects have solved this problem, at the same time segregating the traffic of bathers and diners-out.

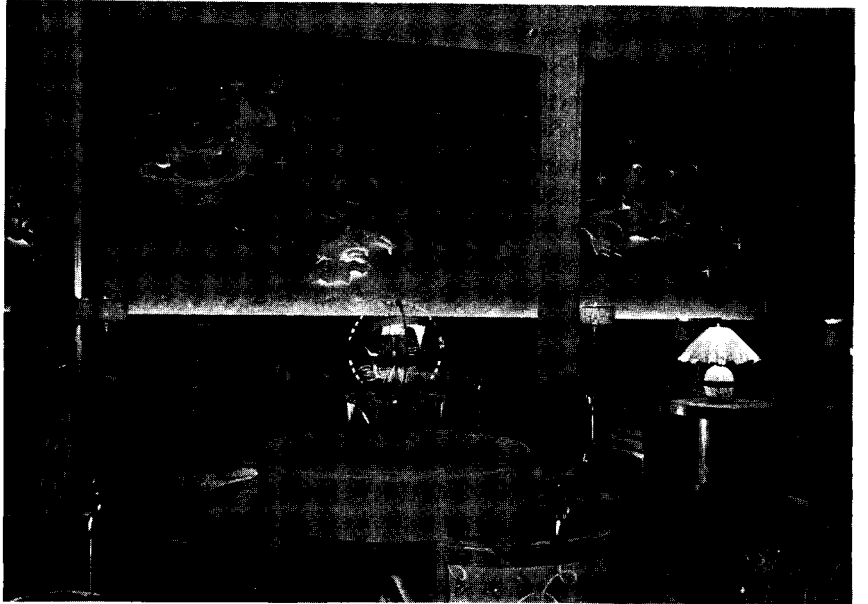
The public rooms boast many decorative features. The ceiling of the lobby (top, right) is centered by a huge circular coffer, whose indirect lighting is supplemented by down lighting around the ceiling's perimeter. Centering the floor is a fountain, also circular, of glass and metal (right, center). The lobby's only solid wall is devoted to a novel mural, whose cast elements are carried free of the wall and back-lighted with neon.

A novel screen, consisting of alternating 4-in. and 12-in. glass cylinders, separates writing room and lobby (lower right). These cylinders—lighted, aerated, and watered from below—become a series of aquaria for tropical fish. The rail which separates balcony from lobby is of polished aluminum and plate glass.

All walls are integrally colored plaster on rock lath. Cement plaster was used in all storage and utility rooms for greater strength. Except for the public rooms—which are floored with terrazzo—glazed vitreous tile was used throughout the building for floors, base, and wainscot.



Lighting in lobby ceiling



Fountain and mural in lobby

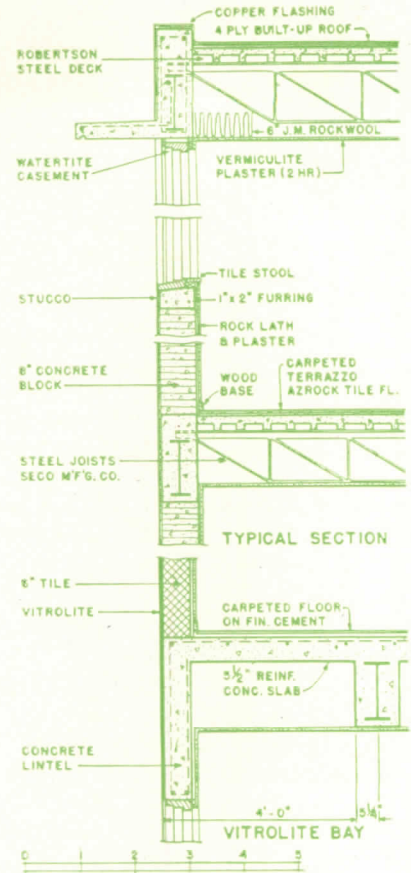


Aquaria screen in writing room

Photos by St. Thomas

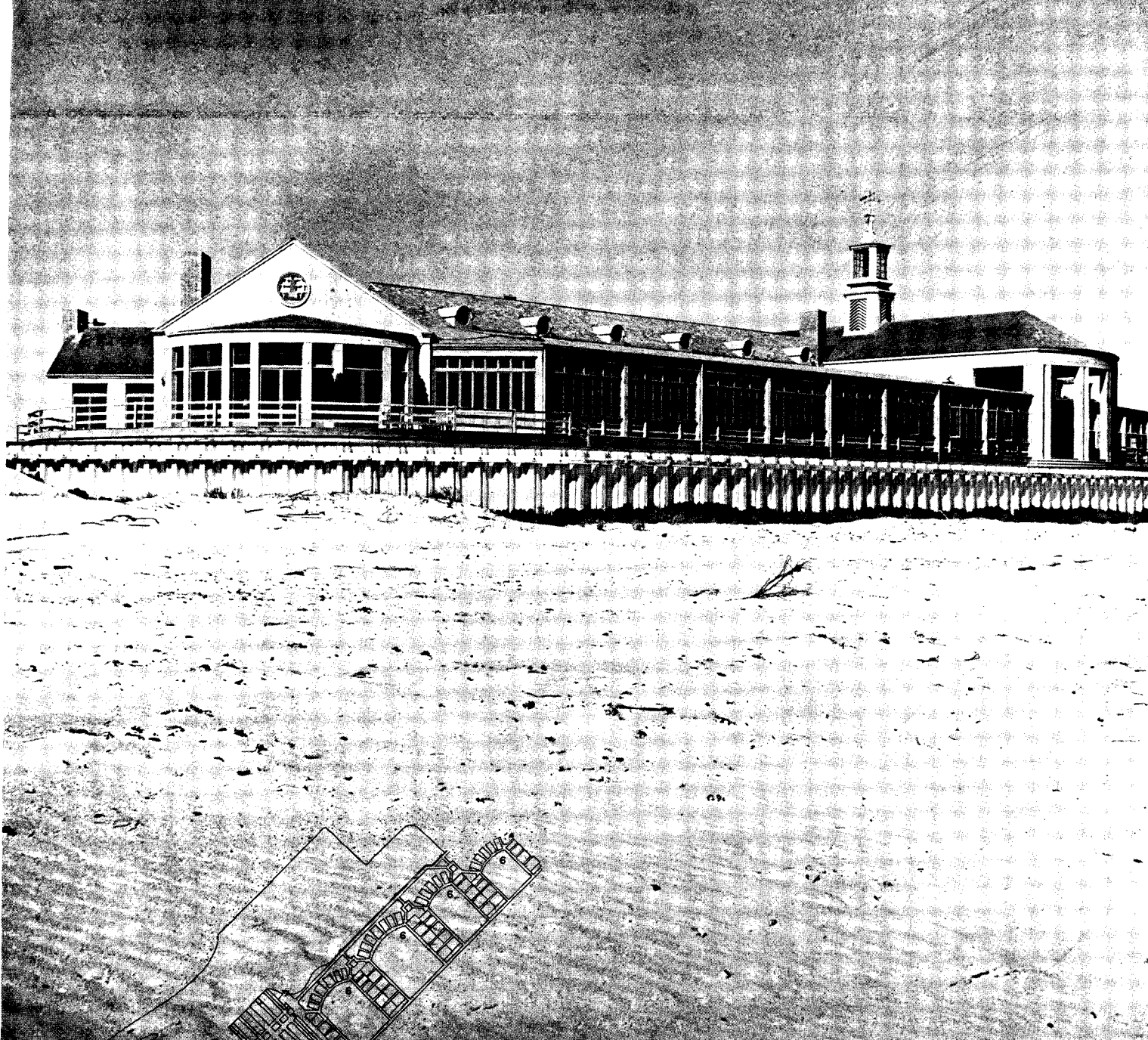


A typical terrace suite (top) and a typical standard guest room (below)

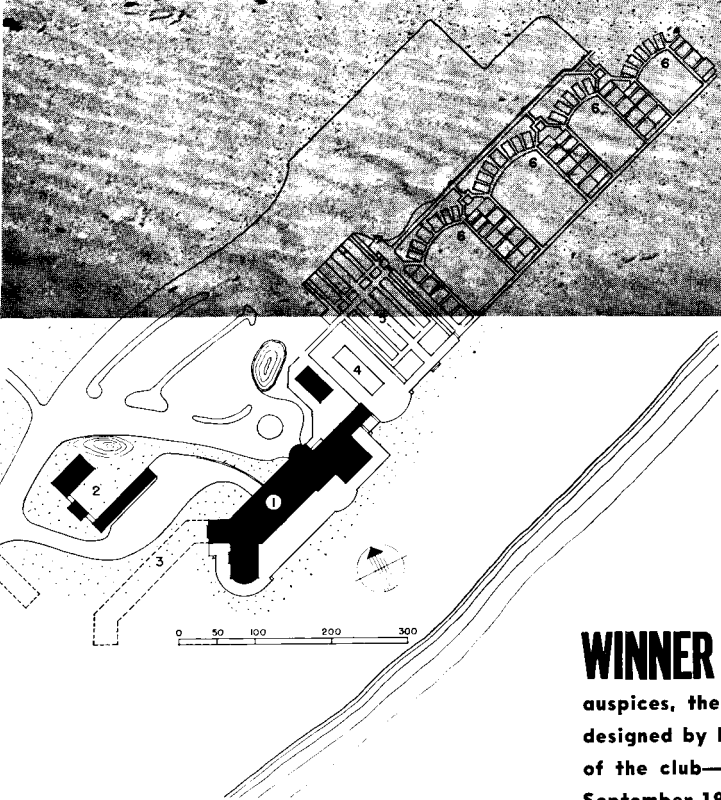


Section, typical roof, floor, and wall

THE OCEAN FRONT of the top floor is occupied by a series of suites consisting of bedroom, bath, living room, and terrace. This floor also contains—in addition to several standard guest rooms—two solaria designed specifically for sunbathing; privacy and protection from ocean breezes are guaranteed by their location. Furnishings of guest rooms reflect current trend away from standard “bedroom” furniture towards a more flexible conversion to daytime use.



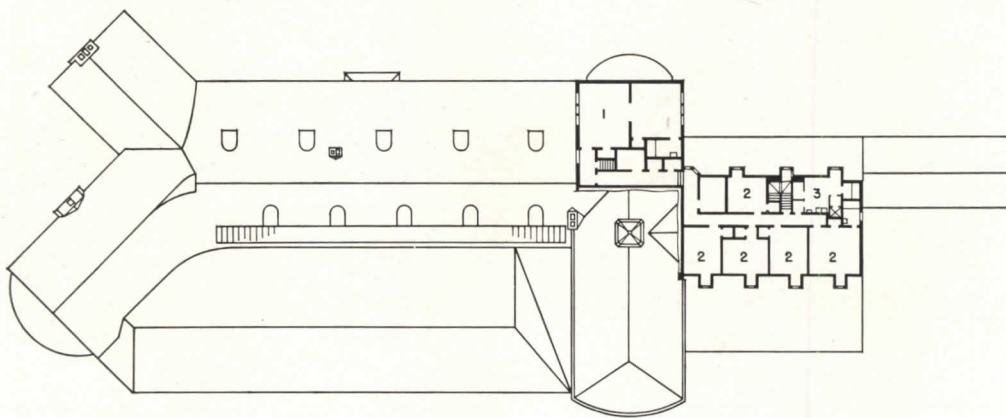
Gottscho



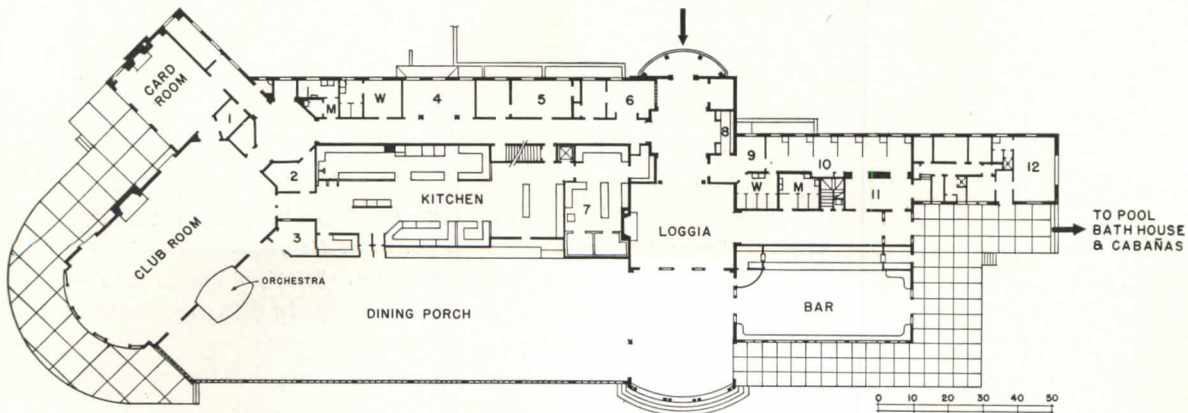
Plot plan: 1. The club house. 2. Help's quarters. 3. Future guest wing. 4. Swimming pool. 5. Bath houses. 6. Cabanas.

WINNER OF A COMPETITION HELD UNDER A.I.A.

auspices, the new Dunes Club on the famous beach at Narragansett, R. I., was designed by PURVES, COPE, and STEWART, Architects. Principal design problem of the club—which replaces an earlier structure destroyed by the hurricane of September 1938—was to provide adequate and attractive background for a large and diverse membership, and "to arrange the various elements of plan so that there would be no overlapping, confusion, or encroachment of functions."



Second floor: 1. Steward's apartment. 2. Officers' bedroom. 3. Toilet.



Ground floor: 1. Chairs. 2. Linen. 3. Bar. 4. Writing room. 5. Officers. 6. Desk. 7. Food preparation. 8. Coats. 9. Powder room. 10. Beauty parlor. 11. Waiting room. 12. Therapy suite.

BEACH CLUB IN RHODE ISLAND

PURVES, COPE, and STEWART, Architects

THE PROBLEM presented the architects was that of creating a private beach club to accommodate a membership of some 300 people drawn from St. Louis, Philadelphia, New York, and the immediate vicinity of Narragansett. Due to the "family" aspect of the membership, provision was made for the recreation of and entertainment of men, women, and children. The club season is relatively short, from approximately June 15th to September 15th—the most active part of the season taking place after July 4th.

Luncheons, dinners, and dinner dances are among the principal social functions of the club; on occasion—particularly over weekends and at holiday times—upwards of 350 must be served. It was therefore necessary to organize the elements of the club house for adequate service and comfortable seating. Furthermore, due to the vagaries of the weather and the possibility of more than one function's being held at a given time, it was necessary to provide for the serving of luncheons and dinners in the main club room, dining porch, or card room, or all combined.

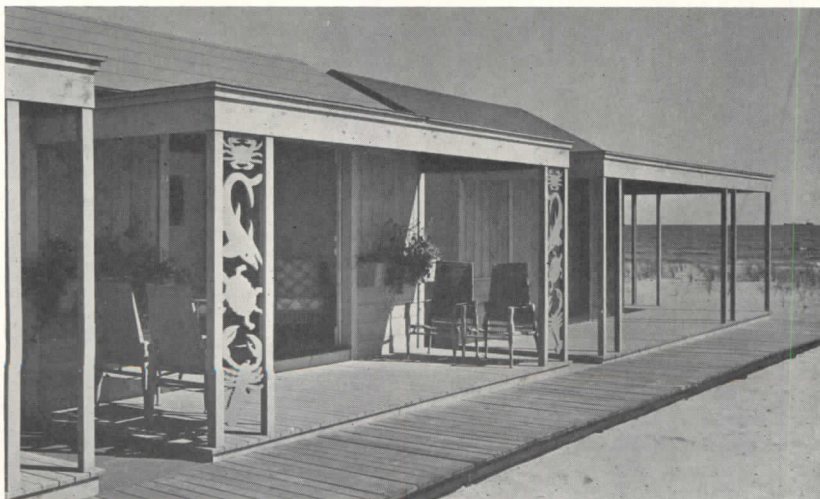
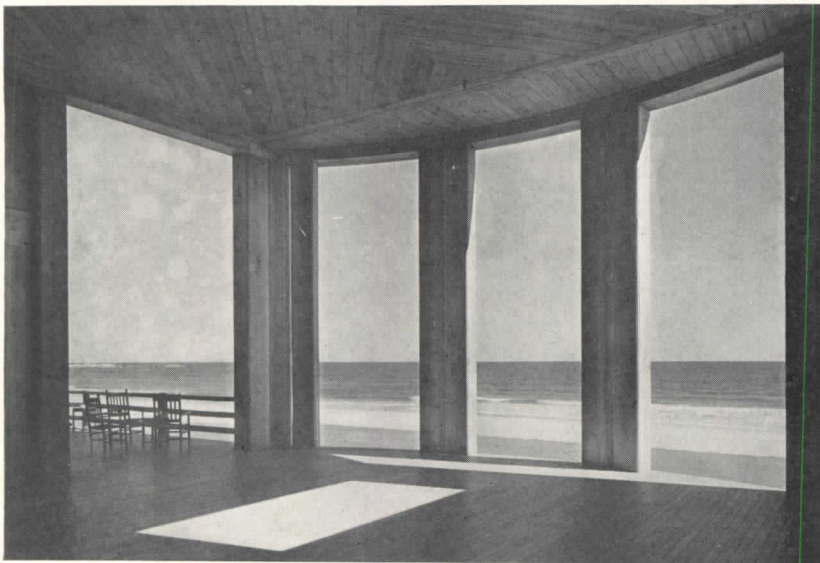
The second—and perhaps most important—element of the plan was that of adequate provisions for swimming and surf- and sunbathing. The original pool survived the storm; around it were organized the new bath houses and cabanas. This element is kept relatively independent of the club house proper and is serviced by a sunken passageway which runs along the north front of the club house to the basement. The bathhouses are ranged along roomy courts and for the most part are equipped with showers. The cabanas, of two sizes and uniform design, are grouped around four courts.

In brief, "the problem was to arrange the various elements of plan so that there would be no overlapping, confusion, or encroachment."

Within the building the main problem was one of circulation and service. The kitchen was regarded as the heart of the service problem and, therefore, became the central element, in order to serve economically and effectively the dining porch, bar, club and card rooms. To prevent cross service, the architects took advantage of natural grades and introduced the kitchen and other supplies at basement level, the supplies then being vertically transported to the kitchen or stored in the basement. Deliveries are made to the kitchen and store rooms by a truck ramp in a sunken courtyard. The kitchen is ventilated by taking the cool air off the sand underneath the building and discharging it through louvered openings in the roof. The kitchen is amply daylighted by a single large skylight.



Main club room, looking towards card room (top) and out to sea (center). The bar room (bottom). Note the architects' ingenious use of wood



Photos by Gottsche

South portico (top and center) and one of the typical cabanas (bottom)

IN EXTERNAL APPEARANCE the architects sought "a building which would look thoroughly at home along the Rhode Island shore line, and which, through a certain freshness of character, would attain a distinguished appearance." Constructed almost entirely of wood, it made possible a wide use of native materials; the exterior and a good deal of the interior being surfaced in rough-sawn "hurricane" pine and oak. On the exterior this wood has been finished with a slight stain on the major wall surfaces. Color is sparingly used, applied chiefly to windows and to the occasional purely decorative features.

Except in certain instances for fire prevention, plaster was not used in the interior: interior finish is largely pine and wallboard. The building is completely equipped with all mechanical services, including a small heating system which takes care of only one or two rooms to be used as offices in winter. There is a complete sprinkler system of the dry-head type, which is carried throughout the buildings and bath houses but does not extend to the cabanas.

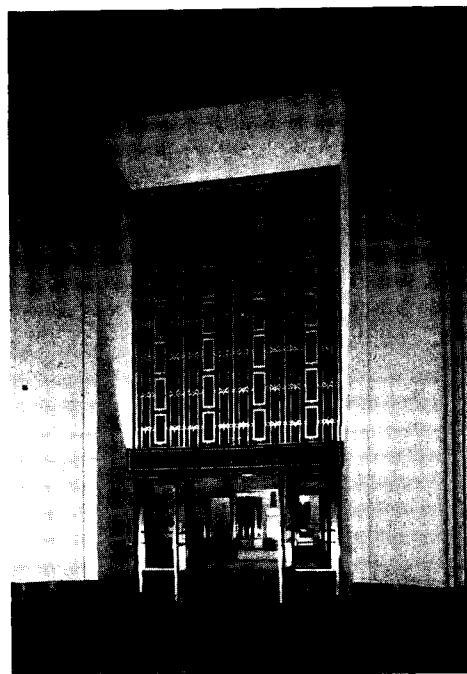


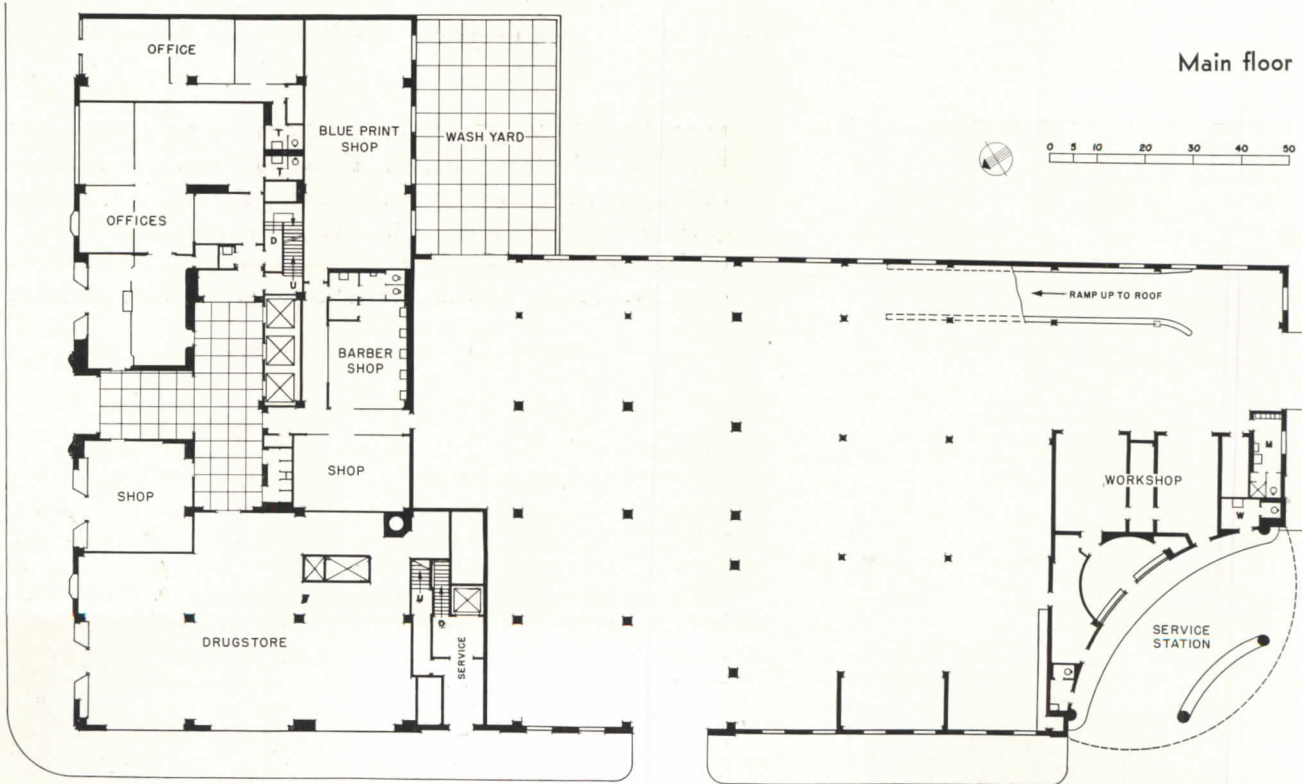
UPTOWN BUILDING PULLS DOWNTOWN TRADE

Design problem in the Oil & Gas Building in Houston, Tex., was "to create office quarters attractive enough to draw desirable tenants from the center of the city and at the same time reduce investment to a point where rentals would be moderate. Results were successful," says the architect, KENNETH FRANZHEIM.

IN ADDITION to five floors of office space—100% rented to a group of petroleum companies months before completion—this new Houston structure includes: (1) a series of shops, storage garage, and filling station at the ground level, and (2) complete quarters for a private club at the penthouse level. "No expense was spared to see that the comfort and convenience of the tenants were permanently secured," according to the architect. The entire building is air-conditioned; lighting level in the office space is held to $41\frac{1}{2}$ watts p.s.f.; three full-automatic elevators are used to service only five floors—yet final cost (including equipment) was held to 52.2c p.c.f.

Externally, "the effect sought was one of quiet dignity." The general color scheme is warm tan and black; framed in reinforced concrete, its walls are faced in light brick, with alberene and granite trim.





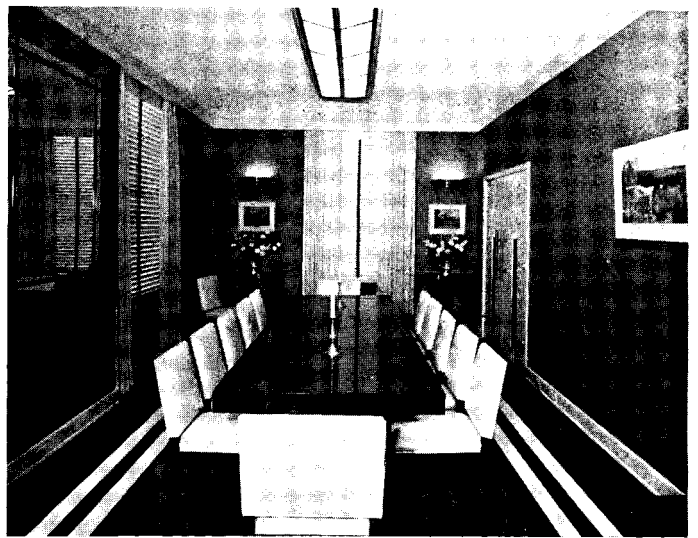
Office floors predesigned for tenants

Since all office space was leased before completion of the building, all such areas were laid out to meet the individual tenant's requirements: the sixth floor (below) is therefore typical of this portion of the structure. All office areas are air-conditioned. The storage garage—which connects directly with the main lobby—includes service and repair shops as well as a roof deck reinforced for open-air parking. Because of the large volume of drawings from the real-estate and engineering departments of the petroleum companies, it was found advantageous to provide for a complete blue-printing shop on the ground floor.



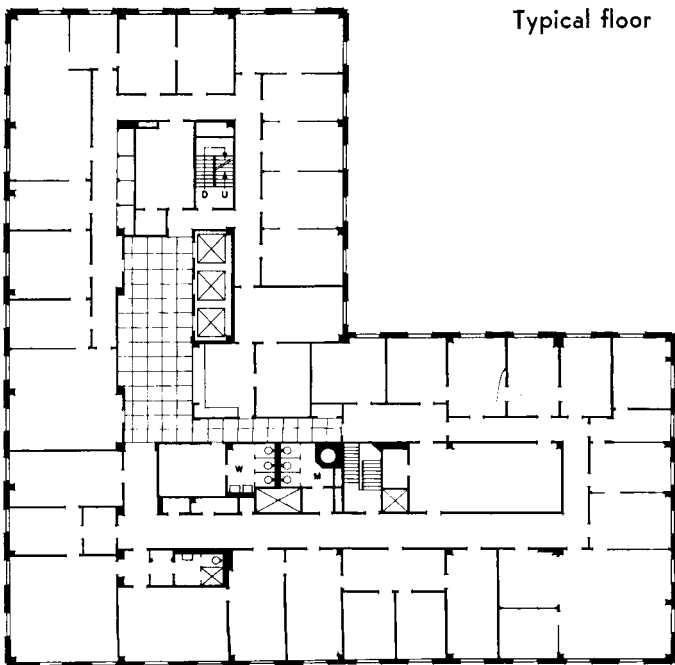
Ramada Club uses penthouse

The top or penthouse floor of the structure is occupied by the Ramada Club. Although entirely separate in management from the building proper, the club quarters were completely designed and furnished by the architect (and cost of this part of the project is included in the over-all unit cost of 52.2c p.c.f.). For a membership of 75, the club desired a homelike atmosphere. "The backgrounds generally are modern and quiet. The furnishings are a mixture of modern and period ideas. The general result," Mr. Franzheim hopes, "is sophisticated comfort."

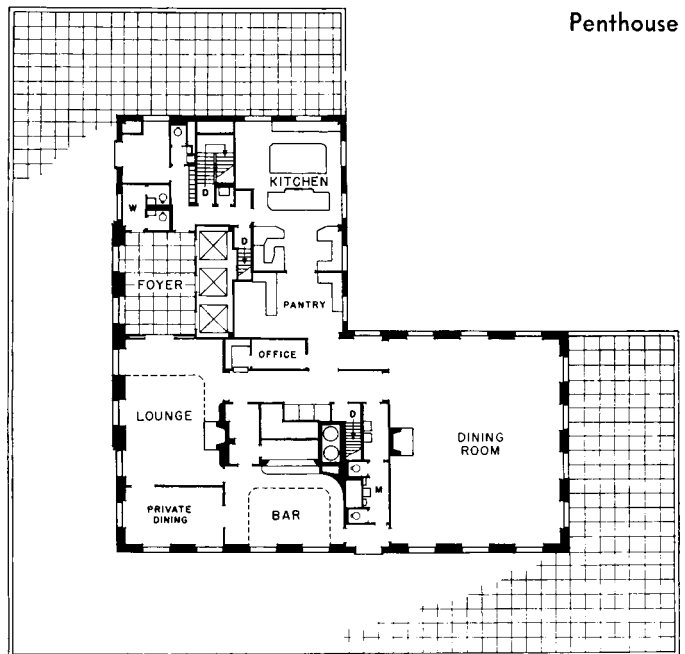


The club bar (top) and small private dining room (bottom)

Typical floor



Penthouse





Windows alternate with scenic wallpaper on three sides of Ramada Club's main dining room.

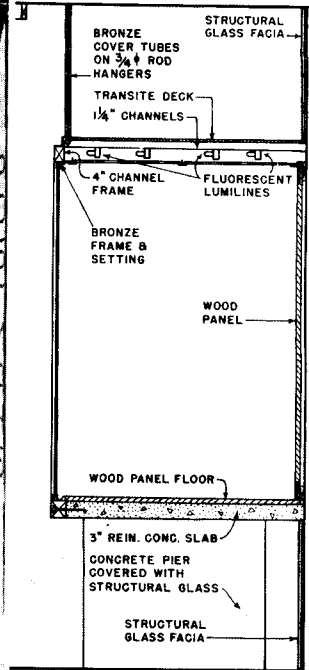
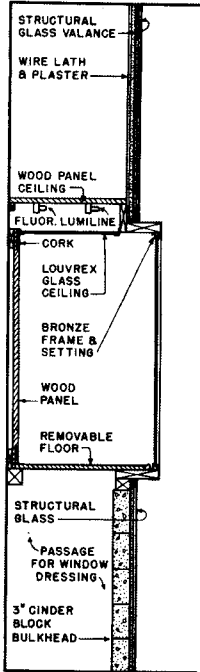


Photos by Elewood M. Payne

The lounge uses dark walls as a background for light furnishings—all architect-designed.

Fortman's

SSP



MAKING THE MOST OF A NARROW FRONTAGE

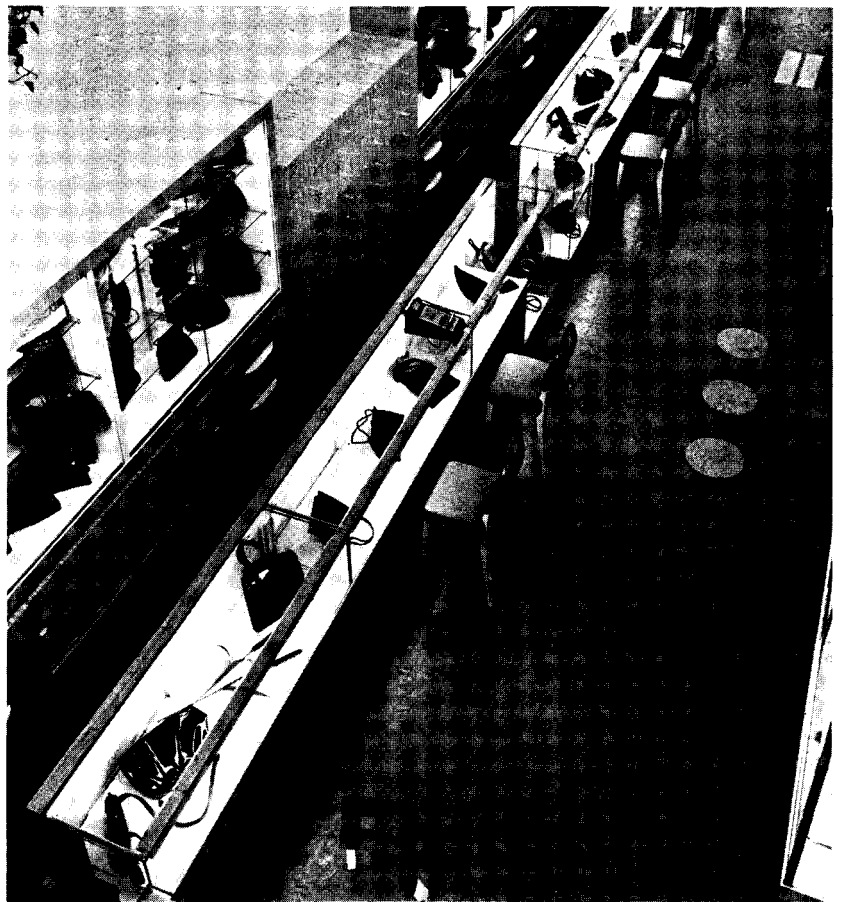
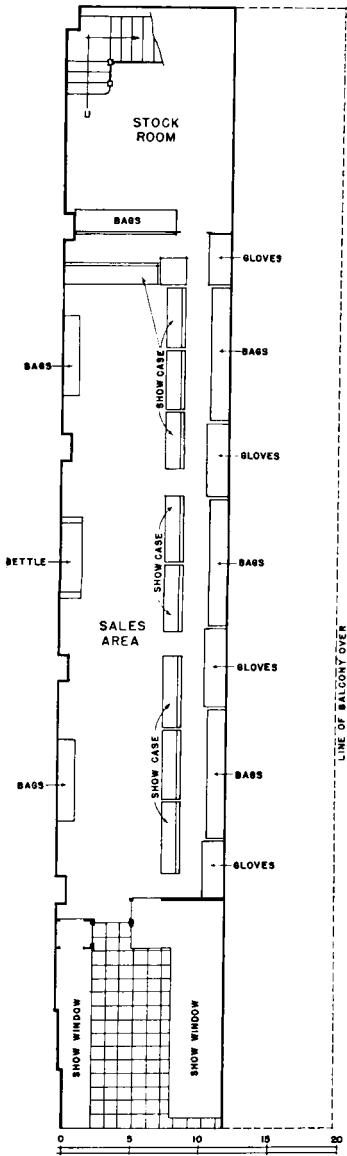
this new shop in New York City exemplifies the current trend in retail shop design. With a frontage of only 12 ft. available, the architect faced the problem of making the vestibule as spacious as possible—both apparently and actually. By the use of an asymmetric plan, and smaller free-standing displays the apparent scale of the entire shop front is increased—at the same time focusing attention on the merchandise itself. Architect: MORRIS LAPIDUS for ROSS-FRANKEL, INC.



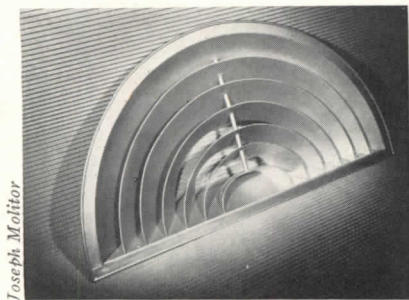
Photos by Gottscho



Photos by Gottscho



CHARACTERISTIC of a current trend in the design of retail specialty shops, this new Fifth Avenue shop for Postman's has a deceptive appearance of simplicity. Actually, it represents close study of advanced merchandising techniques. Here equipment—all storage and most display—has been concentrated along one wall: the opposite wall is free except for two displays and a huge mirrored panel. This, together with high illumination levels in the display cases, serves first of all to focus attention on selected aspects of the merchandise itself. The glass-railed balcony (facing page) not only allows for future expansion but adds considerably to the apparent width of the shop. Case and cabinet work are finished in primavera veneer; furniture is painted: all three were designed by Mr. Lapidus and fabricated by Ross-Frankel, Inc. Floors have a three-color pattern in linoleum.



Joseph Molitor

Fig. 1. New air distributor

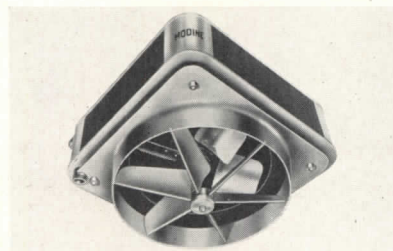


Fig. 2. New unit heater

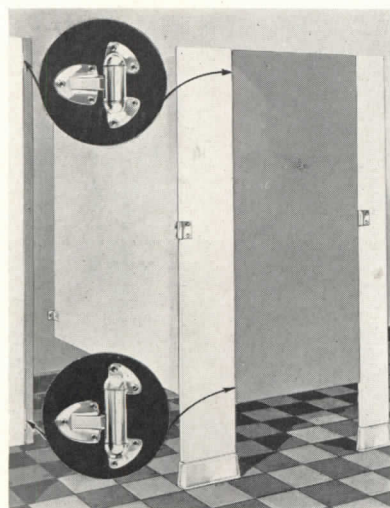


Fig. 3. New flush hinge



Fig. 4. New sanitary W.C.

