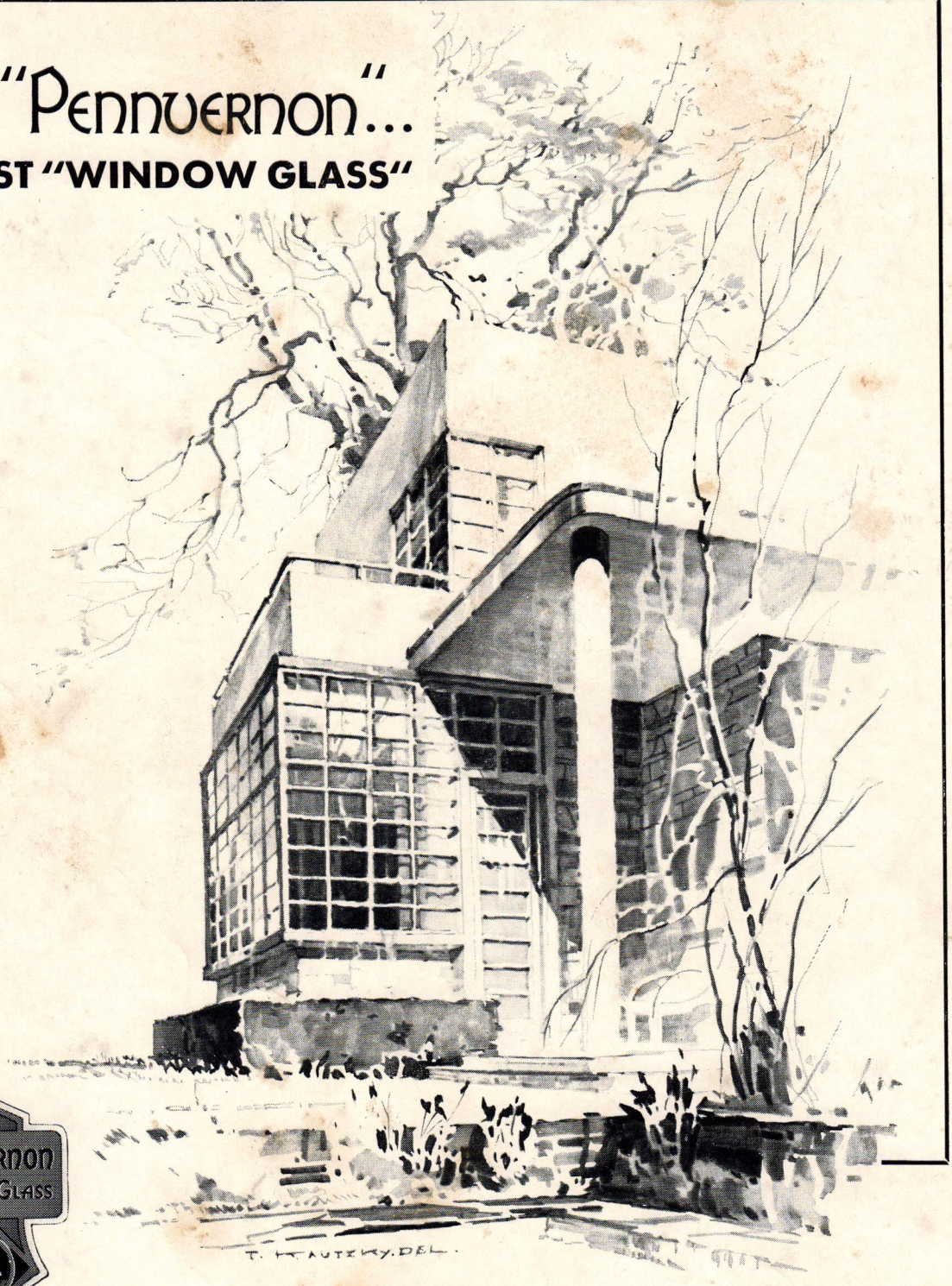
E S I G N

PENCIL POINTS

MAY
1939

SPECIFY "PENNVERNON"...
NOT JUST "WINDOW GLASS"



10 PENNVERNON WINDOW GLASS A

WINDOWS are no better than the glass with which they are glazed. The use of Pennvernon Window Glass insures windows which are exceptionally transparent, which permit clear, satisfying vision and which add to the appearance of a home by their brilliant, reflective surface finish.

Paint · **PITTSBURGH** · *Glass*

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PENCIL POINTS

KENNETH REID
EDITOR

CHARLES MAGRUDER
ASSOCIATE EDITOR

DON GRAF
TECHNICAL EDITOR

The Monograph Series
RUSSELL F. WHITEHEAD
EDITOR

Published Monthly by REINHOLD PUBLISHING CORPORATION, *Stamford, Conn., U.S.A.*

Ralph Reinhold, *President and Treasurer* — H. Burton Lowe, *Vice President and Secretary*
Philip H. Hubbard, *Vice President* — Francis M. Turner, *Vice President*

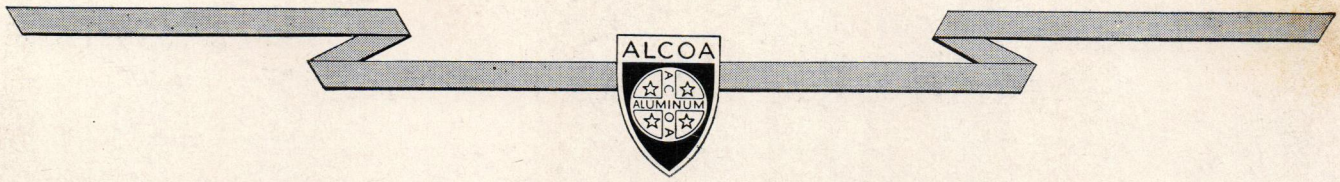
Executive and Editorial Offices: 330 West 42nd Street, New York

50 cents a copy. Yearly subscription $3.00, two years subscription $5.00, payable in advance, to the U. S. A. and all U. S. Possessions. To Canada, Cuba, Mexico, Central and South America, $3.50 a year. To all other countries $5.00 a year. Remittances by International or American Express Money Order or by Draft on a bank in the U. S. should be payable in United States funds. Subscribers are requested to state profession or occupation. Changes of address must reach us before the 20th of the month to assure delivery of forthcoming issue. Be sure to give both your old and new addresses. *To Contributors:* Articles, drawings, photographs, etc., sent with a view to publication will be carefully considered, but the publisher will not be responsible for loss or damage. Copyright, 1939, by Reinhold Publishing Corporation. Trade Mark Registered. All rights are reserved. Entered as second class matter, March 10, 1930, at the Post Office, Stamford, Conn., under the Act of March 3, 1879. Volume XX, No. 5, dated May, 1939. Indexed regularly in *The Art Index.*

LAKEVIEW APAR

Adding to the appeal that keeps apartments occupied...

ALUMINUM



☆ Aluminum adds a smartness that helps attract and hold the tenant; imparts by its subdued richness a feeling of solid permanence. The money-making ability of an apartment building is enhanced; Aluminum retains its attractive newness with but little care.

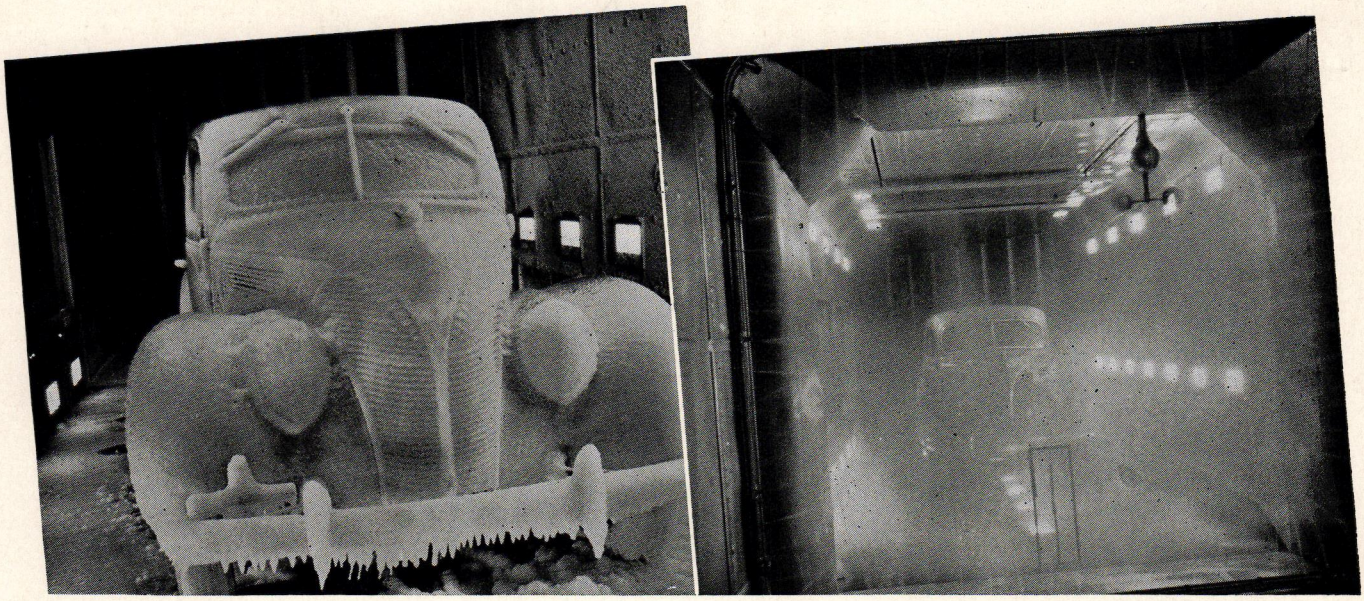
Free scope in design possibilities are offered with Aluminum, for it is suited to any metal-working treatment and can be given many striking finishes. Aluminum coping is neat and inexpensive. Aluminum window sills, spandrels, grilles and structural work add greatly to valuation, yet show low annual cost.

Aluminum windows appeal to occupants and owners alike. Frames and sash are narrow, giving maximum glass area. They are remarkably easy to open and close, and are permanently weathertight. There's no warping or swelling, no rusting or rotting; they never need painting. First cost is surprisingly low.

Standard Aluminum extruded shapes for architectural uses are available. Aluminum Company of America, 2198 Gulf Building, Pittsburgh, Penna.

ALCOA · ALUMINUM

ARCTIC COLD *and* TROPIC RAIN



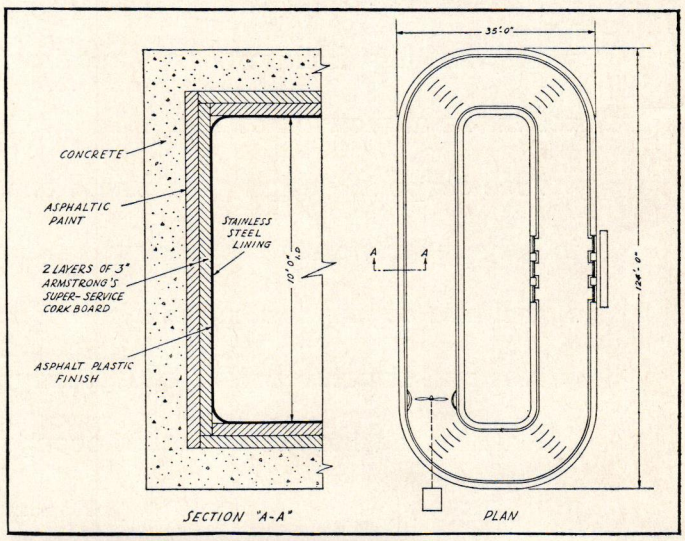
. . . *meet in Ford's huge "WEATHER TUNNEL"*

WHAT effect do weather extremes have on motor cars? The Ford Motor Company wants to know—so it makes its own weather! From sub-zero cold to blistering heat—from desert dryness to the saturated humidity of the jungle—Ford engineers make them all in a huge "weather tunnel." Built in the Ford Engineering Laboratory in Dearborn, Michigan, this 124-foot long loop tunnel is the only one of its kind in the world.

It takes good insulation to withstand temperatures and humidities such as those used here. That's why this Ford "weather tunnel" is insulated throughout with Armstrong's Super-Service Corkboard, a type that is factory-coated with a special asphaltic seal to meet severe service requirements.

The same qualities of efficiency, moisture-resistance, and long life which make Armstrong's Corkboard Insulation ideal for special jobs like this, also give it outstanding advantages for the more everyday uses of air conditioning. You can rely on cork's efficiency to cut down operating expenses and hold uniform temperatures.

Let cork help make your next air conditioning job more efficient! Use Armstrong's Corkboard on walls, roofs, and ducts to prevent condensation; Armstrong's Cork Covering on cold lines to reduce refrigeration loss; Armstrong's Vibracork under machinery to lessen annoying vibration transmission. For literature and samples, write Armstrong Cork Company, Building Materials Division, 922 Concord Street, Lancaster, Pennsylvania.



THIS PLAN DIAGRAM *shows how the Ford "weather tunnel" is completely sealed with Armstrong's Super-Service Corkboard, to keep heat where it is wanted, and to resist moisture penetration.*

THE FORD "WEATHER TUNNEL" *was built under the direction of Emil Zoerlein of the Ford Motor Company. Here any climatic condition can be duplicated with temperature, wind, atmospheric pressure, and moisture content variable almost at will.*

Armstrong's CORK INSULATION

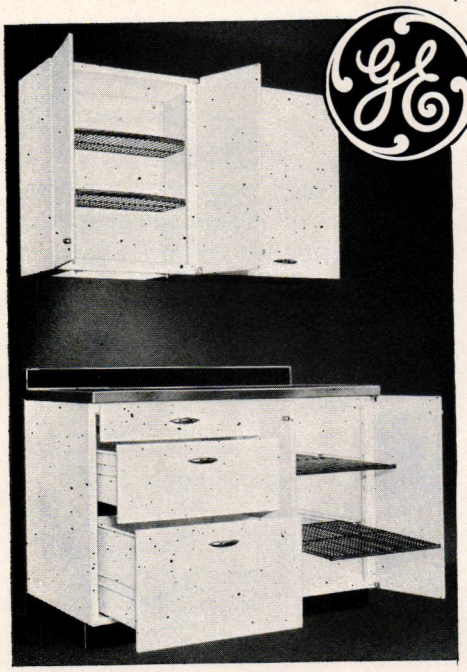
CORKBOARD ▪ **CORK COVERING** ▪ **VIBRACORK**

Kitchen Cabinet News!

GENERAL ELECTRIC COMPANY, CLEVELAND, OHIO ★ RESEARCH KEEPS GENERAL ELECTRIC YEARS AHEAD

General Electric Announces Complete New Line of All-Steel Kitchen Cabinets. New Design Short-Cuts Installation Time and Expense. Replete with New Exclusive Features, Yet They Cost No More Than Ordinary Cabinets. Read the Facts!

THE modern all-electric kitchen gets another big boost from General Electric! For now G-E presents the finest and most complete line of all-steel kitchen cabinets or storage appliances ever introduced. Embodied are many exclusive convenience features never before available in kitchen cabinets—*yet the new G-E line is competitively priced!*



Flexible to the Fraction of an Inch!

The new G-E cabinets will fit any size and style of kitchen in homes of any price class. Wall and base cabinets come in 15, 18, 21, 24 and 30 inch widths. Wall cabinets are 18 or 30½ inches in height. Base cabinets are furnished with doors or drawers. Every type and size of cabinet that housewives could wish for is included in the new line.

Beautiful in Appearance

Simple and strikingly beautiful in design, the new General Electric cabinets are of sturdy welded all-steel construction with gleaming white Glyptal-baked enamel finish. Flush-type construction, work surface illumination, roller bearing drawer guides and styled, chrome-plated hardware.

Simplified, Low-Cost Installation

The new G-E cabinets are incredibly easy to install and at very low cost. Every cabinet is a complete, standardized, packaged unit. Wall cabinets have recessed backs with welded self-aligning brackets for hanging and lining-up on two continuous firring strips mounted directly on any type of wall. Problems of uneven walls or floors are minimized.

Don Graf Data Sheets Ready Now!

Free Don Graf Data Sheets on the new G-E Kitchen Cabinet line are yours for the asking, along with complete information. Write *today* to General Electric Co., Section CP5, Specialty Appliance Div., Nela Park, Cleveland, Ohio.

See G-E "House of Magic" at both World Fairs

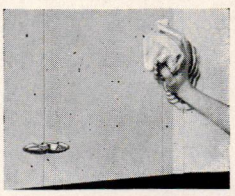
GENERAL ELECTRIC

27 TIME-SAVING, LABOR-SAVING FEATURES AND ACCESSORIES TO DELIGHT THE HEARTS OF MODERN HOMEMAKERS. LOOK THEM OVER!

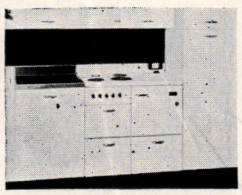
Adjustable sliding shelves of steel wire. Refrigerator type. A revolutionary feature. Makes contents of all shelves easy to see, easy to remove.

Drawers in base cabinets equipped with adjustable roller bearing drawer slides. Quiet, "finger-tip" operation. By adding or interchanging slides and drawers, 11 different drawer combinations are possible.

Automatic interior lighting in both wall and base cabinets. Wall cabinet fixtures serve dual purpose of illuminating work surfaces. Fixtures are equipped with convenience outlet for plug-in appliances.



Easy to clean and keep clean because of flush-type construction with minimum of dividing lines. Completely concealed spring-action hinges eliminate door catches. No sticking or binding of cabinet doors!



All cabinets are of matched design and styled to harmonize with General Electric Kitchen Appliances, including the G-E Electric Range, Refrigerator and Electric Sink.

Accessories include cutlery tray, cutting board, bulk storage bin, cup racks, telescoping condiment shelves, pan cover file rack, bread and cake box, waste basket, detergent rack, corner decorative shelf sections, grilled doors, broom cabinets, linen cabinets, plate warmer, planning desk and chair, and recipe cabinet.

SPECIFICATIONS

for Air Conditioning and Refrigerating Installations

ONE of the most exacting duties of an architect or engineer is to draw concise and inevasible specifications for the guidance of contractors and the protection of his client. Such specifications should be founded on the specifications and regulations of nationally known and accepted authoritative bodies interested solely in public welfare.

The National Board of Fire Underwriters, Underwriters' Laboratories, Inc., and the National Fire Protection Association are institutions of this class. Each has contributed to the fundamental specifications covering air conditioning and refrigerating machinery. Every architect and engineer should have a copy of their rules and specifications:

(1) NBFU Pamphlet No. 90 entitled, "Regulations of the National Board of Fire Underwriters for the Installation of Air Conditioning, Warm Air Heating, Air Cooling, and Ventilating Systems as Recommended by the National Fire Protection Association." (This is also the A. S. A. standard Z33.2). Address National Board of Fire Underwriters at 85 John Street, New York City, or 222 West Adams Street, Chicago, Illinois, or Merchants Exchange Building, San Francisco, California.

(2) Underwriters' Laboratories, Inc., Subject 207, "Standard for Air Conditioning and Commercial Refrigerating Equipment." Address 207 East Ohio Street, Chicago, Illinois.

(3) Underwriters' Laboratories, Inc., Subject 207, "Standard for Unit Refrigerating Systems." Address 207 East Ohio Street, Chicago, Illinois.

(4) Underwriters' Laboratories Report MH2375 entitled, "The Comparative Life, Fire, and Explosion Hazards of Common Refrigerants." Supplies of this publication are exhausted at the Underwriters' Laboratories, but may be consulted in most public libraries in the United States. Reprints have been made by Kinetic Chemicals, Inc., Tenth and Market Streets, Wilmington, Delaware, and are available at $1.00 each.

It is often hard to compare values and capacity of the equipment offered and so it is well to provide that the contractor shall express his rating according to the following methods:

(1) "Standard Method of Rating and Testing Mechanical Condensing Units"—Price 15¢.

(2) "Standard Method of Rating and Testing Air Conditioning Equipment"—Price 20¢.

These standards are obtainable from the American Society of Refrigerating Engineers, 37 West 39th Street, New York City.

An example of concise yet comprehensive specification formulation that everyone should have may be obtained for 5¢ from the Superintendent of Documents, Government Printing Office, Washington, D. C. It is "Federal Specification for Air-Conditioning Units (Room-Coolers); Electric-Motor-Driven, Portable," 00-A-361 of July 23, 1938.

By following these rules you avoid any possibility of penalty to your client in insurance rates and promote safety of life and property. The "Freon"* refrigerants meet the requirements of these specifications.

KINETIC

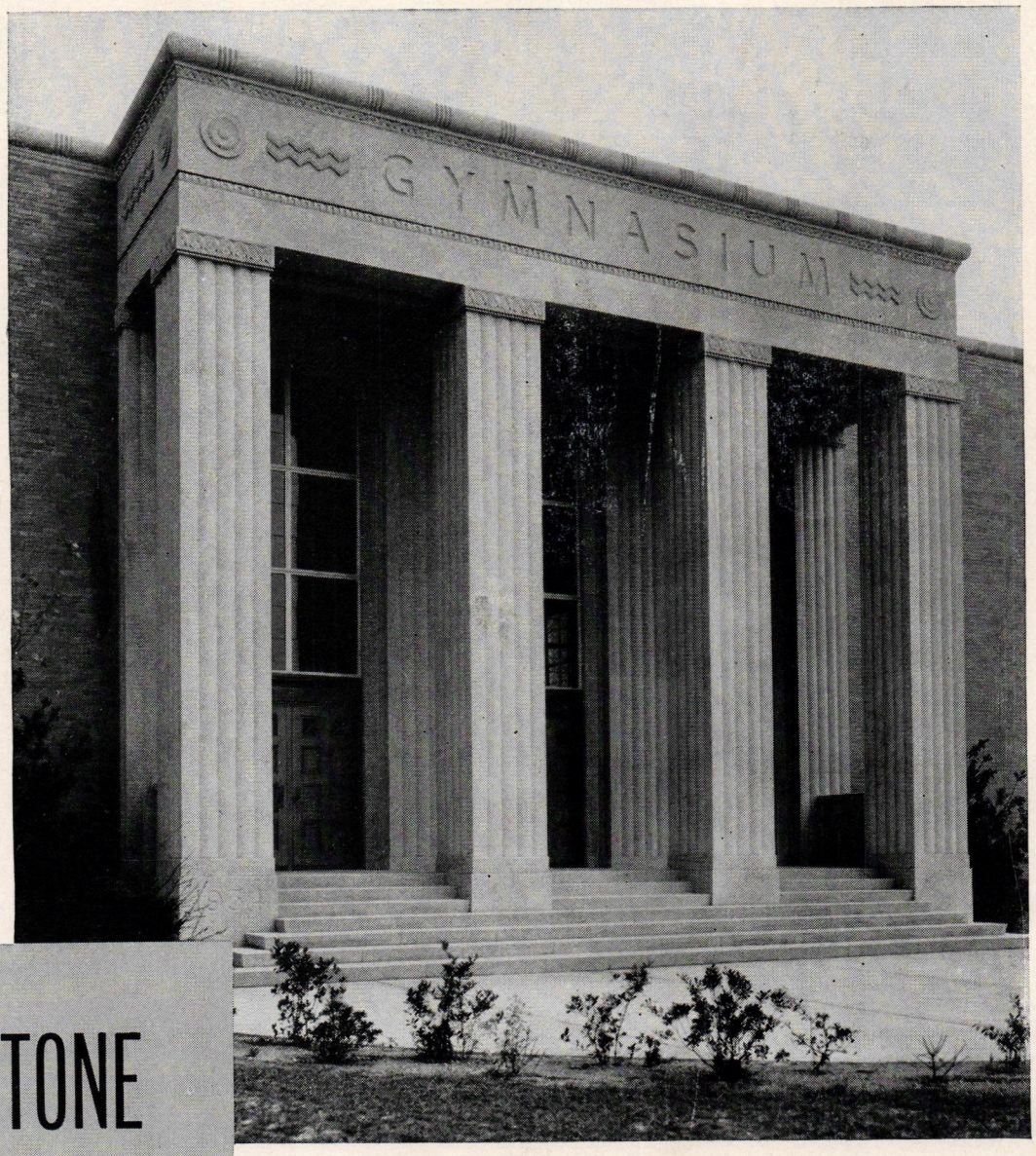
FREON

REG. U. S. PAT. OFF.

safe refrigerants

"Freon" is Kinetic's registered trade mark for its fluorine refrigerants.

KINETIC CHEMICALS, INC., TENTH & MARKET STREETS, WILMINGTON, DELAWARE



CAST STONE

WITH 11,000 LB. COMPRESSIVE STRENGTH

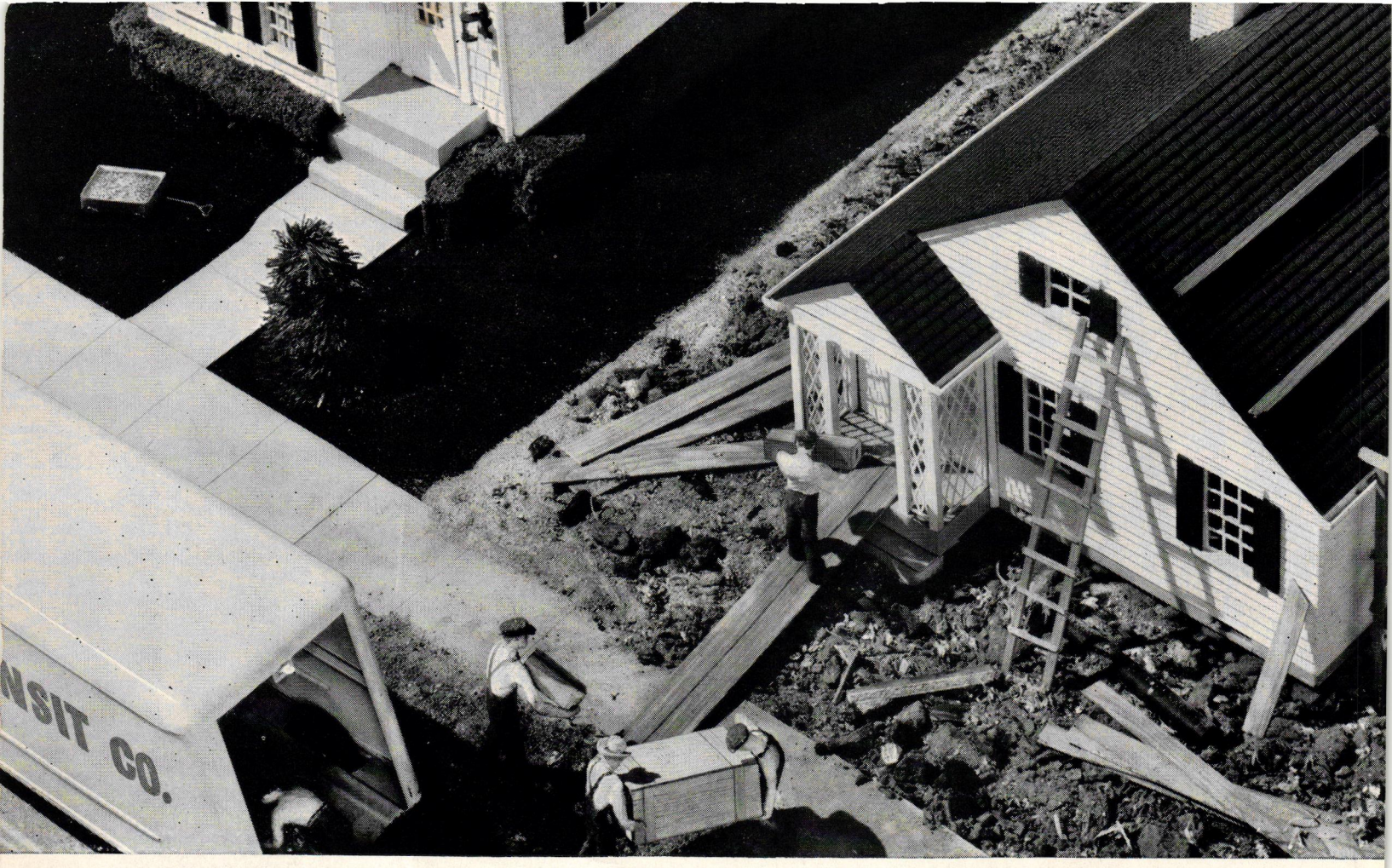
CAST-STONE offers a wide range of possibilities in color and texture, with marked economy. On Oceanside, L. I., High School, for example, cast-stone is a warm gray-colored artificial granite, rose-tinted to harmonize with brick. Texture, obtained with crushed marble and small proportions of black slag fully exposed by rubbing, is clear and uniform, accenting ornamental detail. Architect: Frederic P. Wiedersum, Valley Stream, N. Y. Cast-stone produced by National Cast Stone Corporation, New York, N. Y.

As to structural quality, tests of this cast-stone, which was made with 'Incor' 24-Hour Cement, show a compressive strength of more than 11,000 lb. per sq. in.—result of careful workmanship and the quality of this improved Portland cement. 'Incor' also helps to assure durability—important in cast-stone, which is used principally for exterior work. By curing thoroughly in 24 to 48 hours (6 to 8 days sooner), 'Incor'* helps to produce strong, dense, watertight concrete which withstands exposure to the elements. Lone Star Cement Corporation, 342 Madison Avenue, New York.

*Reg. U. S. Pat. Off.

LONE STAR CEMENT CORPORATION

MAKERS OF LONE STAR CEMENT • • • 'INCOR' 24-HOUR CEMENT



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YOU don't have to put up with the red tape that so often delays home loans! Your local Savings or Building and Loan Association will frequently have an approval for you 48 hours after the application is filed! Construction money moves fast, too. For this business was built on prompt, efficient service!

Years of experience have keyed our procedure to your requirements. Savings, Building and Loan Associations have a background of 10,500,000 American homes financed soundly, conveniently and promptly. For over 100 years our group has been America's most popular home financing system.

Records like these aren't easy to establish. Yet institutions like ours consistently finance more home loans than all other financing institutions put together. Here are the reasons why—

1. Prompt service, without red tape, all the way through.
2. Convenient, easy-to-understand loans paid back like rent on a monthly-repayment, long-term plan.
3. Friendly service where a loan means a good neighbor, not just a number.

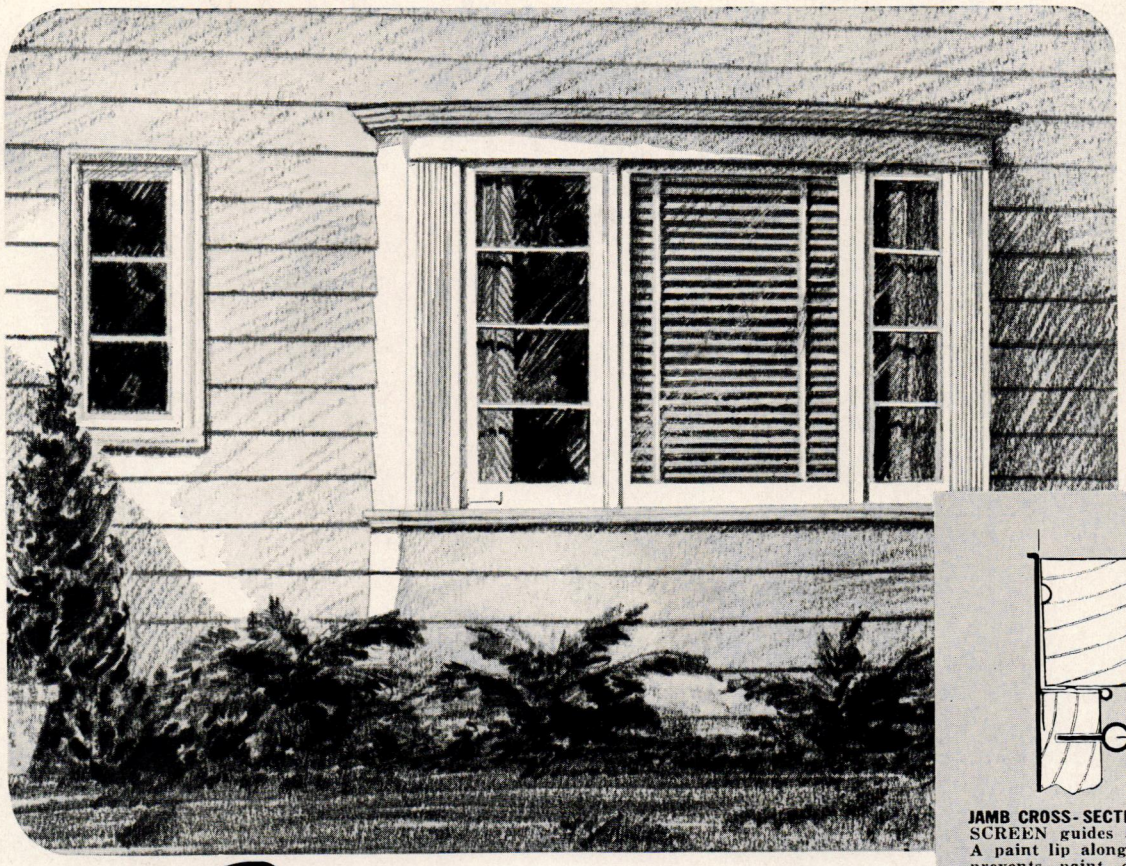
In addition, savings, building and loan associations keep local dollars at home. We help make jobs for local people by fostering local saving to encourage local home ownership.

You be the judge. Try this source of home financing money. See for yourself what "time-saving efficiency" means to you and the people you serve. Let a member of the United States Building and Loan League give you facts and details about this prompt, red-tape-less home financing service.

ARCHITECTS—*Our services include facilities to handle all types of home loans whether they be for new building, buying, remodeling or refinancing. Call us for information. You'll like our quick, friendly service.*

Your Local SAVINGS OR BUILDING AND LOAN ASSOCIATION

When you support **Your Local Savings or Building and Loan Association—*You help local business!***



Pella CASEMENTS
equipped with Rolscreens

ROLSCREENS preserve the architectural beauty of *sparkling Pella* CASEMENTS because they are so inconspicuous! Home owners never cease to appreciate the convenience of ROLSCREENS — nor do they ever seem to tire of proudly demonstrating them to friends. ROLSCREENS are guaranteed for 10 years!

Only Window with Wood Lined Steel Frame — Pella Casement Windows have rigid metal frames made of heavy sixteen gauge rustproof, galvannealed (zinc impregnated) steel. These frames are full jamb width — 5 5/16" wide and they are made to fit all types of wall construction. Clear, white pine (other woods if desired) is used for lining frames.

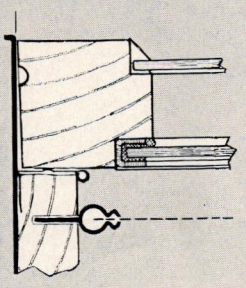
Other Pella Casement Features — DUAL GLAZING protects against winter cold and summer heat. SPRING BRONZE WEATHER-STRIPPING — compression type — that paint can't clog. Tension easily adjusted. Exclusive Pella design. SASH — Genuine white pine 1¾" thick. Hung on non-extension, self-cleaning hinges.

Saves Drafting Time — Pella Casement details can be drawn into your own plans, thus eliminating further drafting on window construction. Authentic designs are available to blend in with and emphasize the character of any style architecture.

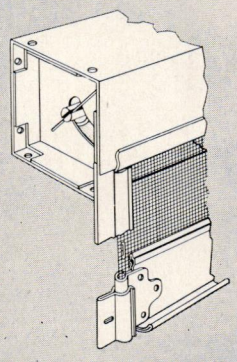
Saves on Wall Cost — Overall Casement dimensions are 20% over-size which saves materially on wall cost. Glass size 9" x 12" — admits 12½% more light. Weather-tight and highly non-conductive to heat and cold. Pella Casements meet rigid requirements of modern heating, ventilating and air conditioning.

Write Today **FOR FREE BOOK**

This interesting book shows progressive installation photos and complete data. It is file size. Get your FREE copy by writing to: ROLSCREEN COMPANY, Dept. P59, Pella, Iowa.

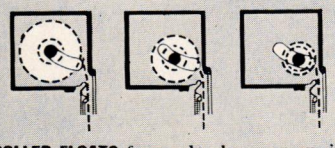


JAMB CROSS-SECTION shows how ROLSCREEN guides are installed in stops. A paint lip along the jaw of the guide prevents paint entering and binding the screen. Note weather-strip that seals the sash.



ONCE IN PLACE, ALWAYS IN PLACE
NO PUTTING UP — NO TAKING DOWN

ROLSCREEN Roller Housing is completely built-in. Lugs in selvage of wire-cloth are gripped by guides to prevent sagging. Wire-cloth releases from guides if bumped — automatically re-enters guides when screen is raised.



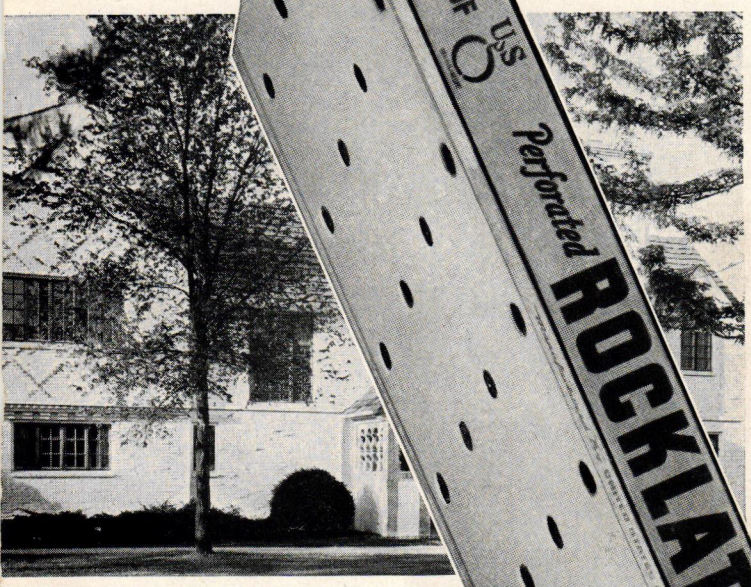
ROLLER FLOATS forward when screen is lowered; backward when screen is raised. Eliminates drag on wire cloth at housing edge.

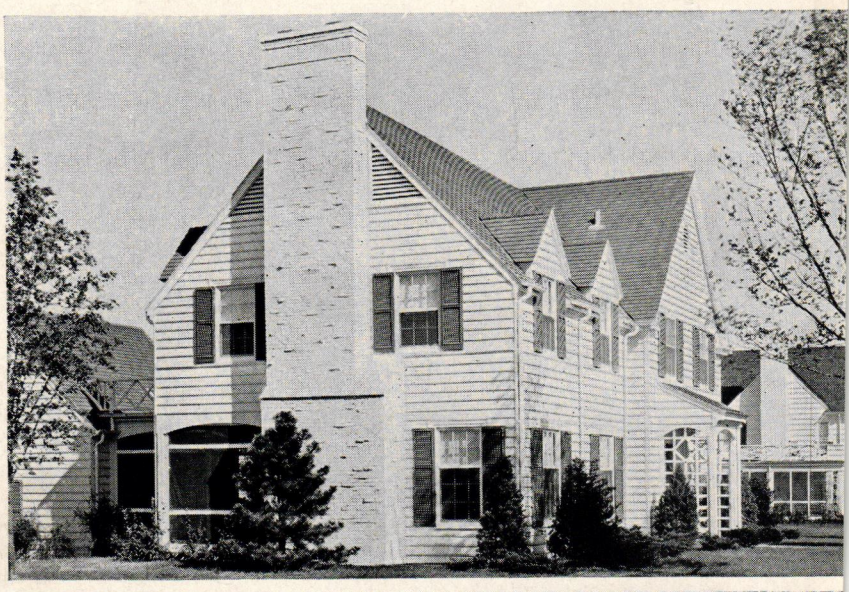
CUT INSTALLATION COSTS

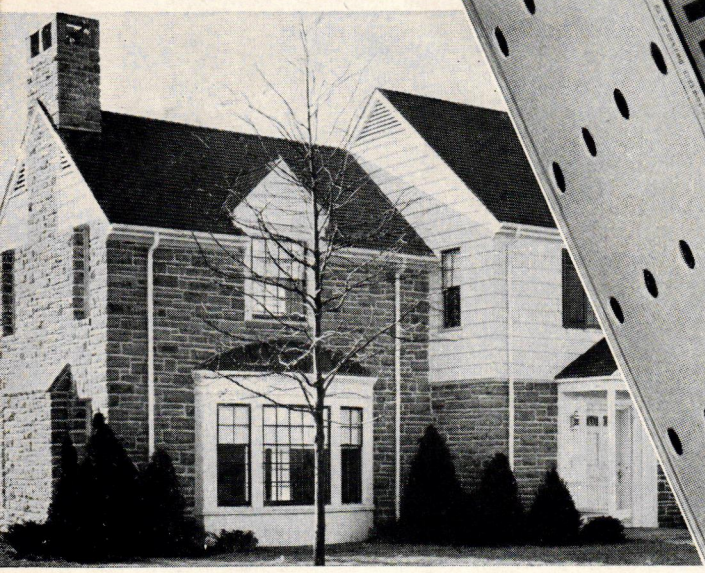
Pella Casements are 100% factory fitted and completely assembled. After uncrating, they are simply set into rough wall openings, caulked and locked in place by means of inside interlocking fins. Weather-tight installation completed in about 20 minutes.

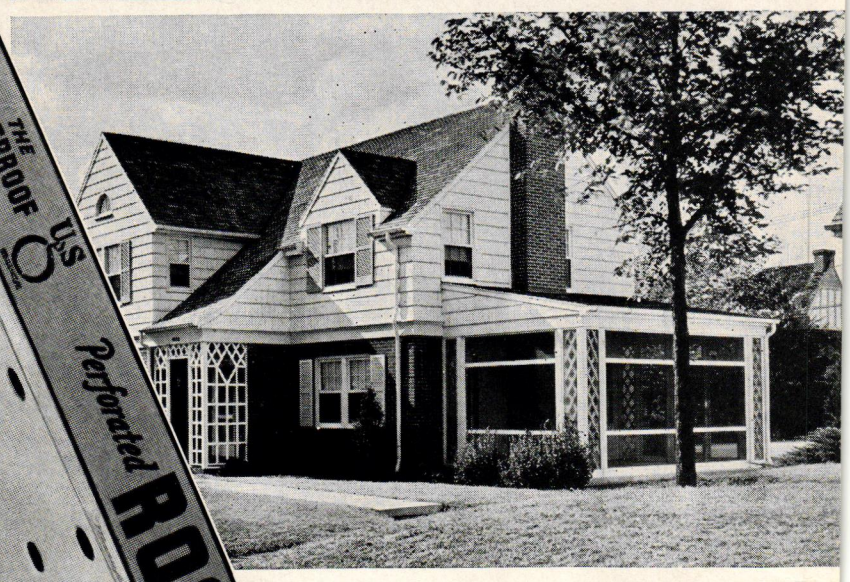
Pella CASEMENTS
VENETIAN BLINDS ★ ROLSCREENS

On America's Finest Housing Developments









For example on these homes in Kansas City's Country Club District, developed by J. C. Nichols, Perforated Rocklath* is now being used extensively because:

Plaster becomes RIVETED and WELDED to its surfaces—resulting in walls and ceilings that are both crack resistive and retain their fine appearance for many years.

Perforated Rocklath is *the fireproof lath*—gives added fire protection to owners of homes in this fine development.

Perforated Rocklath is not expensive—sells for little, if any, more than old-fashioned, combustible lathing materials.

Specify it on your next job—and watch the results. For complete information on Perforated Rocklath see your building material dealer—or write THE UNITED STATES GYPSUM COMPANY, 300 West Adams Street, Chicago, Illinois.

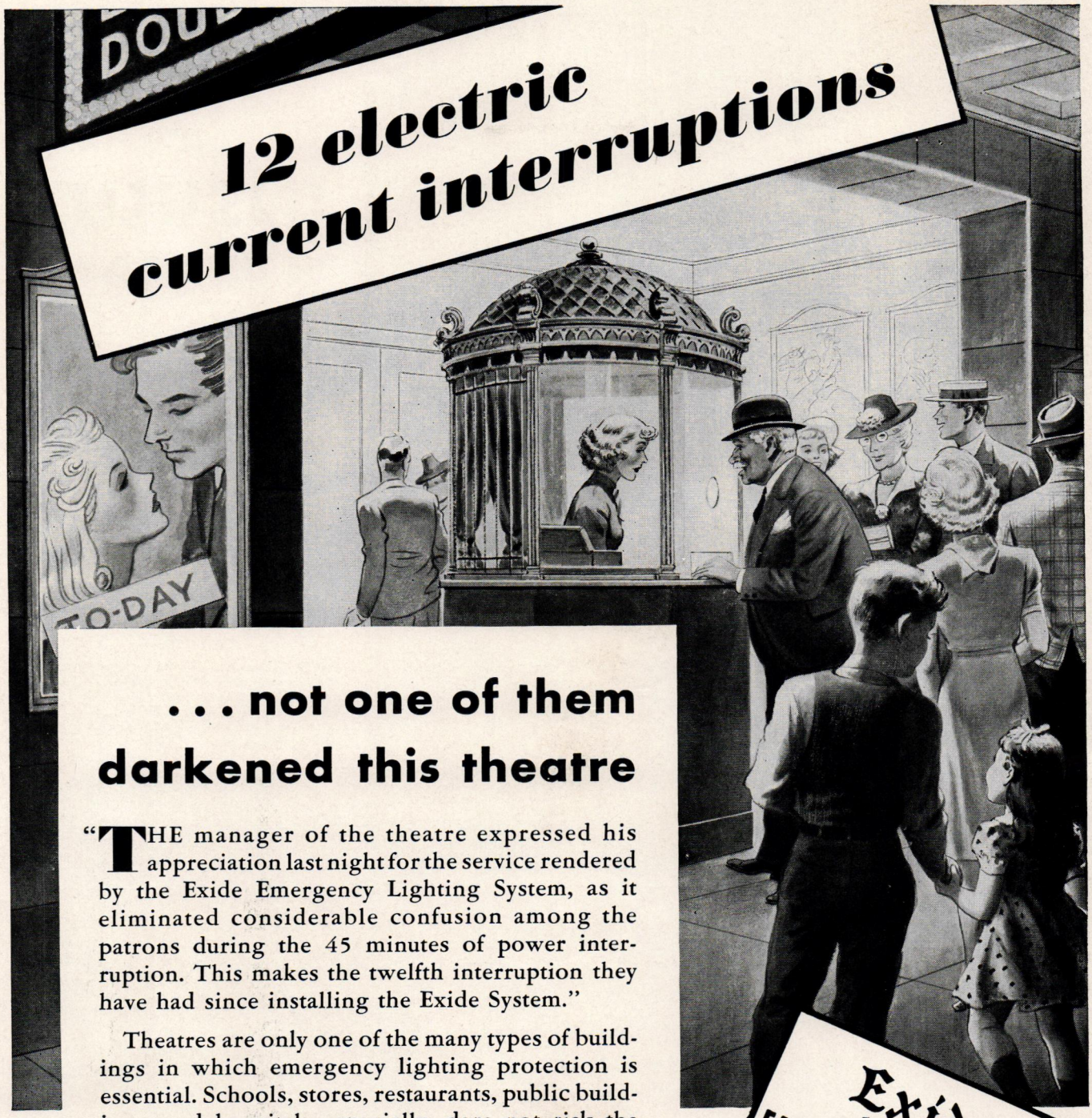
U.S.G. PERFORATED

ROCKLATH

*Registered trade-mark

THE FIREPROOF *LATH*

11-5



. . . not one of them darkened this theatre

"THE manager of the theatre expressed his appreciation last night for the service rendered by the Exide Emergency Lighting System, as it eliminated considerable confusion among the patrons during the 45 minutes of power interruption. This makes the twelfth interruption they have had since installing the Exide System."

Theatres are only one of the many types of buildings in which emergency lighting protection is essential. Schools, stores, restaurants, public buildings, and hospitals especially, dare not risk the danger of sudden darkness.

But not all emergency protection is equally effective. For genuine safety, the system must function both *instantaneously* and *automatically*—an outstanding feature of all Exide Emergency Lighting Units.

The utility companies take every precaution, but cannot control the effects of storms, floods, fires, or street accidents. Privately-owned plants, no matter how carefully planned and operated, may also have interruptions that make Exide protection essential. Write for Don Graf's Data Sheets giving full details.

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I am an Architect ☐ Engineer ☐ Draftsman ☐

IT'S INSULUX IN THE P.E.D.A.C.*

"House of Homes"

* *P.E.D.A.C. means the Permanent Exhibition of Decorative Arts and Crafts, International Building, Rockefeller Center, New York... Designers: Wallace K. Harrison, A.I.A., J. Andre Fouilhoux, A.I.A. and Paul R. MacAlister, A.I.D.*

● As P.E.D.A.C. previews the news in home decoration and architecture, so Insulux previews a significant trend in your quest for finer, freer living. In this exhibition, where thought and practice meet, it is only natural that Light The Modern Way should play a leading role in the modern home.

When you see this house, you will be impressed by the two-story Insulux panel which flanks one end. Serving a valuable functional purpose, it floods the house with pleasantly diffused light. At the same time, it adds distinction to interior decorative effects.

Though young in years, Owens-Illinois Insulux Glass Block has been proved in more than 50,000 installations. When you want generous light transmission (anywhere from 41 to 86.5 percent, depending upon the design you select) without sacrifice of privacy, or a charming decorative effect, specify Insulux. Owens-Illinois Glass Company, Insulux Products Division . . . Toledo, Ohio.

● It's time to start work on the second of the four Owens-Illinois Insulux Glass Block competitions with $15,000 in prizes. Send in your entry today to Henry H. Saylor, Professional Adviser, A.I.A., 9 Rockefeller Plaza, New York, N. Y.

VISIT THE GLASS CENTER 1939 NEW YORK WORLD'S FAIR

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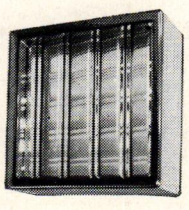

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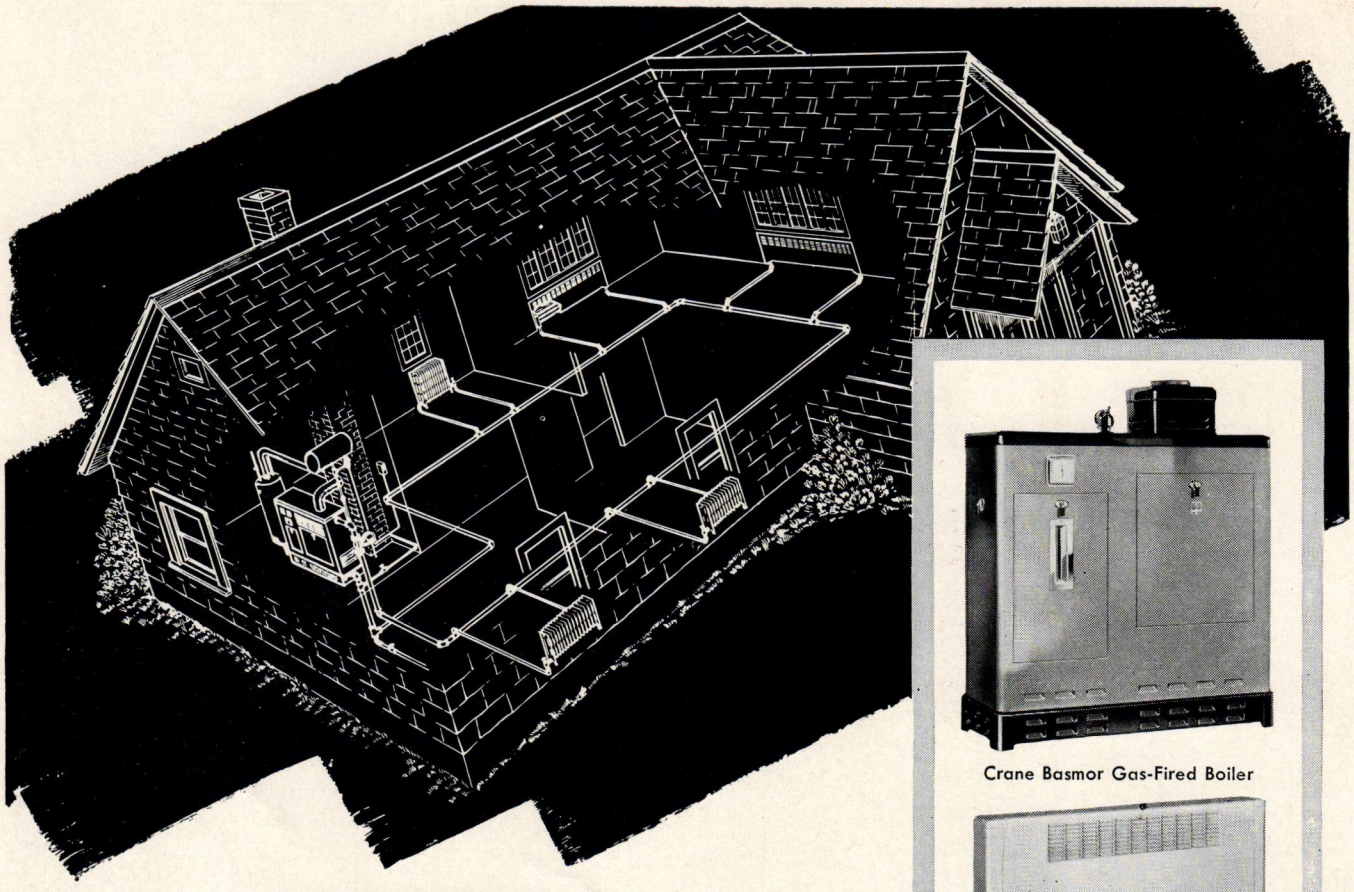

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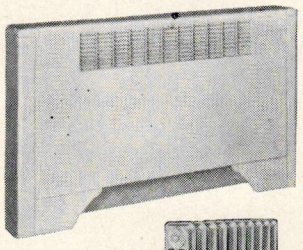
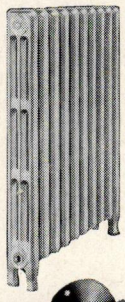
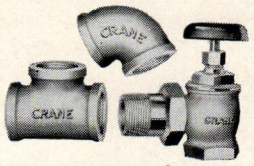




Crane Convectors and Direct Radiators

Crane Automatic Controls



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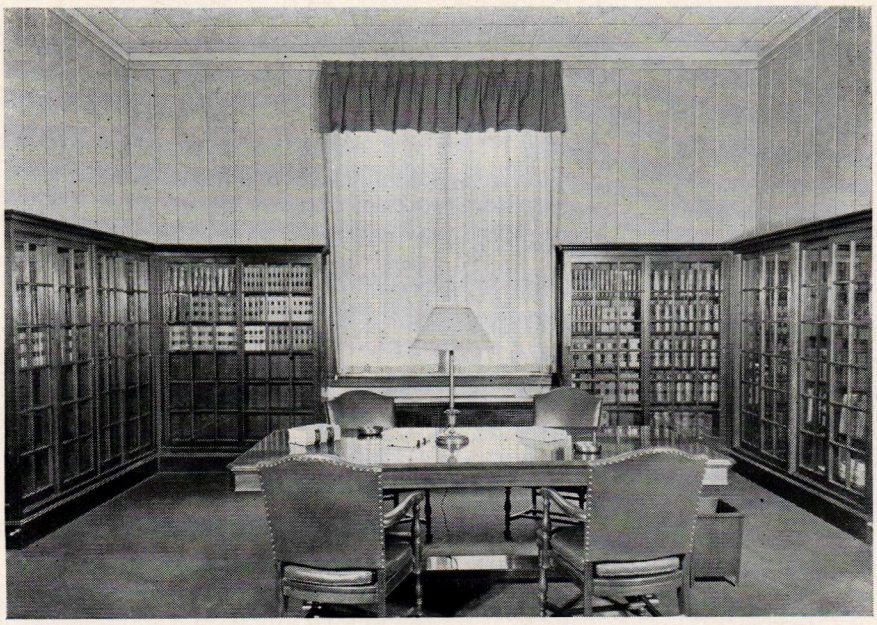

QUIET COMFORT *and dignity mark the library of Becker & Ehrgood, attorneys at law, Lebanon, Pa. The walls are variable width planking of Temlok De Luxe in ash; the ceiling, white panels of Temlok De Luxe.*

THIS PRIVATE OFFICE *of Becker & Ehrgood also is quiet and comfortable because of the walls and ceiling of Armstrong's Temlok De Luxe. The architect for this suite of offices was Harvey L. Hauer of Lebanon, Pa.*

For offices and public rooms of all kinds, there's added advantage in the fact that Temlok De Luxe quiets noise.

You'll find Armstrong's Temlok De Luxe an interesting material to work with in every way. Use it for both new construction and remodeling, in every kind of interior. Complete information and specifications will be found in Sweet's Catalog File. Samples and illustrated file-size literature sent on request. Please address Armstrong Cork Co., Building Materials Division, 911 Concord St., Lancaster, Pennsylvania.

Armstrong's TEMLOK INSULATION

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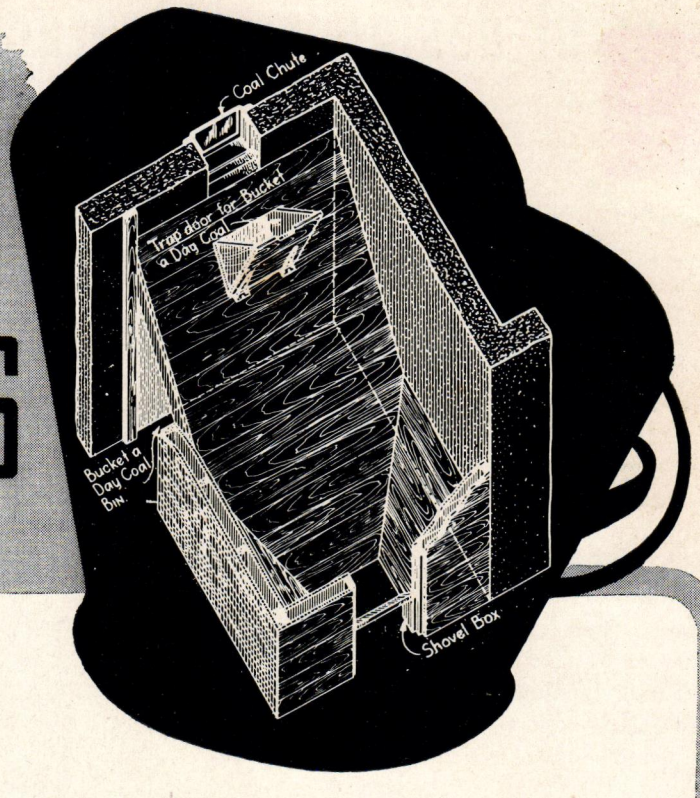
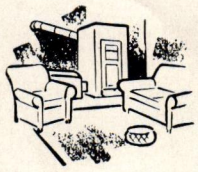
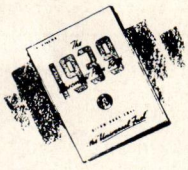
Designs FOR SPACE-SAVING MODERN COAL BINS





COAL BINS, like fuels, are local problems. Some buildings have plenty of space; in others, space must be rigidly conserved. Coal bins that can be tucked away into unusual places or that perform double duties are helpful in solving designing problems.



YOU WILL FIND details of such bins in our free book, the 1939 Basement Book. You will also find constructional details of other modernly built bins, plans for basements and for basementless houses that illustrate the fundamental principles of designing for the use of modern, low-cost bituminous coal or coke.

MORE AND MORE PEOPLE are turning to scientifically cleaned and prepared bituminous coal or coke. They desire the steady heat it provides. They like the savings which the low-cost universal fuel gives them. Fuel problems, after all, are local problems. Your local coal merchant can give you valuable information on local fuel performance and fuel costs which is important in solving your clients' heating requirements. See your local coal merchants for local costs—write for the 1939 Basement Plan Book for helpful hints in designing.

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The Nation-Wide Organization of Bituminous Coal Producers

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Please send me a copy of your Free Booklet *"The 1939 Basement Plan Book,"* A. I. A. File 30-G.

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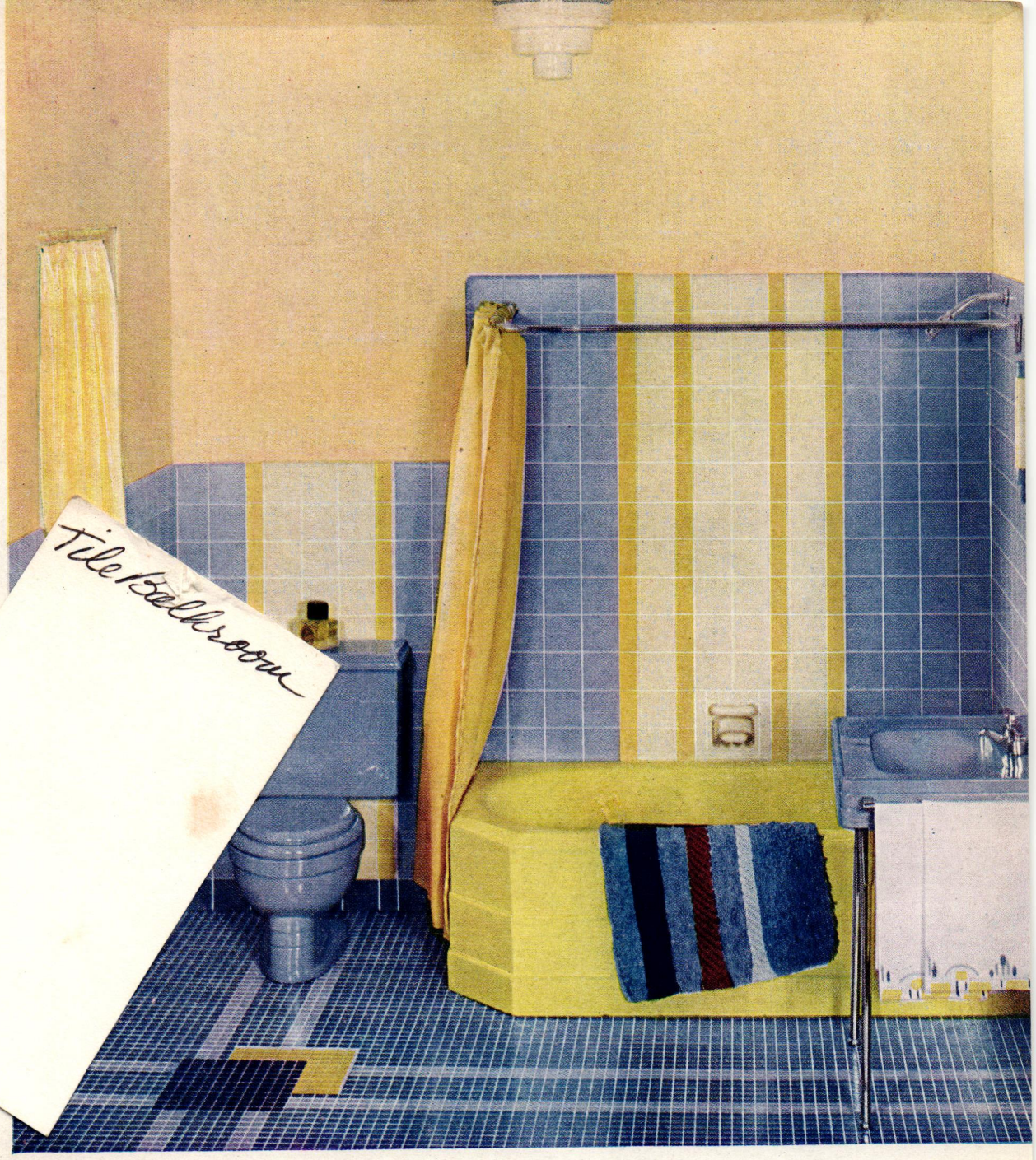

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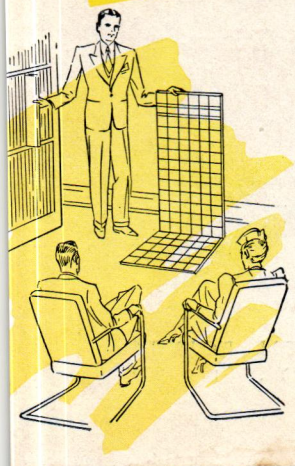
complete speci
this Sunstyled bath

SOME DAY THERE MAY BE A SUBSTITUTE FOR TILE!

Suntile Color Selection SERVICE



A patented system of balanced color presentation, through an interchangeable section assembly of full size tile panels. You and your client can see in a few minutes color balanced combinations, including floors, wainscot and trim as they will appear in an actual installation. Combinations of your preference can be quickly demonstrated.

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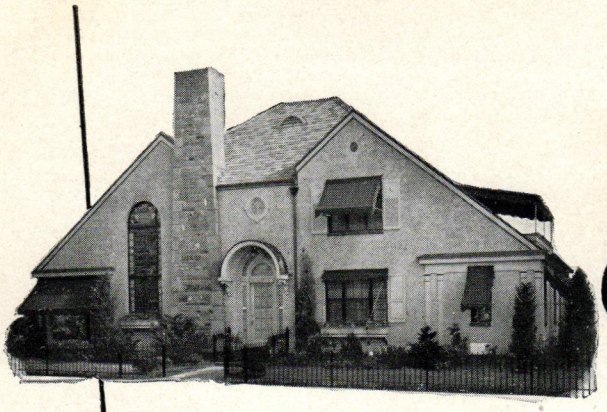


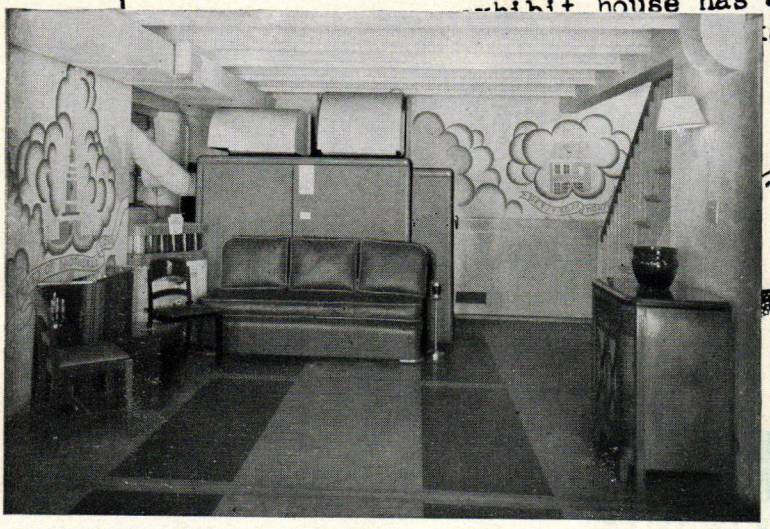
Prominent architect confirms his initial opinion of FITZGIBBONS DIRECTAIRE

Fitzgibbons direct fi… summer cooling was finally agreed upon, with ample sufficient heat during the past winter, I am pleased to endorse your equipment as being practically trouble free and providing excellent comfort during the entire year.