Side-wall Anemostat

WALL ANEMOSTAT TYPE "W" is a new high-speed, draftless air-diffusing unit for side-wall application. Operating on a principle similar to that of the ceiling-type unit, the new device not only introduces cooled or heated air from a side wall without draft, but also creates equalization of temperatures throughout the conditioned space. (Fig. 1)

The device, consisting of a series of concentric, semielliptical flaring members, is mounted with its face flush with the wall. Installed in connection with an air-handling duct system, the wall anemostat converts air, traveling at relatively high velocity, into numerous air currents, traveling in layers at a variety of angles to each other. Counter currents produce an "aspirating" effect which draws 35% of room air into the device. Here this room air mixes with the primary air flowing through the duct, causing stabilization of temperature in the conditioned area.

Engineering tables for the wall anemostat set up limitations and restrictions which have been established for the guidance of designing and application engineers. Anemostat Corporation of America, 10 East 39th St., New York City.

Vertical-delivery Unit Heater for air "curtain"

MODINE has now added to its line 11 models of vertical-delivery unit heaters, ranging in capacity from 30,000 Btu per hour to 471,600 Btu. (Fig. 2). They are equipped with adjustable spoke-type cone-jet deflectors so that the warm-air stream may be formed into a narrow, jet-like vertical cone for high-up installation; a low broad cone when unit is installed relatively close to the floor; or concentrated at an angle to any side.

They are suggested for use in factories (as for crane ways) or any other place where high clearance is essential; over store and office doorways to provide a curtain of heated air to offset in-pressing winter gales, etc.

For a room where a single unit heater is sufficient, the vertical heater gives delivery of heat to entire perimeter of the room, or, if desirable, it may be focused in a limited direction. In multiple installations, the deflectors may be controlled so as to give more delivery of heated air toward outside walls. Modine Manufacturing Co., Racine, Wisconsin.

Surface-type Gravity Hinge

THE NEW SURFACE-TYPE gravity hinge illustrated (Fig. 3) is now a standard part of Ferrometal's Flush Top toilet-partition assembly. The hinge, along with a matching top pivot, is attached to inside of door with machine screws, without mortising of either door or partition. The hinge has adjustment permitting door to be set at closed or any open position desired. Milwaukee Stamping Co., Milwaukee, Wisconsin.

Sanitary Type W.C.

THE "ESQUATOR", was developed for public-toilet installation. Designed to reduce possibilities of infection, the unit is for use without physical contact. Even the flushing mechanism is foot-operated. (Fig. 4). Other points mentioned in its favor: no seat-replacement problem; no paper either needed or wasted on seat covers; discourages washroom loitering. Crane Co., 836 So. Michigan Avenue, Chicago, Illinois.

Prefabricated Shower Unit

RECENTLY ANNOUNCED is a new prefabricated, heavy-duty shower, made of Monel with cast-stone base. For installation in industrial plants, schools, and institutions. Advantages claimed: rust-proof, easy to maintain; installation requires but a fraction of the time needed for built-in units. Fiat Metal Manufacturing Co., 1207 Roscoe St., Chicago, Illinois.

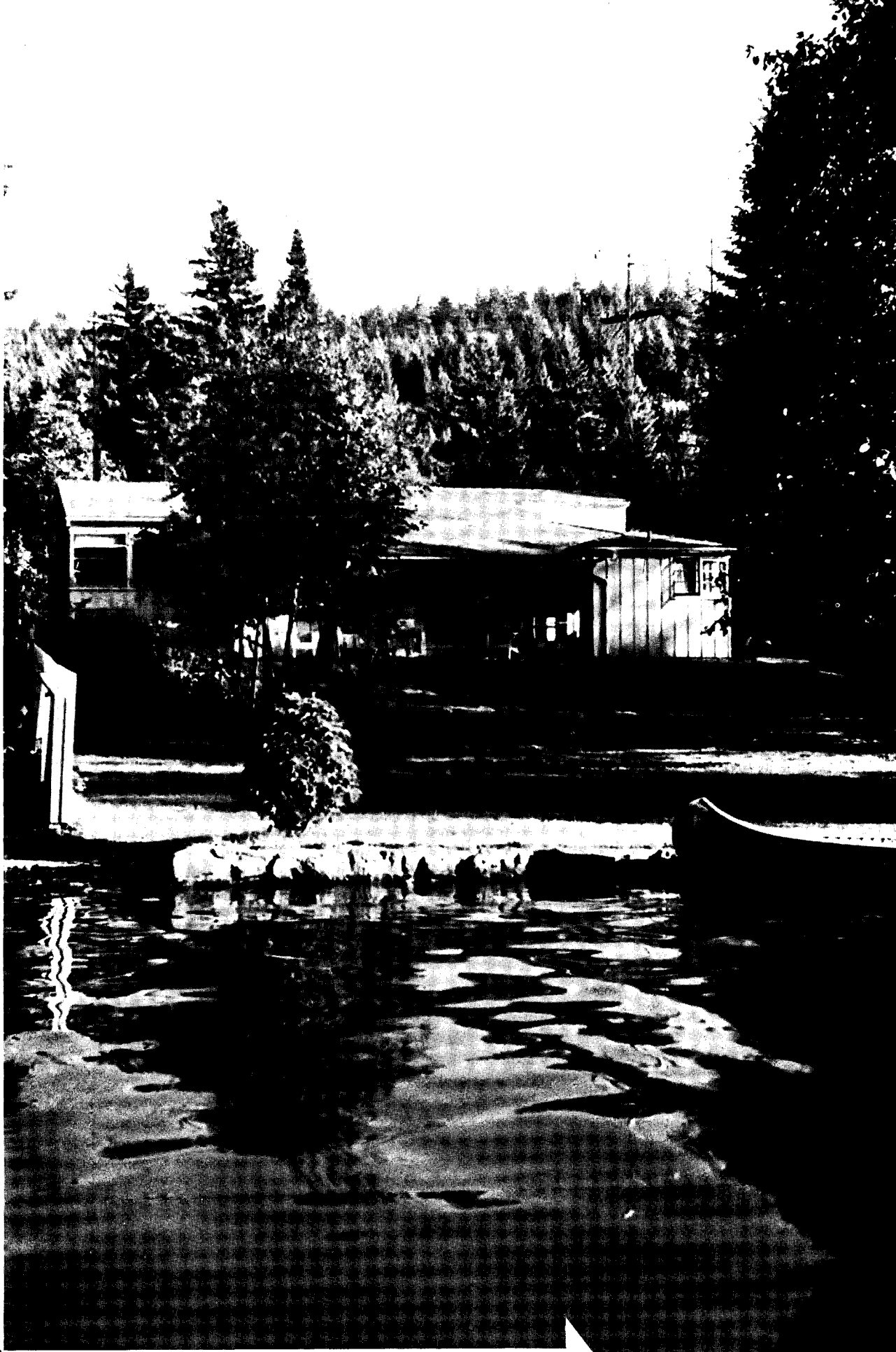
Ventilator Brick

A NEW METAL ventilator brick for adding air spaces in insulated houses, in storage rooms, cellar rooms, and other masonry-enclosed areas. Made of cast semisteel with louvered exterior spaces and water drips top and bottom, the brick-size unit extends through the entire wall to the inner wall surface and may be laid up as construction progresses. Equally adapted for use in frame or concrete wall construction. The Majestic Company, Huntington, Indiana.

Silent Flush Valve Uses No Screens

THE NEW WATROUS Silent-Action Flush Valve, just announced, obtains its quiet operation without the use of screens,

(Continued on page 140)



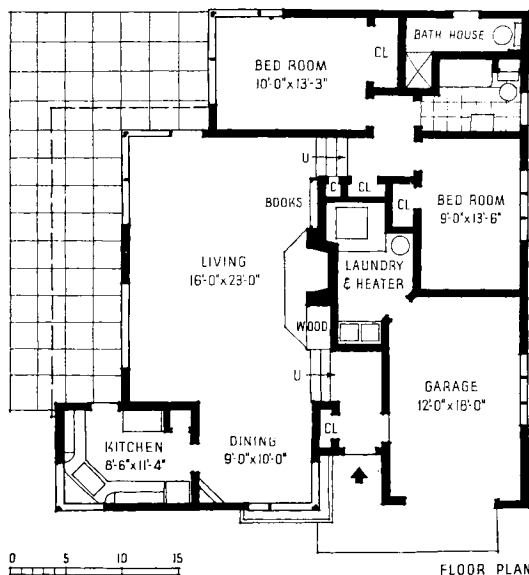
HOUSES FOR OCCASIONAL OCCUPANCY 



HOUSE ON A LAKE FRONT IN OREGON

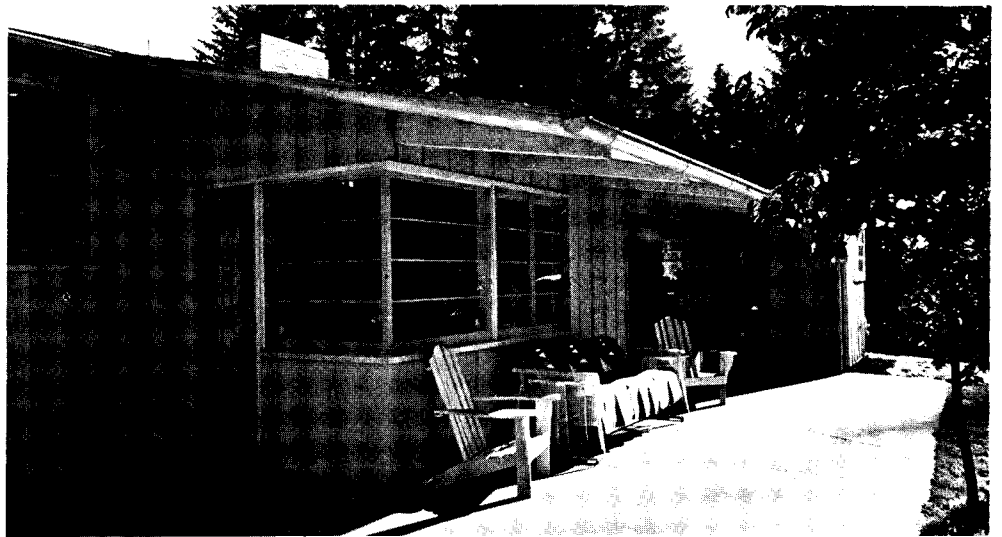
This house for Mr. and Mrs. John Carter on Lake Oswego by VAN EVERA BAILEY, Architect, is an interesting example of an attempt to handle the design in a modern way and yet to retain a touch of rusticity. This is accomplished by combining simple, low lines and modern detail with a sloping roof.

THE FUNDAMENTAL IDEA in the design of this house, says Mr. Bailey, was to "make living in the yard a natural function of the house." Consequently the lake elevation overlooks a terrace and a lawn that slopes gently down to the water, where the owners' boat is anchored. Storage room for the boat is provided under the front bedroom, as the water level did not permit inclusion of a basement. For easy access to living room and kitchen from the outside, it was necessary to keep the floors of these rooms at terrace level. The slight rise in the site is taken care of by steps that occur between the living-room level and the entrance-hall bedroom level.

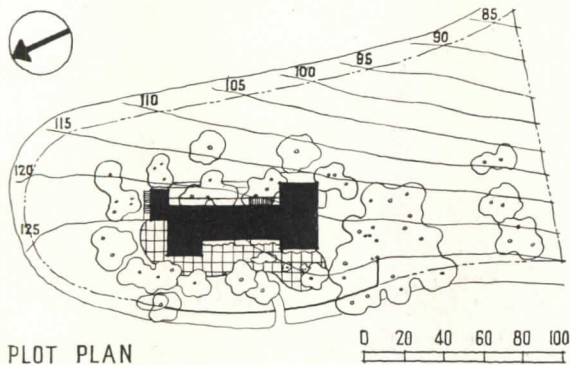




Photos by Roger Sturtevant



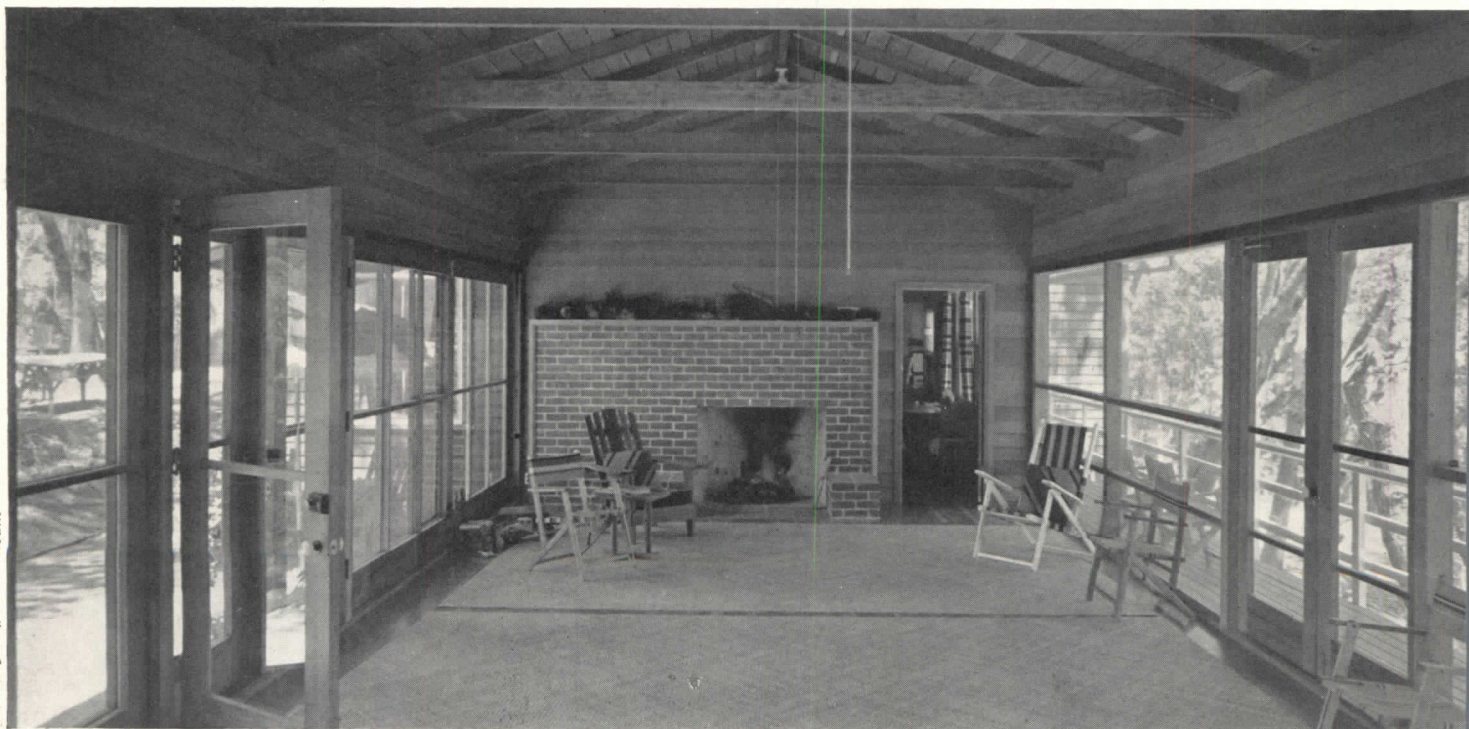
The exterior is of rough-sawn fir boards, painted off-white with terracotta trim. For shelter against glare, the roof is extended past the living-room wall and overhangs part of the terrace (right center). The living room (right bottom)—like the rest of the interior—is plaster, painted off-white with varying shades of pink; the shed-roof ceiling is of rough-sawn plank and 6 by 8-in. exposed beams, painted with cold-water paint.



PLOT PLAN

A WEEKEND RETREAT IN CALIFORNIA

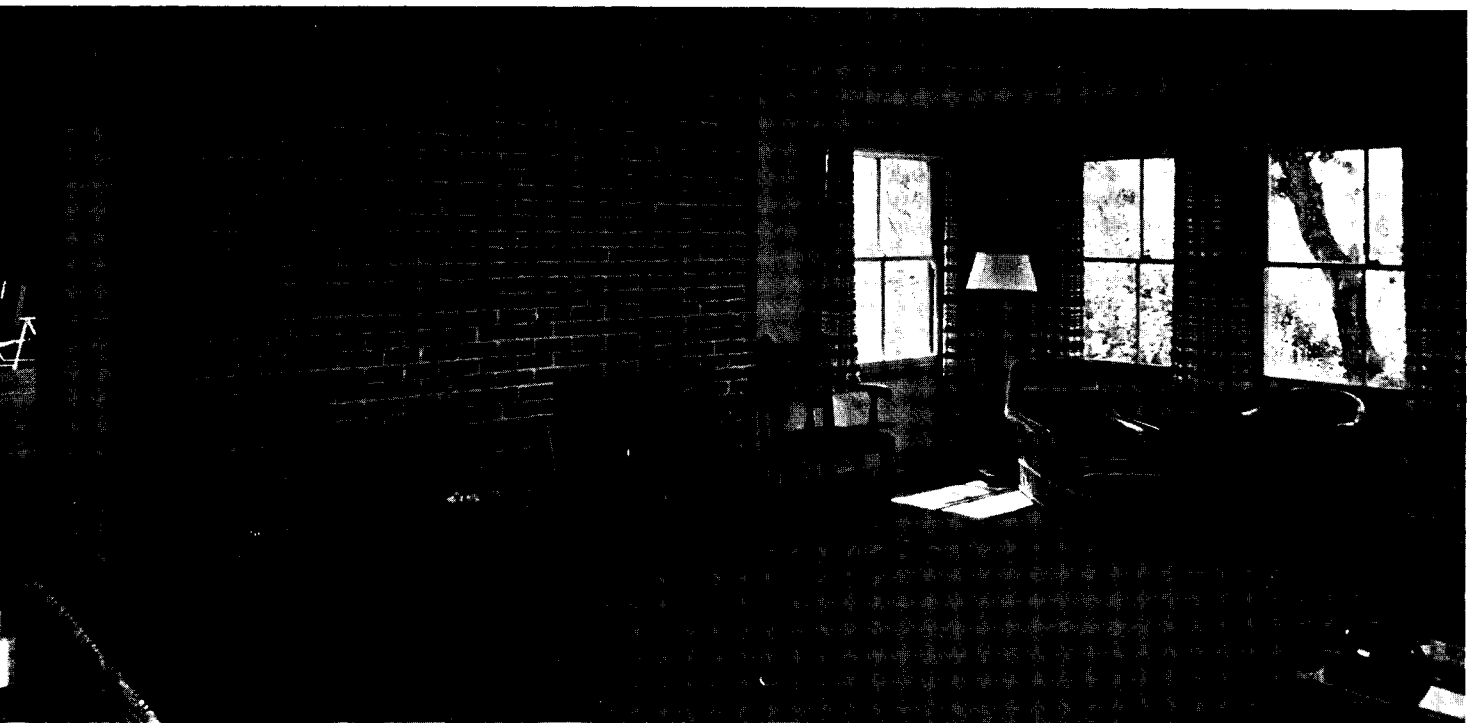
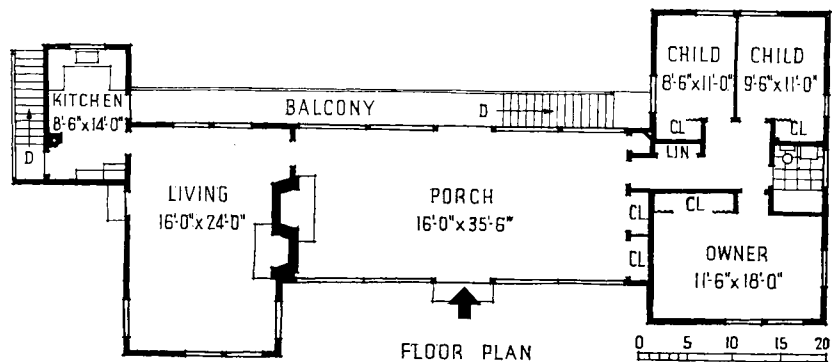
Intended primarily for weekend and summer use, this house for Dr. and Mrs. A. V. Pettit by Architect WILLIAM WILSON WURSTER is situated in Kentfield, Marin County, across Golden Gate Bridge from San Francisco. The informal character results partly from the use of simple materials, partly from the open plan scheme.



Photos by Roger Sturtevant



ALL THE MAIN ROOMS are on the same level as the entrance; as the lot slopes quite steeply at the rear, it was possible to include a maid's room and laundry on that side at ground level. The feature of the house is a living porch, open on both sides, which connects the living and sleeping areas. At the rear a balcony runs the length of the living porch and overlooks the wooded hillside. Beveled redwood siding, oiled with linseed, is used on the exterior, with a trim of the same material, painted white. The roof is of untreated cedar shingles. Interiors are simple, with walls of all rooms surfaced with untreated Ponderosa pine plywood.





NEW YORK COUNTRY GUEST COTTAGE

This whimsical and colorful little peasant cottage, built on the Vernon H. Brown estate at Sand Pond, N. Y., was designed by Architects POLHEMUS & COFFIN to house: (1) extra guests and (2) a completely equipped kitchen where Mrs. Brown indulges her hobby of canning and preserving. "Every attempt was made to produce an effect of playfulness," the architects comment, "but in such a way that it would not interfere with practical use."

INSIDE AND OUT, the cottage is bright with color. The exterior batten boards are painted chalk-blue; the trim, white. The brick chimney is painted a bright red, with joints outlined in white.

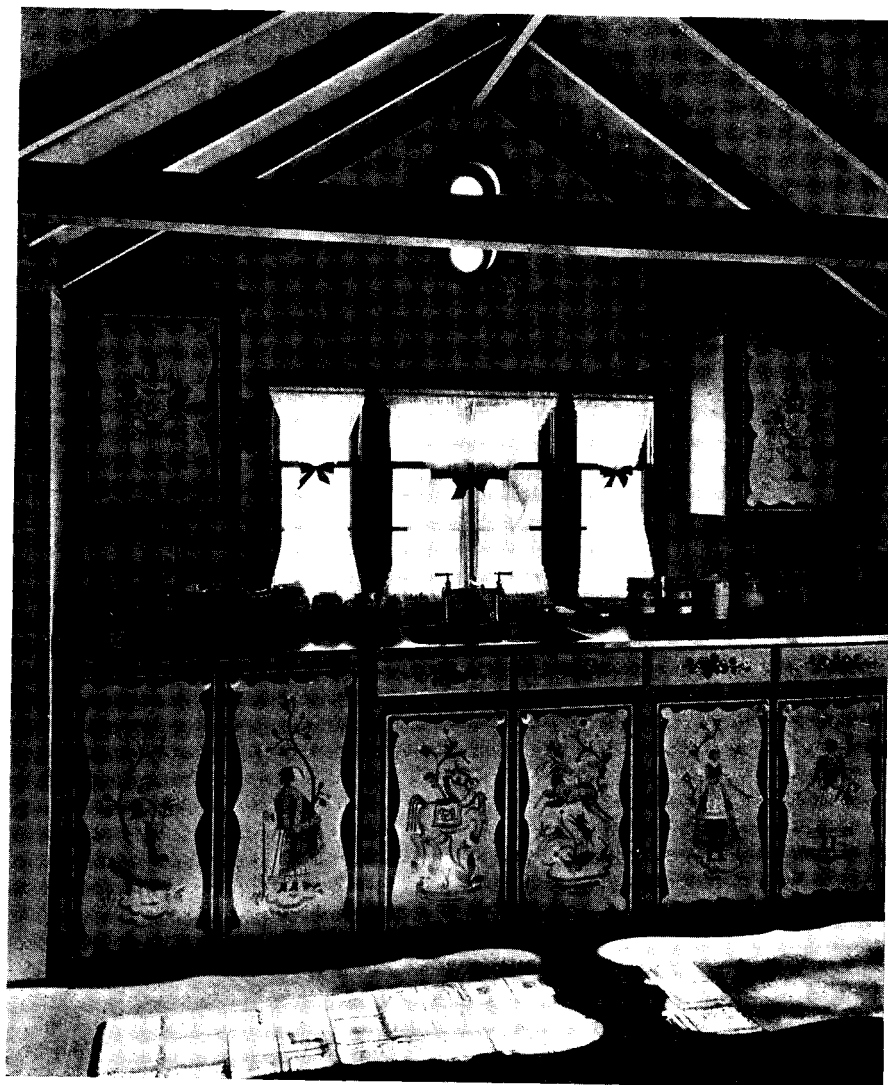
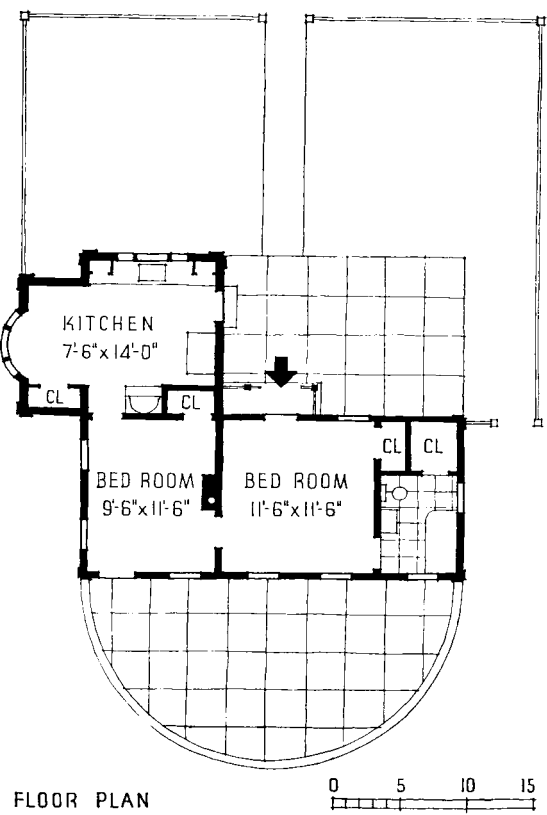
The interior of the house is entirely of wood. Floors are wide boards, and both walls and ceilings are of flush boarding, with applied decoration. The Scandinavian peasant motifs were executed by Fred Barnum. In the bedrooms, Mr. Barnum's scheme consists of pastel blues, pinks, and grays against a gray-white background. In the kitchen, more vivid coloring is used. Backgrounds and borders are bright red. This same red also accents the figures on the cabinet doors, shown in the photograph at top, next page.

In all of the rooms, note that the painted ornament is concentrated around either structural members or design features—on door panels, around windows, or to decorate exposed beams and the spaces between them.

Photo at top is the bedroom side of the cottage, which commands a view of a lake. At left are shown the porch entrance to one of the bedrooms (left) and the kitchen door (right).



Photos by Gottscho

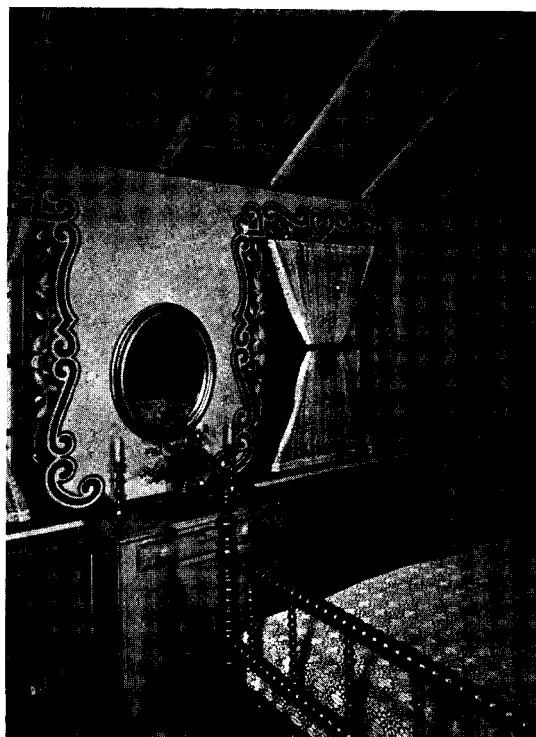


Kitchen work center

Larger bedroom



Other bedroom





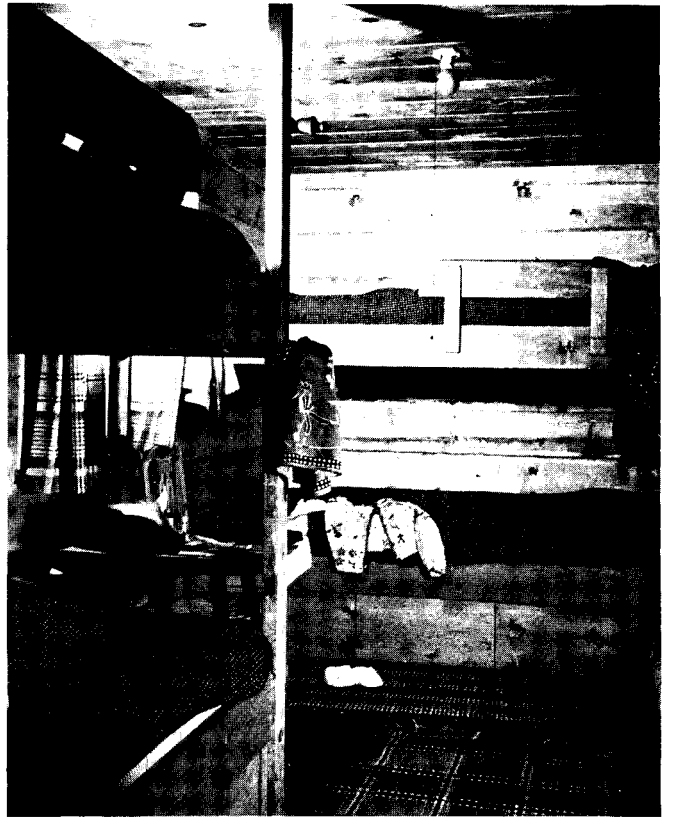
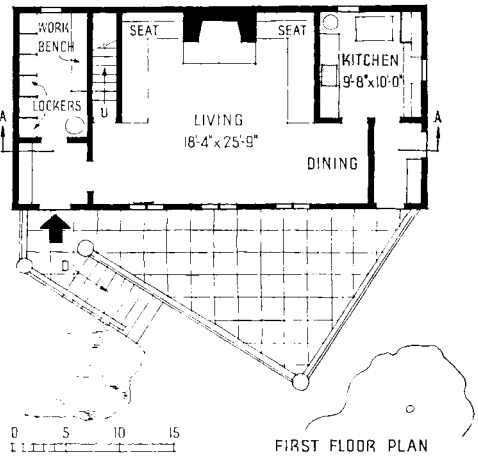
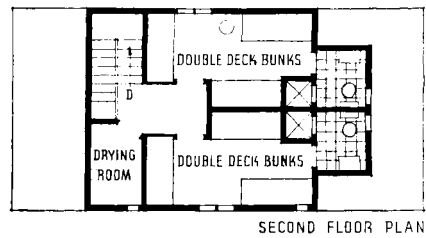
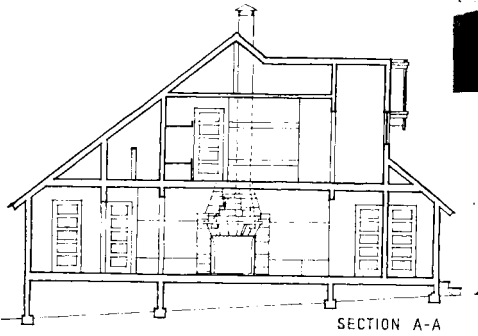
A SKI CABIN IN THE HIGH SIERRAS

Reminiscent of a Swiss chalet but refreshingly simple in detail, this cabin at Soda Springs, Calif., was designed for Dr. and Mrs. Ralph A. Reynolds by FRANCIS E. LLOYD, Architect. Winter in Soda Springs is generally severe, and snow depth sometimes reaches 20 ft.; this fact, together with the occasional occupancy, presented problems in equipment and maintenance for which special solutions had to be evolved.

THE OWNER wanted a cabin designed primarily for winter use, and felt that a relatively small living room and minimal sleeping quarters were consistent with that fundamental program. It was also felt that if concessions were made to permit possible summer use, some of the "ski-lodge" character would be lost. Consequently the plan incorporates a number of facilities for caring for winter sports equipment. A prime requisite also was that the house should be easy to open for use and close afterwards. This necessitated particularly a means of taking care of the plumbing; the problem was solved by placing valves in the kitchen for draining all the pipes and the water heater. The structure is wood frame on a continuous concrete footing. The exterior is of weathered silver-gray boards; shutters are bright blue with decorations painted by Mrs. Reynolds.



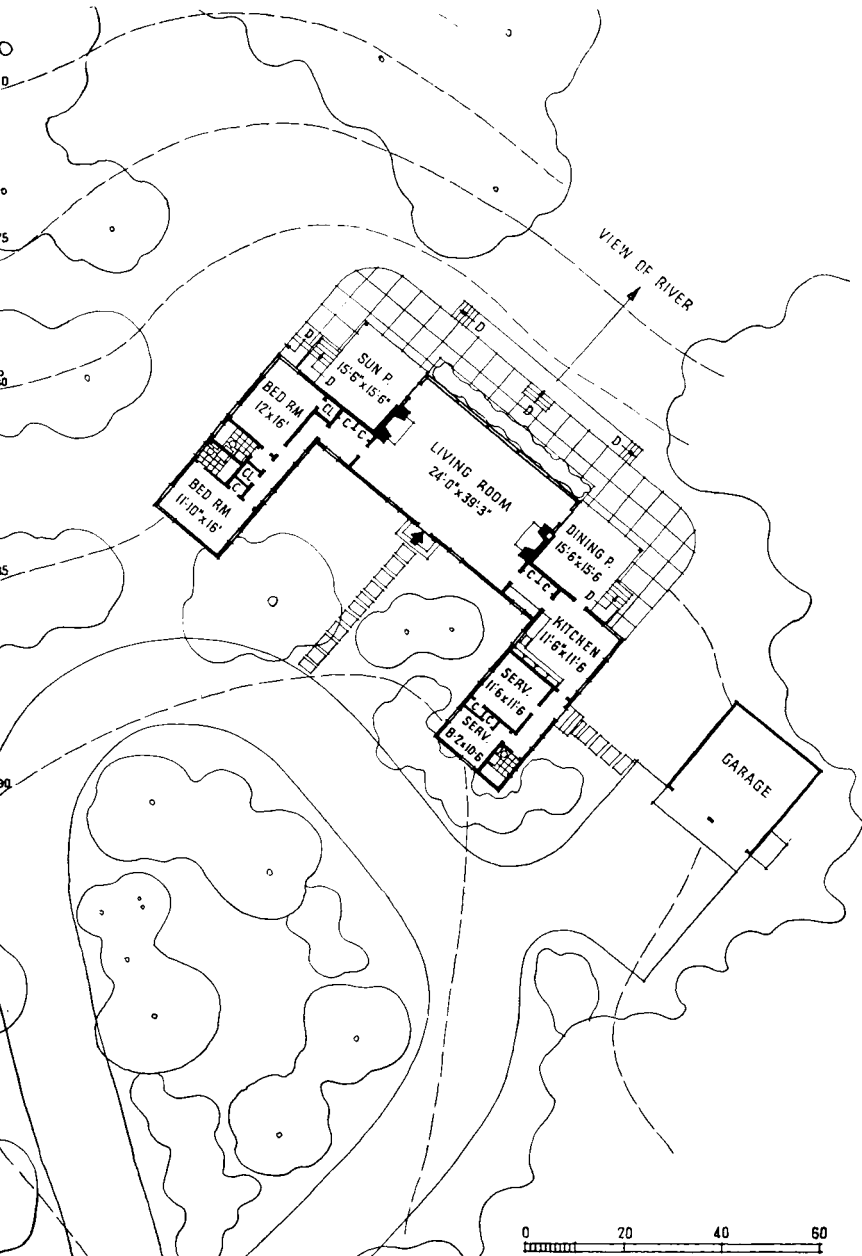
Photos by John H. Lahlman



The interior is finished with pine boards oiled with clear linseed; floors are of Douglas fir. Above is a view of the living room with its large field-stone chimney. Below is a typical bunk room, equipped with three double deckers.



Photos by Stovell

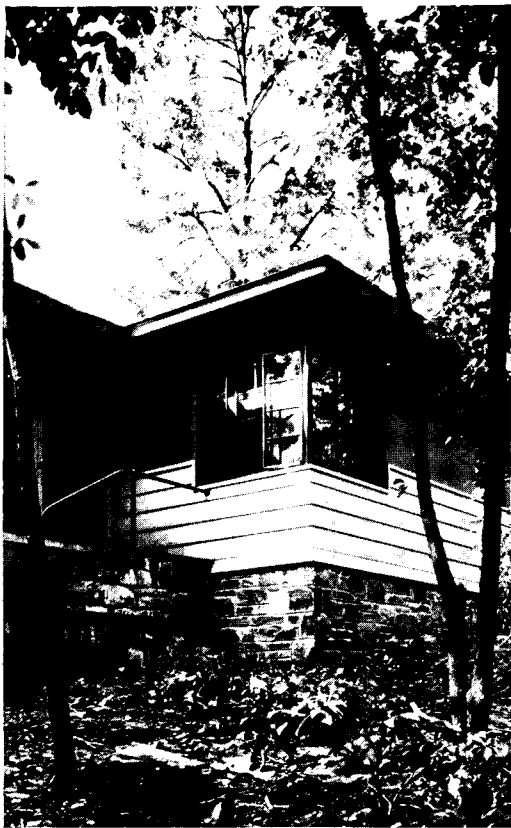


LODGE ON THE POTOMAC RIVER

In this lodge for Mr. and Mrs. Eugene Meyer, near Greenway, Va., Architect WALDRON FAULKNER satisfied the program's prime requisite—to provide a view of the river from the house—by placing all the living spaces on the river side and making them as open as possible.



The front door is painted orange.



THE SITE for the lodge is a ledge on a bluff above the Potomac River; the long, rather flat lines of the house fit into this landscape. Appropriate also to the surrounding woods are the colors used on the exterior: putty color for trim and lower portion, with terra cotta above. Doors and sash are orange. The feature of the plan is the living room, one wall of which is given over entirely to windows; flanking it, on the river side of the house, are two screened porches. Servants' rooms and kitchen are arranged in one of the two wings; in the other are the owners' sleeping quarters. The three main elements—sleeping and living areas, and service—are thus nicely differentiated. All rooms receive ample light, and the roof overhang cuts down the glare. The construction is frame with an exterior finish of white pine, painted. Large areas of steel sash are used; these are supported at intervals by Lally columns.

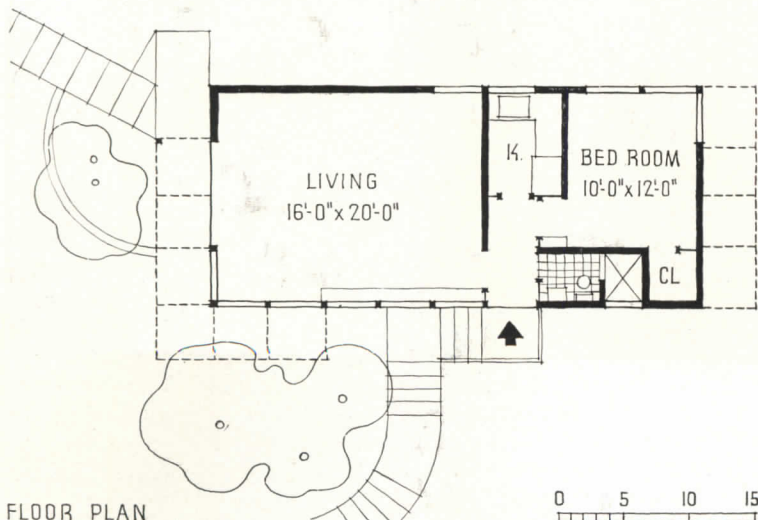
Above, left, detail of steps from sun porch to terrace. At right are shown the river elevation of the house (top) and the living room (bottom). Walls of this room are of waxed oak plywood; ceiling is V-jointed pine boarding, painted putty color; floor is deep-purple linoleum with a pale-green border. The moulding around the fireplace is painted orange.

GUEST HOUSE ON A LOS ANGELES HILLSIDE

Designer GREGORY AIN planned this studio-guest house in the hills near Los Angeles for Slavko Vorkapich. Consisting merely of a living room, bedroom, kitchenette, and bath, it was designed to reduce maintenance to a minimum. Toward this end, Mr. Ain has used large unbroken surfaces with no applied ornament and has incorporated considerable built-in furniture. The house is constructed of prefabricated panels, the whole design being based on a 4-ft. module.



Photos by Fred R. Dapprich



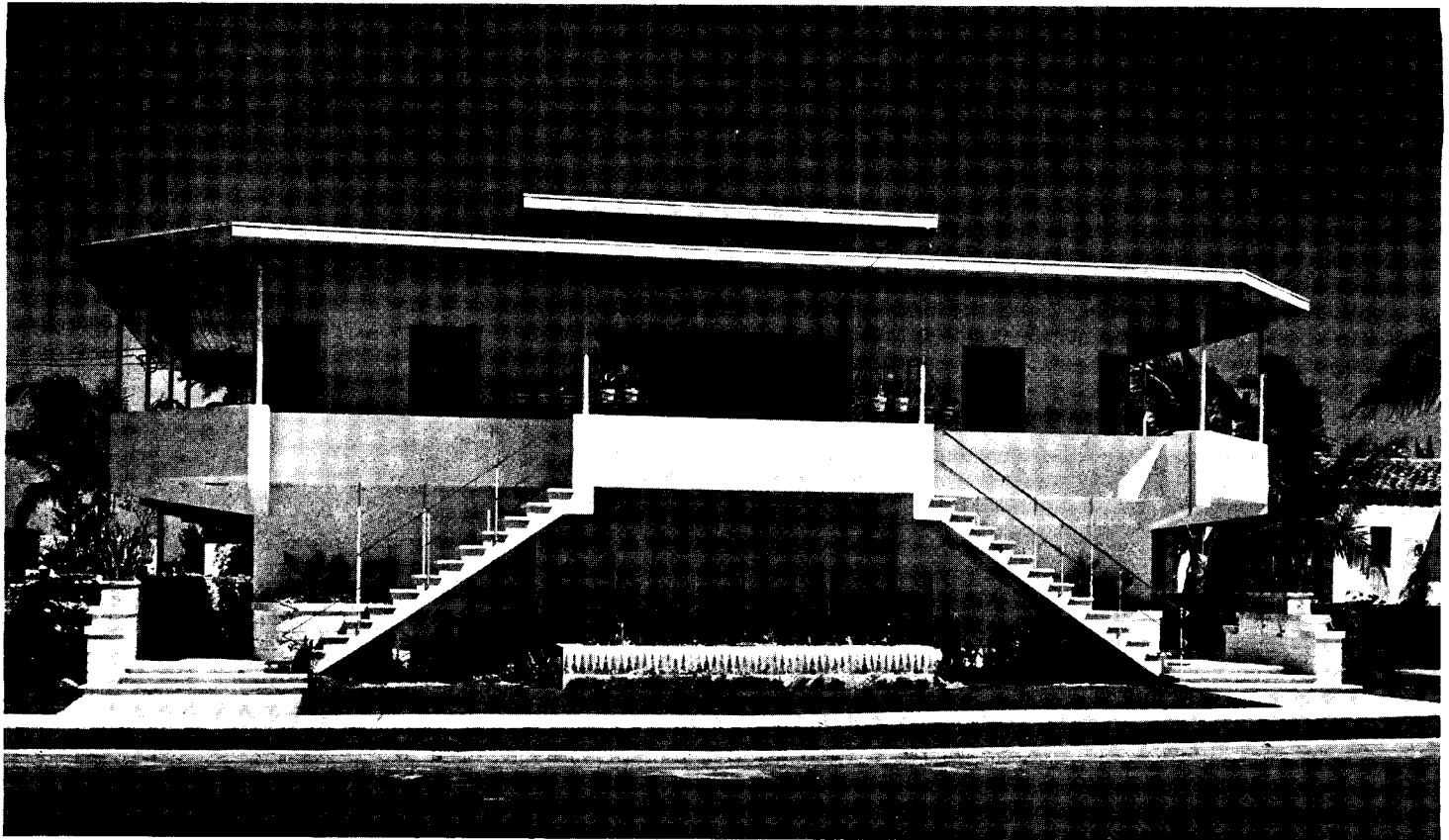
FLOOR PLAN

THIS COMPACT modern cabin is placed on a flat shelf among the treetops of a steep hillside. From the all-glass window end of the living room, there is a broad view.

The prefabricated plywood wall panels, 4 by 8 ft. in size, key into a frame of 4 by 4-in. posts, 4 ft. on centers. Where the big windows occur, the sash simply take the place of standard panels. The roof is composition, laid on 1/2-in. three-ply sheathing. Ceilings are of 4 by 8-ft. insulation board.

Both exterior and interior walls are painted light cream. The trim is gray green to harmonize with the foliage. Living-room draperies are natural light-tan cement sacking.

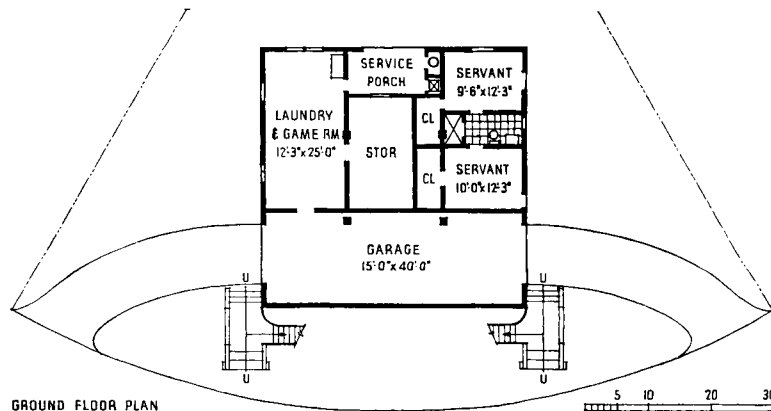
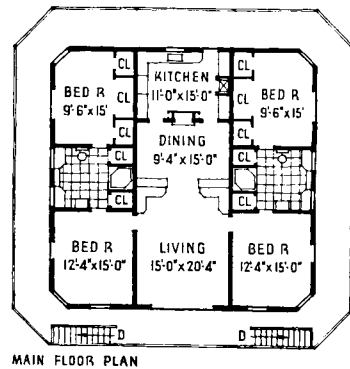




A "TROPOTYPE" SCHEME FOR FLORIDA

In designing this house for Mr. Sailing Baruch on DeLido Island, the architects, IGOR B. POLEVITZKY and T. TRIP RUSSELL, were up against a number of problems: they not only had to contend with a tropical climate, but the wedge-shaped lot was at the end of a semicircular block, remote from any immediate view of Biscayne Bay. But the owners wanted a view—and the architects captured it for them by an ingeniously simple solution.

TO MEET THE NEEDS of Florida's tropical climate, this extremely schematic plan was evolved; hence the name "Tropotype." The main rooms are all on the second floor and are surrounded by an overhanging balcony from which the desired view of Biscayne Bay is obtained. Besides adding considerable area without overcrowding the lot, this balcony protects first-floor windows from tropical showers and sun. "This second-floor location of the living spaces," say the architects, "seems to be ideal for this climate and flat terrain, as it provides a maximum of ventilation and view, with a minimum of dampness and insects." Over the centrally located rooms is a clerestory which admits both light and air. On the ground floor are servants' rooms, storage facilities, and a garage. The architects took full advantage of the odd-shaped lot by making the garage a tunnel through the house. Cars drive in one side and out the other. The construction of the whole building is vibrated waterproof concrete block, unstuccoed. First and second floors are concrete slabs; the second floor is cantilevered to form the balcony. The finished second floor is of locally quarried natural coral rock, sand blasted and polished.



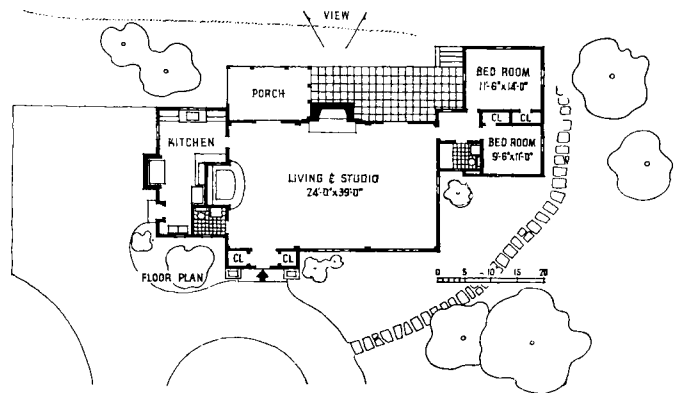
PITTSBURGH LODGE FOR ENTERTAINING

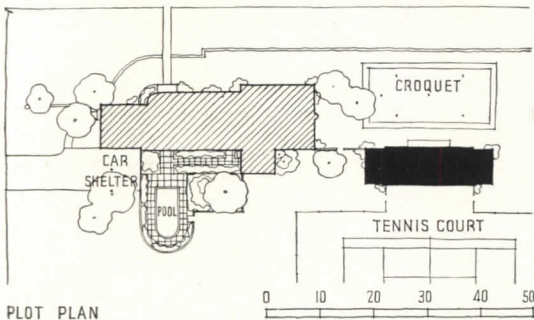
Architects FRANKLIN & BROWN had two separate problems in planning this lodge outside Pittsburgh for Mr. James P. Campbell. The owner needed a place where he could be host to from 80 to 100 business associates. Provisions for family use on weekends were a further requisite. The first demand explains the large-size kitchen, and the living-studio. The compact bedroom wing is the answer to Problem No. 2.



R. P. Hay

THE CONSTRUCTION of the lodge has several unusual features. Up to the sill line, the walls are native stone. Above, the frame consists of 4-by-4 posts, 24 in. on centers. Exterior walls are white-painted vertical boards and battens, attached both to the uprights and to nailing strips. The framing posts show on the interior. For finish between them, panels of insulation board are recessed about 1 in. back from the face of the 4-by-4's, with a finish moulding around the edges, giving the effect of deep paneling. The windows are wood casement; the roof, asphalt shingles. A cellar beneath the bedroom wing contains a hot-air furnace.

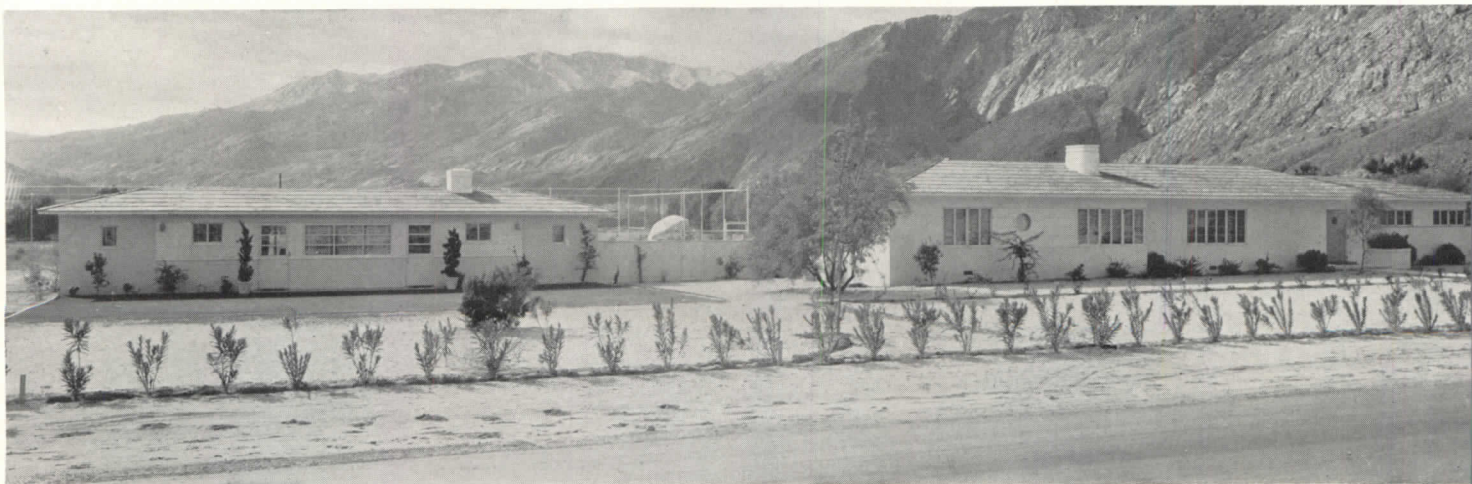




PLOT PLAN

HOUSE FOR GUESTS IN PALM SPRINGS

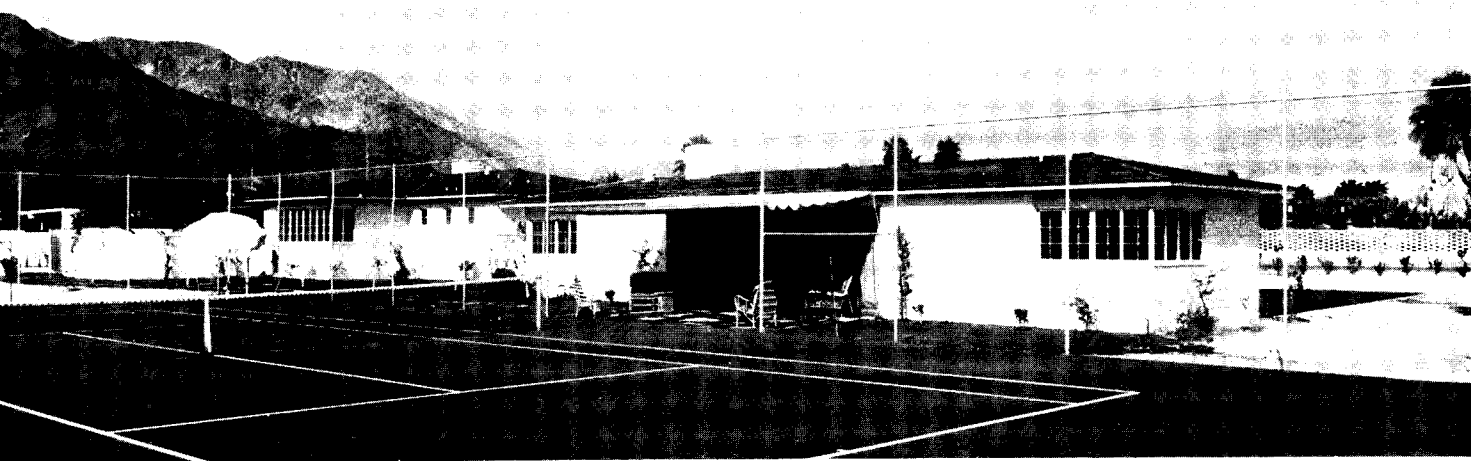
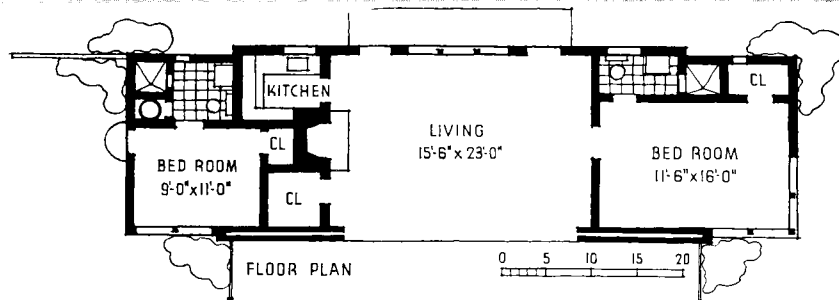
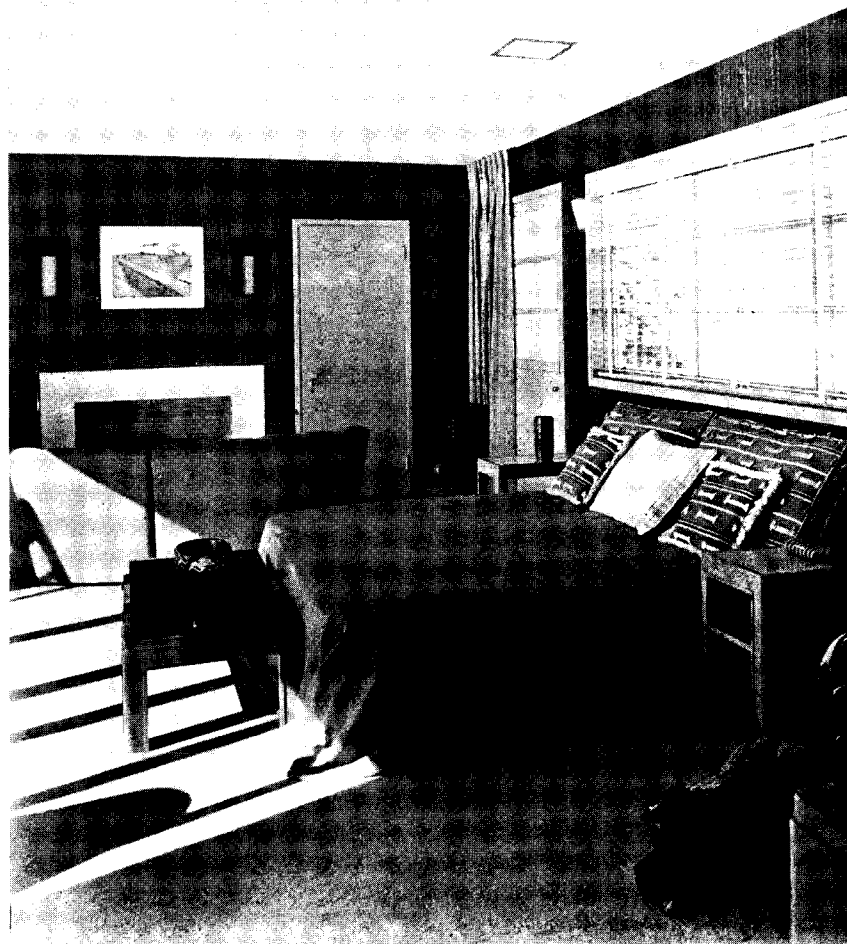
This guest house on the California desert was designed by Architect CHARLES O. MATCHAM for Mr. and Mrs. William T. Walker, of Detroit, as an adjunct to their winter home. Nicely related to the main house, it is situated between the croquet court and the tennis court. It is notable not only as a straightforward scheme for the accommodation of guests but as a solution to the specialized problems of desert living.



ALTHOUGH WINTER DAYS on the desert are often very warm, nights are sometimes very cold. For comfortable living, then, a house must be so arranged that it can be either wide open or tightly closed. To meet this situation in the Walker guest house, Mr. Matcham used huge sliding doors as one entire wall of the living room. On typically fine days, the whole room becomes in effect an outdoor sun shelter, and an awning on wires overhead pushes out to form a canopy above the flagstone terrace, where spectators may sit to watch the tennis. Sunlight is further regulated by curtains which draw across at either side of the opening.

On cold nights, the glazed doors pull together. The house is heated by unit heaters in the bedrooms and a fireplace in the living-game room. Location of the bedroom suites at opposite ends of the structure provides desirable privacy. A kitchenette and a storage room for sports equipment complete the layout.

Exterior walls are of plaster over frame construction; red-cedar shingles cover the roof. Indoors, the living room is finished in wood veneer; plaster is used in the other rooms. Floors are either waxed colored cement or linoleum.

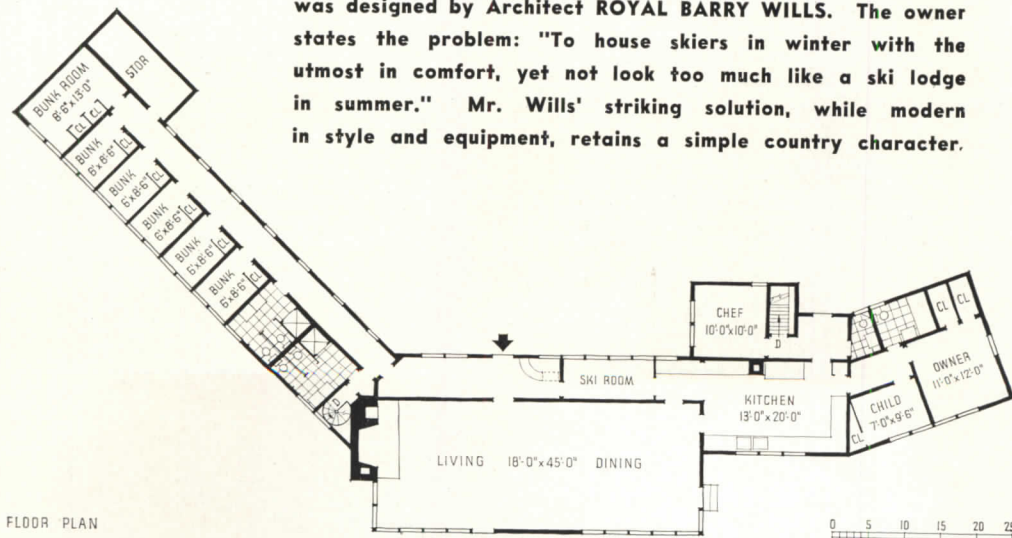




Photos by Imandt

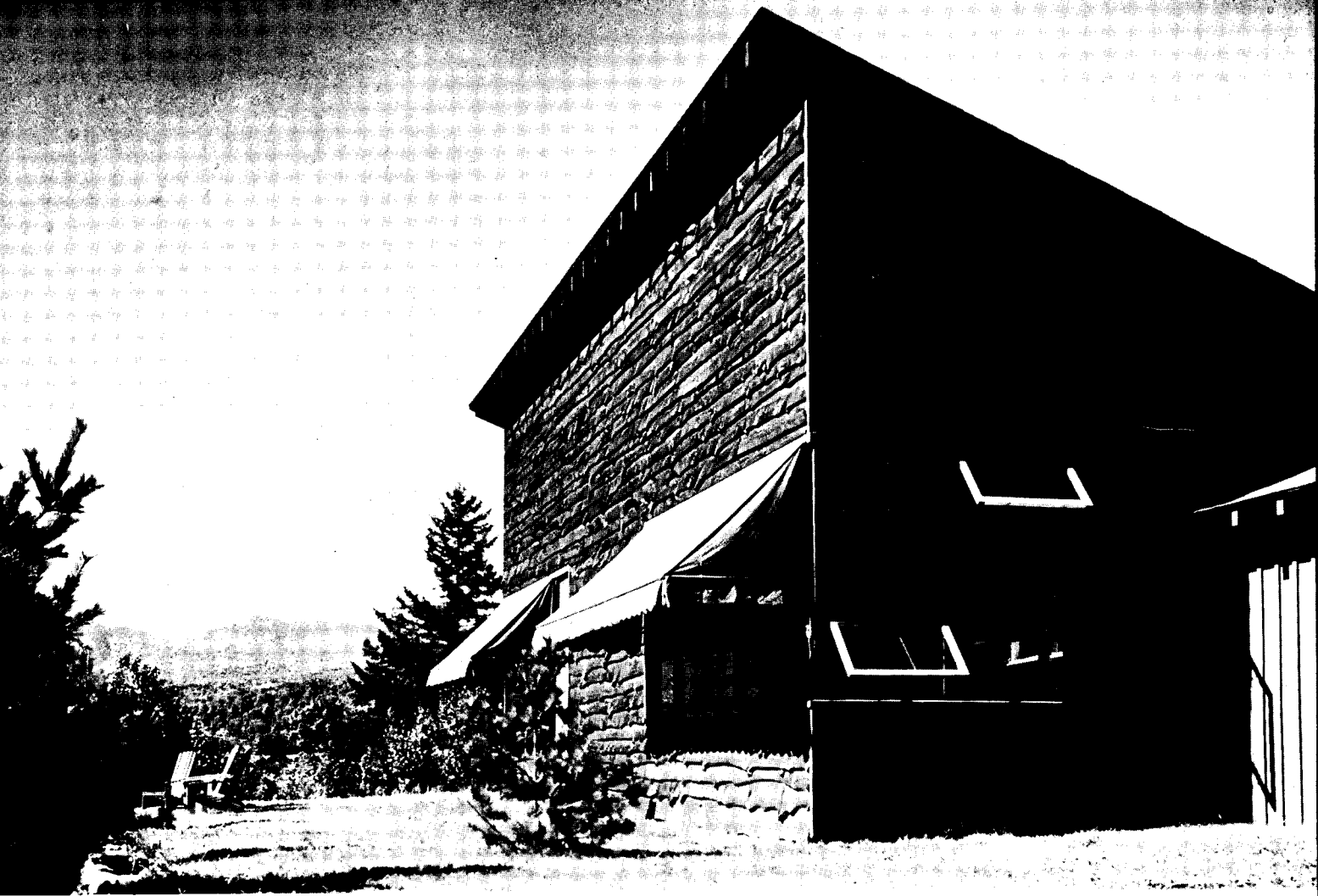
WINTER SPORTS LODGE IN VERMONT

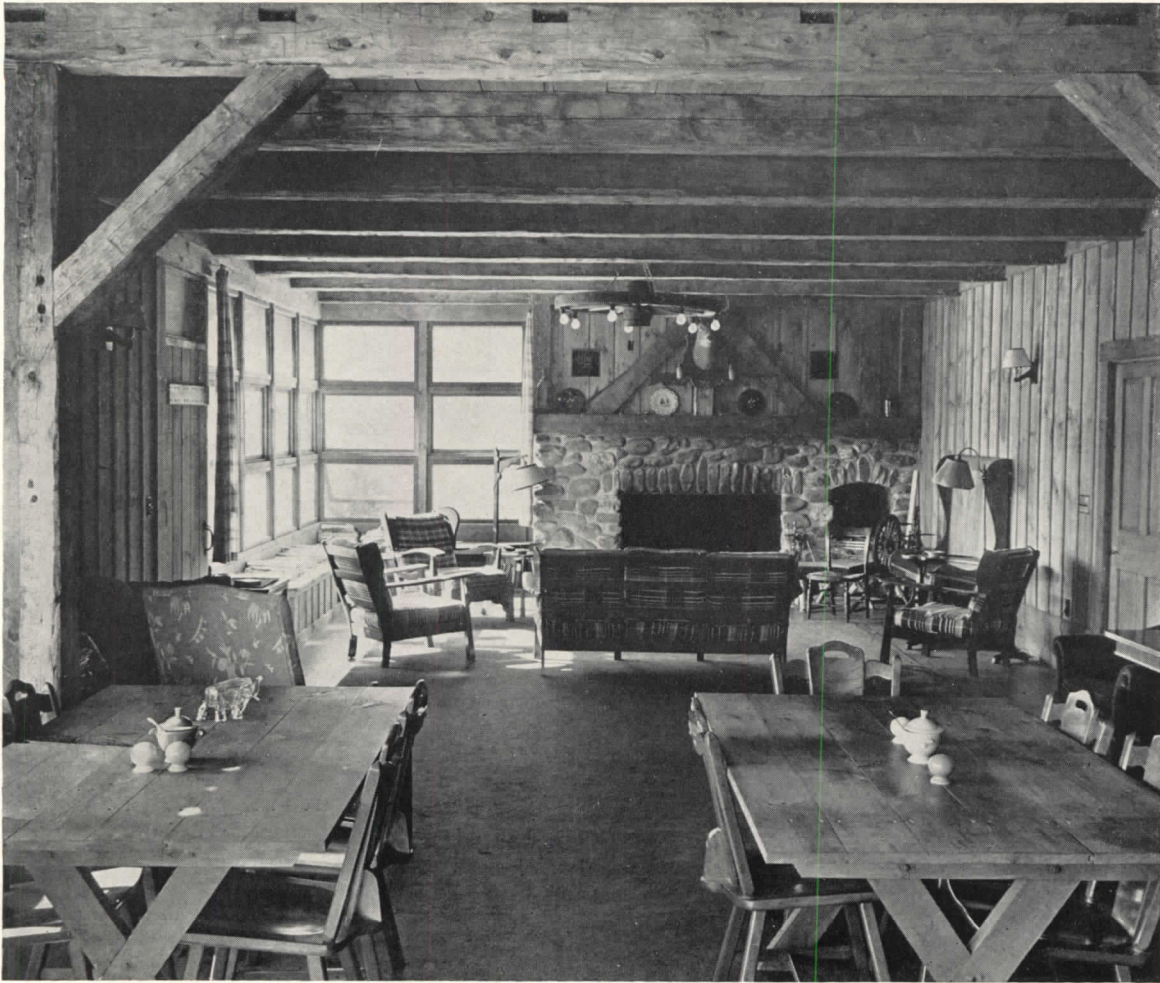
This sizable ski lodge for W. Kenneth Hoyt, at Stowe, Vt., was designed by Architect ROYAL BARRY WILLS. The owner states the problem: "To house skiers in winter with the utmost in comfort, yet not look too much like a ski lodge in summer." Mr. Wills' striking solution, while modern in style and equipment, retains a simple country character.



FOR THE WALLS of the central portion of the lodge, Architect Wills used rough hemlock siding, stained a dark reddish brown. The two wings are finished in vertical boards and battens. To keep the house comfortable, all outside walls and ceilings are thoroughly insulated.

The plan consists of three distinct areas. The right-hand wing contains living quarters for the year-round use of the family, with kitchen and servant's room. The central general living room, entrance hall, and equipment room are the headquarters and activity center for large gatherings. In the left-hand wing are bunkrooms for 14 guests, with separate toilet facilities for men and women.

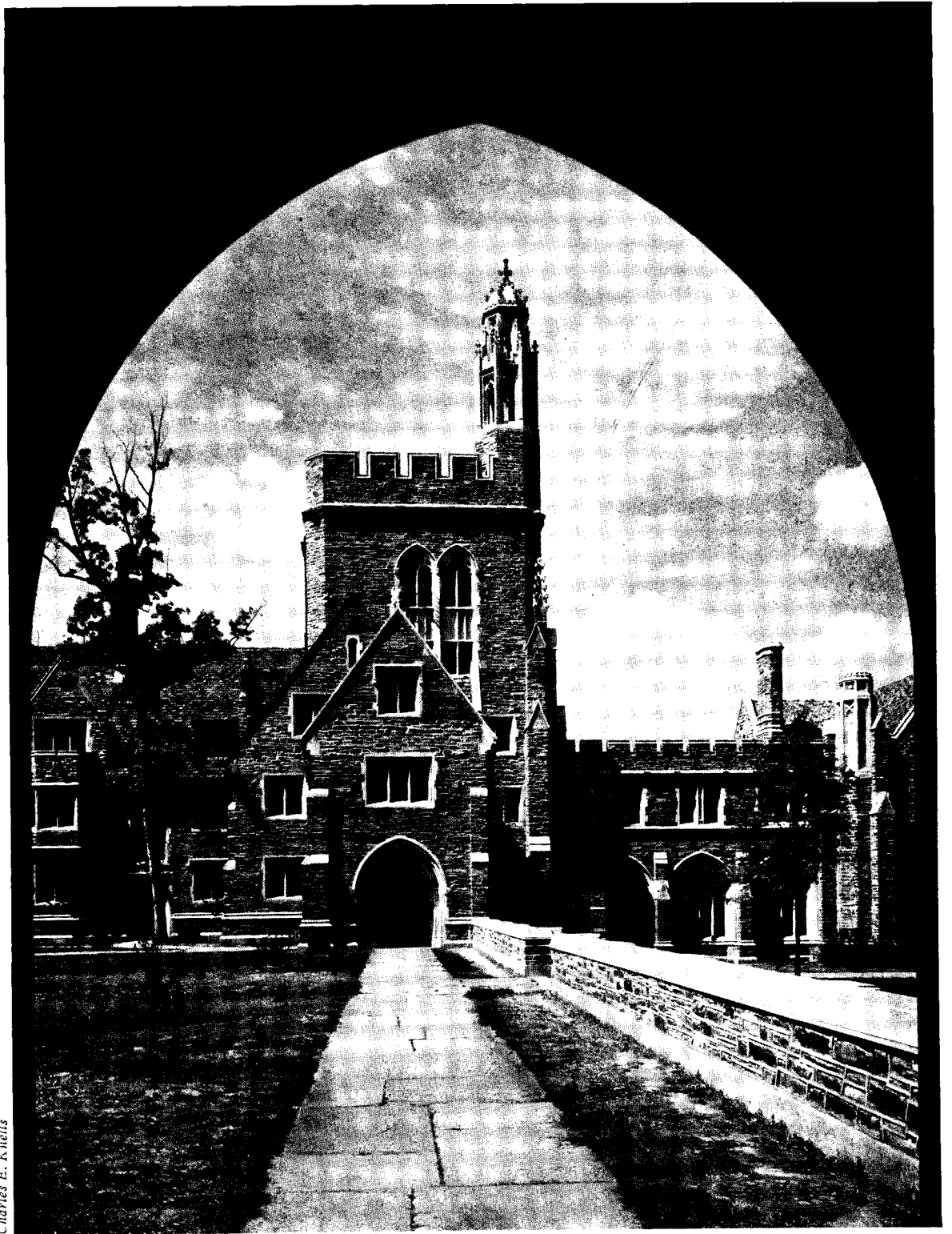




Photos by Imandt



In the large living room of the ski lodge, the walls are finished with native pine boards and battens. According to the owner, the heat-circulator fireplace by itself has heated the 9,000-cu.-ft. room to 72° when it was 35 below outside. Supplementing this is a central steam-heating system, with furnace located in a small basement, which serves the entire establishment. For bunk-room walls (photo at left), Mr. Wills specified insulation board.



Charles E. Knells

ARCHITECTURE IS TOPS WITH RECENT GRADUATES—BUT

how effective was their education? How accurately did it prepare them for actual conditions in the building field? Faced with an unparalleled acceleration of developments within the building field—technical, economic, and social—American architectural schools have in recent years made drastic revisions in both their curricula and teaching methods. These trends have by now become sufficiently established to suggest a "check-up". For this purpose, the RECORD this month turns to the most likely source of such information—the architectural graduates themselves. Analysis and tabulation of their replies appear on pp. 82-87.

DESIGN TRENDS



AMONG THE BUILDING INDUSTRY'S most important undeveloped resources are the tyro architects who have received their professional degrees within the last few years. Most of them are still struggling for the opportunity to practice their profession. Few have been so fortunate as to see the products of their imagination and training expressed in concrete terms. Yet among these architectural graduates of today are the architectural leaders of tomorrow. They will set the pace of future building design, and will be responsible for tomorrow's homes, hospitals, office buildings, and factories.

Today, a very limited number are licensed and/or practicing architects; for the most part, they are just so many draftsmen, specification writers, clerical workers—doing work which actually requires little or none of their academic training. It is perhaps on the foundation of this present experience

that they will make tomorrow's architecture. This hard fact remains, however: for the time being their significance is collective rather than individual.

In surveying these young architects, the RECORD aimed first to find out what types of work they have done since graduation, and how that work has remunerated them. The questions were designed to produce a picture of the present place and function of these men in the building industry, and to show to what degree that place and function correspond to their aim: the practice of architecture.