…xhibit house has already been visited by …s of life.

Very truly yours,

Wm. F. B. Koelle
Architect



DUCT WORK — Horace T. Potts Co. and Wm. F. Cameron Co.
EASY OIL BURNER — Judson C. Burns
OIL — The Petrol Corporation

Here is a basement game room de luxe, an important element in the "Philadelphians at Home" exhibition house. Notice the Fitzgibbons Directaire conditioner in the background, where it is quietly and economically providing summer cooling, winter warmth, and correct humidity through constantly filtered air circulated to all parts of the house.

The convincing reasons behind the selection of the Directaire for this important installation, are set forth in full in the Directaire bulletin. Write for your copy.

"PHILADELPHIANS AT HOME" a veritable model of residence beauty, convenience, and home comfort, has been a focal point of attraction in the center of Philadelphia for a full year. Mr. Wm. F. B. Koelle, well-known architect and moving spirit in the enterprise, after full consideration, selected the Fitzgibbons Directaire conditioner for the important job of year-'round air conditioned comfort in this exhibition home. After a year of service of this unit, Mr. Koelle writes us, as above.

We are indeed pleased to receive the commendation of an architect with the standing and experience of Mr. Koelle — and are proud of the Fitzgibbons Directaire which has earned this approbation.

MOST ECONOMICAL IN FUEL — 1889 — THE FITZGIBBONS BOILER

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HERE, THERE, THIS & THAT

Potomac Patter

The variety of building operations, both in kind and manner, now going on in your Nation's capital can be said to run the gamut from A to Z—Airports to Zoo buildings. Incidentally the Zoo building is for the Zebras. While on the subject of Zoos, by the by, the National Zoological Park here is taking tremendous strides in the direction of successfully becoming "the world's best"—not only from the point of collections but also from the architectural viewpoint.

The Snake House and Bird House, by the late Municipal Architect, Albert L. Harris, and the Elephant House and Small Mammal Building by Procurement are all recent additions possessing the qualities of being efficiently utilitarian and sufficiently æsthetic. Smells don't count! And to show how far the Zoologists have gone in studying their problem in connection with the Small Mammal Building, the architects were required to have toilet facilities installed for the rodents. These consisted of small aluminum detachable boxes, painted black within and installed against a hole in the cage. It was theorized that the occupants would willingly use this darkened area. But the idea didn't take: the rats were afraid of the dark.

The exhibition of architectural work of Catholic University alumni and students, held in "the drafting room over the gym," was moved to better and larger quarters—more interesting too. And that applies to the exhibition as well. In the first place, the use of the unfinished portion of the Shrine of the Immaculate Conception, known as the Memorial Chapel, gives the viewer an added interest. The drawings, photographs, models, etc. exhibited are confined to a special space prepared for the exhibition but surrounding this space is an architectural scene that stirs the imagination. Statues, mosaics, the altar, the drawings, and numerous models of the Shrine are as artistic and full of the essence of by-gone craftsmanship as any idealistically inclined architect could possibly hope to see in America. The large scale model of the Shrine is a creation that should not be missed. Designed by Maginnis and Walsh, with Frederick V. Murphy, C. U.'s architectural mentor, as Associate, this dream, when come true, and it is beyond our hope to behold it in our lifetime, will "make the angels sing."

In the second place, surrounded by so much architectural interest and beauty, the exhibition was bound to be enhanced—and so it is. The lads prevailed upon somebody to permit the use and construction of 12-foot stud partitions to inclose an area large enough to present an architectural show. Under the able leadership of Everett Fellinger, President of C. U.'s Architectural Society, the students are now presenting a show of alumni and student work that may well come under the heading of Achievement.

Many Traveling Scholarship designs are being shown, among which are Robert Weppner's 1934 Rome Prize winner, S. T. Stathes' 1938 Paris Prize winner and William Suite's second placer in the 1938 LeBrun. Among the alumni, excellent pieces are exhibited by John E. Miller, now practising in Cleveland, Richard E. Collins and William O'Neill, both with the Navy Department, Raleigh Daniel and Fred Tilp. Students contributing outstanding pieces are Post-Graduate John E. Dundin and under-graduates Stephen Chaconas, Edgar Beery, Bert Ameche and Everett Fellinger, the latter two showing some extraordinary water colors of French and Italian scenes

(Continued on page 24)

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JAMISON- BUILT DOORS

Stevenson Vestibule Door with Track Port

(See our catalog in Sweet's Catalog File)

GIMME MY WADB!*

*Westinghouse Architects' Data Book.

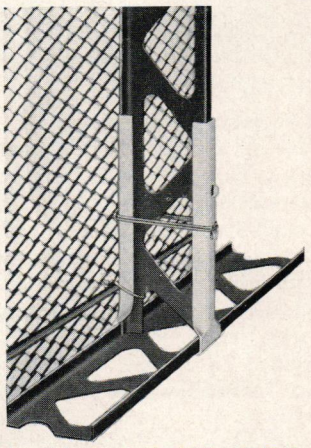
Go to it brother! No holds barred. The mental gymnastics WADB will save on electrical design and specifications are worth all of the physical exertion. And remember, while you've got him down, exact a promise that he'll either use the office copy, or refer to Sweet's.

J-94051

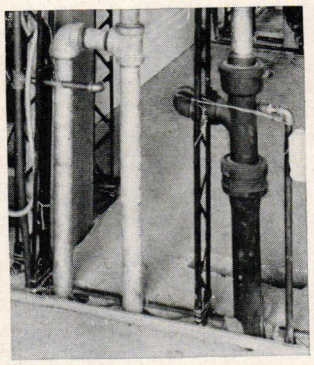
Westinghouse

All Non-Bearing Plastered Partitions

Frances Atherton Girls' Dormitory, Pennsylvania State University, State College, Pa. Architect: Chas. Z. Klander, Philadelphia, Pa.



Bar-Z-Stud on track with Bar-X-Lath tied to one side.



The hollow design of Bar-Z-System partitions and the triangular openings in the Bar-Z-Studs facilitate installation of plumbing and conduits as shown here.

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BAR-Z-SYSTEM

TO SAFEGUARD the interior beauty of modern buildings, architects, more and more, are specifying Steelcrete Bar-Z-System—the original system of hollow plastered partitions. This rigid construction, consisting of Bar-Z-Studs and Bar-X-Lath (the diamond mesh expanded metal lath with twin reinforcing rods), provides a perfect reinforced base for plaster and assures maximum protection against cracking. It also offers high resistance to the penetration of sound. You can specify the Steelcrete Bar-Z-System for any type of building. Write for the latest catalog containing complete details.

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Cold Spring Slows All But Competitors

Architecture is frozen music (or vice versa, as Mr. Cram once said by mistake). This congelation has now spread from the finished product to the trade. It may be the cold, stormy spring we are having (still five feet of snow at Pinkham Notch in mid-April), or the disjointed condition of everything in particular. It may be sun spots or red ink stains; but something seems to have nipped the architectural enthusiasm in Boston. I hope I'm wrong.

A sure betrayal of quiet times is the general attack on the Uncle's Smithsonian Competition. Each consignment of bulletins to the New England sector, containing program changes and answers, must look like Christmas at the P. O.

The Uncle is really our universal Santa Claus, except in the matter of taxes, and almost every drop of architectural business that comes out the old pump nozzle is nothing but priming he has poured in at the top. Some of it probably leaks down past the piston rings into the well and doesn't do any legitimate good at all.

Just now the Unk's patented PWA primer seems to have pulled in its neck, which immediately sends many offices into a slump and puts a number of good men onto the Common.

Housing has started, "innitch by innitch" (old song), but the current recession has so far made the prediction of a labor shortage one of the great jokes of all time. (We guys never get any breaks.) Employee discussion, centered on the housing wage-scale, finds that the most optimistic searcher for a "have-not" victory in its settlement, would have to wipe every last fly speck off his microscope lens before he could detect traces of one. Probably the clear-cut ruling on overtime rates comes nearest to being a step towards the millennium.

Sandford Full has just returned to these here parts from Pittsburgh and big money. He is again ready to handle any and all perspectives that you may want done better than you can do them yourself. Frankly, wasn't your last home-made one a little on the putrid side? Remember, you can fool some of the people some of the time, but those carboniferous trees looked like anachronisms in a steel engraving.

Messrs. Kluwer and Norton have temporarily quit Boston for Williamsburg, Virginia, whereas W. W. Walden and most of the wanderers are back again in this land of milk and honey.

Vaughn Holmes recently tossed a wash boiler into his car and motored down to the Cape to see if herring had started to run. Being an old Cape boy he knows his herring (Clupea harengus), just as the Connecticut Valley lad knows his onions (Allium cepa) and suckers (Catostomidae).

With war clouds forming we are not as envious of Bob Dean, architect and artillery officer, as we were when his extra-curricular activity was nothing worse than a brace of chukkers before an admiring gallery. Doug Gass put it right when he is reported to have said, "Dean, as I see it, I'll be filling the shells that you fire."

The Architectural League of Boston had beer and victuals before and after Donald Nickerson's talk on "Wood Finish Situations," March 29th. On the reactions of wood, without and within the holy bonds of joinery, the Theodore Schwamb Company's Mr. Nickerson is practically an oracle.

The evening was a good one, but, between you and me, if you want a full house you've got to have a speaker who is peddling formulas for a decent subsistence through some quicker and easier device than professional skill. If this be heresy make the most of it, as someone said in a tight place; I think it was Joe Zilsch, but I'm not sure.

LEON KEACH

BEFORE STUCCO

Modernizing miracle transforms noted Los Angeles Auditorium

THE REMODELING of this center of business and culture in Los Angeles is a tribute to architects and builders of today—and the modern materials they use.

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AFTER STUCCO

PPS-4

STUCCO MADE WITH **Atlas White** PORTLAND CEMENT

Los Angeles Letter

"Have you been to the Fair?" and "What do you think of it?" are the questions everyone is asking since the 1939 Golden Gate International Exposition opened with a great fanfare. The Governor considered it of such moment that he declared opening day a holiday, and all the State officials and half the citizenry crossed the bay to Treasure Island by ferry and bridge to celebrate the occasion. The Exposition had been officially, though subtly, advertised throughout the United States since the first of the year by our blue and gold automobile plates, which have stamped above the numerals: "California World's Fair '39."

To see an exposition for the first time in the company of a small group of architects is certainly the best way to assimilate and digest the impressions that assail one on every hand. After a Saturday in Sacramento discussing legislation affecting the architectural profession, four of us from the South hurried to San Francisco to make the most of a brief week-end. We arrived in the early evening, and as everybody recommended, we were able to have our first view of the Fair at night, with all the illumination. It was with high expectations that we approached Treasure Island, crossing by ferry through the brusque salt air of San Francisco Bay with the great Oakland Bridge towering above us, the top lost in the fog and night.

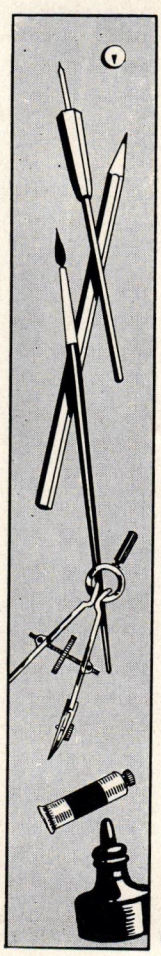
The illumination of the Fair buildings was perfectly satisfying; an aesthetic experience that I had supposed was still remote. To me, night lighting has too often meant the singling out of some special feature of a building by throwing on it several spots, which changed and distorted the proportions beyond all recognition. Here, however, the lighting gives a better and more immediate grasp of the size and shape of the buildings, and portions to be emphasized are picked out with differences in color and intensity. The general exterior effect was one of such interest that the four of us spent all evening walking about outside. We couldn't help wondering, however, how these same buildings would look by daylight, whether or not all the glamour and illusion would be gone with the rising of the sun, or, what is more typical of the Bay Region, with the arrival of a foggy, windy morning.

Drifting along with the crowds, we were finally brought to a stop in the Gayway by the crowd standing before the Nude Ranch, Sally Rand's contribution to the general fun. We, of course, entered, such is the fame of the Bubble Dance, ironically enough the thing that perpetuates for many the memory of the Chicago Fair. Without doubt, this conception of the strip tease is the most ludicrous that has been thus far devised.

The next morning although the Fair had lost some of its carnival spirit, there were other features to replace the lighting, and the use of color on the buildings, the large and striking murals, and the flowers of the planting areas really came into their own in the daylight. The chief disappointment was in the exhibits, for while one had the impression that the architects had done a magnificent job in creating the setting and background, the groups responsible for the displays had been less successful. Perhaps two expositions in one year had an effect on the exhibitors! The exhibition of Arts and Decorations, however, is outstanding, the result of long and thoughtful planning. We viewed the paintings rather carefully—from the $30,000,000 array of Italian and European art to the contemporary American work, the latter reproducing the American scene in an amazing variety of styles. The interior decorators are exhibiting in the same building several significant rooms.

The group of buildings that is bound to create the most controversy

(Continued on page 33)



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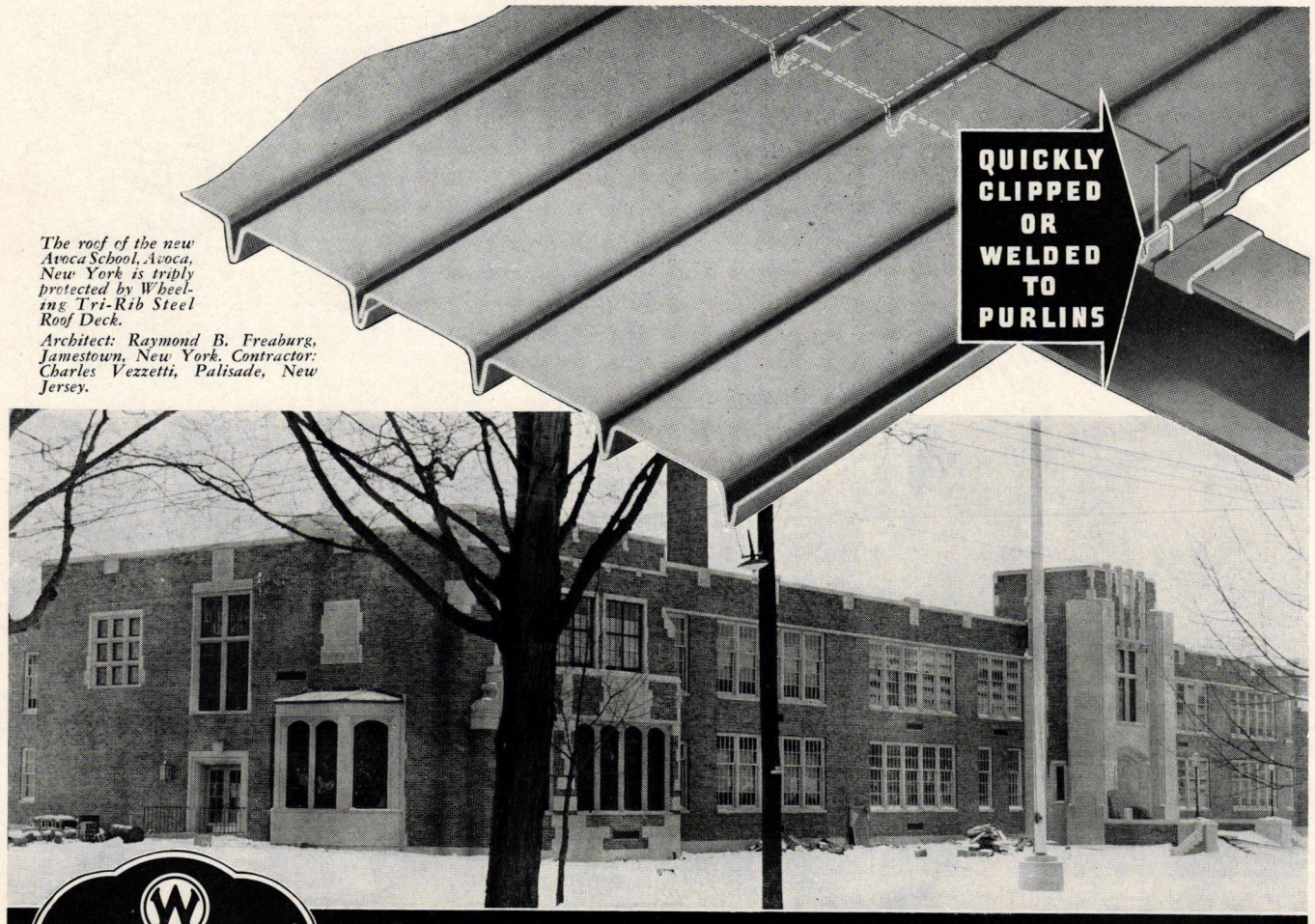
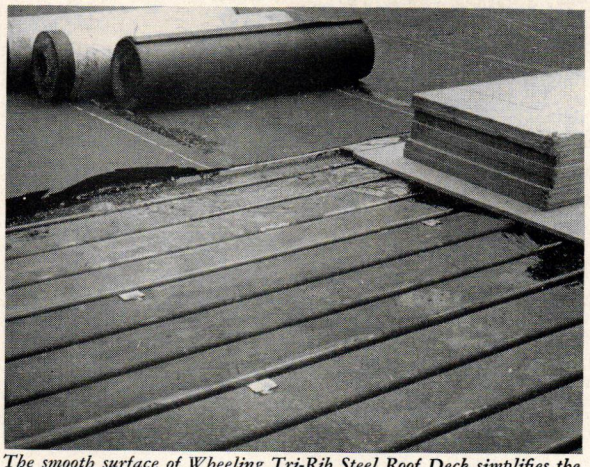


The roof of the new Avoca School, Avoca, New York is triply protected by Wheeling Tri-Rib Steel Roof Deck.

Architect: Raymond B. Freaburg, Jamestown, New York. Contractor: Charles Vezzetti, Palisade, New Jersey.

Wheeling
CORRUGATING COMPANY

Tri-Rib STEEL ROOF DECK



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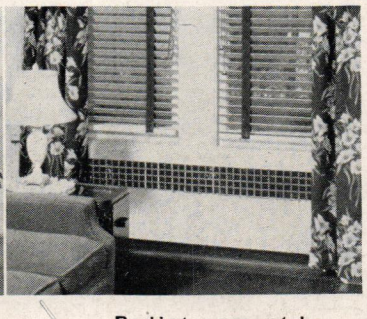

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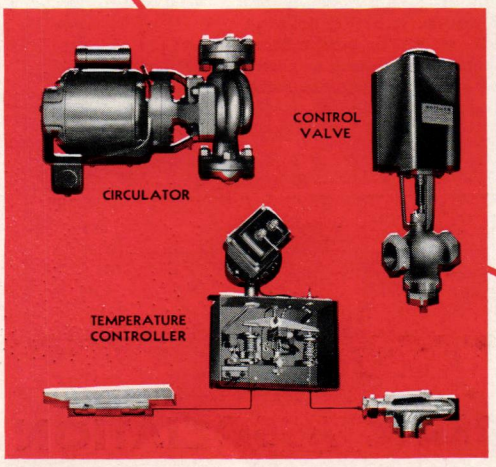

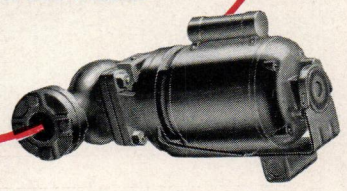

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● **Modernistic, colorful Terrazzo in the Bond Clothing Store, Philadelphia, Pa., makes a permanently attractive floor. Here the colors are white, yellow and black. At the store entrance, the Terrazzo floor contains white and red.**

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(INSIDE AND OUTSIDE)

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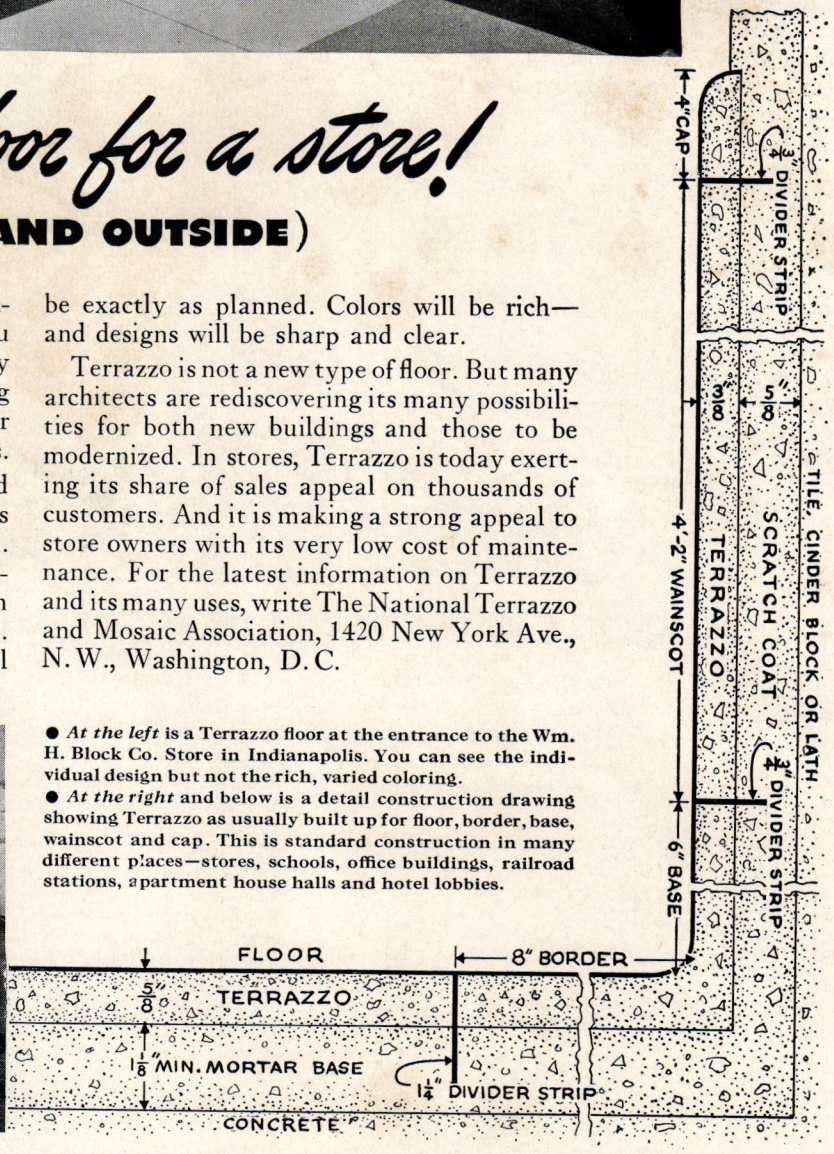
Terrazzo is not a new type of floor. But many architects are rediscovering its many possibilities for both new buildings and those to be modernized. In stores, Terrazzo is today exerting its share of sales appeal on thousands of customers. And it is making a strong appeal to store owners with its very low cost of maintenance. For the latest information on Terrazzo and its many uses, write The National Terrazzo and Mosaic Association, 1420 New York Ave., N. W., Washington, D. C.

● *At the left* **is a Terrazzo floor at the entrance to the Wm. H. Block Co. Store in Indianapolis. You can see the individual design but not the rich, varied coloring.**

● *At the right* **and below is a detail construction drawing showing Terrazzo as usually built up for floor, border, base, wainscot and cap. This is standard construction in many different places—stores, schools, office buildings, railroad stations, apartment house halls and hotel lobbies.**



THE NATIONAL TERRAZZO AND MOSAIC ASSOCIATION

(Continued from page 28)

is the United States Government exhibit. The central portion consists of forty-eight wood columns, four abreast, which rise over a hundred feet in height, and except for beams which tie them together at the top they have no roof. While one may be appreciative of a nice bit of symbolism and quite sympathetic to the trends in architecture, still the unfinished look and the bewildering appearance of the structure forces one into a difficult defensive position against the "but whys" of the traditionalists.

Altogether I feel that we will look upon the Golden Gate Exposition as a fine capture of the atmosphere suggested by the picturesque countries that border the Pacific Basin. The opportunity of utilizing a man-made island is unusual, and the most has been made of it. No startling design features have been introduced, and it is probable that not much influence will be exerted upon the architectural trends of our communities. One does carry away, however, the impression of an architectural commission executed in a manner to bring credit to our profession, and of a feeling that light as a medium of design in itself is now a well established part of our vocabulary.

PAUL HUNTER

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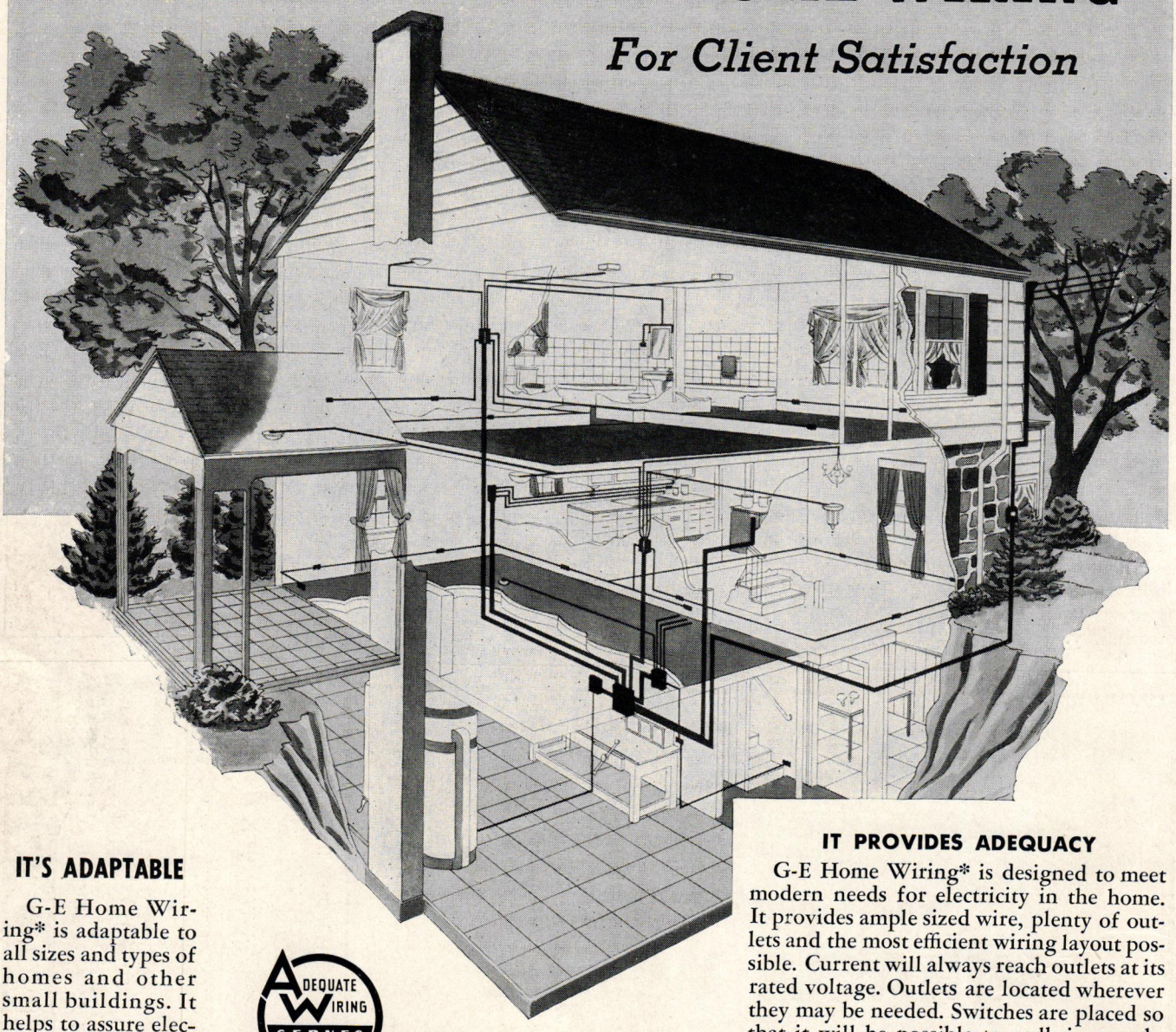

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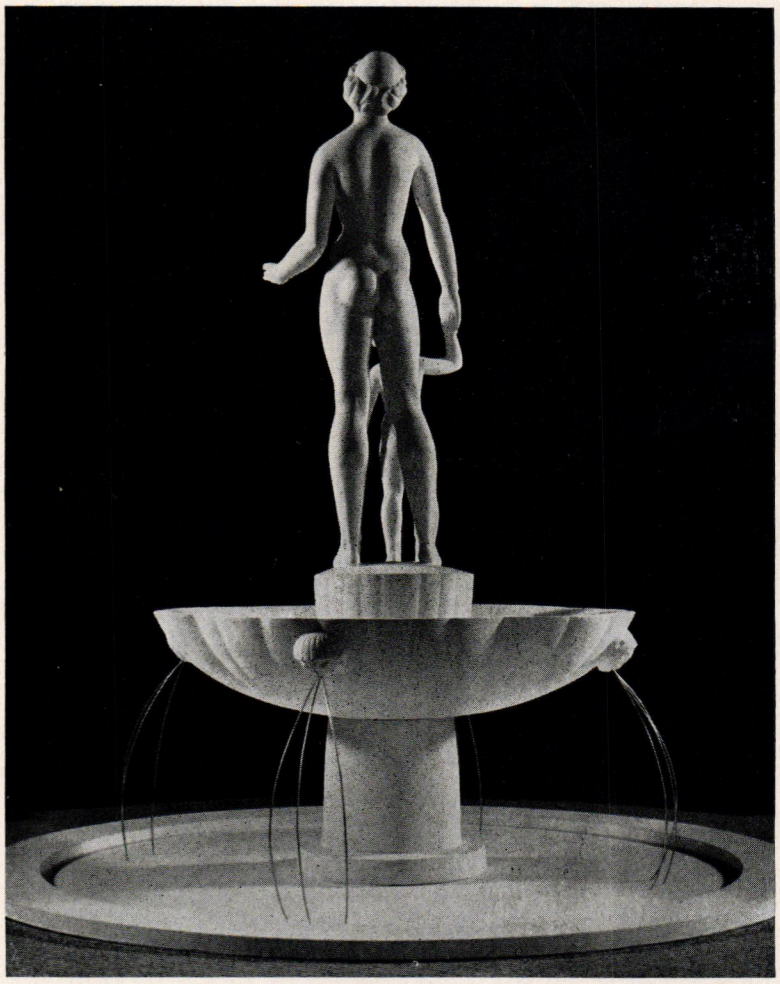
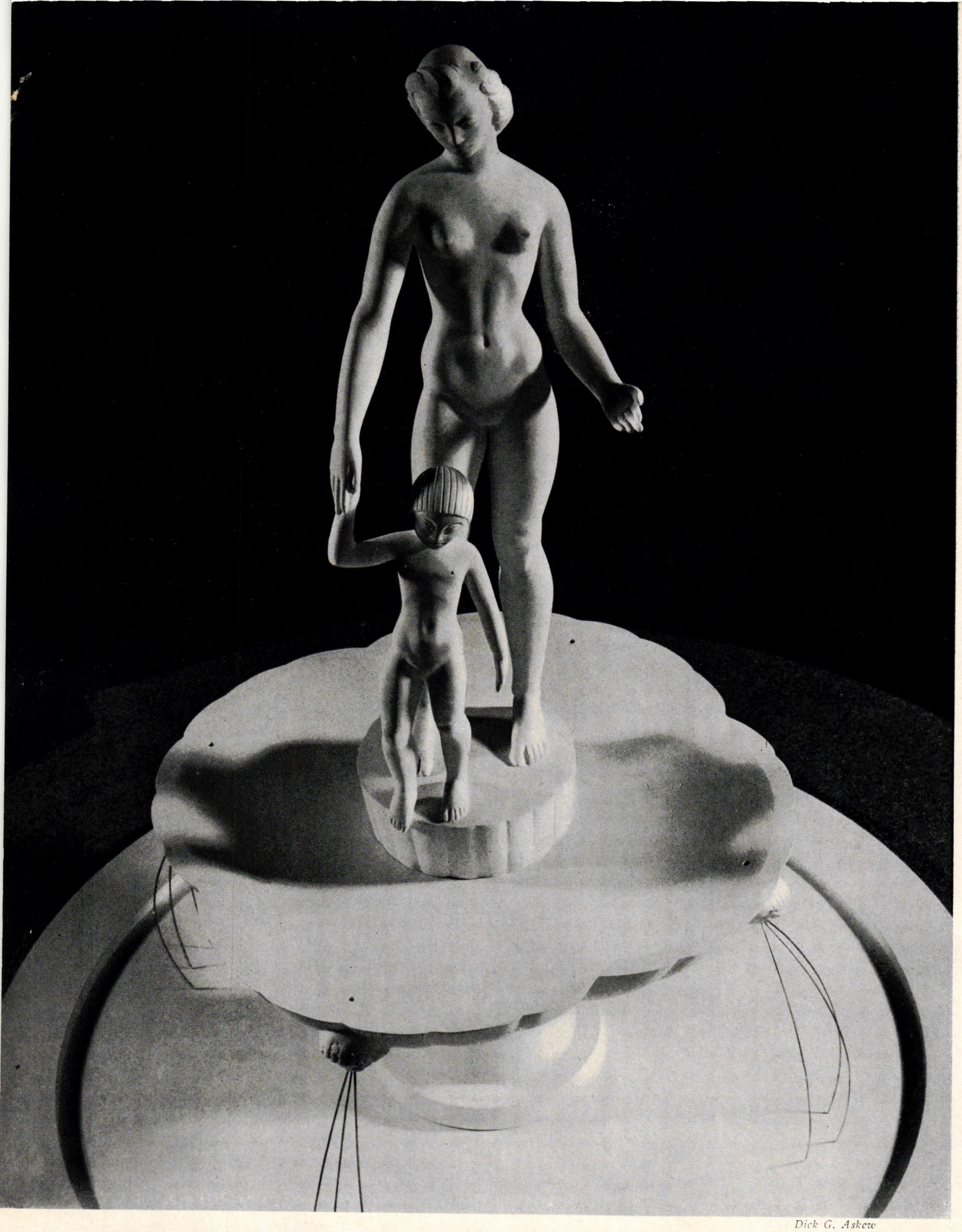


Dick G. Askew

MODEL OF A FOUNTAIN BY MARSHALL FREDERICKS

A sculpture of Springtide delicacy designed for a fountain on a private estate is shown here as modeled at small scale by Marshall Fredericks, Sculptor, of Cranbrook Academy of Art, Bloomfield Hills, Michigan. Maybe it is just the spell of the season—but it seems to us that Fredericks has captured in "Sisters" that fresh charm which ever imbues young growing things. At least, it is easy to picture this fountain in a secluded retreat, alive in the sun-flecked shade of over-arching trees



Dick G. Askew

MODEL OF A GARDEN FOUNTAIN, "SISTERS," BY MARSHALL FREDERICKS

AGAIN THE STOCK PLAN

CAN ARCHITECTS HELP CORRECT ITS ABUSES

BY KENNETH REID

INCREASED volume of home building generally means an upward trend in general business. Feeling that this is so, many public and private organizations have been working furiously in every conceivable way during the past few years to stimulate housing projects of various sorts. A not inconsiderable part of this effort has been directed towards the small, low-cost house field.

The Federal government has adopted measures to make the financing of home ownership easier. Private lending institutions have cooperated. Real estate developers have put up many hundreds of moderately low priced houses and have advertised vigorously the advantages of buying or building. Lay publications, newspapers and magazines, have advocated home ownership and have made available to the public, at nominal cost, stock plans and specifications which they have secured through competitions or by direct purchase from architects. Manufacturers of building materials and equipment have done likewise and, as an effective way of stimulating the sale of their products, are offering designs, similarly derived, for from one to twenty-five dollars per set of drawings and specs. Other manufacturers, after doing considerable research, are engaged in selling complete prefabricated houses or prefabricated units to be assembled at the site. Architects have had a part in all this, either directly by setting up stock plan bureaus in various cities or by assisting the other agencies in preparing their designs.

Motivating all of this activity there has been a typically American mingling of altruism with the perfectly normal desire to sell goods and make money. We cannot legitimately quarrel with either factor. We can, however, point out that in the pardonable zeal with which the objective of more house building has been and is being pursued, there lurks the danger that the architect may be shouldered completely out of the picture. To the big city architect whose practice lies in the field of larger buildings this threat means little. To the vast number of smaller practitioners scattered throughout the country in smaller centers, the matter is of considerable moment.

The subject of stock plans has been inconclusively fought over many times in the past. Most small residential architects are opposed to them either as providing illegitimate competition in the business of making a livelihood or as being against the true interest of the purchaser and therefore wrong in principle. No matter where we stand, however, on this controversial question, it seems certain that stock plan services will persist in one form or another. We may just as well give up trying to have them outlawed and devote our energies to developing ways of improving the methods of their application to actual construction. There is an opportunity here for doing a real public service which will. at the same time, help a great many of our fellow architects whose principal field is the small house.

Let us admit the probable existence today of a sufficiently wide variety of stock plans to make it possible for the family of small size and resources to find one suited to its needs. The small house architect of the locality can serve such a family (1) by advising on the selection of a design; (2) by advising on the choice of an appropriate site; (3) by making what minor changes are desirable; (4) by getting competitive bids from good builders; and (5) by giving expert supervision to the performance of the contract. For such services his charge could be moderate and it is likely that through them the owner would effect a real saving and get greater value for

his money. There can be little doubt that without the architect's aid the owner takes an undue risk of getting gypped in one way or another in the biggest transaction of his life.

For any responsible organization to do other than advise the prospective owner to take his stock plans to a reputable architect before going ahead with his building venture would seem, to those who know how building is done, contrary to public interest. And yet there are many agencies operating stock plan services which are strangely luke-warm about offering such advice—if, indeed, they offer it at all. Too often the hopeful individual is directed to go to any competent carpenter or carpenter-contractor or to a building material dealer for all necessary further guidance. The design itself is represented, either directly or by implication, as the whole of the architect's possible contribution. The sponsoring organization usually makes much of the fact that it has taken care of the expensive architect's fee —$500 or more—at a corresponding saving to the plan purchaser. Commonly, the buyer is assured that the plans he buys are the product of the best brains in the architectural profession. The fact that "fortunate he" is able to get them for say $15 tends, incidentally, to help establish in the lay mind generally a ridiculously low valuation for such high-powered brain products.

Not the least difficult part of the situation is the fact that it is by and with the consent and cooperation of architects that the stock plan services have succeeded in raising the quality of the designs they purvey to a rather creditable level. Some of the houses are really good and, if built according to their designer's standards, would be first class. This makes it all the more important for the profession to acknowledge its responsibility and to surround this stock plan business with safeguards if possible, on its own behalf as well as the public's.

I have discovered by personal experience that individual, scattered protests to the sponsors of stock plan services are met with polite apathy, so far as doing anything to change their procedure is concerned. These people are usually able to point to some statement printed in their advertising literature, gently suggesting that it might be a good idea to see an architect. Such statements are undeniably there but are almost invariably more than counteracted by other and more prominent suggestions that there are ways in which the architect's services may be eliminated. Concerted, consistent, and continuous protest by large numbers of interested architects might prove effective in putting into the regular stock plan propaganda more vigorous positive advice to consult an architect.

Architects who feel the impact of stock plan competition should certainly do something about it both as individuals and in groups. Architects who make and have made drawings and specifications which are used in these stock plan services could have exacted and still can exact, as a part of their compensation, the promise by the sponsors to *urge strongly* that an architect be engaged for supervision at least. They have nothing to lose by doing this and may very well have something to gain.

Architects who are not directly involved in either of these two ways should certainly be interested, altruistically, in helping the innocent lay public to understand and appreciate what a competent small house architect can do for them, even with a set of stock plans. For their own best interest, they should be willing to combat the propaganda which is slowly and steadily lowering the estimate put by the layman upon the value of professional services.

As a professional magazine, we can reach only the profession itself. Were we in a position to reach the lay building public we should certainly campaign strongly for general recognition of the importance of the architect's services in safeguarding the small owner's pocketbook. Lay publications can do this but they will not do it without some stimulating pressure from the architects themselves. We urge every architectural man to let slip no opportunity to exert whatever influence he may have upon every agency of public information that deals with the matter of house building, to the end that the present confusion about the architect's function and value may be cleared up to everybody's advantage.

"Flood Acres," a model house at Palo Alto by architect John T. Fennacy. Plan not available in time for inclusion

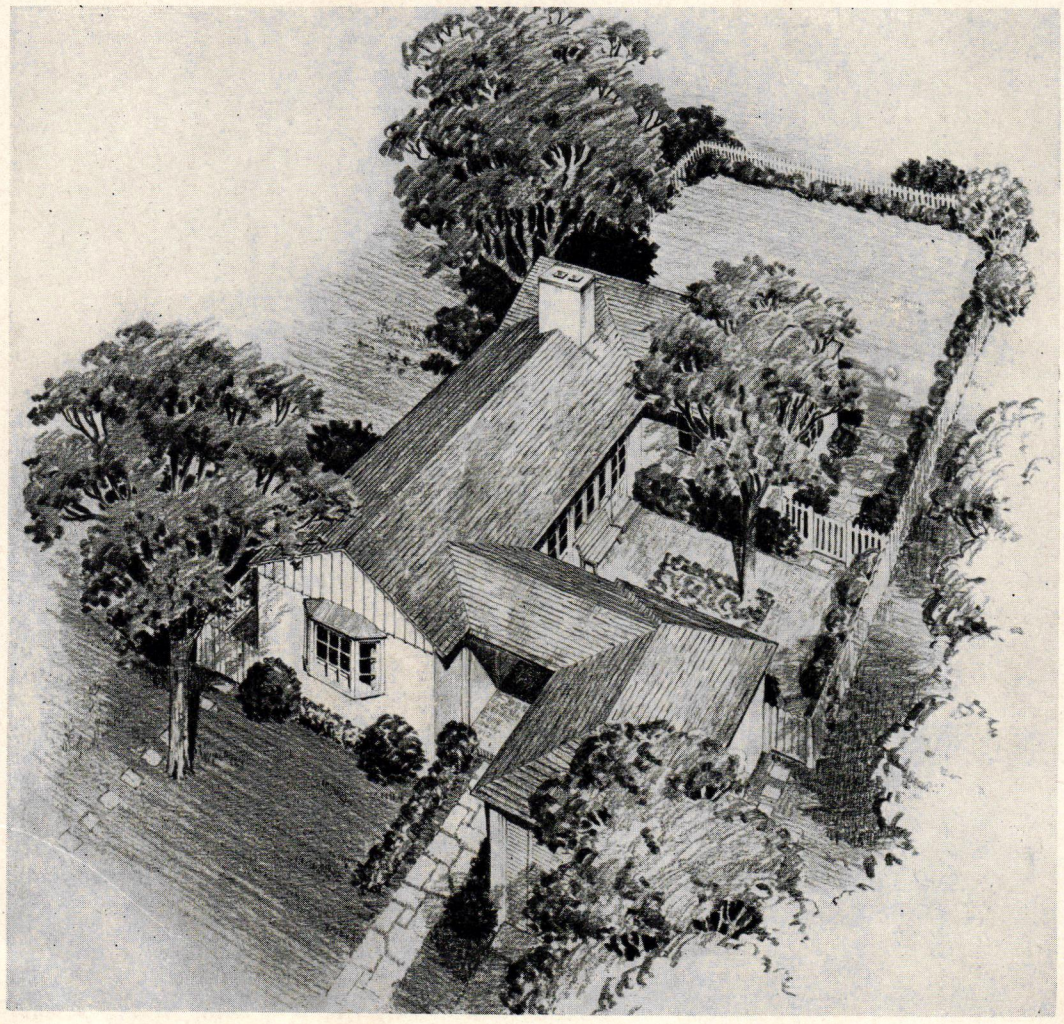
EXPOSITION MODEL HOMES

UNDER the leadership of Mr. Edwyn A. Hunt, Chairman of the Homes and Gardens Section of the Golden Gate International Exposition, the Real Estate Developers, Builders, and Architects of the San Francisco Bay Region undertook, about a year ago, to collaborate on that unusual project, the "Exposition Model Homes Tour, Inc." It was desired to show, in conjunction with the Fair, a number of model California houses. In place, however, of undertaking to construct these houses on Treasure Island itself, where they would have to be dismantled after the Fair was over, the very intelligent course was adopted of building them in their natural settings throughout the Bay Counties. In this way they could be exhibited during the exposition to visitors transported in their own automobiles or by motorbus from the Fair grounds. Afterwards they could be reconditioned and sold.

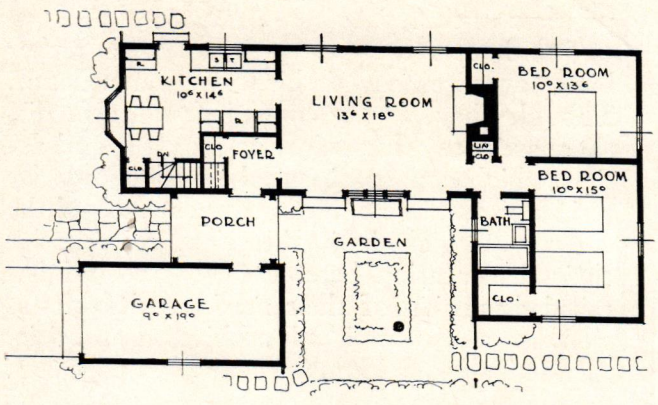
The project was organized with Mr. Hunt as President and with an Architects' Committee comprised of James H. Mitchell, *Chairman,* and Gardner Dailey, E. Geoffry Bangs, Spencer Eldredge, and Gwynn Officer as members. Representatives of all groups concerned —real estate, building, materials, banks, public utilities, decorating and furnishing—were included as officers, directors, and members of the Advisory Board of the non-profit corporation. Locations and sites were agreed upon and builders and developers undertook to finance, build, landscape, and furnish the houses, to be ready for public inspection on May 1, 1939. Each house was to be designed by a registered architect and each design was to be passed upon by the Architects' Committee.

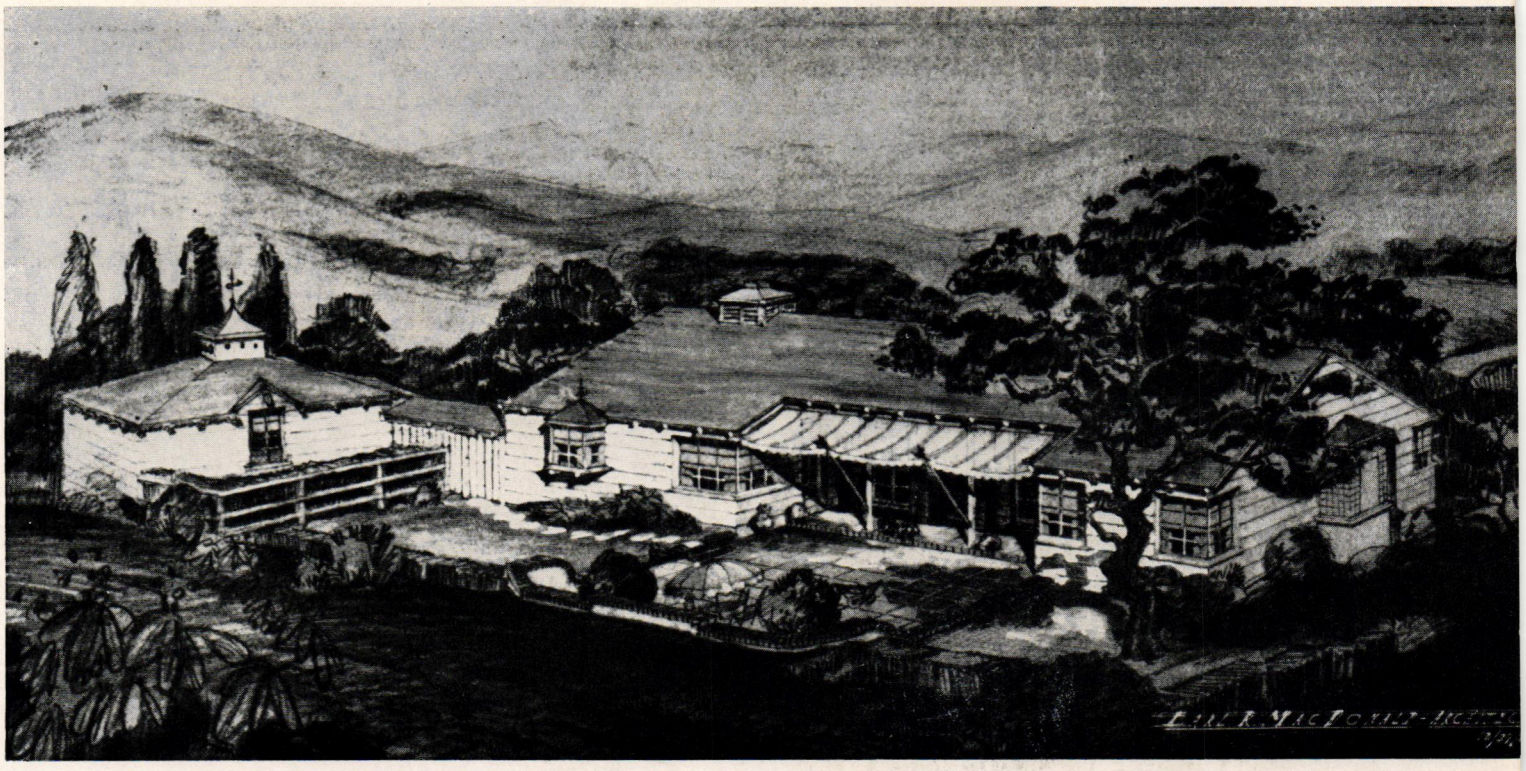
Everything went pretty much according to schedule, with the result that most of the houses are now ready and May 15 has been set as the day for the last one to be completed. The following pages carry the architects' perspectives and plans for twenty-six of the houses together with brief notes concerning their exterior materials and mention of the individuals and companies involved in their construction. The prices given are only roughly indicative of the construction costs, since they include the cost of landscaping and of the land itself which varies according to locality and size. They are stated only to give some idea of what is considered a fair amount of house for each price range in the vicinity of San Francisco today. The display period will last until September 15, 1939.

The houses themselves represent a rather high average of architectural excellence. Though they were designed for California, there are many fine points of planning and design which can be observed to advantage by residence architects in most other parts of the country, which is justification enough for their presentation here. For general and detailed discussion of their merits and faults as seen by a distinguished architectural critic, turn to Talbot F. Hamlin's article on page 293.

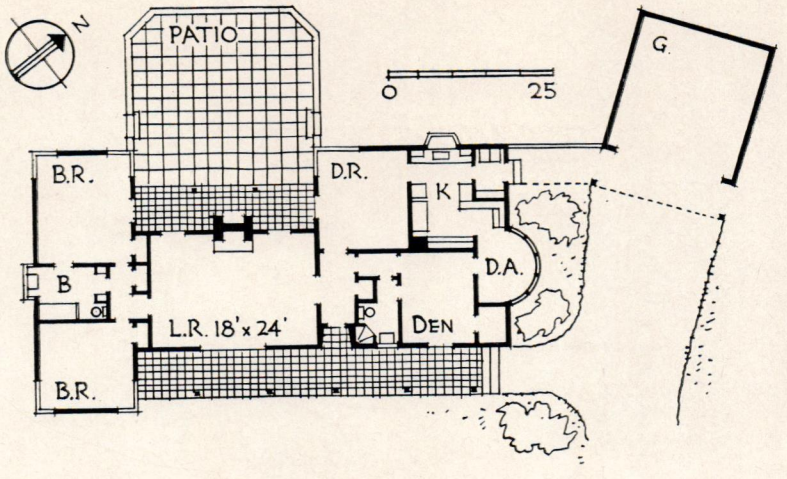


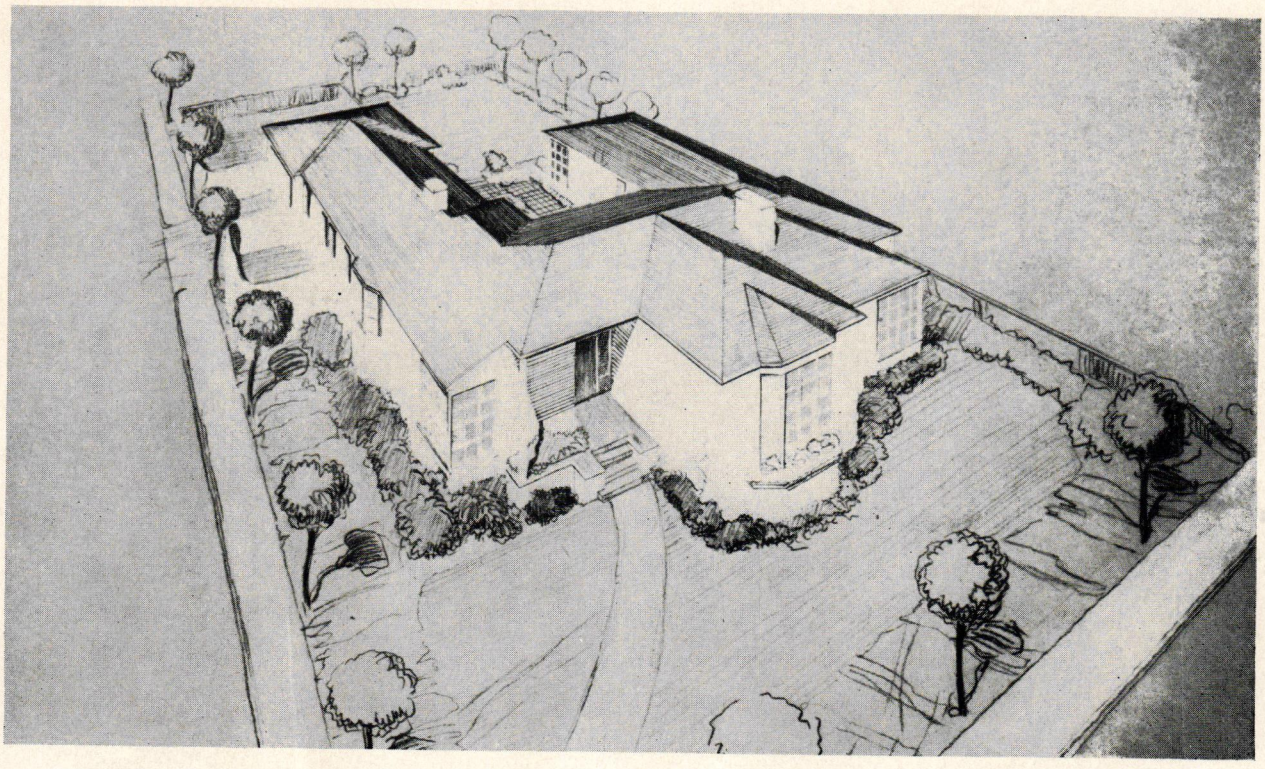
As the official starting place for the Exposition Model Homes Tour, on Treasure Island itself, stands the Johns-Manville, "triple insulated" Guildway Home, sponsored by Baldwin and Howell. The house was originally designed by Architect Albert E. Olson, of New York, and was adapted for use as a "Host House" by James H. Mitchell, President of the Northern California Chapter, A.I.A. R. E. Elrod was the builder. White asbestos clapboard was used on the exterior and the roof covering material is weathered, black asbestos shingles



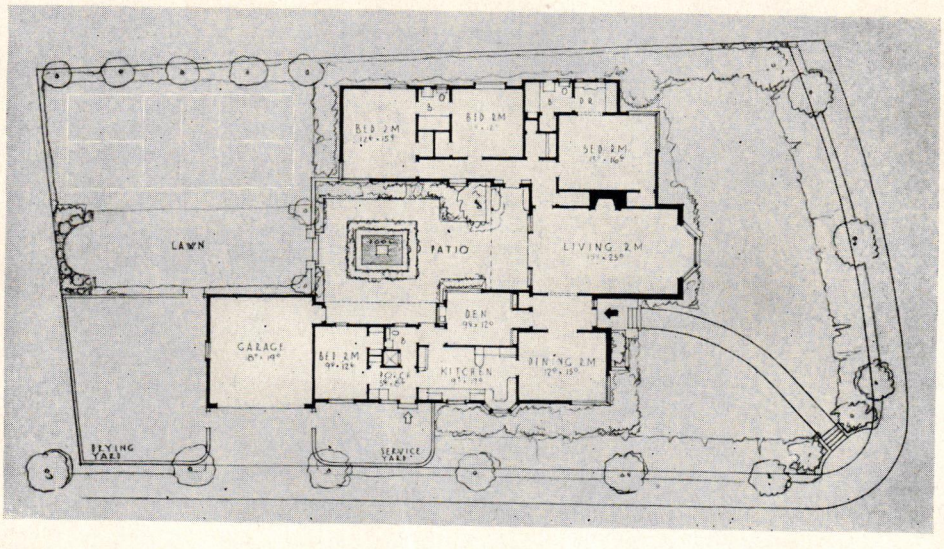


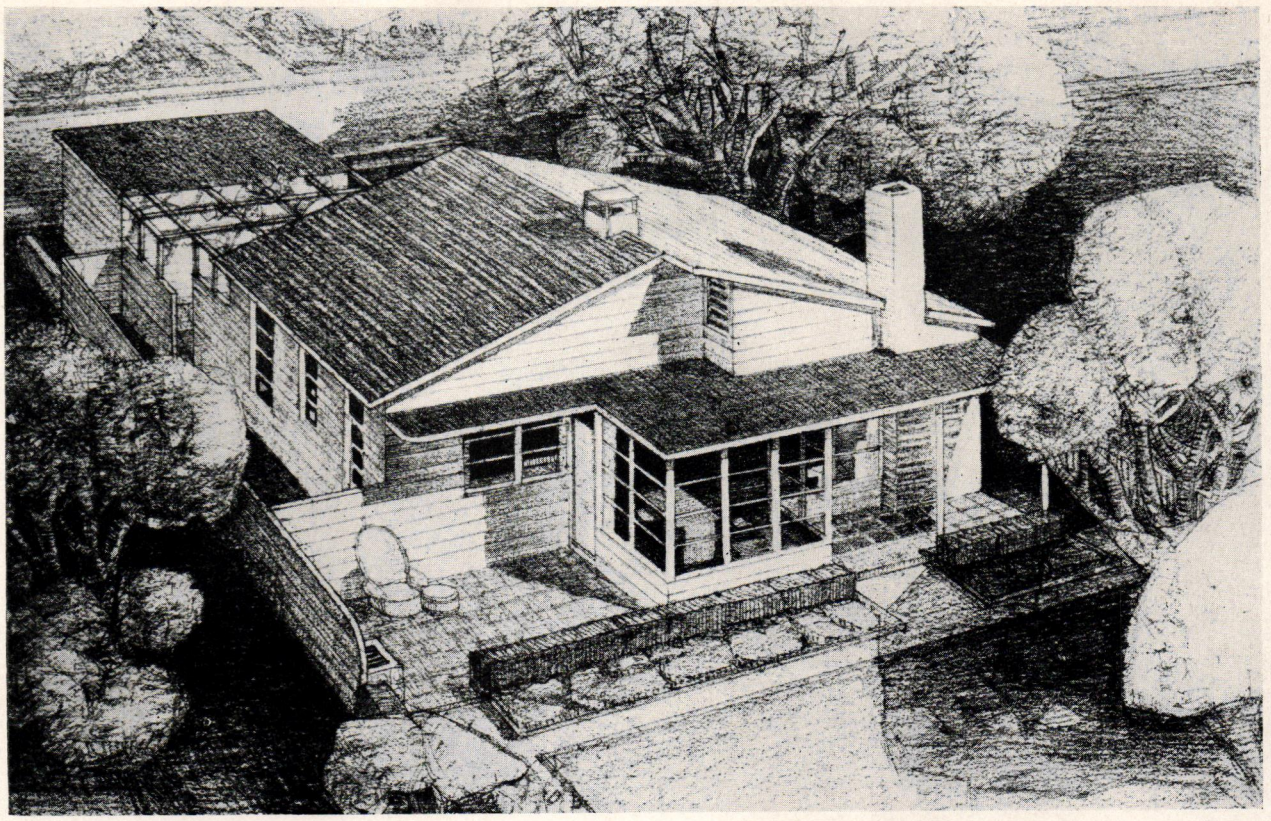
Designed by architect Earl R. MacDonald for the Montclair Realty Company, this house, known as "Happy Valley Estates Model Home," is of simple frame construction with shakes used for wall and roof covering. The perspective is taken from the west, looking down into the patio which extends the living area into the California sunshine. The property is priced at $12,000

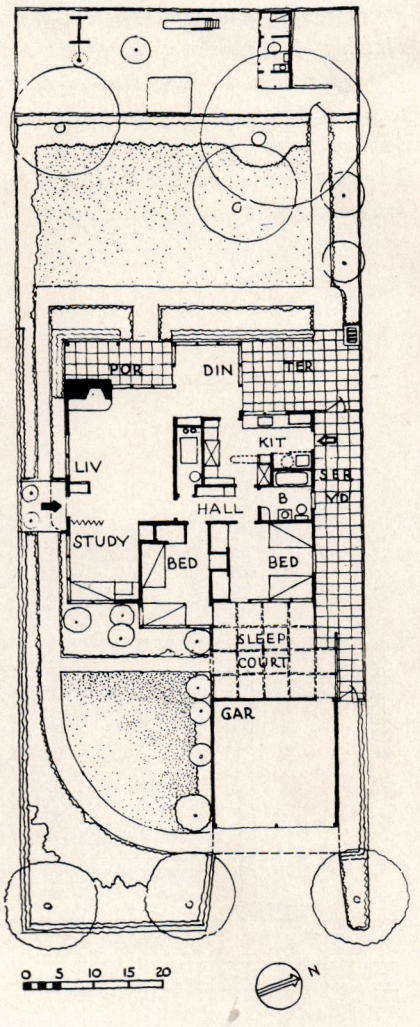




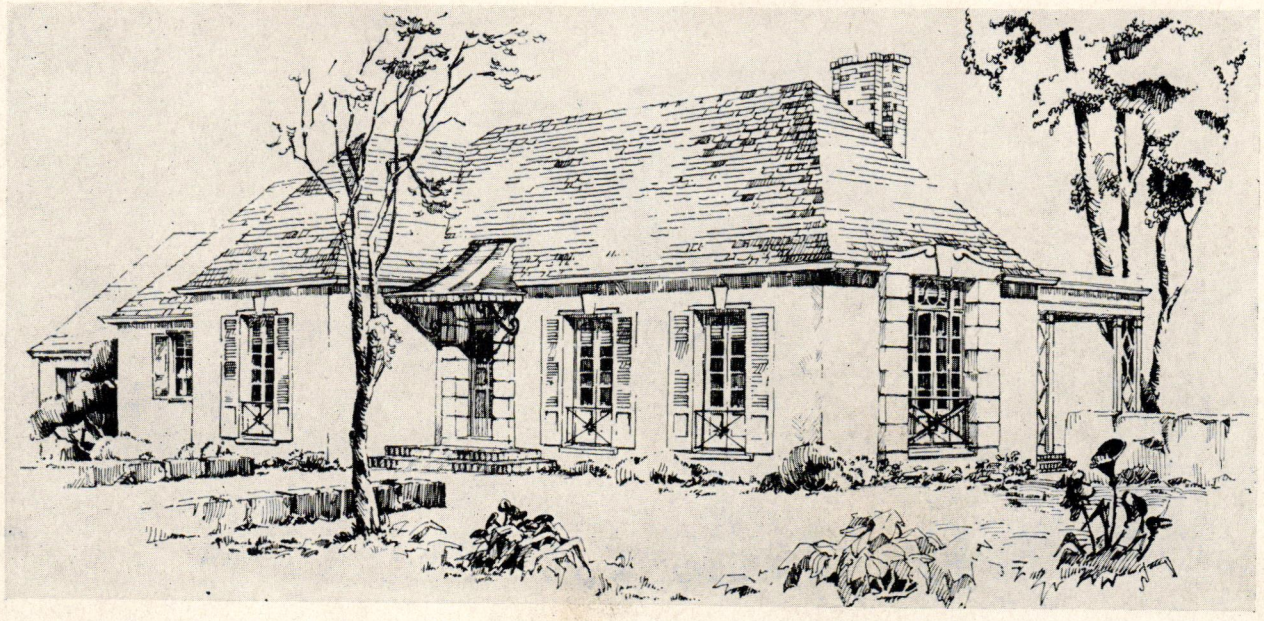
"Baywood Knolls," at San Mateo, had for its architect Angus McSweeney. He designed it around a living patio for which complete privacy is insured by the flanking wings. Large window areas set in steel sash pierce its stucco walls and a roof of cedar shingles completes its external surface. The house was built by George W. Williams for developers Coldwell, Cornwall & Banker to sell for $12,000 or thereabouts together with the land