The second purpose of the questionnaire was to discover how well their formal training has fitted them for such practice. Because their schooling is immediately behind them they are in a logical position to appraise it in terms of the practical problems of contemporary building design. And

STATUS OF RECENT ARCHITECTURAL GRADUATES

During the past four years, approximately 2,000 architectural students have earned degrees in colleges and universities throughout the country. (Total number of degrees granted by the 33 member schools of the Association of Collegiate Schools of Architecture was 1708. Although ACSA membership increased from 30 in 1935-36 to 33 in 1939, annual number of ACSA graduates decreased from 472 to 378 in same period.) These recent graduates are now "out in the world". But what are they doing? Are they employed or unemployed? In the building field or out? Employee or freelance? Satisfied with their choice, or otherwise? To find out how they have fared during the past few years, and to analyze their reactions to their formal education and the profession itself, ARCHITECTURAL RECORD recently queried 1,000 graduates living in all parts of the country. Returns from this questionnaire exceeded all expectations—47% of the total. Although the original intention was to go back no further than the class of 1936, the list of graduates included a sampling of earlier years. Their replies are included.

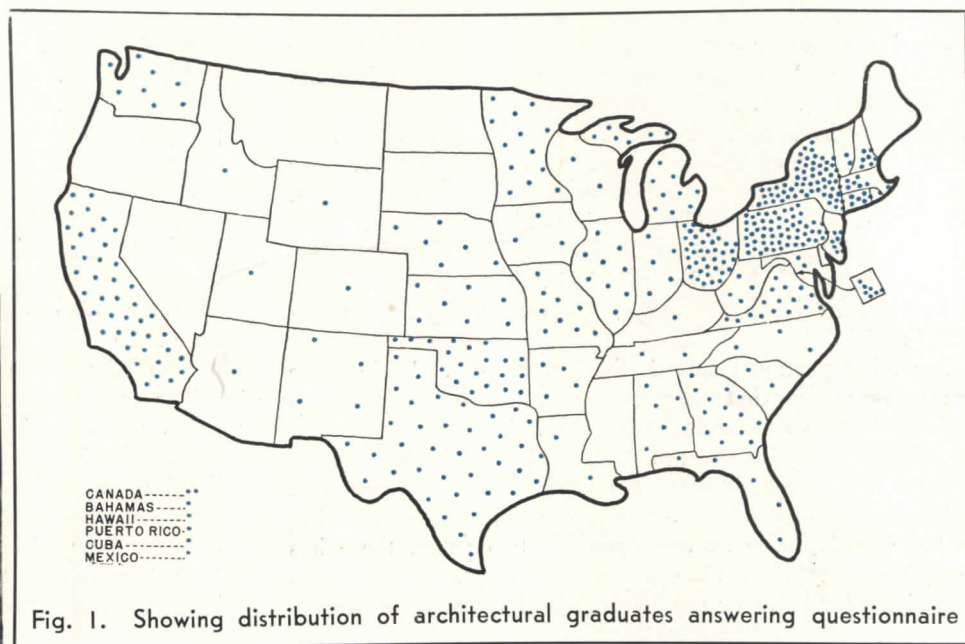


Fig. 1. Showing distribution of architectural graduates answering questionnaire

many of those answering the questionnaire took advantage of this position to comment in rich and enthusiastic detail. Underlying their comments is a reflection of the (still) great contrast between the cloistered academic life of school and the hard business of making a living. There is no gainsaying the fact that the impact of practical experience has definitely conditioned their attitude. In fact, with this contrast vividly before them, they are considerably more caustic than their elders would probably be.

That this questionnaire has produced a geographically representative cross section of architectural graduate opinion is reflected in the map. (Fig. 1). Thirty-seven states and the District of Columbia are represented. In addition, a total of eight questionnaires was received from Canada, the Bahamas, Puerto Rico, Mexico, Hawaii, and Cuba. Twenty

of the questionnaires returned did not indicate the residence of the respondent.

Logically, the greatest concentration of replies is in the areas of population (and building) concentration. But the South and Middle West are well represented. In number of replies, New York and Pennsylvania are well in the lead, although California, Texas, and Ohio are important runners-up. Unexpected was the relatively large response from both Georgia and Oklahoma.

To what extent answers to such a "Gallup poll" can be considered as definitive is of course a moot question. But they do serve to establish certain important trends; and the chances are that a complete coverage would not materially alter the picture of postgraduate experience which they present.

STATUS OF GRADUATES: EMPLOYMENT AND OCCUPATION

The 465 architectural graduates who answered the questionnaire represent a favored group of this country's workers. They have received the benefits of a higher education, and have been trained for an important function in America's most important industry. Yet 13%—60 of them—are currently unemployed. (Fig. 2). This proportion is large, but it compares favorably with country-wide unemployment which current estimates place at from 10 to 20% of employables, and which has spared no trade, craft, or profession. But the fact that architectural graduates as a group are more fortunate than many others is small comfort to the unfortunate 13%.

The percentage of unemployment among architectural graduates varies quite consistently with the number of years they have been at work. Thus, of the 34 who graduated prior to 1936, only one—2.9%—is currently without work, while of the 1939 graduates, 15%—20 out of 114—are jobless. The implication of this variation is that an increase of even a few years in experience and age is an aid in job-getting. (Fig. 3).

In its questions regarding post-college experience, the RECORD made a distinction between the different types of jobs held since graduation and jobs held at the present time. Replies to these questions reveal that, even though architectural graduates are apparently a favored group, they have functioned, and are functioning, as almost everything but architects. (Fig. 4). Trained to design and supervise the construction of buildings, an outstanding majority of them have so far been denied this privilege. Only 11%, or 49, have at any time since graduation been engaged in private practice. They have, however, tried to stay in the building field. Only 71 have held jobs outside of building while a total of 583 different jobs have been held within it. The principal source of employment has been in architects' offices, which have provided 293 jobs.

Second important source is the Government. 19% of the graduates report that they have found haven working as Federal, State, or Municipal employees. This relatively large proportion is, perhaps, a reflection of the past decade's trend towards the employment of the profession by government.

Because the elapsed time since graduation of those replying to the questionnaire averages roughly two years, there has been relatively little time for job turnover. Nonetheless, 37% have held two or more jobs, and 15% have held three

JOBS HELD SINCE GRADUATION

ARCHITECT'S EMPLOYEE	293
GOVERNMENT EMPLOYEE	184
OUTSIDE BUILDING FIELD	71
ENGINEER'S EMPLOYEE	69
CONTRACTOR'S EMPLOYEE	61
PRIVATE PRACTICE	49
BUILDER'S EMPLOYEE	42
B'LD'G. MAT'L. M'FRS. EMPLOYEE	34

Fig. 4. Number and type of job held since graduation

or more; an ubiquitous 2% have changed jobs five or more times. There is, of course, a direct relation between turnover and year of graduation. Only 27% of the prior-to-1936 graduates have held one job, while the percentage is 63 for the class of 1939.

A characteristic of present American employment is its mobility. Most college students accept without question the fact that they will probably find work after graduation in a community other than their home (and many are "glad of it"). It is not surprising, therefore, to find that 58% of the architectural graduates went to some other city to make a living. Of this migrating group, 42% turned towards larger cities, only 15% to smaller ones. 1% report that they travel around, and have no definite place of business. This trend to larger cities apparently is a reflection of the fact that building activity is concentrated in urban areas; hence, the graduates find the biggest market for their services there. (Fig. 5).

As for present type of employment, 47% (220) of the architectural graduates covered by the survey are working as draftsmen, and are thus following the traditional path to private practice. An additional 50 (10%) of them report that they are employed as architects, and 14 are specification writers. Distinct from these groups of employees are the 42 who are practicing architecture under their own shingle—a select list that breaks down into 28 going it alone and 14 in partnership. This, however, is present employment. The questionnaire reveals that 49 graduates have been in private practice at one time or another since they left school: apparently seven new offices dropped by the wayside.

Although the fortunes of the above groups range from relatively menial and noncreative work to actual design production, at least they are all participating in some fashion in the business of building. But this listing does not cover 25%, or 108 of the respondents. These are the ones who have been sidetracked for one reason or another, and a good many of them are working entirely outside the building field.

The pattern of this present employment is shown in the chart. (Fig. 6). The fact that 434 employed graduates are covered by it, whereas 60 out of the 465 total are elsewhere listed as unemployed, results from inadvertent overlapping. For example, some have indicated that while holding a job they are engaged in private practice on the side. This chart shows graphically the large number of graduates who have been drawn away from their chosen calling into the cul-de-sac

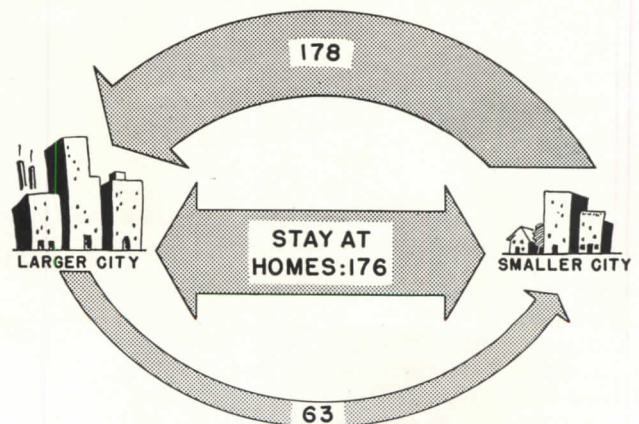


Fig. 5. Movement of graduates between communities

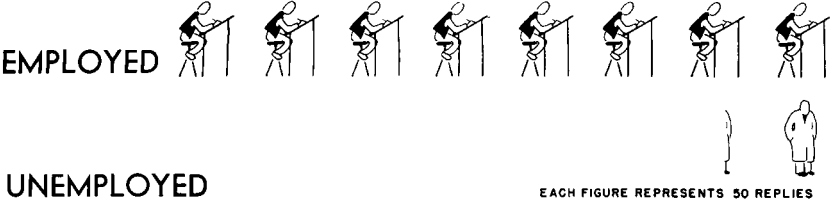


Fig. 2. The ratio of employed to unemployed graduates was 8.7 to 1.3.

PERCENTAGE OF EMPLOYED

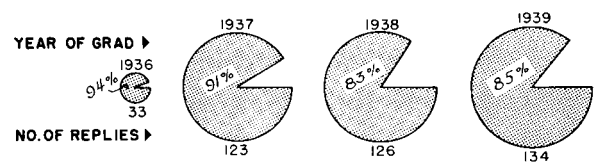


Fig. 3. Ratio of year of graduation to employment

of "other employment." It also indicates how few of the graduates achieve the opportunity for individual expression early in their careers.

State registration law: aid or menace?

The reasons behind the proportions of this chart are as complex as are the personal problems of the 434 respondents. They stem, in fact, from the economic maladjustments of the past decade, from varying individual capacities, from personal economics.

But there is an even more direct cause of the large percentage of nonarchitectural work being done. It is illustrated in Fig. 7. Although many an architectural graduate does not hang up his shingle because he cannot afford to, many another has the funds, but is not allowed to. The reason is the State registration laws.

No one will deny that buildings should be well-designed in the interests of public health and safety, and that the title of architects should be protected from fraud. But should the title require protection from graduates of the country's architectural schools? If (1) it is assumed that the schools adequately equip architects for practice (and some will deny such an assumption—even the graduates themselves, as witness the next page), then (2) it seems hardly logical that the law require a long period of practical experience before professional practice can be undertaken.

These laws act as a dam against which each new stream of graduates beats in vain. (Fig. 7). Out of 460 replies to the question concerning registration, only 42, or 9%, indicated that they had passed their State examinations. Nor does this percentage vary appreciably with year of graduation, as might be expected: of the 1936 graduates, only 15.2% were registered architects.

It can easily be said that this is not a matter for too much concern. Office experience is unquestionably valuable, and the graduates have lots of time to get established (their average age is 25.7 years). But the graduates themselves are of another opinion. Although not asked specifically in the ques-

tionnaire, many of them took the invitation of a blank corner of paper to give their opinions of State examinations.

Representative of the general opinion (although more outspoken than most of the others) is this comment from the back of one questionnaire: "When a fellow graduates from law school, what happens? A few weeks later he takes the bar exam, and if he has been any kind of a student he passes it. He has been prepared for it. When a fellow graduates from architectural college, what happens? Nothing! He can't take the State exam because he is not prepared for it—he needs a world of so-called practical experience."

Said an out and out individualist: "State registration laws force you into three to five years of draftsman subjugation of personality, and to pass boards you have to start all over and forget you are a draftsman."

Dreams 86% fulfilled

But in spite of the obstacles imposed by such State laws and the depression-augmented difficulties of making a living, the respondents indicate that their college-boy dreams of 1939 income have been 86% realized, as an average. Some, moreover, exuberantly state that they are making 150% of what they expected to. These figures do not permit any very important interpretation. They depend on whether collegiate optimism or depression-born conservatism prevailed. At least, most students are hardheaded enough to expect no great wealth the first year. The 1939 graduates, by making a relatively conservative estimate of their earning power, guessed to within 92% of reality. But the guesses get progressively worse with the earlier graduating classes. Thus, the class of 1936 realized 84% of what they expected, while graduates prior to 1936 realized only 76%.

Perhaps a further indication of the relative progress made by these recent graduates is the number who have had their work published in an architectural magazine. This number is 38 out of 454 who answered the question. Five are from the class of 1939, 10 from the class of 1938, 15 from 1937; the rest are respondents from years previous.

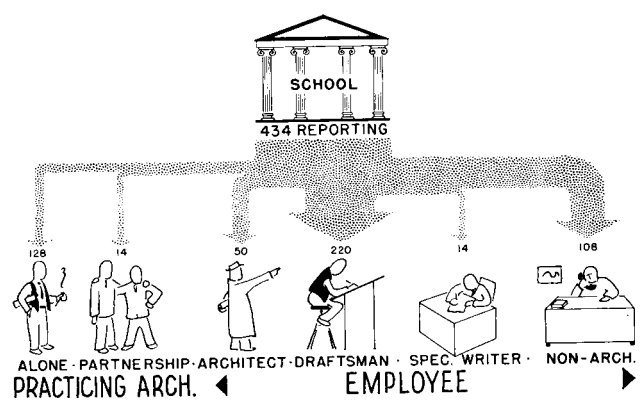


Fig. 6. Classification of graduates by present function

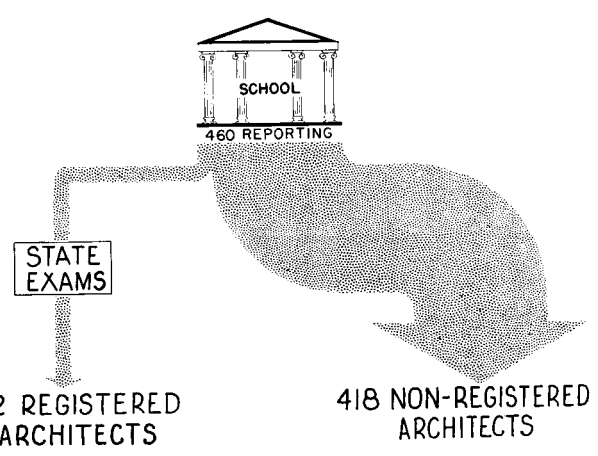


Fig. 7. Classification of all graduates by registration

IMPLIED CHANGES IN CURRICULA

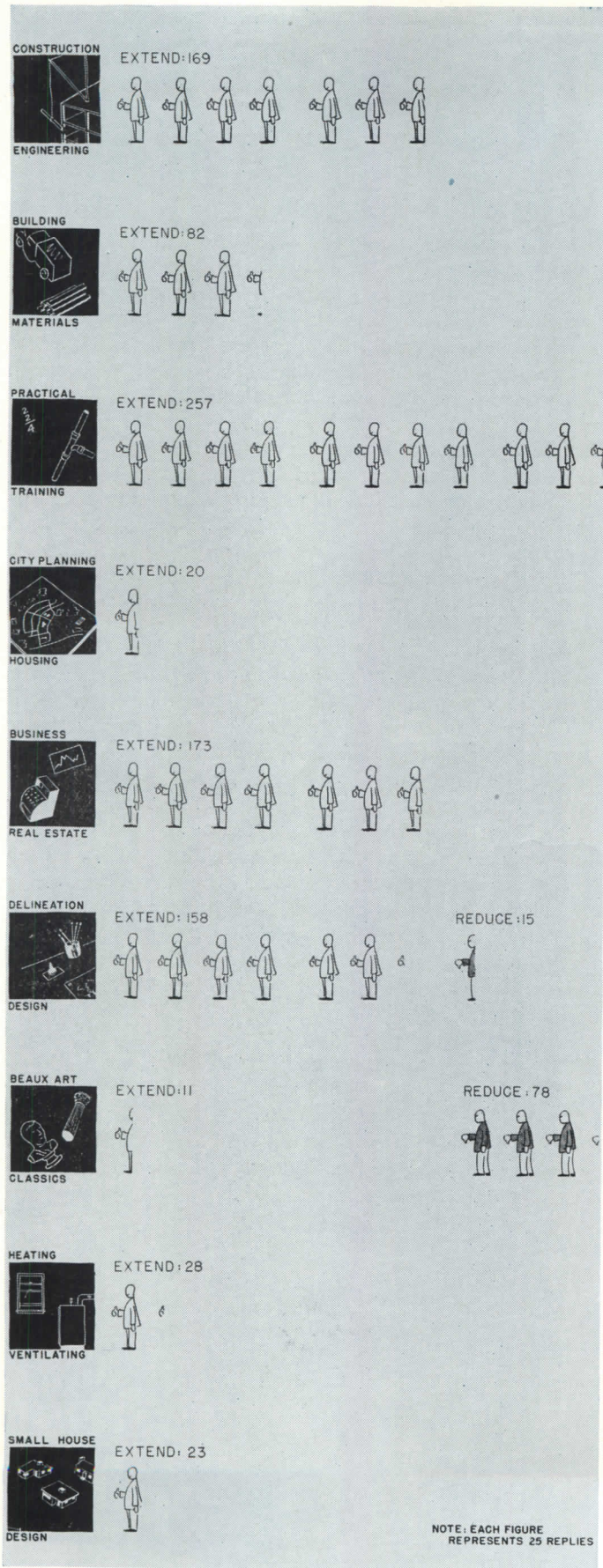


Fig. 8. For extension or contraction of curricula by subject

It was inevitable that the architectural graduates, when questioned about the phases of their education that should be extended or reduced, took the RECORD at its word and wrote reams on the subject. Students per se are critical enough, but given the opportunity to judge their education on the basis of practical experience they can be, and in this case were, critical to a fault. (Fig. 8).

In general, however, the replies are surprisingly fair. Although a few suggest a professorial purge, as many more go to the other extreme and take the blame themselves for any limitations in their training ("If I had only studied when I had the chance!"). Some are completely satisfied with their education, and suggest no changes. But the great majority, although believing that their education was good, think that it should have been altered in certain definite respects. Indicative of this attitude is the fact that although 400 (86%) suggest changes in their curricula, 277 (65%) express the belief that their education equipped them adequately for their profession. Although this apparently is a contradiction, actually it is not. In effect, they are saying that although their education was good, it could have been a lot better.

In its list of questions on this subject of changes in education, the RECORD attempted to make a distinction between existing courses that should be extended, and entirely new phases that should be added. As this distinction was not clearly defined in the answers, no attempt has been made to analyze them separately; they are all classed as extensions.

Because the concrete business of building—as expressed in design, drafting, specification writing, engineering—is the main concern of the 465 graduate architects responding to the questionnaire, they see by reflection a lack of practicality in their education. This lack takes many forms, but essentially they see it in the simple terms of job-getting and job-holding. Perhaps no better expression of this could be found than the comment of one graduate: "Had I been able to turn out working drawings upon graduation, I could have stayed in the profession. As it was, I had to learn while working and therefore could not make a living wage." So he is now swelling the total of those working outside the building field.

A count of all who suggested that the architectural curriculum be brought down to earth (no matter what the form) totals 257, 55% of the reports received. It is interesting to note that the number of years since graduation has little effect on this proportion, apparently indicating that the extension of experience (over so short a span) confirms opinions but does little to change them.

Often expressed is the need for more *engineering* training (which is also frequently paralleled by a desire for less "impractical" art). One hundred sixty-nine want more knowledge of construction—of the actual technics of building. That is 37% of the total. These replies are, of course, based on the specific training received by each graduate. Some undoubtedly got all the engineering they needed. In fact, three said they had too much. A subdivision of the desire for more technical training is the 28-times-repeated suggestion that courses in *heating* and *ventilating* be extended. Frequently expressed in this category is the request for information about *air conditioning*.

An important factor in the practical needs of these struggling designers is for more knowledge about *building materials*. Several suggest a course of study that would provide a "detailed investigation into building materials: their characteristics, limitations, behavior, and composition." These suggestions total 82.

Perhaps the most "practical" of all groups of suggestions is that which has been classed under *business and real estate*. This category, which actually includes the entire range of professional practice, produced the largest number of positive suggestions. Courses suggested range from real-estate law to the technique for handling clients, and include accounting, office operation, estimating, economics, and public speaking. Some even suggest that their basic problem is "how to win friends and influence people"—one put it as: "Selling jobs as well as oneself." These suggestions total 173 or 37% of the questionnaires received.

Such reiterated suggestions for a more practical education are not limited to the technical and professional aspects of architecture, however. Over a third of the graduates think that their training in design should have been more specifically related to the problems they would meet in actual building. This opinion takes the positive form of suggestions for training in *small-house design* (23 replies), and the negative form of suggestions for fewer monumental design projects ("that we will never have to design in actual practice") and studies in classical forms. In fact, Beaux Arts projects are definitely on the black list. Although 11 spoke for tradition—often indirectly, as against the modern trend—73 were against classical architecture and the classical methods of teaching it. And those that turned down their thumbs on this subject are the most vehement of the respondents, expressing their opinions in exclamation points.

As a corollary to this attitude towards design, a large

number believe that their training in delineation was inadequate. Numbering 158, they feel that courses in model making, free-hand drawing, and water colors (of subjects they might someday conceivably design) should have been extended. This—together with parallel protests against "plaster casts of Corinthian columns"—apparently reflects a desire for improved means of communicating their ideas to other people.

Although subjects having to do with the everyday business of making a living are preponderant among the replies, there is nonetheless an undercurrent of interest in broader aspects of architecture. *City planning and housing*, for example, drew a total of 20 suggestions which came principally from the most recent graduates. Also, 43 graduates suggest that they should have more general cultural subjects. On this score opinion is sharply divided, however. Sixty-eight consider that they had too much culture and theory as it was.

Their particular anathemas are foreign languages, with French out in front; 33 voted to reduce or eliminate these languages. Mathematics also is not in favor ("Trigonometry is last math course any architect remembers"), which is particularly interesting—and not necessarily contradictory—in view of the emphasis they have placed on "engineering" and other "technical" subjects. They apparently feel a need for a working knowledge of the *general principles* which operate in the control of light, sound, atmosphere, etc.—not *detailed information* on design and installation of equipment for such purposes.

SUMMARY

As a summation of its questionnaire, the RECORD asked the graduates whether or not they regretted choosing architecture for their life's work. The replies were decidedly reassuring. Only 22, or 5%, wish they had gone into something else. There are, however, a few on the border line. One, though not regretting, modified his check mark with: "But I sometimes wonder!"

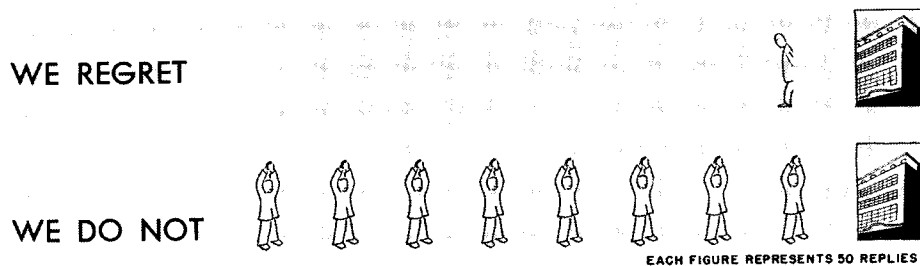
Apparently, there is no daunting most of the 95% who are glad they studied architecture. Collectively they are not making as much money as they expected to. If they are not out of the building field altogether, they are bogged down behind someone else's drawing board. In many States they are marking time until they can take the examination for registration. Nonetheless they like it: "mostly because at its worst it is more satisfying than most of the dull things men do."

From the 465 answered questionnaires it is evident that the latest architectural graduates have been no more successful in finding an easy road to success than their predecessors. If anything, they are having a harder time getting established than the graduates of two score years ago. The worst building depression in U. S. history could not help but affect

them. And as the technics of building become more complex and the types of available materials double or treble in number, architects must spend additional years in preliminary training.

Assuming that the replies mirror the general status and opinions of recent architectural graduates, several interesting and illuminating conclusions can be drawn:

1. The architect has no easy sledding after graduation, but in three out of four cases he soon finds work either in architecture or in building fields closely related to it.
2. State examinations and laws do more to retard the postgraduate practice of architecture than any other single factor. Only one in every ten graduates is registered.
3. A majority of architectural graduates see the need for important changes in education. Six out of seven would make some changes.
4. There is a definite gap between the theoretical training of the schools and actual experience in the building field. One out of every two respondents was forced to recognize this and suggested "more practical" training.
5. Architecture is "tops" with 19 out of 20 graduates.





TO CIVILIZE IS TO BU

WE, AS A NATION, have slowly come to realize that, having colonized America, and, having industrialized America, we must now civilize it. We have to devise ways of putting our technics and our resources to work to make this country a better place to live in, to work in, and to enjoy, and to find ways of spreading those benefits to all the people.

To civilize, we must build—perhaps more and better than we ever did before. Past eras of expansion have generated ever-growing demands for construction. Needs for highways, bridges, factories, new villages, towns, and cities were provided for through a resourceful application of new engineering technics, the development of frontier lands, and the growth of financial and credit systems. A new era involving a more intensive cultivation of our economic and social opportunities has now begun.

If architecture lagged behind industry and engineering in the nineteenth century, it was probably less the fault of architects than because of a cultural lag of the American people. In the New England Georgian mansions and the Southern plantation houses of the eighteenth century, we produced buildings as distinguished as those of similar character in England—and the classic tradition was well suited to an age when educated men were brought up on Cicero and Virgil. But the nineteenth century was an era characterized by the rise of the business man, by whom culture was long considered the function of swooning females, architecture, the fashionable expression of pecuniary success. Consequently, public taste in architecture has, *until quite recently*, been dominated by fashion concepts.

American architects of the nineteenth century, in spite of clients who were chiefly interested in business and the display of material success, produced works of merit that compared favorably with those of their contemporaries in Europe. Also, at the end of the century we became inventors of new structural materials and methods, and new conveniences and comforts, thus providing twentieth-century architects with opportunities for creative effort beyond the capacity of any imitative era to demand, to produce, or to appreciate.

Barring extreme war dislocations, the fourth decade of the twentieth century should open for American engineers and architects the new opportunities of a matured industrial economy embodied with ample man-power and material and financial resources for the great experiment of creating a new environment for civilized living. Along with economic and technological maturity has come a large measure of cultural maturity. Evidence of this is the popular reception accorded the creative work of our writers, dramatists, composers, and painters, all of whom speak today in a truly American idiom free from subservience to Europe or to the past. We can see

... THE NEW FRONTIERS OF ARCHITECTURE

An abstract of a paper read by Thomas S. Holden in St. Louis, on January 25, 1940, to a joint meeting of the St. Louis Chapter of the American Institute of Architects and the Engineers' Club of St. Louis. Mr. Holden is Vice-president of F. W. Dodge Corporation and Editorial Director of ARCHITECTURAL RECORD.

it in the notable advancement in design of manufactured articles of every description; many of these attractive articles of utility have found their way into old and traditional houses and have broken down the rigid formulae for period interiors. In the motion picture we have, potentially, if not actually, a great new popular art form. If we still have anything left of the energy and spirit of the pioneers who built the America we inherited, then economic maturity does not mean senility, but acceptance of the adult responsibility of going ahead on our own steam, and of finding new modes of expression for an evolving American culture.

Buildings and engineering structures of all kinds will be needed to re-create the United States into a civilized community. Some of the new structures we can already see. The airplane has created an ever-increasing demand for hangars and airports. Two-lane highways are being replaced by four-lane landscaped parkways. The need for community improvements of every sort and variety has been partly met and the basis of planning for requirements amply demonstrated by our emergency public works programs. The many housing surveys that have been made give a partial picture of the country's future construction needs; so, also, do enumerations of community needs in the reports of President Hoover's Committee on Recent Social Trends and President Roosevelt's National Resources Planning Board. Other important surveys have been made, showing needs for future highways; the changing school and college demands brought about by population changes; the enormous growth of recreational activities creating demands of every sort—from national parks, playgrounds, athletic fields, and beach resorts to community centers and community theaters.

To the stimulus of evolving demand for better buildings for family living, facilities for a motorized and air-minded generation, facilities for recreation, education, and civilized community life, must be added the further stimulus of new ideas in the realm of architectural and engineering design. The elevated motor highway, visioned by Hugh Ferriss and others as a solution of urban traffic problems, has already become a reality in New York City. Attempts to produce prefabricated parts of houses, and experiments in modern architectural design are two welcome evidences that creative forces are coming to vigorous life in America. Our World's Fairs have given architects opportunity to limber up their imaginations, to experiment with new forms, and to utilize new materials. We can hail these efforts with great satisfaction as evidences of vitality, without giving uncritical approval to everything that is new just because it is new. Perhaps the time is not so far ahead when large sectors of the American public will judge a work of architecture less on the basis of whether it is old, traditional, true to some period

momentarily in the fashion, or entirely new, than on the basis of whether it is alive—an organic expression of the living habits which brought it into being.

Such future building demands as we now can visualize are less for the grandiose and monumental types of structures, and more for the accommodation of the great mass of the people. A reversion to simplicity is therefore implied. With new demands for spaciousness, for openness to outdoors and sunlight, for greater convenience and higher degrees of utility, and with the myriad new materials and construction methods permitting all these requirements to be happily met, the architects of the country can no longer be content to turn out mere imitations of the past—even though it may be an American past that supplies the inspiration.

Our recent troubles have been the peculiar accompaniments of a very important transition in our economic history. A new orientation toward future national objectives is being found. But, certainly, all problems have not been solved; all the obstacles have not yet been overcome. It cannot even be said that the way ahead is either clear or easy. It never was. Only the prosperous era from 1896 to 1929 nurtured a generation which believed success was easy and automatic.

Ahead of us lie big jobs: revising our systems of taxation, so that something better than Federal emergency programs may be available to satisfy pressing community demands; modernizing building codes; reducing foreclosure costs and removing other legal impediments to housing progress; regularizing building-labor employment and improving employer-employee relations in the building industry. There is plenty of work to do. The important point, however, is that opportunities for doing it are gradually increasing. Domestic conditions are thus favorable to continued recovery progress. An overshadowing cloud is the European War; and no man can tell with assurance what this will mean to Europe or to us. One forecast—as probable of fulfillment as any other—might be that leadership in the advancement of civilization and culture will pass to the Western Hemisphere.

Faith in our future progress has been severely taxed by the long duration of our period of adjustment. We have expected some smart invention—like assembly-line technics for prefabricated houses—to offer a quick and easy solution to the problems of business recovery. We have only grudgingly and gradually admitted the need for basic adjustments in our economic procedure. As usual in a democracy, some of our experimental adjustments have been muddle-headed in conception, and some of the good ones have had muddle-headed administration. But, fundamentally, the American people have gained a new sense of direction, and as a nation we are making a fresh start on our way toward a newly-envisioned goal.

CURRENT TRENDS OF BUILDING COSTS

Compiled by Clyde Shute, Manager, Statistical and Research Division, F. W. Dodge Corporation, from data collected by E. H. Boeckh & Associates, Inc.

CURVES INDICATE trend of the combined material and labor costs in the field of residential frame construction. The base line, 100, represents the U. S. average for 1926-1929 for residential frame construction.

Tabular information gives cost index numbers for the nine common classes of construction. The base, 100, in each of the nine classes represents the U. S. average for 1926-1929 for each particular group. The tables show the index numbers for the month for

both this year and last.

Cost comparisons, as percentage differences for any particular class of construction, are possible between localities or periods within the same city by a simple process of dividing the difference between the two index numbers by one of them. For example: if index for city A is 110 and index for city B is 95 (both indexes for A and B must be for the same class of construction), then costs in A are approximately 16% higher than in

$$B \left(\frac{110-95}{95} = 0.158. \right) \text{ Conversely it may}$$

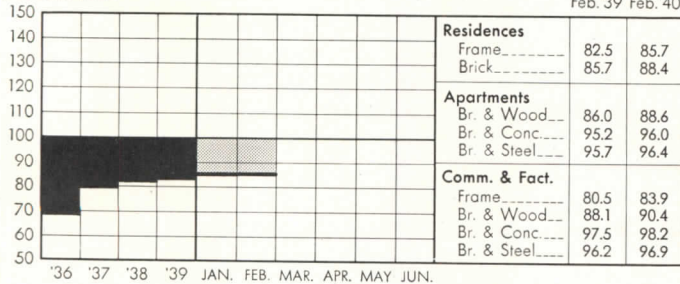
be said that costs in B are approximately 14% lower than in

$$A \left(\frac{100-95}{110} = 0.136. \right)$$

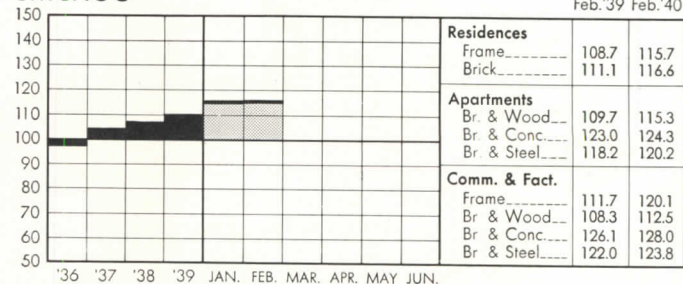
Similar cost comparisons, however, cannot be made between different classes of construction since the index numbers for each class of construction relate to a different U. S. average for 1926-1929.

CONSTRUCTION COST INDEX U. S. average, including materials and labor, for 1926-1929 equals 100.