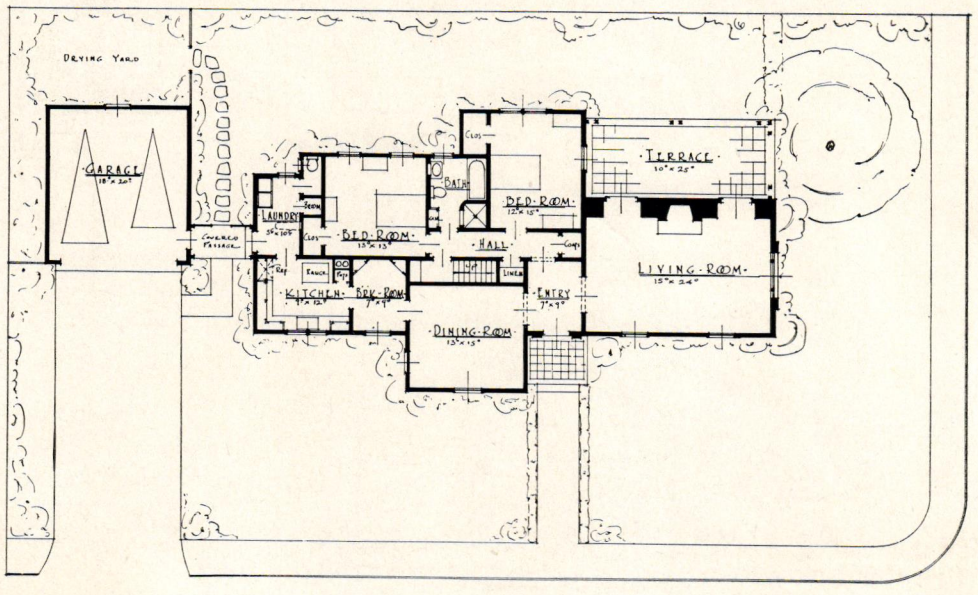


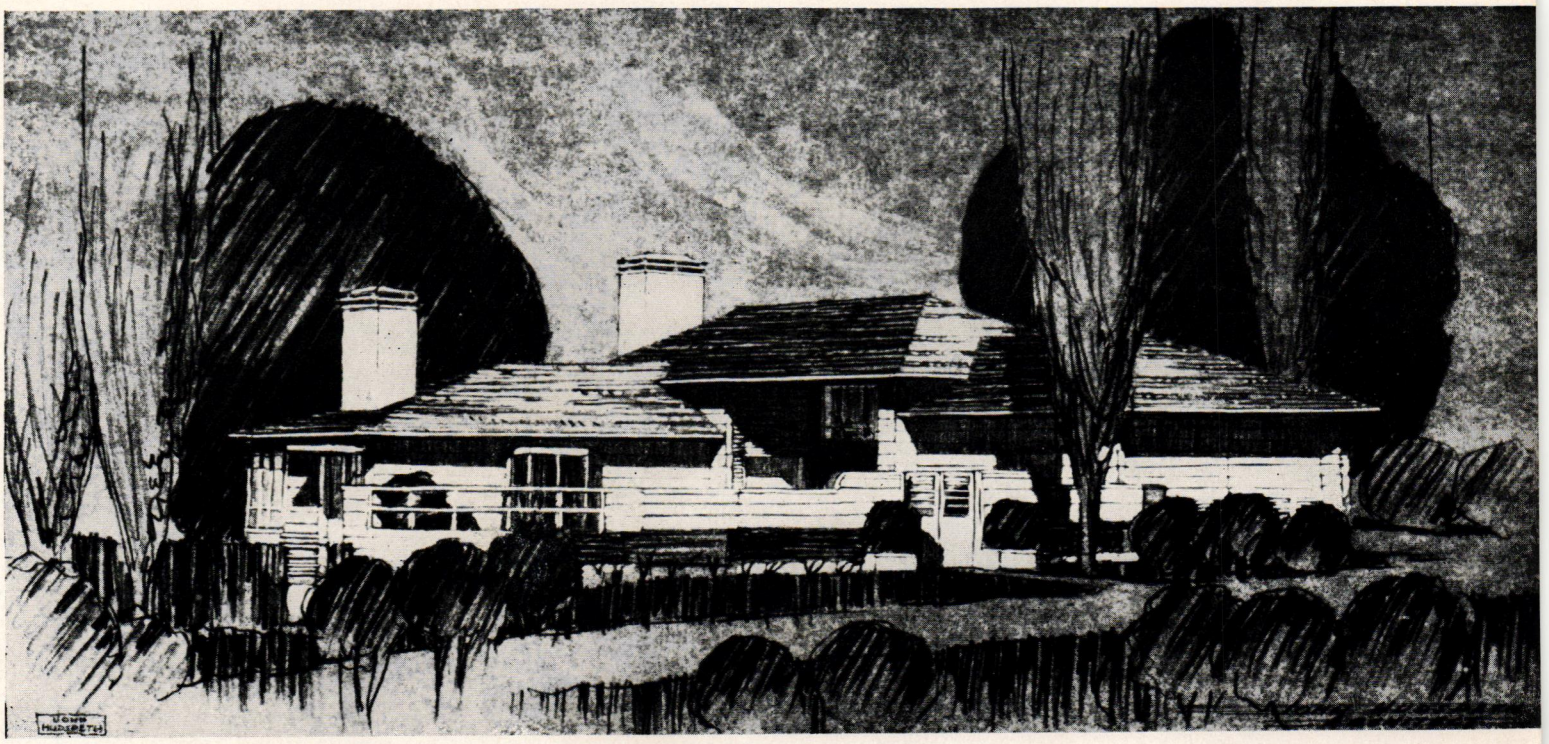


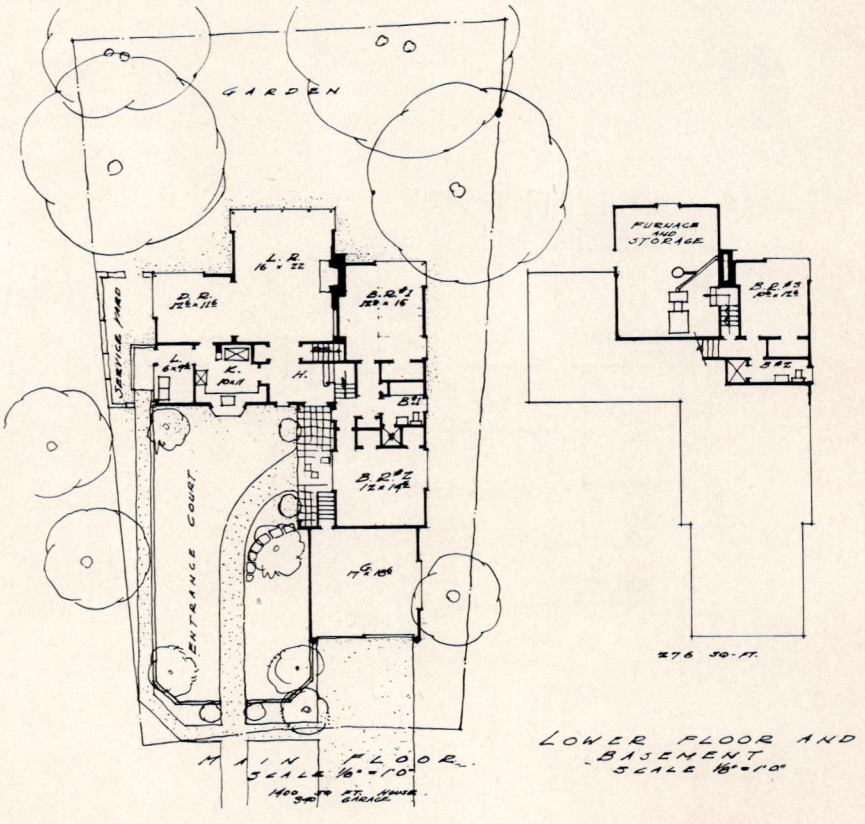
The house "Belle Haven City," in the Redwood District, was designed by James H. Mitchell for developer David D. Bohannon to be sold at between $6000 and $7000. Painted redwood siding was used for the walls, with some stucco, while the roof was of cedar shingles. The windows have wood sash and are variously double-hung, casement, and fixed. Perspective shows the rear or garden end with its cleverly sheltered dining terrace



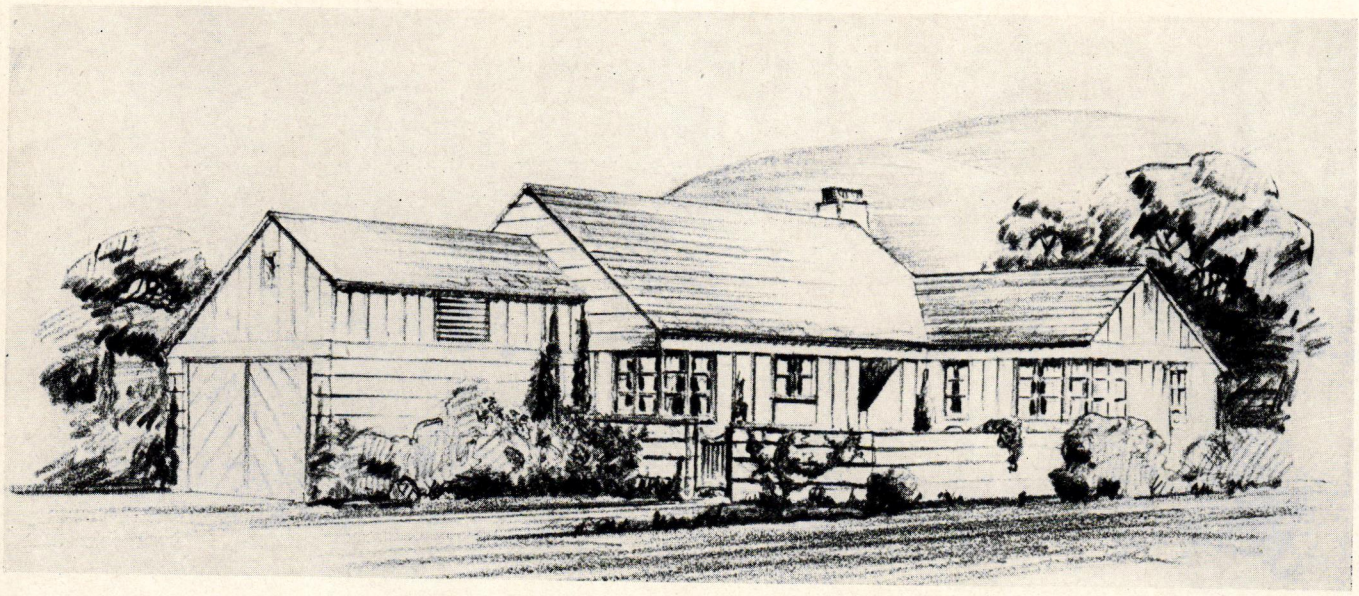
Sponsored by "The American Home" and built for the Lang Realty Corporation at Burlingame, this house, "Oak Grove Manor," was designed by Leo J. Sharps. With its stucco walls, shake roof, and wood casement sash it presents a more stylized appearance than most of the houses included in the "Tour." Price: about $9500. The builder of this particular house was Carl Bessett



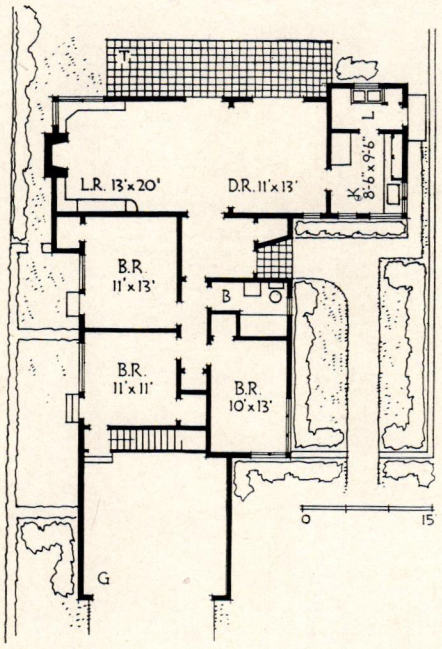


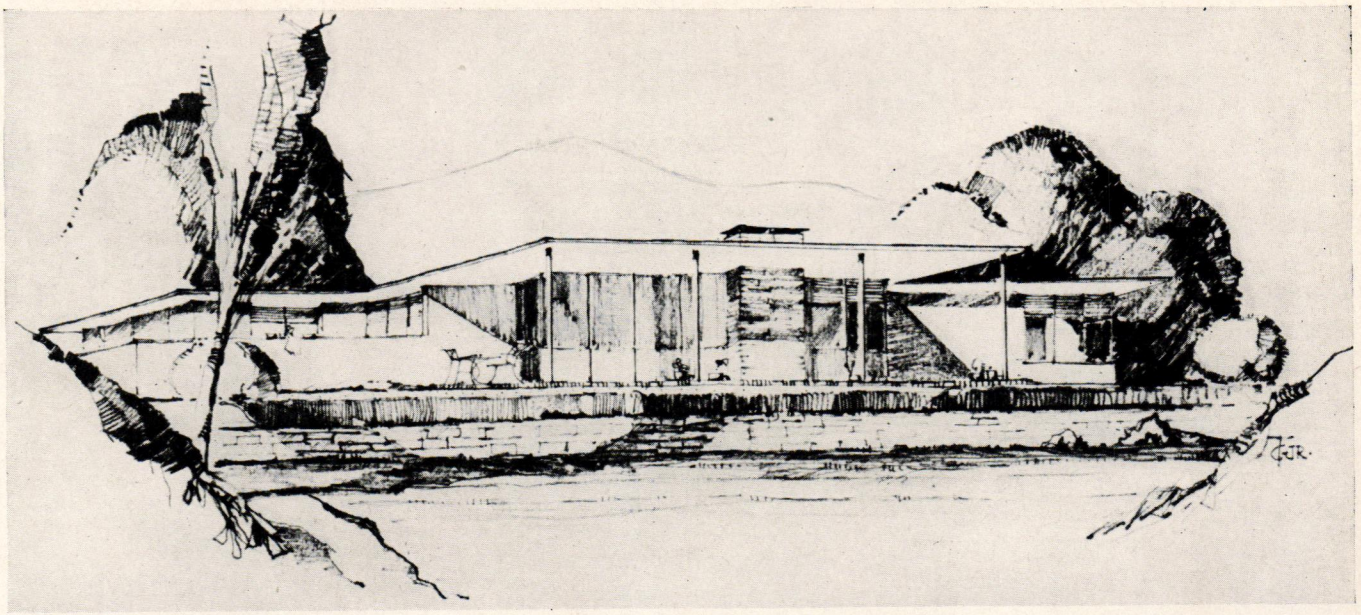


John B. Hudspeth's design for "Montclair Highlands" calls for redwood siding painted a warm white with the soffit of the wide cornice done in a pastel yellow. The roof of Prussian blue and black cedar shingles is in effective contrast. Developers Emge and Stockman employed J. R. Armstrong as builder and will offer the house for approximately $9500, including, as usual, the land

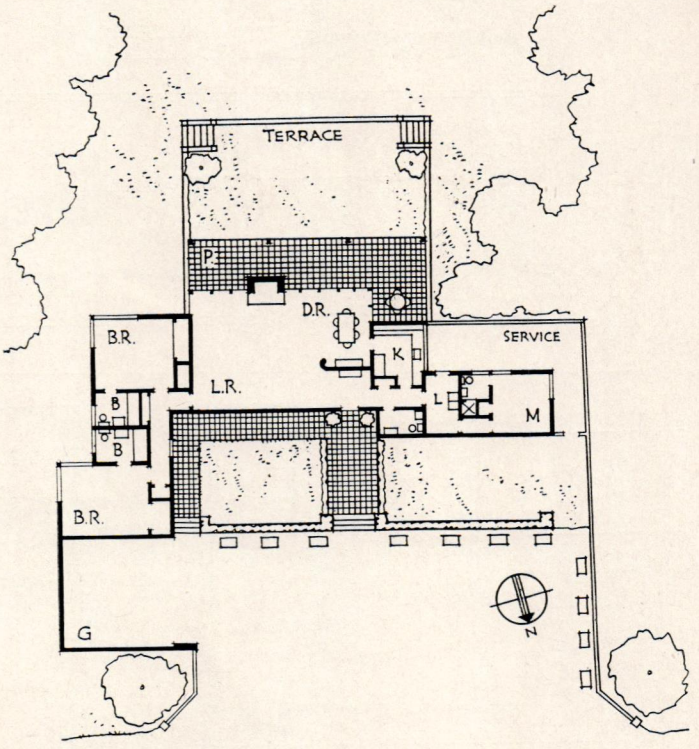


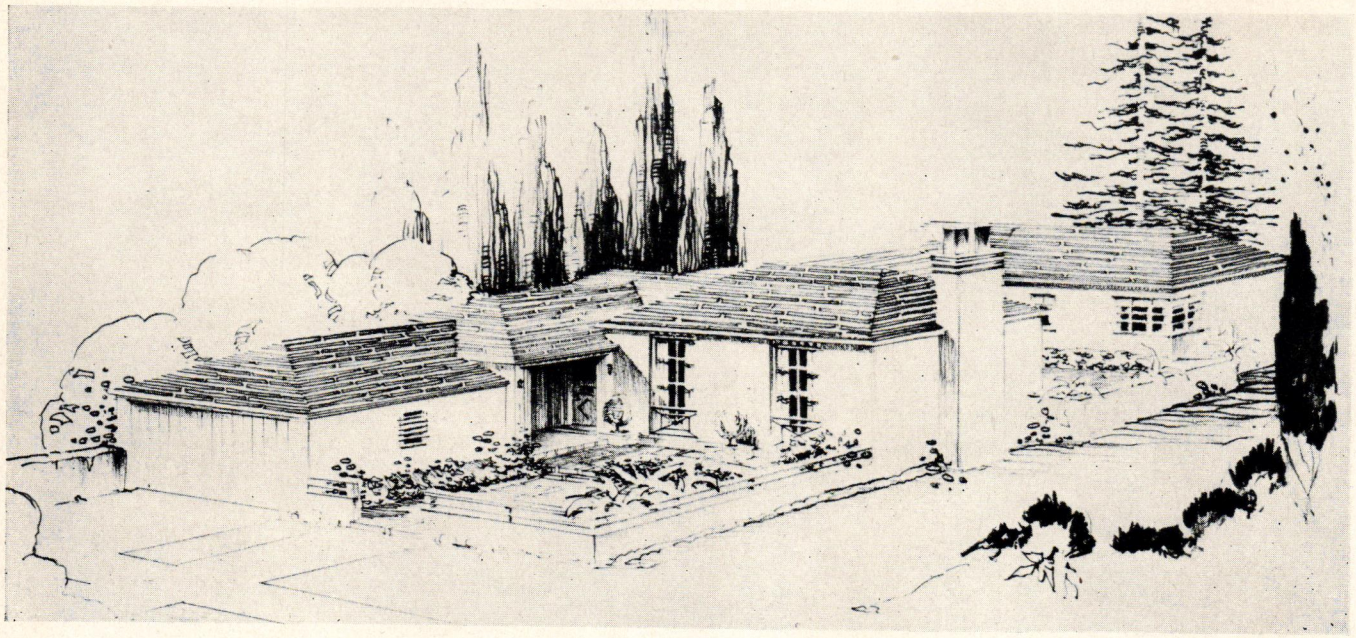
Designated as Swedish Modern, "Oak Knoll Manor" was designed by architect Charles F. Maury for developer David D. Bohannon. An all wood house, with both casement and double-hung windows, this example has redwood siding, painted, and a roof of cedar shingles. It is located in Oakland and is priced at approximately $6000

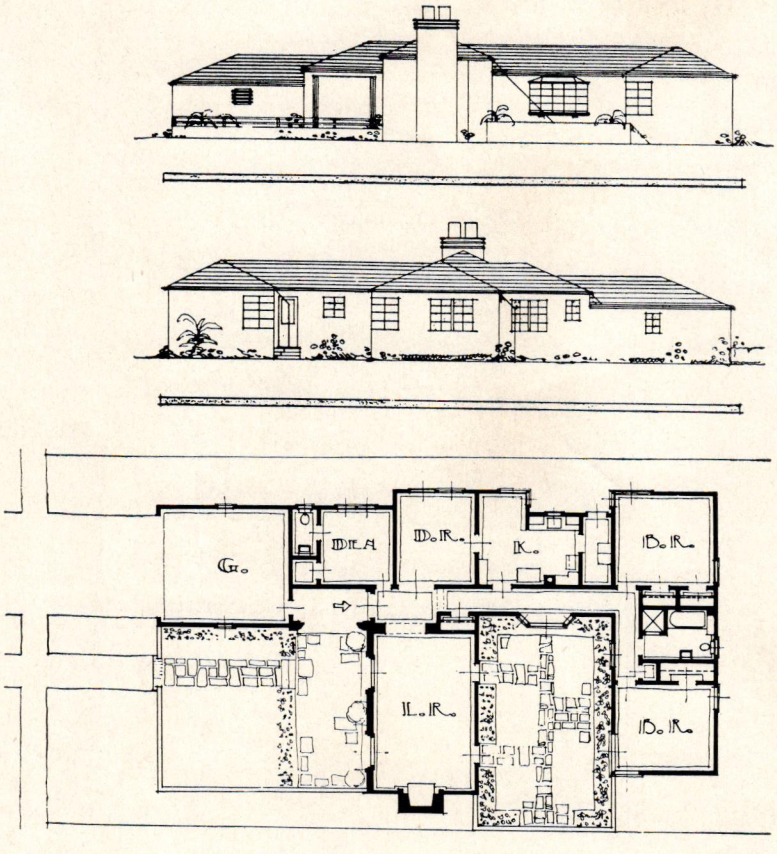




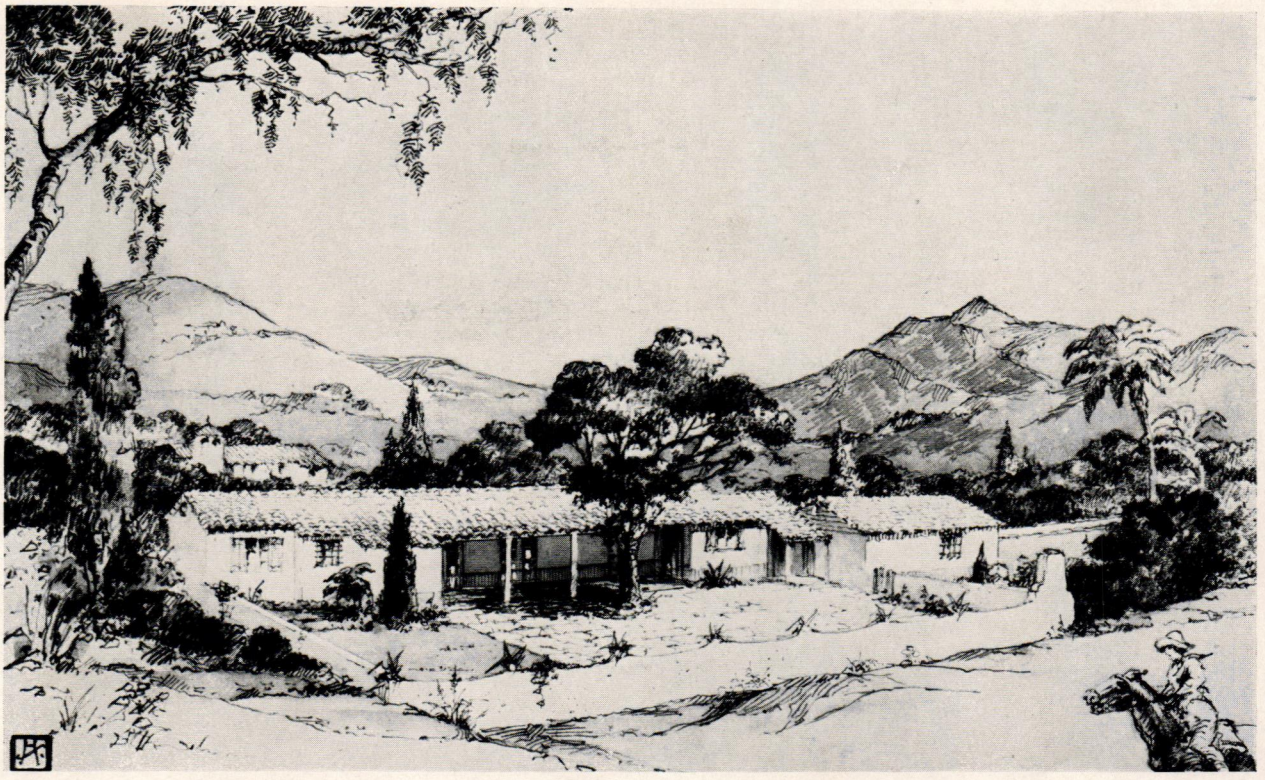
Clarence Tantau's second house in this collection is the "Santa Cruz Host Home" at Pasatiempo. Thomas Church collaborated on the landscaping and the building was erected by Darrow Palmer for the Pasatiempo Estates Co. Priced at $15,000, this house has flush redwood siding, painted, and a tar and white gravel roof surface to reflect the sun's heat. Wood casements and sliding sash, with large panes of glass, allow for plenty of daylight lighting in accord with contemporary demand



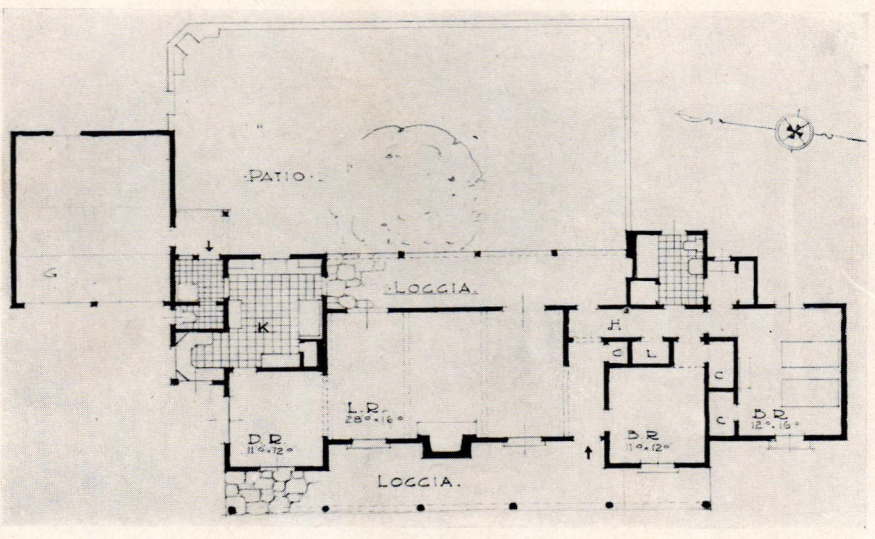


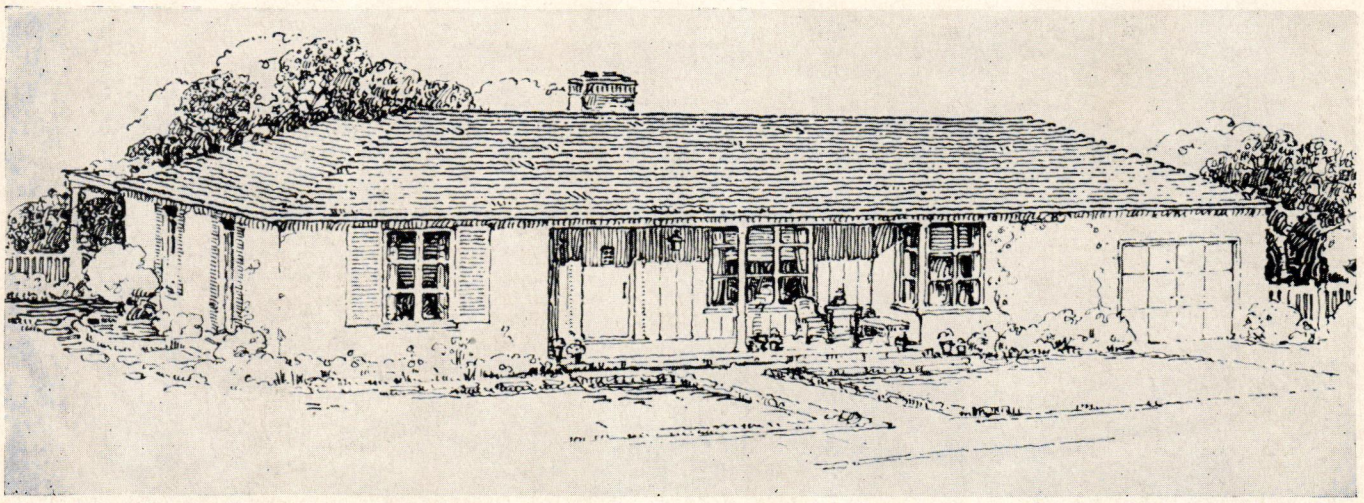


For "New Broadmore," at San Leandro, architect Irwin M. Johnson employed padré stucco walls with steel sash and a cedar shingle roof. Derry Brothers acted as both developers and builders and expect to get about $8000 for house and landscaped lot

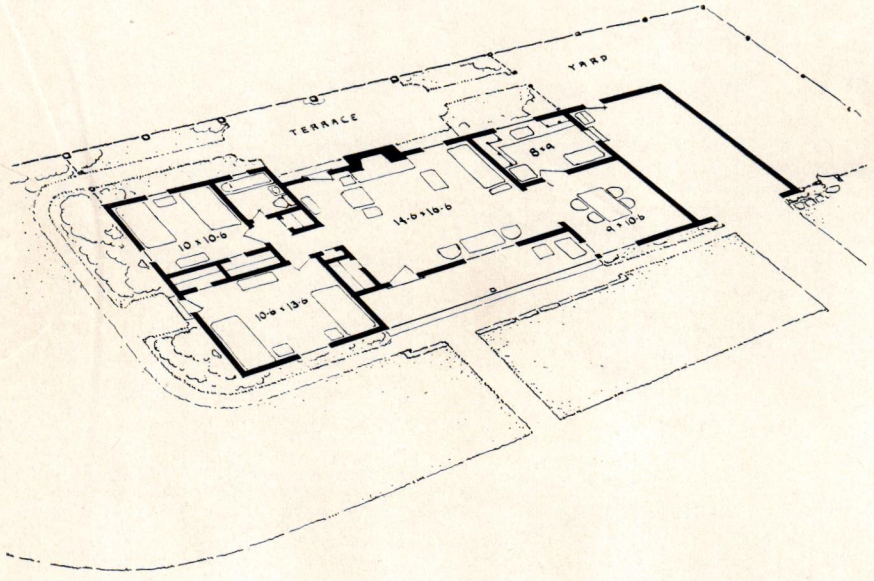


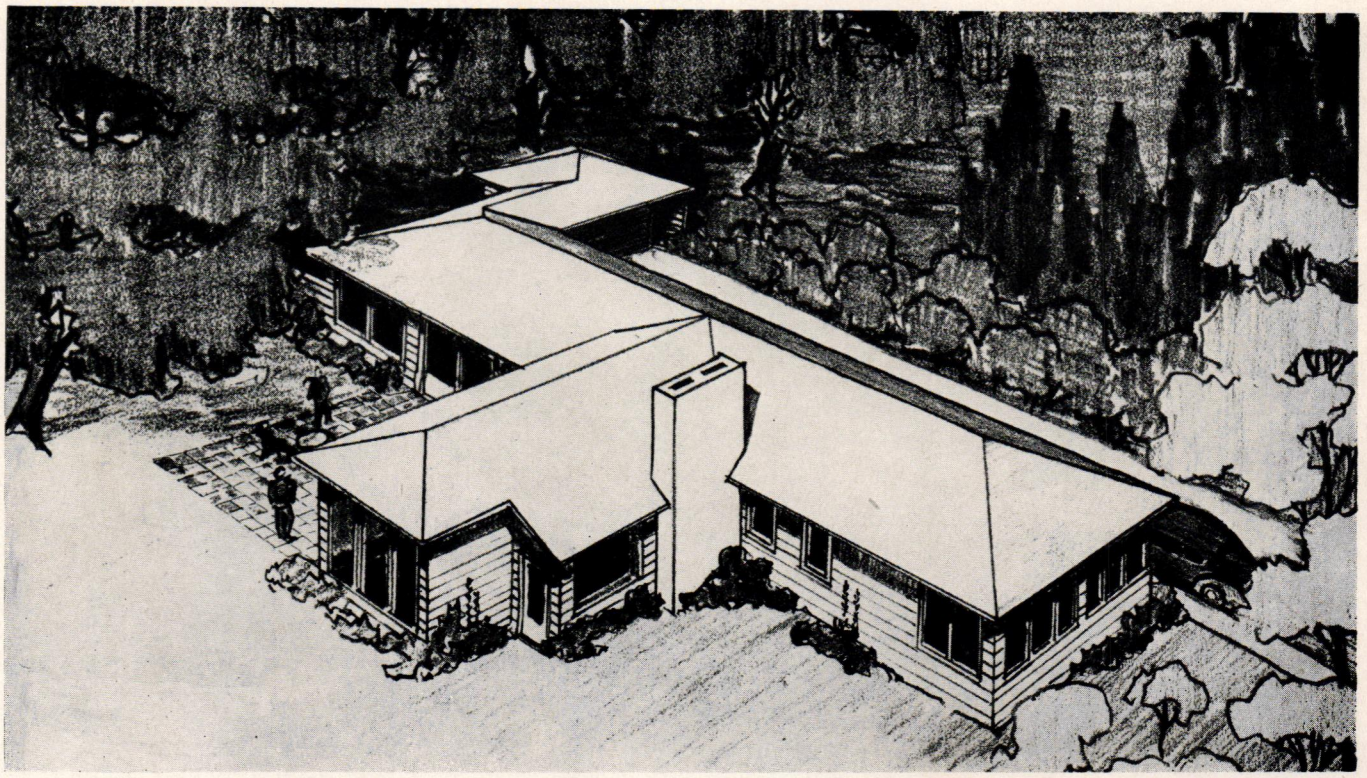
Harold G. Stoner, Architect, designed this house, known as "Sleepy Hollow," for builder David S. Adams to erect at San Anselmo, Marin County, California. Walls of stucco with wood sash and a terra cotta tile roof were chosen as a suitable expression of the informality of the scheme as well as for appropriate economy of construction. The Lang Realty Corporation were the developers who sponsored this house and have set a price of $8500 upon it, including a sizable piece of land



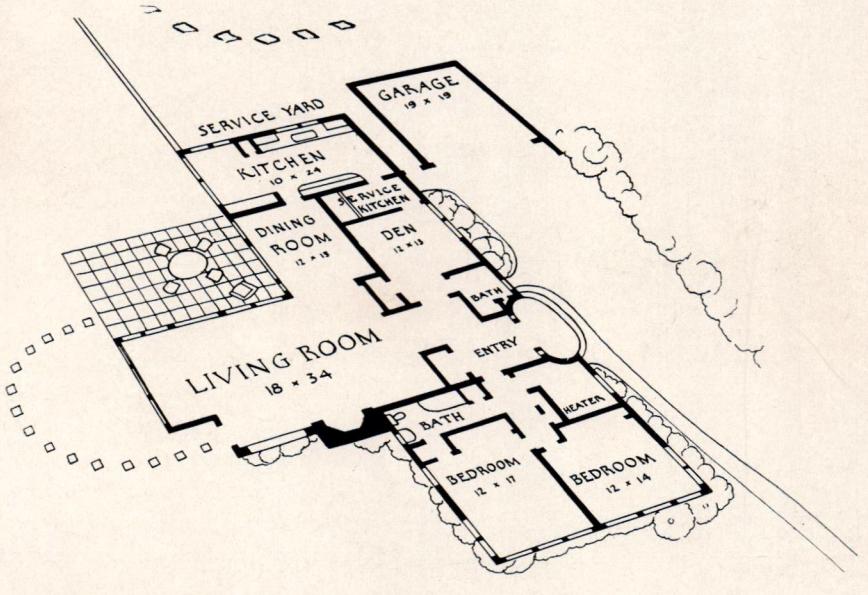


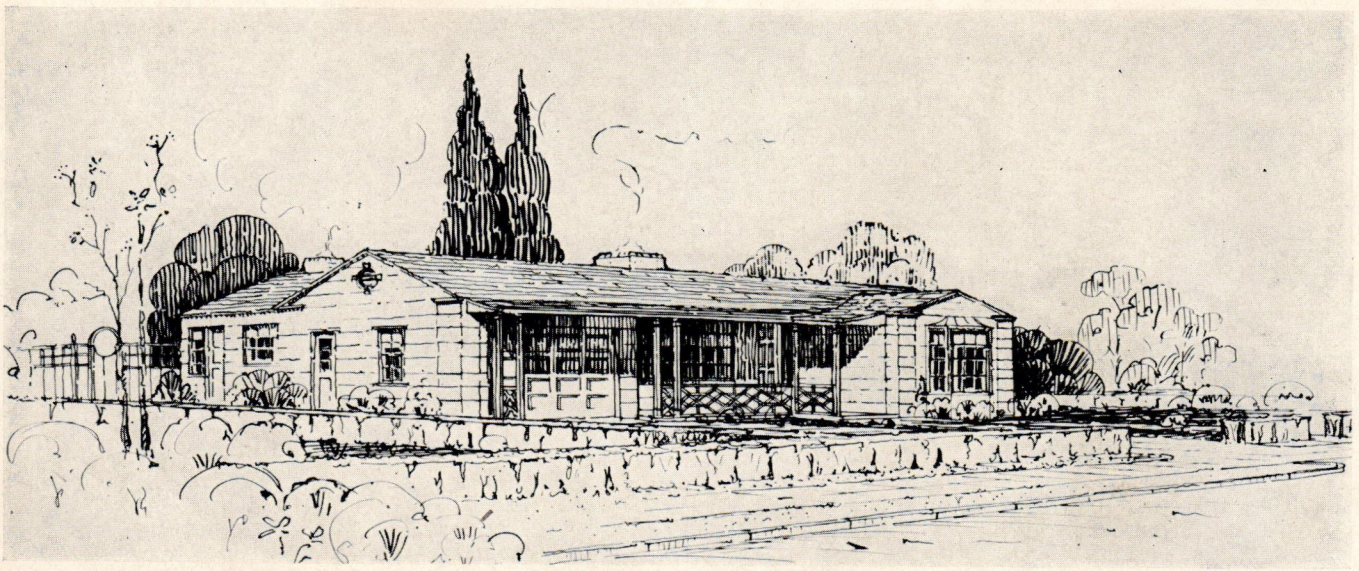
The "Sunnybrae" Model Home, by architect John Knox Ballantine, Jr., was built for American Homes, Inc., by builder George W. Williams at San Mateo. It has white stucco walls with a shingle roof and wood casement windows. The tract upon which it has been erected will eventually contain about 700 houses, designed to be in general architectural conformity with the simple style set here. A concrete subfloor in place of the usual joists serves as a base upon which the oak floor was laid, making it possible to keep the floor just a step above the ground level

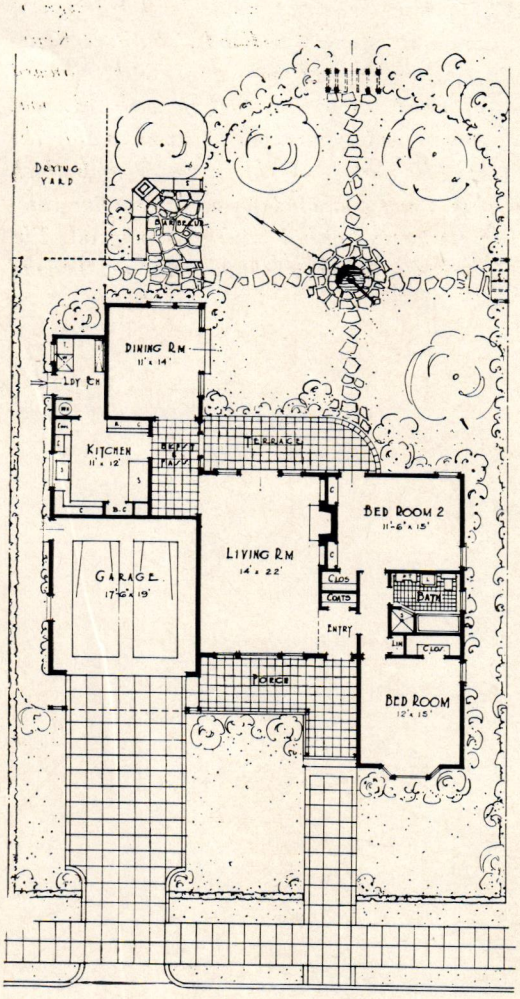




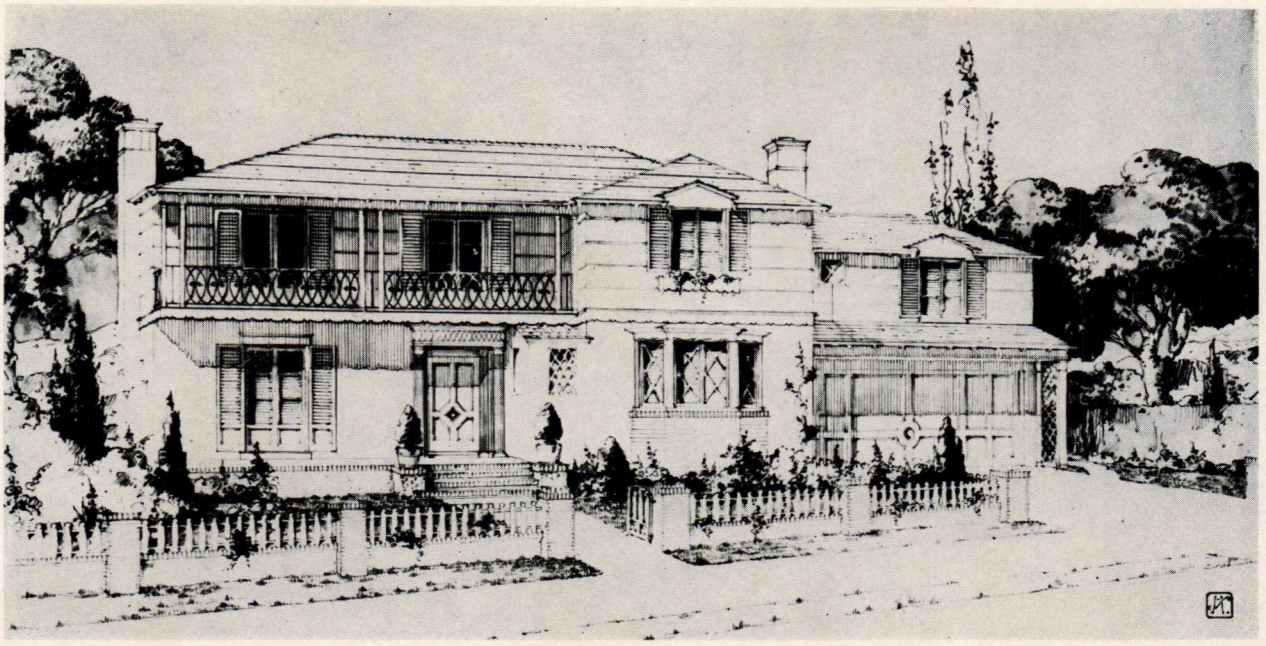
William Wilson Wurster is responsible for the design of the house known as "Kent Woodlands," built at Kentfield by R. F. Johnson and Sons for Frank Howard Allen. It is of wood frame construction with redwood, flush-joint, tongue and groove boards, resawed, for the exterior walls. The roof is of three-quarter inch thick split cedar shakes and the windows are sugar pine casements. The exterior is finished with bleaching oil. The property is marked to sell at $14000, including the land

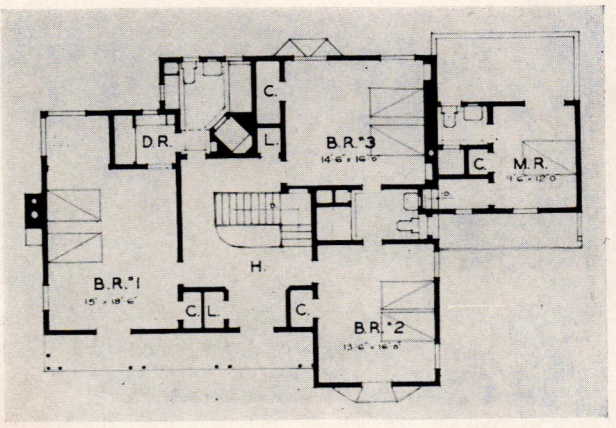


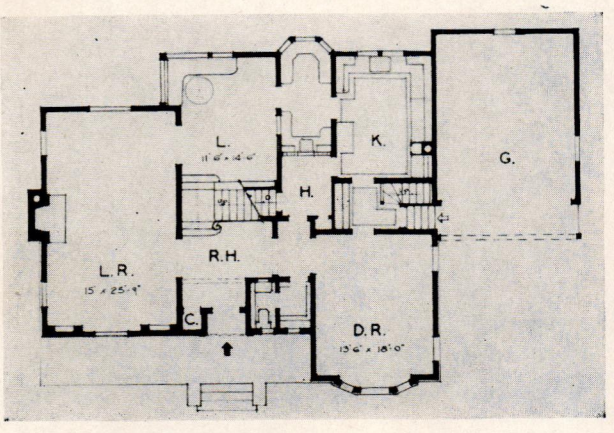




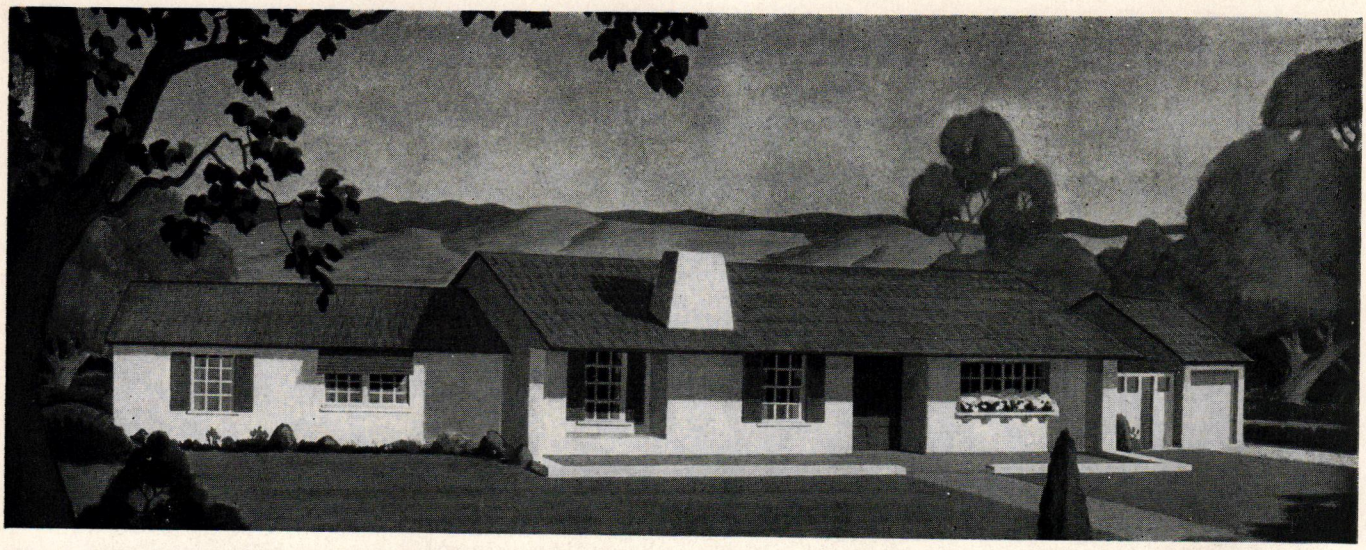
"San Mateo Terrace," a low-cost house designed by Arthur D. Janssen, was built at San Mateo by the San Mateo Investment Company to sell for $6000. Of wood construction, it has redwood rustic siding, cedar shingle roof, and wood sash for all windows

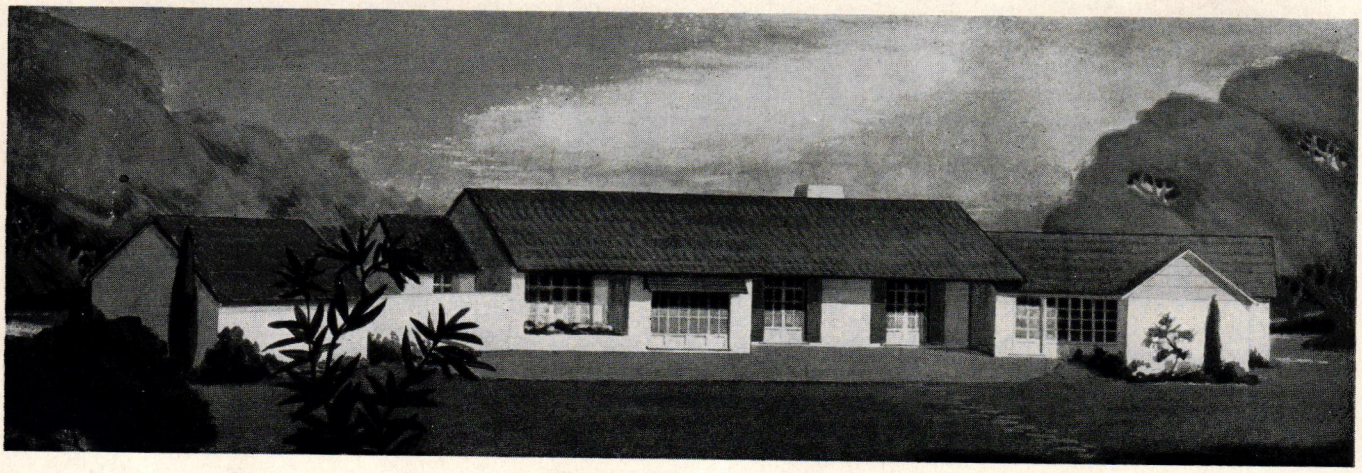




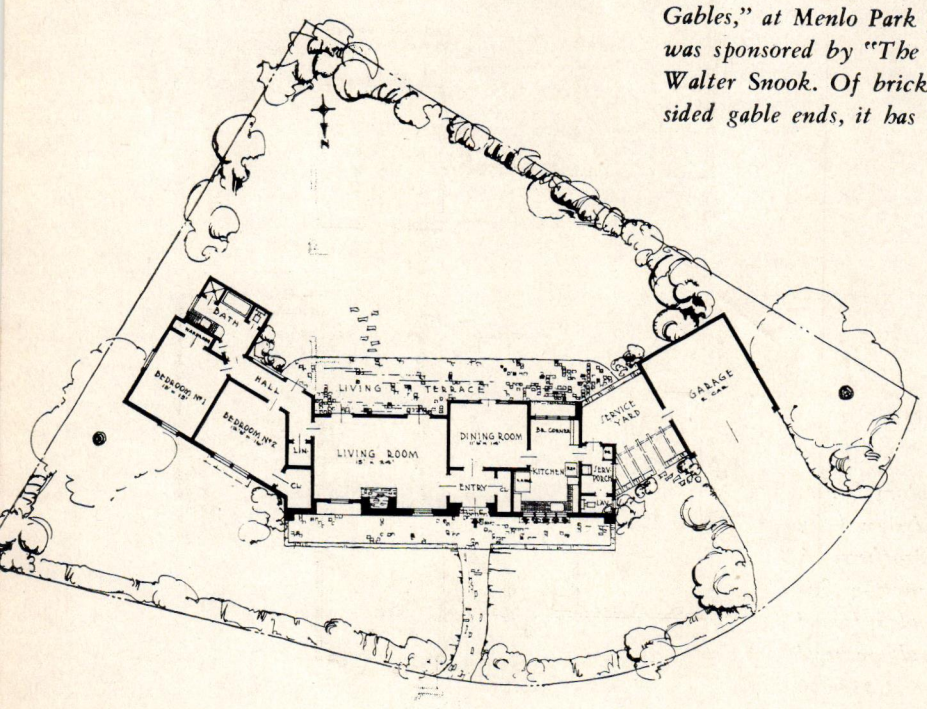


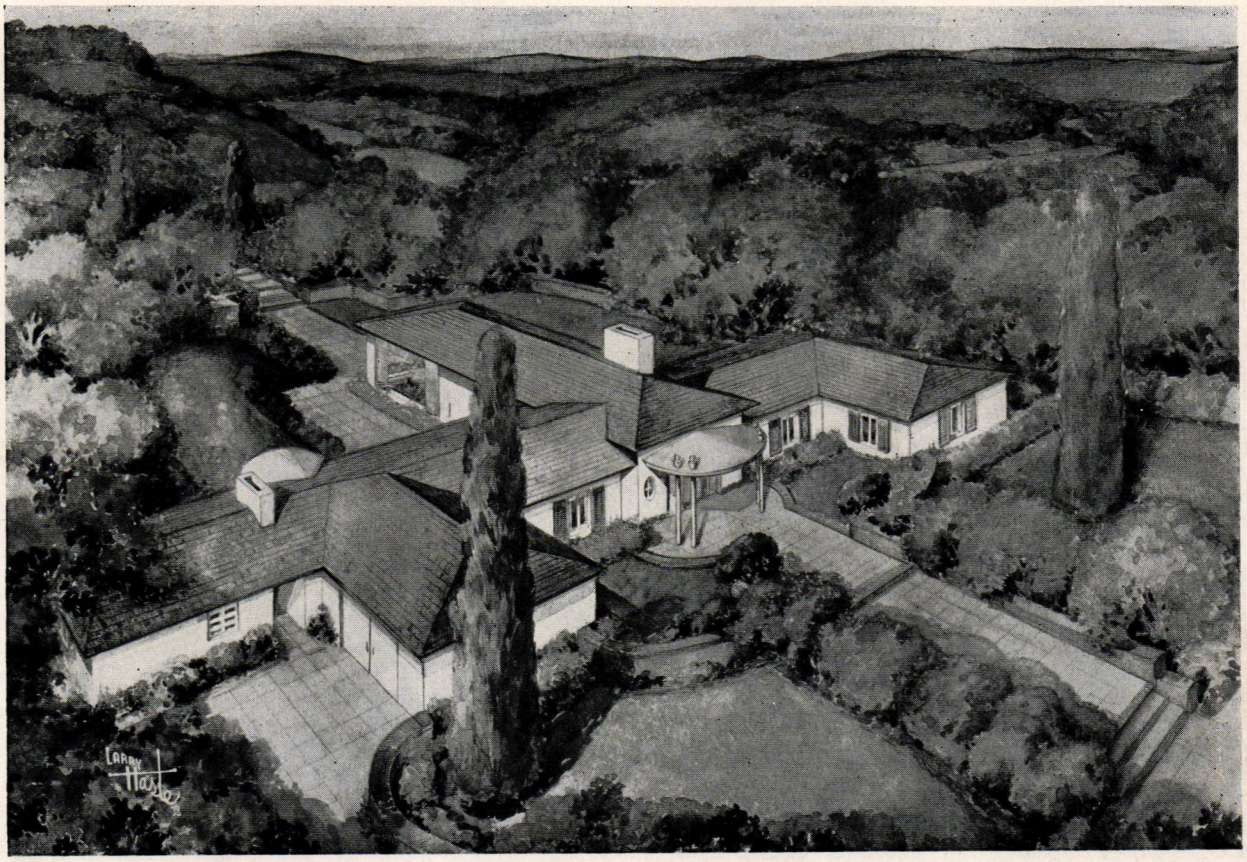
One of the comparatively few two-story houses is the one known as "Lakeside," designed by Harold D. Stoner for Stoneson Brothers. A composite exterior of frame construction finished with stucco, brick veneer, and redwood siding, with wood casements and mineral shingle roof. The approximate price is $18000



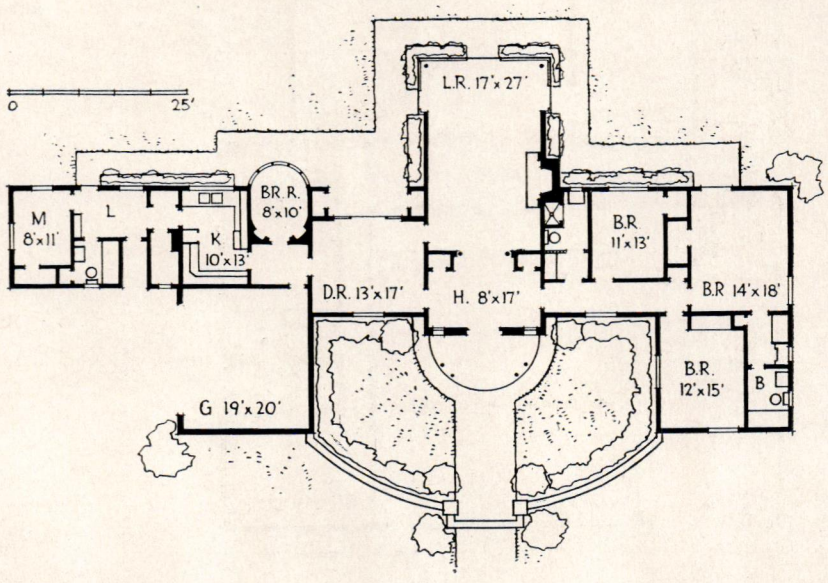


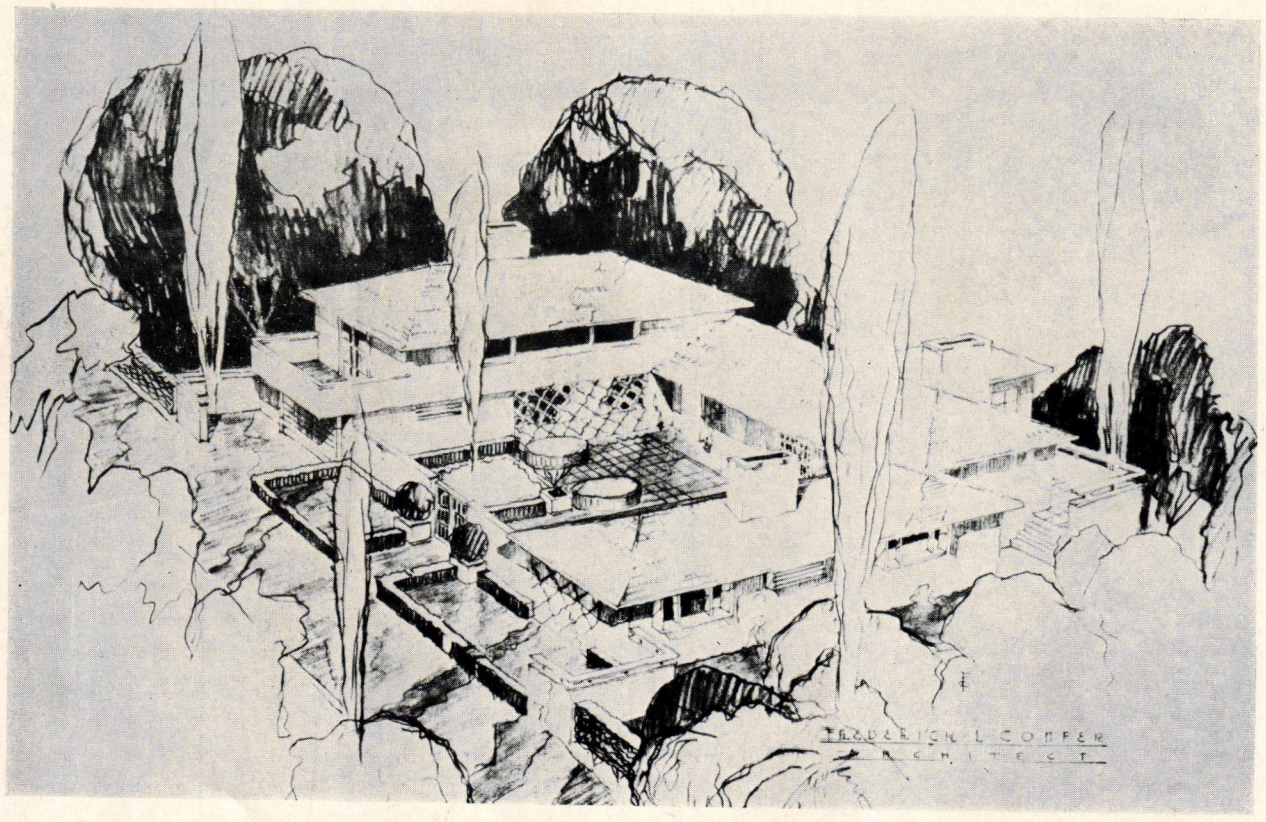
Allen C. Collins, Architect, did this house, "Felton Gables," at Menlo Park for developer Jerome Draper. It was sponsored by "The American Home" and built by Walter Snook. Of brick veneer and stucco with rustic sided gable ends, it has shingle tile roof and wood sash



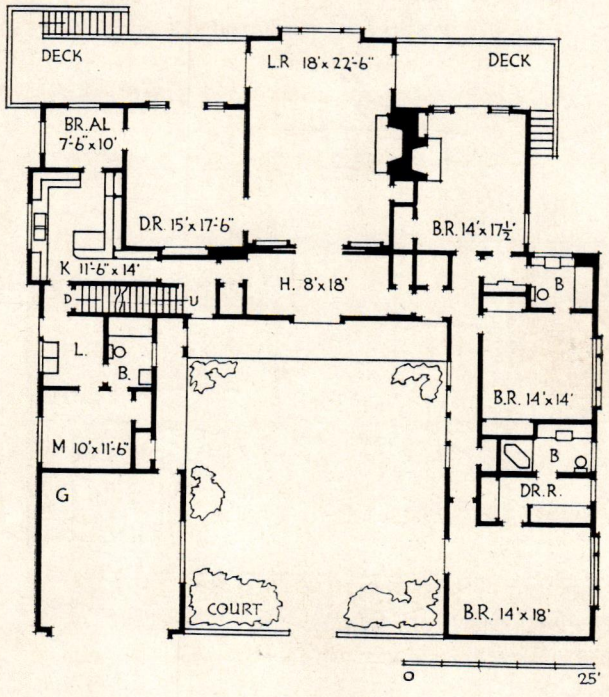


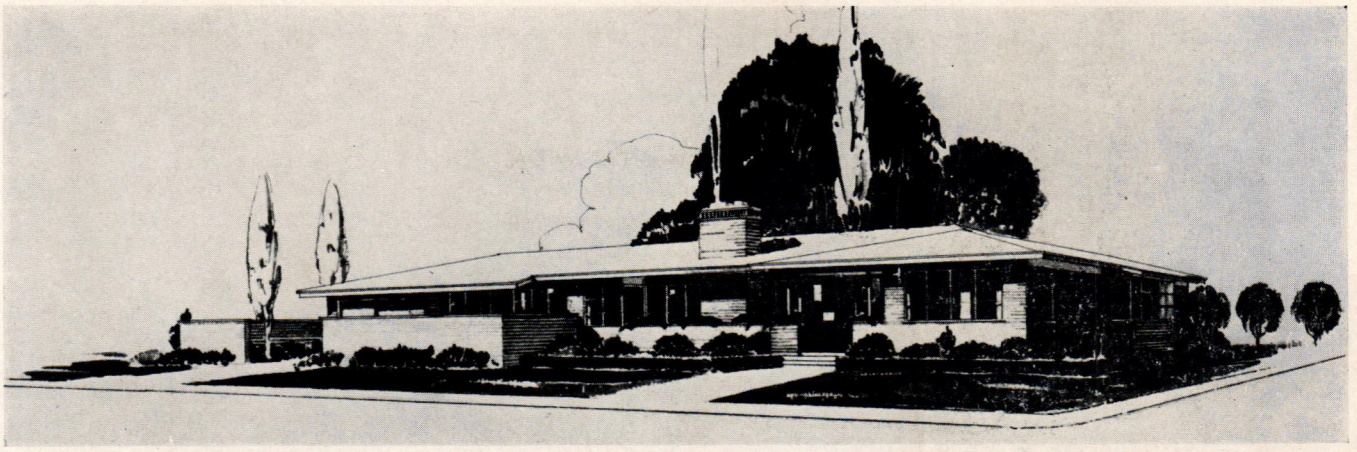
"Moraga Woodlands," near Orinda, is another of the houses sponsored by "The American Home." John B. Anthony was the architect and the developer was M. Jordan (not to be confused, of course, with the famous M. Jourdain). Brick veneer, shingle tile, and steel sash combine in a substantial exterior for a $15000 price

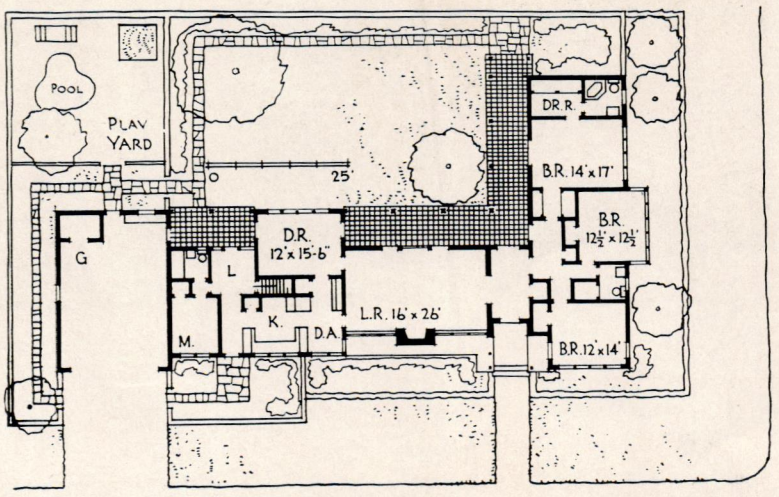




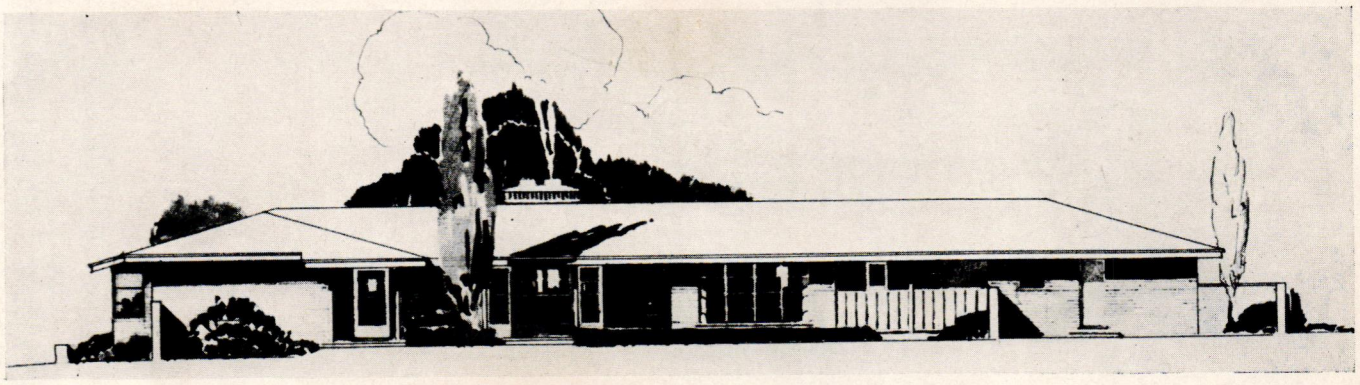
Frederick L. Confer's design for the house called "Park Hills," built by Herbert Atkinson for the Mason McDuffie Company at Berkeley, was done on a generous scale to be sold at $20,000. Stucco walls, Oregon pine sash, and interlocking shingle tile roof with redwood gutters and copper leaders are all appropriate to the climate. Outdoor and indoor living are well provided for

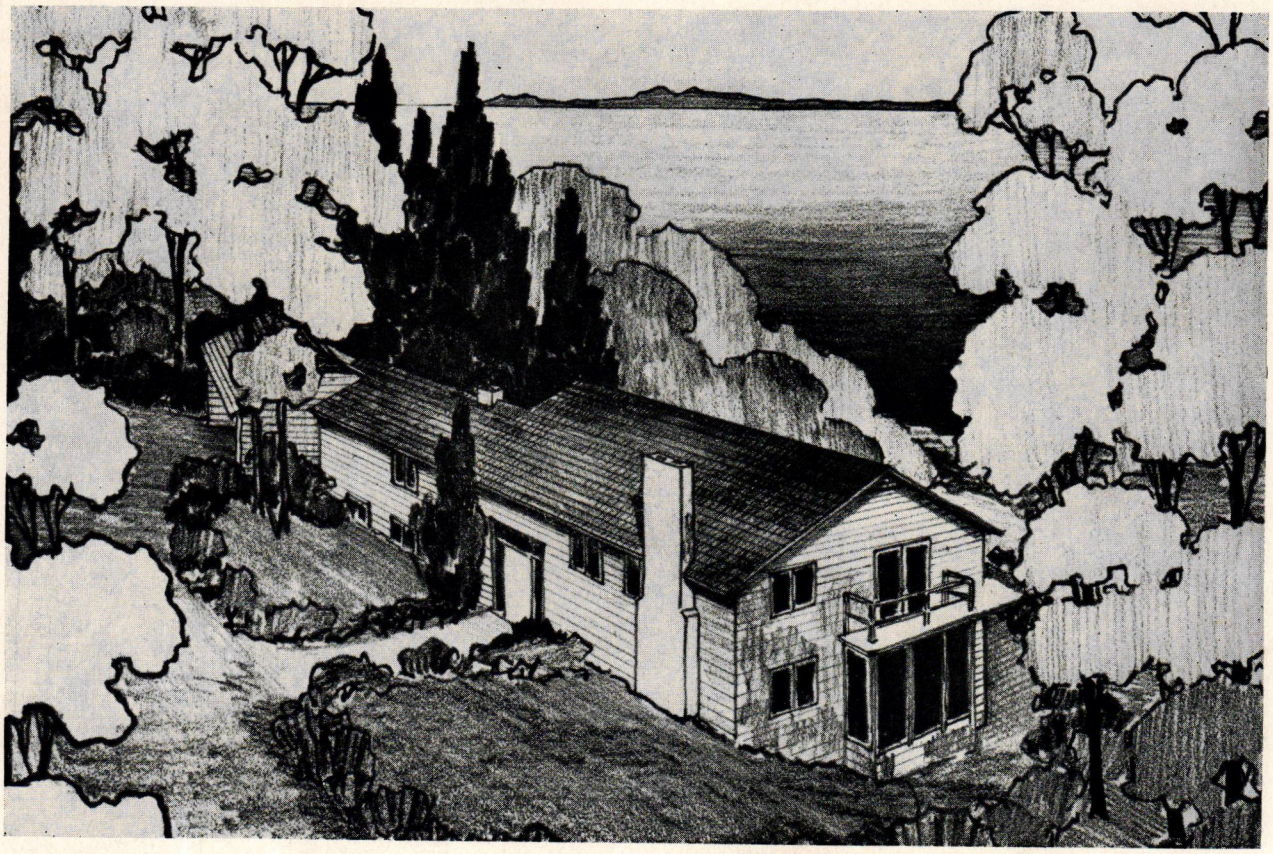




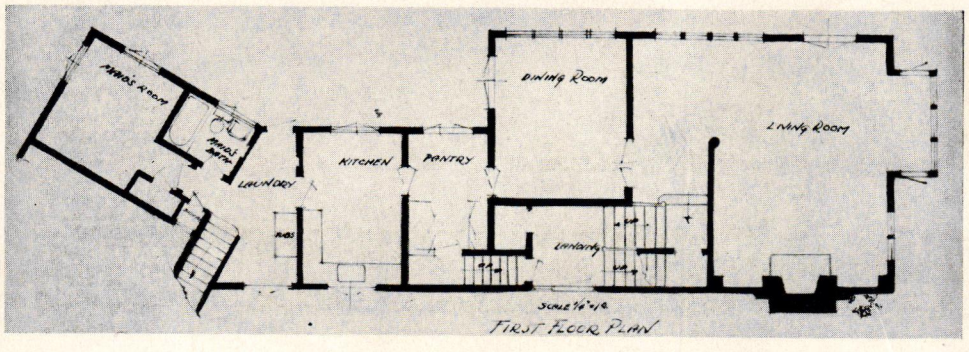


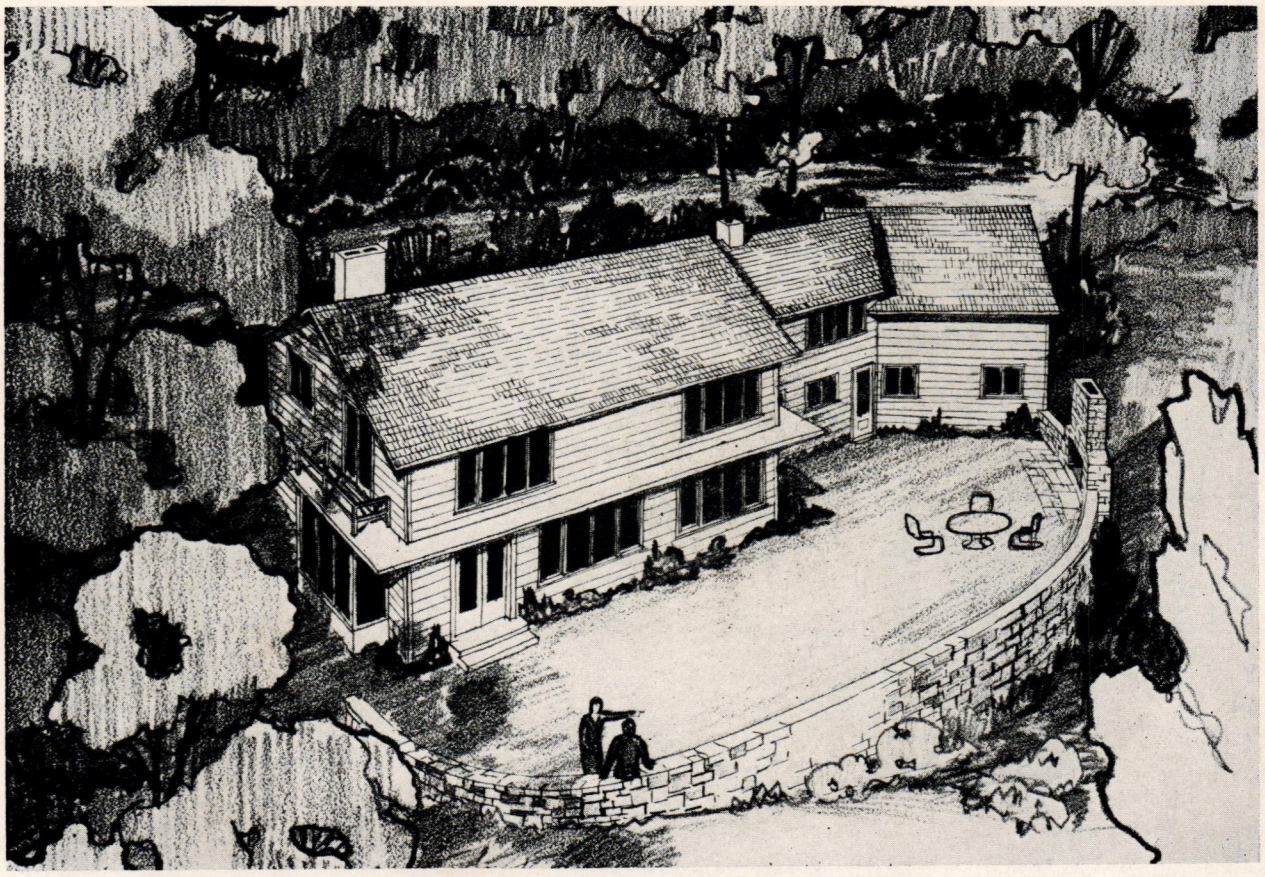
In the so-called "modernized craftsman" style, with a typically California plan, is "Leland Manor" at Palo Alto, designed by Birge M. Clark and David B. Clark for developers Hare, Brewer & Kelley and built by Aro & Okerman. Dark red brick walls and a green tile roof combine with the planting to make the whole exceptionally colorful. The wide eaves (from two to two-and-a-half feet) contribute to the play of light and shadow. Note the glass-sided living room and the large window area throughout to take advantage of mountain views



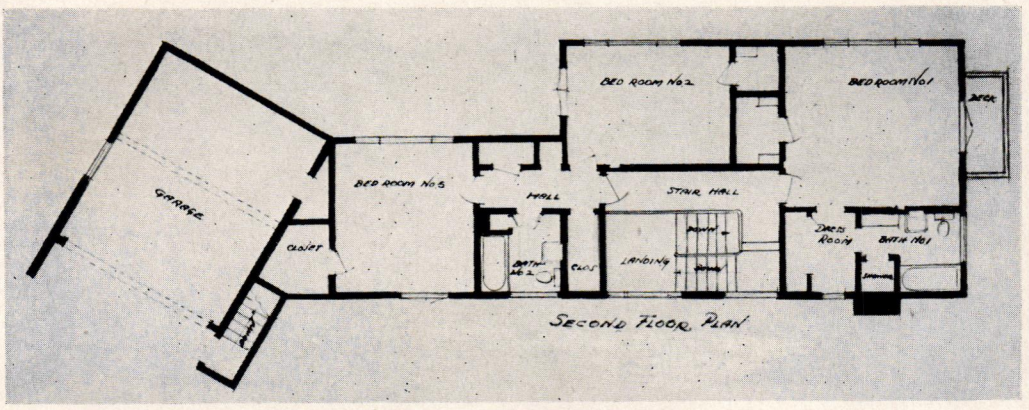


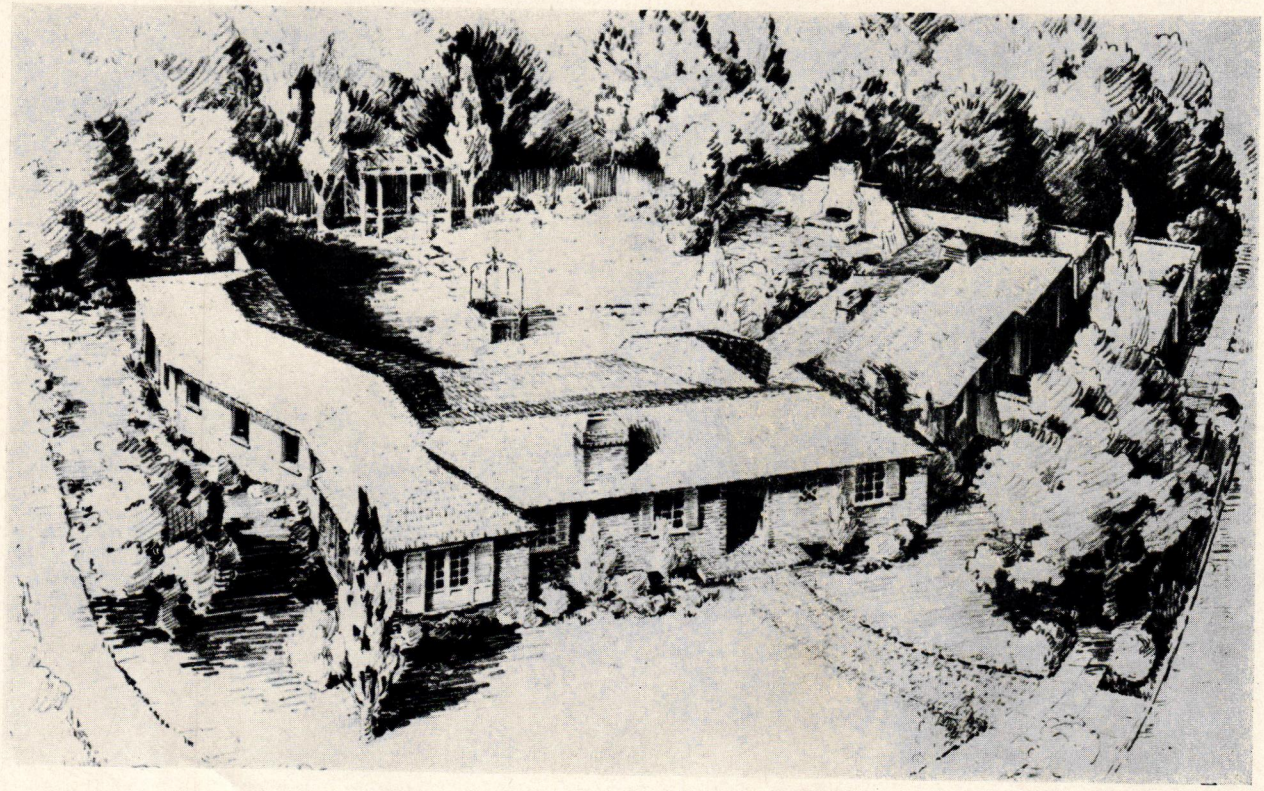
William Wilson Wurster is again represented in the Exposition Model Homes Tour with a somewhat larger house at Belvedere, known as "Belvedere Island" to the developers—the land company of the same name. As is frequently the case in Wurster's houses, he worked in close collaboration with Thomas Church, the Landscape Architect. The living terrace side is shown opposite



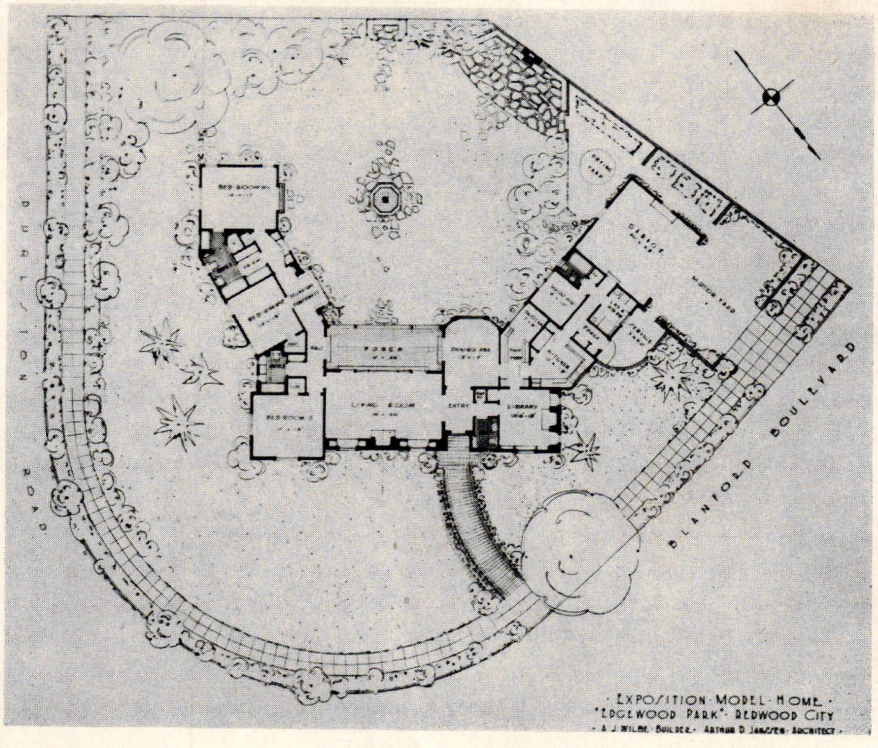


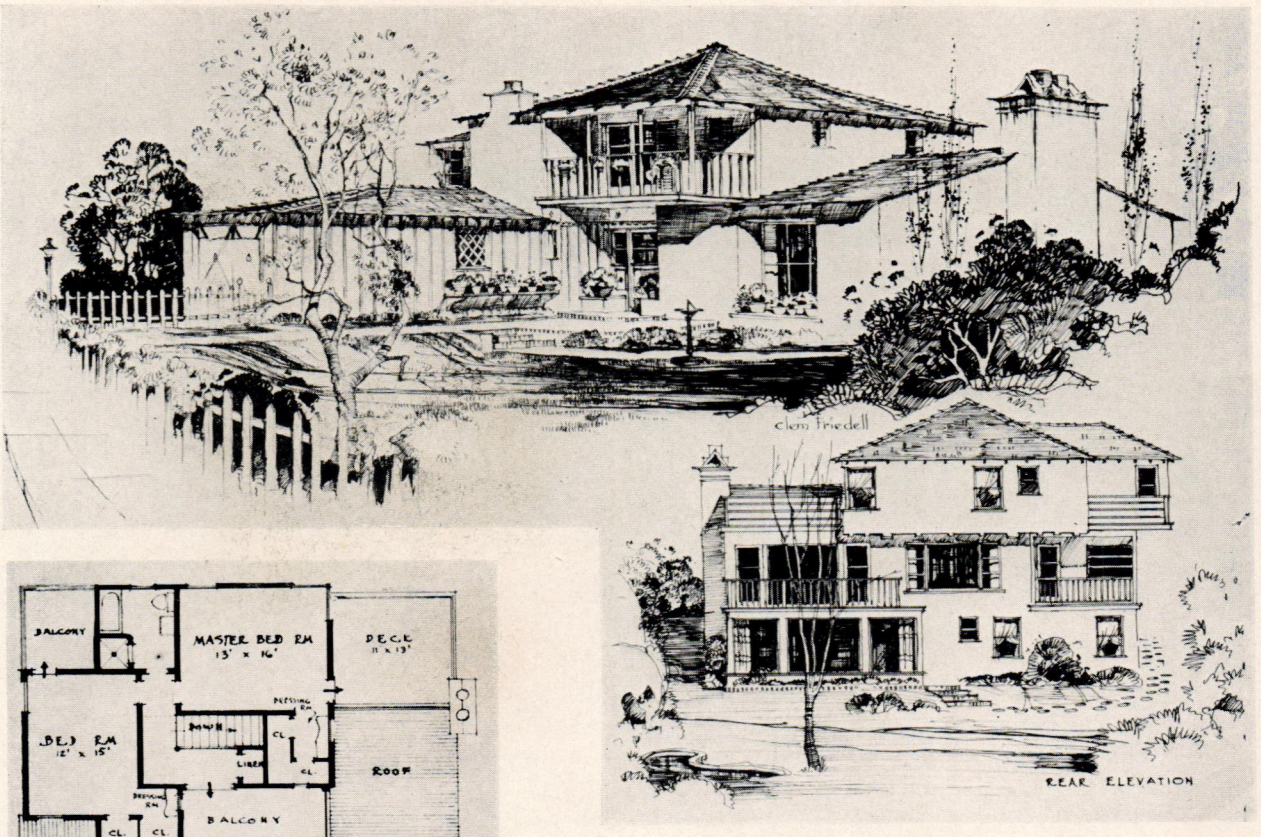
Wurster used redwood, rabbetted bevel resawed siding over wood frame for his exterior on this house, with an interlocking shingle tile roof. The walls were painted. The entrance halfway between the two floor levels is an ingenious way to solve the site problem. Large lights of double strength glass, set in sugar pine casements give unobstructed views, which we judge to be worth while

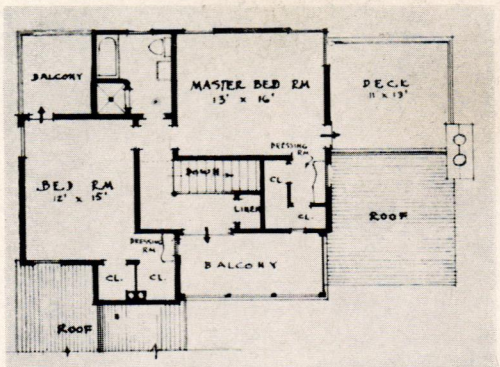




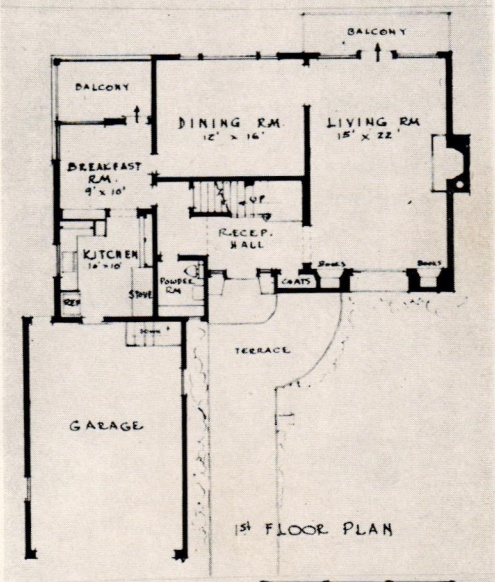
Architect Arthur D. Janssen is also represented for the second time in this group of houses by "Edgewood Park," at Redwood City. Its rambling walls are treated variously with brick veneer, stucco, wood siding, and vertical boarding. The roof is of cedar shakes and the window sash of wood. The Redwood City Chamber of Commerce and Real Estate Board proudly sponsor this house, priced at $12000 with the corner lot included



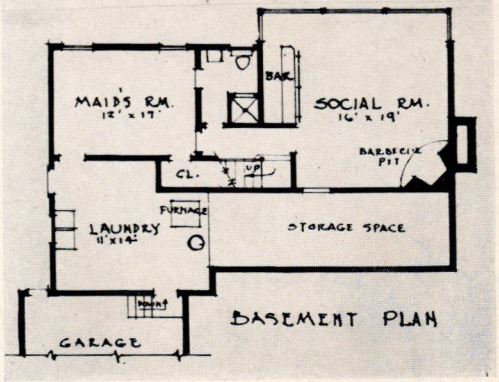




2nd FLOOR PLAN

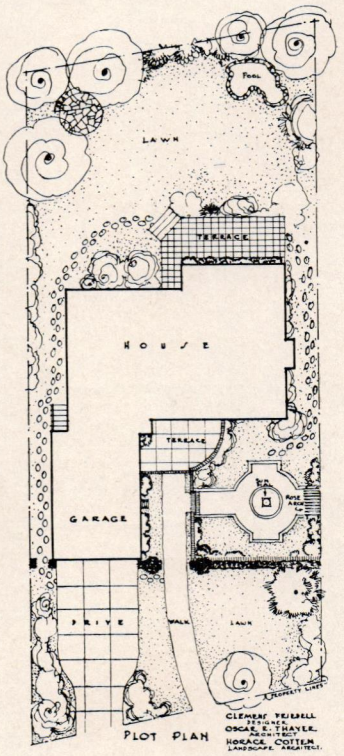


1st FLOOR PLAN

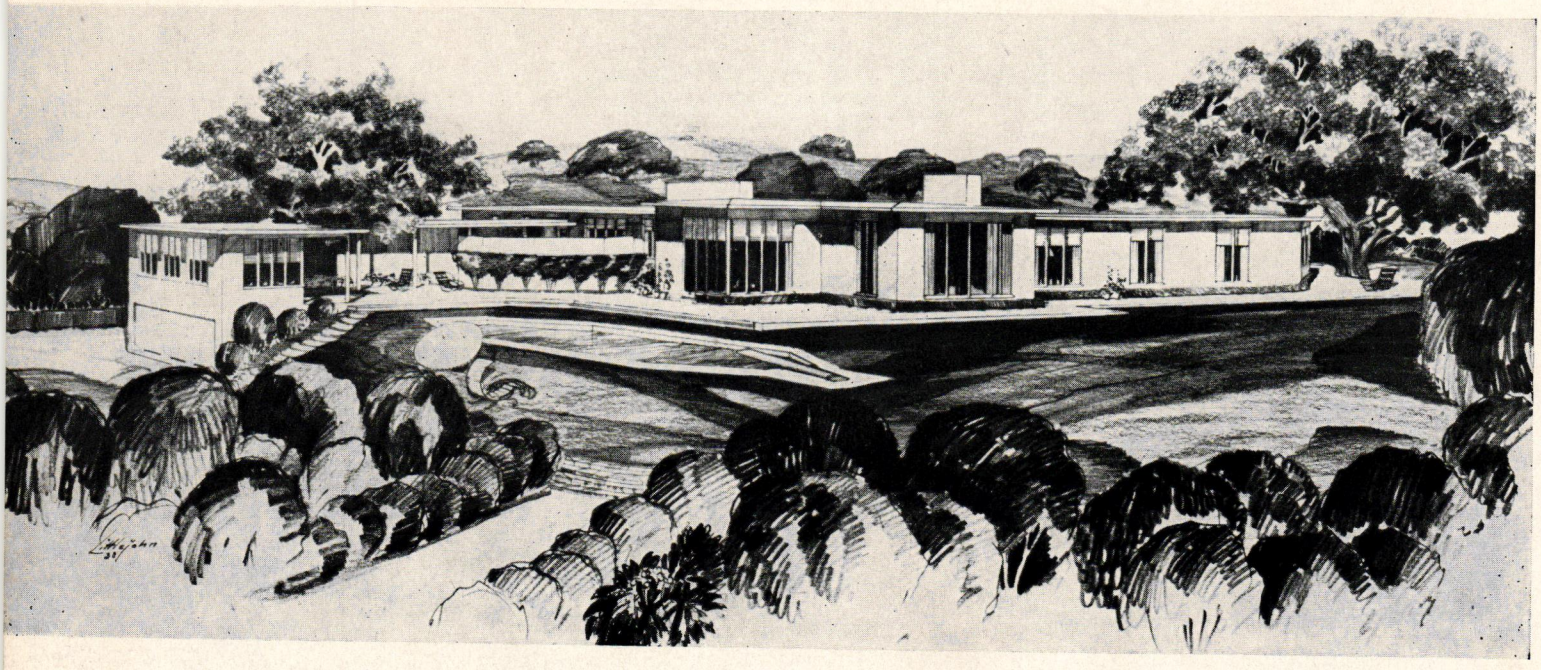


BASEMENT PLAN

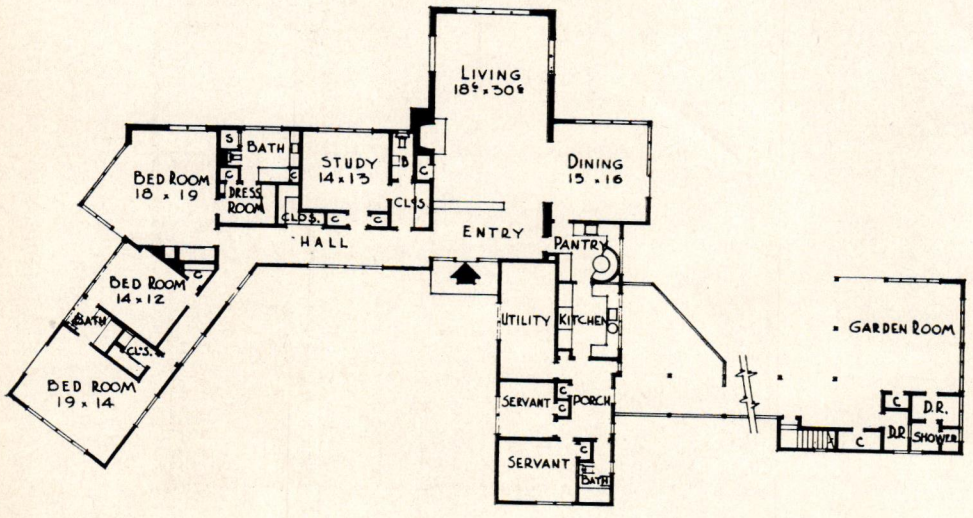
Here is a house, known as "Millbrae Highland," by Oscar R. Thayer, Architect and Clemens Friedell, Designer. Horace Cotten was the Landscape Architect. The exterior is mostly finished with cement plaster but there are areas of board and batten. Both double-hung and casement wood sash are used and the roof is of heavy butt, hand split shingles. Built by Niels Schultz for Millbrae Highlands Co.

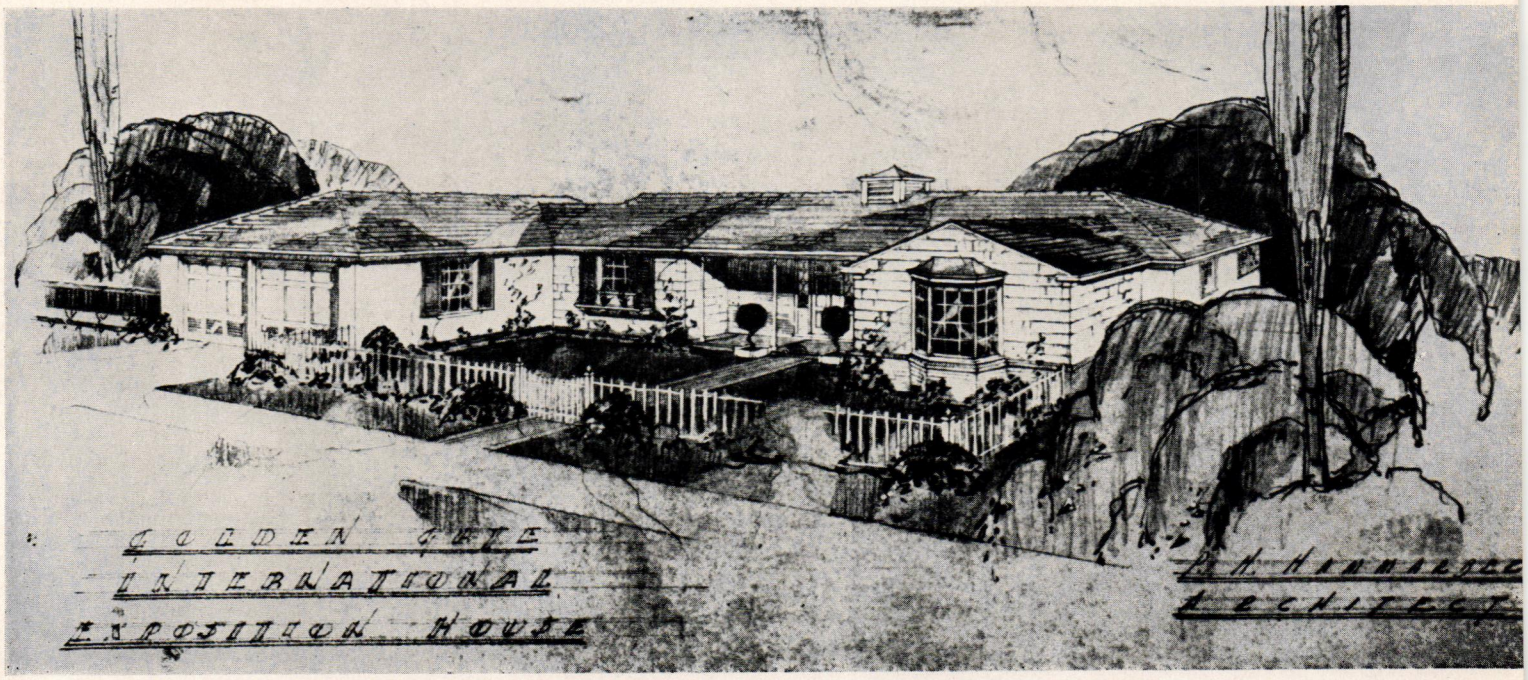


PLOT PLAN

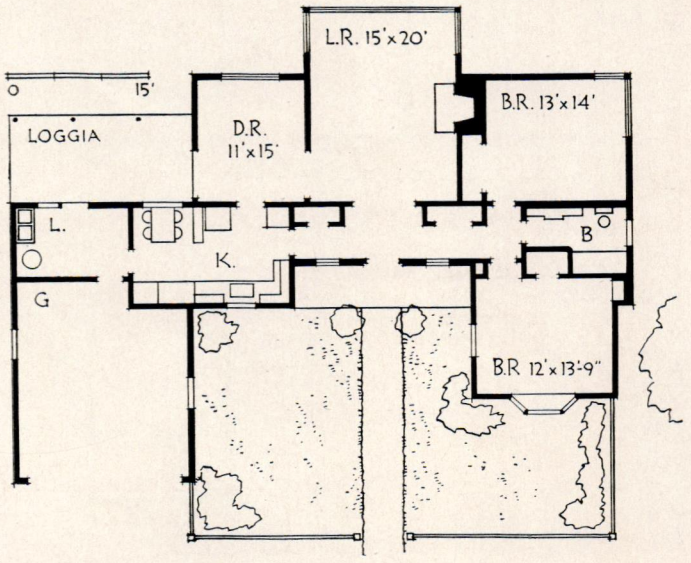


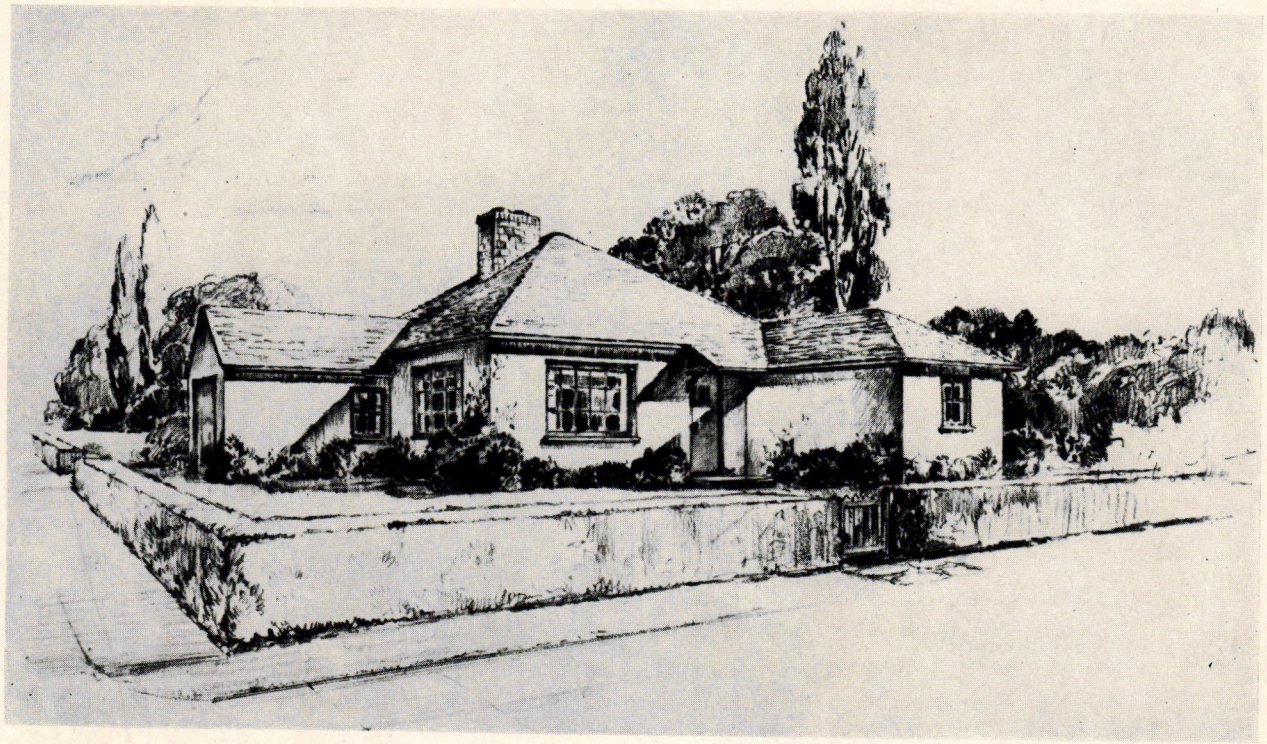
The "Good Housekeeping" house, "Woodside Hills" at Menlo Park, gave architect Gardner Dailey an opportunity to do a thoroughly contemporary dwelling with fine relationship between indoors and out. Painted redwood siding, large glass areas, tar and felt composition flat roof finished with a special metallic coating form the exterior. The most modern equipment is used, including a small dial private branch exchange telephone system with a capacity of as many as fifteen instruments for intramural and extramural service. The perspective, taken from the garden side, shows the swimming pool which is equipped with all necessary devices to keep it clear, clean, and sanitary



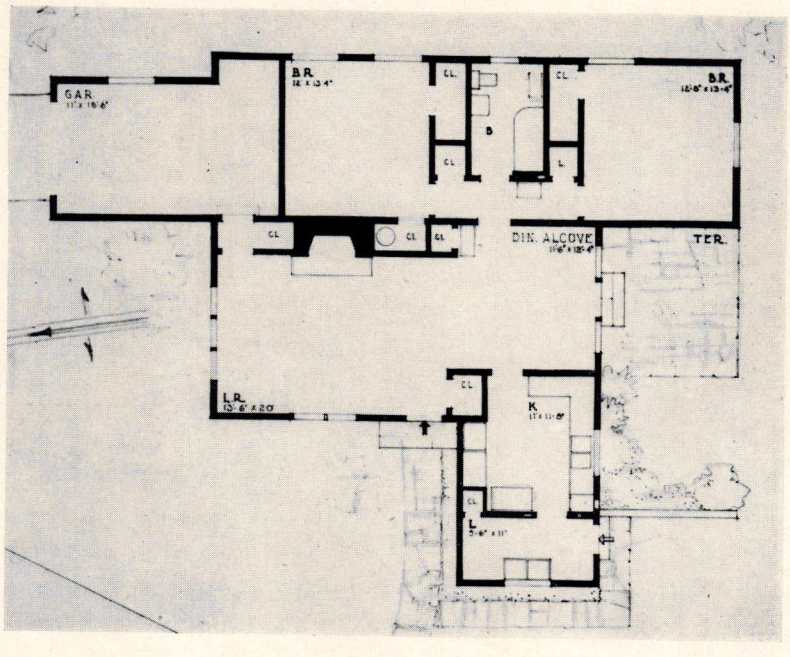


"Cragmont," designed by P. H. Hammarberg and built by J. M. Walker for the Berkeley Real Estate Board and the Berkeley Chamber of Commerce, has walls of stucco, brick veneer, and shakes. Both steel and wood sash are included and the roof covering is split shakes. The house was designed to be sold for a price of $10,000 approximately





The "Irish Cottage," at Brookside Meadow, San Anselmo, was by architect Carl F. Grommé and was sponsored by "The American Home" and the Leach Realty Company. It has stucco walls with wood sash and a roof of redwood Monterey shakes. The available sketch fails to correspond in some minor details with the plan but we thought the house worth including as an example of relatively low-cost construction. ($6000)



CALIFORNIA FAIR HOUSES

BY TALBOT F. HAMLIN

THE San Francisco World's Fair has no Tomorrow Town, but in a sense California has gone New York one better by extending its Fair to include a piece of some twenty-five different speculative real estate developments around San Francisco, in each of which a special house has been designed, built, and furnished, and a tour can be made which takes in all of them. A number of the best residential architects of San Francisco have designed these houses, and they form a group which gives a most interesting opportunity to judge of house ideas in the West and to compare them with those current around New York.

The first impression one gets of the whole group is that of freedom in both plan and exterior form. Of the twenty-five houses shown, only nine can be called definitely archæological in their design approach. Any similar group of houses in Eastern suburbs would undoubtedly show a majority which were "Regency" or "Colonial" or "English"—I use the quotation marks advisedly—and to one who is looking for progress in house design, and especially in speculative house design, this small proportion of stylistic examples tends to prejudice him tremendously in favor of the whole enterprise. There is a real æsthetic lift in these houses, a sense of pleasant forms, agreeable both to live in and to look at.

On the other hand, of the group only three can definitely be called "Modern" in the stylistic sense. This leaves thirteen which seem to be merely houses first and foremost, livable, simple, designed for their needs and without any fore-ordained style choice. Now of course, to the Westerner, many of these houses, which to the Easterner appear freely designed, will seem merely traditional; that is, many of them fall within the category of long, low houses with low-pitched roofs which are based on the tradition of the old simple ranch house. To that extent, the Easterner is likely to be deceived and to find in this group more of creative originality than is perhaps warranted. Yet the very continuance of this tradition, and the complete freedom with which it is interpreted today, is itself significant. It seems to be generally those simple forms which were originally dictated by the climate and the freedom of space which have persisted; little effort seems to have been made at that kind of archæological copying of details, or of their slight modification, which forms such a large part of the dressing of Eastern suburban houses. If the old California ranch tradition of free, rambling planes and of the economical use of California material is still applicable today, it is because of its basic ideals and its controlling simplicity, rather than through any antiquarian love of past forms.

The second great impression which anyone from the crowded East is bound to receive is the lavishness of the space arrangements. Mere square foot area is used with a prodigal freedom even in the smaller houses; all of them seem to be designed for lots two or three times the size of those to which the New York suburban dweller is accustomed. It is of course this basic lavishness in land usage which permits the almost universal use of the one-story bungalow type. Of all of these houses, although several make some use of a second level, especially on sloping sites, only three are full two-story houses. The bungalow certainly has many advantages. It allows length of line for even small houses. It saves the space occupied by stairs. It allows the formation of interesting courts and patios. And especially, it makes unnecessary that almost universal Eastern struggle to prevent a small two-story house from looking over-high and "perky." But it has its disadvantages also. Frequently these bungalows cover almost the entire lot on which they are built, and many of their windows perforce look out upon their neighbors' with all too little space between. A rambling house on a small lot tends to break it up, so as to make any efficient use of the site for garden purposes difficult if not impossible. Thus, for the house owner who is a gardener by nature, the California type is manifestly unsuited; and, no matter how great an effort is made to give lovely effects by the intensive develop-

ment of the patio or the front garden, the general impression is often confused and cramped. Where the lots are large enough this disadvantage of the bungalow disappears, but in any suburban community where the land is intensively used the close-ranged bungalows can give just as crowded an appearance and as total a lack of privacy as can be found in our own less expensive suburbs.

The sense of space appears again in the room sizes. Thus, even in the less expensive of these houses, in the $6,000 price range, one finds living rooms 14′ x 22′, a dining room 11′ x 14′, and bedrooms 12′ x 15′; and in the larger and more expensive examples the rooms are even bigger. This, too, is an enormous aid to the architect; it enables him to work with fundamental unit dimensions that are pleasant and long.

The problem of the bungalow plan is often simply the problem of how to diminish corridor length, how to arrange the rooms so that the long travel from end to end can be made simply and beautifully. The larger the bungalow the more difficult this problem becomes, and these plans in this particular respect deserve the most careful study. The general solution seems to be based on an entrance and living room somewhere near the center, the dining room and service on one side, and the bedrooms on the other. It is interesting to see to what extent this idea has been simplified and thought through in a number of these houses. Note, for example, the unusual entry and short corridor in Stoner's *Sleepy Hollow* house, and also the complete simplicity of the single corridor in Hammarberg's *Cragmont* bungalow, as well as the little hall off the vestibule in Clark and Clark's *Leland Manor* house. Among the larger houses, the patio type illustrated in Confer's house seems to get the utmost out of the basic idea; and Janssen's *Edgewood Park* house, though perhaps wasteful in its corridor area, is successful because real meaning as well as æsthetic charm has been given to the corridor by its glazed entrance and projecting bay. Excellent also is the beautiful plan of Wurster's *Kent Woodlands* bungalow, with its little private hall and its L-shaped entry.

The plans of these California houses are significant examples of how the basically 20th-century idea of concentrating window areas into long groups, to allow a similar gain in concentrated wall surface, dominates the best of these plans, whatever their style. In every case a mere glance will show how much more usable, how much easier to furnish, are those rooms with windows grouped and wall surface concentrated than are rooms of the older type with many separate narrow windows. It is apparent, too, from a glance, that frequently the use of the individual window for stylistic reasons, in some of these houses, has definitely compromised the usability of the inside space.

Another plan characteristic of many of these houses is a living room projecting from the body of the house to gain light on three sides. In general, the effect of such a room is excellent; but this arrangement needs to be handled with special care in order not to have one whole end of the room dark, and it is obvious that too much light in one place is not going to make up for too little in another. It is for this reason that frequently the living room runs through to get light also from windows on the entrance side.

The careful handling of this problem of window and wall space will do more than almost anything else to determine the interior beauty as well as the usefulness of the rooms of a house. It is interesting, for instance, to compare Wurster's *Kent Woodlands* house with some of the more historical houses like the *Lakeside* house of Stoner or the *Oak Grove Manor* house of Leo Sharps, and to see how both in bedrooms and living rooms ample wall surfaces are preserved in the more modern type of planning. Yet this is a question of planning and not of style; and, if there is any criticism to be made of the very beautiful and lavish contemporary house by Gardner Dailey, it is precisely because in certain of the rooms, especially the living room and the largest bedroom, the wall space seems unduly broken up.

Among these houses there are several in which an attempt at the greatest possible economy has been made, through the rigid elimination of waste space. In bungalow planning this is manifestly a difficult matter, but the solutions reached in several of these are excellent. Note particularly Tantau's *Bayshore Terrace* house, with its unusual compactness and the way all of its rooms are placed under one great flat overhanging roof. Perhaps his living room and dining spaces are too cramped; yet the large outdoor living area would do much to offset this difficulty, and the whole, in its freshness, its simplicity, is evidently the result not only of careful study but of brilliant and imaginative conception as well. Ballantine's *Sunnybrae* house has a similar economy, though the total bulk is greater. Maury's *Oak Knolls* house makes an even greater attempt to achieve an economical plan, and adds a third bedroom with little increase in cost. This is one of the most interesting of the small

house plans, remarkable because of the spaciousness of the combined living and dining areas, the pleasant square entry, and the convenient arrangement of the bedrooms. The service entrance to the kitchen is also well arranged for a small house. One only wishes that the exterior had been handled with the same economy of means and simplicity of form.

There are many unusual elements in the plans shown which remove the greater number of these houses from the ordinary run-of-the-mill of suburban building, and if for no other reason than to show these little marks of distinction, which are the result of imagination and not of dollars, the building of these will have been worth while. Thus, in Mitchell's *Belle Haven City* house the addition of a pergola-roofed and partially enclosed "Sleep Court," so-called, between the house and the garage, so arranged as to have almost perfect privacy, is ingenious and should furnish a delightful place for outdoor private living. This house has many features of considerable interest, but it is one of those which suffers most from over-broken wall surfaces and consequent difficulty in furnishing—and this same broken-up quality is unfortunately apparent in the exterior.

Another lovely element found in many of these houses is the semi-enclosed garden court or the patio of various types. The garden arrangement shown in Clark and Clark's *Leland Manor* house, with its L-shaped colonnade, not only has possibilities of great charm but also is so arranged as to gain almost complete privacy for the inhabitants; and Janssen's *Edgewood Park* house achieves almost the same result on its interesting corner lot. In fact, the lot usage in this last house is one of the most imaginative and brilliant of any of those shown.

There is, however, one great difficulty with the patio plan, especially on small lots—the fact that, almost necessarily, it is the corridors along the wings, and not the rooms, which receive the benefit of this private enclosed garden. This can be seen in both McSweeney's *Baywood Knolls* bungalow and in the larger house at *Park Hills* by Confer. In both there is a patio with the possibility of great attractiveness; yet, in both, most of the windows looking out on this are windows in corridors only, and the real windows of the bedrooms look out to the outside—that is, if the lot is narrow, directly into the next door neighbors'.

Hudspeth's *Montclair Highlands* building seems unnecessarily diffuse. Its chief garden forms the entrance to the house and is largely open to the street on two sides, whereas the main views of the living areas are off in quite the other direction. In other respects this is one of the more interesting designs, especially in its use of changing levels, the pleasant handling of its living and dining spaces, and the attractive lines of its broad, overhanging hipped roofs.

Another most interesting variation, due to extremely difficult site conditions, is shown in Wurster's *Belvedere Island* house, built on a steep hillside. The entrance is contrived on a half-story landing; from it one descends half a floor to the living room, dining room, and service, or goes up half a floor to the three bedrooms. The garage is on this higher level. In this way, superb sea views are gained for every room in the house, and yet the building is basically economical in its space usage. This house is an excellent example of how extremely difficult grade conditions on a building site may frequently give rise to greater beauty than a flat site would permit.

One wonders how fully these California architects realize the extraordinary opportunity the freedom of the California tradition allows them. If real estate developers around San Francisco build houses like the best of those shown here, it would almost seem as though the architects of California had no limitation in design save that of their own imaginative power. It may be instructive to examine some of these designs with this point in mind, not only to see what the present California achievement is and what the rest of the country may learn from it, but also perhaps to discover in what way the future of suburban house development may go. Again and again ideas in architecture developed in the West have swept over the rest of the country —the bungalow itself, for instance, some thirty years ago; later it was the flood of pseudo-Spanish baroque; later still it was the efficiency type of apartment with in-a-door beds and dressing closets, a type which I believe originated on the Pacific Coast and has since become standard all over the country. So perhaps it may be with free and modern suburban house building, and these San Francisco World's Fair houses may come to have an interest, even for Easterners, which is much more than academic.

We may dismiss the purely historical examples briefly; but, even in those in which historical style of some kind is obvious, there is something to learn of the lessons of simplicity vs. elaboration — of the real, even if archaic, vs. the false. Thus, Stoner's *Sleepy Hollow* house, though one of the most archæological of the so-called "ranch type," has

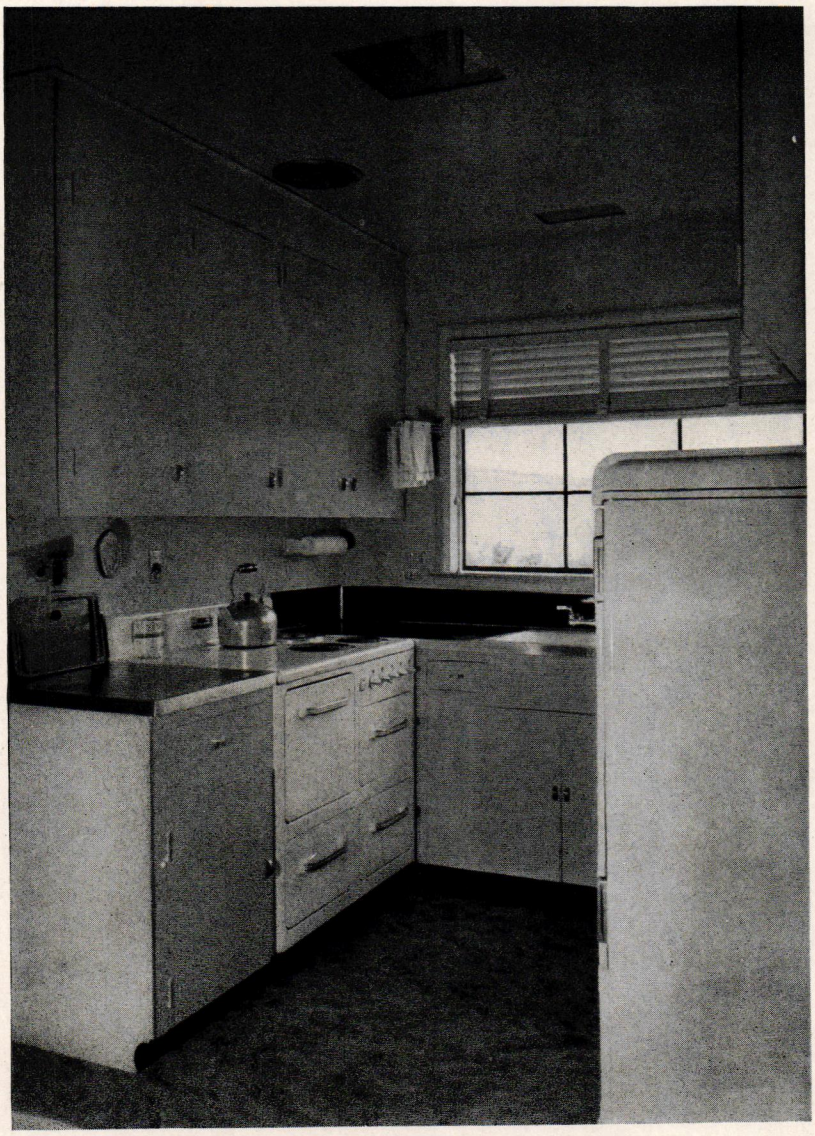
some basic simplicity of planning and some definite sincerity of design which makes it much more than a fashion-plate. For to be a fashion-plate instead of a home is the effect, usually, of those in which things seem to be added on only for their style quality. Frequently some of the simpler buildings, which otherwise might be most attractive, are harmed by the desire of adding little bays or gables here and there for no special reason; and when it comes to the question of balcony iron work stuck below window sills where no balconies exist, and false stone quoins and keyblocks, the violation of taste categories is more obvious but not at heart of a different type. For example, Johnson's simple patio house at *New Broadmore* has many qualities both in plan and treatment which are livable and lovely; why, then, the iron balconies on a first-floor French window opening out onto a private garden? Why the little bays in McDonald's *Happy Valley* bungalow, and the barn treatment of the garage? Why the little mixtures of old and new in Ballantine's *Sunnybrae* house, otherwise a building so completely disarming in its economical, direct simplicity? Some of the best of these buildings are harmed rather than helped by an evident search for superficial interest. Janssen's *Edgewood Park* house, for instance, is full of charming parts, but somehow the *whole* is not quite so good as the sum of its parts; and one feels that a conscientious stripping away of such things as useless blinds and similar elements would have added to and not hurt the beauty of design.

Nevertheless, the main impression made by the best of these houses is one of direct simplicity, straightforward planning, and exterior design pleasing in its modesty and its frank expression of the climate and the local conditions. Even the most modern of the houses, like those of Tantau and Dailey, show the same quality of grateful acceptance of the California environment. However simple, there is in them little of the false uniformity which sometimes characterizes work in the so-called International Style. Quite the contrary, these three houses owe much of their real beauty to their broad overhangs and quiet horizontality, both qualities suggested if not dictated by the location. This is to me particularly encouraging, because it shows that the constructive ideas of contemporary house design have already been accepted and absorbed, in at least this part of the country, to such an extent that no longer is any revolution for revolution's sake necessary. No longer is modern architecture merely a name for an applied style; instead, much of its thinking has been so completely digested that it is less the modernity of these houses which impresses than their success as just plain "house."

We are accordingly able to judge the best of these houses with no further regard for style matters, and to appreciate them as examples of the attractive building of livable shelters for American families. Seen thus, they gain a new value. The simple loveliness of the wall and window surfaces and the inviting horizontal lines of Tantau's smaller house are interesting and distinguished because of their innate beauty and fitness, and not merely because they are modern. Similarly, his larger house, with its pleasant contrast of stone chimney and large window, and its broad overhanging porch, has a quality of humane beauty quite apart from its style; and even its use of corner windows is not stylistic but, rather, natural, because the corner window in these particular places is the best from both inside and out.

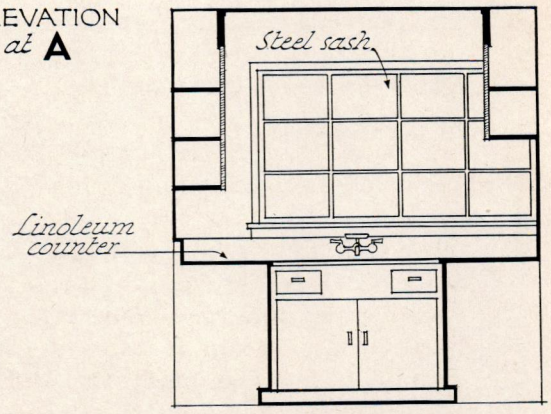
Clark and Clark's *Leland Manor* house has perhaps even more of this natural, styleless beauty, which is none the less modern because of its lack of International Style clichés. The lesson of the earlier Wright houses is obvious in its all-embracing low-pitched roof; however, it is in no sense a copy of Wright ideas—it is, rather, one of the most effective and beautiful houses of the group because it is so plainly and so simply what it sets out to be, an ample house for a modest family of refined taste and great æsthetic sensibility. From this point of view, this building is to me perhaps the outstanding creation of the entire group. If only we might see in this the qualities which the higher-class speculative housing of the future all over America was to possess, then we might be happy indeed; then we might feel that half the battle to bring architecture—and architecture of a free, natural, and modern type—into speculative housing was nearly won.

After all, the foundation of any house architecture must be, first and foremost, the livability of the buildings which it creates. The American family will demand in its house free and open space, but it will also demand the possibility of complete privacy for its members. It will demand a minimum of wasteful, merely connective area. It will, I am confident, also, more and more develop a taste for houses without applied stylisms and with a charm that is at least half modesty. It is because the best of these houses rank so high, if judged by these criteria, that they are to me such significant contributions in a field—that of speculative housing—which has been too much neglected.