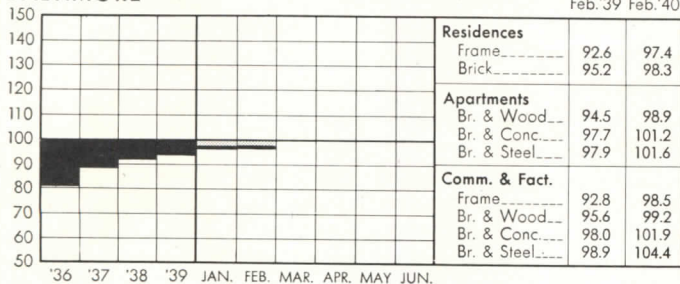
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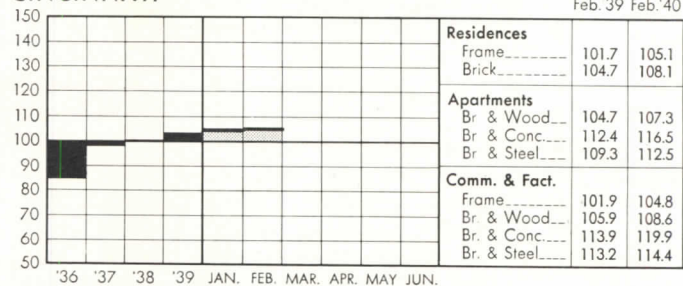
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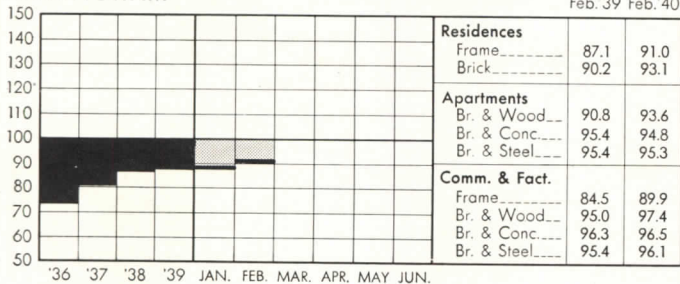
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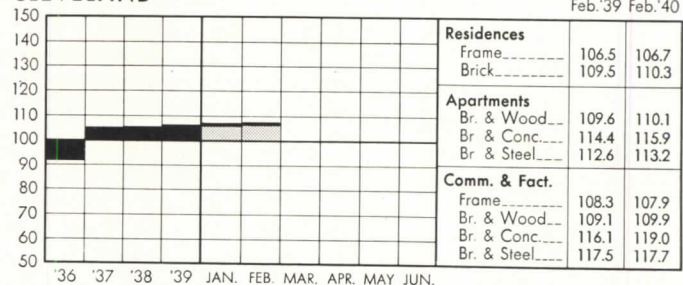
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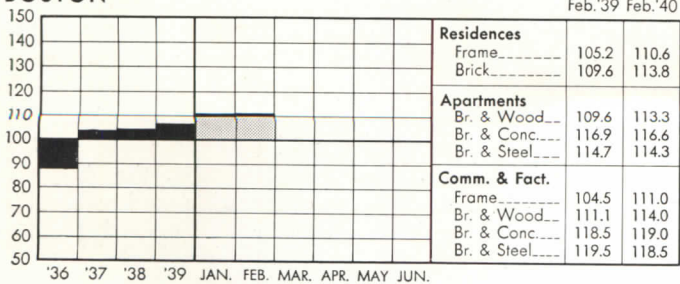
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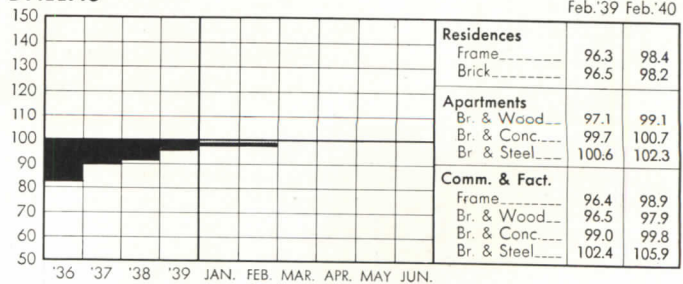
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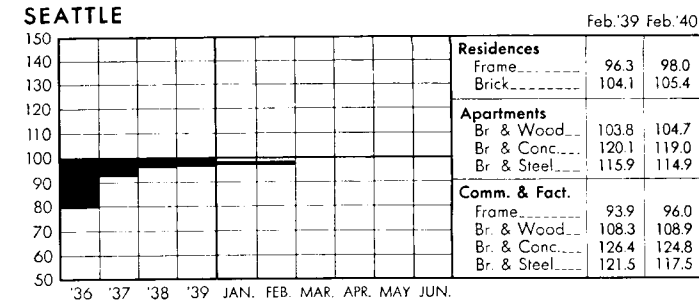
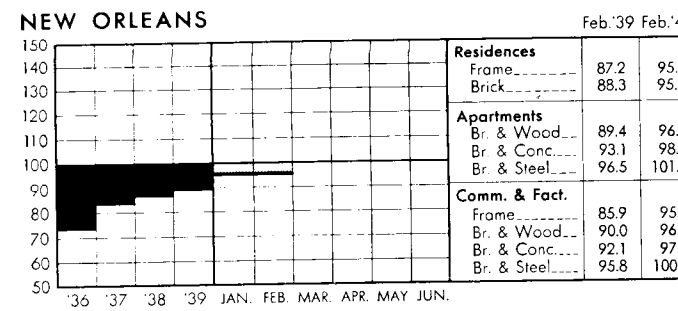
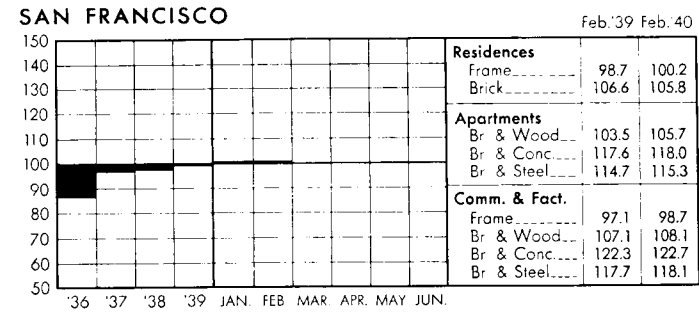
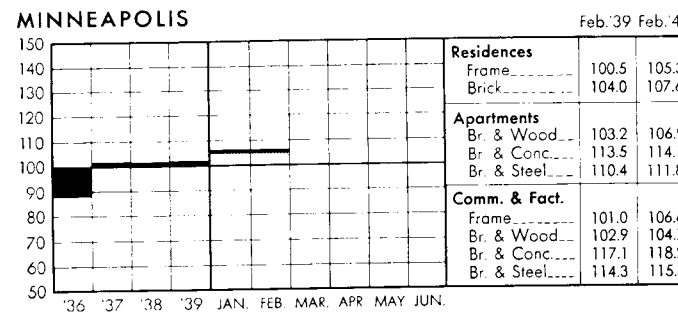
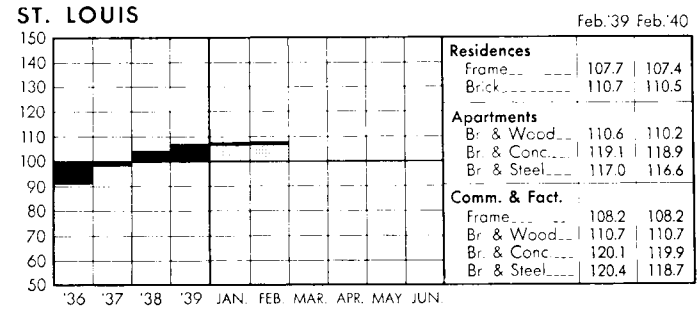
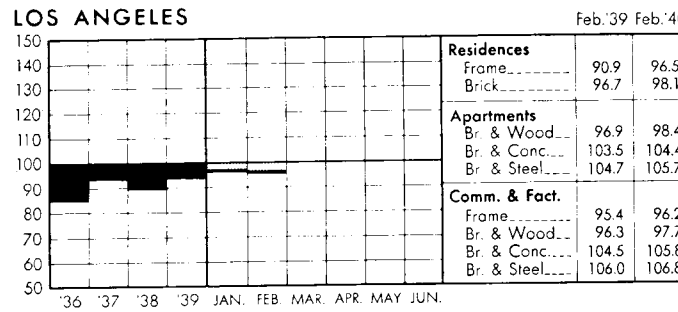
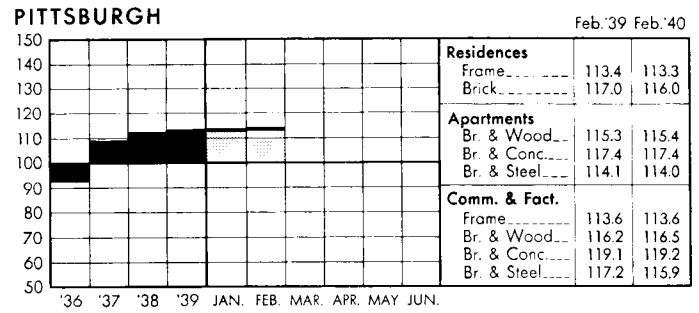
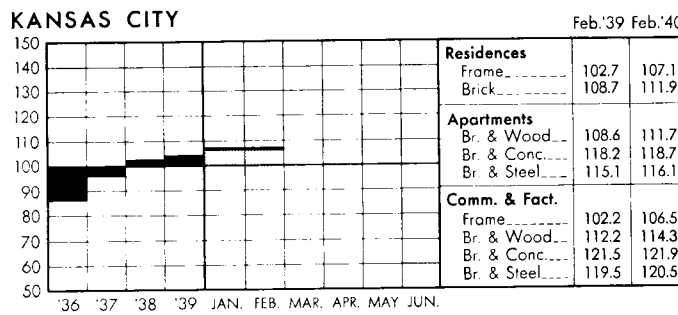
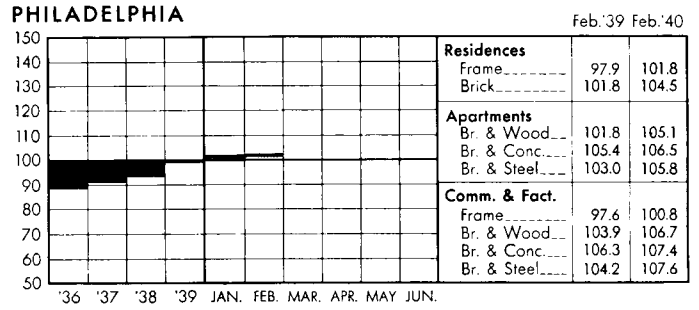
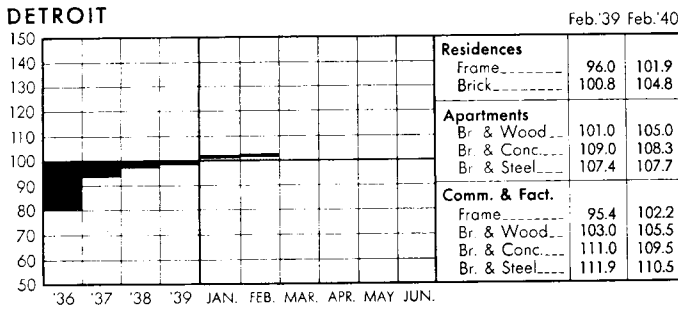
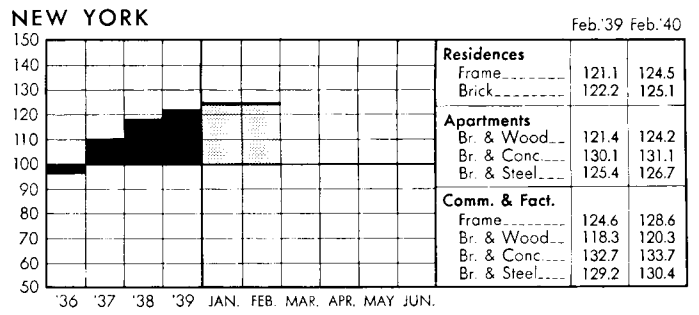
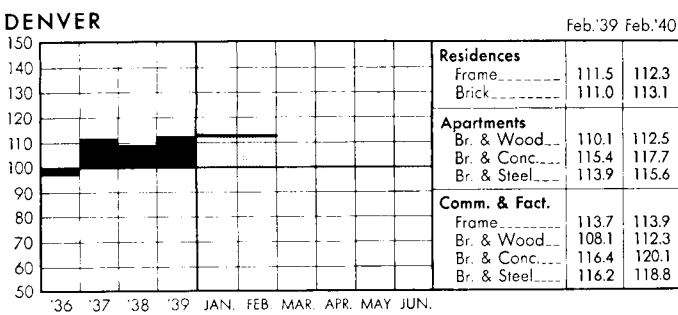


BOSTON



DALLAS





NOTES ON NEW BOOKS

GARDENS IN THE MODERN LANDSCAPE. By Christopher Tunnard. The Architectural Press, London, England. Illustrated. 188 pp. 6½ by 9¾ in. Price, 15s.

"IF WE CAN gain a clearer picture of what a garden is, or should be," says Mr. Tunnard in his preface to "Gardens in the Modern Landscape", "we shall be better equipped to evolve a technique of planning which will play a part in satisfying the complex needs of modern society." It was with the aim of painting this picture that the book was written. Profusely illustrated, with well-chosen photographs and drawings (mainly of English gardens), the book outlines the trends of the past and relates them to possible contemporary methods of garden and landscape design. It must be remembered, however, that, throughout the volume, Mr. Tunnard is dealing specifically with English problems and their possible solutions; his more general observations are less limited in application.

Although the first part is devoted to presenting the historical background, this is no dusty record of past events; Mr. Tunnard punctuates his history with pungent observations, sometimes appreciative, sometimes critical. The rest of the book discusses the means towards a new technique: "functionalism", the Oriental influence, and modern art are the three sources of inspiration for the modern designer, according to Mr. Tunnard, and from them he has "endeavored to devise three methods which can be co-ordinated or synthesized into a working aesthetic for landscape design."

The new landscape, says Mr. Tunnard, is the garden without boundaries. The problem of interpreting the two main influences on the garden—"the outer influence from the landscape and the inner from the house"—is, in the author's opinion, capable of solution, if we believe that inspiration "can be drawn from the underlying principles of contemporary life and art . . . For the garden of today cannot be called contemporary in spirit as can the modern movements in architecture, sculpture, or painting. It is not of our time, but of the sentimental past; a body with no head and very little heart. Imagination is dead, romance a mere excuse for ex-

travagance in decoration. Contemporary garden design has not even yet caught up with contemporary trends in architecture."

The last two chapters deal with "A Solution for Today" (including a proposed redevelopment of Claremont, a famous English country estate), and "The Wider Planning," in which it is pointed out that, in planning the countryside for work and play, the garden must be given a foremost place. Mr. Tunnard makes a plea for close co-operation between town planner, landscape architect, engineer, and architect.

WASHINGTON, NERVE CENTER. By Edwin Roskam. Ruby A. Black, Co-editor. Introduction by Eleanor Roosevelt. Published by Alliance Book Corporation, Longmans, Green & Co., Inc., New York. 144 pp. 8½ by 11¼ in. Price, \$2.50. THIS IS NOT merely a treatise on the architecture of the nation's capital, nor is it a typical tourists' guide book. Rather it is a descriptive presentation—largely photographic—of Washington as the place where every thread of our government converges. Both informative and entertaining, it treats its subject much as a biographer approaches a personality. While it touches on exterior and superficial characteristics of appearance, it explores mainly the city as a living force performing individual and specific functions.

The student of architecture will find no lengthy descriptions of the "austere, quasi-Greek temples" that house the government. The authors do, however, take a look at Washington and its buildings and note that it "looks like nothing else we ever built to use."

"It takes a young nation," they comment, "to build itself a symbol as solemn and as irrelevant as the interminable perspectives of marble columns we made ourselves . . . a design concocted out of memories of Athens, Rome, and Paris."

After a brief characterization of the physical city and its *raison d'être*—the Federal Government—the book then shows where and how Washingtonians (including the President's family) live and work and what the tourist does and sees. The rest of the book is a graphic portrayal of the city as government headquarters, with lines extending out

into and controlling actions and events in every corner of the nation. Photographs and brief text dramatize the various governmental departments and impress by implication both their vast scope and their importance on the individual.

In her introduction, Mrs. Roosevelt expresses the hope that the volume will serve as much more than a mere guide book to the city—as a guide, rather, to "better citizenship through a knowledge of (the) government." The book is the second in "The Face of America" series which the author-photographer inaugurated with his "San Francisco, West Coast Metropolis."

ENGINEERS AND ENGINEERING IN THE RENAISSANCE. By William Barclay Parsons. 661 pp.; 7 by 10 in. 1939; The Williams & Wilkins Company, Baltimore. Price, \$8.00.

ALL THOSE WHO have a special interest in the humble but amazing background of today's engineering and scientific activity will find General Parsons' exhaustive and carefully documented volume an absorbing work. It is evident that General Parsons was not only an able engineer, but also that explanation and interpretation of the structural exploits of the Renaissance constituted a special hobby of his inquiring and orderly mind.

General Parsons died in 1932 and his book was issued posthumously by his family. It contains a vast amount of interpretive history, as well as a great deal of informative text which explains how the cathedrals and churches, the palaces, and the bridges of the Renaissance were constructed. Throughout the volume, text is complemented by half-tone reproductions and a wide variety of technical drawings. A considerable number of them in the fore part of the volume are from the notebook of Leonardo Da Vinci.

Material throughout is well documented. The book contains an extensive bibliography, an appendix, and an index. In addition, Dr. Nicholas Murray Butler, *President of Columbia University*, has contributed an introduction and Dr. John C. Merriam, *President Emeritus of Carnegie Institute of Washington*, a biographical sketch of General Parsons as a preface.

STANDARDS FOR HOUSES

Ezra Stoller



BUILDING TYPES



Ezra Stoller

A village of prefabricated houses near Providence, R. I. These were recently built for workers of a textile mill.



Courtesy F. S. A.

Community in Arizona for migrant farmers. These houses provide accommodations for approximately 300 farm families.

Performance Standards that Point Way to Better Houses

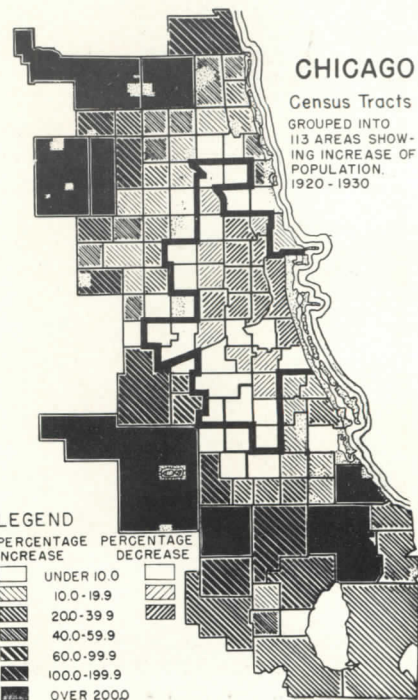
What new design needs for houses are indicated by recent shifts of population and industry? How are these movements likely to affect the market for detached, single-family dwellings? What standards are indicated by these needs? These are some of the questions that this study attempts to answer. . . . Included are performance standards for lighting, sound control, heating and ventilating, sanitation, and circulation. And finally, a number of houses are presented which appear to satisfy these standards relatively well.

CHANGES in the larger physical patterns of which buildings form a part (neighborhoods, cities, regions) are a function of changing relationships in production. This is also true of changes in the quantitative ratio of specific building types to each other or to the total of buildings constructed. Such developments may indicate a need for new or changed design forms; and the house, as a housing type, may be examined with this in view.

Among these developments is the trend toward industrial decentralization: industrial plants tend to move from the center to the periphery of cities, from an original urban nucleus to rural communities and satellite towns, from the older settled parts of the country to the newer regions. Accompanying this mobility of industry is a mobility of population, a trend accelerated by the greater insecurity in recent years of job tenure, increased uncertainty of status and wage, relative scarcity of available jobs.

Several examples may be cited. Between 1920 and 1930, the Borough of Manhattan (New York City) lost about 420,000 inhabitants; yet during this same period, Metropolitan New York (which covers parts of three states, part or all of 19 counties, and nearly 300 cities, villages, and other local units) gained almost two and one-half million persons. An increasing proportion of the total population and of the total number of wage jobs is being absorbed by the regions around the large cities (population, 200,000 and over). In the period from 1899 to 1929, the population of those areas increased by 118.2% and the number of wage jobs in them by 114.9%; this compares with an increase of 61.6% in the population and 87.5% in wage jobs in the country as a whole. A similar movement from farm to metropolitan districts has long been taking place. Partly as a result of decentralization, the detached single-family house appears to be maintaining its importance as a housing type: the relatively lower cost of land outside urban centers reduces the cost of freestanding houses. The percentage of families provided for in *new* one-family dwellings in 257 identical cities increased from 35.2% in 1928 to 49.8% in 1938, while those provided for in two-family dwellings decreased from 11.1% to 4.9%, and those provided for in multifamily dwellings decreased from 53.7% to 45.3%. (A much larger number of families, however, is provided for in *existing* one-family houses—76.4% in 1930.)

How do these trends indicate new design needs in houses? First, emphasis is put on the ease with which a place of residence can be changed. Second, because of the increase in tenancy and shorter periods of tenure, the tempo of obsolescence is stepped up. The designer is placed in a position of greater importance to the extent that old and obsolete standards are replaced by new and higher ones.

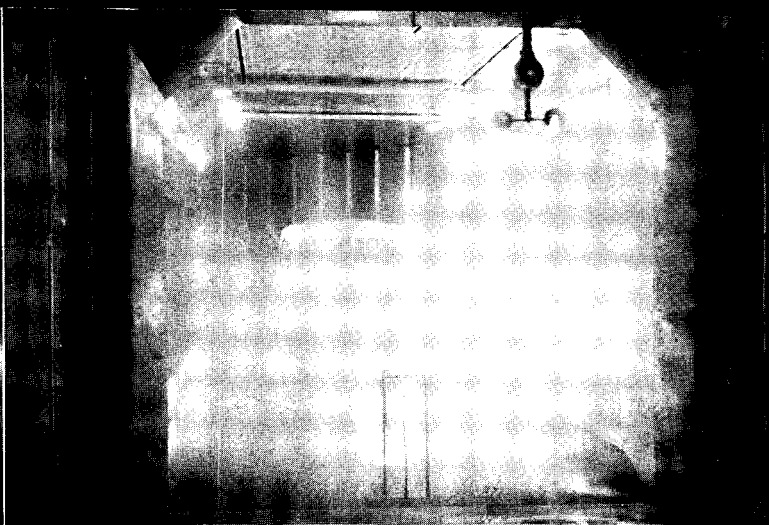
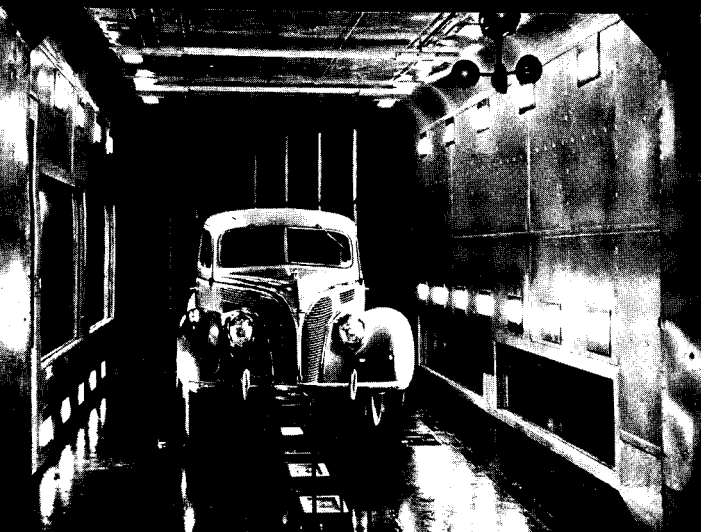


Map of Chicago showing the centrifugal movement of population from the original urban nucleus to the periphery. (Map: courtesy, McGraw-Hill)



Twentieth Century-Fox

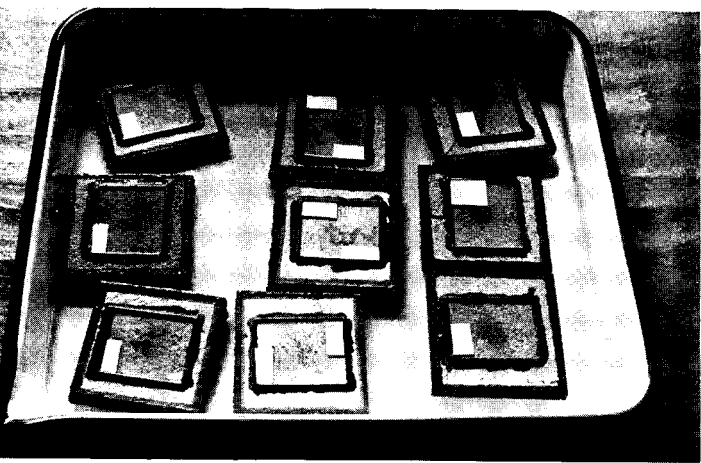
The increased mobility of America's farm population has recently been dramatized in the novel and motion picture, "The Grapes of Wrath".



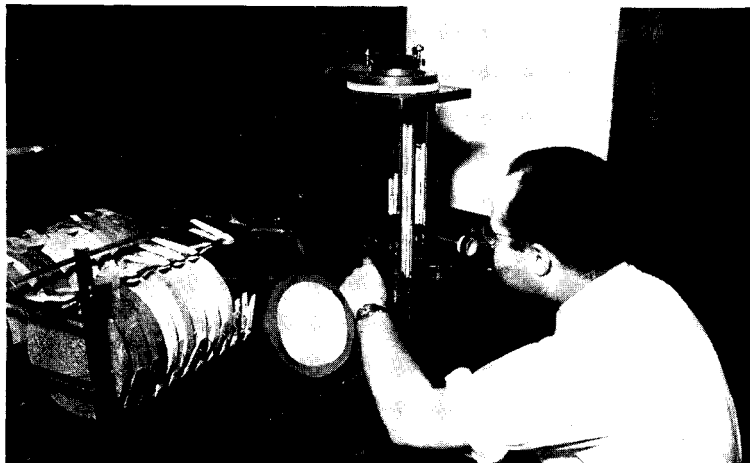
Courtesy Ford Motor Co.

Performance as measured in the automobile industry: a "weather tunnel" built for research in motor-car design. The standards which performance must satisfy are similarly determined by research . . .

. . . The Bureau of Standards has undertaken an analogous research program for housing.

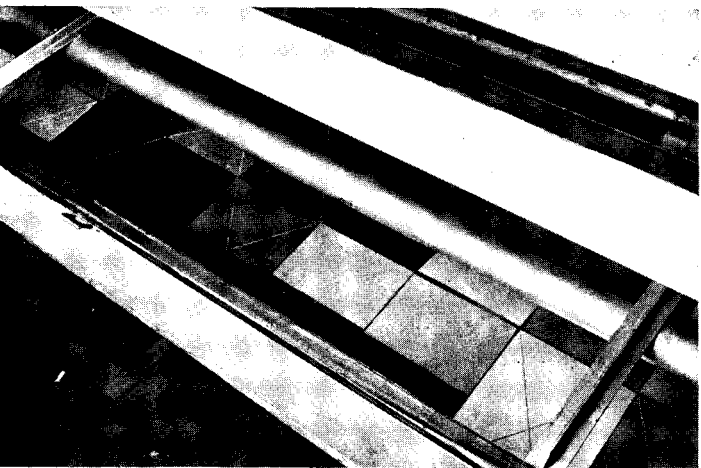


Testing of fiber building board for water penetration

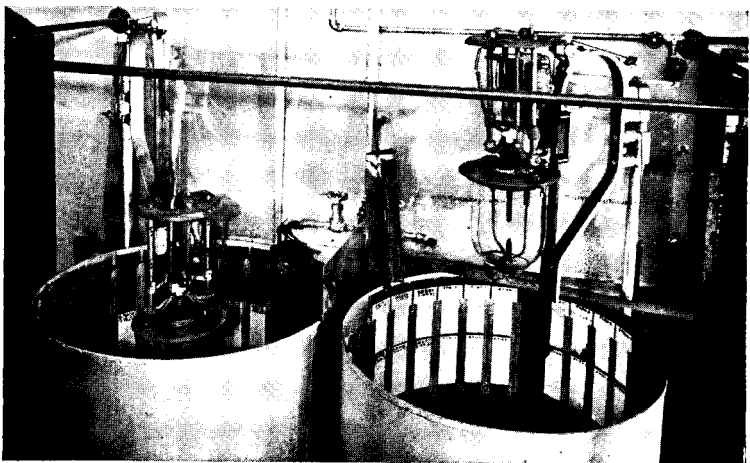


. . . testing for air penetration

Courtesy U. S. Bureau of Standards

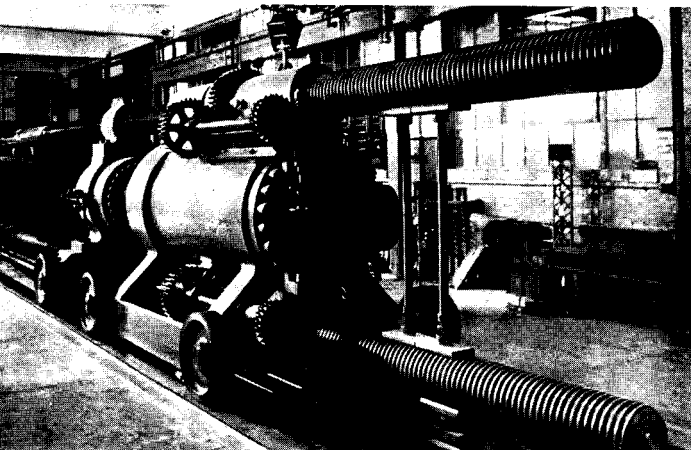


Exposure rack for outdoor weathering tests of paints

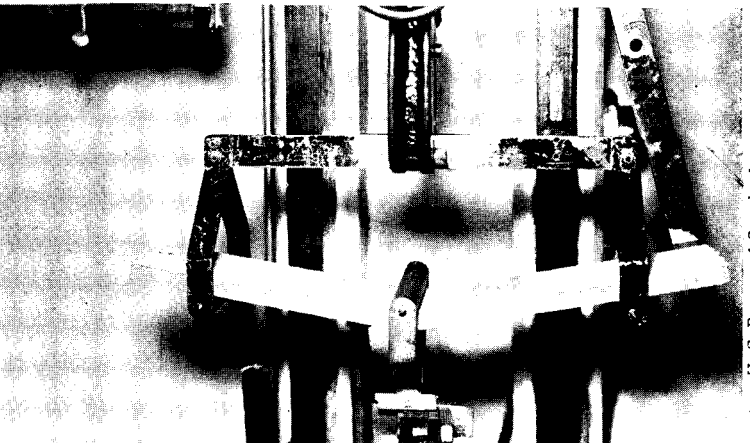


Equipment for accelerated weathering tests of paints

Courtesy U. S. Bureau of Standards



High precision machine for testing structural materials



Testing for floor slabs with the floor slab test

Courtesy U. S. Bureau of Standards

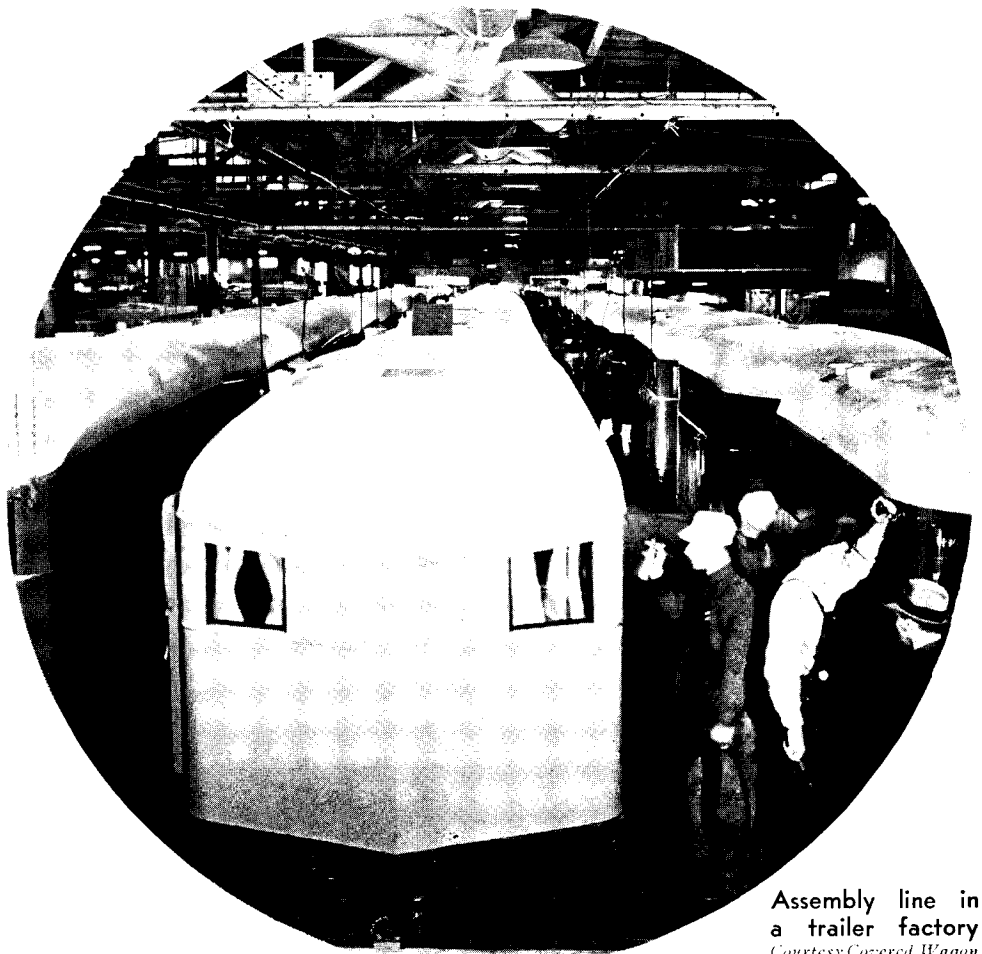
STANDARDS IN BUILDING, until comparatively recent years, have been determined largely by rule of thumb. This has been especially true of standards for house design.

Today, research methods which have proved economical and efficient in other fields of production, notably the automobile industry, are being used increasingly to formulate standards of house design on a level of precision comparable to that of the more advanced fields.

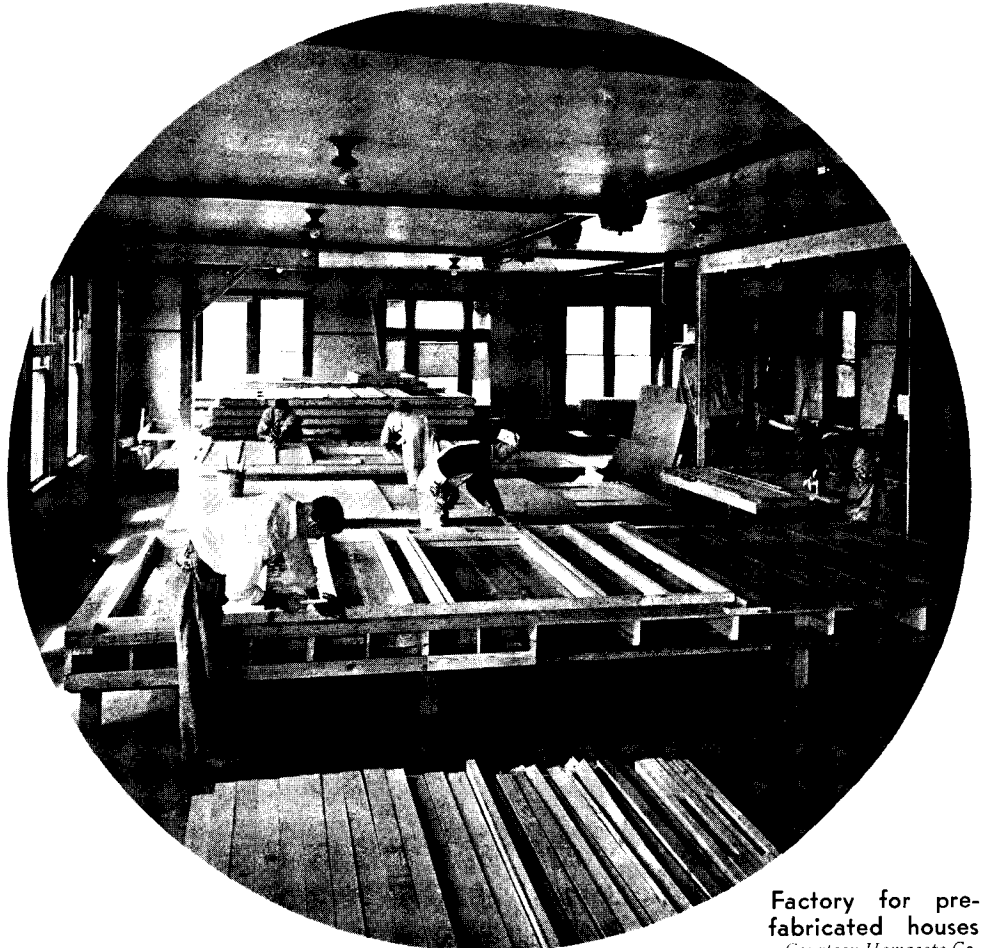
In determining optimum environmental standards for systems of lighting, sound control, heating and ventilating, sanitation, and circulation, within houses, at least three criteria are considered: efficiency, health, and comfort. Possibilities of objective measurements are greatest when "efficiency" is the criterion, least when "comfort" is the chief consideration; and in most areas of a house outside the "work centers," comfort is usually held most important. This is not to say that these criteria are necessarily inconsistent with each other: however, feelings of comfort under specific conditions are largely the result of personal habit and experience, and sometimes do not coincide with optimum conditions for efficiency or health.

Several further questions: Are these standards minimum or optimum? Are the design forms, the materials and equipment, which satisfy these standards, attainable in houses for subsistence farmers or only on a relatively "luxurious" level? In this study, an attempt is made to divorce standards as far as possible from the specific forms by which they are attained: this because standards tied too closely to particular materials or equipment tend, when higher standards become attainable, to act as a brake on progressive development. This is true of many building codes.

In the following pages, optimum performance standards for lighting, sound control, heating and ventilating, sanitation, and circulation, within the house, are compiled from authoritative sources and examined critically according to the foregoing criteria.



Assembly line in a trailer factory
Courtesy Covered Wagon



Factory for prefabricated houses
Courtesy Homasote Co.

STANDARDS FOR LIGHTING

Sources: H. L. Logan, Managing Engineer, Controls Division, Holophane Co., Inc.; Frank A. Hansen, Director, Western Institute of Light and Vision; J. Carl Fisher, Chairman, Committee on Residence Lighting, Illuminating Engineering Society; Electrical Testing Laboratories; Myrtle Fahs Bender, Westinghouse Co.



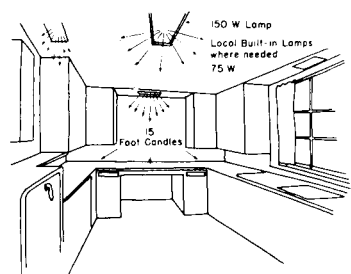
Courtesy Electrical Testing Laboratories

Measuring performance of light diffuser in laboratory

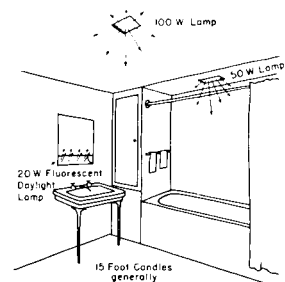


Julius Shulman

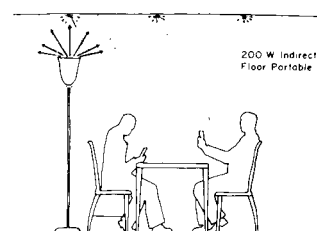
A safe ratio of general illumination to localized lighting for critical seeing is about 1 to 10. R. C. Neutra, Architect.



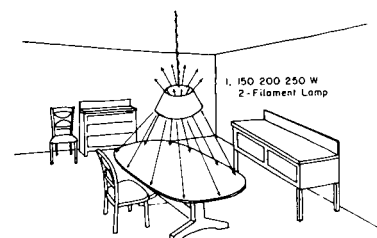
Light for kitchen



Light for bathroom



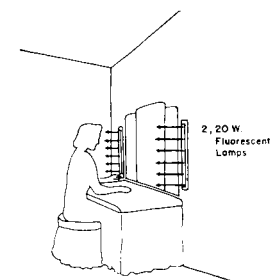
Light for card playing



Light for dining room



Light for reading



Light for dressing table

RESEARCHES involving criteria of clearness and ease in seeing indicate optimum levels of illumination above those now recommended by the Residence Lighting Committee of the Illuminating Engineering Society. Specifically, these researches establish as a fact that critical tasks of near-vision, such as reading or sewing, are most easily performed at levels exceeding 100 footcandles. However, quantity of light is but one factor to be considered. Brightness distribution, direction of light and diffusion, availability of specific products, ability of available products to produce specific results, and costs, are necessary considerations. "Visibility" is a function of many variables: recommendations in terms of footcandles alone do not include these variables.