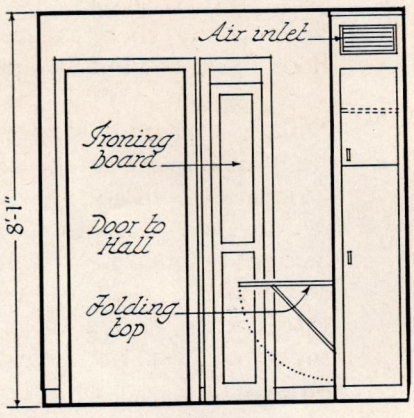


GEORGE H. VAN ANDA

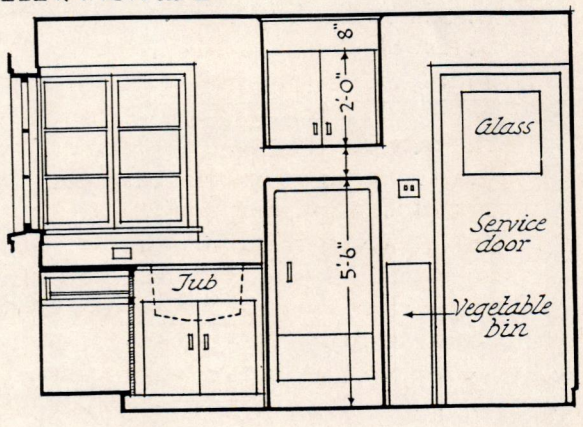
ELEVATION at **A**



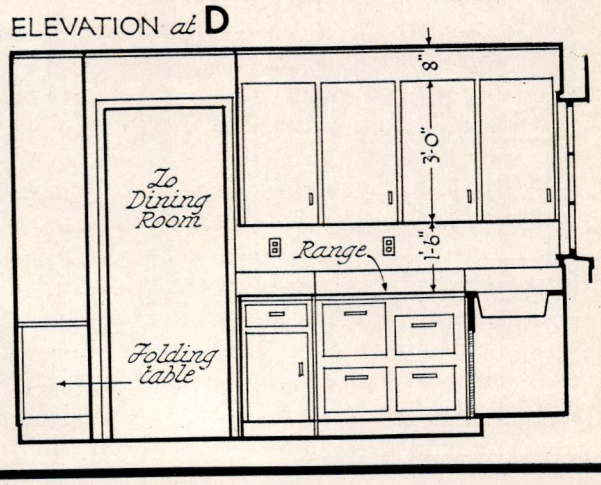
ELEVATION at **C**



ELEVATION at **B**



ELEVATION at **D**



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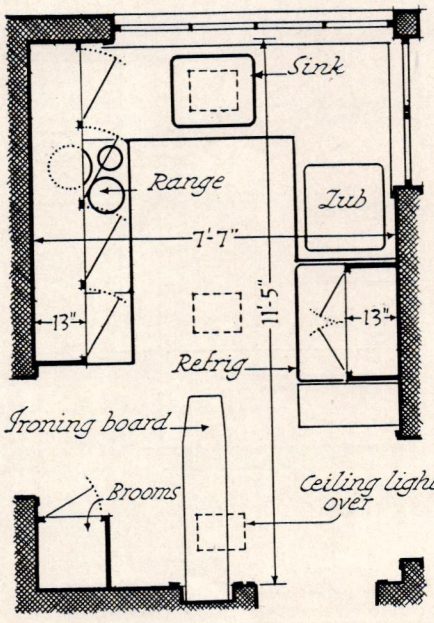
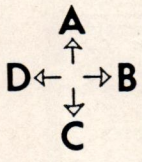
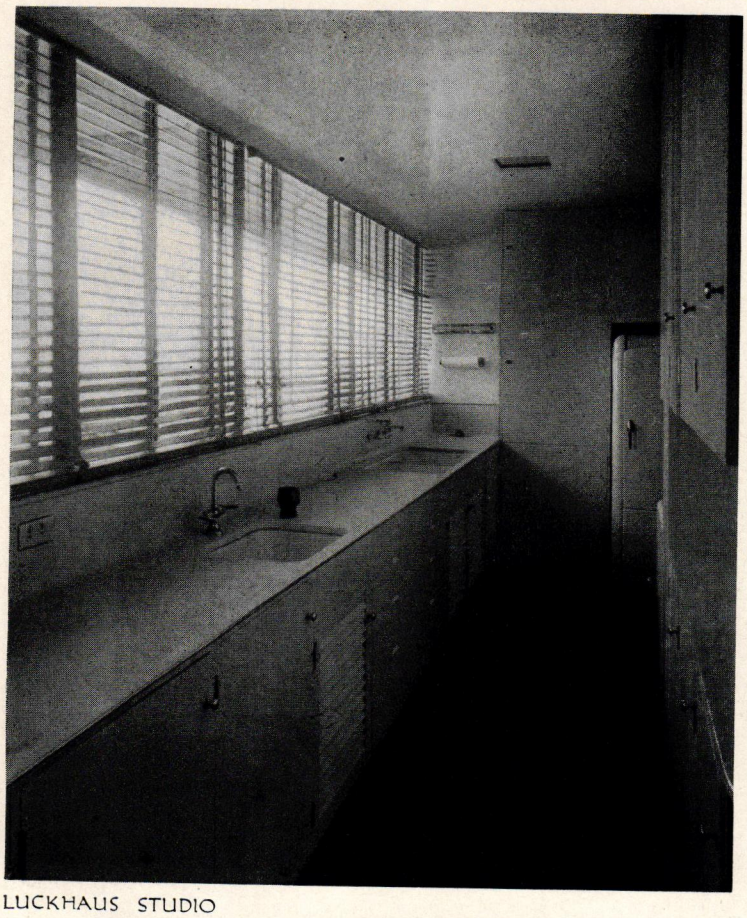
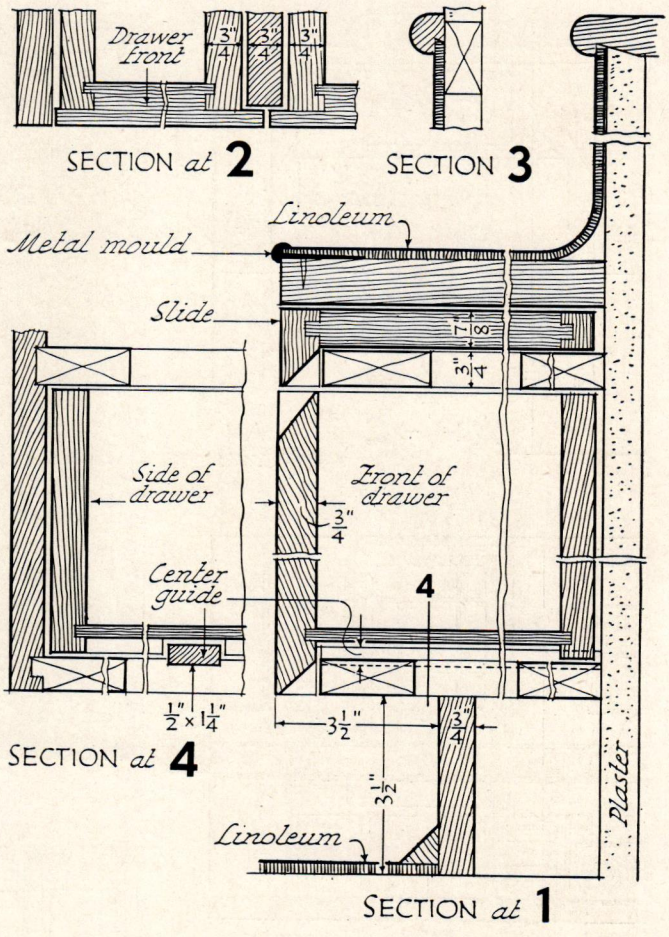


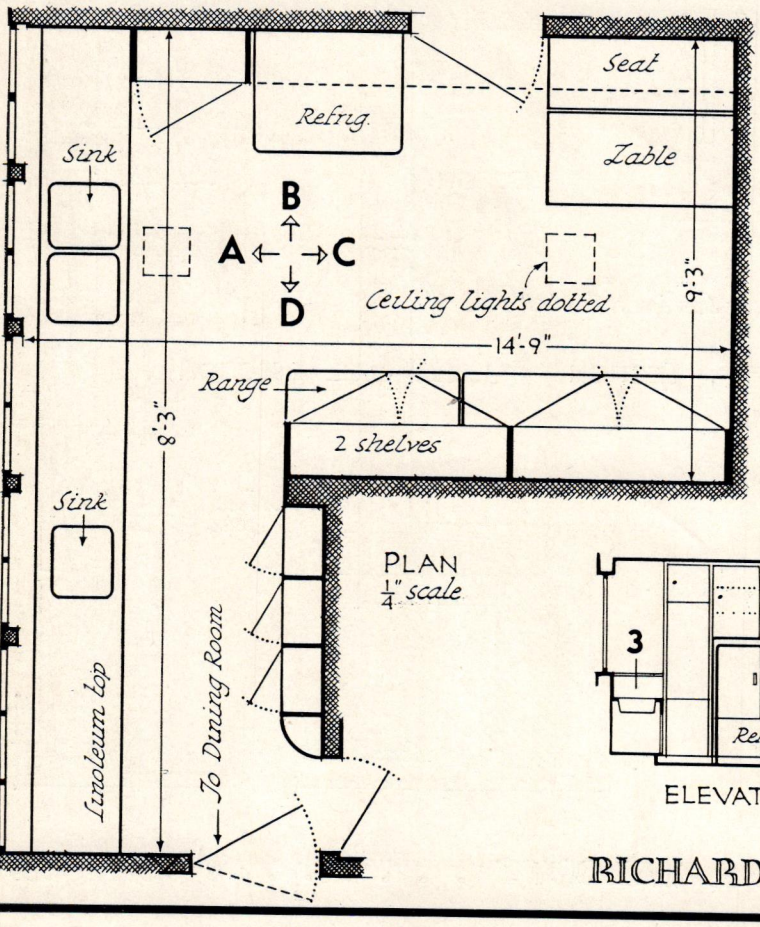


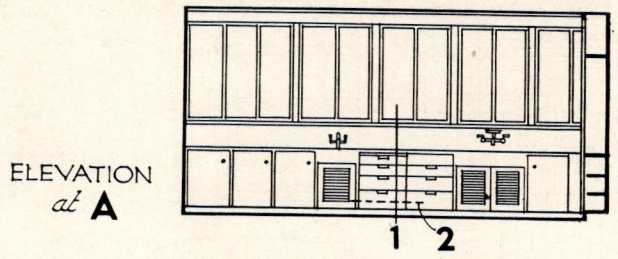
WILLIS N. MILLS
Architect
ALLAN McDOWELL
Associate

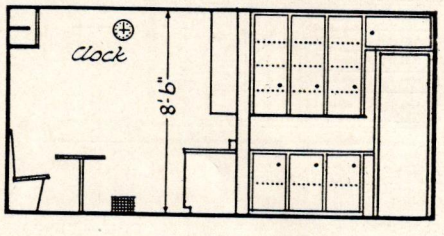


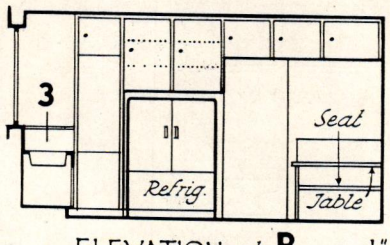
LUCKHAUS STUDIO



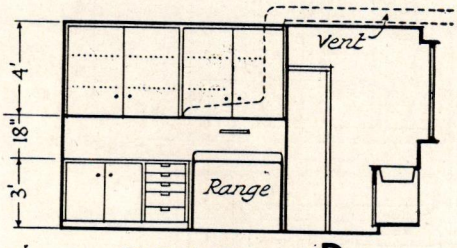




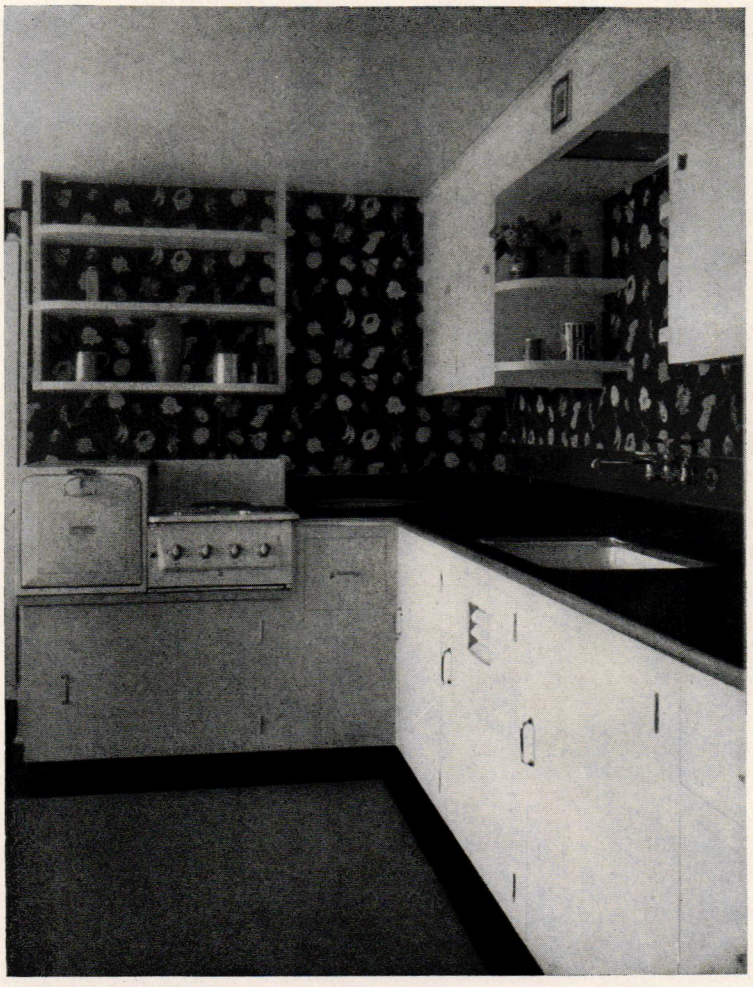




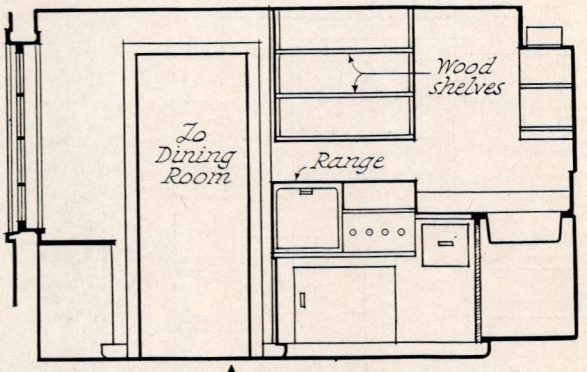
1/8" scale



RICHARD J. NEUTRA . . . . . *Architect*

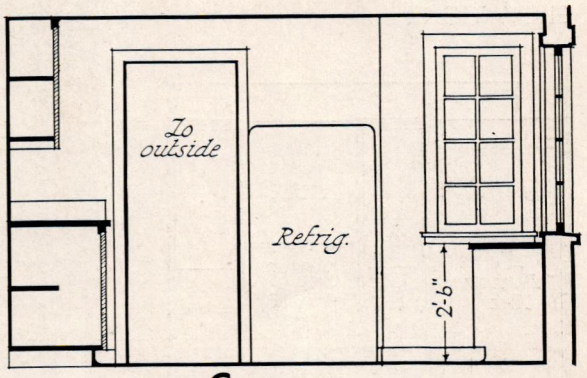


GEORGE H. VAN ANDA

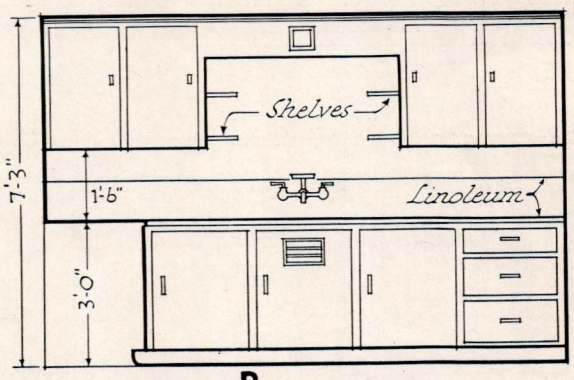


ELEVATION at **A**

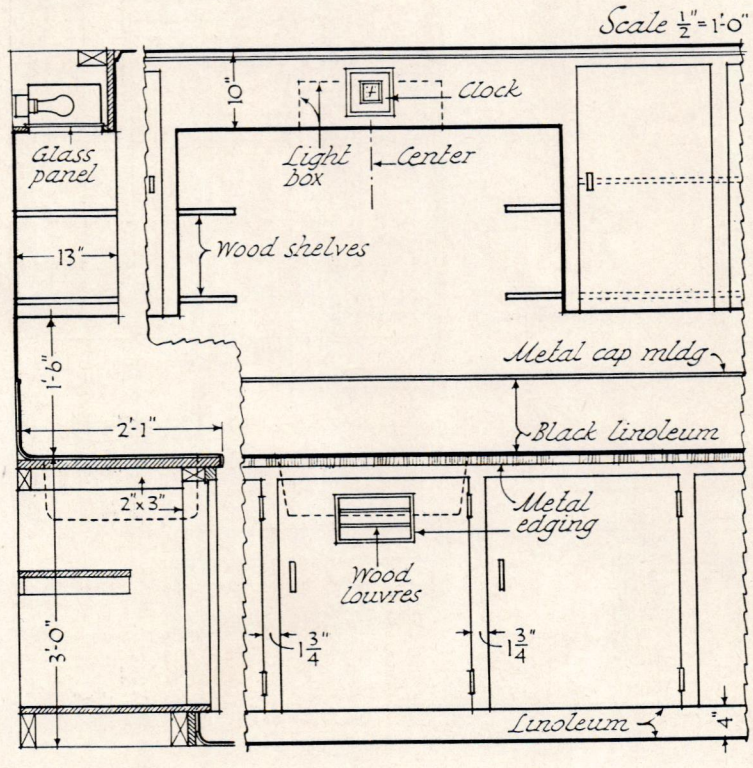
Elevation and Plan at $\frac{1}{4}$" scale

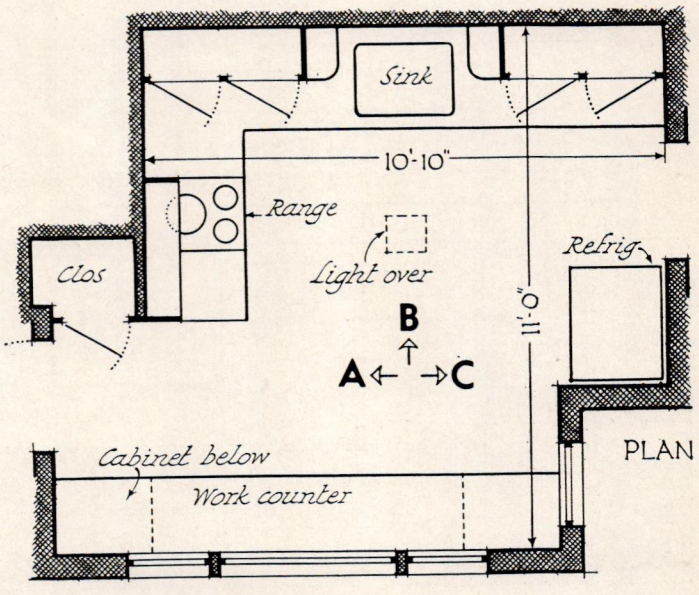


ELEVATION at **C**



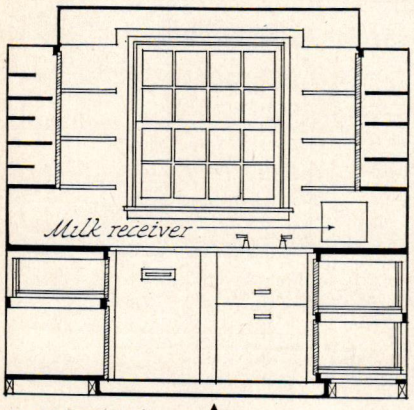
ELEVATION at **B**



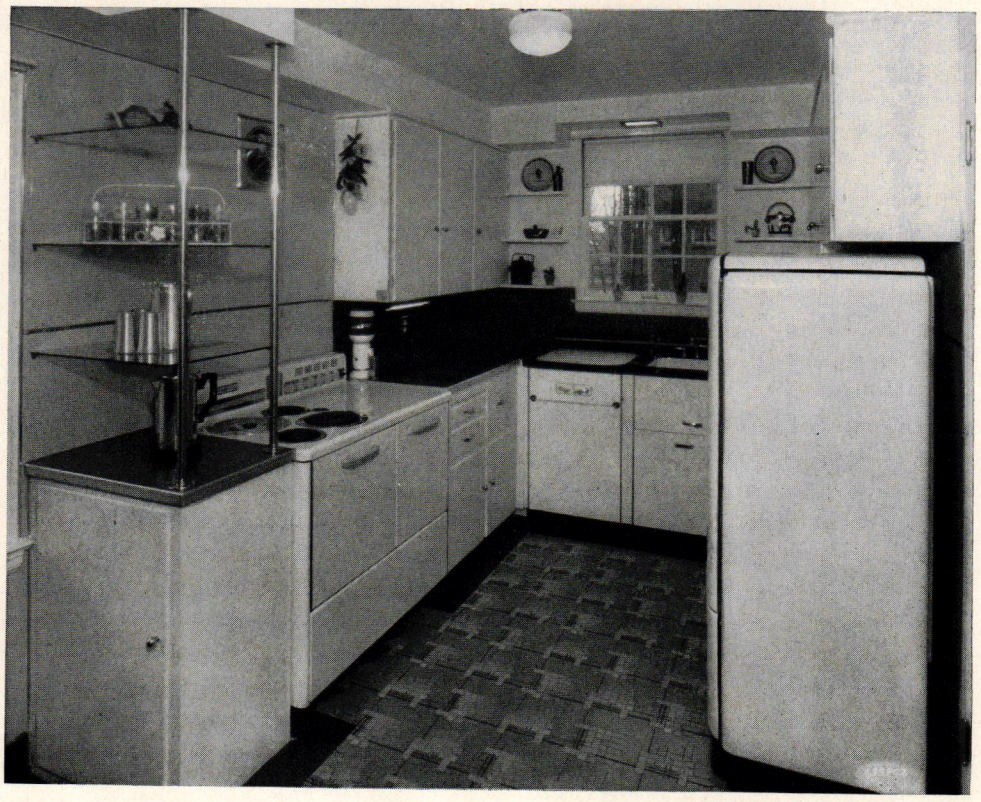


PLAN

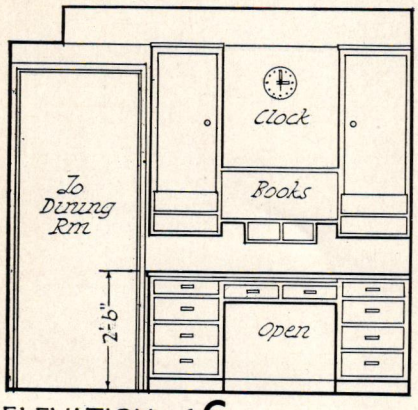
ALLAN McDOWELL . . . . *Designer*



ELEVATION *at* **A**

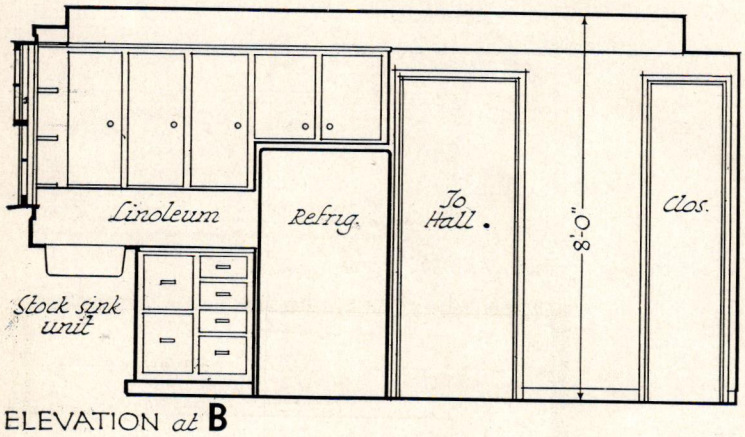


MANNING BROS. INC.



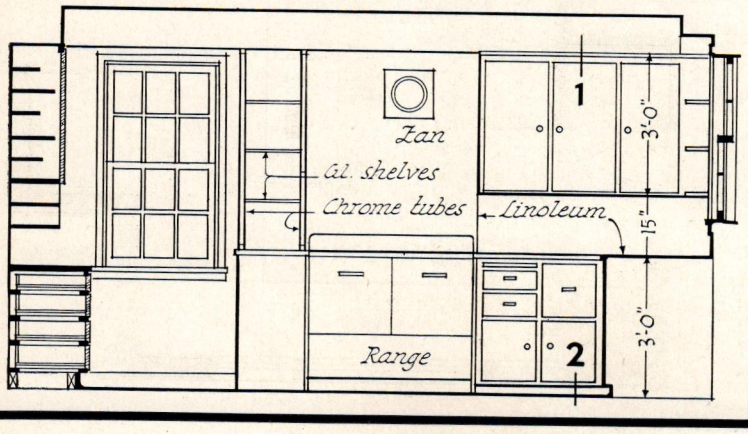
ELEVATION *at* **C**

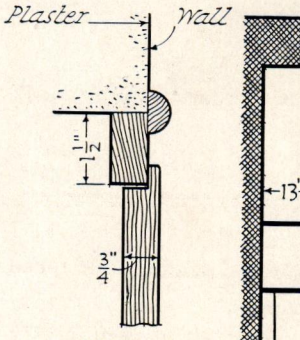
Elevations at $\frac{1}{4}$" *scale*



ELEVATION *at* **B**

ELEVATION *at* **D**

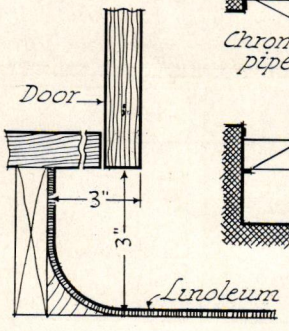


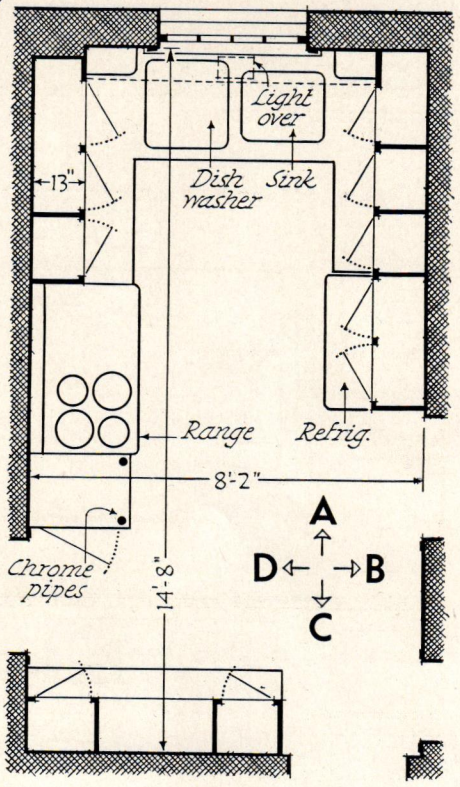


SECTION **1**

3" *scale*

SECTION **2**





PLAN
Scale $\frac{1}{4}$" = 1'-0"

EARL L. CONFER . . . *Architect*

PENCIL POINTS DATA SHEETS

Prepared by DON GRAF, B.S., M.Arch.

Give an architect a commercial, amusement, or public building to design, and the battery of toilet fixtures that he provides will look like the interminable rows of crosses in Arlington National Cemetery. Give him a small house, and the bathroom is usually only a few inches larger each way than the cross section of the clothes chute. The glorification of the urinals and the toilet stall on the one hand, and the apparent shame with which ablutions are architecturally regarded, is another of those great mysteries.

Of course, in large buildings there are always a number of sizable areas in plan which nobody knows what to do with. But on a small residence, we have a curious reversal of form and the designer mentally rates the various equipment as:

Toilet— 4 stars
Lavatory— 2 stars
Bath tub— ½ star
Shower Bath (too often)— 0 stars

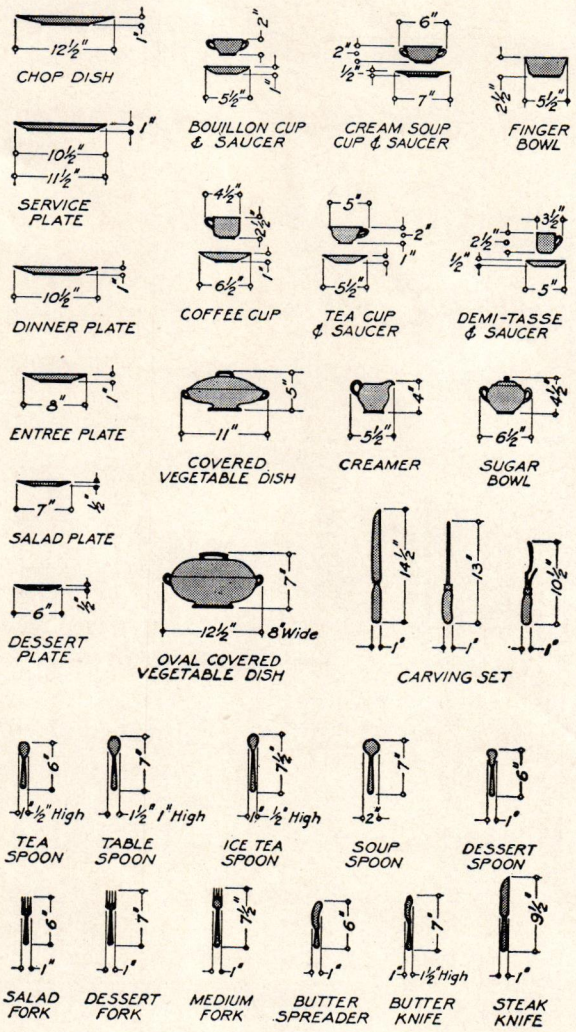
The Hindus will wash only in running water. Like the "eether" and "eyther" situation in the popular song, there are Hindu or *shower bath* proponents, and there are others who belong to what we might term the torso-dunking or *bath tub* school. We confess we advocate the method whereby the dirt is *washed off*, rather than the system in which you dissolve it and then sit and splash in the dilute solution.

But we respect the convictions of those who prefer the bath tub. There are times, too, when the shower cannot be substituted for the tub. In cases of sickness

SIZES OF TABLEWARE

Index No. **D 31** PLANNING

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF

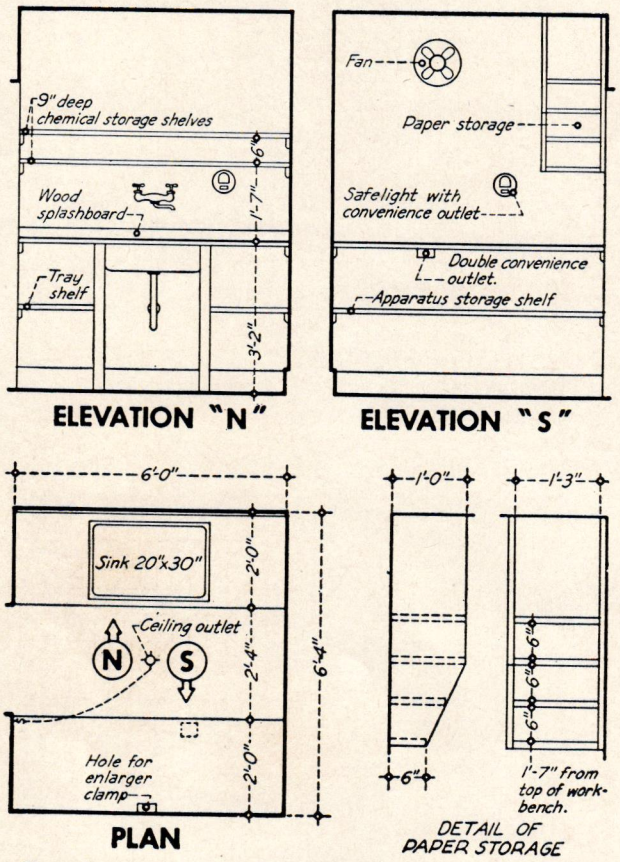


SET 15 MAY 1939

ECONOMICAL AMATEUR DARKROOM

Index No. **D 201** PLANNING

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF



SET 15 MAY 1939

Shown here is an economical darkroom arrangement for the camera hobbyist. See *Data Sheets* D20j and D20k for a de luxe darkroom arrangement.

In the plan the *wet* operations have been separated from the *dry*. The mixing of chemicals, development, washing, and fixing can all take place on the sink side of the room. The exposure in the enlarger or contact printer as well as the drying and trimming can be confined to the other side of the darkroom. The door should have a lock, and a ventilating fan is an absolute necessity. The door can be weather-stripped to make it light-tight. Walls should be painted matte black—and don't let any one tell you different.

and for the bathing of infants, the tub bath is often indicated. The hydro-therapeutic virtue of the bath tub will find many supporters among persons inclined to nervousness.

Therefore, we propose as an axiom that space should be found in every dwelling that makes any claim to modernism, for *both tub and shower.*

There is still a danger remaining, however, and it is the unforgivable sin of bathroom design, to our way of thinking. That is to so cramp the bathroom space that the functions of shower and tub baths have to be combined. This is the worst sort of a makeshift. Tubs were not made for shower baths any more than shower baths can be filled up to the top of the curb to act as tubs.

No part of a modern home presents quite the disregard of function that does the combination tub and shower. The bather stands in a slippery tub. He bumps his elbows on the wall, and very likely on the accessories and valves which are placed low for sit-down bathing. The shower spray creates strong air currents which blow through the shower curtain and slap the wet cloth against his bare skin. Water spray splashes out through the curtain openings until the bathroom looks as if the local fire department had been testing a defective hose in the room, or Hercules had been practising his Augean Stable trick. If the joint between the bathroom wall material and the tub rim has not been made carefully, the living room ceiling below may fall off an hour or so later.

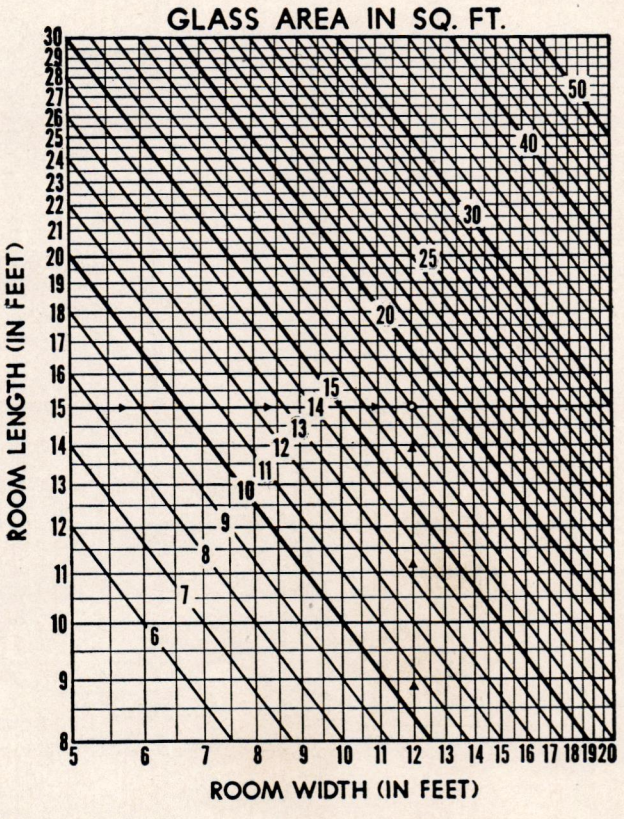
We hope no one who may read this ever checks up on some of the house plans we have been responsible for because we have a feeling that a number of "minimal bathrooms" might be discovered. However, we hereby resolve that in the future we will never put a window over a bath tub or design a bathroom without both a man-sized tub for tubbing and an honest-to-goodness shower enclosure (with glass door, non-skid floor, dome light) for showering. Selah!

MINIMUM GLASS AREAS FOR ROOMS

Index No. **F 3 d** CONSTRUCTION

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF

SET 15 MAY 1939



GLASS AREA. The recommended Building Code of the NBFU is typical of most requirements for window glass area: "The glass area of windows shall be not less than 1/10th of the floor area of the room served by them; provided that in habitable rooms such glass area shall not be less than 10 square feet, and in bathrooms not less than 6 square feet."

PROPORTION OF OPENING. The FHA require that 40% of the glass area must be capable of opening for ventilation; the NBFU recommend 50%.

GLAZED DOORS. The FHA provide that the glazed portions of doors opening on yard, court or street may be considered as windows. The NBFU do not make this provision.

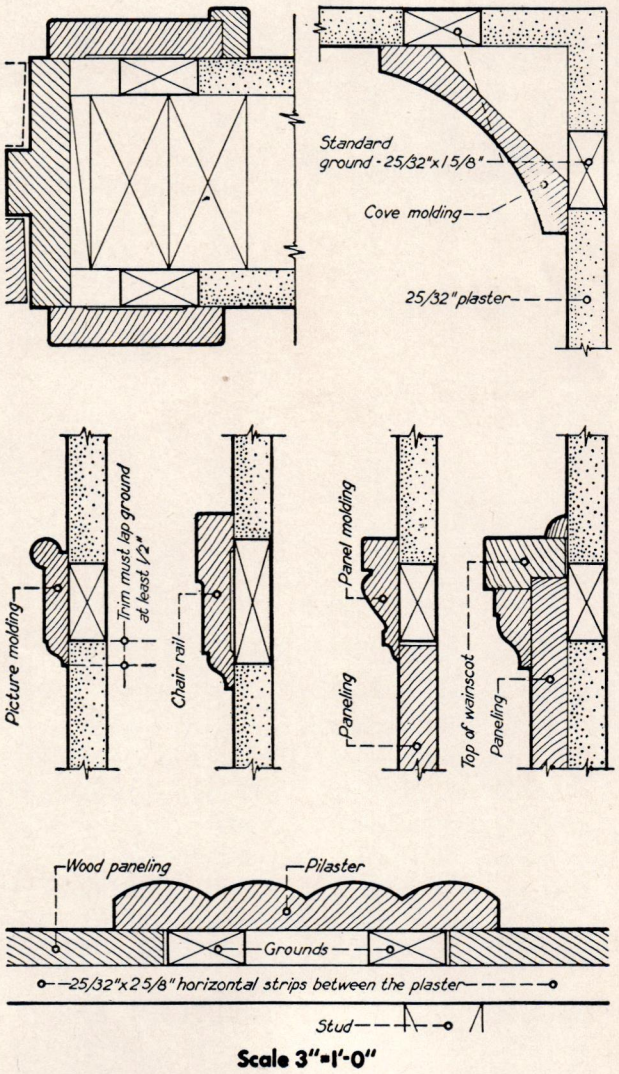
HOW TO USE THE CHART. A room 15 feet long by 12 feet wide is shown by the chart to require 18 square feet of glass area.

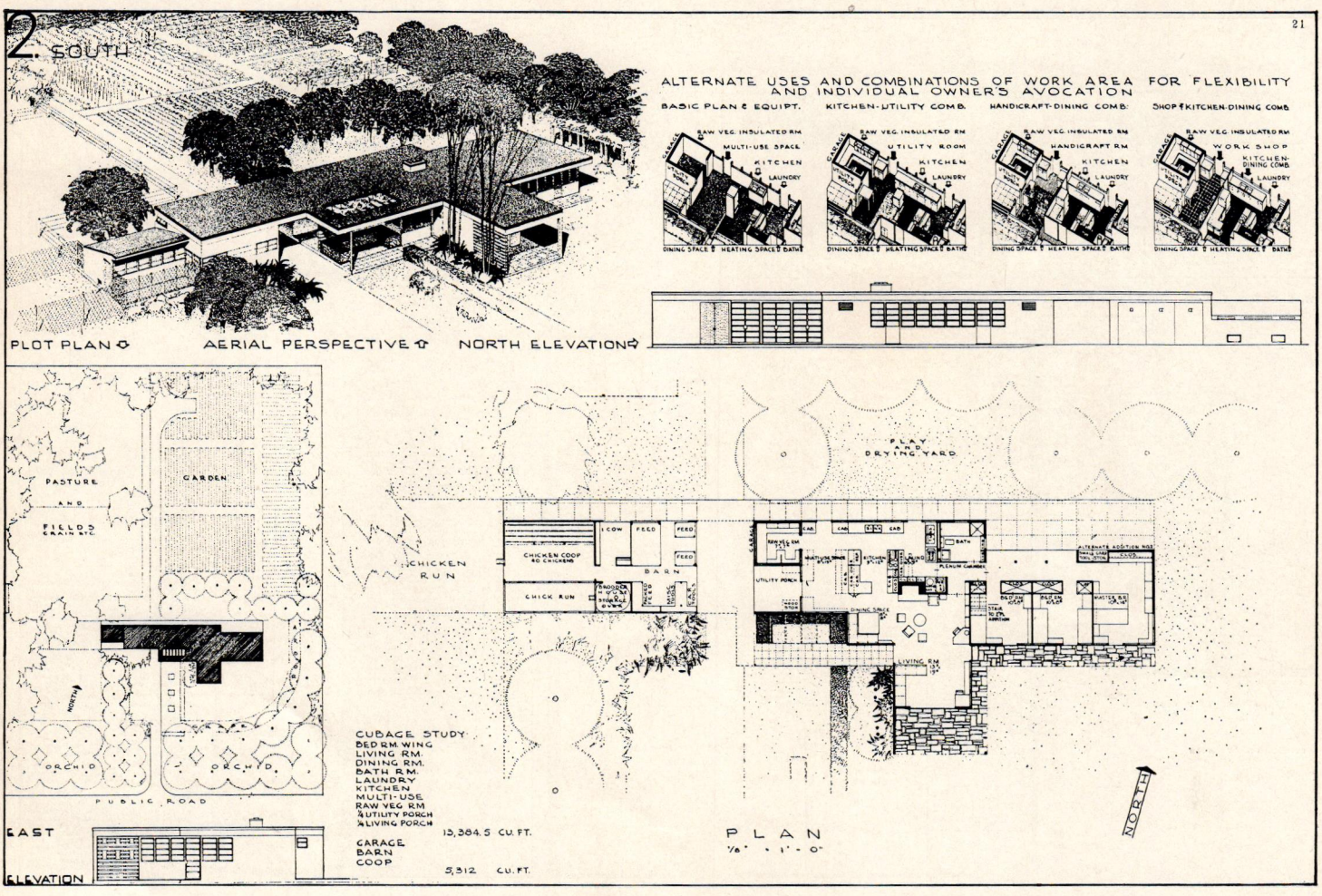
PLASTER GROUNDS FOR TRIM

Index No. **F10 m** CONSTRUCTION

PENCIL POINTS DATA SHEETS PREPARED BY DON GRAF

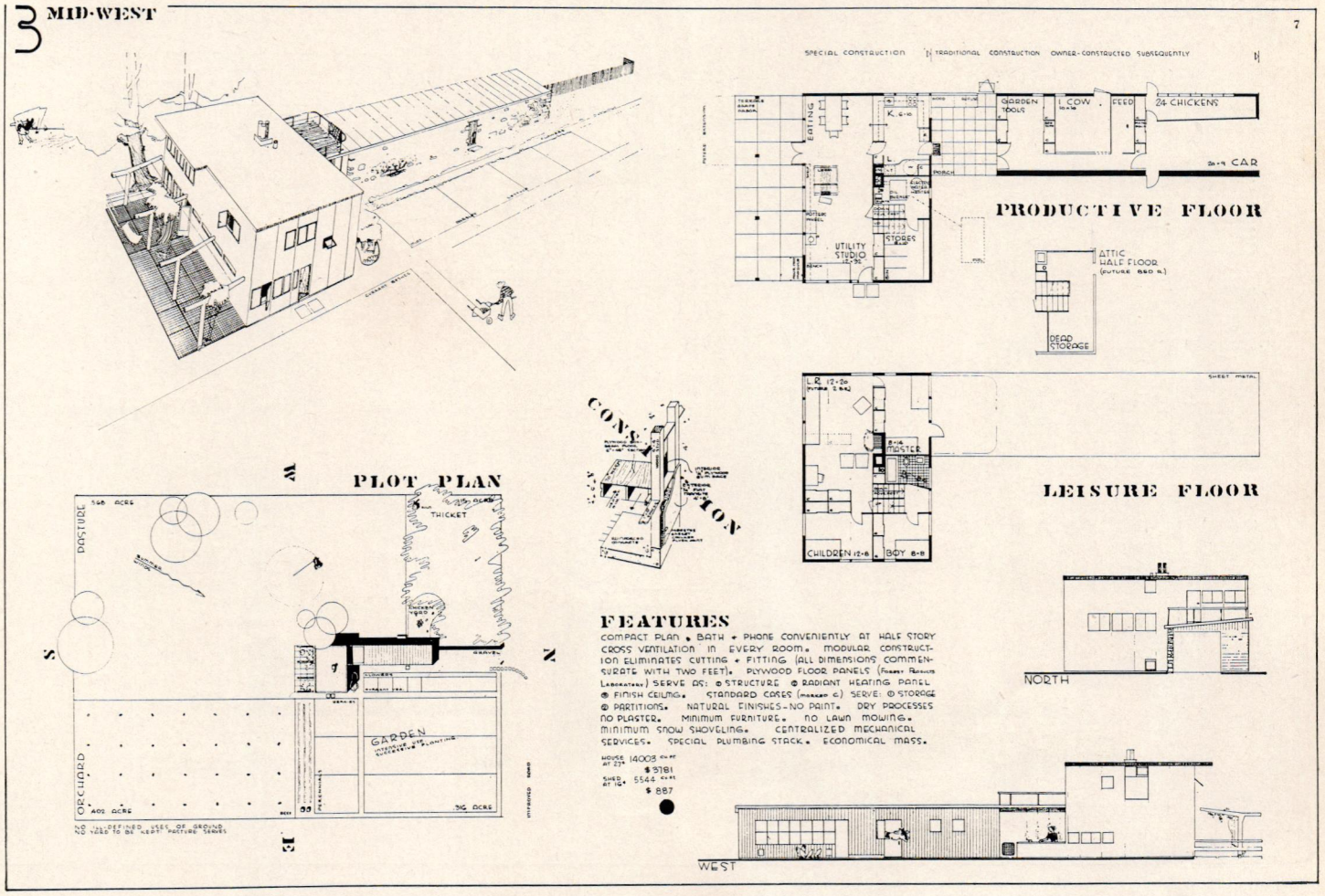
SET 15 MAY 1939





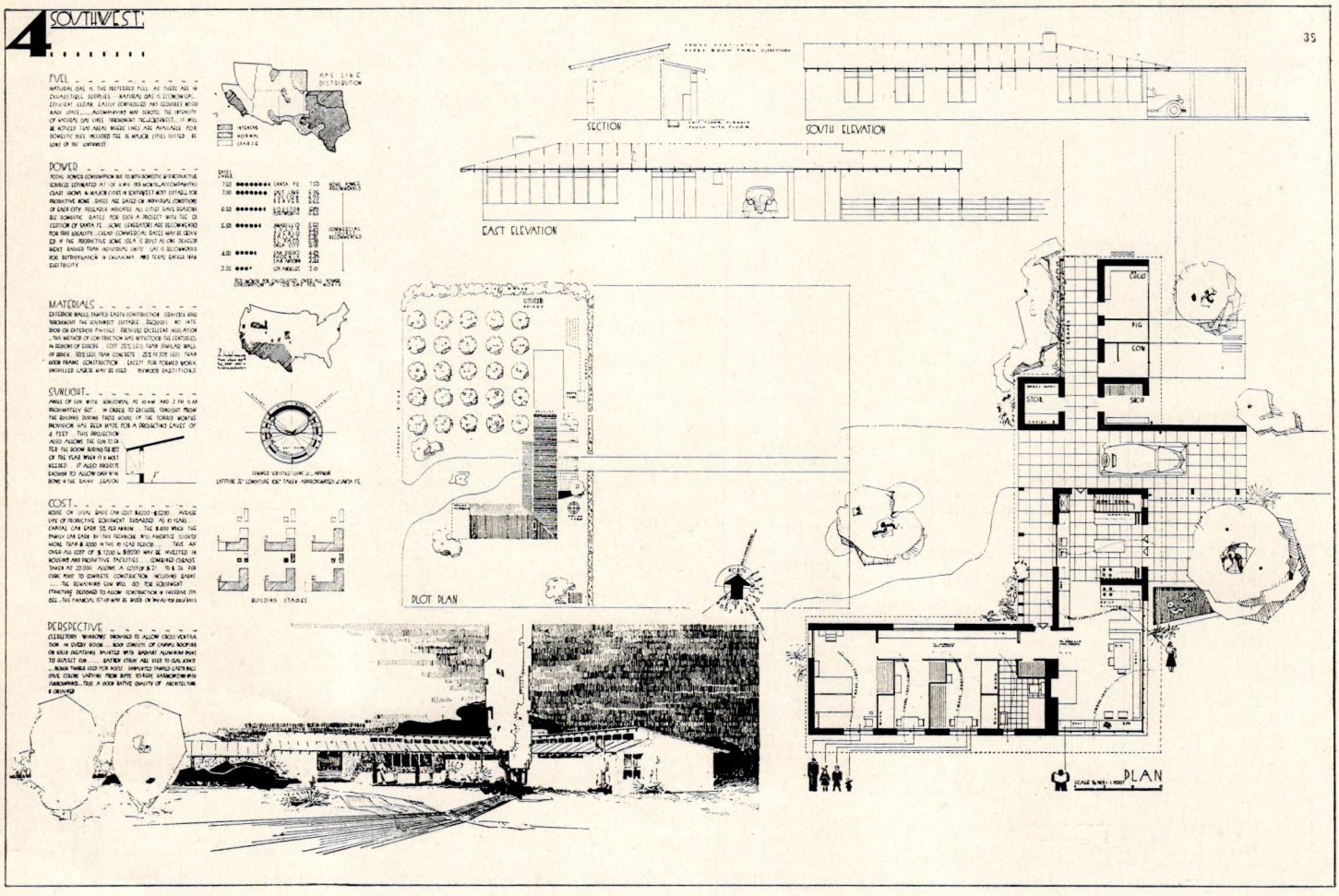
PRIZE PRODUCTIVE HOME FOR THE SOUTH

The Jury of Awards agreed that the five prizewinning designs, including this one by Rudolph A. Matern, of Woodhaven, New York, "in great part fulfilled" five requirements which were given major consideration in judgment. These were: adaptability to productive activities in the home; layout of land and outbuildings; economy in planning, construction, and materials; suitability to the various regions; and ability of the competitor, as indicated by his entry, to prepare proper working drawings and specifications. The architects drew their winning plans on the assumption that the homes would be built near enough to a city to enable the husband to commute and earn a total income of $2,100 a year; with his spending power augmented $400 a year by raising livestock, garden produce, and fruit on the land surrounding the house. They were planned to minimize labor



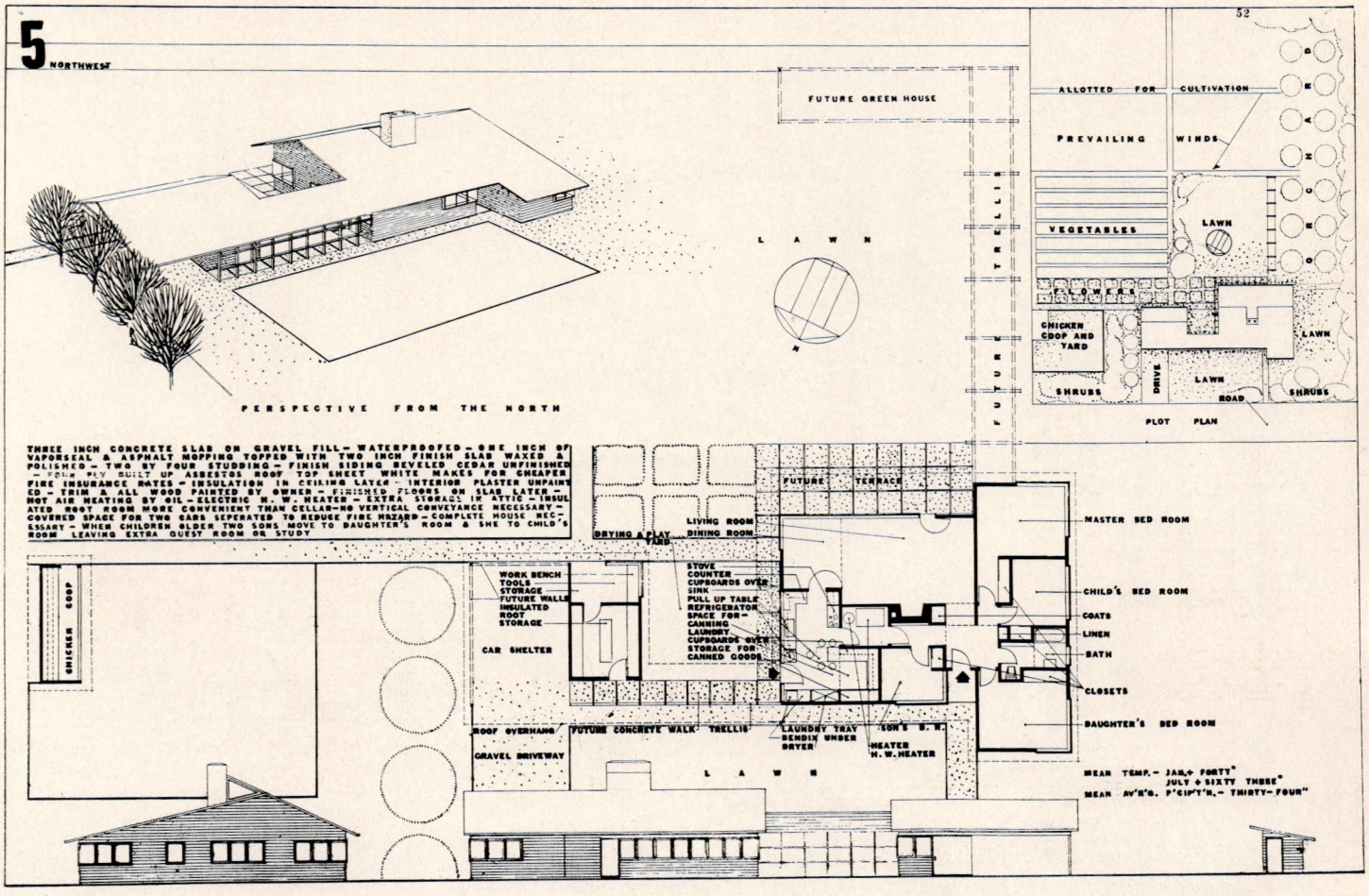
PRIZE PRODUCTIVE HOME FOR MID-WEST

This $1,000 prize design is by Harry Weese, a student at Cranbrook Academy of Art, Bloomfield Hills, Michigan. Summarizing the opinions of the Jurors, Walter Sanders, A.I.A., Professional Adviser, reported that they were "gratified by the spirit shown in the designs submitted, and by the general character of the architecture presented, for a productive semi-rural life." It was pointed out, however, that the Jury "does not wish to present the idea that any of these plans will be an ideal productive home; and only hopes that they might serve as a springboard for the ultimate ideal." It was agreed that "the one requirement most generally neglected was economy," but that as the Program indicated that the occupant of the house might participate in the finishing of the house as well as in the construction of the outbuildings, none of the prizewinning houses was too expensive



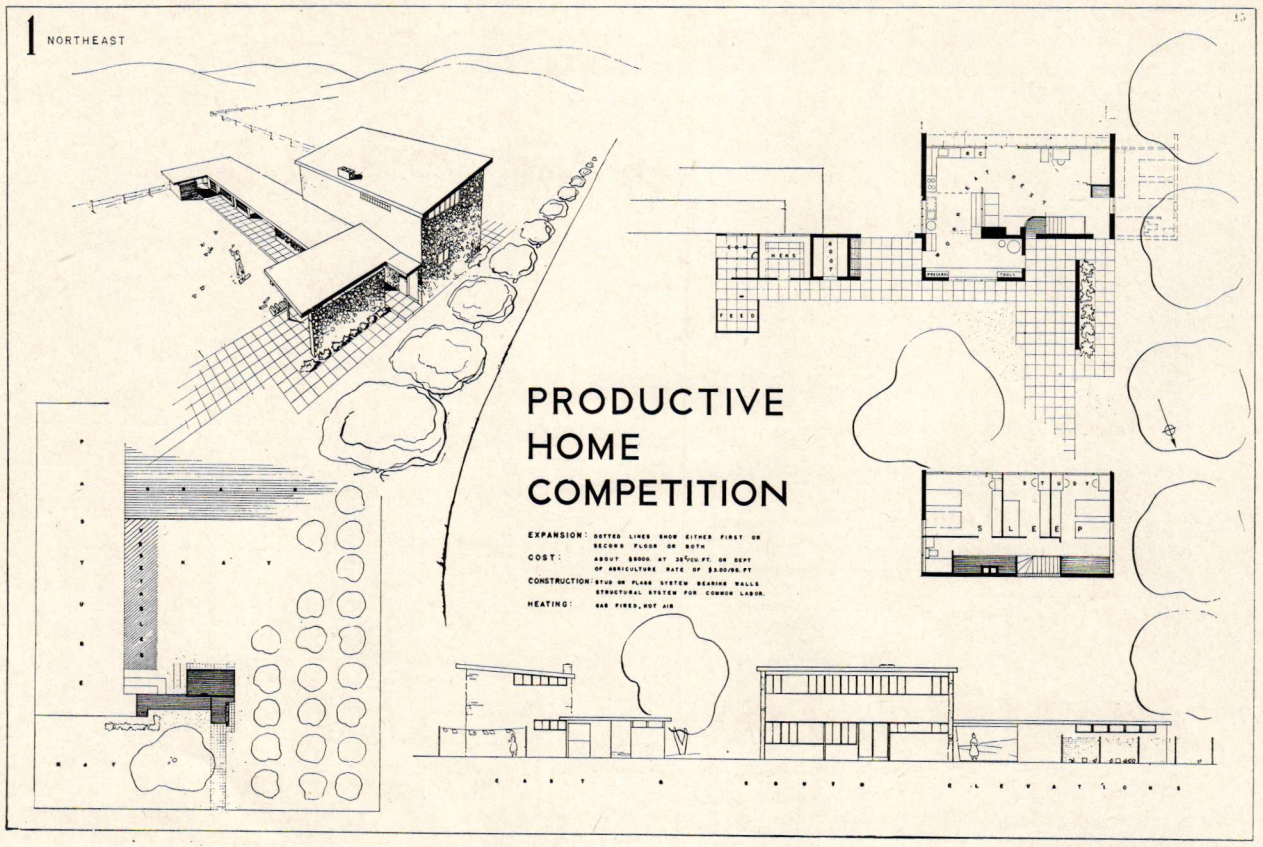
PRIZE PRODUCTIVE HOME FOR SOUTHWEST

William W. Caudill and Lois Worley, students at Massachusetts Institute of Technology, collaborated on this design. As an expression of the program of the sponsoring organizations, which are endeavoring to bring people back to the land and an independent, wholesome way of living, it was considered imperative to "provide an efficient and dignified background for those conscious and proud of their modest station in life." Following the conclusion of the Competition the prizewinning designs and other drawings of the final stage were exhibited in New York, and exhibitions in other cities are being arranged by the sponsors. Various of the Jurors pointed out that storage space was generally insufficient, although vital to the smooth operation of a productive home; that living and working areas were not well protected from confusion and dust, in all cases; that the possibilities for future development were not specially emphasized

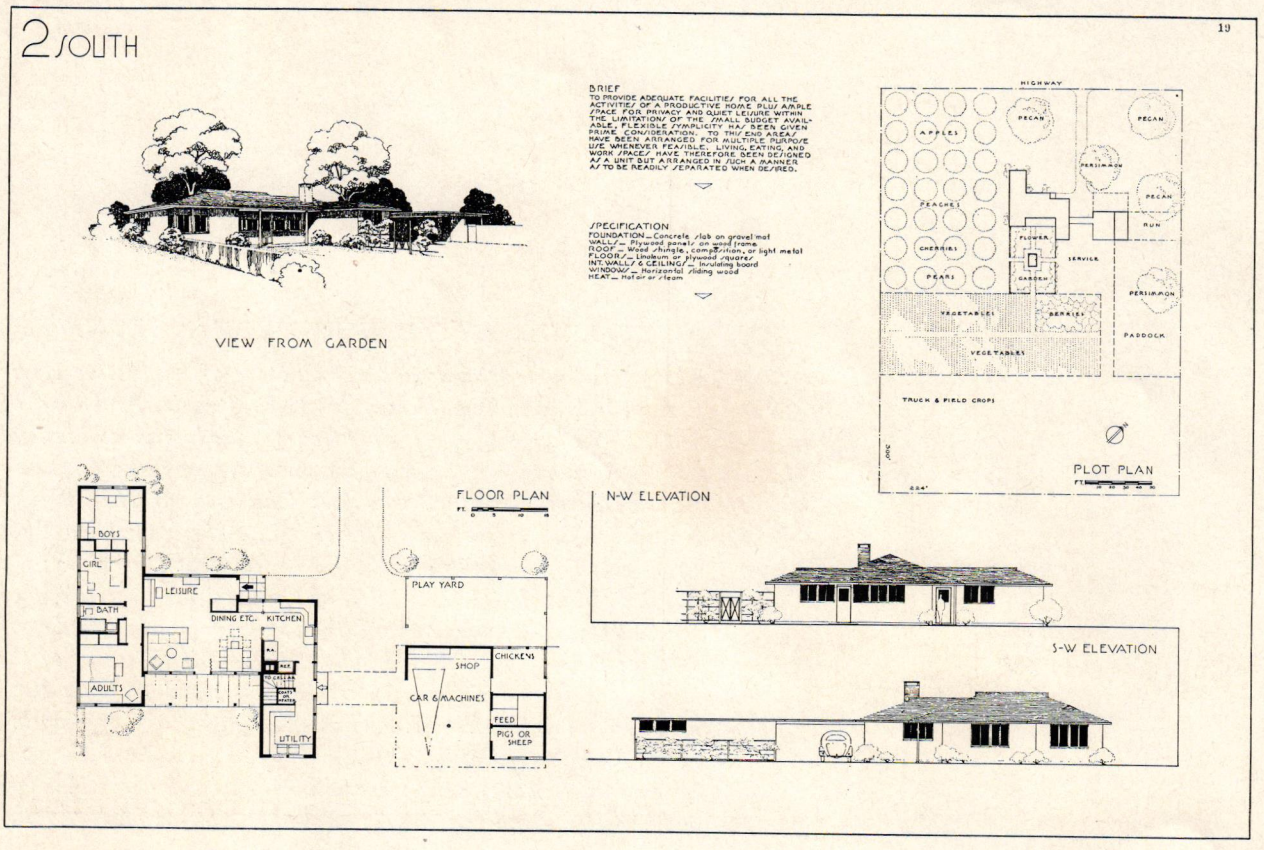


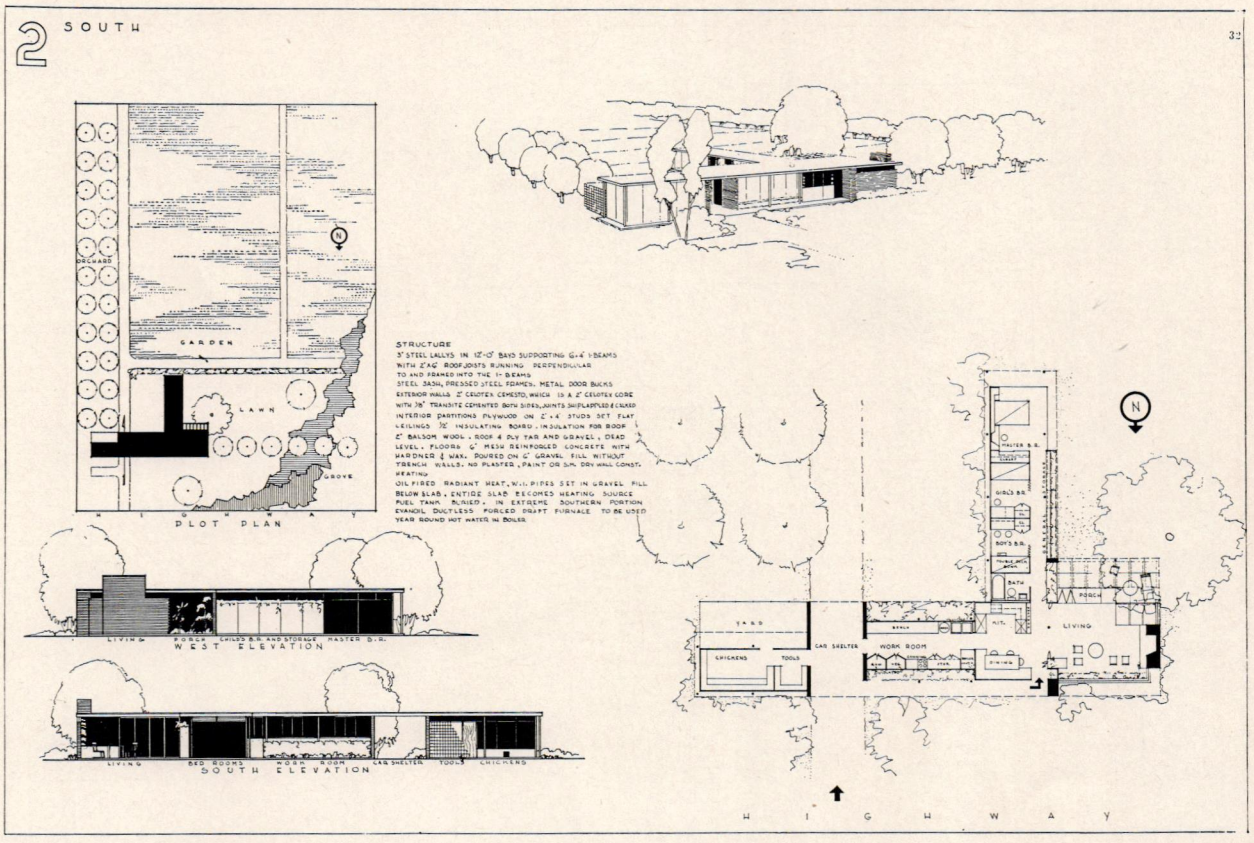
PRIZE PRODUCTIVE HOME FOR NORTHWEST

The prizewinning designs in the final stage of Productive Home Competition including this one by J. R. Sproule, Architect, of Seattle, Washington, were all fitted to productive living and were not stereotyped in any case, in the opinion of Burnham Hoyt, Denver Architect who was Chairman of the Jury of Awards. Other Jurors were Frederick L. Ackerman, New York Architect; Dr. Baker Brownell, of Northwestern University; the Rt. Rev. Msgr. Luigi G. Ligutti, of Granger, Iowa, President of the National Catholic Rural Life Conference and Founder of Granger Homesteads; Eloise Davison, New York, Director of the New York Herald Tribune Home Institute; and Antonin Raymond, of New York, and Richard J. Neutra, of Los Angeles, noted Architects elected to the final jury by a vote of the contestants in the concluding stage. Elliott Taylor was the Manager and Walter Sanders, A.I.A., was the Professional Adviser

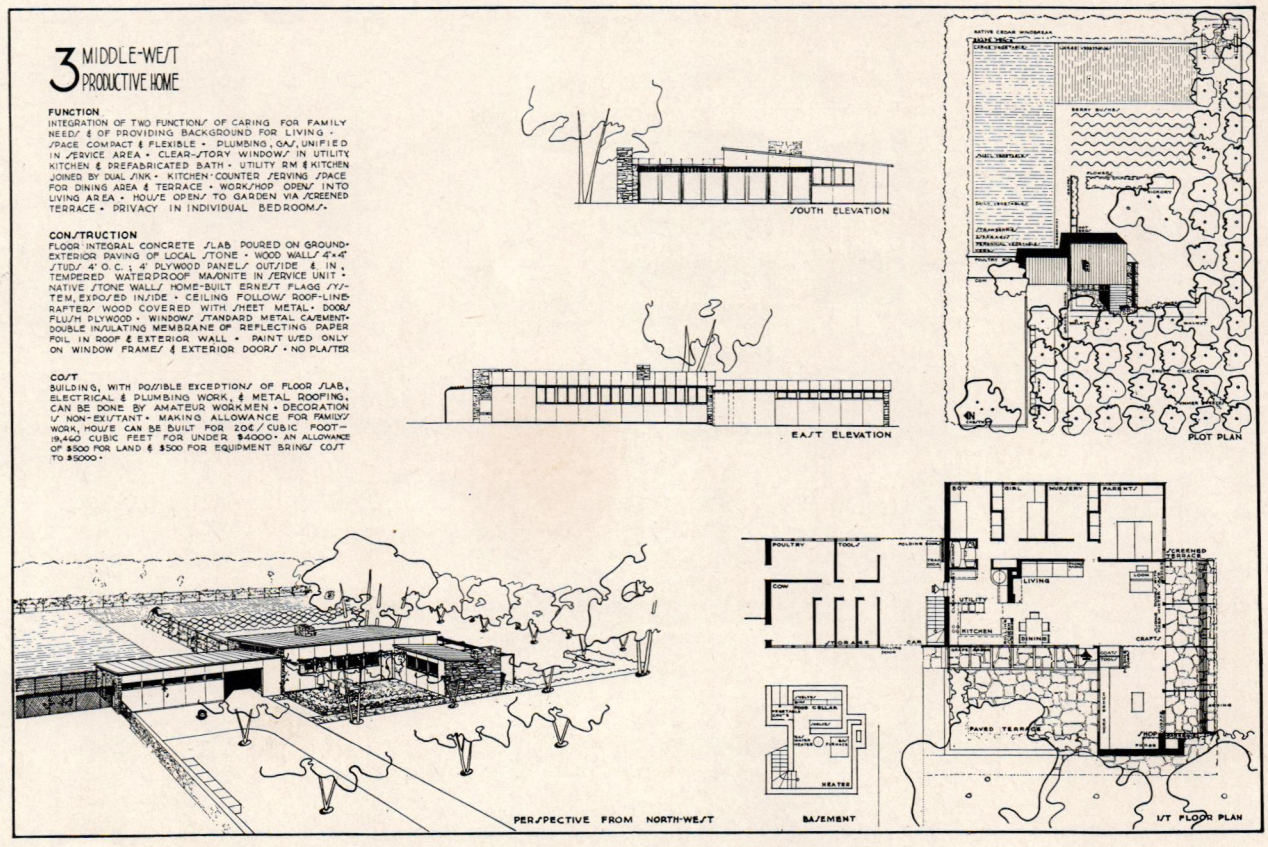


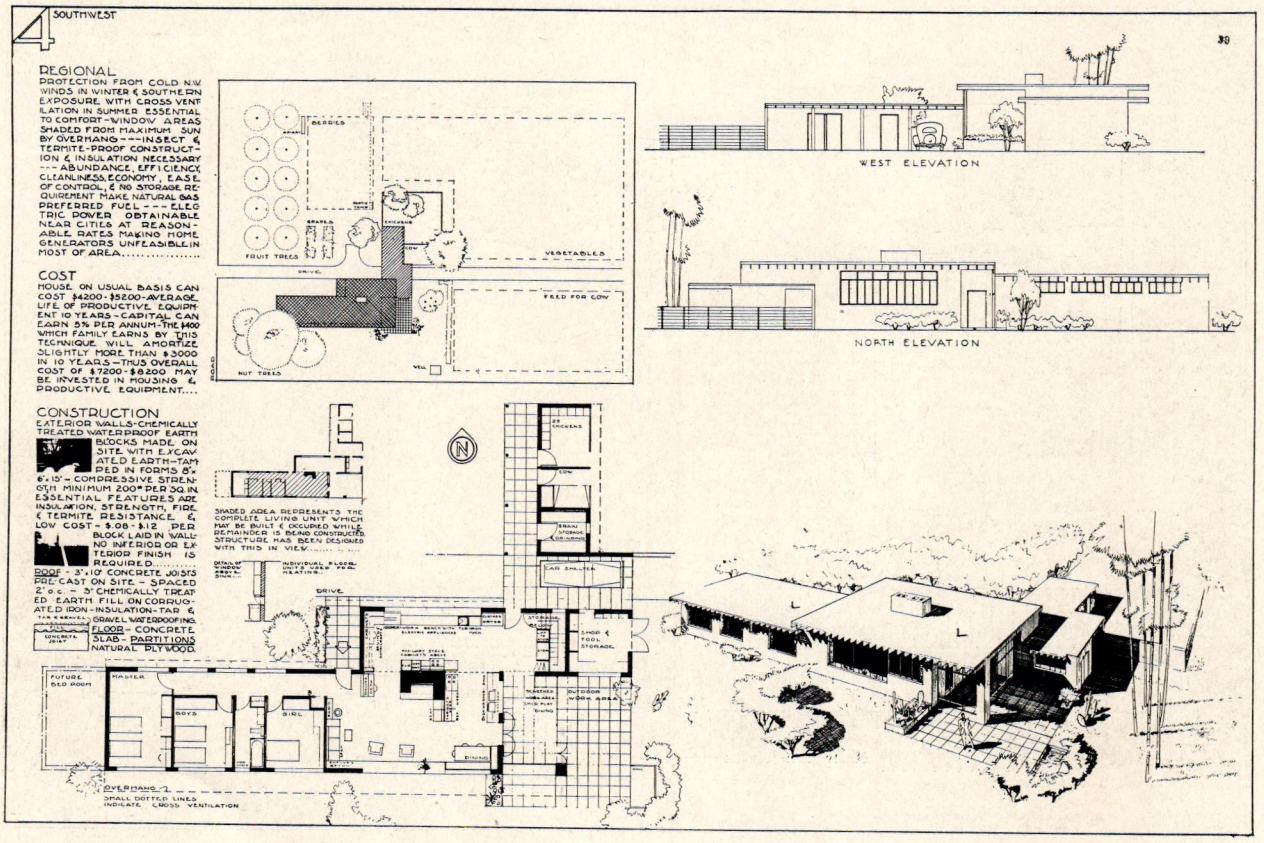
Other solutions in the final stage of the Competition included the one above, for the Northeast, by Milton H. Caughey, New York student, and the design below, for the South, by W. A. Ganster, Arthur Hennighausen, and Mertze Koski, of Waukegan



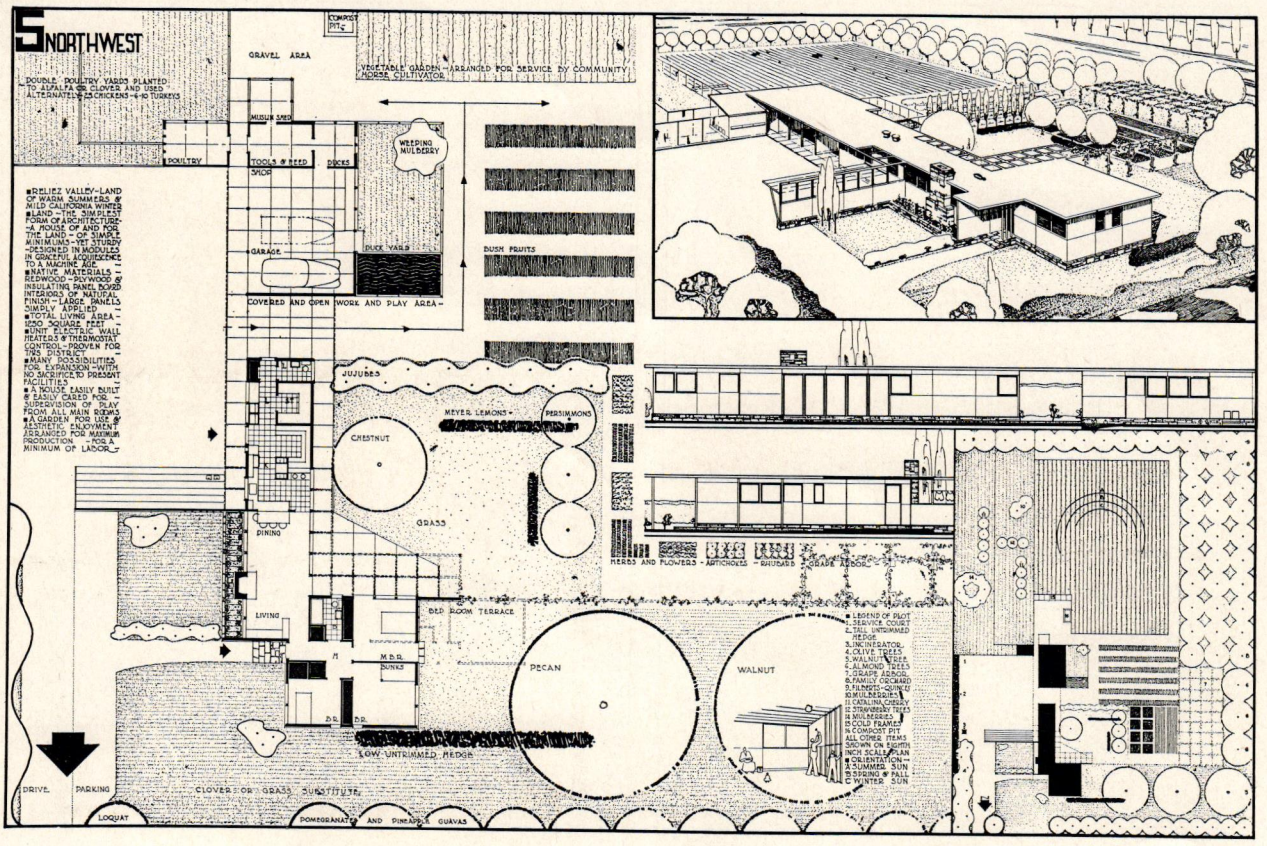


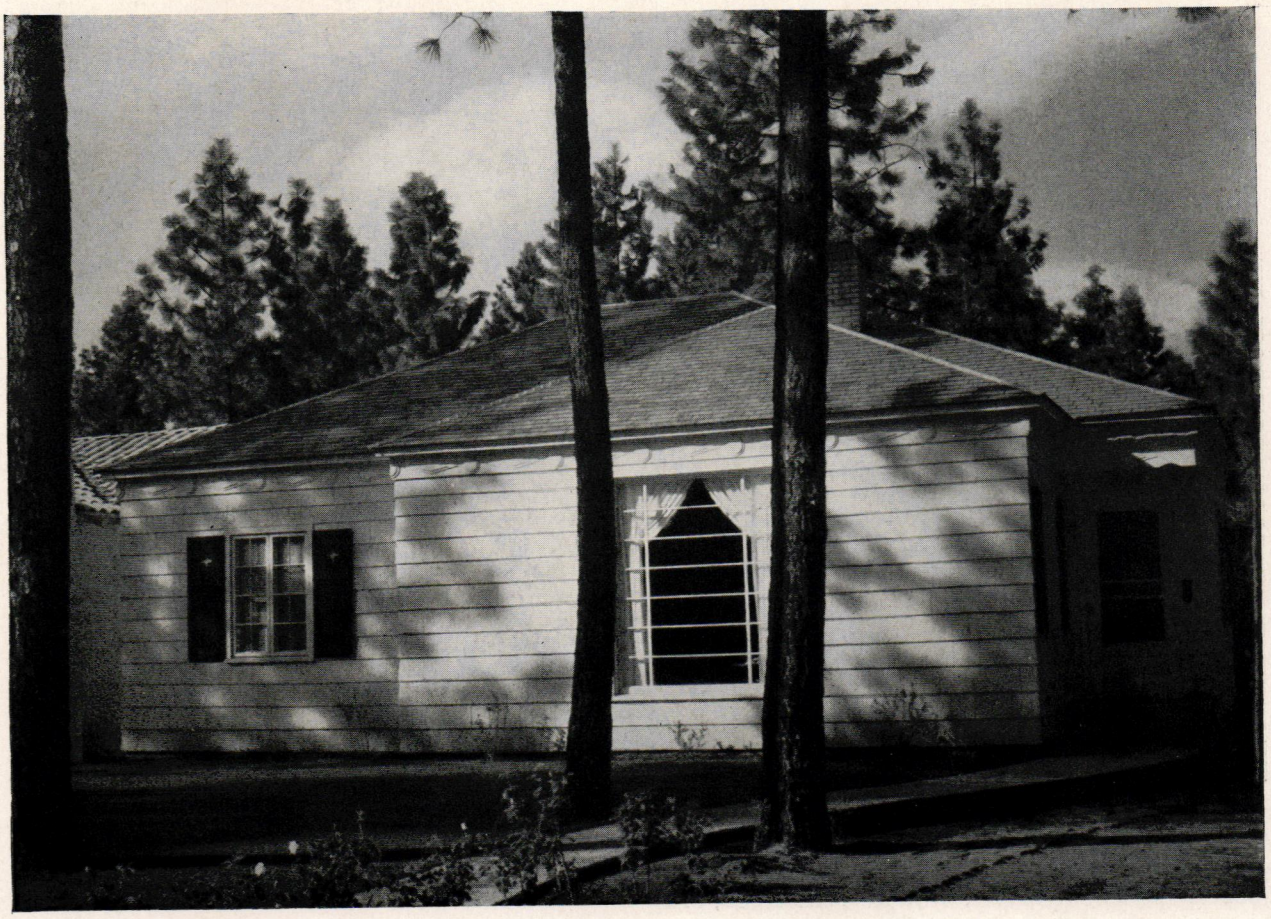
Evans, Moore & Woodbridge, New York Architects, designed this home for the South, also in the final stage of the Competition. The design below, for the Middle West, is by Henry Erlandsen Hebbeln, a student at Cranbrook Academy of Art



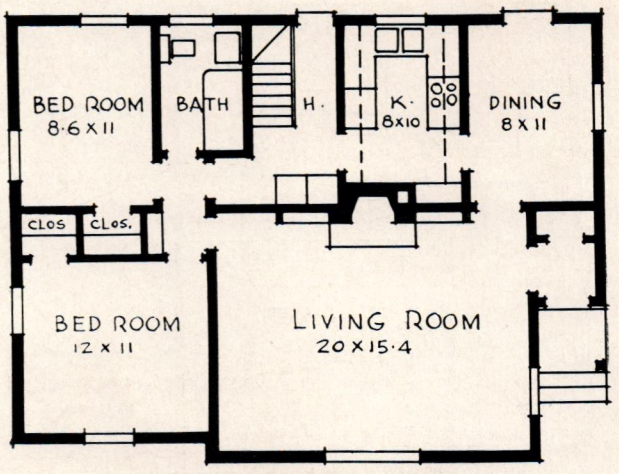


This home for the Southwest is by William H. Caudill and Lois Worley, M.I.T. students who won a $1,000 prize with another design for the same region. The Northwest home is by John E. Dinwiddie, Garrett Eckbo, and Albert Hill, of San Francisco

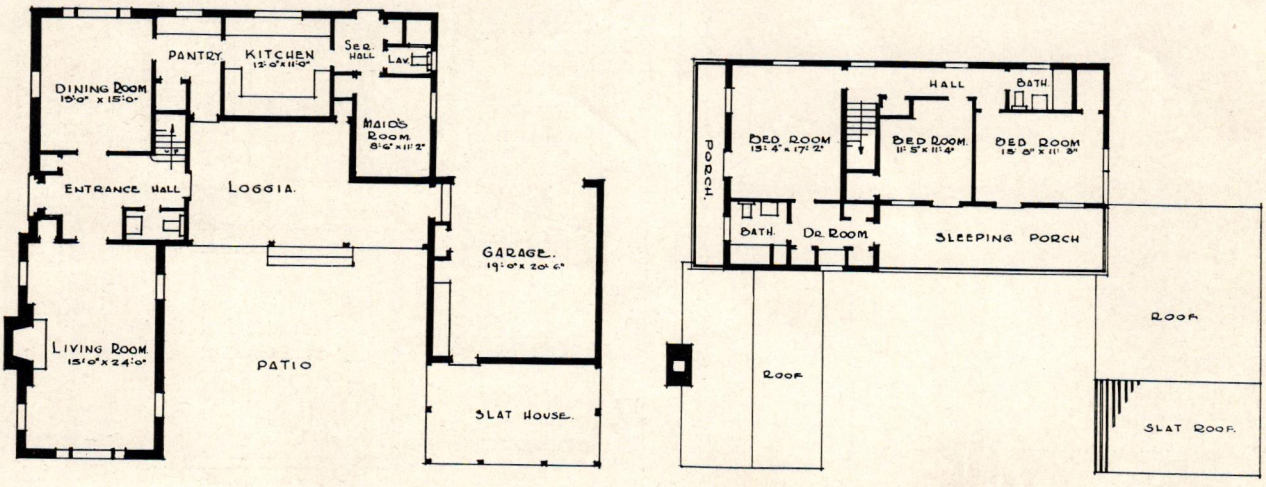


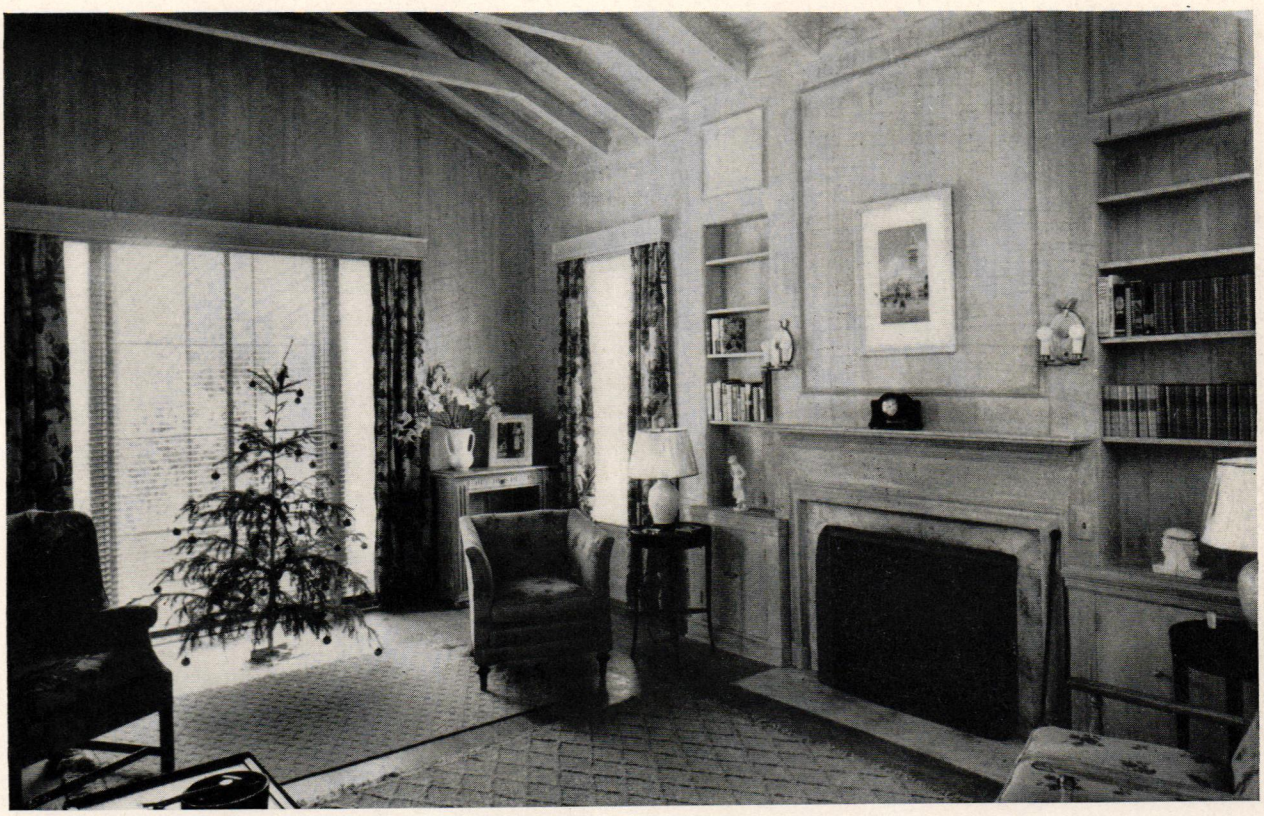


This small house designed by Whitehouse & Price, Architects, of Spokane, Washington, and owned by H. C. Bender was one of the 20 entries receiving $1,000 prizes in the recent "New American Home Building" competition conducted by the General Electric Home Bureau. Houses in 40 States, representing approximately $4,000,000 in homes, were entered in the competition by architects, owners, builders, contractors, and realtors

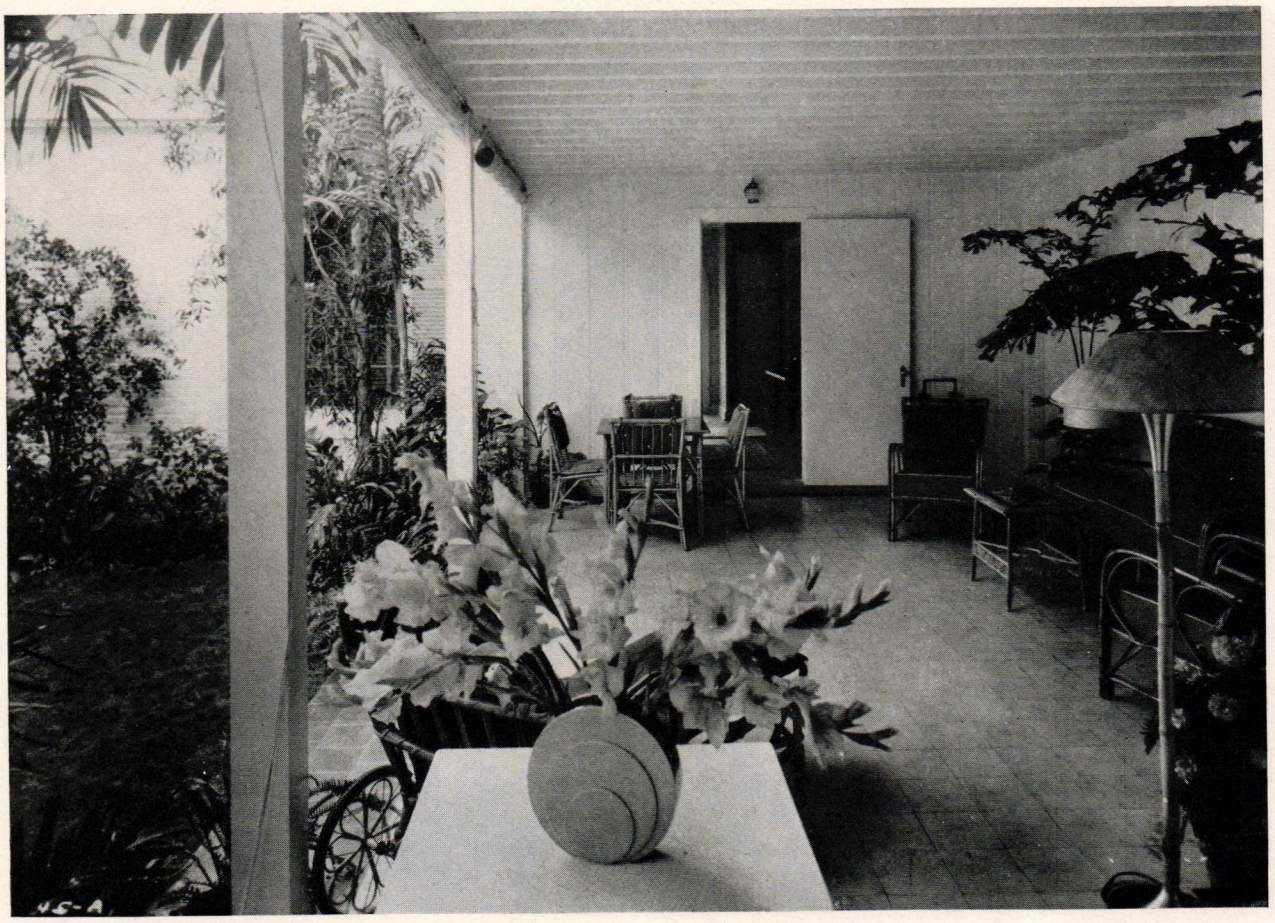


Free circulation, open porches, and an inviting loggia and patio distinguish this Palm Beach home designed by John S. Lawson, Architect, of West Palm Beach, and entered by him in the General Electric competition. The Jury of Award paid special attention during the judgment to those points of house design and construction which have "changed mere shelter to better living"



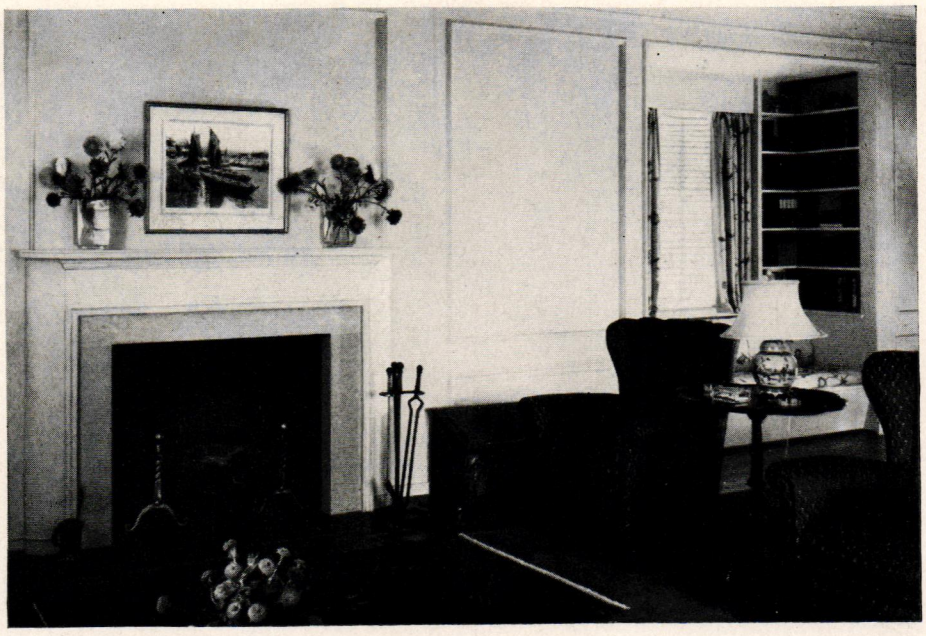


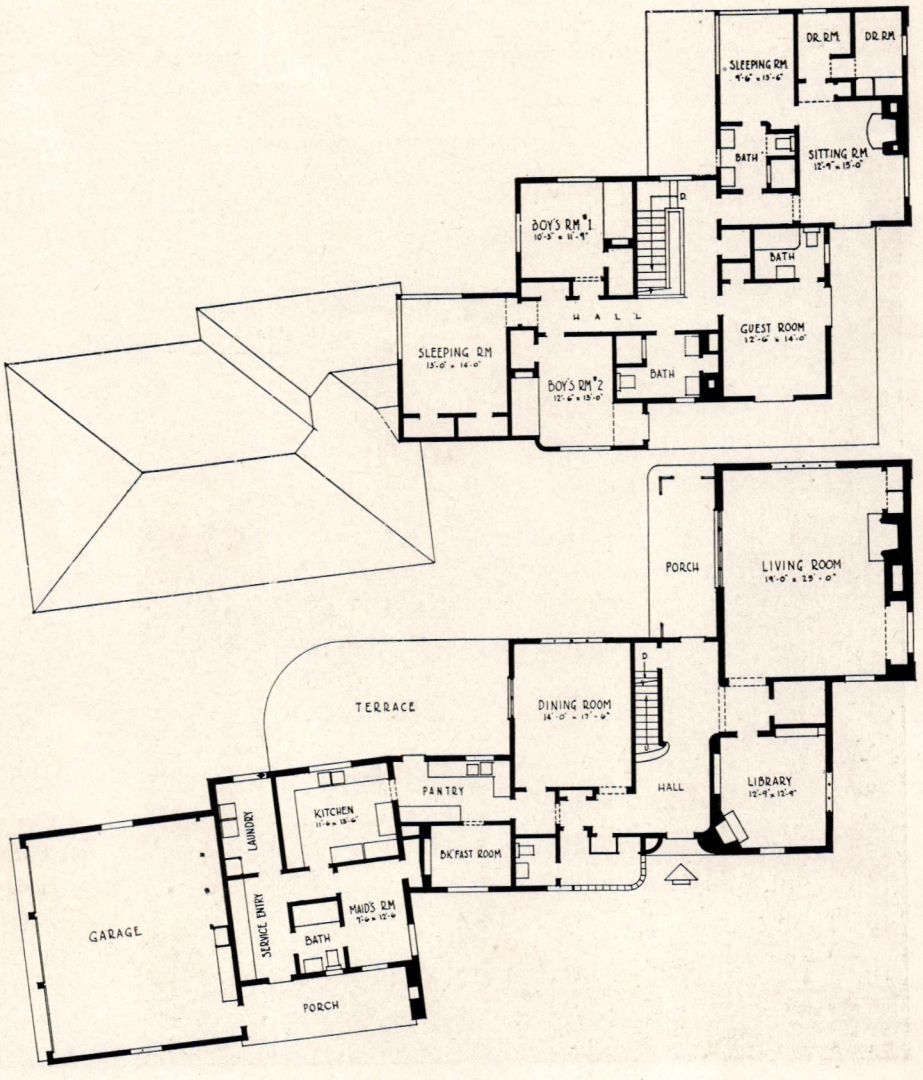
A spacious living room and a deep loggia beside the patio, suitable for outdoor dining as well as lounging, are features of this John S. Lawson house, in Palm Beach

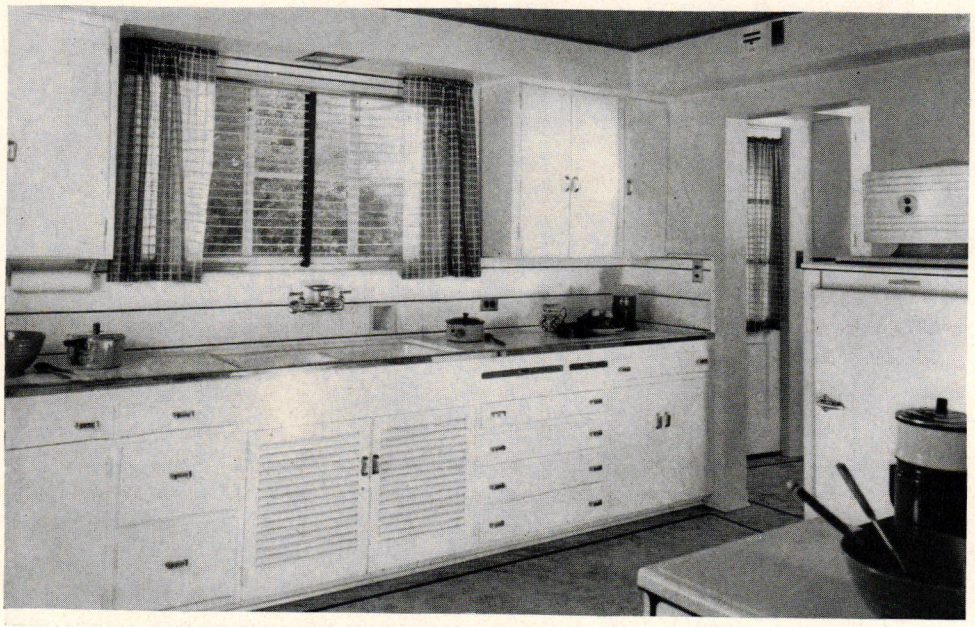


Comfortably spread across a broad site, to take advantage of sunshine and prevailing breezes, is this California house entered by H. Roy Kelley, Architect, of Los Angeles, in the General Electric competition. Porches upstairs and downstairs and a broad, sheltered terrace at the rear all encourage outdoor living

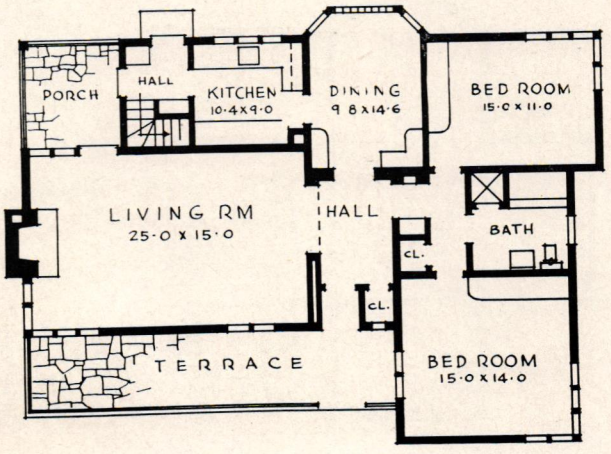
A book alcove lends interest to the living room of the H. Roy Kelley entry in the General Electric competition. The plans are below and other views of the house are presented overpage as well as on the opposite page



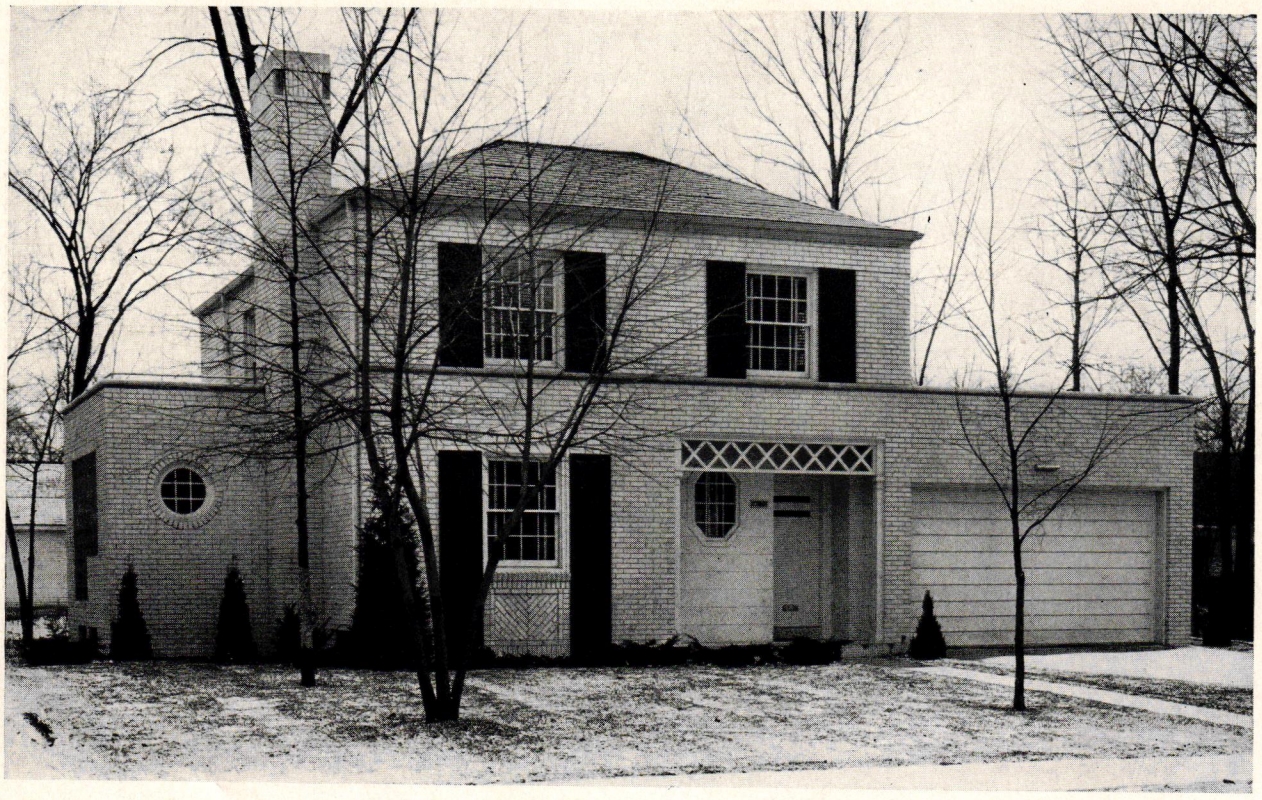


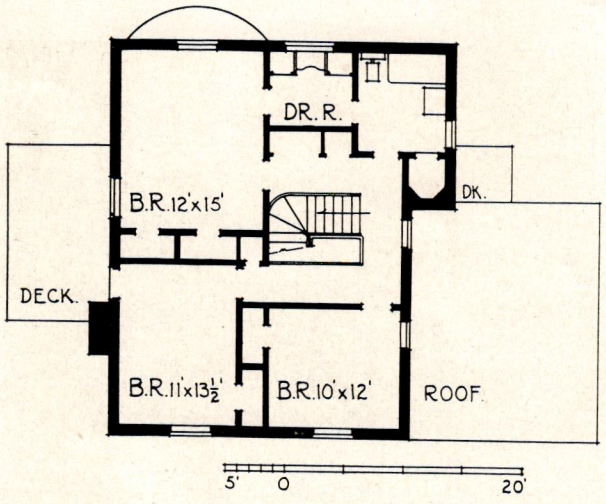


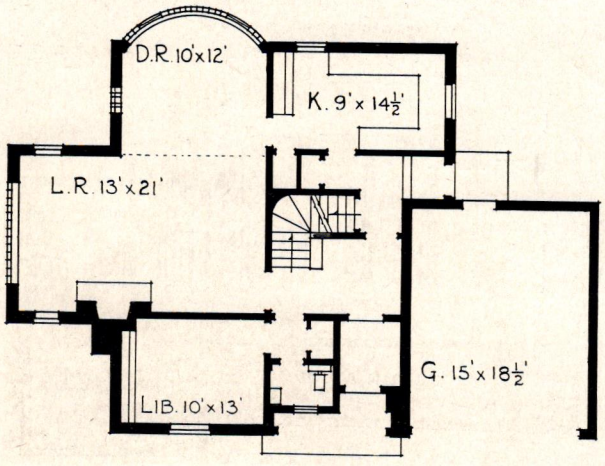
Ample working space and all equipment needed for the kitchen of a large home are found in the house designed by H. Roy Kelley, Los Angeles Architect, and entered in the General Electric competition. The distinctive covered balcony on the second floor is shown below



The charm of this small house designed by Norman W. Cook, Architect, of Ottawa, Illinois, is indicated by the rear view, showing the dining room bay and living porch. The house was entered in the General Electric competition by the owner, D. R. Hanley, of Streator, Illinois. Typical of the interior detail is the bedroom chest-wardrobe, a commodious and attractive provision

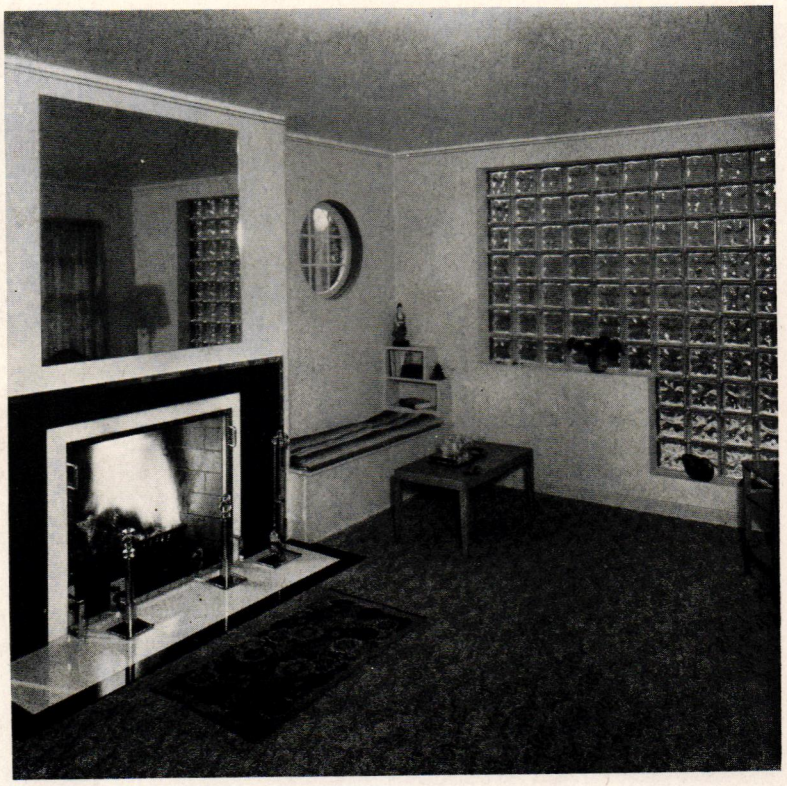




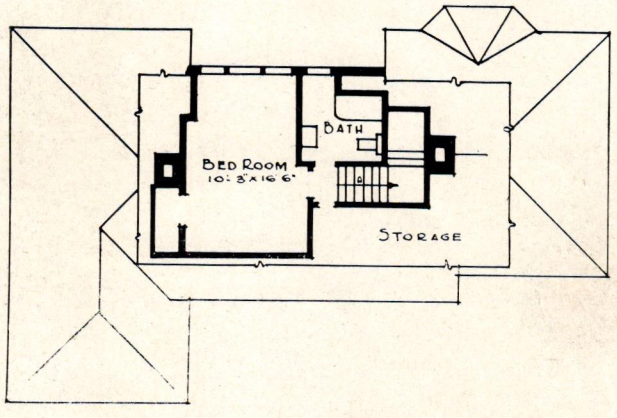


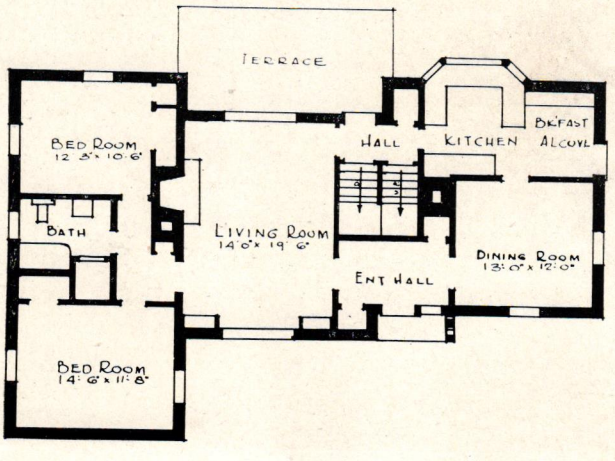
The centralized plan often desirable in a two-story house is exemplified by this Detroit home designed by Earl L. Confer, Architect, for Mr. and Mrs. Wiley D. Sanderson, and awarded a $1,000 prize in the competition. The entrance and stair hall gives direct access to the secluded library, as well as to the living room and the dining room with its wide view of the garden

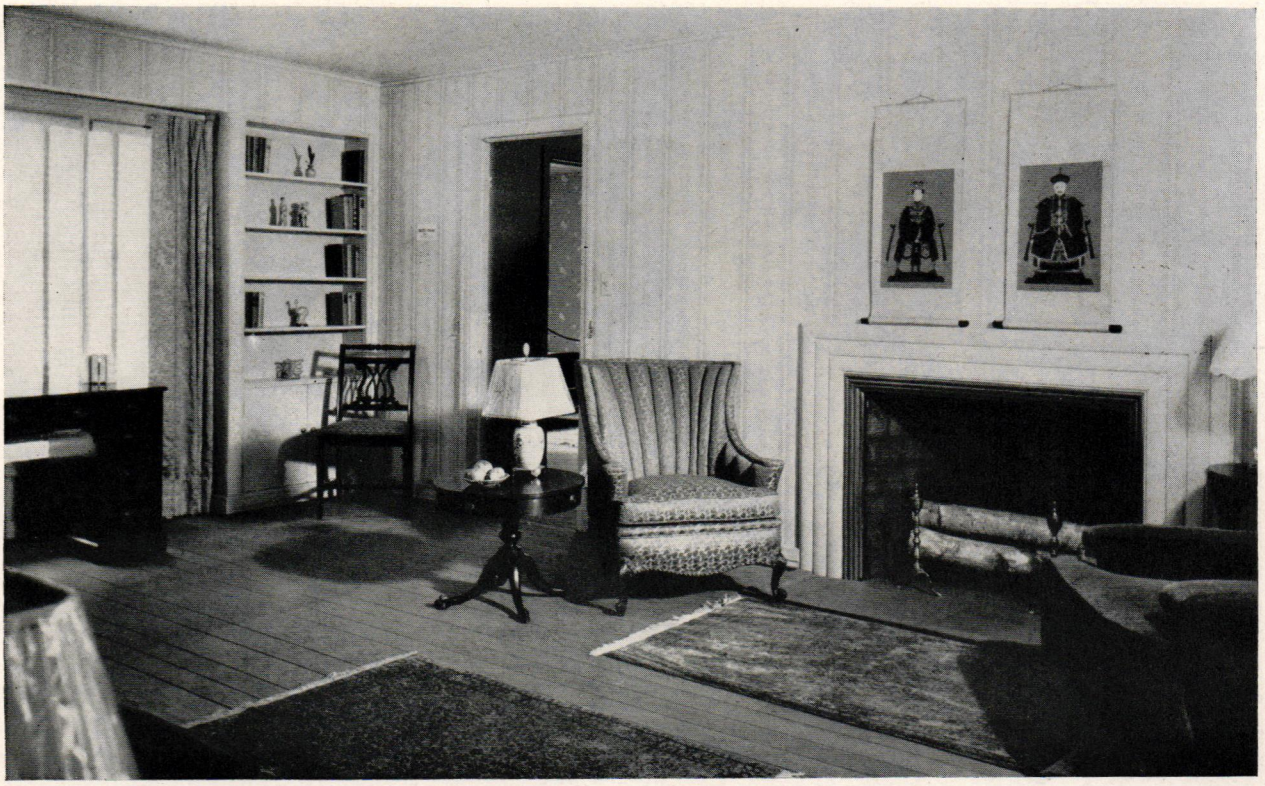
Glass brick in the side wall of the living room gives maximum light, without destroying the privacy of this room, and adds to the architectural interest of the fireplace corner. The quiet, paneled library, below, with an adjacent lavatory, also is suitable for use as a downstairs bedroom or as a guest room



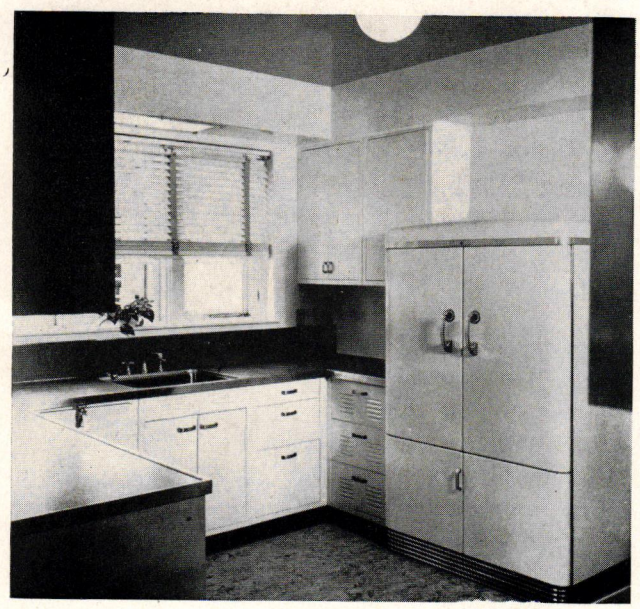
Ditchy-Farley-Perry, Detroit architectural firm, designed this home for R. H. McKenzie, of Detroit, and entered it in the General Electric competition. The enclosed dooryard and recessed entrance lend interest to this façade

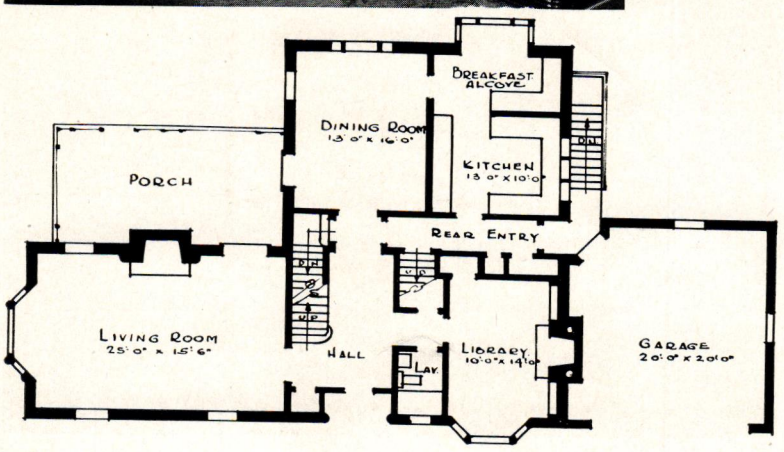




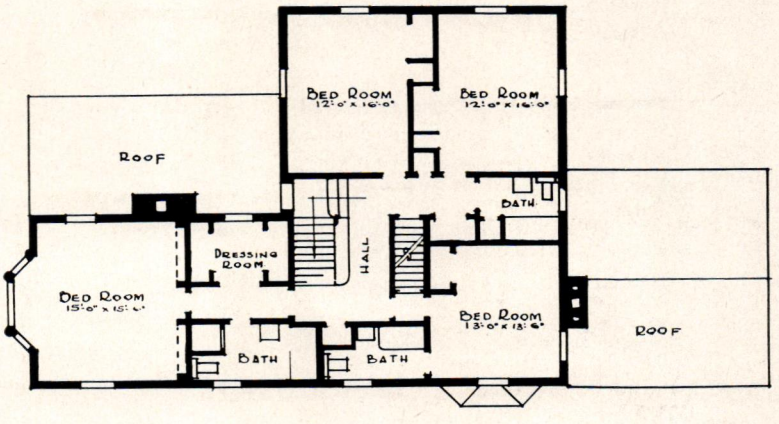


A large living room, above, runs through the Ditchy-Farley-Perry house to a pleasant terrace at the rear. A breakfast alcove, at right, is provided adjacent to the fully-equipped, compact, modern kitchen

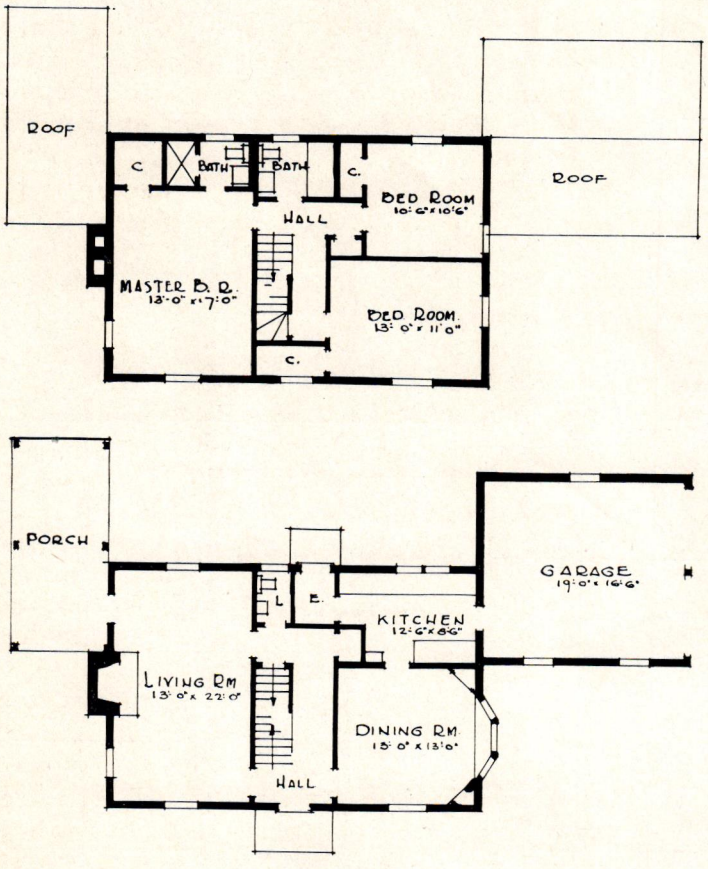




For Olive G. Moon, who entered it in the General Electric competition, this Highland Park, Illinois, house was designed by White & Weber, Architects, of Chicago. Counters and rows of conveniently-placed cabinets give ample work space in the kitchen, shown above



The living room of the White & Weber house, one of the 20 $1,000 prize-winners of the General Electric competition, has windows on three sides and is of generous size. The principal entrance to the house, above at the right, is unusual in the treatment of the glass area



John C. Lyons was the architect and builder of his own home at Marblehead, Massachusetts, which also won one of the 20 $1,000 prizes in the General Electric competition. The quiet distinction of the architectural treatment is consistent with the compact, rather formal plan

WIRING IS PART OF PLANNING

AND SHOULD BE MADE ADEQUATE FOR FUTURE LOADS

BY HENRY OTIS CHAPMAN, JR.

ORIENTATION, climate, selection of views, service, use, and the accommodation of the social standards and living habits of the family are carefully balanced in the house plans we submit to our clients. We strive for beauty and balance of design in harmony with the natural surroundings and the tastes of the client. In spite of this careful effort, too often a conscientiously planned house will stand as a thing of beauty long after its mechanical elements have become so obsolete as to have undermined its real value as a home. Thus we learn that such elements are essential to the functioning of plan and design in pace with constantly progressing modes of life.

Electrical service has an accepted place in modern living. Serviceable house wiring should be included in house plans. The rub is that wiring which assures continued satisfaction of use is not easily achieved by an unfamiliar hand. An installation must dovetail the functional aspects of the house plan. It must fit the style of living that is implicit in the style of the house. To express intelligent forethought in well-planned wiring is to enhance the livability of the house and to defer one form of obsolescence which is developing substantial proportions as a threat to property values.

It is understood that we all wish to avoid the extremes suggested by equipment-conscious clients who have permitted their imaginations to stray through a mass of consumer advertising, with no sense of proportionate values to guide them. No doubt we have all met at least one of those naïve young couples, with $12,000 for a new home, who blandly list for the architect enough ultra modern equipment to absorb $5,000 before they even begin to consider anything else. Frequently, the size of such a commission does not justify the long hours devoted to helping them untangle real from imagined requirements. And we, ourselves, in specifying electrical equipment, often find it difficult to determine the adequate minimum that will preserve the economic balance of the house.

Henry Otis Chapman, Jr., was graduated in architecture from Cornell in 1922. Although he is engaged in general practice, he is particularly interested in residential problems. Henry Otis Chapman, Jr. and Harold W. Beder designed House No. 17 in the New York Fair

Let us look at *deferred obsolescence* as a factor in the question of electrical adequacy. Financing on twenty-year loans calls for postponing serious depreciation for at least the term of amortization. Wise planning, based on a keen sense of trends, offers reasonable assurance that any house built today will remain livable, and salable, for twenty years. The wiring installation, therefore, should provide capacity and flexibility to serve present normal electrical needs, as well as all additional equipment which might go into the home for at least two decades.

At first glance, this standard may seem to imply too elaborate a concept of the importance of electrical service. But such provision merely recognizes the trend toward reduced rates as uses are increased to include heating, cooking, water heating, air-conditioning, etc. As the cheaper rates for such services are offered, the householder usually plans to install the necessary equipment. Great is his chagrin if he learns that the entrance capacity or the circuiting of his house wiring system cannot supply the required power. Even more acute is his disappointment when he learns that the expense of replacement is forbidding. A new underground job may run to five or six times what would have been the added cost had the proper service been installed during building.

Another trend, which promises to spotlight the importance of electricity in the home with intensified emphasis, is the present tendency to *streamline* the routine of living. "This is easier," "This takes less time," "This runs itself," "This is more fun," are the word-of-mouth recommendations that are encouraging more families to plan for extra comfort, more leisure, a more retentive grasp on youth, and a quality of interest and enjoyment in the performance of home tasks.

The family that likes to dine on the terrace or serve tea in the garden is no longer a rarity in average American life. Greater privacy for the individual is in growing demand. Variety in hospitality, and more activities beyond the home are broadening the immediate horizons of thousands of families every year. Hobbies and independent activities for each member of the family quickly develop when household responsibilities involve an inconsequential minimum of time and effort. The servantless home, particularly, requires close attention to wiring requirements. As long as families are disposed to eliminate servants and install electrical helpers, the service capacity and circuiting of the wiring system and the number and position of outlets and switches will continue to assume an increasing importance. Many families forego servants and plan housekeeping with the aid of modern equipment, on a semi-self-conducted basis. The budget item for a servant's wages can then be devoted to theater tickets, country club dues, dancing lessons and other luxuries—so, by all means, let us anticipate the resulting demands for essential electrical equipment.

The standard for living comfort rises each year in each income group. Granted this fact, we must provide for increases in the demands upon house wiring which new electrical aids to comfort will make. This year the new room heaters, room coolers, attic ventilator fans and other simple fore-runners of air-conditioning are beginning to prove, in popularity, factors to be reckoned with. Each of us can mention, off-hand, many other similar straws in the wind. Certainly, the continuing national circulation of news and editorial matter on the subject draws public attention to the increasing possibilities of electrical service in homes.

To be specific about the question *what is truly essential?*, let us consider the basis for an adequate minimum of electrical service:

First, each room must be allowed its proper facilities, (a) for the accepted uses of electrical service in such rooms, (b) for fully materializing the functional plan, (c) for probable increases in portable or built-in electrical accessories and equipment.

Second, the position of these facilities is important. Wall switches to control each room's chief lighting unit are needed on the latch side of the principal doorway. When commonly used doorways are ten feet or more apart, wall switches at each of these doors should provide multiple control of the chief lighting unit or, lacking a ceiling fixture,

Some one has figured out that the happy bride, on her golden wedding day, will have washed the dishes 54,600 times. Allowing a half-hour for each session at the sink, she has put in 3⅛ solid years of wedded bliss with her hands in dishwater! The electric dishwasher eliminates most of the time and all of the drudgery normally associated with cleaning up after meals. The disposal unit in the sink itself carries away the kitchen wastes with the exception of bottles and tin cans. Yet these Twentieth Century aids to easier living present no obstacle to the designer in his choice of materials for the architectural treatment of the kitchen décor

MINIMUM OUTLET REQUIREMENTS FOR RESIDENCES

FRONT ENTRANCE

One or two to conform with style of architecture.

Located just inside door to control entrance lighting.

WP For decorative lighting.

HN For illuminated house number.

LIVING ROOM, BEDROOMS RECEPTION HALL*

More than one may be needed in large rooms (over 400 sq. ft. in area) or rooms with extremely low ceilings.

According to needs for decorative or supplementary lighting.

One in each usable wall space 3 ft. or more in length at the floor line, with others located so that no point in any wall space, unbroken by a doorway, is more than 6 ft. from an outlet.

One on latch side of principal doorway, to control chief illumination. One at same point for wall brackets, if installed. Multiple control of chief lighting wherever commonly used doors are ten feet or more apart.

NOTE: The ceiling outlet may be omitted if two or more convenience outlets or wall brackets are provided with switch control as specified for chief illumination.

*: *Also refers to library, den, sun room, recreation room, enclosed porches.*

COVERED PORCHES, TERRACES, PATIOS

One per 100 sq. ft., (or major fraction), of floor area.

One located within house. (Multiple control if needed)

One per 15 ft., (or major fraction), of wall.

DINETTE, BREAKFAST NOOK

One over table space.

One on latch side of door nearest kitchen.

At table height in center of wall space to adjoin table.

OTHER ENTRANCES

At other commonly used entrances, side and rear.

Located just inside door.

KITCHEN

Centrally located, for general illumination.

Supplementary lighting units for each important work area, (to eliminate shadows on range, sink, counters, etc.)

To control central lighting, one on latch side of principal doorway. Multiple control of central light wherever commonly used doors are 10 ft., or more, apart.

At elbow height, one at each work area plus outlets for such special purposes as clock, refrigerator, ventilator fan (with wall switch), water heater, range, dishwasher, etc.

KITCHENETTE, PANTRY

At least one, for general illumination. Additional units for supplementary lighting at work surfaces, as needed.

On latch side of door, to control chief light.

LAUNDRY or LAUNDRY SPACE

One over each work center, (tubs, ironing board, etc.)

On latch side of main doorway, for chief lighting unit.

One for each important work area. Pendant type, 3 ft. in front of tubs, is best for washer.

BASEMENT

One near foot of stairs. Also, one in each enclosed space. Additional lighting in front of furnace and at work bench, if needed.

Near head of stairs, to control light at foot.

One near work bench for electric tools. One also may be needed for furnace.

ATTIC

One at head of stairs. Also one unit in each enclosed space.

One, at foot of stairs, to control chief attic light.

For general use.

CLOSETS

One, if floor area is 10 sq. ft. or more. (Pull switch)

For added convenience. (Particularly useful for coat closets.)

DINING ROOM, BREAKFAST ROOM

Over table space.

For decorative or supplementary lighting, according to style of interior.

One on the latch side of principal doorway. Multiple-control if commonly used doors are 10 ft. or more apart.

One in each wall space where a buffet or serving table may stand. Minimum two, one of which may be a floor outlet for a table-tap.

BATHROOMS

One if floor area is 60 sq. ft. or more.

One on each side of mirror.

On latch side of door, to control ceiling light, if installed, otherwise to control wall lights.

Near mirror, well away from faucets.

NOTE: A completely enclosed shower requires a vaporproof lighting unit, controlled by a wall switch outside the compartment.

HALLS

One per 15 ft. (or major fraction), of hall. Lights at head and foot of stairs included.

One at most commonly used entrance. Multiple control where path of light is needed.

One per 20 ft., (or major fraction), of hall.

STAIRWAYS

One at head and foot of each stairway.

At head and foot of stairways between active floors, one for each stairway light. (See also basement and attic requirements)

GARAGE

One over hood end of each car space.

Exterior, for lighting path to house.

One per two ceiling lights, conveniently located.

To control exterior light from both garage and house.

It should be borne in mind that the requirements shown here for outlets and switching are minimum—not necessarily representing all the conveniences that are desirable. These minimums have been approved by the National Adequate Wiring Bureau. Local laws should be observed in the locating of switches for bathroom and laundry lights.

should control the bracket lamps or certain of the outlets for portable lamps. This is essentially a safety measure to preclude any necessity for taking one step into a dark room. Switching arrangements, unless well planned, do indeed "date" a house. Often, when entering a home that is not decidedly new, it is amusing to observe the clumsy placing of the light switch beyond convenient reach. It can be spotted at once as typical of one of the several brief eras of ineptitude in the development of modern wiring practice.

Three-way and four-way switches are needed to provide a path of light ahead (and control of lights left behind) in one's normal progress along halls and up and down stairs. We are most of us well versed in the effective arrangement of lighting fixtures. Equally important is the relative position of each baseboard outlet. These should be spaced so that each usable wall space of from three feet to twelve feet in length at the floor line is served by a duplex outlet. One duplex outlet cannot adequately serve more than twelve feet of length. Greater convenience is assured when due thought is given to possible uses of the corners of the room and these outlets are located toward each end of a space, rather than in the center.

Third, capacity must be adequate. This means that one lighting circuit must be provided in the house for each 500 square feet of floor area in the finished room and enclosed porches. Outlets which are remote from the distribution center should be served by #12 wire (larger than the minimum #14) to supply undiminished voltage at the outlets. Additional circuits of no smaller than #12 wire should feed properly placed convenience outlets in kitchen, pantry, dinette, breakfast room, dining room and laundry—exclusively for the connection of heating and motor driven appliances which require full voltage for efficient and economical use.

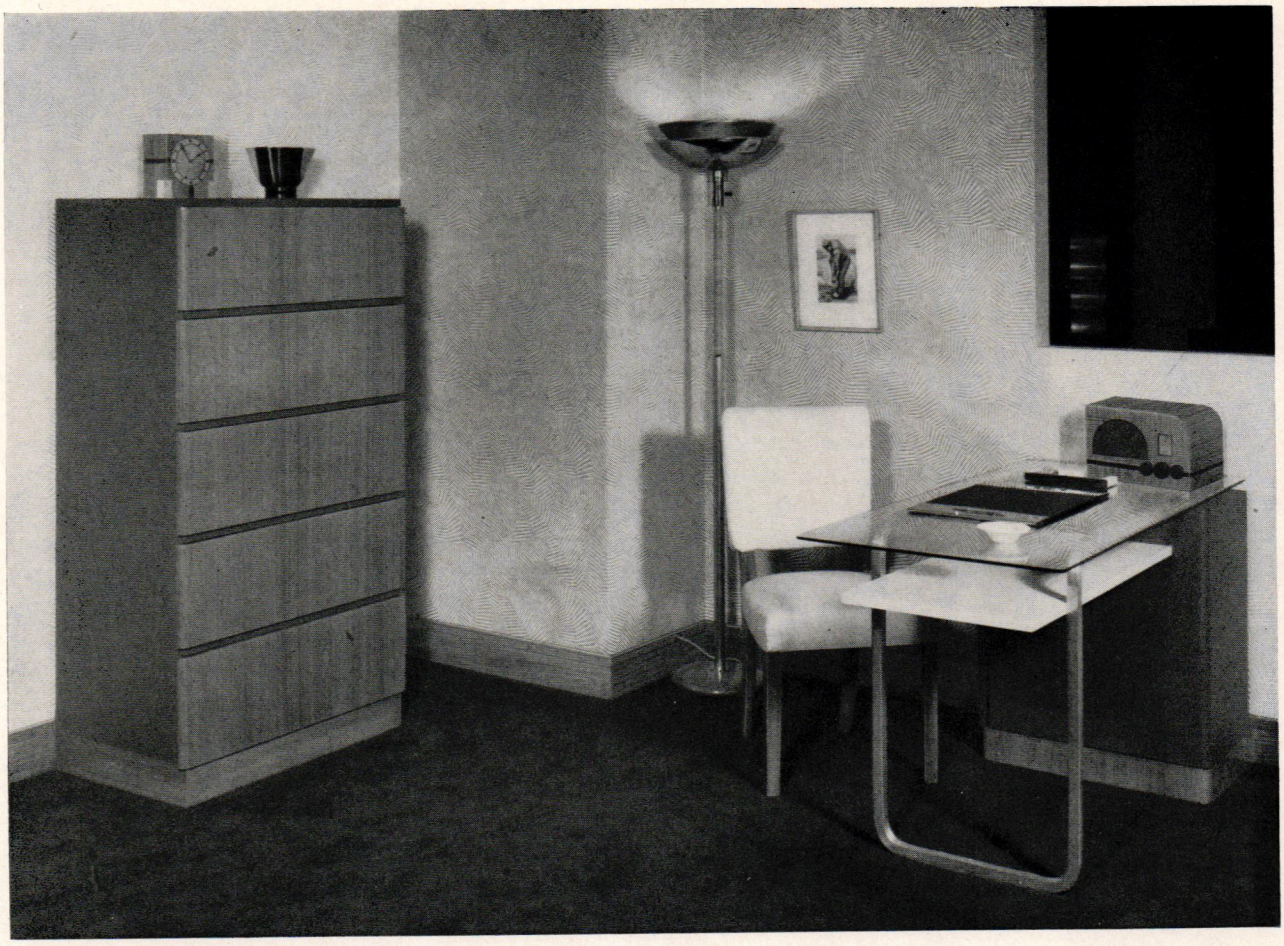
When wires are too small to accommodate the demand at the outlet, voltage drop is excessive. Dimmed lights and imperfect service from appliances result. When a circuit is *actually overloaded,* the protective device or fuses function to prevent damage to the wire from the heat which resistance creates. But when the devices in use on one circuit *almost* (but not quite) create an overload, the heat loss in the wire represents a continuing waste of electrical energy.

The probable demands on the total number of circuits must be recognized in computing the service entrance capacity. At this point is determined the efficiency and degree of flexibility of the entire installation. Power is delivered from the street service at full voltage. It flows through the entrance conductors to the meter, and on to the distribution panel where the branch circuits provide direct routes to the many points of use. The size of the conductors between the service line in the street and the outlets must be large enough to conduct the power without appreciably reducing voltage. Primarily, the entrance conductors are the bottle neck of the electrical supply. When they are of ample capacity to serve the many uses a good wiring system provides, the householder enjoys perfect electrical service at minimum cost.

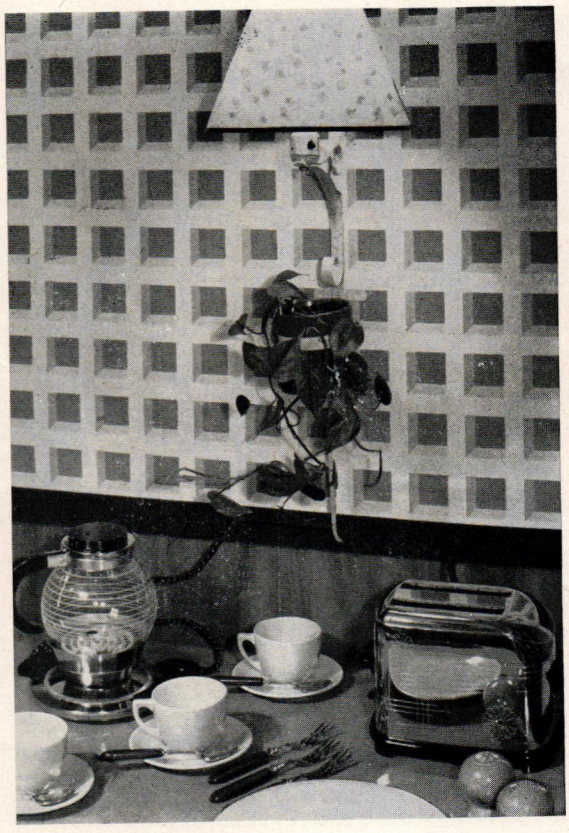
There are some, no doubt, who will contend that these considerations are beyond the scope of the architect's responsibility. "Let the power company specify the service," and "Let the electrical contractor lay out the wiring" they say. The answer is that *only the architect*

○	CEILING OUTLET
-○	WALL OUTLET
-(F)	FAN OUTLET
-◔	CLOCK OUTLET
-⊖	DUPLEX CONVENIENCE OUTLET
-⊖WP	WEATHERPROOF CONVENIENCE OUTLET
-◭	SPECIAL PURPOSE OUTLET
-◉	FLOOR OUTLET
$	SINGLE POLE SWITCH
$3	THREE WAY SWITCH
$4	FOUR WAY SWITCH
$D	AUTOMATIC DOOR SWITCH
$P	SWITCH AND PILOT LAMP
▣	PUSH BUTTON
□/	BUZZER
□○	BELL
◁	TELEPHONE
-[R]	RADIO OUTLET
-○HN	ILLUMINATED HOUSE NUMBER
▬	PANEL

The Adequate Wiring Bureau recommends these symbols for use on plans. The table which is reproduced here is at a size which can be readily traced for use on plans



It would be hard to think of anything more annoying than to find that the light outlet you wish to use for plugging in an electric appliance is covered up by a heavy piece of furniture—unless it would be that there is no outlet at all available. With a continuous outlet strip used as a baseboard cap, a chair rail, or a horizontal corner molding, it is impossible to cover up the outlets because they occur at frequent intervals. An outlet is always available in a convenient place for the attachment of small appliances or portable lighting



knows the standard of living the house is designed to serve. *It is the architect* who can most accurately anticipate the relation between the electrical service and the functioning of his plan in active terms of daily living. *It is the architect* who must safeguard the home owner's investment in electrical service and equipment as basic structural detail.

In the light of this truism, it is apropos to review the newer types of equipment.

The circuit breaker for the protection of branch circuits is a fairly recent development. Circuit breakers are available in both flush and surface mounting types, for the control of lighting, range, water heater, and appliance circuits. An excessive current draw will actuate a spring mechanism and break the circuit. The breaker will continue to trip out until the overload is eliminated.

Outlet strips prove useful along the planned work centers in kitchen and pantry, across the end of the table in the dinette space, and along the buffet shelf in the recreation room. They should be supplied by circuits of wire not smaller than #12. Major electrical equipment (with the exception of the refrigerator, disposal unit and dishwasher sink) calls for separate circuits. Stoker, oil burner or water pump motor requires a circuit of #12 wire. An electric range needs its own circuit of three wires, #6 or larger. For most water heaters and room heaters, wires should be #10. Air-conditioning apparatus must have its own wiring of capacity based on the motor sizes.