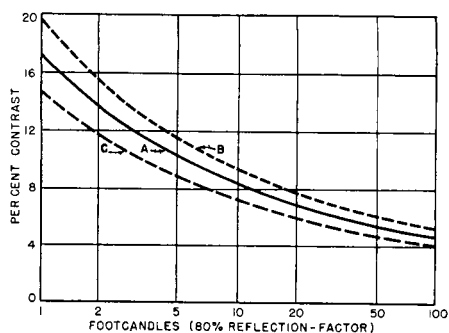
There is reason to believe that optimum lighting in the home will be achieved only through critical study of factors involved in a particular home.

Light for specific activities

When any room or area is used for study, sewing, or other tasks involving constant use of the eyes, "adequate" illumination should be supplied. Research has determined the *minimum* lighting for such seeing. The following recommendations are approved by the Illuminating Engineering Society.

	Footcandles
Reading	
Prolonged periods of fine type...	20-50
Ordinary reading	10-20
Sewing	
Fine needlework on dark goods...	100 or more
Prolonged average sewing.....	50-100
Prolonged sewing on light goods...	20-50
Ordinary sewing on light goods...	10-20
Writing (ordinary)	10-20
Card playing	5-10
Children's study table	20-50
Dining room	
When used for ordinary reading or writing rather than for ordinary dining	10-20
Kitchen	
General	5-10
Local at work counters and sink...	10-20
Bedroom	
General	2-5
Bedlight	10-20
Dresser, vanity, and dressing-table mirrors*	10-30
Sewing machine	20-50
Bathroom mirror*	10-30
Children's play room	
General	5-10
Local	10-20
Stairways and stair landings	2-5
Workbench	10-30
Ironing machine, ironing board, and laundry trays	10-20

*Intensity value delivered on each side of face. These intensities, however, coming primarily from portable lamps, or other localized lighting units in a room, without any general illumination surrounding them, may create complaints of "too much light," and such complaints would, no doubt, be justified. "Too much light" in this case would in reality refer not to the quantity of light, but to a poor distribution and diffusion of this light.



Curve A represents average relation between footcandles and the contrast of a given object with background necessary for threshold visibility. Curves B and C show average variation of observations by normal subjects.

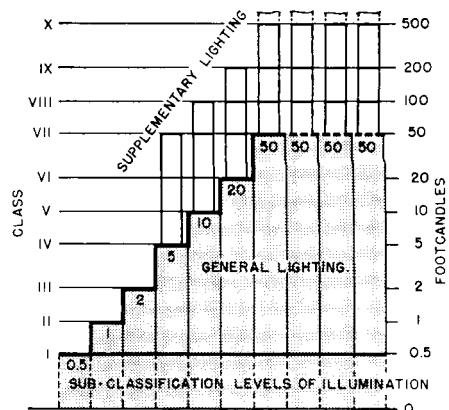
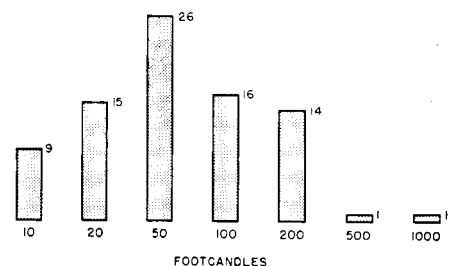


Diagram based on the footcandle scale of effectiveness, showing that the footcandle level must be approximately doubled to produce a significant improvement in seeing. Visual tasks are divided into 10 classes corresponding to the footcandle levels indicated. Supplementary lighting does not exceed 10 times the general illumination.



Showing the number of persons of a group of 82 adult subjects who chose various footcandle levels for reading an ordinary newspaper under a particular condition of lighting.

Diagrams by Dr. Matthew Luckiesh and Frank K. Moss of Nela Park Lighting Research Laboratory. (See "The Science of Seeing," 1937, D. Van Nostrand Company, Inc.). These suggest the limited value of recommendations of optimum lighting in terms of footcandles alone: reflection factors, economy, and individual differences are also important factors; obviously much depends on the individual. Nevertheless, within these limitations, specific recommendations can be made.

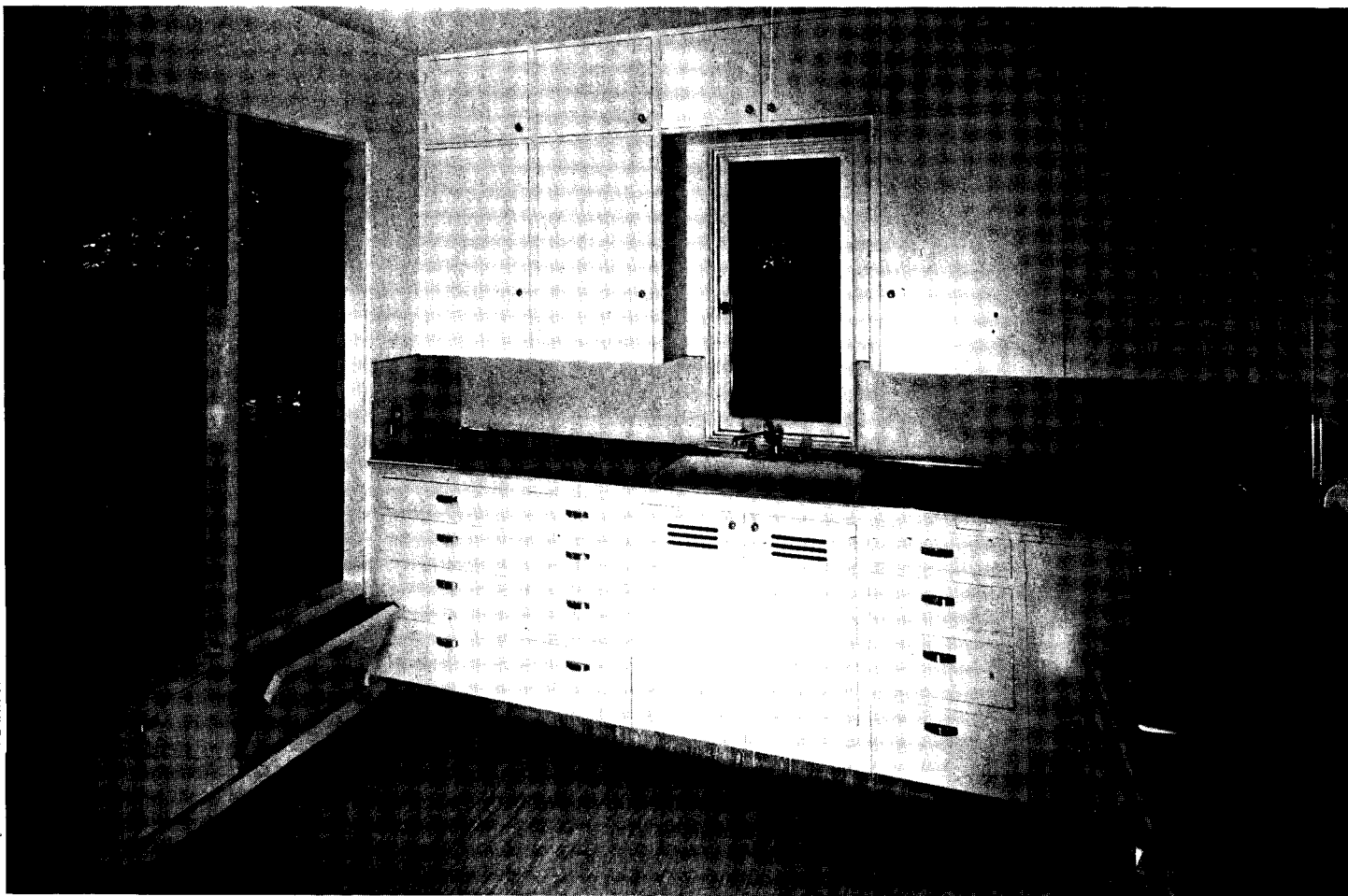


Science Service

Measuring physiological changes under laboratory conditions

STANDARDS FOR HEATING AND VENTILATING

Sources: Cyril Tasker, Chairman, ASHVE Committee on Sensations of Comfort in Air Conditioning; F. C. Houghton, Director of ASHVE Research Laboratory; C.-E. A. Winslow, Department of Public Health, Yale University; C. H. B. Hotchkiss, Editor, Heating and Ventilating; W. Randolph Lacey, Bryant Heater Co.



Courtesy, American Builder

Ventilation by louvers, which, when closed, are reported practically to eliminate air infiltration. John Yeon, Designer

OPTIMUM STANDARDS for heating and ventilating vary with the personal habits, health, sex, age, and color of occupants. They vary, too, with the specific activity and clothing worn.

The ASHVE conducted a series of tests a few years ago on a large number of white persons of both sexes, dressed in ordinary indoor winter clothing, and either resting or doing light work. It was found that 97% of these people felt comfortable at 66° effective temperature (ET); this corresponds to a 70° dry-bulb temperature with 50% relative humidity. (Humidity in houses seldom rises above 40%, which would mean a 71° dry-bulb temperature to give the 66° ET; more often, the humidity is about 30%, which would mean a 72° dry-bulb temperature.) The ASHVE researchers also found that although 97% of the persons tested were comfortable at 66° ET, 50% felt comfortable under conditions varying between 63 and 71° ET; the other 50% felt comfortable even outside this range.

Obviously, much depends on the individual and his specific body conditions. Body temperature is determined by a balance of heat production and heat loss which in healthy persons takes place automatically. When air temperatures rise to 75 or 80° F, metabolism (internal heat production) decreases. In cold environments, there is an increase in metabolism. There are limits, however, to the ability of the human body to maintain heat equilibrium without serious discomfort or injury to health; the upper limit of effective temperature is 90° ET for men at rest, and between 80° and 90° ET for men at work, depending on the rate of work.

The rate of heat loss from the body by convection varies as the difference between the temperature of the body and of the surrounding air, and on the rate of air motion over the body. By radiation, the loss varies as the difference between body temperature and the mean surface temperature of surrounding walls and objects: in rooms in which wall-surface temperatures are considerably below or above air temperatures, readings of the dry-bulb thermometer need to be corrected; for example, with cold walls, air temperature may have to be 2 to 6° F higher. Several years ago, the John B. Pierce Laboratory of Hygiene introduced a measure termed "operative temperature," which is the combined effect of air and wall-surface temperatures. A minimum operative temperature of 65° F is recommended: this for "the normally vig-

orous person, normally clothed and at rest."

In rooms occupied by old people or by children who may play on the floor, the system should be able to provide an operative temperature of 70° F at knee-height under usual winter conditions. This would be high for normal adults. Considerable vertical differentials involve fuel waste from increased heat loss through the upper parts of rooms: thermal insulation will ordinarily reduce such differentials from a usual 10° to 20° between floor and ceiling to less than 10°. Thermostats are useful in maintaining constant temperatures.

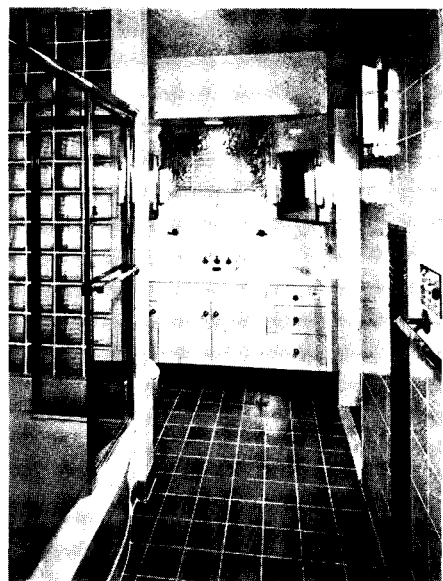
Rate of air change is considered important, with the minimum change desirable ranging between 5 and 15 cu. ft. per minute per person. Under usual conditions and with average-quality outside air, an air change of 10 to 20 cu. ft. per person per minute, or a complete change for the room each 30 minutes, results in freedom from body odors. However, it has been noted that there is a greater occurrence of respiratory diseases in winter when the overturn of air is less than 10 times per hour, followed by a considerable decrease in the spring when the ventilation rate approaches 100 overturns per hour. (Possibly measures for killing air-borne bacteria may become standard procedure in the future: See AR 7/39, pp. 72, 73.)

Variations in standards for different activities are indicated by examples:

1. Sleeping: Body temperature is maintained during sleep by means of insulation (covers) over any range of conditions from 5° to 10° above the comfort conditions for a person at rest, to temperatures far below freezing. A temperature of 62 to 65° F with a 20 to 30% relative humidity would be comfortable for most people in winter, and 65 to 70°, with 50% relative humidity, for most people in summer.

2. Bathing: A dry-bulb temperature of 80 to 85° F is held to be most comfortable. It is suggested, too, however, that since relative humidity in a bathroom is comparatively high, a dry-bulb temperature of 70 to 80° F would be most comfortable.

3. Exercising: At the ASHVE Research Laboratory, test subjects under rather severe exercise for a continuous period of 4 hours indicated optimum comfort at 53° ET, which for average humidity means a dry-bulb temperature of from 54 to 55° F. For a normal person doing his daily dozen, a dry-bulb temperature of 60 to 65° F would generally be most comfortable.



Radiant heating in bathroom: floors are heated from a system of electric wiring that is embedded in the floor.



Heating and ventilating through directional air registers at ceilings

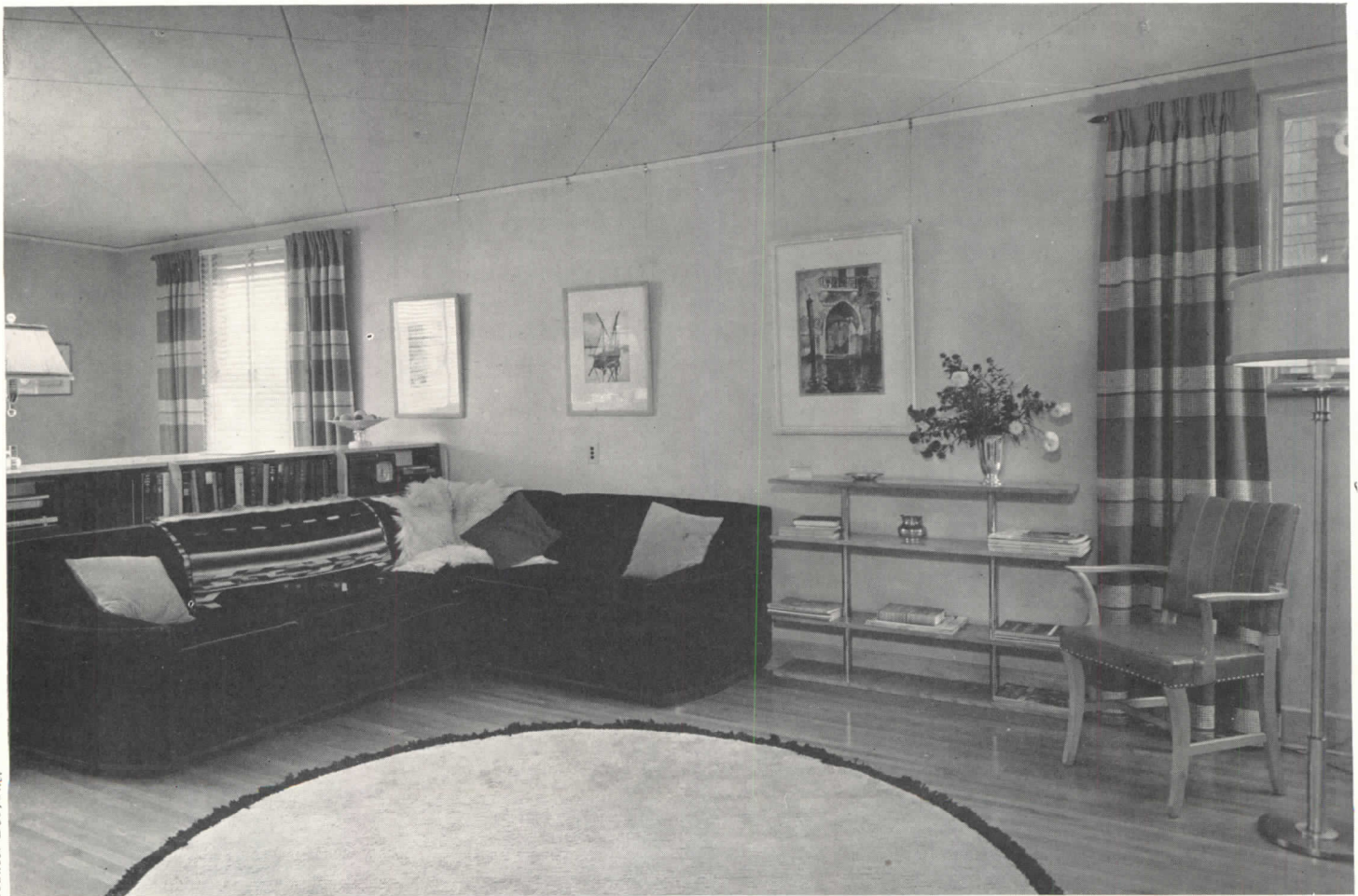
STANDARDS FOR SOUND CONTROL

Sources: Dr. Paul E. Sabine, Riverbank Laboratories; Paul Washburn, Johns-Manville; Acoustical Materials Association.



Science Service, Johns-Manville

Reverberation chamber for measuring sound absorption



Hauser Bob, Inc.

Use of relatively sound-absorptive and sound-insulating materials is sometimes desirable. Sewall Smith, Architect.

SOUNDS within the house vary according to noise levels outside, the materials and equipment used, spatial relationship of rooms, etc. In the adjoining tables are listed the recorded measurements in a "typical" suburban house and the approximate values of transmission loss of various materials and constructions.

Traffic noise in a city residential district, for example, will produce noise levels in rooms facing the street of about 50 decibels. Therefore, the design problem is to provide conditions such that the level of unwanted sounds in the family living quarters shall have peak values of less than 50 decibels.

From the adjoining table, it appears that the chief sources of noise are the kitchen and the bathroom. To reduce noise in the kitchen, tables and drainboards may be covered with linoleum, rubber, or some other relatively resilient material, instead of metal and porcelain surfaces; and more effective sound insulation between kitchen and dining room may be provided than is afforded by the usual swinging door. (As shown in the table, the latter causes a reduction of only 16 decibels between kitchen and dining room.) A pantry with absorbent ceiling will accomplish this: measurements in another house, with a pantry 6 ft. wide between kitchen and dining room, showed a reduction of 46 decibels between the two rooms.

So-called "noiseless" plumbing will help keep down the noise level in the bathroom; measurements of the latter show a noise level about 10 db lower than for the usual type. Sound-insulating doors with rubber-gasketed stops and automatic threshold closers are now available. These yield transmission loss of 35 to 40 decibels. The noise from a bathroom will be particularly bad in an adjoining room if fixtures are attached to partition walls; double walls of clay or gypsum tile, or of staggered wood-stud construction, between bathrooms and adjacent bedrooms, will help. A second-floor bathroom directly over a first-floor living room is also a source of annoyance.

Game rooms in basements with cement floors and walls and little natural absorption of sound can be considerably quieted by use of a material with an absorption coefficient of, say, .30 to .40 on the ceiling. For noise reduction, the nursery or children's playroom should not be located directly over the living or working quarters of the adult members of the family. Use of acoustic materials in dining or music rooms may be desirable.

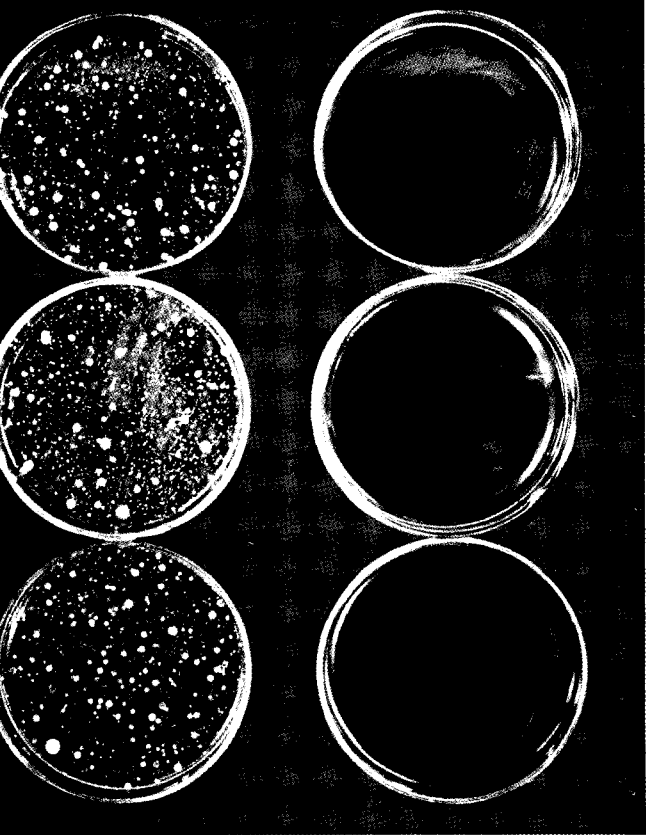
SOUND MEASUREMENTS IN HOUSE*

Location	Source of Noise	Noise Level in Room	Noise Level Elsewhere
Basement			
Furnace room	Oil burner	61 db	35 db in living room directly above
Laundry	Electric washing machine	65 "	
Game room	Laughter and loud conversation	85 "	
First floor			
Kitchen	Dishwashing	76 "	In dining room through swinging door 60 db
"	Silverware laid on metal-top table	86 "	70 "
"	Water running into sink	66 "	50 "
"	Closing drawer in metal table	90 "	74 "
"	Electrical refrigerator	44 "	
Library	Vacuum cleaner on rug	71 "	51 db in living room through closed door
"	Vacuum cleaner on hardwood floor	75 "	
"	Radio, orchestra-concert set for comfortable hearing	65-84 db	Peak 65
Living room	Conversation—man	70 db	
"	woman	60 "	
"	Laughter, four persons	78 "	
"	Piano	68-91 db	51-70 db in basement directly below
Second floor			
Bathroom	Flushing toilet	74 db	In hall through closed door 54 db
"	Water running into basin	68 "	46 "
"	Water running into tub	71 "	50 "
"	Shower	75 "	53 "
Bedroom	Piano in first-floor room directly below	45-62 db	
"	Car passing in street 150 ft. away	35 db	
"	Bathroom shower through hall and two closed doors	35 "	
"	Oil burner in basement	Below 30 db but audible	
"	Kitchen noises	Barely audible	

*Measurements were made in a seven-room house of wood-frame construction in suburbs and not on a main thoroughfare; partitions are 5-in., 2-by-4 studs, lath and plaster construction; floors are ½-in. hardwood over usual subflooring, linoleum in kitchen and bathroom; all other floors are covered with rugs on felt pads; window drapes are of light fabric; all doors are paneled, 1½ in. thick, of pine or birch.

APPROXIMATE VALUES OF TRANSMISSION LOSS

Construction	Transmission Loss in db
1. 1½-in. paneled doors as ordinarily hung	20-22 decibels
2. The same with gasketed stops and threshold closer	24-26 "
3. 1¾-in. solid-core flush-type door as ordinarily hung	28 "
4. Window, ⅛-in. glass	25 "
5. Windows, ¼-in. plate glass	30 "
6. Sound insulating doors, 1¾ to 2½ in., with complete crack closure	35-40 "
7. Hardwood floors on subflooring on 2 by 6-in. joists, plaster ceiling below	40 "
8. 2-by-4 wood stud, lath and gypsum plaster	35 "
9. 2-by-4 staggered stud wall on 6-in. plate and header, lath and plaster	45 "
10. The same with lime plaster	43 "
11. Masonry partitions, gypsum tile, clay tile, brick and/or plaster, ranging in weight from 10 to 30 lb. per sq. ft.	26-42 " {depending on weight}
12. 4-in. cinder concrete block Haydite or Waylite tile, plastered both sides, weights ranging from 23 to 32 lb. per sq. ft.	43-51 decibels
13. Double 3-in. hollow gypsum tile wall, 2-in. air space	50 "
14. Wood stud, with ½-in. fiberboard, unplastered	26 "

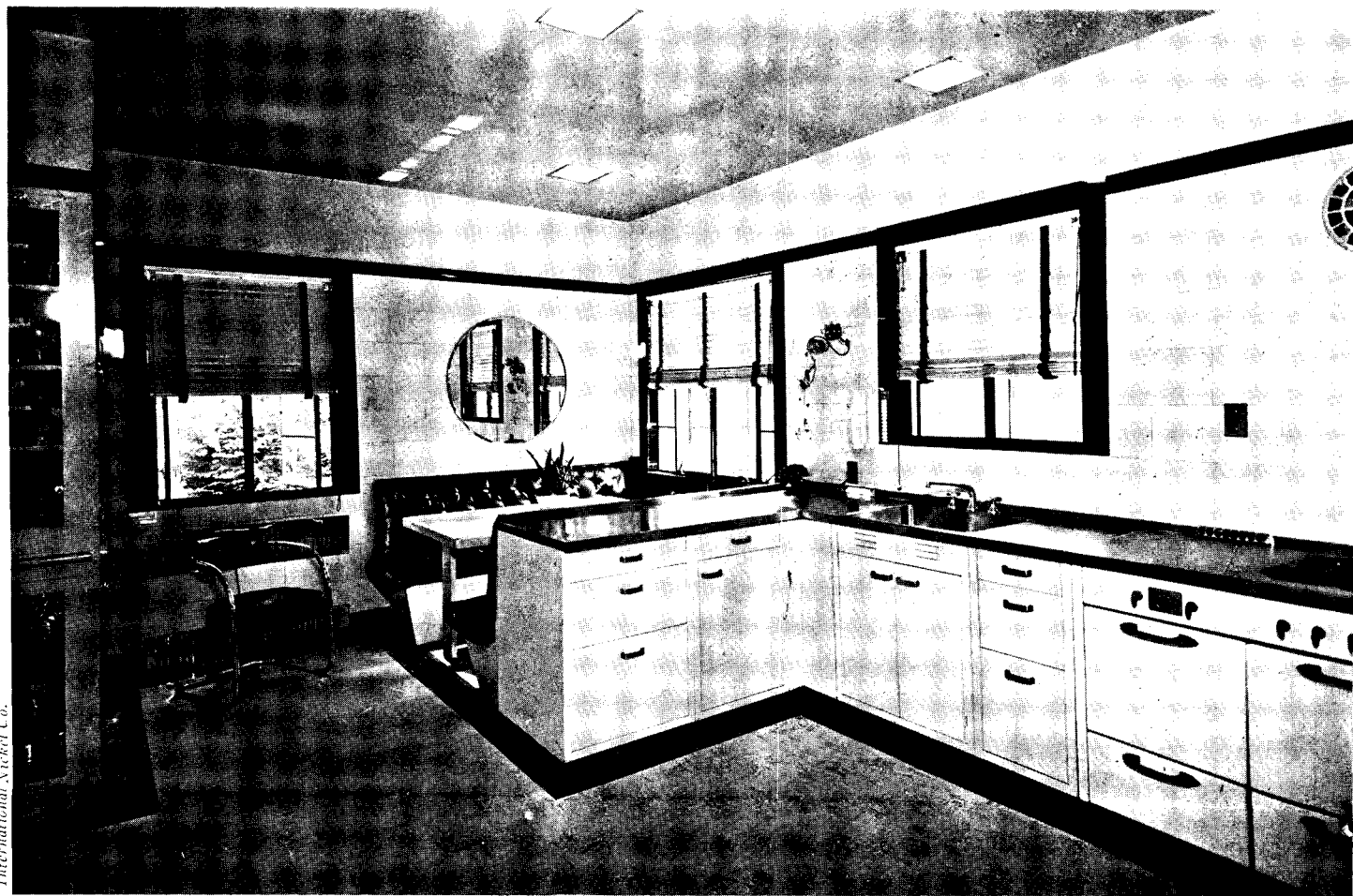


W. Estiglionse

Bacteria before and after sanitization by ultraviolet

STANDARDS FOR SANITATION

Sources: Basic Principles of Housing (2nd Edition), Committee on Hygiene of Housing, American Public Health Association; F. H. Whitley, Instructor, Department of Sanitary Engineering, New York University.



International Nickel Co.

Sanitation in the house is advanced by use of relatively continuous, non-porous, and non-corrosive materials and equipment.

Water supply

For drinking, cooking purposes, and general domestic use, water should be: free of pathogenic bacteria; low in total bacterial content; free of turbidity; without odor or taste; free of iron or manganese, toxic salts or minerals; it should not contain an excessive amount of dissolved mineral substances; it should be soft but not corrosive to water service pipes. (Soft waters tend to corrode pipes because they contain no substances which form protective deposits; they often contain oxygen and carbon dioxide, the corrosive action of the first being accelerated by the presence of the latter. Hard waters deposit a scale which tends to protect the pipe against corrosion.)

If the local water supply meets the standards of the United States Public Health Service for water served on interstate carriers, or if it is approved by the State Health Department, it will satisfy existing standards of safe quality, although it may not be as free of hardness and turbidity as is desirable. For a private supply, a laboratory analysis may be necessary.

In addition, there should be an adequate supply under pressure sufficient to serve all fixtures within the house: 20 gallons per capita per day is a minimum. However, daily water consumption per person varies greatly as the following statistics show:

(Gallons per person per day)	
56	Dallas, Tex.
63	Oakland, Calif.
81	San Francisco, Calif.
91	Springfield, Mass.
100	New Orleans, La.
113	Boston, Mass.
131	New York, N. Y.
132	Baltimore, Md.
142	Cleveland, Ohio
168	Philadelphia, Pa.
191	Denver, Colo.
213	Buffalo, N. Y.
275	Chicago, Ill.

Disposal of liquid wastes

Important in preventing the spread of intestinal disease, disease carried by insects, and foul odors resulting from the septicization of human wastes, is a properly installed water-carriage system for removing personal wastes. The number of bathrooms and rooms with toilet facilities to be provided in a specific house will vary. Minimum considerations call for at least one bathroom equipped with a toilet, a bathtub or shower, and a lavatory for a single-family house; a bathroom on each floor on which there are bedrooms, with lavatory and toilet facilities on other floors and in the basement, if those parts of the house are occupied for extended periods of the day. In

larger houses, it is desirable to have either a connecting bath for each pair of bedrooms or, even better, to have a bathroom for each bedroom.

For protection against water-borne infection, there should be no cross connections in the house plumbing or siphonage from fixtures. Fixtures with submerged inlets are the chief cause of siphonage and should be avoided. In flush tanks or flush-valve toilets, an effective vacuum breaker is required for the prevention of siphonage. Pipes should have smooth surfaces and tight joints. Grade should be sufficient to permit carrying off of wastes without deposition of solids. Rate of discharge of waste water from plumbing fixtures through the drainage system should be as rapid as safety permits. (Tests at the Bureau of Standards indicate that a bathtub with a 1½-in. outlet, trap, and waste required 1½ to 2 minutes to empty, while the same bathtub with a 2-in outlet, trap, and waste required only 1 to 1⅓ minutes to discharge.)

Performance standards for sanitation equipment are suggested by the following:

Toilets: minimum fouling surface (large water area); minimum of physical contact (e.g. toilet seat with open front, pedal-operated flush valves); maximum aid to peristaltic action of intestines (height: 14 to 15 in.); minimum noise.

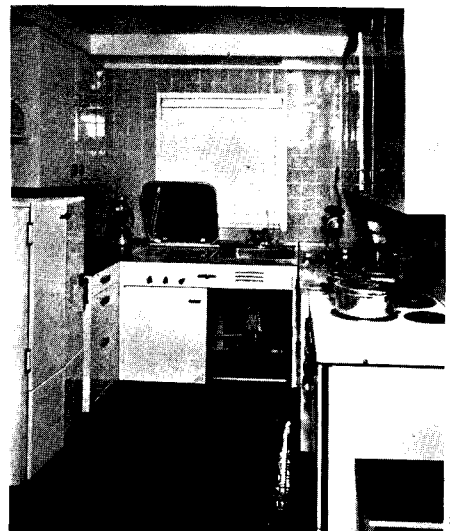
Bathtubs: minimum slippability (flat bottom); prevention of siphonage (over-rim spout supply).

Showers: elimination of scalding danger (pressure-equalizing or thermostatic mixing valve).

To facilitate housecleaning and reduce the hazards of possible infection, materials for sanitation equipment should be as smooth, continuous, impervious, and resistant to temperature change as possible.

Disposal of solid wastes

Prompt removal of solid wastes is also essential: accumulations of wastes are breeding places for insects and rodents. Where garbage must be stored between collections, there should be a watertight covered container to receive the garbage, located preferably out of doors and below the ground surface; similarly, ashes and other solid wastes should be stored in closed containers in a location that facilitates collection. When kitchen grinders or incinerators are used, there is little accumulation of garbage or rubbish.



Kitchen grinder under sink; garbage is disposed of through sewerage system.



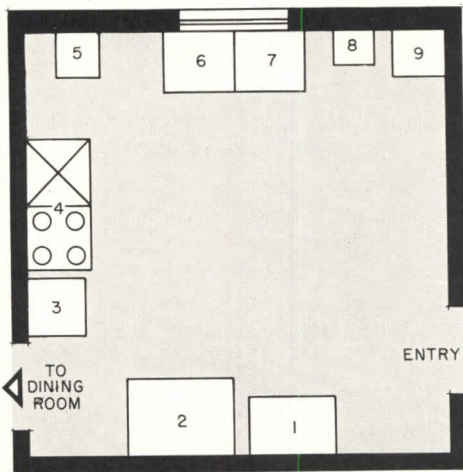
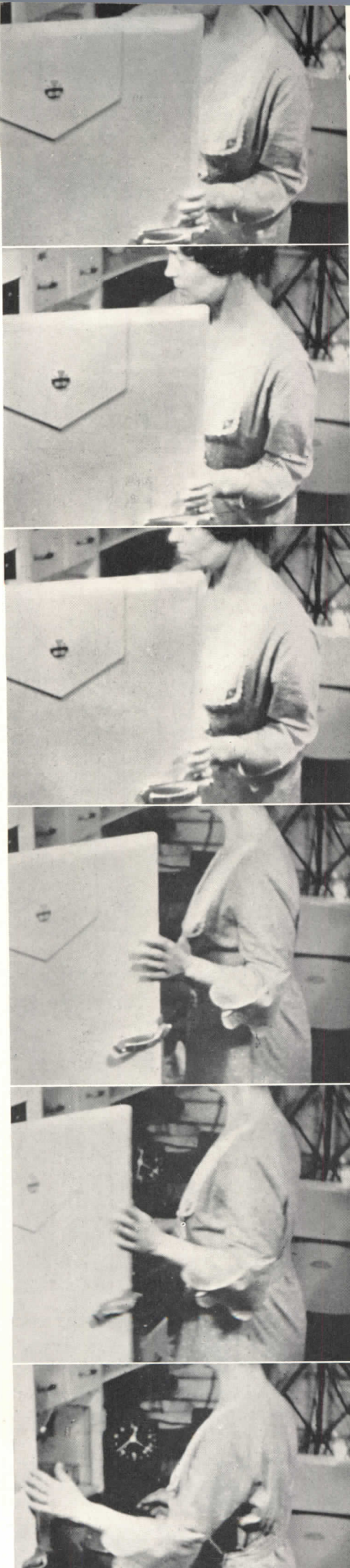
Plastic wall surfaces are relatively continuous, impervious, and non-porous.



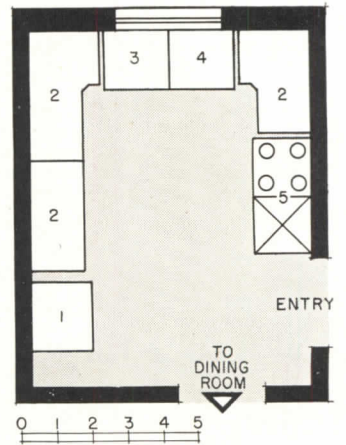
Increased use of electrical equipment advances cleanliness in the kitchen.

STANDARDS FOR CIRCULATION

Sources: Dr. Mario Salvadori, Time-and-Motion Engineer, Instructor in Columbia University; Eloise Davison, N. Y. Herald-Tribune Home Institute; Professor David B. Porter, Professor of Industrial Engineering, New York University; I. W. Clark, Home Planning Department, Westinghouse Electric & Manufacturing Company; K. G. Patrick, General Electric Company.



1. Refrigerator. 2. Cabinet. 3. Table. 4. Range. 5. Dishes. 6. Dishwasher. 7. Sink. 8. Vegetables. 9. Brooms.



1. Refrigerator. 2. Cabinet. 3. Dishwasher. 4. Sink. 5. Range.

The photos at left are taken from a time-and-motion study film made in the Department of Industrial Engineering at New York University, under Professor David B. Porter. The study was made by Miss Eloise Davison, now of the New York Herald-Tribune Home Institute; Miss Grace Pennock assisted. In the tests, three identical meals were prepared in each of two kitchens, one a "typical" kitchen and one a "model" kitchen. It was found that preparation of these meals in the former required walking of 15,221 in. (1,042 steps) in 132 min. 43 sec.; in the latter, the work involved walking of only 6,824 in. (357 steps) in 111 min. 33 sec. It is possible in this way to measure the frequency of movement between various fixtures, the kinds of motion involved, etc. The design of equipment and its placement in the kitchen may be determined on this basis.

IT IS ESTIMATED that the performance of the usual "housekeeping" tasks alone involves walking on the part of the "housekeeper" of approximately 200 miles a year—about 90 of these miles in the kitchen alone. To facilitate these movements, to minimize fatigue in the performance of these and other activities within the house is the problem of circulation.

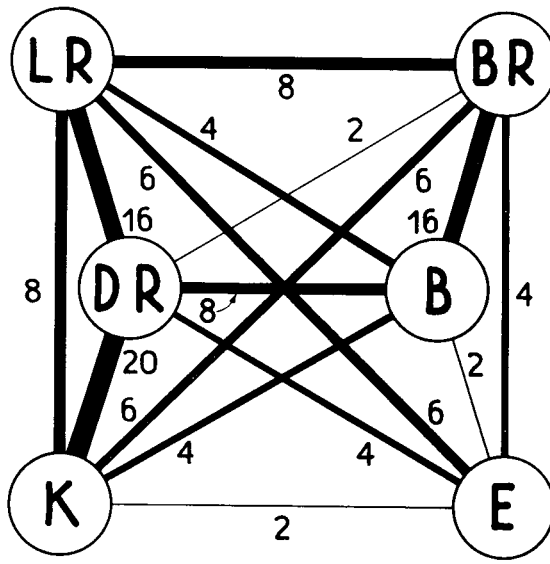
"Fatigue" is characterized by a slowing down of both muscular and nervous reactions. A minimizing of fatigue, however, is not the sole criterion of circulation: movement as a "leisure" activity may be pleasurable in itself; the problem of the house designer is to determine in each instance which of these factors dominates, to what extent, and then to base the design upon these factors.

Reduction of fatigue is a special aspect of the wider concept of "efficiency" common to industrial production: it is a function of economy of time and motion and is analyzable in those terms.

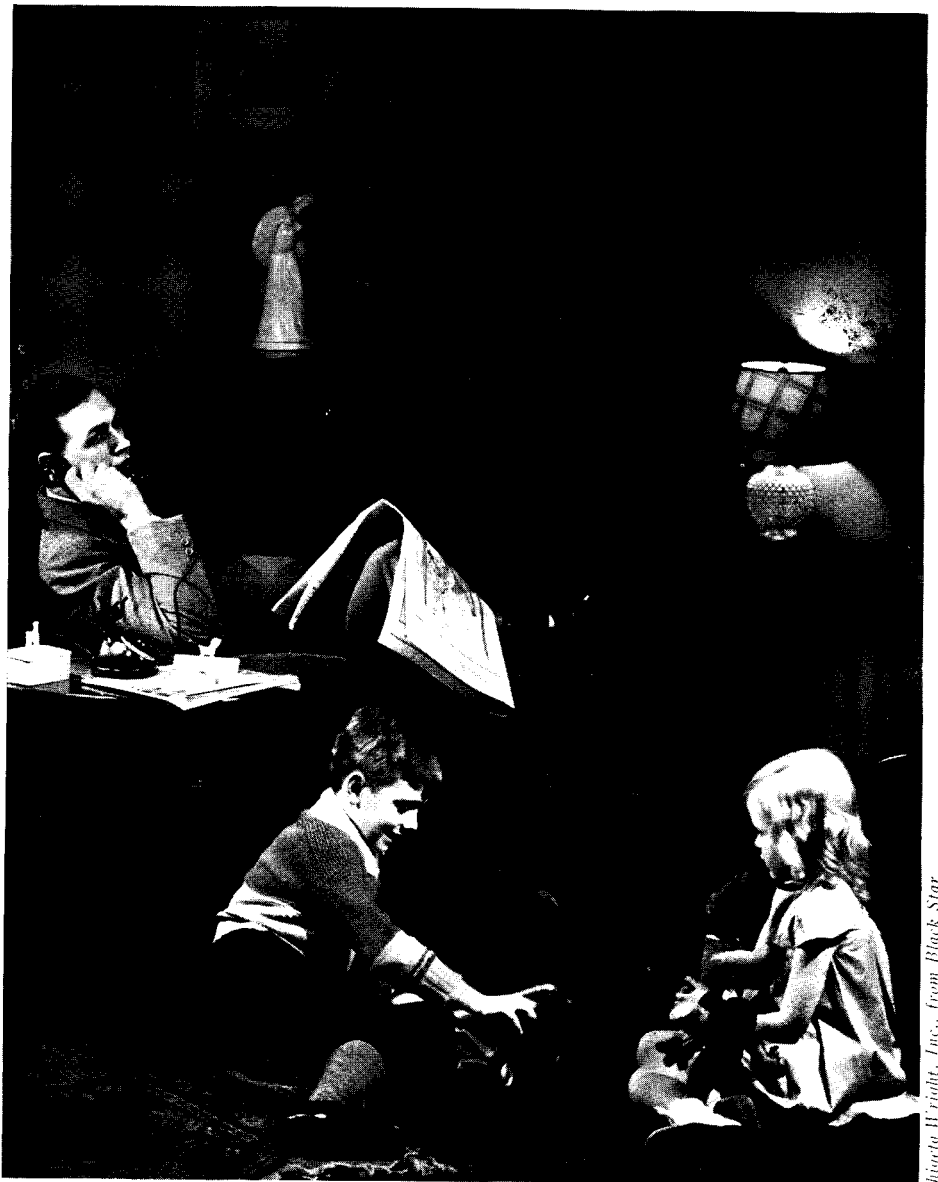
By time-and-motion analyses, it is possible to find: (a) what movements are essential to specific activities; (b) how they are performed; (c) how to improve performance in terms of time, fatigue, and accomplished results; (d) how to improve the tools used in specific activities. (In a house, the "tools" are the materials, equipment, and services which make up the house.) Economy of motion applied to the location of different centers of activity within the house is determined by the frequency of specific sequences of activity, and the location of equipment and furniture in each center is determined by the frequency of the specific motions in each activity.

Economy of motion produces a tendency to economy of space, a consequence which is exaggerated by the fact that usually economy of space means economy in costs. But an exaggeration of space-economy may also increase "psychic strain."

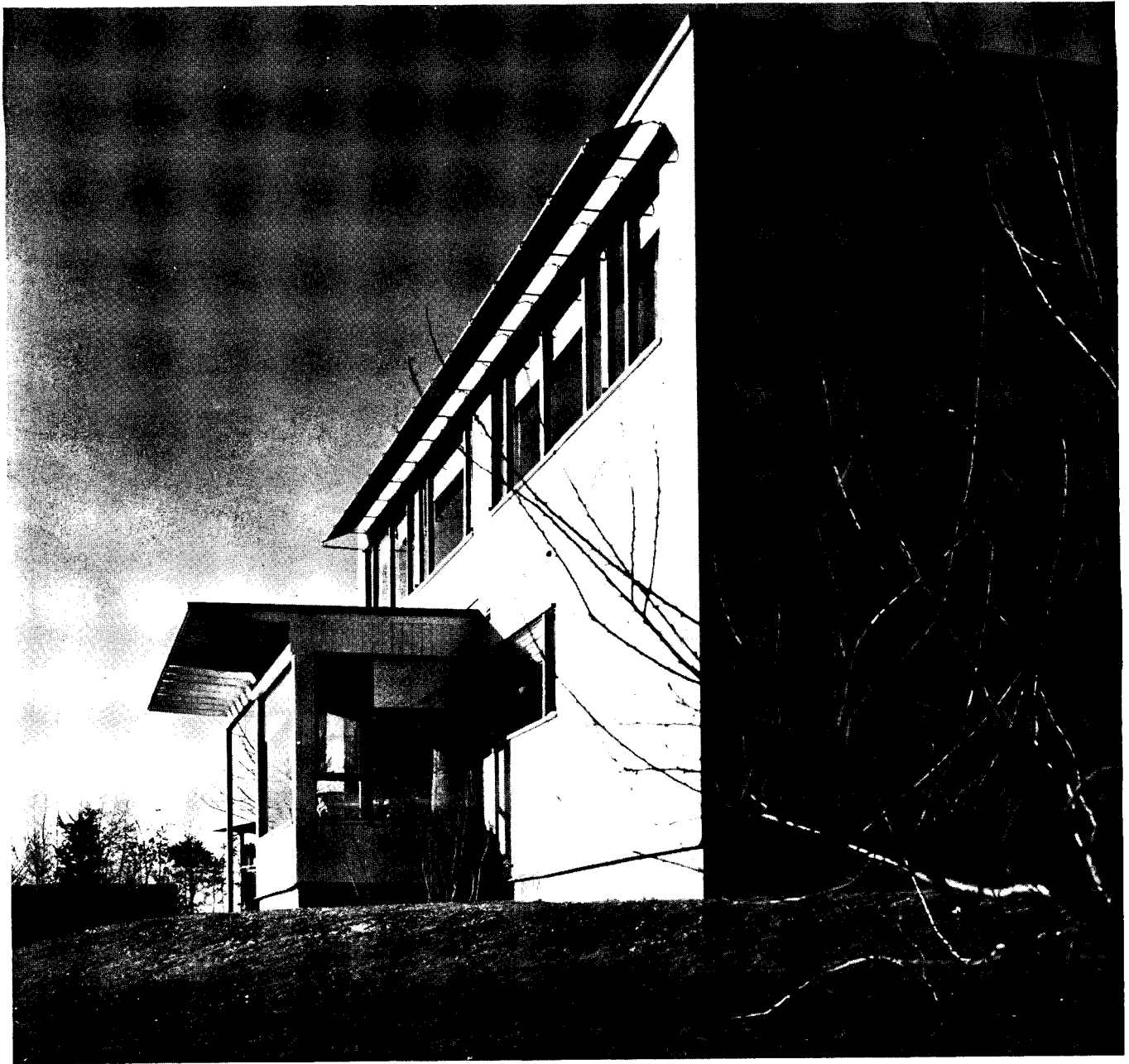
The provision of from 400 to 300 cu. ft. of space per occupant of a dwelling unit of usual ceiling height will satisfy minimum requirements for health, but will ordinarily not permit separate rooms for each occupant. Just as a house is sometimes a place of refuge from the tension and activity of the outer world, so separate rooms within the house will reduce the nervous irritation of too close or too frequent contact with other occupants of the house.



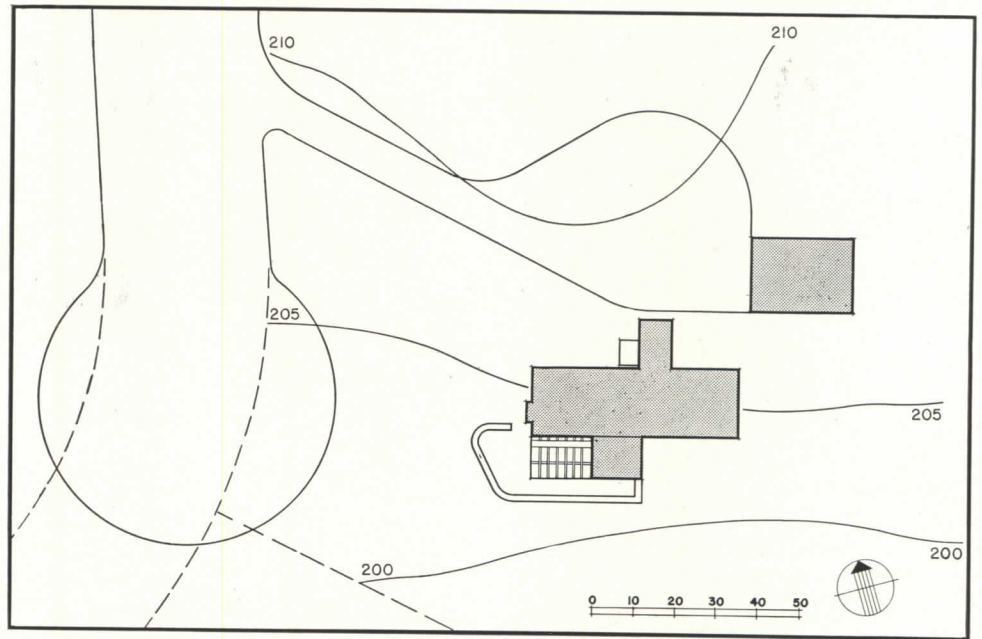
The diagram above was made by Dr. Salvadori on the basis of observations within his own home. It is intended to suggest that adjacency relationships of various areas within the house may be determined, partly by measurements of the frequency of movement between those areas. Below: leisure activities in the home involve movements that are pleasurable in themselves and to which criteria of time-and-motion economy are not applicable



Shirley Wright, Inc., from Black Star



Photos by Arthur Haskell



Plot plan

THIS HOUSE for Professor and Mrs. James Ford is located at the foot of a large apple orchard in the town of Lincoln, Mass., about a mile from Thoreau's Lake Walden. All rooms are oriented to the south except halls, stairs, and bathrooms which face north, and the maid's room which faces east. The windows of second-story rooms look over the apple trees to a wooded area beyond. A fixed shade of redwood board, placed over these windows, is so designed as to exclude the sun in summer, when it is high, and permit it to penetrate in winter, when it is low. The overhang of the dining-room roof and the redwood boards over the living-room windows are similarly designed for this purpose. To catch as much sun as possible, the house is built only one room deep; this permits cross or through ventilation for every room. Furnishing of the house was done by the tenants.

Materials and Equipment

Foundations: 12-in. concrete blocks; waterproof below grade, with float finish above; copper termite shield.

Structure: Wood frame with asphalt felt between boarding and exterior siding (vertical tongue and groove V-joint siding).

Wall insulation: Double-ply Cabot's Quilt between studs.

Roof insulation: Triple-ply Cabot's Quilt.

Roof: Five-ply tar and gravel, copper flashing; roof drain inside.

Floors: Douglas Fir. In kitchen, bathroom, maid's room, corridors, linoleum. The rest of the house is carpeted.

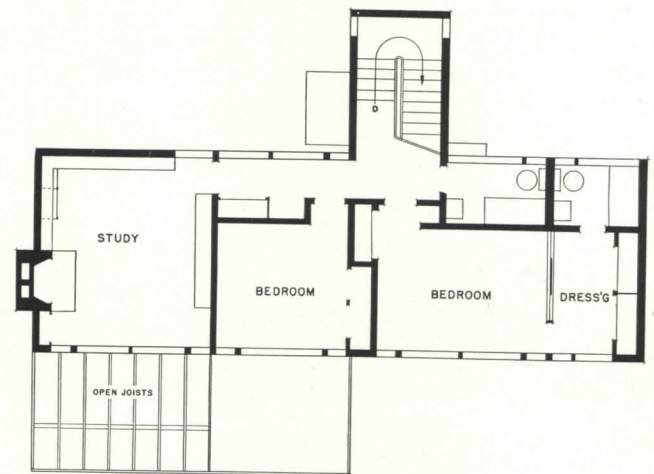
Walls and ceilings: Kitchen and maid's room and all bathrooms, hard plaster; all ceilings and walls throughout are finished with 4 by 8-in. Weldbord panels, U. S. Plywood; inside walls, stair hall have vertical clapboards, painted white.

Windows: Metal sash and screens, Hope's.

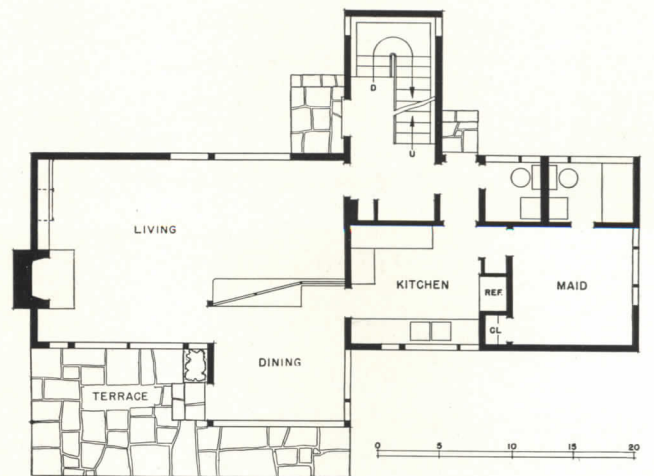
Heating: Automatic oil burner and forced hot-water system, American Radiator Company.

Kitchen: Range and refrigerator, Westinghouse; three-speed ventilating fan above stove, metal cabinets, Eames Company.

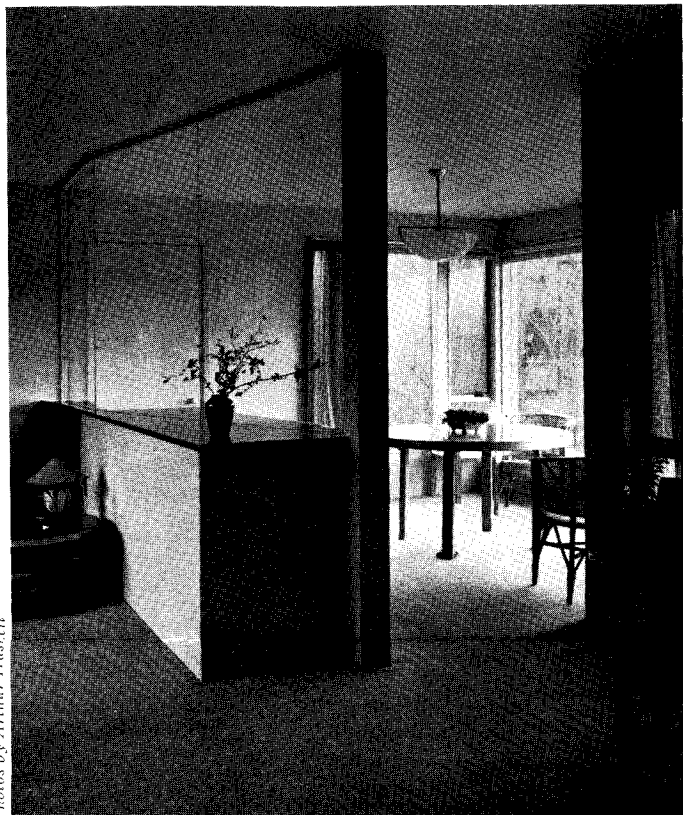
Built-in furniture: Buffet top, black Caffolite; buffet doors, Masonite sliding; dressing table, black Masonite top.



Second floor



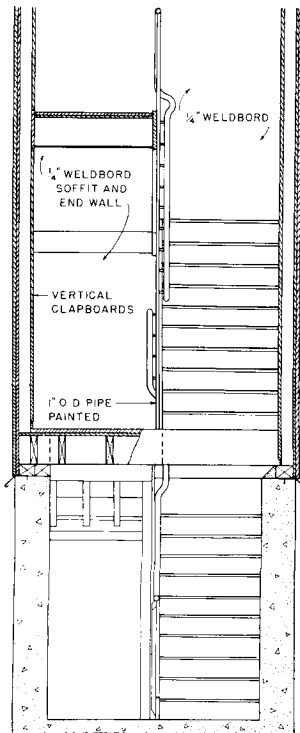
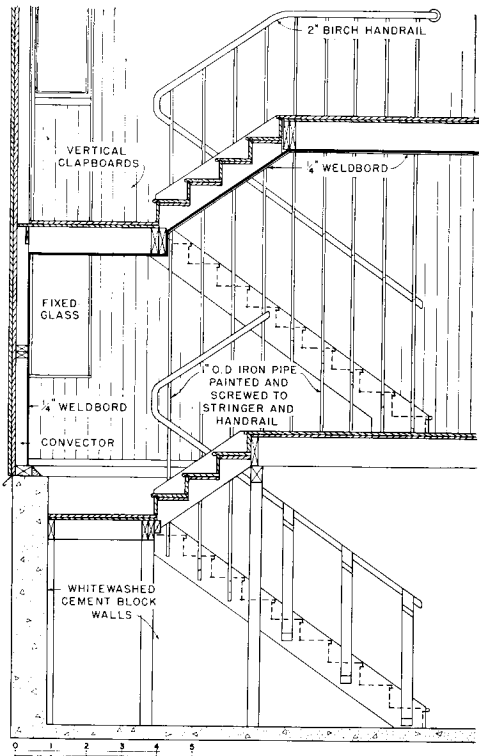
First floor



Photos by Arthur Haspell

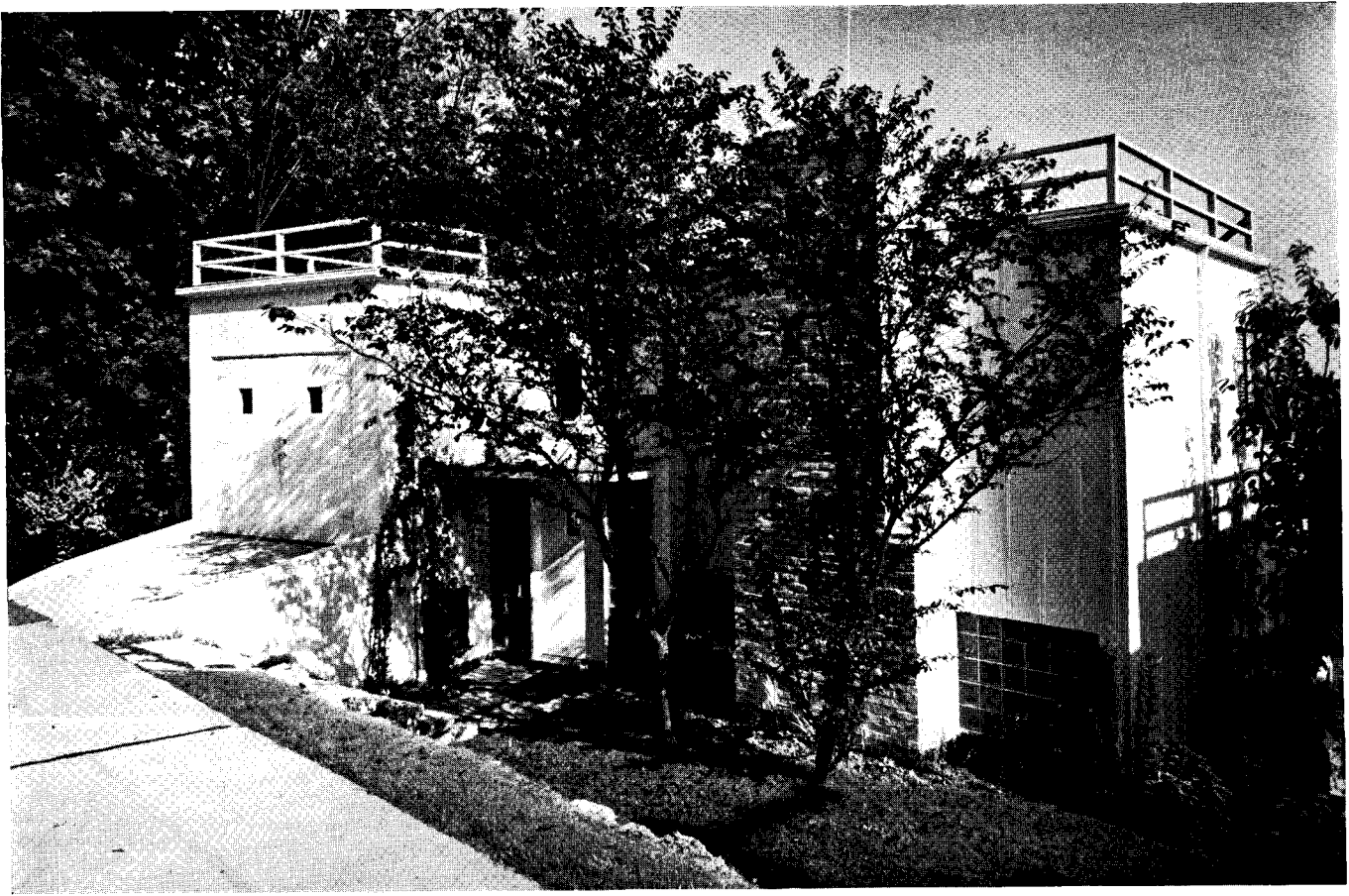
The living room is separated from the dining room by a built-in buffet with a glass partition above. The glazed area of the dining room is projected over the terrace; the early morning and late afternoon sun is admitted here and a view afforded of the large wooded area to the east, south, and west.

HOUSE IN MASSACHUSETTS



Stairhall: side walls are painted white; plywood-panel end wall is canyon red; black linoleum on floors.





Photos by Roger Sturtevant

Top: the front door opens on a landing halfway between first and second floors. Bottom: rear view of house

HOUSE IN WASHINGTON

PAUL THIRY and ALBAN A. SHAY, Architects

THIS HOUSE in Seattle, designed for use of one of the architects, overlooks Lake Washington and Mt. Rainier. The lot slopes downhill from the street on the west to the back lot line on the east, at an angle of 45°. The design was determined largely by this steepness of the lot.

The garage opens from the street and on the second-floor level. The front door opens on a landing halfway between the first and second floors, and the living-room floor is 4 ft. below the sunken front-yard grade. To screen the living room from the public view and still obtain much-needed sunlight on the west, 8-in. glass block was used in the front wall. The basement is completely above ground in the rear, with maid's room and bath, laundry, and entertainment room, all with a view to the rear.

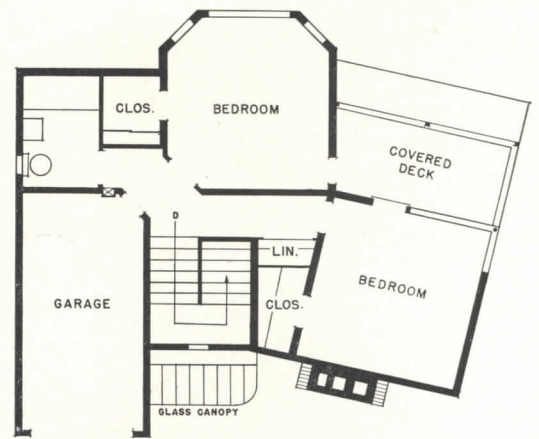
Materials and Equipment

Exterior: Walls, T. & G. cedar siding vertically laid 1 by 10 in., with 2-in. mold between; glass block in front wall; casements, Fentron Steel.

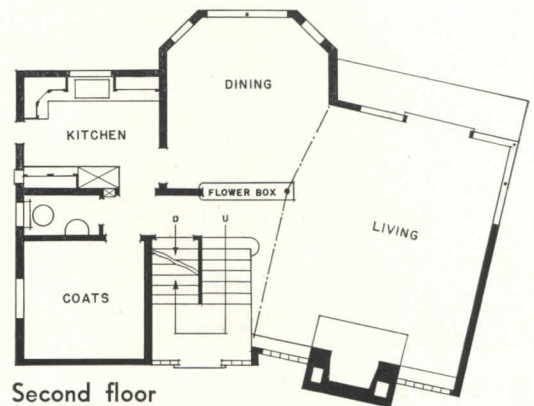
Interior: Living room, Vello, blue-green finish; Venetian blinds at windows; Broadloom rug of Port wine color, Alexandre Smith; other floors, oak parqueted and Armstrong linoleum.

Heating: Majestic conditioned hot-air plant.

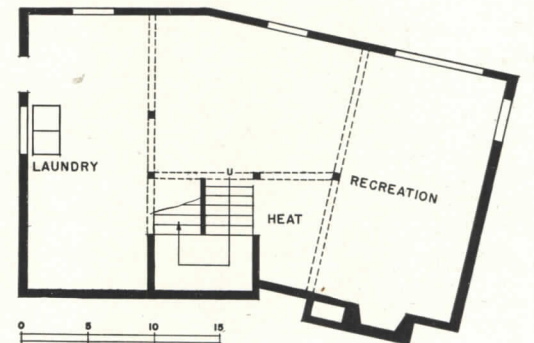
Plumbing: Standard Sanitary Manufacturing Company.



Third floor



Second floor



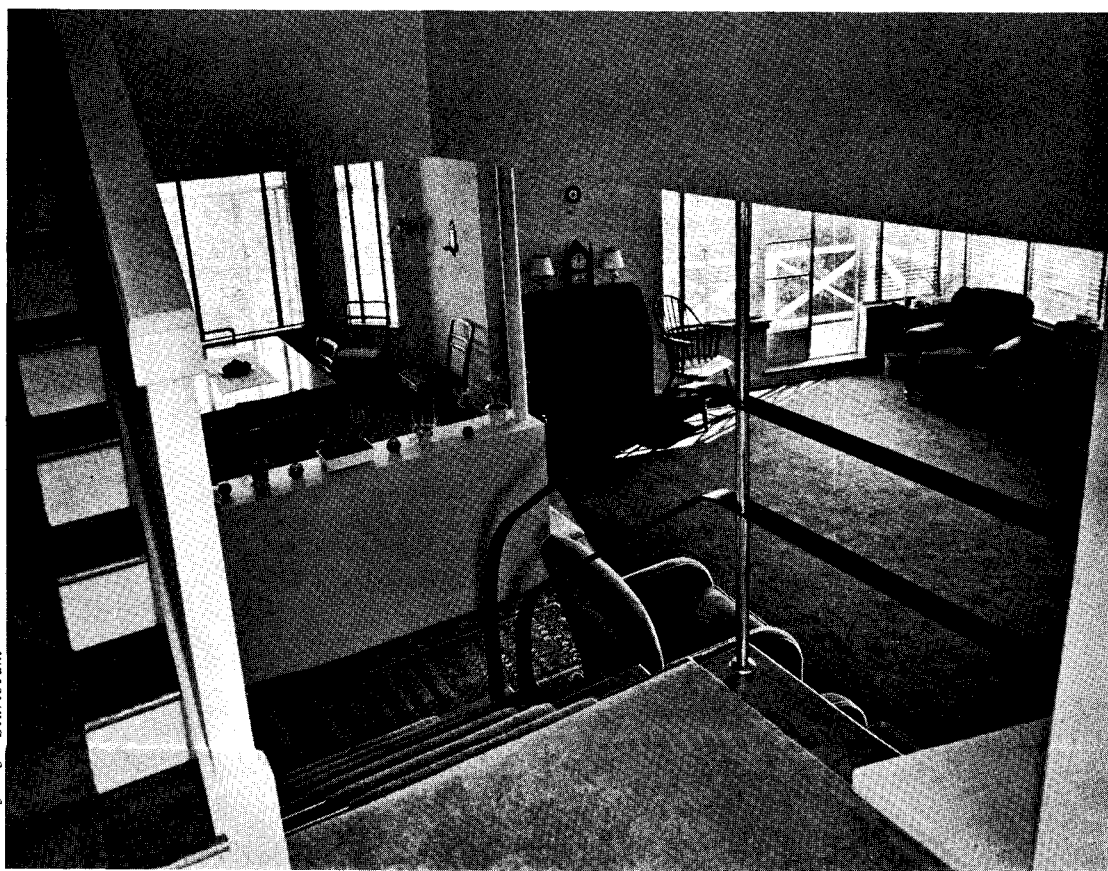
First floor



HOUSE IN WASHINGTON



Living room on street side, 4 ft. below grade; glass block in the wall screens the room from passers-by, admitting daylight at the same time. Street door opens on a stair landing.

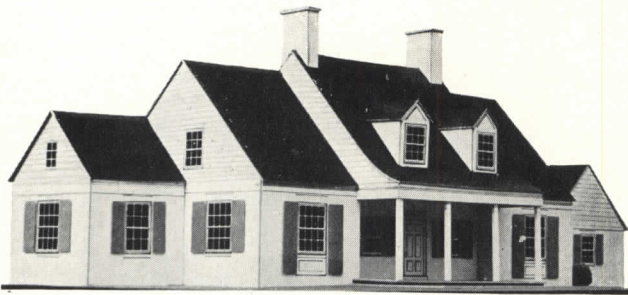


Photos by Roger Starkevant

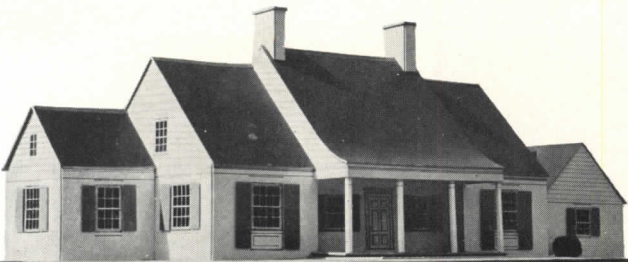
Living room from landing. Balcony commanding view of Lake Rainier is seen in background.



Photos by Wiles



First model



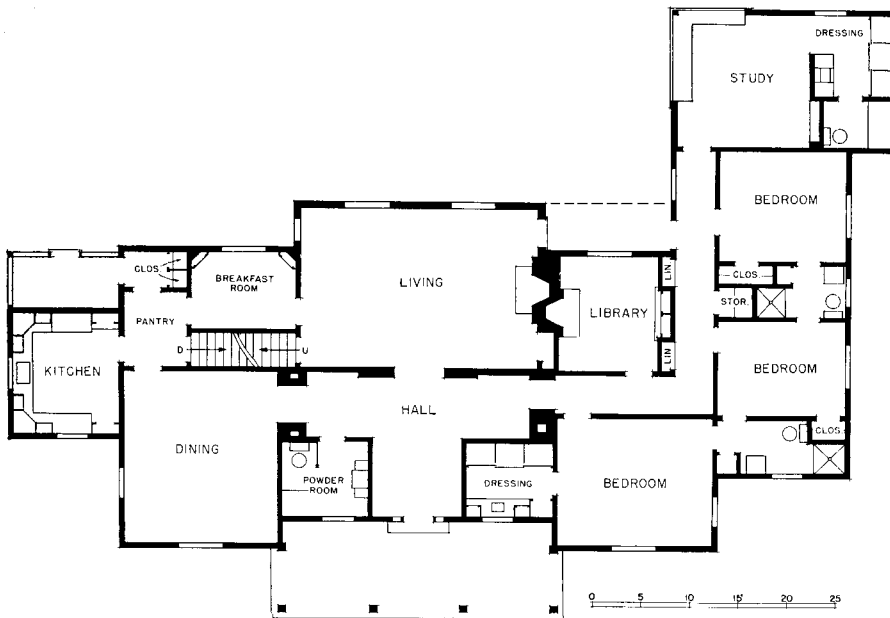
Second model

THIS HOUSE in Belle Meade, Tenn., represents a fresh handling of a traditional form: detail is minimized and window space is increased.

The client had wanted a two-story house; but the architect convinced him with models that a one-story house was sufficient for his needs; the attic space is unpartitioned. There are roof decks on both sides, enclosed by railings.

The bedrooms grouped about the library are for the use of the owner and his wife. The rear wing—study and bedroom—is used by the children. Dining and breakfast rooms are similarly segregated so that separate entertaining by adults and children is possible.

Cubic-foot cost was 34c.

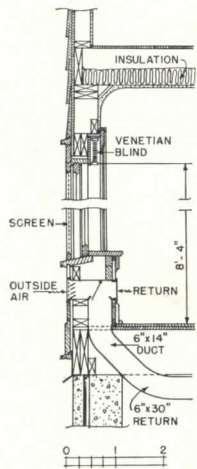
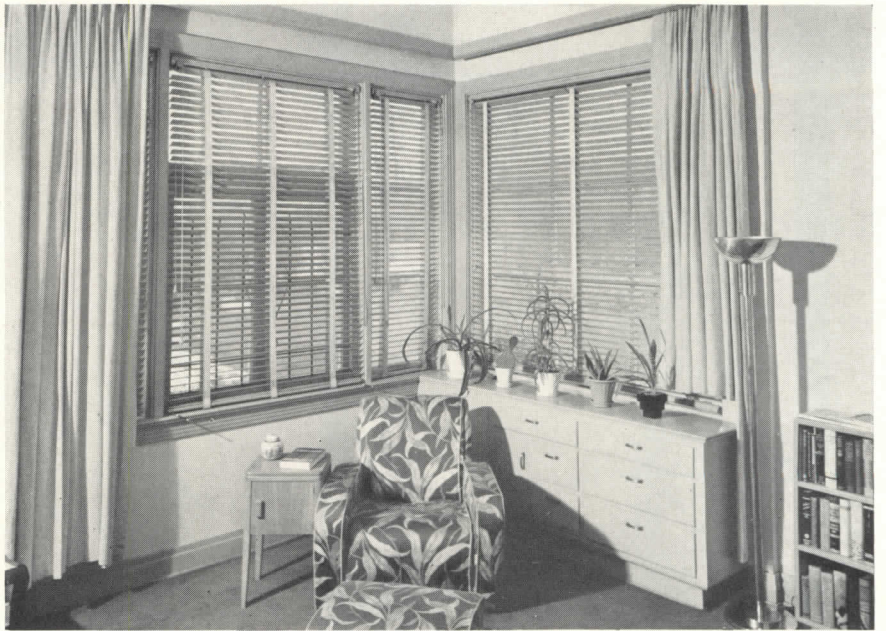


Floor plan

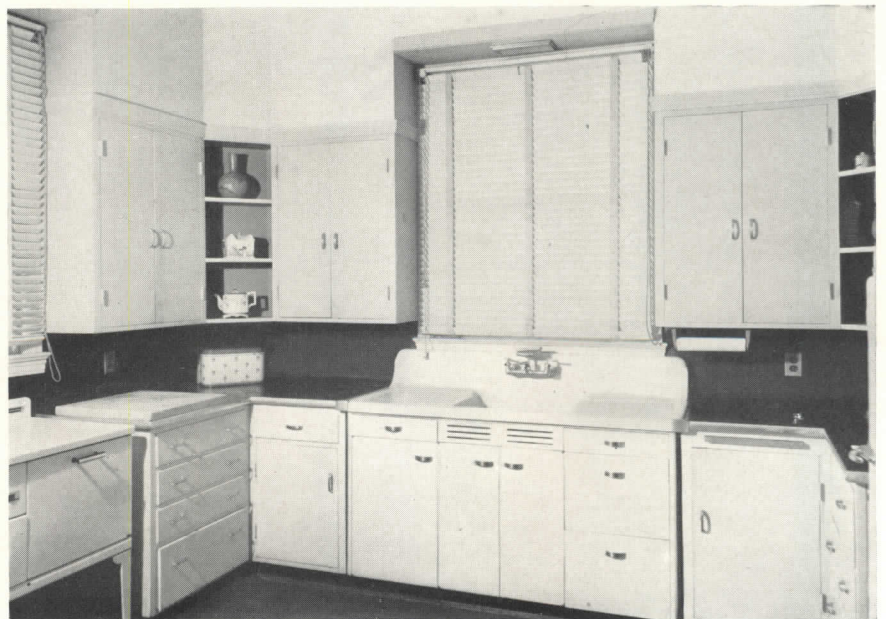
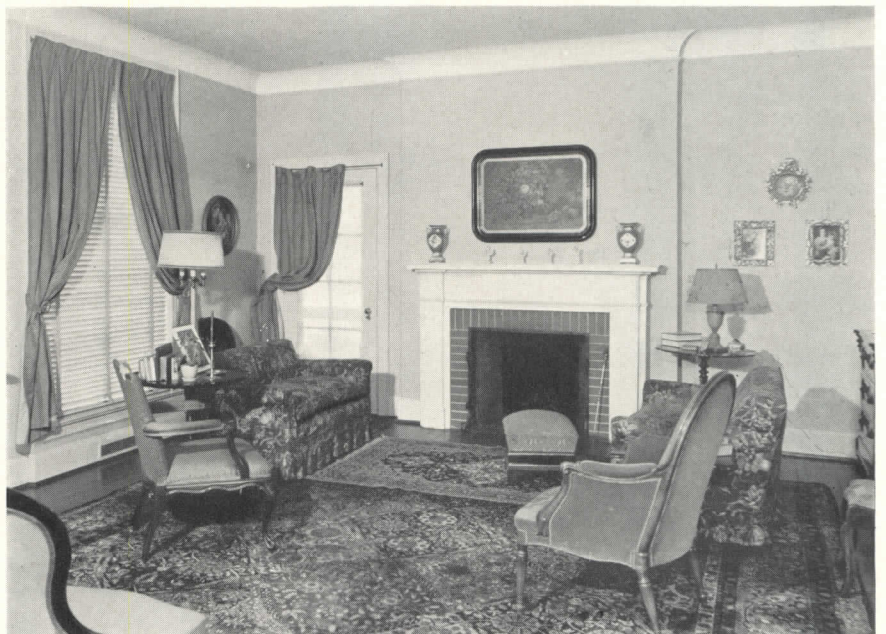
Materials and Equipment

Foundation: Ready-mix concrete, Ironite waterproofing.
Exterior walls: Cypress siding.
Roofing: Carey cork-backed tapered asphalt shingles. Deck roofs, 5-ply asphalt.
Insulation: Mineral wool, U. S. Gypsum Co., all walls and floors, 4 in.; deck roofs, 6 in., with air space. Attic and roof, 1/2-in. Masonite under rafters.
Interior walls: U. S. Gypsum plaster; bathrooms, tile; study bathroom, rubber.
Floors: White oak, Minwax finish; bathrooms, tile; study bathroom, rubber.
Bathroom equipment: Crane Company, John Bouchard Sons.
Kitchen equipment: General Electric range, Frigidaire.
Heating: Peerless steel furnace, hot-air circulating system; Fairbanks-Morse stoker; Hotpoint electric water heater.
Wiring: Knob and tube, G. E. Ingram.
Lighting fixtures: Lightolier Co.