The flush mounting of the circuit breaker makes a neat installation which can be located at any convenient spot. The circuit breaker may be used with an outside meter, wires from the meter passing directly through the wall into the circuit breaker. The outside meter allows the electric company's meter reader to determine the current consumption without entering the building. Circuit breakers should conform with NEC provisions

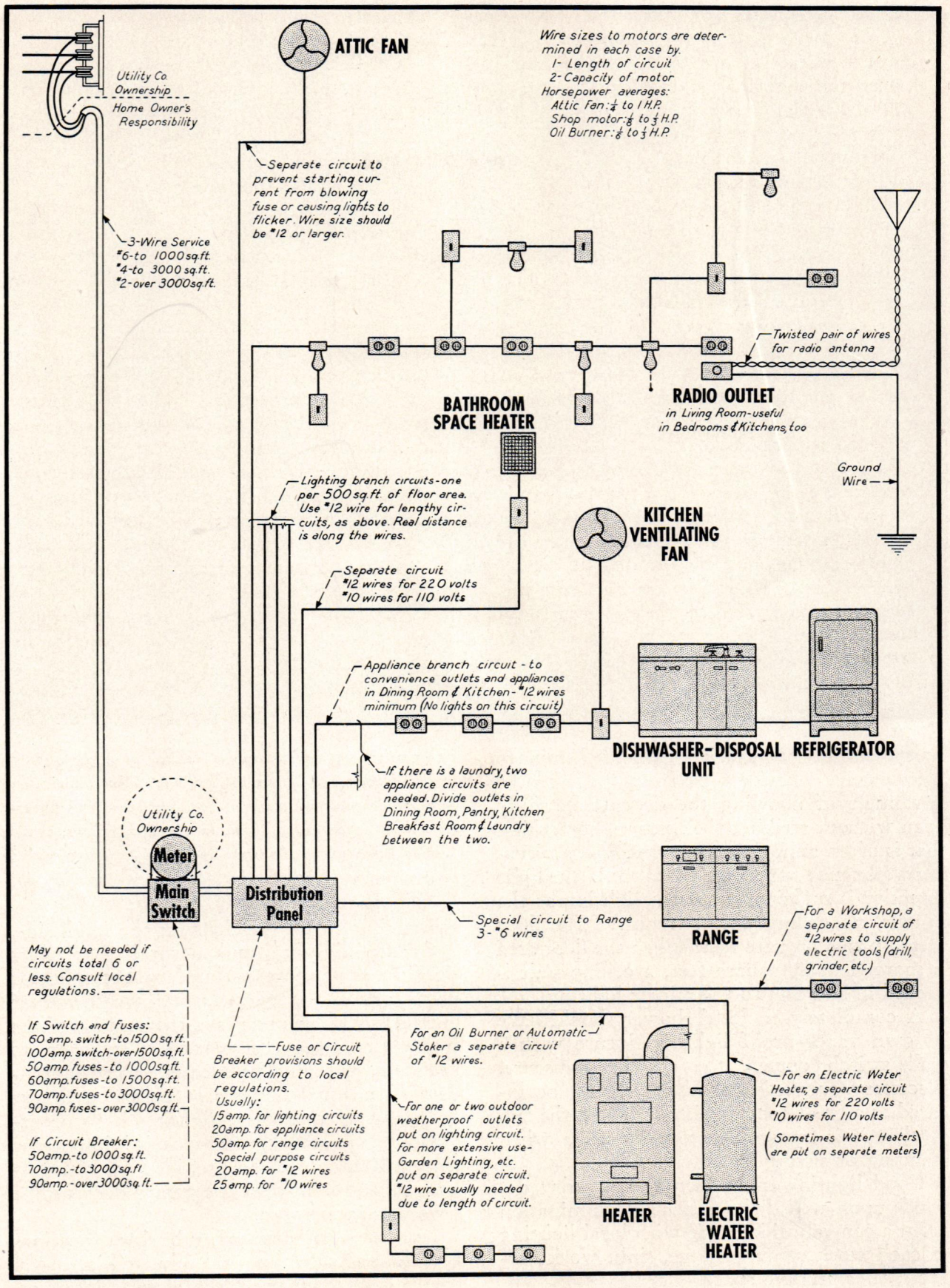
Other new developments include ground and antenna connections brought to special outlets for radios in the bedrooms, living room, recreation room, and kitchen. Concealed raceways for telephone wiring have been accepted practice for some years.

In the past, we have discriminated between lighting for vision and lighting for decorative effect. Certain lamps and fixtures supplied the positive element of illumination. Others added decorative value. Today the tendency is to combine these services in more flexible lighting schemes. For good visibility, medical and health authorities have urged diffused lighting of uniform brilliance. Lights can be so arranged that a few can be switched on merely to assure eye comfort when conversation, and not reading, is in progress. Additional light of the proper intensity for any special use of the eyes can be added as it is needed.

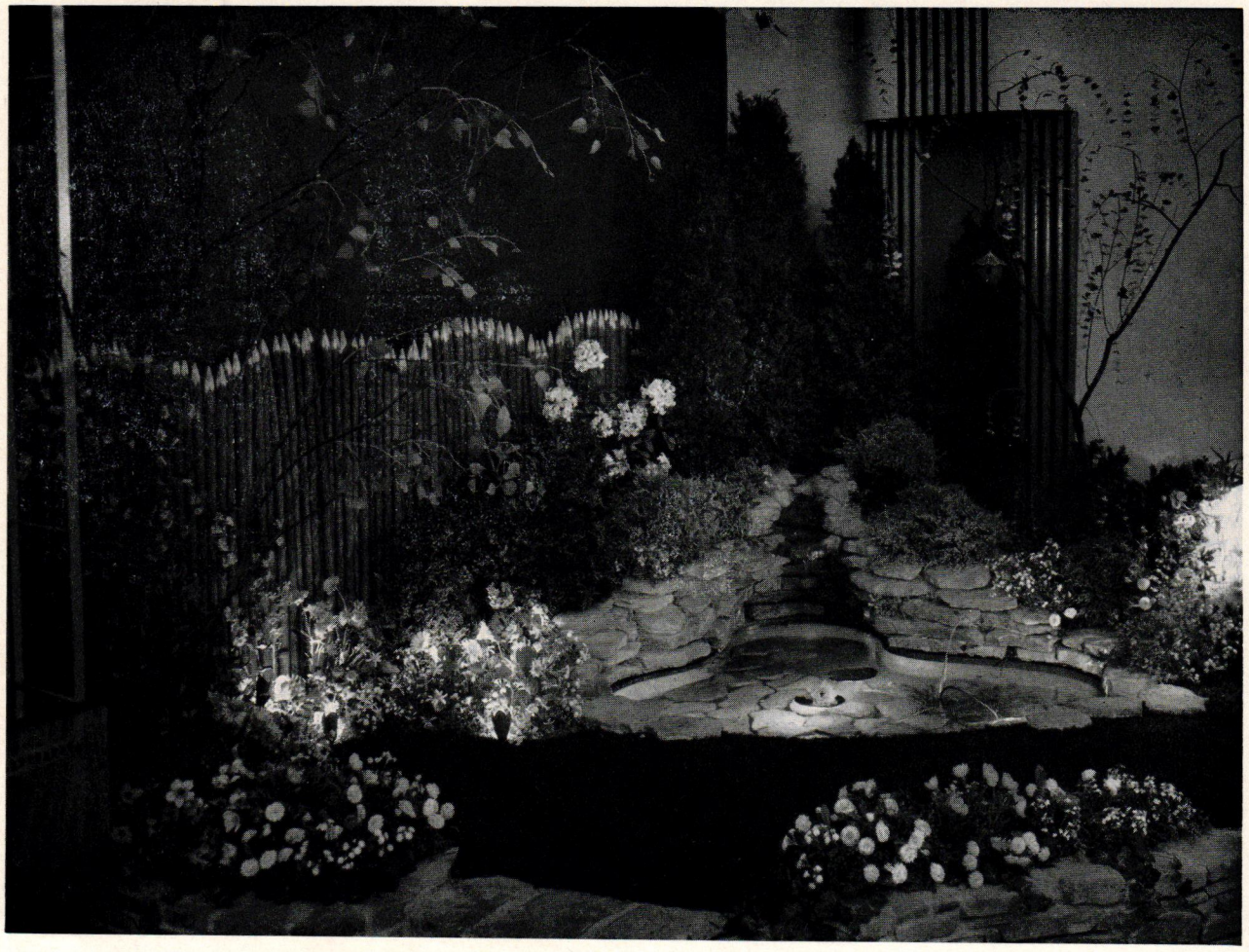
One of the newest developments in lighting is the development of the Fluorescent Mazda Lamp. Superficially, it resembles the well-known Lumiline type of lamp. The Fluorescent Lamp can be obtained in 3 lengths and 2 diameters. The colors available are white, blue, green, pink, gold, red, and daylight. The daylight colored lamp gives a light almost exactly matched to standard daylight. Colored objects are seen in practically a perfect rendition of their outdoor appearance. One typical application of these lamps is the use of one daylight lamp and one white lamp on each side of a full-length bedroom mirror. A woman can study her appearance under outdoor or indoor lighting by using one or the other pair of the lamps.

Light should also be provided at the head and foot of each stairway, with wall switches to control the lights from either upper or lower level. Any closet that is not in direct line with a lighting fixture needs a rigid ceiling or bracket fixture with pull chain, door-switch, or wall switch control.

Bathroom mirrors are best illuminated from light sources on each side. Many manufacturers of bathroom cabinets have made the side lighting an integral part of the design either



This comprehensive diagram indicates the desirable standards for wiring adequacy as recommended by the National Adequate Wiring Bureau. The suggested circuiting and wire sizes are based on a very careful analysis of what the home owner may reasonably expect from his wiring system. The requirements are not extravagant or overgenerous



The garden can be made as attractive at night as it is in the daytime, by means of lighting. The electric lily pads in the pool are made of metal with a tiny watertight light underneath them. In the flower beds, small, painted reflectors in the shape of flower petals are readily hidden in the foliage so that they are not seen by day

by the addition of bracket lights or luminous glass panels. These cabinets usually have the advantage of allowing the door to be fully open without striking the fixture—something that is often annoying when separate projecting wall type fixtures are installed. If the light intensity is sufficient from the lighting at the mirror, no ceiling unit is required for floor areas up to 60 square feet. When the floor area is more than 60 square feet, a ceiling unit is needed in addition to the mirror lighting.

A completely enclosed shower should have its own vapor-proof lighting fixture with a wall switch outside the shower enclosure. Necessary convenience outlets should be located at a great enough distance from the tub so that it is impossible to reach them when standing or sitting in water.

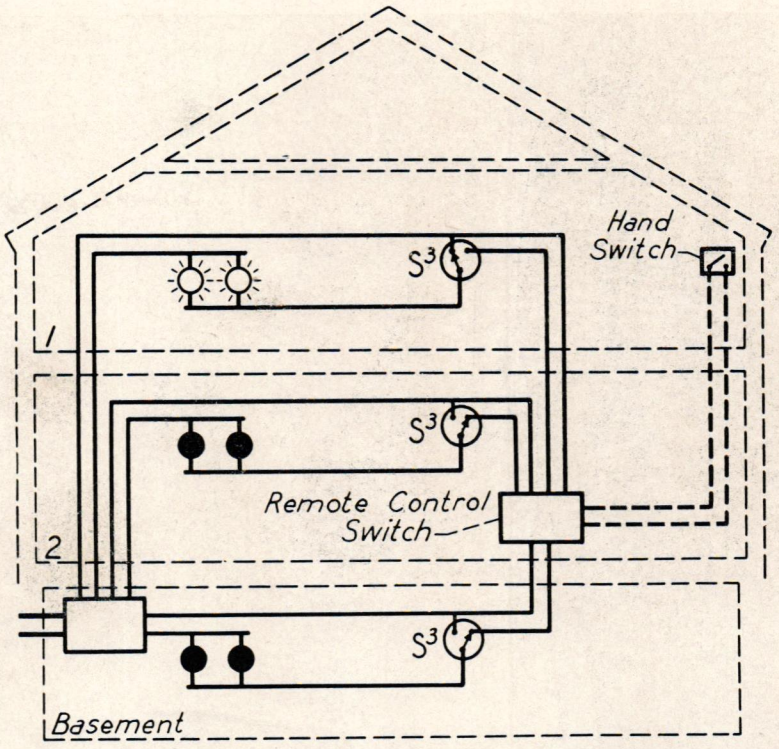
Good lighting in kitchen and laundry depends upon well diffused general illumination from a central ceiling unit with local lighting at each work center—range, sink, work surfaces, tubs, ironing space.

Exterior lights are needed at each entrance to the house with one or two at the front entrance, depending on the style of architecture and whether or not there is a porch. The lighting of each house entrance should have its switch just inside the door on the latch side.

Garden lighting and decorative outdoor lighting at Christmas-time are becoming so popular that it is wise to install weatherproof outlets at strategic points in the exterior of the house wall near the ground. Circuiting to these outlets should be adequate to accommodate an unusual number of lamps on festive occasions. If protective lighting is to be attached to the same connections, it is important that switch control be provided for the outlets. A flood light over the garage door can be classed as an essential.

Dwellings in isolated suburban locations may be, and sometimes are, plunged into total darkness by failure of the electrical service. This usually occurs during an emergency when light is more important than during normal times. Nothing could be calculated to strike terror into the hearts of the occupants of a secluded country home than to have fire break

It is said that night prowlers fear two things—the bark of a small dog, and light. In this simplified diagram is indicated a method whereby a selected group of lighting fixtures, or all the bulbs in the house and on the grounds, can be illuminated by the flip of a small electric switch. Such a switch is usually placed at the bedside in the master's bedroom. Wiring connects this to the remote control switch. The remote control switch will not affect lights which are burning but will turn on lights which are out. As a protection for secluded country homes, this system creates a very real security



A louvered plate with a small light behind it provides a night light in the nursery. The light is thrown down so that it does not disturb the sleeping child but allows the nurse or mother to enter and leave the room without falling over toys or furniture. A night light of this type is also desirable in the guest room so that the stranger can orient himself when waking up there

This bedroom illustrates the part electricity can play in creating more house for the money. First of all, it is a guest bedroom with radio, electric clock, bedside lighting and fluorescent daylight lighting at the dressing mirror. Second, the room serves as a sitting room for the parents when the young folks take over the rest of the house. The third use for the room involves a transformation—see the illustration on the opposite page

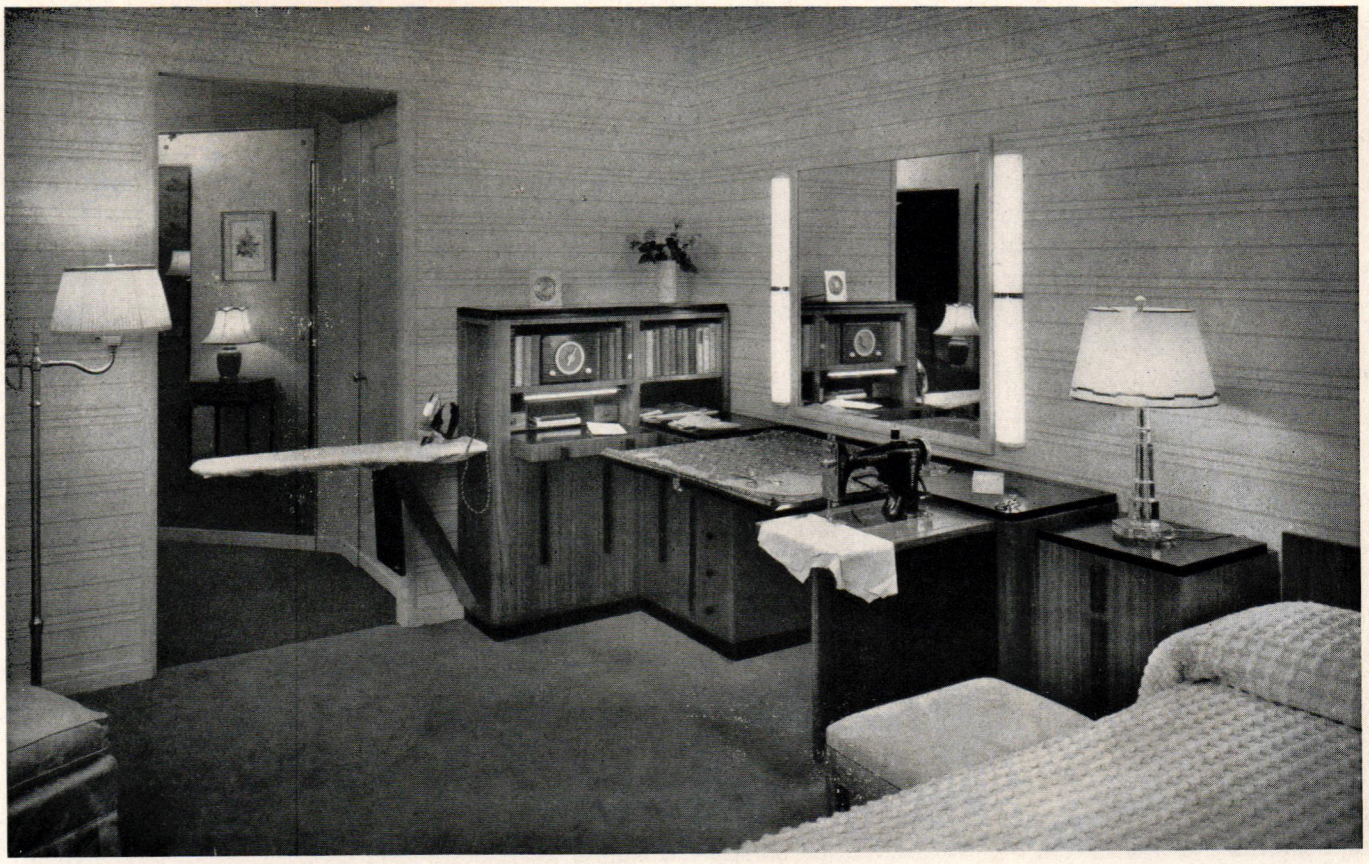
out or to have lightning strike the building, without the protection of being able to see. Various emergency systems are available, ranging from very inexpensive semi-automatic low-voltage emergency supplies up to fully-automatic systems with a capacity of 60 amperes. Emergency lighting protection provides definite security and convenience.

In planning for electrical service other than lighting, specific uses must be totaled. In the living room, spare outlets will be needed for the probable electric clock, radio, and regular use of the vacuum cleaner. These provisions should remain after all the portable lamps have been connected so that the arrangement of the room need not be disturbed to allow the use of the vacuum cleaner or other appliances. In some homes a floor outlet on the appliance circuit will be welcome near the fireplace where an electric hospitality tray may be brought to the coffee table. In dining rooms, duplex convenience outlets on the appliance circuit will be needed in each wall where a buffet or serving table may stand. A floor outlet is desirable for connecting a table-tap in the servantless home. Appliance outlets should also be installed at elbow height at each work center in kitchen, pantry, and laundry. For the washer, the pendant type outlet is best. Throughout the house, extra base outlets amplify livability. Each bedroom becomes more truly the private sanctuary of its owner when outlets offer opportunity to use conveniently the several comfort-yielding toiletry or health appliances each member of the family is inclined to adopt.

A corner of the basement can become a handy workshop if a drop light and convenience outlet have been installed. In the garage, an outlet for each car space is useful when the trouble-shooter lamp or an electric tool is needed. We know that all of these uses of electricity in the home are already popular. The provisions recommended here are no more than adequate—as they apply to homes of varied sizes and styles.

In rounding out and perfecting the general plan of any house, these elements must be considered so that the character of the electrical installation will not hasten obsolescence while other equipment maintains modernity.

The electrical needs in homes are determined by typical equipment and lighting requirements which are more or less uniform. Hence, it is a fairly simple matter to establish the



Here the bedroom becomes a very ample sewing room. The electric sewing machine pulls out of the cupboard, one of the bedside lamps is controlled to produce 50-foot candles for the finer work of sewing. The ironing board and cutting table appear with no trouble at all—when their need has been fulfilled they are replaced very simply. Naturally no such complete electrical convenience could be had without wise and adequate wiring

minimum wiring of any house, in keeping with its size, style, and the standard of living it represents. On the other hand, the apartment house, hotel, office building, school, theater, or any commercial building, presents so many special requirements that one cannot generalize concerning the standards for wiring except in broad terms. However, adequacy of the electrical installation is vital. It is no trifling architectural duty to allot the building dollar to all the various trade divisions in such a way that the completed structure is in perfect balance—without undue emphasis on one essential part at the sacrifice of another.

In larger projects, electrical demands are of a highly specialized nature. The architect on operations of magnitude is forced to confine himself more closely to coordinating the activities of all the agencies whose efforts result in a completed building. On a residence he may, either for his own amusement or because of necessity, act as designer, detailer, specification writer, engineer, superintendent, and office boy. On a large building these functions are delegated.

Which introduces us to the engineer.

The architect will establish the general quality of the work, the scope of equipment, many specific functions which must be performed, and other "musts" which the electrical engineer is required to observe. The engineer should be selected on the basis of his experience in working with architectural organizations as well as for his knowledge of the highly specialized and detailed elements of an electrical system for a large building.

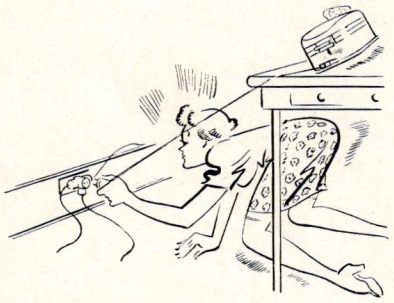
In apartment houses, electrical demands are influenced primarily by the living habits of the type of tenancy desired. It is necessary to provide a proper installation to reliably serve such equipment as elevators, pressure pumps, a multiplicity of radio outlets, electric cooking facilities, the lighting system, intercommunication system, and the electrical apparatus involved in the heating system. It is a complicated matter to assure uniformly good radio reception throughout a modern apartment house. Furthermore, the capacity of the service entrance, the size of feeders and the design of the wiring system are governed by many incidental factors which are peculiar to each individual structure.

Commercial, educational, and amusement buildings present even more intricate electri-

cal problems. Here, again, the architect must skilfully direct the electrical engineer (either one in his own employ, or an "outside man") to translate the architectural requirements of function, quality and convenience into details of circular mils and acceptable devices. The system must adequately serve the special requirements of such equipment as escalators, conveyors, commercial cooking installations, electric signs, stage lighting, tel-autograph systems, machines for manufacturing, fire pumps, etc. The building may require radio amplification and public address systems or talking picture and broadcasting equipment. It is up to the architect to see that the engineering of this highly specialized equipment does not mean neglect of such commonplace but vital necessities as proper lighting, convenience outlets, and telephone facilities.

Other details which must be considered include fire alarm systems (as required by local ordinances for various classes of building), cab announcing systems (stipulated for many hotels and theaters), electric time-keeping systems, electric eyes for certain elevators and doors, and (where the blind are to be served) presignalling alarm systems. The engineer will recognize local trade regulations, standards of the Board of Fire Underwriters, conformity with regulations of the lighting company—and the telephone company's requirements for conduits and other basic elements.

One glance at a completed electrical specification for a large apartment house, office building, theater, or department store, reveals the amazing fact that when a truly modern installation is planned, it can include as many *headings* as there are *items* in the specification for a medium or good-sized residence. The specification can be determined only by the character of the individual building and its functional purpose. The more fully that present and probable future electrical developments are recognized, the more efficiently will the building serve its occupants during the life of the building.

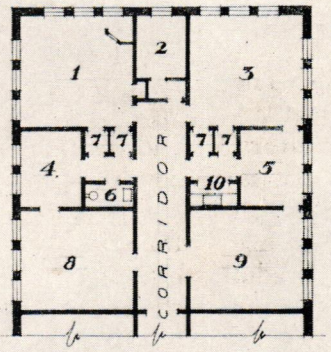


Photos on pages 330, 336, 338, and 339, by General Electric; page 333, by National Electric Products; page 334, by Westinghouse; page 337, by Arrow Hart and Hegeman

*TYPHONITE ELDORADO PENCIL PAGE

AN X-RAY DIAGNOSTIC DEPARTMENT IN A HOSPITAL

NOTE – FOR MINIMUM ROOM SIZES, REFER TO LITERATURE OF MANUFACTURERS OF X-RAY EQUIPMENT.

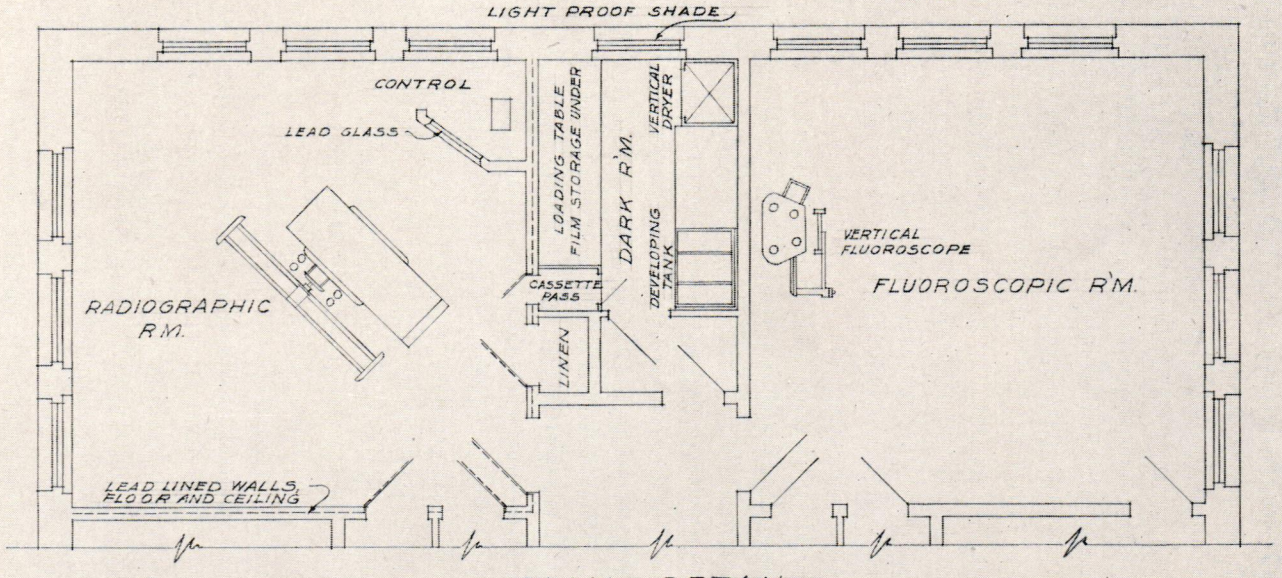


KEY PLAN
SCALE 1/16" = 1'-0"

⇦ KEY TO ROOMS.

1. RADIOGRAPHIC R'M.
2. DARK R'M.
3. FLUOROSCOPIC R'M.
4. RECORD R'M.
5. DR'S. OFFICE
6. LAVATORY
7. DRESSING CUBICLE
8. VIEWING & CONFERENCE R'M.
9. WAITING R'M.
10. PREPARATION ALCOVE

NOTE – WHERE SPACE SAVING IS PARAMOUNT, RADIOGRAPHIC AND FLUOROSCOPIC SERVICES MAY BE COMBINED, BUT DIAGNOSIS IS SPEEDED UP BY HAVING SEPARATE ROOMS.



PLAN DETAIL
SCALE 1/4" = 1'-0"

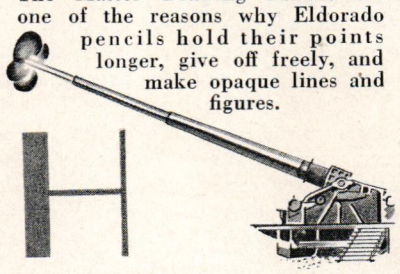
This drawing was made on PENCILTEX pencil cloth with TYPHONITE ELDORADO "H" pencil.

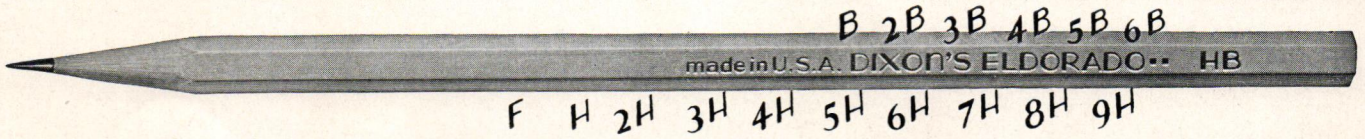
IN UTILIZING this month's drawing by *Typhonite Eldorado, two points should be borne in mind. First, an X-ray diagnostic department should never be confused with radiotherapy, an entirely different matter, demanding special study.

Second, the drawing reproduced here shows an ideal relation of one room to another. This fundamental relationship can be adhered to even though the shape and size of rooms are changed to meet special building conditions.

We offer, free, an actual size blue print of this drawing for your file. It will show you that Typhonite Eldorado's sharp, clean lines are ideal for blue printing. Just write to: Pencil Sales Department, 167-J5, JOSEPH DIXON CRUCIBLE COMPANY, Jersey City, N. J.

HURTLING from the muzzle of a long range gun, a shell travels 2600 feet per second. But think of this—far, far greater in velocity whirls the typhoon of dry steam used to batter graphite into the extremely minute particles called Typhonite. Typhonite is used exclusively by Dixon in making leads for Eldorado, The Master Drawing Pencil. It's one of the reasons why Eldorado pencils hold their points longer, give off freely, and make opaque lines and figures.





SERVICE DEPARTMENTS

THE MART. In this department we will print, free of charge, notices from readers (dealers excepted) having for sale or desiring to purchase books, drawing instruments, and other property pertaining directly to the profession or business in which most of us are engaged. Only those items will be listed for sale which we can no longer supply from our own stock. Such notices will be inserted in one issue only, but there is no limit to the number of different notices pertaining to different things which any subscriber may insert.

PERSONAL NOTICES. Announcements concerning the opening of new offices for the practice of architecture, changes in architectural firms, changes of address and items of personal interest will be printed free of charge.

FREE EMPLOYMENT SERVICE. In this department we shall continue to print, free of charge, notices from architects or others requiring designers, draftsmen, specification writers, or superintendents, as well as from those seeking similar positions.

SPECIAL NOTICE TO ARCHITECTS LOCATED OUTSIDE OF THE UNITED STATES: Should you be interested in any building material or equipment manufactured in America, we will gladly procure and send, without charge, any information you may desire.

Notices submitted for publication in these Service Departments must reach us before the twelfth of each month if they are to be inserted in the next issue. Address all communications to 330 West 42nd Street, New York, N. Y.

THE MART

WANTED: Copy of *Modern Perspective*, Wm. Robert Ware, Macmillan Company, N. Y., 1900. State price and condition. Communicate Miss Flagg, PENCIL POINTS.

Paul A. Guibert, 143 E. 39th Street, New York, N. Y., would like to obtain a copy of December, 1932, PENCIL POINTS. He will pay up to $1.00 for the copy.

Stanley A. Smith, 408 Michigan Avenue, Pullman, Washington, would like to purchase copies of PENCIL POINTS for the complete year 1921, preferably unbound. Will pay any reasonable price.

P. A. Nichols, 300 Tuxedo Avenue, Highland Park, Michigan, has for sale copies of PENCIL POINTS from May through December, 1937, complete and in perfect condition.

T. D. Herin, 266 N. E. Third Street, Miami, Florida, would like to purchase back issues of PENCIL POINTS from May, 1933, through April, 1936. Please state if price includes delivery charges.

Eugene A. Stopper, 1805 Liberty Trust Bldg., Philadelphia, Pa., would like to purchase a copy of *Prisons and Prison Buildings*, Alfred Hopkins, Architectural Book Publishing Company.

H. M. Liebeskind, 1511 45th Street, Brooklyn, N. Y., would like to purchase a second-hand correspondence course in structural design. State full particulars.

G. B. German, 4631 Jay Street, Duluth, Minn., has the professional library of the late F. G. German, Architect, for sale, and will send list of about 85 items to any one interested. Most of the books are rare and there are some out-of-print volumes. Some of the titles are: *Interiors Anciens en Belgique*, K. Sluyterman & McAtl. Cornette 1913; *In English Homes*, Chas. Latham, 3 vols., 3rd ed. 1909; *Orders of Columns*, Buehlman; *Materiaux et Documents d'Architecture*, A. Raguenet; *Les Concours Publics d'Architecture*, 13 vols., Wm. et Farge, 1895; 6 vols. of A. Pugin and A. W. Pugin's *Specimens of Gothic Architecture*, dating back to 1822.

M. D. Schoen, 1712 N. 8th Street, Sheboygan, Wis., has the following copies of PENCIL POINTS for sale: June through November, 1926; May and November, 1927; February, March, July, August, October, 1929; March, April, May, June, August, September, 1931; January, February, May, July, August, November, December, 1932; March, 1933. Will sell very reasonable, plus postage.

PERSONALS

CLARENCE OSTMAN PETERSON, *Architect*, has opened an office for the practice of architecture at 2140 Fell Street, San Francisco, Calif.

LINDBLAD & McLANE, *Architects*, have opened an office for the general practice of architecture at 123 East First Street, Dixon, Ill.

HERMAN H. SIEGEL, *Architect*, has opened an office at 339 Fifth Avenue, New York, N. Y.

The firm of AMES, CHILD and KUSSIN, *Architects*, has been formed to engage in the general practice of architecture. Offices will be located at 50 Beacon Street, Boston, Mass., together with the office of Edwin S. Dodge.

GERALD ANTHONY PAUL, *Architect*, will practice at his office, 1490 Rockaway Parkway, Brooklyn, N. Y.

DAVID A. YERKES, *Architect*, has opened an office in the New England Building, Topeka, Kansas.

THEODORE M. POLITANO announces the opening of the General Drafting Service at 3 South 5th Avenue, Mt. Vernon, N. Y.

STANTON WILLARD, *Architect*, announces the dissolution of the partnership of Symmes & Willard. He will carry on the practice of architecture under his own name with offices at 1314 Seventeenth Street, Bakersfield, Calif. Associated with him, as in the former partnership, are Arthur C. Metcalf and J. Warren Wright, *Architects*.

GEORGE A. THOMPSON, *Architect*, has opened an office at 424 State Street, Baton Rouge, La.

GILBERT ROHDE, *Industrial Designer*, has moved his offices to 22 East 60th Street, New York, N. Y.

FREE EMPLOYMENT SERVICE

POSITIONS WANTED

ARCHITECTURAL draftsman, 26, desires position in architect's or builder's office. Four years' experience with the city's building expert. Familiar with all types of buildings. Capable of estimating and personal supervision of small houses and stores. Graduate of Mechanics Inst. of N. Y. Moderate salary. Ellery Wankel, 1272 Albany Ave., Brooklyn, N. Y.

HIGH SCHOOL graduate with some drafting experience desires position with architect or builder in Philadelphia vicinity. Salary no object. Donald Shelton, 209 Broadway, Brooklawn, N. J.

DESIGNER and all around draftsman, 27, years' experience, all classes commercial, public and domestic buildings. Thorough practical man, perspective, rendering, sketches, working drawings, details. Take charge of squad or entire office. Salary modest. New York or New Jersey preferred. Box No. 500.

COLLEGE graduate, 33, unmarried, deaf, some architectural and six years' structural drafting, wishes position with architect or engineer leading to that of structural designer. Box No. 501.

(Continued on page 50, Advertising Section)

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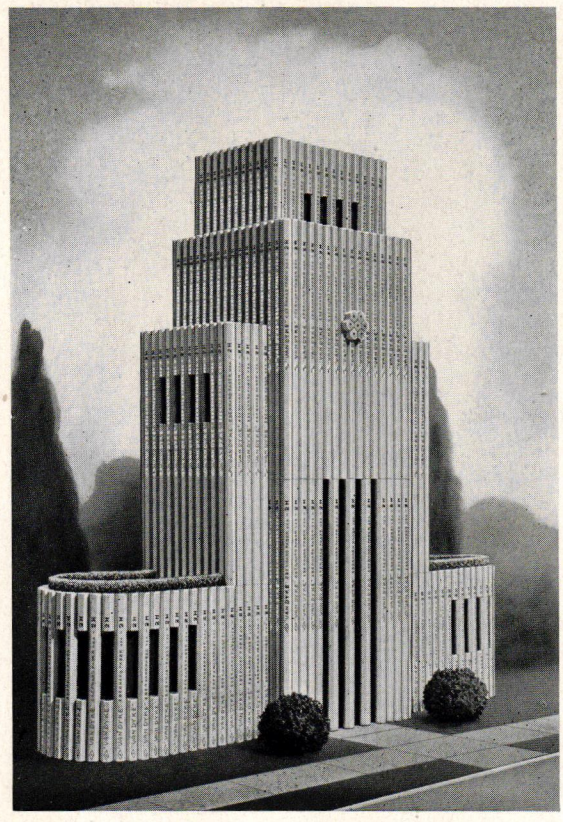

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PUBLICATIONS ON MATERIALS AND EQUIPMENT

of Interest to Architects, Draftsmen and Specification Writers

Publications mentioned here will be sent free unless otherwise noted, upon request, to readers of PENCIL POINTS *by the firm issuing them. When writing for these items please mention* PENCIL POINTS.

KAWNEER K. Z. S. ARCHITECTURAL PORCELAIN ENAMEL STORE FRONTS.—A.I.A. File No. 26-b-1. Useful new reference manual for architects and designers announcing and describing Kawneer architectural porcelain enamel panels for modern store fronts. Important features and advantages are covered, details included and various types of store fronts illustrated in full color. 16 pp. 8½ x 11. The Kawneer Co., Niles, Mich.

IN-BILT LIGHTING THROUGH HOLOPHANE CONTROLENS. — Valuable reference manual for architects and lighting engineers covering the application, performance and installation of In-Bilt lighting systems with Holophane Controlens. Specifications, sectional views, distribution curves, dimension tables, etc. Indexed. 32 pp. 8½ x 11. Holophane Co., Inc., Controlens Division, 342 Madison Ave., New York, N. Y.

TRANSITE WALLS BY JOHNS-MANVILLE.—Attractive brochure dealing with the subject of Johns-Manville Transite Walls, a movable partition construction for sub-dividing building interiors. Panel sizes, details, specifications, installation photographs, etc. 16 pp. 8½ x 11. Johns-Manville, 22 E. 40th St., New York, N. Y.

FRIEZ INSTRUMENTS AND CONTROLS.—Catalog K listing and illustrating a line of the latest controlling, measuring and recording instruments for use in heating, refrigeration and air conditioning. 24 pp. 8½ x 11. Julien P. Friez & Sons, Division of Bendix Aviation Corporation, Baltimore, Md.

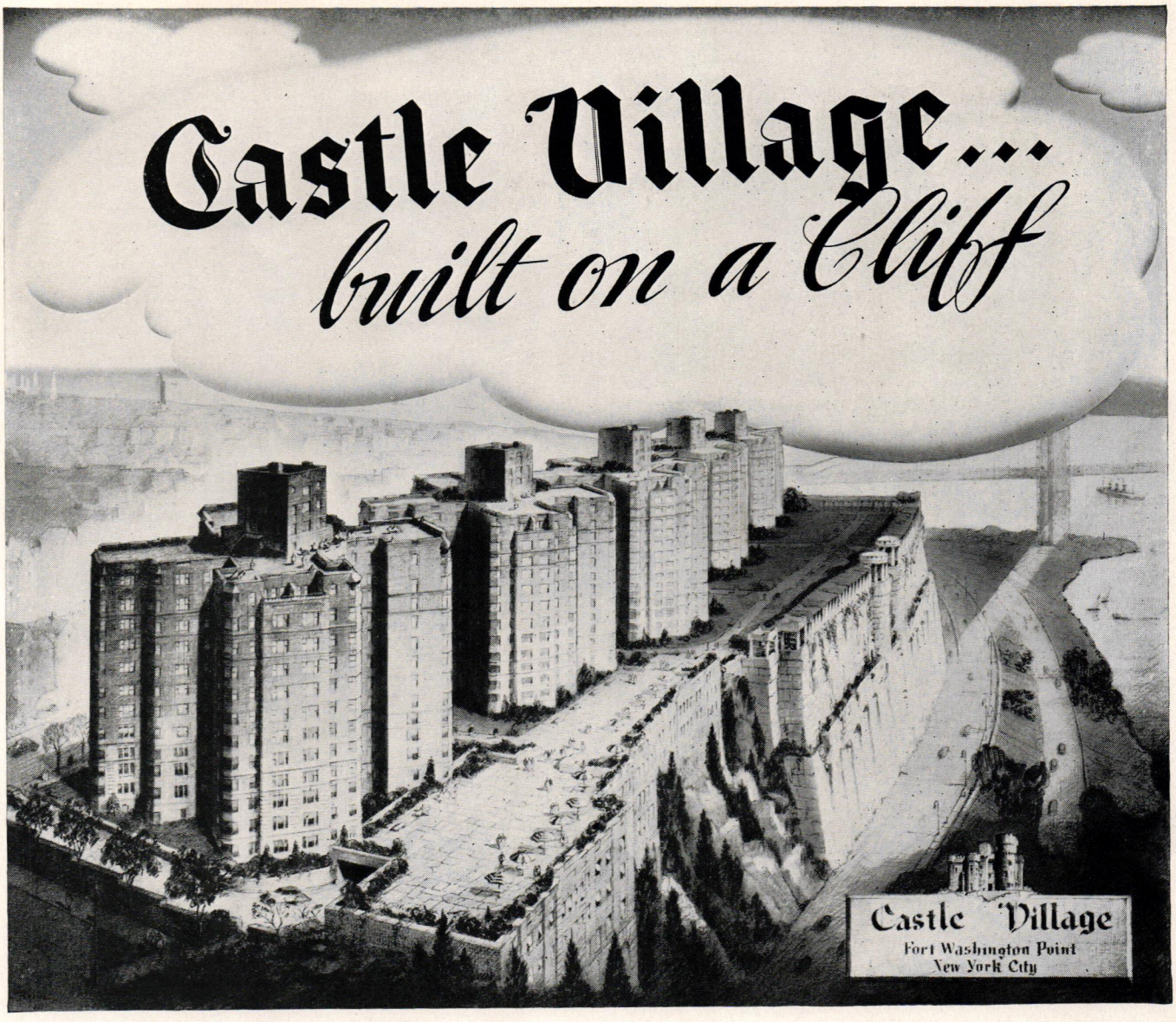
THE ELECTRO-MATIC AIR FILTER.—Bulletin No. 250 presenting detailed description of the Electro-Matic air filter, a new development in which electrical precipitation has been combined with automatic air filtration to obtain the combined advantages of these two methods of cleaning air. Engineering and mechanical data, capacity and dimension chart, specifications, standard arrangements, etc. 8 pp. 8½ x 11. American Air Filter Co., Inc., Louisville, Ky.

STANLEY MULTICHROME CABINET HARDWARE.—A.I.A. File No. 27-c-7. Folder describing and illustrating a complete line of colorful cabinet hardware, including hinges, spring latches, knob pulls, drawer and cabinet pulls. 4 pp. 8½ x 11. The Stanley Works, New Britain, Conn.

BRYANT WIRING DEVICES.—Folder listing and illustrating a line of wiring devices for residential installations, including tumbler switches, convenience outlets, range connectors, lampholders, interchangeable devices and flush plates. 6 pp. 8½ x 11. The Bryant Electric Co., Bridgeport, Conn.

(Continued on page 44, Advertising Section)

Castle Village... built on a Cliff



ARCHITECT'S CONCEPTION of new 600-family Castle Village project, now under construction on Washington Heights, New York City. George Washington Bridge in right background. NATIONAL *Pipe used in all heating, drainage, gas, and fire lines. Architect: George F. Pelham, Jr.; Consulting Engineers: Daniel & Wallen; Heating Contractor: J. H. Bodinger Co., Inc.; Plumbing Contractor: Frank B. Lassette, Inc.*

NOW rearing its head above northwest Manhattan is Castle Village, one of the most unique apartment projects ever undertaken by private capital. When completed, it will house 600 families. Situated on the cliff at Fort Washington Point, each of its five units will command a breathtaking view of the Palisades. First floor apartments will be about 200 feet above the Hudson River.

From pent-house to basement, these structures will be modern in every detail. Since they are designed to serve generations of discriminating New Yorkers, only the finest structural materials are used. A project of this magnitude naturally requires many tons of pipe, and in keeping with all quality standards, the major tonnage is NATIONAL Pipe.

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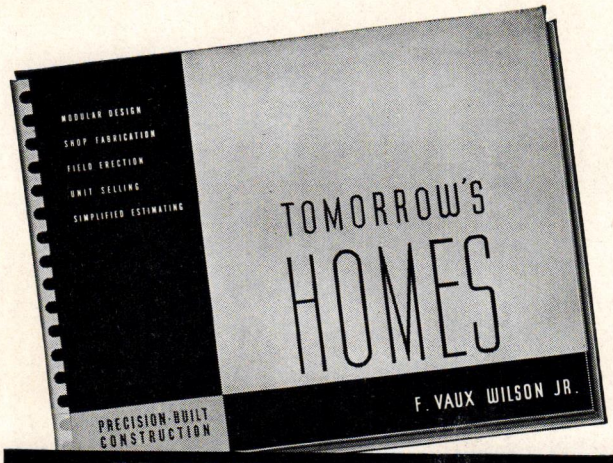

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TOMORROW'S HOMES will be issued in March. Normally priced at $10.00 per copy, it is *privileged* to established architects, *without charge.* Make sure of your copy by sending us your reservation today. Please write on your professional letterhead. Only one copy to a firm.

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PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 42, Advertising Section)

THE TILE HANDBOOK—T-1. — A.I.A. File No. 23-a. Valuable looseleaf handbook, containing basic information for tilework and related work, has been prepared for the express purpose of compiling and coordinating all available data on tile to serve as a standard guide for the architectural and building professions. Copies may be obtained on application on business letter to The Tile and Mantel Contractors' Assn. of America, Inc., Investment Bldg., Washington, D. C.

P & S BAKELITE AND IVORY WALL PLATES.—Folder listing and illustrating a complete line of brown bakelite and ivory wall plates. 4 pp. 8½ x 11. Pass & Seymour, Inc., Solvay Station, Syracuse, N. Y.

McDONNELL BOILER WATER LEVEL CONTROL.—Useful reference manual for architects and heating engineers covering a line of boiler water level control, including boiler water feeders, low water cut-offs, combined water feeders and low water cut-offs, liquid level controls, and automatic protective devices. Installation and dimension details, tabular matter, etc. 20 pp. 8½ x 11. McDonnell & Miller, Wrigley Bldg., Chicago, Ill.

EXPLOSION-PROOF AND DUST-TIGHT PYLETS.—Bulletin No. 1105, superseding all previous listings, describes a new line of explosion-proof and dust-tight conduit fittings. Indexed. Price list. 16 pp. 8½ x 11. The Pyle-National Co., 1334-58 North Kostner Ave., Chicago, Ill.
Published by the same firm, "Heavy Duty Pylets." Folder describing the advantages of an improved type of heavy duty conduit fittings. 4 pp. 8½ x 11.

FOSTORIA FLUORESCENT LOCALITES.—Catalog describing 25 different models of Fostoria fluorescent canopies, ranging from a single 15-watt model to a two-tube 80-watt model, for use in drafting rooms, industrial plants, etc. 4 pp. 8½ x 11. The Fostoria Pressed Steel Corp., Fostoria, Ohio.

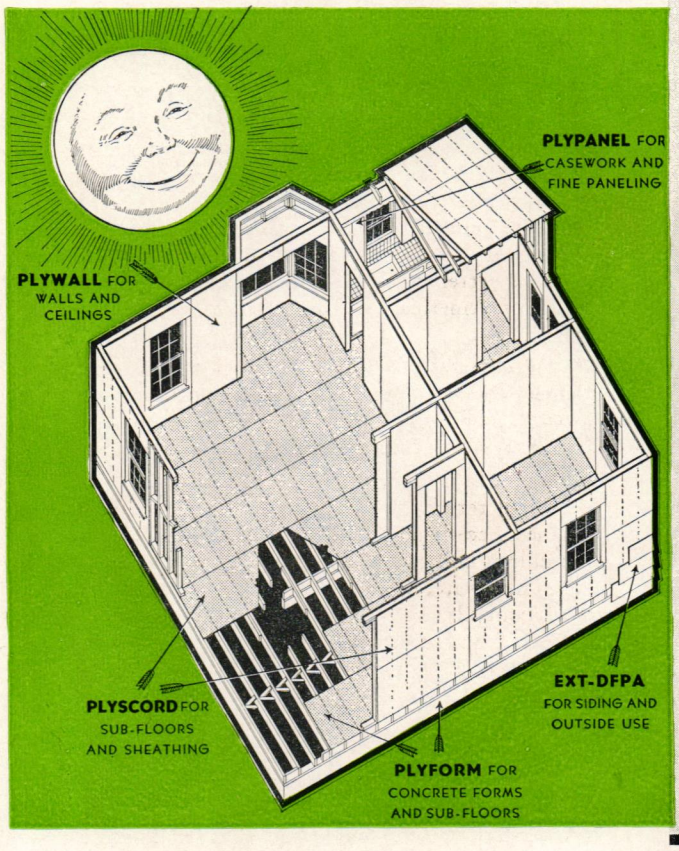
PERFORMANCE.—Vol. 1, No. 1, of a series of informative bulletins for architects and builders dealing with the subject of mineral wool for stopping heat and cold, fire and sound. Included is data on how to find heat transmission of building sections. 4 pp. 8½ x 11. The National Mineral Wool Assn., 1270 Sixth Ave., New York, N. Y.

STEEL HORIZON.—Vol. 1, No. 1, of new series of house publications, presents late news, either pictorially, or editorially—from fabricators, about their new and improved products, as well as outstanding fabrications made of Allegheny Ludlum steels. Allegheny Ludlum Steel Corp., Pittsburgh, Pa.

A N W INSULATED CABLE.—Folder covering a type of insulated cable for moist locations without lead sheath for commercial and industrial applications. 4 pp. 8½ x 11. Anaconda Wire & Cable Co., 25 Broadway, New York, N. Y.

ARMORED CONCRETE AND STANDARD CONSTRUCTION CASTINGS.—Catalog No. 110 deals with the subject of armored concrete for use in constructing driveways, curbs, loading and railway platforms, doors, etc., also gray iron castings for roadway and walkway frames and covers or gratings. Detail drawings, dimensions, installation photographs, etc. 26 pp. 8½ x 11. Flockhart Foundry Co., 83 Polk St., Newark, N. J.

(Continued on page 46, Advertising Section)



There was a word for it 3000 years ago . . .

Now we call it dri-bilt WITH PLYWOOD

Standardized home construction made practical by this method!

Based on the use of floor mats of standard sizes, the Japanese developed a very practical grid system of dry-built construction 3000 years ago.

Now there is a modular plan of building keyed to modern times. It uses one of the most versatile of all modern materials . . . *Douglas Fir Plywood,* which is real lumber made larger, lighter, stronger. This new plan is ideal for every size and style of American home. *It is called Dri-Bilt with Plywood.*

The standard size of Douglas Fir Plywood panels is 4′x8′. By basing room sizes on multiples of 4′ and using the proper grades of these big laminated panels for sheathing, sub-flooring, exterior siding, interior walls and ceilings, built-ins and even concrete forms, *substantial reductions can be made in building time—in labor, too. And your client gets so much more house for his money!*

The Dri-Bilt with Plywood method reduces cutting, fitting and nailing to a minimum. It slashes building and supervisory time as much as six weeks because walls and ceilings are bone dry from start to finish. It gives you a more rigid, more durable house—one whose exterior walls are six times stronger than when horizontal board sheathing is used . . . one whose interior walls are puncture-proof and receptive to any finish.

You'll find it easy to specify the right grade of Douglas Fir Plywood for every purpose, because every panel is now "grade trade-marked." Study the trade-marks below. They make identification easy. Sweet's Catalog contains complete data on Douglas Fir Plywood. For special new information on the Dri-Bilt method, send coupon below.

F.H.A. has accepted Douglas Fir Plywood for home construction. Its use is approved in Uniform Building Code

DOUGLAS FIR PLYWOOD
Real Lumber
MADE LARGER, LIGHTER
SPLIT-PROOF
STRONGER

GENUINE -PLYSCORD- SHEATHING D. F. P. A. INSPECTED

GENUINE DOUGLAS FIR PLYFORM Concrete Form Panel D. F. P. A. INSPECTED

GENUINE PLYWALL Douglas Fir Plywood WALLBOARD D. F. P. A. INSPECTED

TRADE MARK PLYPANEL D.F.P.A. REG. U. S. PAT. OFF. PEND.

TRADE MARK EXT.-D.F.P.A. REG. U. S. PAT. OFF. PEND.

SPECIFY DOUGLAS FIR PLYWOOD BY THESE "GRADE TRADE-MARKS!"

DOUGLAS FIR PLYWOOD ASSOCIATION, Tacoma Bldg., Tacoma, Washington.
Please send me your FREE manual on Dri-Bilt with Plywood construction.

Name_____

Address_____

City_____ State_____

Dalton Residence, Rumson, N. J. Alfred Busselle, Architect.
Light Vermont Marble and Brick.

Fashions
IN BUILDING

Today's residences range from the simplicity of the Colonial to the advanced lines of the Modern. Never was there greater diversity of style. And never was there more conclusive evidence that marble is adapted to the ever-changing cycle of design.

It happens here that we show the Vermont Marble trim of the Dalton Residence—a Colonial form—but the effect would be no less harmonious in ultramodern walls.

For Bulletins on various forms of marble construction—Random Ashlar, Marble Trim, Store Fronts, Mantels, Markwa, the Marble Tile, Lumar, the Luminous Marble—write Vermont Marble Company, Proctor, Vt., or any of the following branches: Albany, 75 State St.; Boston, 44 School St.; Chicago, 5535 No. Wolcott Ave.; Cleveland, 4300 Euclid Ave.; Dallas, 1513 Wall St.; Houston, 310 Bringhurst St.; Los Angeles, 727 West 7th St.; New York, 101 Park Ave.; Philadelphia, 22nd & Westmoreland Sts.; San Francisco, 525 Market St.; Tacoma, 1120 East "D" St. In Canada write Ontario Marble Co., Ltd., 403 Manning Chambers, Toronto.

VERMONT MARBLE

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 44, Advertising Section)

FEATURES OF THE NEW GENERAL ELECTRIC KITCHEN LINE.—Brochure briefly describing the advantages and features and illustrating a new line of kitchen cabinets and accessories. Typical sections and dimension drawings. 42 pp. 8½ x 11. General Electric Co., Nela Park, Cleveland, O.

LASTING BEAUTY — ENDURING VALUE FOR YOUR HOME WITH CURTIS WOODWORK. — New brochure covering the Curtis line of architectural woodwork, including doors, windows, mantels, stairs and various types of cabinets. 20 pp. 8½ x 11. Curtis Companies Service Bureau, Clinton, Iowa.

ARMSTRONG'S MONOCORK. — New folder with descriptive data and specifications covering Monocork, a plastic material of cork and rubber for interior or exterior floors or pavements. 6 pp. 8½ x 11. Armstrong Cork Co., 993 Concord St., Lancaster, Pa.

MILLER FLUORESCENT LIGHTING FIXTURES.—Catalog announcing and describing a new line of flood and concentrating three light reflector units as well as units utilizing the new 48-in. fluorescent tube. 16 pp. 8½ x 11. The Miller Co., Meriden, Conn.

PARSONS' NEW ECONOMICAL AMERICAN METHOD FOR THE APPLICATION OF ROOFING SLATE.—Folder describing a new method of application which makes it possible to secure a natural stone, colorful, slate roof at a price and weight per square applied to reasonably compete with all cheaper roofing materials. 4 pp. 8½ x 11. Parsons Brothers Slate Co., Pen Argyl, Pa.

THE NEW METHOD OF CIRCUIT WIRING.—Catalog and handbook No. 2 covering National Plug-In strip, a wiring system which provides a means of plugging-in every six or eighteen inches all around the room. Installation details, and instructions, fittings, prices, etc. 30 pp. 8¼ x 10. National Electric Products Corp., Pittsburgh, Pa.

MARLITE COLOR GUIDE.—A novel color guide chart with traffic light control which enables the user to determine at a glance whether the color combination selected is one that can be combined harmoniously. The Marsh Wall Products, Inc., Dover, Ohio.

METAL LATH NEWS.—A.I.A. File No. 20-b-1. The April edition of this monthly publication, dealing with the subject of housing, presents technical construction details in sixteen pages of large reproductions of interesting photographs and drawings. Included are full size horizontal cross section drawings of a 2-in. solid and a 3½-in. hollow partition of metal lath and plaster, calling attention to the particular adaptability of such construction to housing projects. 16 pp. 8½ x 11. Metal Lath Manufacturers Assn., 208 S. La Salle St., Chicago, Ill.

BONDERIZING. — Attractive brochure, just issued, presents detailed information on the subject of Bonderizing, a Parker process that holds paint to steel and resists rust. Test data. Profusely illustrated. 40 pp. 8½ x 11. Parker Rust Proof Co., Detroit, Mich.

BROWN INSTRUMENTS.—New folder illustrating a complete line of indicating, recording and controlling instruments for measuring and controlling temperatures, pressure, flows, liquid levels and humidity. 8 pp. 8½ x 11. The Brown Instrument Co., Philadelphia, Pa.

(Continued on page 48, Advertising Section)

On the sidewalls of this House...

Beauty that never grows old!

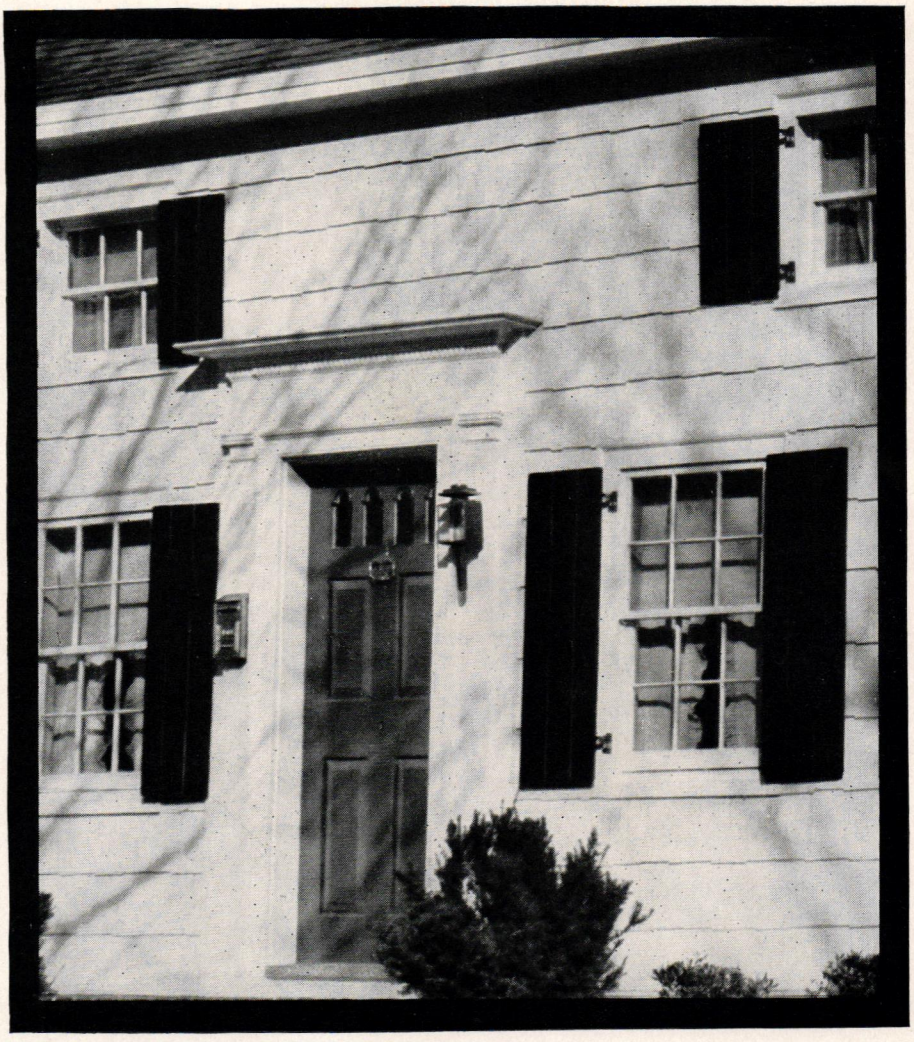
...the architect specified J-M "Shake" Textured Asbestos Shingles... fireproof, durable, and weather-resistant...

Not until you actually touch these Johns-Manville Asbestos Shingles, do you realize they are not made of wood. That's how faithfully they reproduce the charm and texture of old, hand-split "shakes"!

Johns-Manville has recaptured this traditional beauty in a modern material . . . asbestos-cement. By the very nature of this composition, J-M Asbestos Shingles cannot burn or rot, and they require no paint to preserve their lasting charm. Throughout the years, their virtual freedom from maintenance will prove an important factor in minimizing upkeep on this house.

If you wish detailed information about any Johns-Manville Building Materials, write Johns-Manville, 22 E. 40th Street, New York City.

★



GIVE YOUR CLIENTS THE ADVANTAGES OF TRIPLE INSULATION*

Triple Insulation means a house that has been "insulated" or protected against fire, weather and wear with these three J-M materials:

1. Asbestos Shingles on the roof and Asbestos Siding provide a fireproof, lasting exterior.

2. Rock Wool Home Insulation in walls and attic protects against winter cold and summer heat, and gives added protection against fire.

3. J-M Steeltex Plaster Base retards the spread of inside fires and reduces plaster-upkeep expense.

Johns-Manville

JOHNS-MANVILLE JM PRODUCTS

BUILDING MATERIALS

Asbestos Roofing and Siding Shingles • Decorative Asbestos Wall Boards • Insulating Boards • Home Insulation • Steeltex • Asphalt Tile Flooring, Acoustical Material, etc.

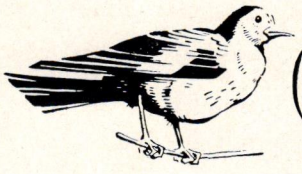
A draftsman expressed his compassion
For craftsmen who are failing to cash in.
"A few pennies more
Bring returns galore
Buy "Castell" you'll be right in fashion!"

ONLY A PENCIL—but if you could see with your own eyes the extraordinary operations that go into the manufacture of "Castell" your amazement would reach a new high.

ONLY A PENCIL—but to you "Castell" is an important instrument of your livelihood. Like some magic alchemy "Castell" transmutes vague ideas into big, vibrant, beautiful projects.

ONLY A PENCIL?—no, indeed! "Castell" is your friend of long standing. To some of you "Castell" has been a friend for 35 years . . . and we hope, will continue to be your friend for many, many more!

A. W. FABER, INC. • NEWARK, NEW JERSEY



NO GRIT
NO SCRATCH
NO SMUDGE

WORLD'S FINEST DRAWING PENCIL—NONE HIGHER PRICED IN AMERICA

A.W. FABER-CASTELL

DRAWING PENCIL IN THE METAL BOX

15¢ each ★ $1.50 per dozen

PUBLICATIONS ON MATERIALS AND EQUIPMENT

(Continued from page 46, Advertising Section)

THREE KEYS TO THE MODERN BASEMENT.—New publication presenting many practical suggestions for transforming the basement into a livable and attractive room. The suggestions cover building furniture and games, treatment of windows, doors and windows, making stairways attractive, etc. 20 pp. 8½ x 11. Copies are available upon request at 10 cents each to The Bryant Heater Co., 17825 St. Clair Ave., Cleveland, O.

MANUFACTURERS' DATA WANTED

CLARENCE OSTMAN PETERSON, *Architect,* 2140 Fell Street, San Francisco, Calif.

LINDBLAD & McLANE, *Architects,* 123 East First Street, Dixon, Ill. (Data for A.I.A. file.)

HERMAN H. SIEGEL, *Architect,* 339 Fifth Avenue, New York, N. Y.

GERALD ANTHONY PAUL, *Architect,* 1490 Rockaway Parkway, Brooklyn, N. Y.

DAVID A. YERKES, *Architect,* New England Building, Topeka, Kansas.

JOSEPH O. CEZAR, *Architect,* 708 18th Street, Bedford, Indiana. (Data for complete A.I.A. file.)

DIAL & THOMAS, *Architects,* Standard Building & Loan Bldg., Columbia, S. C.

BASIL G. F. LASLETT, *Architect,* 416 Huske Bldg., Fayetteville, N. C.

HERBERT J. MacGREGOR, *Architect,* 120 Broadway, New York, N. Y.

SHAVAK D. MEHT, *Architect* and *Interior Decorator,* Dantra House, Barrow Road, Apollo Bunder, Bombay, India. (Data on modern furniture and concealed lighting, commercial and residential buildings, theatres and hospitals, and small residences.)

W. H. PUGH, *Architect,* 1208 Elmwood Avenue, Fort Wayne, Indiana. (Complete data on schools, churches and large public buildings, for A.I.A. file.)

THEODORE M. POLITANO, General Drafting Service, 3 South 5th Avenue, Mt. Vernon, N. Y.

RALPH L. WARNER, *Drafting Teacher,* 10311 Orton Avenue, West Los Angeles, Calif. (Data on modern equipment for houses, and house plans.)

ERNEST A. PHELPS, *Draftsman,* 2936 S. Bannock, Englewood, Colo. (Data on products for small homes.)

BILL BEESON, *Draftsman,* 1100 Edgecomb Avenue, Benton Harbor, Michigan. (Complete catalogs and samples to be used in drafting shop.)

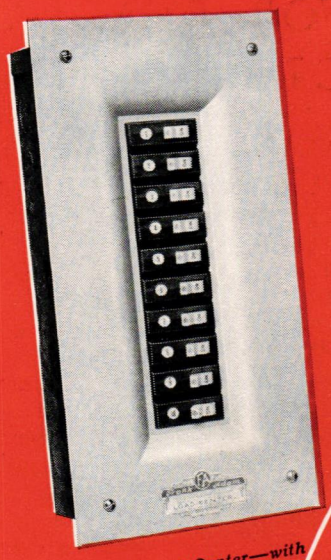
A. R. STOCKER, *Supervisor* and *Designer,* Rounds & Porter Lumber Company, Stillwater, Oklahoma. (Data for complete A.I.A. file.)

ARCHITECTURAL LIBRARY, The University of Manitoba, Winnipeg, Canada. (Samples of building materials and accessories, related to architecture and interior decoration.)

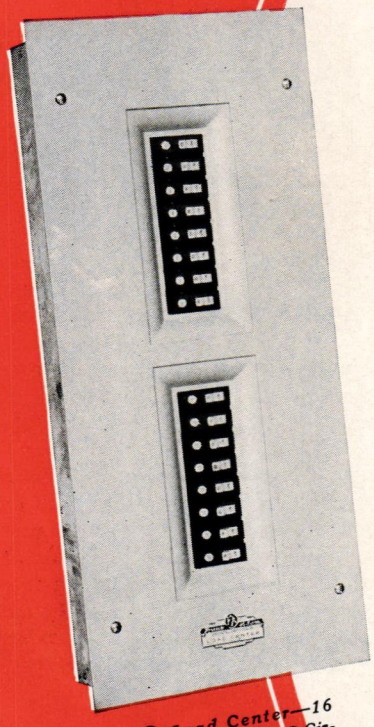
FRANK P. CALAMITA, *Designer,* 1848 Pilgrim Avenue, Bronx, N. Y. (Data for complete A.I.A. file and on residential work.)

E. JEAN STEWART, Research Division, Construction Control Corporation, 1041 N. McCadden Place, Hollywood, Calif. (Complete data for use in drafting rooms and construction department, also for A.I.A. file.)

CLIFFORD N. WRIGHT, *Student,* 1577 Leslie Avenue, Detroit, Mich. (Data for A.I.A. file, complete.)



Ⓕ Load Center—with 10 Single Pole Ⓕ AC Circuit Breaker Branch Circuits



Ⓕ Load Center—16 Single Pole Ⓕ AC Circuit Breaker Branch Circuits

EST. 1891
THE SIGN OF A FA BETTER JOB
Frank Adam

LOAD CENTERS
AC CIRCUIT BREAKER TYPE

FRANK ADAM ELECTRIC CO.
ST. LOUIS, MO. U.S.A.