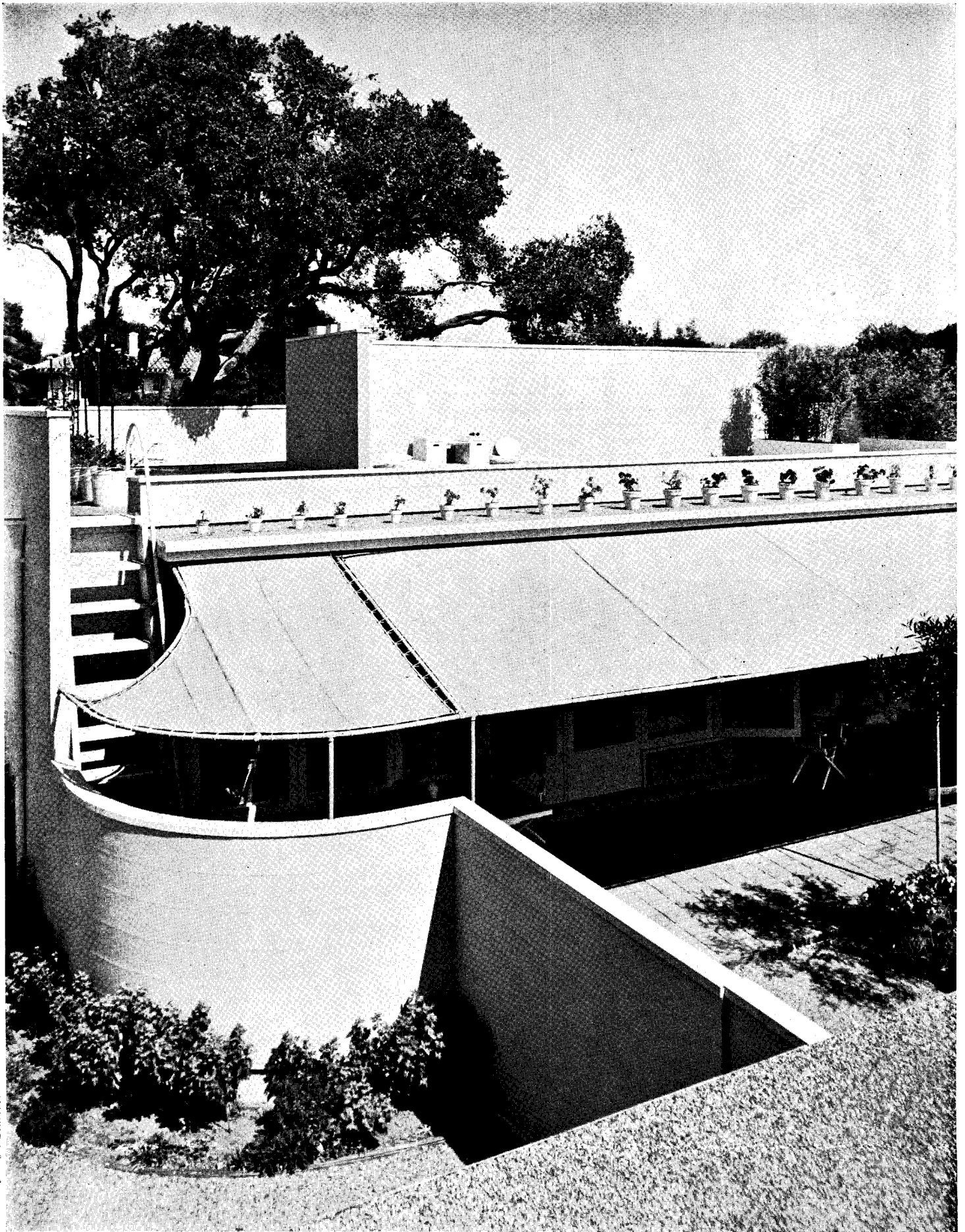
HOUSE IN TENNESSEE



Detail showing air duct under living-room window



Top: corner of study in rear wing. Center: living room looking toward rear entrance. Bottom: kitchen



Photos by Royce Siersteven

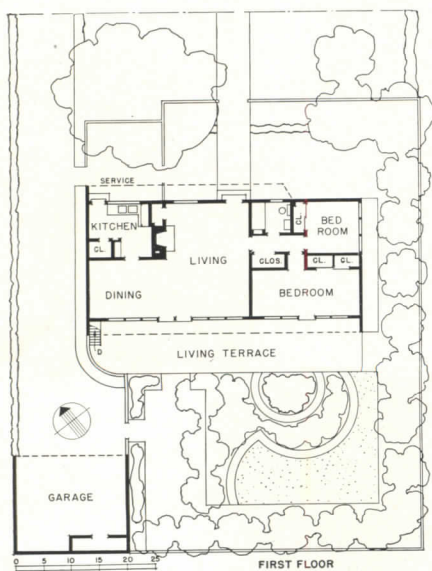
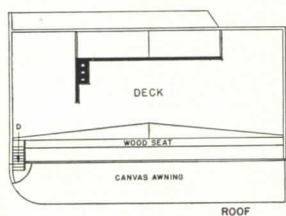
For maximum privacy, the house faces the garden side to the south; the roof deck is shielded on the north by a wall.

HOUSE IN CALIFORNIA

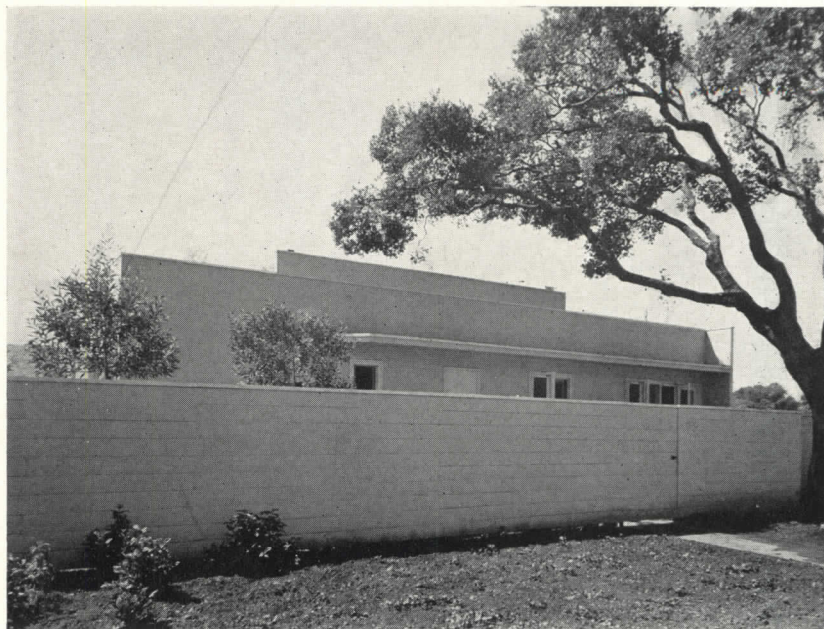
WILLIAM WILSON WURSTER, Architect

PRIVACY FOR OUTDOOR LIVING was the dominant motive in the design of this house. To this end, the entire property is surrounded by a board fence, 6 ft. high. The house is opened to the garden (south) side. The roof deck is shielded on the north by a wind-baffle wall; sun bathing may be enjoyed

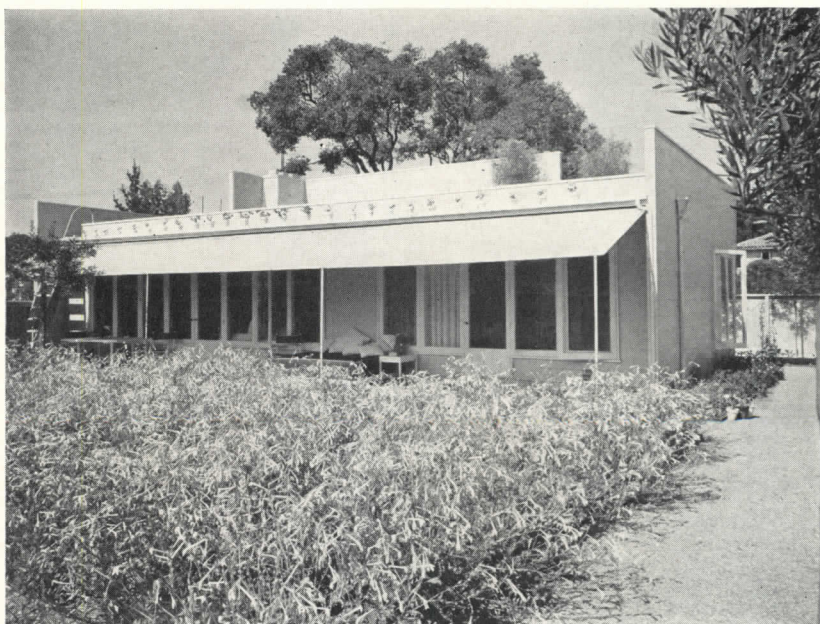
here, free from the interruptions of lower-floor living; the roof deck also affords a view of the Coast Range Mountains which is not obtainable from the first floor. The garden is planted with night-blooming flowers. Thomas D. Church was the landscape architect.



Plan

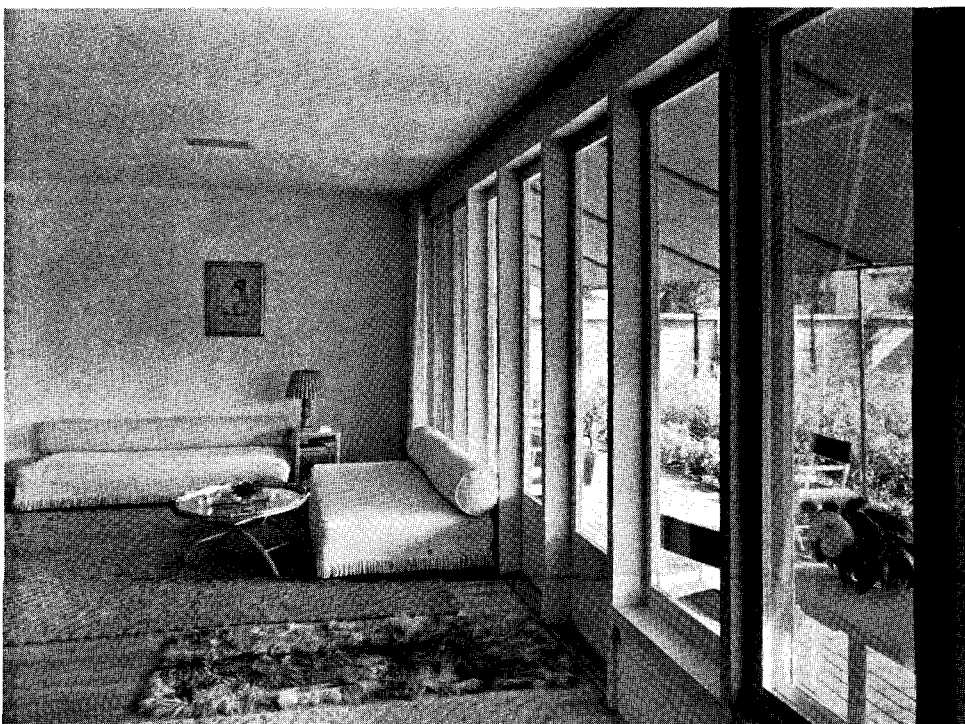
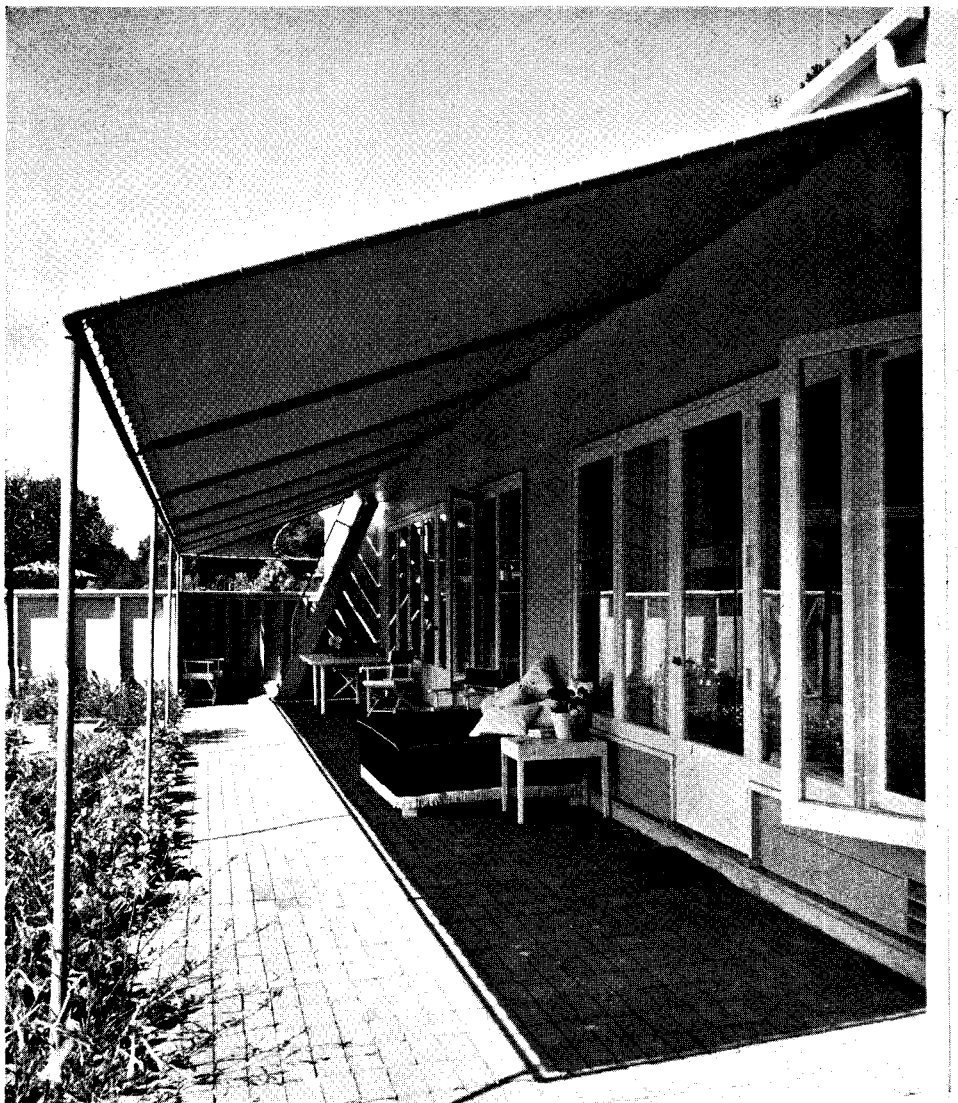


View from the north; the house is surrounded by a fence for privacy.



House from south; bedroom, living and dining rooms open on a garden.

HOUSE IN CALIFORNIA



Photos by Roger Sturtevant

Top: terrace adjoining living areas; stairway at end of terrace leads to roof deck. Bottom: view of living room

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medal was accepted by *Raymond M. Hood, Jr.*, on the occasion of the Chapter's annual dinner, February 27, at the Architectural League in New York City. Mr. Frost was chairman of the medal jury, which also included: *John W. Cross*, *Philip L. Goodwin*, *Otto Teegen*, and *A. Stewart Walker*. Principal speaker at the dinner was *Charles D. Maginnis* of Boston, past president of the AIA. Guests of honor were: *Edwin D. Bergstrom* of Los An-

geles, present Institute president; the presidents of architectural societies in the metropolitan area; and *Mrs. Raymond M. Hood*, widow of the medalist.

According to the presentational citation, "Raymond Hood was known in the profession as a stormy petrel . . . always putting out new ideas at variance with accepted traditions, seeing the problems of the profession in a new light, and yet always developing

his ideas with a solid common-sense approach. . . . (He) held that modern architecture meant better buildings with more light and space, and that it should reflect and interpret the conditions of the times."

Remaining as notable demonstrations of Raymond Hood's contribution to contemporary American architecture are the buildings of McGraw-Hill, the Daily News, American Radiator Company, the Beaux-Arts Apartments, and Rockefeller Center, in New York City; in Chicago, the Chicago Tribune Tower. He also designed several buildings at the Century of Progress Exposition held in Chicago.

Mr. Hood was a past president of the Architectural League of New York, and a member of the American Institute of Architects, the Groupe Americain of the Societe des Architectes Diplomes par le Gouvernement, the Beaux Arts Society, and the Alumni of the American Academy in Rome.

Other Awards of Interest to the Architectural Field

THE DESIGN by *Henry B. Marsh*, Bluff Point, N. Y., has been judged winner in the competition for a new post office and court house, to be erected at a cost of approximately \$500,000 at Jamestown, N. Y. Fifth in the series of regional competitions conducted under the auspices of the Federal Works Administration, this event attracted 71 entries by architects with home offices in Region No. 3, comprising most of New York State (New York City and nearby counties excepted). Honorable mentions were conferred on *Haskell and Considine*, Elmira; *William P. Crane*, Syracuse; and *James J. O'Shaughnessy*, Albany. The awarding jury consisted of architects *Wilson C. Ely*, Newark, N. J.; *G. Corner Fenhagen*, Baltimore, Md.; *Philip L. Goodwin*, New York City; *Douglas Orr*, New Haven, Conn.; and *C. C. Zantinger*, Philadelphia, Pa.

J. GELGISSER of New York University was awarded first prize in the Ninth Annual Design Competition sponsored by the Beaux Arts Institute for the Illuminating Engineering Society (AR 12/39, p. 14). The competition this year called for a fashionable women's wear shop located in a modern suburban residential center; the problem was

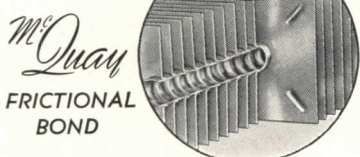
(Continued on page 138)



Ypsilanti State Hospital, Ypsilanti, Mich. Albert Kahn, Inc., Detroit, Architects and Engineers. Peter Eddy, Dearborn, Mich., Heating Contractor.

THE YPSILANTI State Hospital is one of the largest and most outstanding institutions of its kind in America. That Albert Kahn, Inc. should select McQuay Convector for this job is a fitting tribute to McQuay construction, which gains its efficiency through the use of its exclusive frictional bond, whereby the tube is hydraulically expanded into the wide fin collar without the use of solder. In addition to convectors McQuay, Inc., offers a complete line of coils and equipment in the widest range of types and sizes available. McQuay, Incorporated, 1601 Broadway St., Minneapolis, Minnesota.

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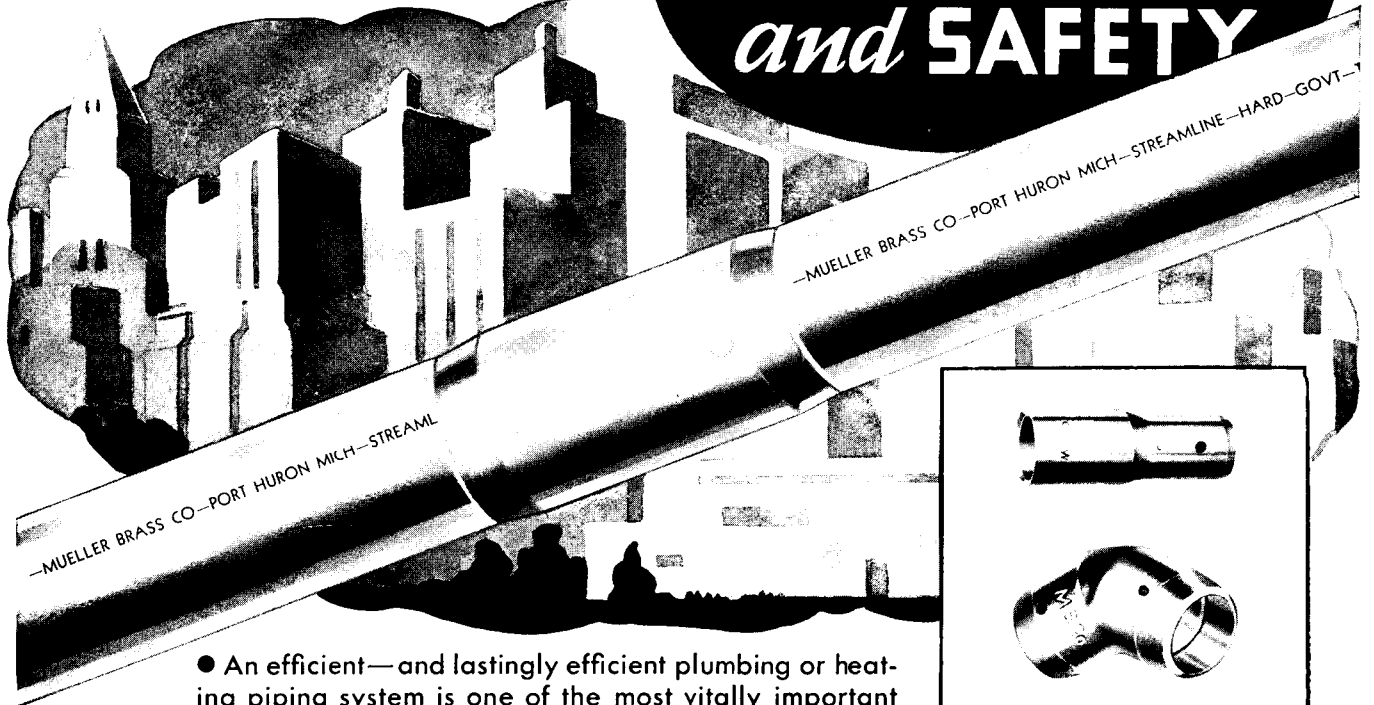
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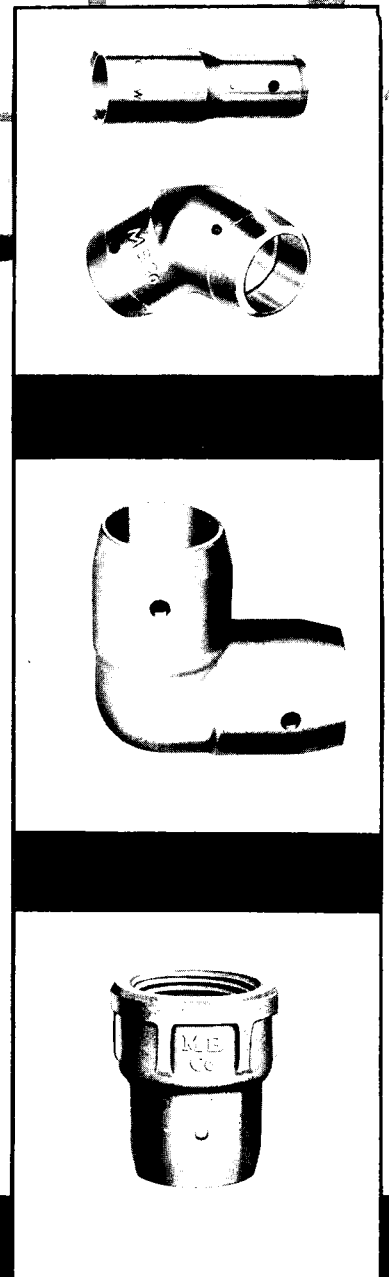
Practically any piping material may be satisfactory for a limited time—but the question is—HOW GOOD WILL IT BE AFTER FIVE OR TEN YEARS UNDER ACTUAL LIVING CONDITIONS? Then comes the real test of a piping system, and that is when copper piping proves its worth beyond question—and goes on proving it with year after year of efficient trouble-free service.

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WITH RECORD READERS

(Continued from page 136)

one of correlating the architecture and lighting to achieve an environment pleasing in appearance and effective from a utility standpoint. For his winning solution, Mr. Gelgisser received a prize of \$300. *D. P. Stevens*, University of Illinois, was awarded the \$200 second prize; third prize of \$100 went to *S. R. Joseph* of N.Y.U.

One hundred and fifty-six nationally distributed architectural students and draftsmen submitted designs. Judging was done at Cleveland by a

group of architects from that city and a number of illuminating engineers from the United States and Canada. *Carl F. Guenther*, headed the first group; *H. H. Magdsick*, former president of the Illuminating Engineering Society, headed the engineers. *Otto Teegen*, Director of the department of architecture, Beaux Arts Institute of Design, presided at the judging.

ACCORDING to an announcement by *C. G. Franck*, president of the Holograph Company, *Thomas Willett Rolph*, Chief Engineer of that organization, for his "preeminent contribu-

tions as an inventor in the field of illuminating engineering," was recently honored with an award as a "Modern Pioneer." The presentation was made by the Committee on Modern Pioneer Awards, headed by Dr. *Karl T. Compton*, President of M.I.T., on the occasion of the 150th anniversary of the founding of the American patent system.

Signal among Mr. Rolph's achievements prompting this recognition by the National Association of Manufacturers were: inventions in the design of desk and table lamps which have contributed greatly to eye hygiene, comfort, and efficiency; the invention of a structural glass brick which redirects light from the outside in such a way that an effect of indirect lighting is created on the interior; and numerous inventions in other general-service commercial and industrial lighting equipment.

Announcements of other "Modern Pioneer" awards, of interest to the building field, received too late for this issue, will be handled subsequently.

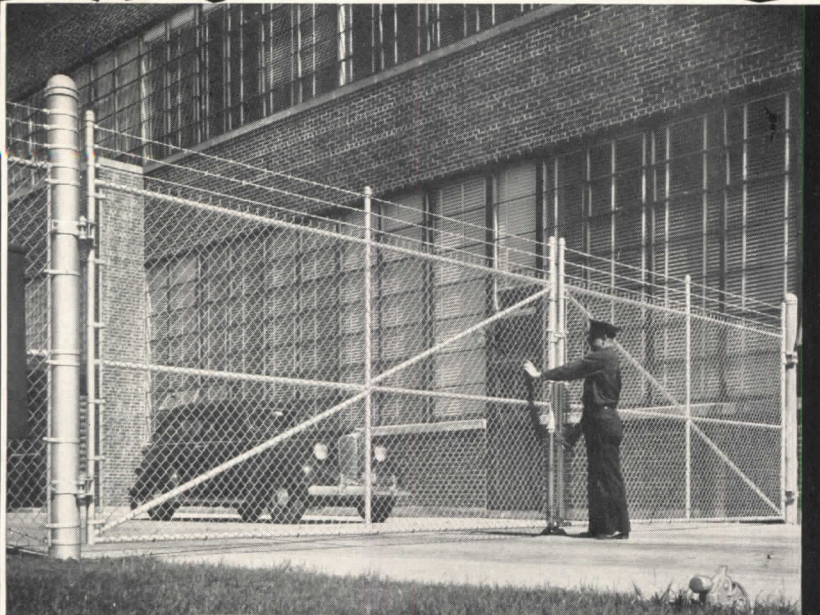
Recently Announced Scholarships Available to Architects

IN ADDITION to the Scholarships noted in this month's calendar (p. 10), the RECORD has been apprised of the following opportunities for advanced architectural study:

The *LeBrun Traveling Scholarship* (\$1400 stipend), offered by the New York Chapter, AIA. Award will be made on the basis of a competition open to any architect or architectural draftsman between the ages of 23 and 30 who is a citizen of the United States, who has been engaged for at least three years in active practice or as an architectural draftsman, and who has never been the recipient of any other traveling scholarship. All submissions for candidacy must be in before April 15, 1940. Complete details should be secured at once from the Secretary of the New York Chapter, AIA, 115 East 40th Street, New York City.

The *George G. Booth Traveling Fellowship in Architecture* will be awarded again this year by the University of Michigan on the basis of a competition to be held during the two weeks beginning April 5, 1940. All graduates of the College of Architecture who have not reached their thirtieth birthday by that date are eligible. Prospective candidates should write at once to Dean *Wells Bennett*, College of Architecture and Design, University of Michigan, Ann Arbor.

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See Sweet's Catalog for detailed information, and write to PAGE FENCE ASSOCIATION, Bridgeport, Conn., Atlanta, Chicago, New York, Pittsburgh or San Francisco for Page Industrial and Residential Fence Books shown here.



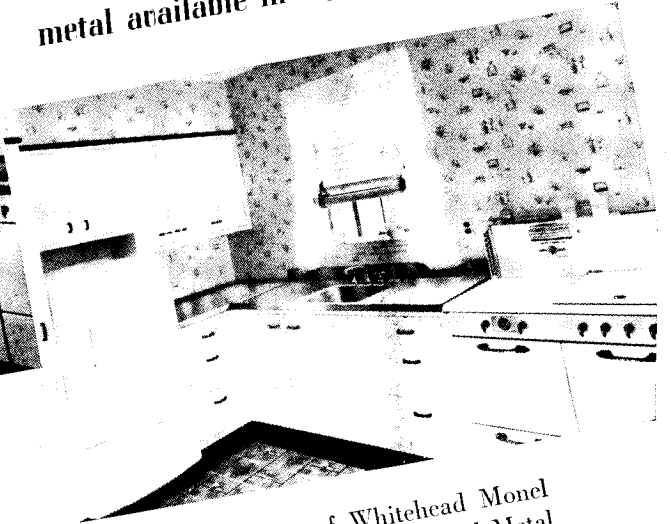
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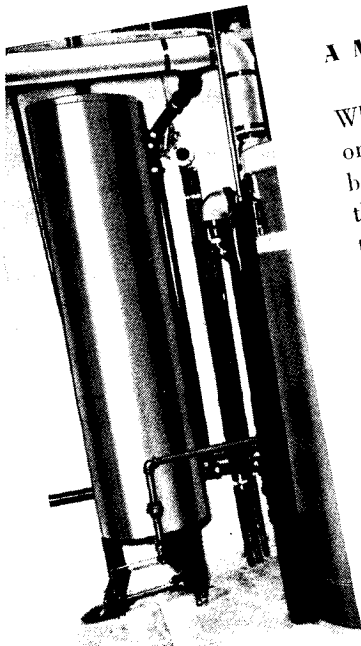
Household equipment of this solid, rust proof metal available in styles to suit any client



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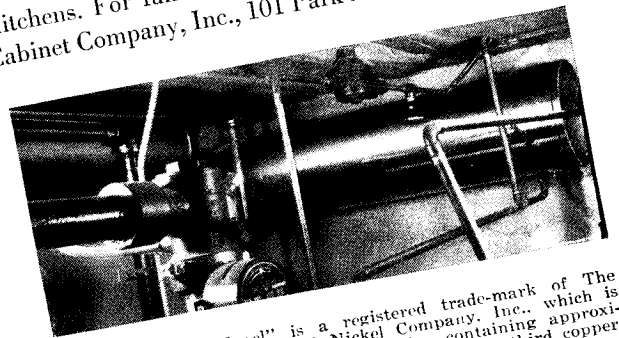
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NEW EQUIPMENTS

(Continued from page 60)

mufflers, or shot, according to the manufacturer. Two units are included in the equipment: a special silent-action shut-off, which, by means of corrugations, reduces velocity of flow to the valve; and a special air-cushioning device which permits a metered amount of air to enter the outlet passage. It is claimed that these valves eliminate 85% of flush valve noise. They may be applied to old equipment also. The Imperial Brass Manufacturing Co., 1200 W. Harrison St., Chicago, Ill.

MANUFACTURERS' PUBLICATIONS

Air Conditioning, Heating, Ventilating

Detroit LoStoker, Catalog No. 350: Describing the Detroit Stoker Company's line of coal firing units of the single-retort underfeed type, mechanically driven by either electric power or steam; 24 pages. *Engineering Data and Specifications, Catalog No. 351:* Suggestions for architects and engineers specifying Detroit LoStokers. *Detroit Stokers—A Complete Line, Catalog No. 550:* Describing overfeed as well as underfeed stokers of many sizes and capacities.

Detroit Stoker Co., Monroe, Mich.

Emerson-Electric Fans, 1940, Catalog No.

X-3649. Listing nearly a hundred types, including air circulators, ceiling fans, exhaust and ventilating fans.

The Emerson Electric Mfg. Co., St. Louis, Mo.

Mercoid Automatic Controls, Catalog No. 400: For heating, air conditioning, refrigeration, and various types of industrial applications.

The Mercoid Corp., 4201 Belmont Ave., Chicago, Ill.

General Equipment

Quality Plumbing and Heating Equipment for the Small Home: 16 pages. Greater Comfort for Guests . . . for Tourist Courts: 8 pages describing plumbing and heating equipment for tourist courts. Two new catalogs.

Crane Co., 836 S. Michigan Ave., Chicago.

Scientific Washroom Service by Scott: 10 pages describing the Scott Advisory Service in planning and equipping washrooms to eliminate the "Double Standard", available without cost to architects, executives, plant superintendents, building managers.

Scott Paper Co., Chester, Pa.

Lighting Equipment

Light for Work, Bulletin No. 149: Describing mercury vapor lighting systems for specific and general indoor and outdoor applications.

The Acme Electric and Mfg. Co., Cleveland, Ohio.

General Electric Farm Wiring Handbook (51-924): 28-page guide for planning electrical wiring on the average farm.

General Electric Co., Bridgeport, Conn.

Guth Duofluo Catalog No. 36: Utility Fluoflector and Fluoflector strips for fluorescent lighting.

Edwin F. Guth Co., 2615 Washington Ave., St. Louis, Mo.

Materials

Tenite—A Thermoplastic Molding Material Made from Eastman Cellulose Esters. Edition 4A: 28 pages illustrating various moldings of Tenite, including door hardware and other building equipment and accessories.

Tennessee Eastman Corp. (subsidiary of Eastman Kodak Co.), Kingsport, Tenn.

Flexrock Concretedense: How to solve the problem of wet floors.

Flexrock Co., 23rd and Mannings Sts., Philadelphia, Pa.

Transite Movable Asbestos Walls by Johns-Manville, Form TR-22 A: 20 pages in case histories of installations, construction details, specifications, descriptive information on movable walls for subdividing offices, factories, and stores.

Johns-Manville, 22 East 40th St., New York, N. Y.

How to Modernize and Make it Pay (84 pages): How to Have the Home You Want (116 pages). Two new catalogs.

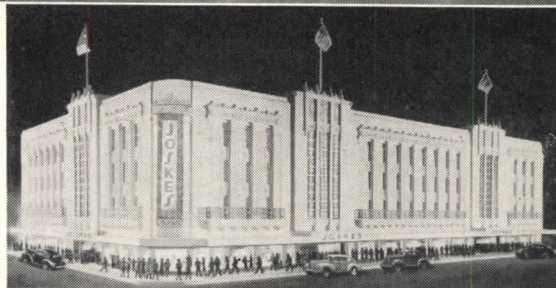
United States Gypsum Co., 300 W. Adams St., Chicago, Ill.



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