Positive, Automatic Protection Plus Easy Manual "ON" and "OFF" Operation

In small installations such as Residences, Stores and Filling Stations where a high-quality job is required, it is desirable to specify Ⓕ AC Circuit Breaker Type Load Centers—either in conjunction with Ⓕ AC Circuit Breaker Type Service Equipment or as individual units.

These AC Load Centers are of the Circuit Breaker type—automatic trip and automatic reset. They assure

(1) Automatic, positive protection against short circuits or sustained overloads—and

(2) Are designed with the proper time lag characteristics to prevent needless circuit interruptions when momentary overloads occur.

(3) Flexibility . . . Easy to change branch circuit capacities, when required. Circuit Breakers can be interchanged by removing only two screws.

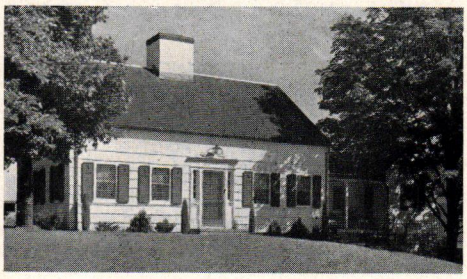
The tripping and re-setting action is simplicity itself. When an overload or short circuit occurs, the Ⓕ Circuit Breaker automatically trips and causes the handle to move to the "OFF" position . . . Simultaneously, the thermal element of the breaker is automatically reset—which means that it is only necessary to return the handle to the "ON" position to restore service, after the cause of the short circuit or overload has been removed . . . Operates like an ordinary tumbler switch for manual operation.

For 120 volt AC service . . . Capacities: 15, 20, 25, 35 and 50 amperes . . . Approved by Underwriters' Laboratories . . . Specify Ⓕ Standardized Products . . . Write for Bulletin 58.

Frank Adam
ELECTRIC COMPANY
ST. LOUIS

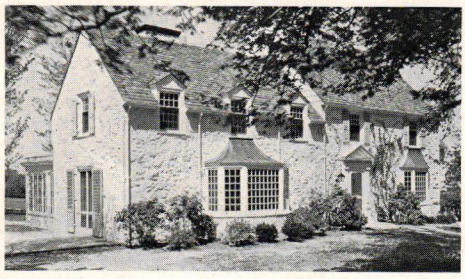
FA TRADE MARK PRODUCTS .. "The Sign of a Better Job"

3 Good Ways
to paint a House



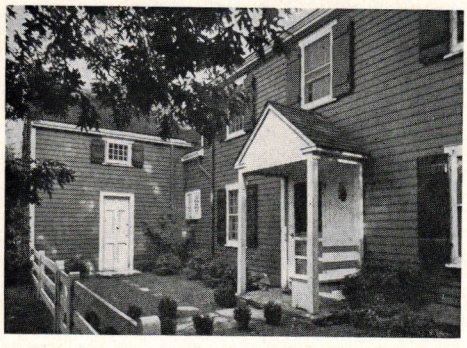
. . . . with Cabot's DOUBLE-WHITE

For an opaque, semi-gloss finish, whose *extra whiteness* lasts for years. The DOUBLE-WHITE house above has blinds painted with Cabot's Green Gloss Collopakes. Architect, H. P. Staats, New York.



. . . . with Cabot's *Old Virginia White*

A texture-revealing "whitewash" white with the wearing qualities of a high grade paint. This *Old Virginia White* house was designed by F. G. Dempwolf, Architect, of York, Pennsylvania.



. . . . with Cabot's Gloss Collopakes

Non-fading colors which give a porcelain-like finish with no brushmarks. Above: a Collopaked house in Haddam Barn Red with DOUBLE-WHITE trim. Architect, Eldredge Snyder, New York City.

THE WHITE BOOK—FREE—Shows pictures of many prize-winning Cabot houses. Contains full information about our exclusive Collopaking process which means greater hiding power and longer life. Address Samuel Cabot, Inc., 1293 Oliver Building, Boston, Mass.

Cabot's DOUBLE-WHITE and Gloss Collopakes

(colloidal paints)

FREE EMPLOYMENT SERVICE FOR READERS OF PENCIL POINTS

Replies to box numbers should be addressed care of PENCIL POINTS, *330 West 42nd Street, New York. 25 words or less in this Department FREE—over 25 words ten cents per word should accompany all notices. Copy must be in by 12th of month* preceding date of issue.

(Continued from page 40, Advertising Section)

POSITIONS OPEN

DESIGNER and draftsman wanted, small residences, exceptionally clever on sketches, permanent position, good future, must have five to ten years' experience, be rapid and neat. 805 East Mountain, Glendale, California.

ARCHITECTURAL DESIGNER and draftsman. Some experience rendered perspectives and working drawings for residential work. Connecticut town. Write, outlining experience and enclosing photo, if possible. Box No. 516.

POSITIONS WANTED

BUILDING construction is what I am interested in. 18 years of age, and have drafting experience. Edward Huton, 238 Thatford Ave., Brooklyn, N. Y.

STENOGRAPHER, typist, clerk, 10 years' experience in architectural, engineering and various equipments, dictation, specifications, practical bookkeeping, payrolls, receptionist. Box No. 502.

YOUNG man, 21, graduate of architectural construction course. No office experience but willing worker. Location no hindrance to desirable opportunity. Gerard A. Bures, 2938 E. Monument Street, Baltimore, Md.

DRAFTSMAN, 30, married, 9 years' engineering experience, I.C.S. architectural graduate. Work for architect or engineer. Go anywhere. James Struble, Box 163, Angelica, N. Y.

A COMPETENT architectural draftsman, rapid, neat and accurate, also capable of rendering service in any capacity, as that of making sketches and complete working drawings, scale and full size details for any type of building, or to take charge of drafting room and conduct it to your best interests. University education, 42 years of age, 20 years of practical experience. Salary commensurate with ability to render service. Box No. 503.

DRAFTSMAN trained Bauhaus and German Universities, 6 years' experience design, supervision, rendering, details—residential and industrial buildings in Europe, South Africa, New York. Speaks English, Spanish, Portuguese, German and French. Wants position where abilities can be used. Box No. 504.

YOUNG man, 18, desires position with architect, builder or industrial designer. Year of drafting experience. Ambitious and hard worker. Architectural student at night. Box No. 506.

LANDSCAPE architect will pull up stakes, go anywhere but prefers middlewest. Has had 16 years' important professional landscape work, design, construction. Write for additional information. Box No. 507.

ARCHITECTURAL draftsman, 26, desires position in architect's office or construction work. Bachelor of Arch. Engineering degree. Available June 1st. Arne J. Kontturi, 3106 Peery Avenue, Kansas City, Mo.

(Continued on page 52, Advertising Section)

Should windows

LAST THE LIFE OF YOUR BUILDINGS..

or shouldn't they?

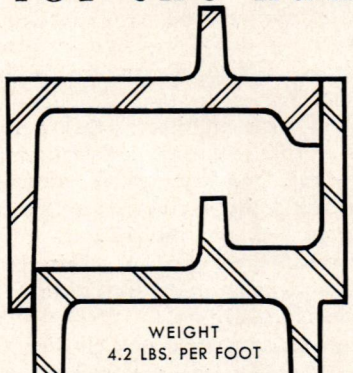
They will...

IF THEY ARE **Mesker Steel Sash** *with* **RUST-RESISTING**

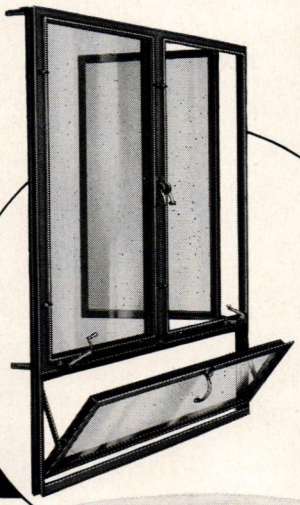
Genuine Wrought Iron Sills

for the name **GWI** **is your guarantee**

that the sill, every window's most vulnerable spot, is permanently protected with Genuine Wrought Iron.



Full size frame and ventilator sections of the popular new Mesker Metropolitan Casement for Schools. This heavy, lifetime window is built three ways . . . all steel, steel with GWI sills, or all Wrought Iron sections.



Good windows deserve this inexpensive, extra protection because sill replacements can double the cost of your windows. For lifetime windows specify "GWI Sills."

MESKER BROTHERS
424 S. SEVENTH ST. ST. LOUIS, MO.

ORIGINATORS OF **Mesker** WROUGHT IRON SASH
SINCE 1879

FREE EMPLOYMENT SERVICE FOR READERS OF PENCIL POINTS

(Continued from page 50, Advertising Section)

JUNIOR draftsman, 21 years of age, single, 2 years' College. Considerable home and school experience and little professional experience on small homes. Can plan, render, design and letter well. Will consider any offer. Best references. Box No. 505.

DRAFTSMAN wishes position. B.S. Architecture, 5 years' experience, renders well in color or black-and-white, age 29; free to travel. Box No. 508.

DRAFTSMAN—young registered architect, University graduate, desires position with architect. Experience with smaller architectural offices, working drawings complete from sketches, also good renderer and designer. Box No. 509.

FIRST-CLASS all around architectural draftsman on all types of work desires position in South America, preferably Buenos Aires. Previous experience. Young. Capable. Box No. 510.

ARCHITECTURAL draftsman, 7 years' experience. Residential, institutional, commercial and industrial work. Design, sketches, working drawings and details. Attentive and thorough. Harmonious to environment. Desire to locate in Los Angeles or vicinity. E. Martin Borigh, 665 North Grand Ave., Los Angeles, Calif.

RECENT architectural school graduate desires position in architect's office. Salary secondary. Will go anywhere. Box No. 511.

DRAFTSMAN, age 26, neat and ambitious, wishes position with architect or firm. Considered good in rendering perspectives in water color. Paul Pavlik, 5688 Boulevard, North Bergen, N. J.

YOUNG man, 18, two years' training in architectural drawing and some house planning, desires position in architect's office in New York City. Only several months' practical experience but is very eager to learn and advance himself in every way. An opportunity would be appreciated. William C. Aquin, 536 Jefferson Ave., Scranton, Pa.

FATHER and SON, both architects, father former Professor of Architecture in European School, and son Roman Prize Winner, and winner of Government Student Medal, desires position, either in architectural office or on teaching staff. Box No. 512.

YOUNG man, 12 years' experience in architects' and builders' offices, wishes position as draftsman or sales representative. Box No. 513.

YOUNG draftsman seeks permanent position with young architect. Experienced apartments, stores, residences. Unusual ability in planning and knowledge of all types of construction. Box No. 514.

YOUNG man, 25, graduate engineer with varied experience including 21 months as army engineer, desires position. Will go anywhere. Complete details and photographs will be furnished to anyone interested. First-class letters of recommendations. J. E. Moyer, 3741-83rd Street, Jackson Heights, N. Y.

JUNIOR architectural draftsman wishes position with architects or builders; trained by three registered architects. Can handle apartment house and alteration work. Knowledge of building laws. Box No. 515.

ARCHITECTURAL PARTNERSHIP WANTED: An architect who has conducted a practice in a western city, largely residential, will be glad to discuss a partnership with an architect located in or near New York City. Is especially interested in interior design. Can successfully handle any part of the work in an architect's office, including the preparation of specifications. Box No. W. C. A.

Extra STRENGTH
MEANS LONGER LIFE

CONCRETE walls, floors and roofs are stronger and last longer if the concrete has been reinforced with wire fabric.

American Steel & Wire Company Wire Fabric is a factory made product. It has been designed to give even distribution of strength and at the same time reduces labor costs. Any type of labor can put Wire Fabric in place with ease and as soon as it has been put in place it is ready for the concrete to be poured.

Our Wire Fabric for building construction is available in Triangle Mesh and Electric Welded square or rectangular mesh. Both can be delivered in sheets or in rolls according to your specification. We will send you complete details on request.

USS **WIRE FABRIC**

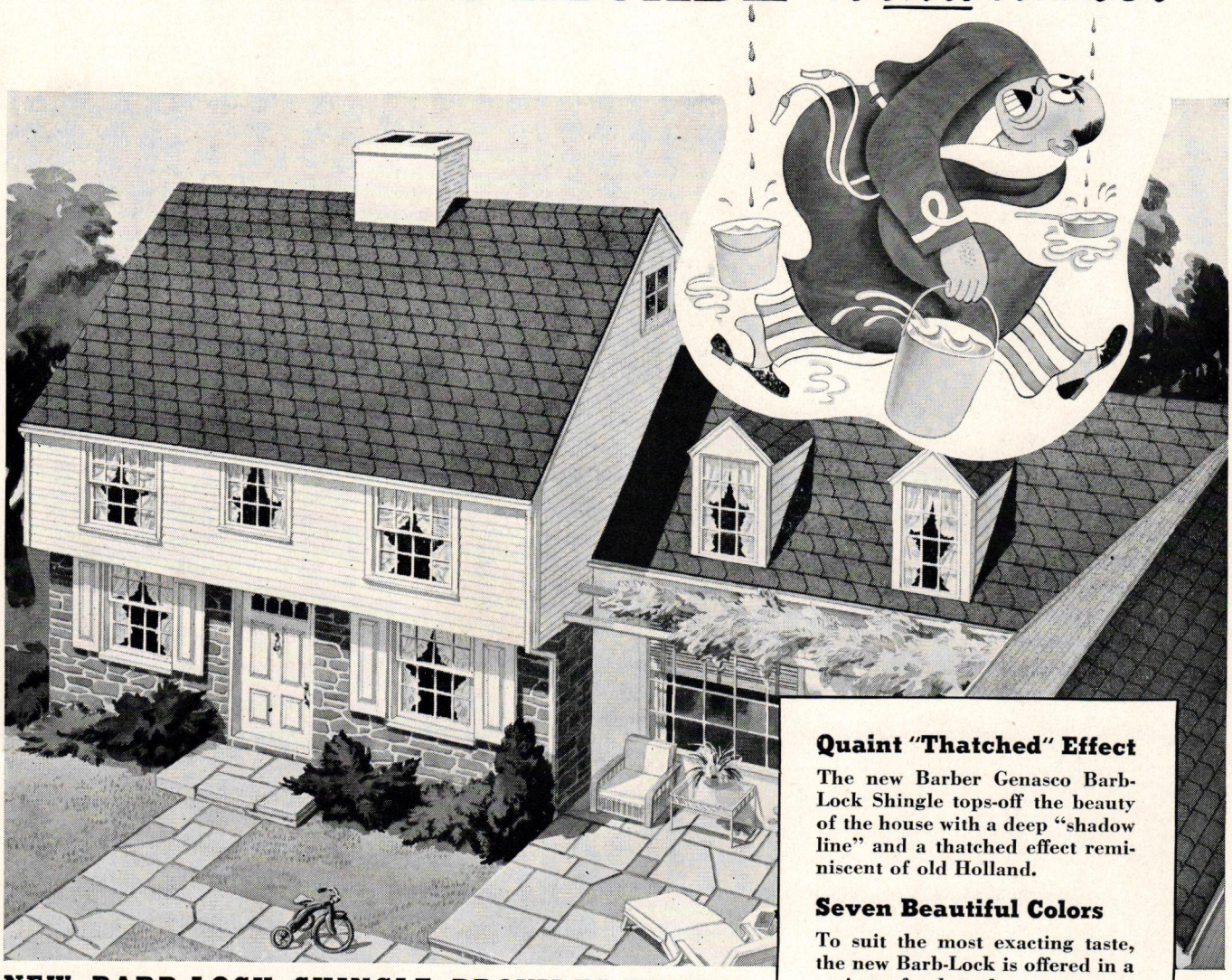
AMERICAN STEEL & WIRE COMPANY

Cleveland, Chicago and New York

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

UNITED STATES STEEL

No "BUCKET BRIGADE" in this house!

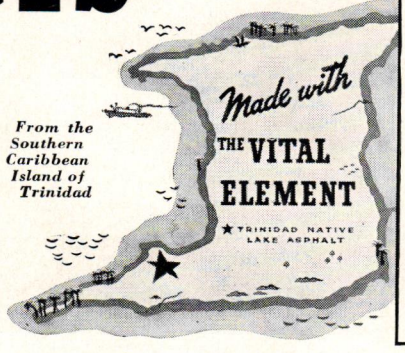


NEW BARB-LOCK SHINGLE PROVIDES REAL ROOFING PROTECTION

Protection and beauty are the two important things about a roof. The new Barber Genasco Barb-Lock Shingle provides both.

BARBER Genasco PRODUCTS

Nationally advertised Barber Genasco Products, made with *The Vital Element*, include: Bonded and other types of Built-up Roofings, Shingles, Sidings, Roll Roofings. Other Barber Asphalt Products include: Waterproofing Asphalts and Fabrics, Resaturator, Resurfacer, Asphalt Protective Products (Plastics and Liquids), Spandrel Beam Waterproofing (Spandrel Cloth and Cement).



Quaint "Thatched" Effect

The new Barber Genasco Barb-Lock Shingle tops-off the beauty of the house with a deep "shadow line" and a thatched effect reminiscent of old Holland.

Seven Beautiful Colors

To suit the most exacting taste, the new Barb-Lock is offered in a variety of colors that are sure to please.

Patented Locking Device

Here's a shingle that will *stay down!* A simple, ingenious fold-under locking device fastens each shingle to the adjoining shingles.

Drip Edge

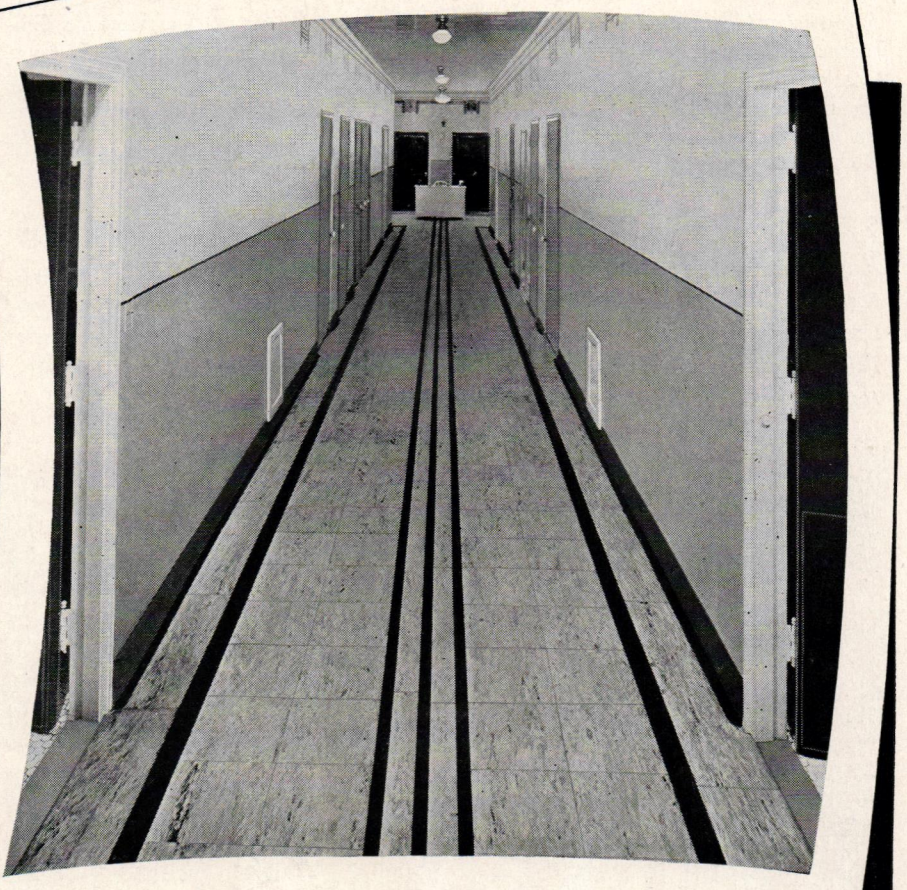
An accentuated drip edge diverts water *away* from the between-shingle laps, and is designed to prevent damaging accumulation of rain or snow *under* the shingles.

The Vital Element

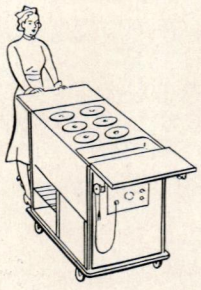
Barber Genasco Roofings, and no others, offer the superb protection of genuine Trinidad Native Lake Asphalt — *The Vital Element.* That's why you can count on the new Barb-Lock Shingle to give years of service in any climate. For full details, address: Barber Asphalt Corporation, Barber, New Jersey.

FOR FURTHER INFORMATION
SEE OUR CATALOG IN SWEET'S

FOR THE PROPER PERSPECTIVE ON FLOORS



This quiet, sanitary floor of Armstrong-Stedman Reinforced Rubber Tile assures underfoot comfort and quiet in the Shriners' Hospital for Crippled Children, Chicago. The field is Escalette No. 620, with feature strips of special plain blue.



...*consider* THESE IMPORTANT ADVANTAGES OF ARMSTRONG-STEDMAN RUBBER TILE

HOSPITAL flooring has a difficult job to do. It must look well, be always fresh and clean, yet work hard. That is why you find floors of Armstrong-Stedman Reinforced Rubber Tile in so many of the country's finest hospitals.

This flooring is extra resilient and therefore extra quiet. Beautiful designs are easily achieved, thanks to a choice of 56 plain, marble, paisley, and two-tone effects. These lasting colors run through the full thickness of the material.

The durability of this rubber tile is due to invisible reinforcing that helps it to resist denting and prevents buckling or crazing. The rich, smooth surface is kept clean and sanitary with just a daily sweeping and an occasional washing and waxing. It never needs troublesome and expensive refinishing.

An Armstrong-Stedman Rubber Tile Floor can be installed right over old floors, with a rubber cove base for added ease of cleaning.

Why not let us send you color-illustrated "New Beauty and Comfort in Floors?" It will give you the whole story. Armstrong Cork Company, Building Materials Division, 1206 State Street, Lancaster, Pa.

For hospitals, Armstrong manufactures the only complete line of resilient floors—Linoleum, Rubber Tile, Cork Tile, Linotile (Oil-Bonded), and Asphalt Tile. Our Architectural Service Bureau can offer unbiased suggestions.

RUBBER TILE • LINOTILE (OIL-BONDED) • ASPHALT TILE

Armstrong's LINOLEUM and RESILIENT, NON-CERAMIC TILES

CORK TILE • LINOWALL • ACOUSTICAL CEILINGS

Pest Club of Rome: NOTE

Attention of members is called to the recent appointment of Chief Nut-Cracker and Noix-de-veau Jack Skinner to the Florida State Board of Architecture. Congratulations are in order, with appropriate ablutions.

Summer Session

The Department of Architecture, College of Fine Arts, Syracuse University, has announced courses in Architecture for a limited number of students during the Summer Session of 1939. The session opens July 5 for six weeks.

Fracturing Glass

Ultra-high-speed photographs revealing the fact that glass cracks at the rate of nearly a mile a second have led to the establishment at the Massachusetts Institute of Technology of a $3,000 fellowship for further photographic studies, which are expected to point the way to improvements in the quality of glass through new knowledge of the behavior of the material.

Frederick Barstow, Midland, Michigan, as the recipient of the fellowship, will continue his research work which led to his degree of master of science.

Architects of the principal structures at the New York World's Fair 1939 will have their work publicised wherever the mail of New York boosters goes, through the colorful World's Fair stamps illustrated below, at one-half actual size. Offered for sale in sheets of 54 designs depicting the principal sights of the Fair, the official stamps have the names of the architects printed across the bottom. They are printed by the Nicklin Co., 110 West 42nd St., New York

ARCHITECTS—ADMINISTRATION BUILDING, Harvey Stevenson, Eastman Studds, Gerald A. Holmes, John A. Thompson, Edgar I. Williams, Richard A. Kimball, Ellery S. Husted. AVIATION BUILDING: William Lescaze, J. Gordon Carr. BRIDGE OF TOMORROW, A. J. Barzaghi, M. L. Radoslovich. BUSINESS SYSTEMS AND INSURANCE BUILDING: Eric Gugler, Slee & Bryson. HALL OF COMMUNICATIONS BUILDING: Francis Keally, Leonard Dean. CONSUMERS BUILDING: Frederic C. Hirons, Peter Copeland. CONTEMPORARY ARTS BUILDING: Frederick L. Ackerman, Joshua D. Lowenfish, John V. Van Pelt. COSMETICS BUILDING: Cross & Cross, John Hironimus. ELECTRICAL PRODUCTS BUILDING: Walker & Gillette. FOOD BUILDING NO. 2: Aspinwall & Simpson, M. W. Del Gaudio. FOOD BUILDING NO. 3: Philip L. Goodwin, Eric Kebbon, Edward D. Stone, Richard Boring Snow, Morris Ketchum, Jr. MARITIME BUILDING: Ely Jacques Kahn, Muschenheim and Brounn. HEALTH AND EDUCATION EXHIBITS: Mayers, Murray & Phillip. MUSIC BUILDING: Reinhard & Hofmeister. PERISPHERE AND TRYLON: Harrison and Foulhoux. PRODUCTION AND DISTRIBUTION BUILDING: Corbett & MacMurray, Robert W. Cutler. TEXTILES BUILDING: Frederick G. Frost, Sr. & Jr., Ward W. Fenner. CHRYSLER BUILDING: James Gamble Rogers. Y.M.C.A. BUILDING, HOME FURNISHINGS BUILDING, ALL GAS—GOOD HOUSEKEEPING HOME: Dwight James Baum. FEDERAL BUILDING, SECTION OF HALL OF NATIONS, VIEW OF THE COURT OF STATES: Egerton Swartout, York and Sawyer, Mcklm, Mead & White, Frederick R. King. HALL OF PHARMACY: George L. Paine, Jr., Pleasants Pennington, I. Woodner-Silverman. **SCULPTORS**—GEORGE WASHINGTON STATUE: James Earle Fraser. MITHRANA: Albert Stewart.

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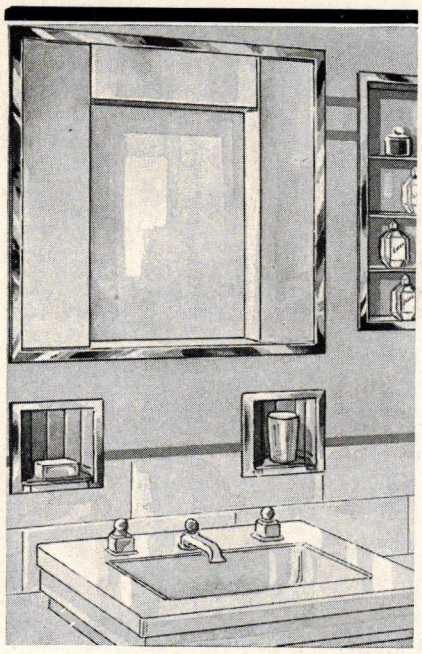

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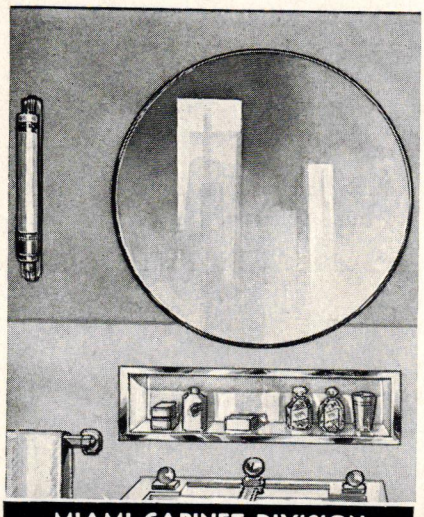

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AT LARGE IN THE LIBRARY

THE NEW VISION, *by L. Moholy-Nagy. ($3.75, 207 pages 7½" x 10½"—W. W. Norton & Company, Inc., New York.)*

BAUHAUS 1919-1928. *Edited by Herbert Bayer, Walter & Ise Gropius. ($3.75, 224 pages 7½" x 10½"—The Museum of Modern Art, N. Y.)*

THE NEW ARCHITECTURE AND THE BAUHAUS, *by Walter Gropius. ($1.75, 90 pages 5½" x 8"—The Museum of Modern Art, N. Y.)*

If you are having difficulty in "understanding" Modern Art you had better read *The New Vision,* since its writer argues that it is not solely a matter of understanding that is at the root of your trouble. Once, when it was thought that there existed something rather absolute called Beauty and that artists could put that something into material there wasn't such difficulty as you are having now. The people received, the artist gave; the one was on a higher level nearer to Beauty than the many. The artist was inspired, put the inspiration into tangible form, and the common people strove to understand or appreciate the latent Beauty.

The fact that Moholy-Nagy begins his first chapter with an analysis of Modern Man, yourself, gives the keynote to the contemporary slant on Art. For Beauty has been thrown into the ashcan with some other idols and the burden of æsthetic experience has been placed upon the common observer. The artist is expected to give expression to all the latent powers of the common man.

But there is no advantage in the modern artist's acquirement of a new vision if his potential clients are to be kept in a state of blindness. And before the common man can perceive what these modern artists are driving at he must break away from the specialized state of mind into which Capitalist division of labor has led him and awaken his dormant powers to achieve a natural balance of intellect and emotion.

To end that impasse is a large order but Moholy-Nagy considers it essential that it be ended. How that might be done is illustrated in the work of the author's New Bauhaus school in Chicago. There he had his students study the texture and tactile values of materials, make paper cutouts, woodcuttings and sculpture in wood and wire. He shows that in all this their approach to surface treatment and shaping of material was guided along the same lines as the Cubists had fol-

(Continued on page 64)

EDITOR'S NOTE: *In view of the controversial nature of the subjects discussed in the Book Reviews for this month, we have thought it only fair to publish the opinions of two whose views of the Bauhaus concept—and more particularly L. Moholy-Nagy's arresting book, "The New Vision"—are opposed. Alan Mather's writing is familiar to those who follow this section of* PENCIL POINTS, *but Karl Oberteuffer, younger member of a talented family, has until now confined his artistic expression primarily to landscape painting and seascapes.*

This book might have been the brainchild of Mrs. Malaprop and Le Bourgeois Gentilhomme, had those two distinguished characters enjoyed a mutual acquaintance and the benefit of our modern artistic education, which upholsters the intellect but sometimes neglects to nourish the intelligence.

In the Introduction, the paragraph ending, " . . . the tendency to place art on a pedestal as something unique and esoteric," and in Preliminaries, the phrase, "Technical progress should never be the goal, only the means," seem to presage a sincere and interesting book. L. Moholy-Nagy draws a long bow—but the text makes it difficult to follow the flight of the arrow. It is a pity that the Bauhaus concept as stated in "Preliminaries," which makes of this chapter an interesting and promising one, does not then have sufficient *directive force* all through the book, for after this one chapter of edifying thoughts on the pattern of our social structure as seen by one who would reform it, you finally emerge into the real body of the book. This might very well be the work done in an ultra-modern kindergarten with all its characteristic mudpies, cut papers, etc., which the reader is asked to consider seriously as mature work, and admire from the point of view of "self-expression," or "spontaneous expressions springing from an inner sense of what is right."

A certain public here in America will undoubtedly like this book very much. The use of such words as "equipoise, spatial weights, biological integration, positive and negative volume, polar contrast, spheric extension, virtual volume, duality in volume" will undoubtedly appeal very strongly to many a modern Mrs. Malaprop. Ill used as these words are in *The New Vision,* they serve a certain purpose; that of giving "tone" to these artistic perpetrations, which, bereft of some sort of ultra-abstract meaning, would

(Continued on page 60)

These Architects Gave Their Clients Lasting Protection with *Balsam Wool*

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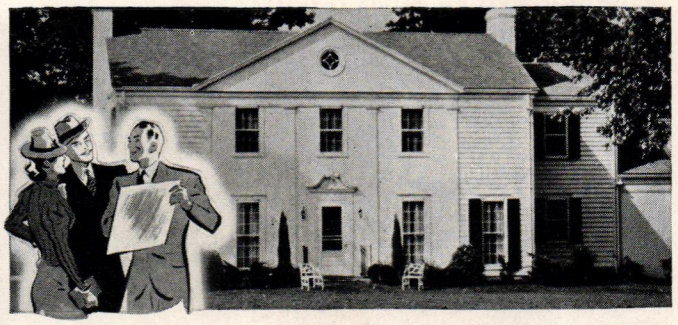
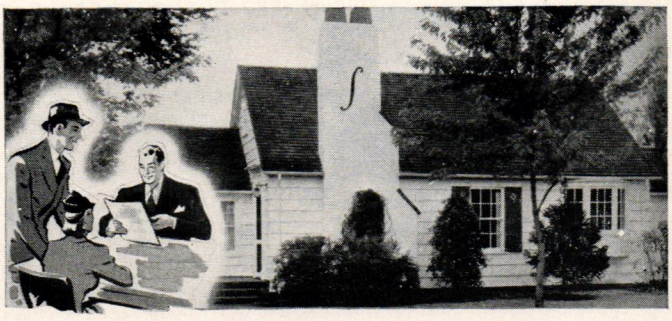


Architects Althouse & Jones, Mansfield, Ohio

2. THE BROWNS COULD AFFORD THE BEST

—so cost was no object in building their house. Choosing insulation on the basis of proved performance, their architect decided that the finest insulation he could specify was Balsam-Wool, available in three thicknesses for every climate, need and pocketbook.



Architect Elmer Gylleck, Elgin, Illinois

1. THE SMITHS HAD A BUDGET

—and they wanted the most in comfort, convenience and fuel saving for their money. When it came to insulation, their architect specified Balsam-Wool—with its *proved* record of providing lasting comfort and savings on the job.

Architect L. I. Janik, Chicago, Illinois

3. THE JONESES WANTED PERMANENCE

—and their architect designed for them a house of exceptional sturdiness. As a fit companion for sturdy walls like these—Balsam-Wool, the insulation of *lasting* efficiency, was specified, for permanent comfort and fuel saving.

WHY is Balsam-Wool the *sure* way to insulate? Because it is completely protected from moisture—sealed in a waterproof covering. Because it has the important moisture barrier that scientists recommend. Because it is firmly fastened in place—will not settle. Because it is highly fire-resistant—verminproof—termite-treated. Because for 17 years, it has proved its lasting efficiency in the nation's buildings.

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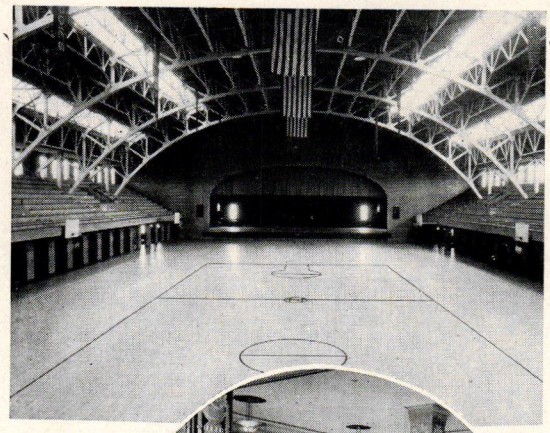

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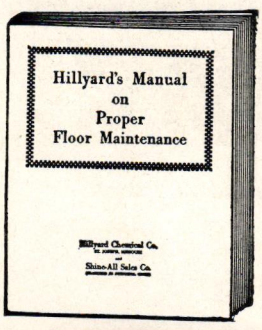
In Sweet's Catalog Section 17, pages 39 you will find Hillyard's Specifications for treatments of many type floors . . . "The Hillyard Way" and descriptions of Hillyard Floor Maintenance Machines. Call or wire the Hillyard Sales Co. for the Hillyard Maintenance Expert in your locality, his advice, recommendations and cooperation is yours for the asking.



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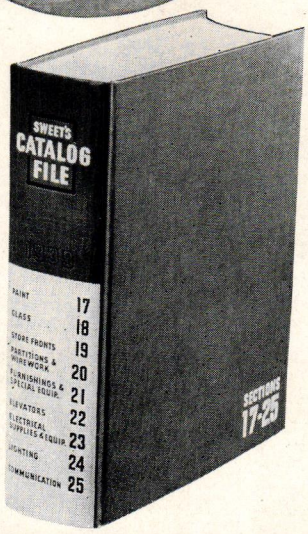

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(Continued from page 58)

not appeal to one normal person out of a hundred. A "gag" for each unintelligible and unintelligent composition; written in the up-to-date accepted language to describe that art which only the initiate are supposed to understand, vaguely erudite, delightfully piquant scientific-sounding allusions which belong so definitely to this age and this culture.

To say that I did not understand this book would be the most polite procedure for me. However, this would not be true, for L. Moholy-Nagy, like many others today, uses the pseudo-scientific vernacular clumsily enough for one to grasp that, even if he had something new to say regarding Form, Space, Texture, or a new vision, it is soon obvious to the reader that he has not sufficient command of language to express himself. L. Moholy-Nagy wallows in ambiguity.

This abuse of language, in connection with still more incomprehensible sculpture, painting, kinetic compositions, and some H. G. Wellsian architecture—all of which seems to be at variance with the original idea of the Bauhaus, for surely no one could call the work of Brancussi, Picasso, Archipenko, Lipchitz, "standard" or "the commonly usable type" — constitute the body of this book, which, according to the first few pages, purposes to show the layman a few things about the Bauhaus and the "fundamentals" of design, painting, sculpture, and architecture.

As an exact commentary on, or document of, man's "cultural ignorance" of the Fine Arts in the year 1938, this book is really valuable and easily worth its modest price, for seldom before has so much intellectual pose been so concisely organized into one volume and sold for so little. A reference book for future generations when more enlightened people may laugh at our culture and wonder how such a generation of poseurs could do the simplest things, eat, sleep, and make love in the normal way.

L. Moholy-Nagy's "Kinetic Sculpture," Fig. 153 ("glass tubes are partly filled with mercury") is vulgarly reminiscent of the Gyro-compass "Mercury Ballistic," even to the detail of the two units in the Kinetic which are hung on Gimbals. In the Mercury Ballistic and Gyro-compass Moholy-Nagy could have found all that he vaguely seeks to express in his "Kinetics." Much more, infinitely more, for there is in the creation of this instrument and many others, such as the Seismograph or the new Electronic Microscope, a touch of infinity. In these instruments he would have

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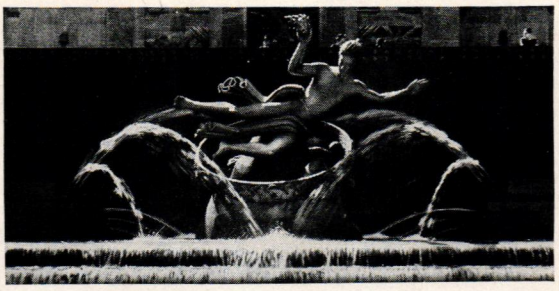
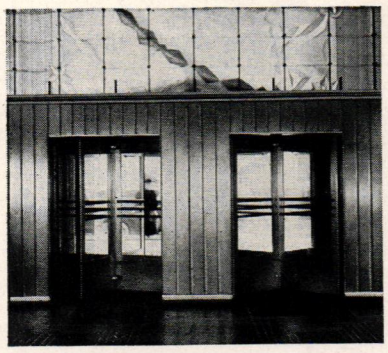


PROMETHEUS FOUNTAIN—Rockefeller Plaza.

Paul Manship, *Sculptor.*
Executed by Roman Bronze Subsidiary.



Interior view of revolving doors, 30 Rockefeller Plaza. More than 60 such doors in all.

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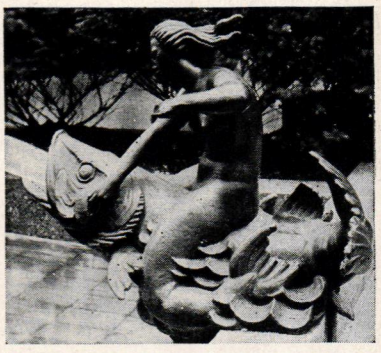

One of five FOUNTAIN FIGURES, Rockefeller Plaza. Rene P. Chambellan, *Sculptor.*
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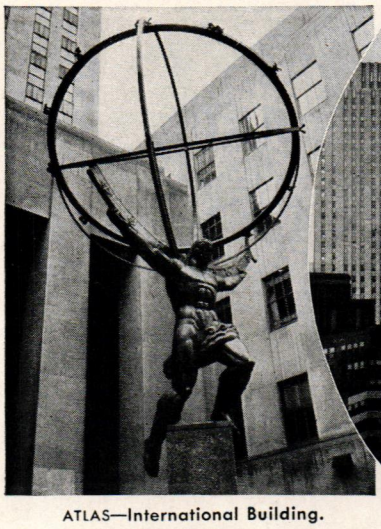
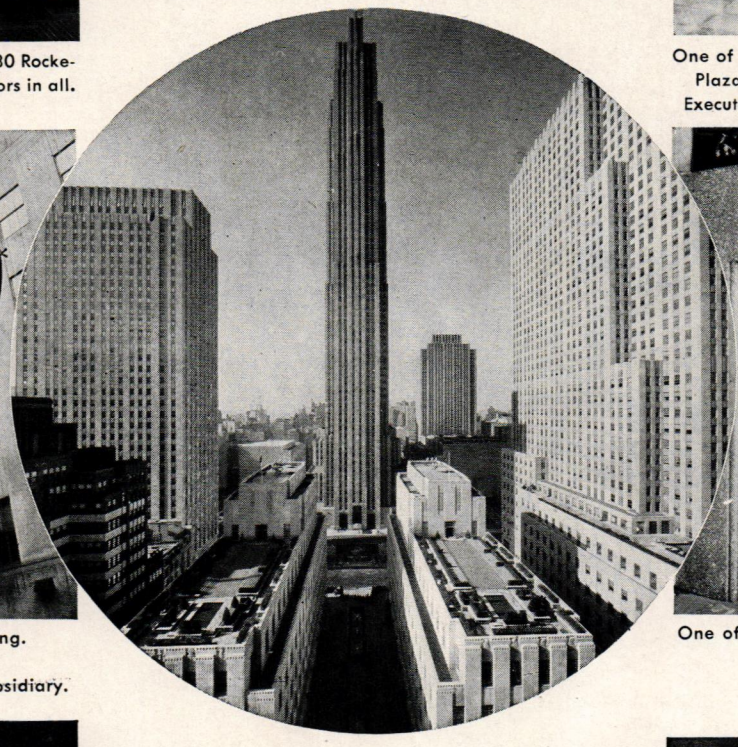
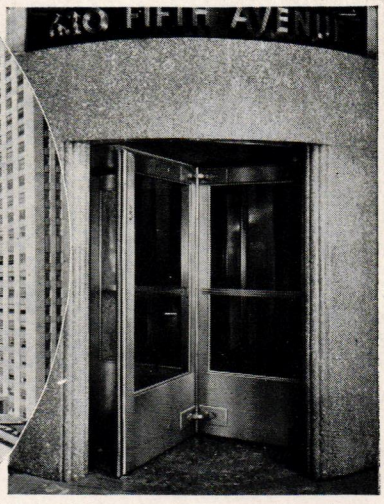
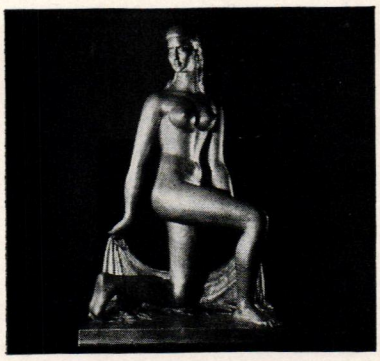


ATLAS—International Building.
Lee Lawrie, *Sculptor.*
Executed by Roman Bronze Subsidiary.





One of the many bronze revolving doors, International Building.



DANCING GIRL (aluminum) Radio City Music Hall. William Zorach, *Sculptor.*
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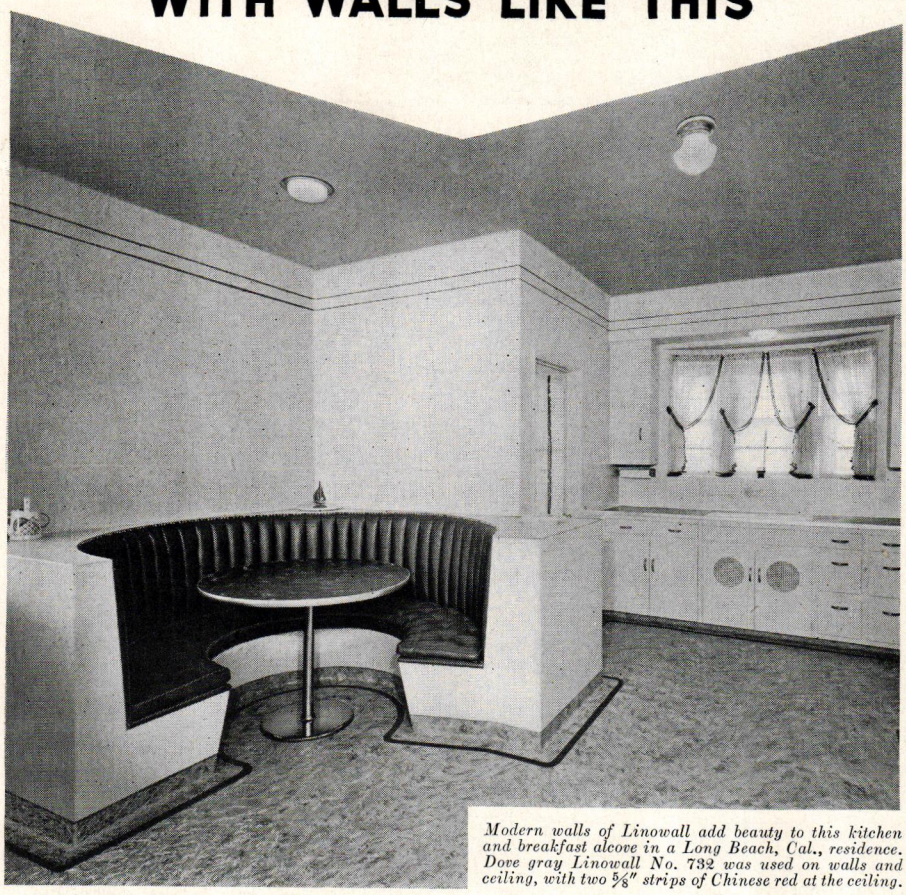

Modern walls of Linowall add beauty to this kitchen and breakfast alcove in a Long Beach, Cal., residence. Dove gray Linowall No. 732 was used on walls and ceiling, with two ⅝" strips of Chinese red at the ceiling.

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Made by the Makers of Armstrong's Linoleum

(Continued from page 60)

found truly beautiful and delicate inspiration—or is it too much to ask an artist of this generation to study and be inspired by such an instrument as the Gyro-compass? Or could it be that such a practical cerebration is not in the mental scope of the "modern artist"? Also in the Seismograph, L.M.-N. might have found the inspiration and accomplishment of a composition which could have been called "Equiposed Sculpture." In the study of the Spectroscope another world is open to his imagination. In other words if L.M.-N. is striving in this book to show us some of the really beautiful compositions of this age he fails, and falls short of that aim by what would seem lack of imagination and of actual knowledge of these widely used instruments that are really beautiful, useful, and typical of the organic and dynamic advances of 1939.

KARL OBERTEUFFER

SOME EUROPEAN ARCHITECTURAL LIBRARIES, THEIR METHODS, EQUIPMENT AND ADMINISTRATION, *by Talbot Hamlin, Librarian, Avery Library, Columbia University. ($3.00, 110 pages 6" x 9"—Columbia University Press, New York.)*

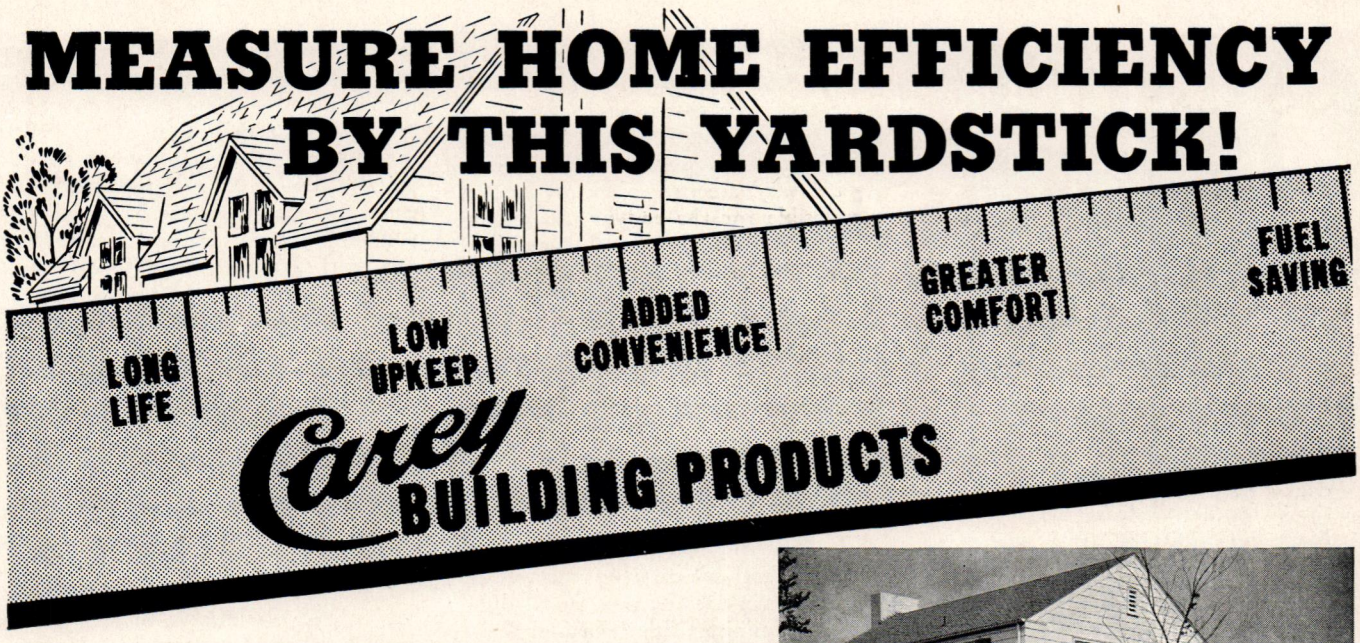
Talbot F. Hamlin visited the great architectural libraries in England, Germany, Italy, and France, and has just published a book of some hundred pages on their character, administration, and equipment. He is an architect, a member of the faculty of the School of Architecture at Columbia University, and the Librarian of the Avery Library of archæology, architecture, and the fine arts; so, naturally, this is an accurate and scholarly report. It is technical rather than popular, devoted principally to matters specially important to the librarian and his architect.

We know that the classification and storage of ordinary books has been satisfactorily worked out, but the folios, drawings, prints and other precious reference material of varied form and character require special classification and arrangement with specially designed shelving, cabinets, boxes or drawers. And few librarians or architects know much about the subject. Therefore, this report will be seized on eagerly by anyone faced with the problem of providing for a fine arts collection in a library or a museum.

There are photographs and a few detailed drawings; better if there were many, for we architects learn more from drawings than from the clearest descriptions.

ALFRED M. GITHENS

MEASURE HOME EFFICIENCY BY THIS YARDSTICK!



To meet the insistent demand for homes that offer new comforts, longer life and lower maintenance, yet that are reasonable in cost, research laboratories have been working overtime.

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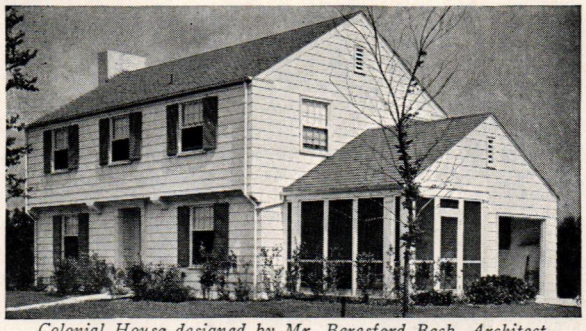
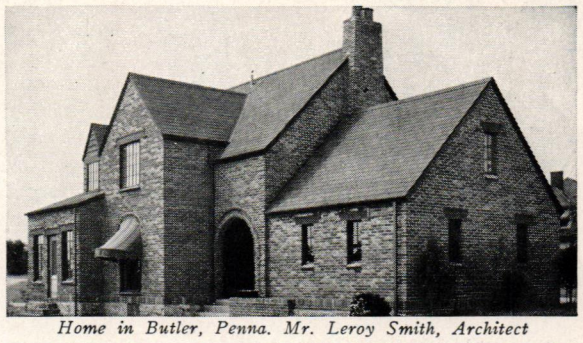
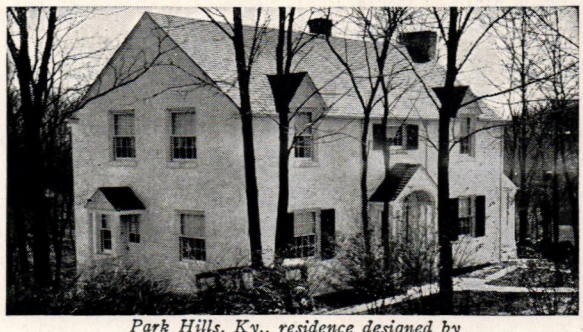


Colonial House designed by Mr. Beresford Beck, Architect, Chicago



Home in Butler, Penna. Mr. Leroy Smith, Architect



Park Hills, Ky., residence designed by Mr. Chester H. Disque, Architect

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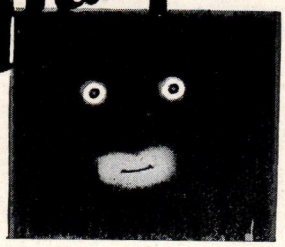

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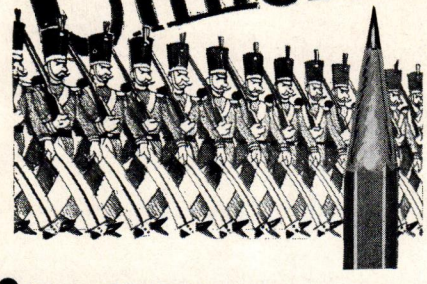

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MARS LUMOGRAPH

(Continued from page 58)

lowed; and this, in theory at least, gave them the potentialities for creation and perception which the artists of that group possessed. (The Cubists, by the way, are the "culprits" largely responsible for the end of the regime of absolute Beauty and her High Priest, the easel artist.) One chapter illustrates the equipoised sculpture developed by the Constructivists and the kinetic or moving sculpture created by the author. The final chapter deals with architecture, or rather, with the new universal perception of space which is, for Moholy-Nagy, the most potent ingredient of the New Architecture.

In *Bauhaus 1919-1928* we have a pictorial and descriptive record of work done in the German school during the administration of Walter Gropius. As it relies for its story upon a group of people who taught at the school and who take a partisan stand, the book lacks the comparative objectivity of *Cubism and Abstract Art* written by the staff of the Museum of Modern Art and published in 1936. Indeed, I recommend the latter book to be read in conjunction with this.

There were groupings within the school—and very important ones too. The Dutch-born *Stijl* group had an enormous influence in the Weimar days of the Bauhaus, as many of the illustrated works show. Then later, at Dessau, Moholy-Nagy and his Russian Constructivism had their day. It is possible that the omission of the work done in the time of Hannes Meyer and, later, of Miës van der Rohe's administration—in a book that cannot but be taken popularly as descriptive of the whole Bauhaus—will be exasperating to the followers of those teachers. And I think that the remarkable diagrams showing circulation between rooms of a house and of rationalized furniture layouts (specialties developed in the time of Hannes Meyer) could and should have been included for their architectural value.

The New Architecture and the Bauhaus was first published in England in 1935 during Walter Gropius' stay in that country. Within the book there are three divisions. In the first, in order, is a statement of the new technics and spatial vision that have made the New Architecture an actuality. Following this is an exposition of Bauhaus principles. Finally, there is a statement of town planning problems, which, since they remain unsolved, leave the New Architecture hanging as a future possibility. Now if you take all the general principles in this book as being "modern" the contradiction between its first and third parts may be confusing. But you

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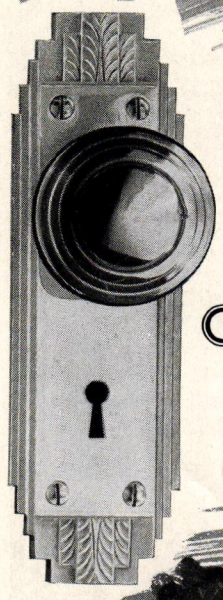
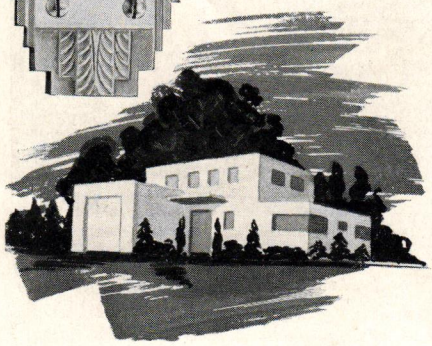


Match IT WITH SAGER



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COMPETITION ANNO

The Cranbrook Academy of Art announces a scholarship open to architects and draftsmen who wish to study Advanced Architecture and Civic Design under the direction of Eliel Saarinen. Applications and details of the scholarship may be obtained from Richard P. Raseman, Executive Secretary, Cranbrook Academy of Art, Bloomfield Hills, Michigan. Applications must be received by the Academy not later than June 1, 1939.

Timber Bridge Design Contest

More than 1,200 entries have been recorded in the Timber Bridge Design Contest being conducted under the joint auspices of the National Lumber Manufacturers Association, The American Forest Products Industries, and the Timber Engineering Company. The competition has been in progress during the past three months and is open to students of architecture and engineering, and graduates of both schools. Twenty-five prizes, totaling to $1,500 and ranging from $500 to $50 will be awarded.

A book giving complete rules may be obtained from the Timber Engineering Company, 1337 Connecticut Avenue, Washington, D. C. All designs must be in the mails by midnight, August 15.

Closing Date Advanced

The closing date of the 1939 Barre Granite Association Competition, announced in the March issue, has been changed from September 1 to August 1. The prize awards will be announced on November 1.

American Academy in Rome

The winners of $2,800 fellowships, for two years, in the Rome Prize Competition in Classical Studies have been announced as follows: Donald F. Brown, New York City, A.B., M.A., New York University; William R. Tongue, Meadville, Pa., A.M., Duke, Ph.D., University of Pennsylvania, now instructor in Classics at Allegheny College; Delight Tolles, Mount Vernon, New York, A.B., Vassar, M.A., Bryn Mawr, now studying on a Bryn Mawr traveling fellowship at the American School at Athens.

It also has been announced that as a result of a 24-hour competition the following 16 final competitors for the Rome Prize in Architecture have been chosen from 62 entering: Maurice W. Bacon, Yale University; Joseph F. Balis, Pennsylvania State College; Fred W. Bucky, Jr., New York University; [illegible] vania St[illegible] and Jose[illegible] land Sch[illegible] ern Rese[illegible] Universit[illegible] olic Uni[illegible] Pennsylv[illegible] Downs, [illegible] and Prin[illegible] Catholic U[illegible] R. Eley, U[illegible] of Southern California; James H. Finch, Georgia School of Technology; James W. Fitzgibbon, Syracuse University and University of Pennsylvania; Chester H. Philips, Princeton University; Robert A. Strauch, University of Illinois; and Charles C. Taylor, Pennsylvania State College and Princeton University.

The problem called for the design of "A College Hall." The final competition will extend over a period of five weeks beginning April 29. Only one Fellowship will be awarded.

Productive Home

The excellent showing made by two alumni and two graduate students of M.I.T. in the recent Productive Home Architectural Competition *(See pages 307-314 of this issue for prizewinning designs)* is called to our attention by Dean William Emerson, of the School of Architecture, who is vigilant in the interest of M.I.T. men. Alexis A. Dukelski, '28, won a $1,000 prize with a home designed for the Northeast; Harry Weese, '38, won another of the five $1,000 prizes with his design for the Mid-West; and Mrs. Lois W. Worley and William W. Caudill produced the prizewinning design for the Southwest *and* another for the same region which received special attention as an outstanding solution.

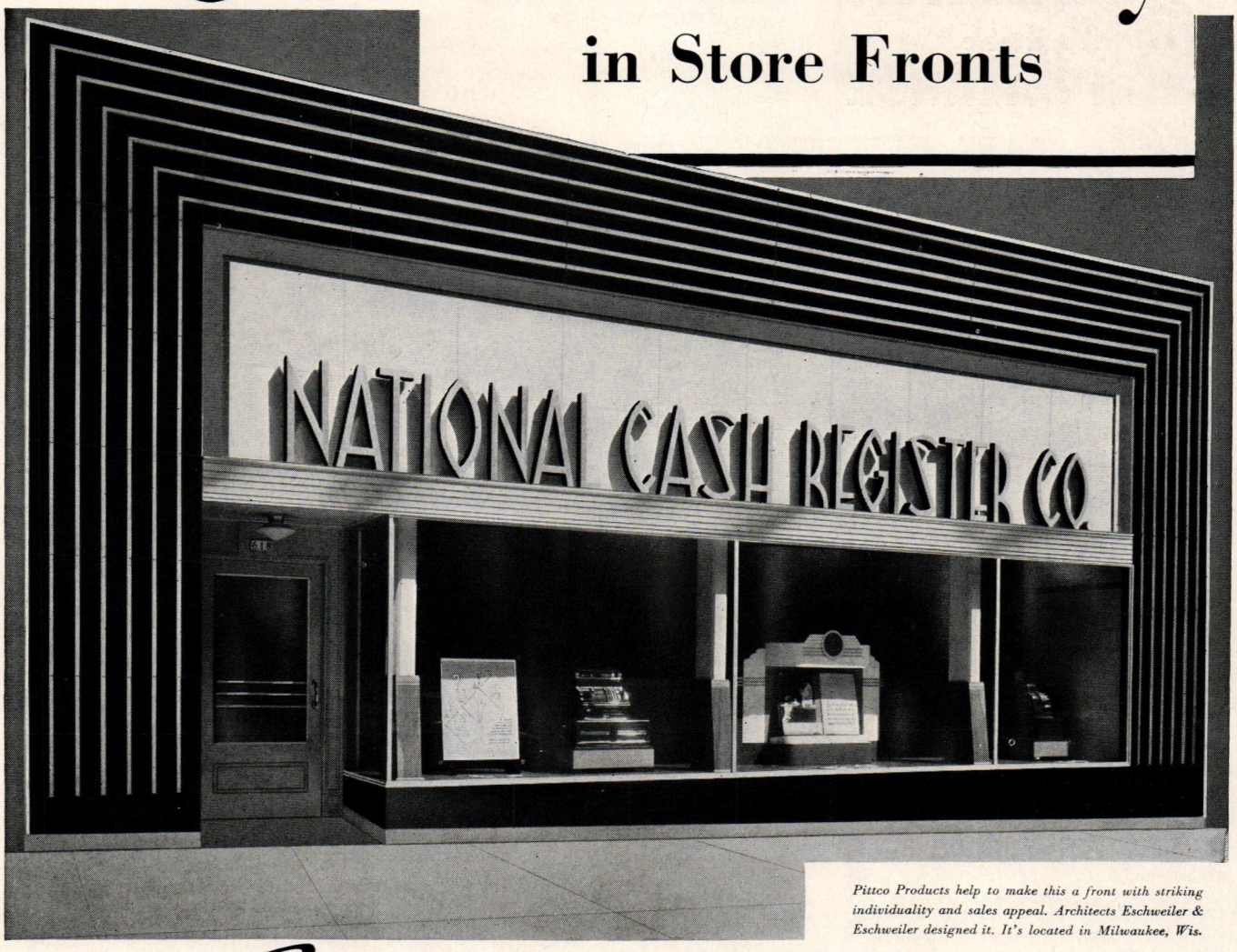
General Electric Awards

The winners of $1,000 awards in the recent "New American Home Building Contest" sponsored by the General Electric Company's Home Bureau — which gave owners, architects, builders, and realtors in all parts of the country an opportunity to submit photographs of modern homes they considered outstanding — are announced below. The entries, from 40 States, were found to include the following types: Colonial, 33 per cent; bungalow, 21 per cent; "Modern," 16 per cent; English, 10 per cent; Cape Cod, 6 per cent; others, 14 per cent.

The winning houses, including several of those shown on pages 315-328

(Continued on page 68)

For Individuality in Store Fronts



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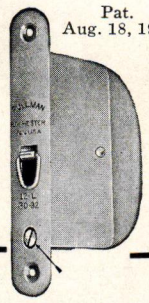

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ARCHITECTURAL LIBRARIES
By Talbot F. Hamlin

THE LIBRARIAN of the Avery Architectural Library of Columbia University surveys the methods, equipment and administration of the more important European architectural and archaeological libraries in order to help American architectural librarians solve their many special problems. 128 pages. Charts, 10 plates, 2 figures. $3.00

Columbia University Press
Morningside Heights • New York

(Continued from page 66)

of this issue, were entered by:

Mrs. Mary-Louise K. Alford, Buffalo, N. Y., Owner; H. C. Bender, Spokane, Wash., Owner; Earl L. Confer, Detroit, Mich., Architect; James F. Eppenstein, Chicago, Ill., Owner and Architect; Mrs. J. S. Feldhusen, Kimberly, Idaho, Owner; G. K. Frisbie, Rancho Santa Fe, Cal., Owner; R. D. Guthrie, Gates Mills, Ohio, Owner; John P. Illges, Columbus, Ga., Owner; John C. Lyons, Marblehead, Mass., Builder and Architect; John S. McKenzie, Elkins Park, Pa., Owner.

Mrs. Dorothy Dell Moffett, Indianapolis, Ind., Owner; Olive G. Moon, Highland Park, Ill., Owner; Y. W. Nibecker, Huntington Park, Cal., Owner; John S. Osterstock, Shrewsbury, N. J., Owner; A. Parker Terryberry, Grand Rapids, Mich., Owner; Texas Master Builders, Houston, Texas, Builder; Waldo and Weller, Inc., Detroit, Mich., Architect; Philip Will, Jr., Chicago, Ill., Owner; Wilbur R. Williams, Boulder, Colo., Owner; and David E. Winkworth, Monroe, Mich., Builder and Architect.

Modern American

The winning designs and other selected entries in the recent "Modern American Dining Room" competition conducted by James H. Blauvelt, New York Interior Decorator, in collaboration with Country Life Magazine, will be displayed May 23-31 at the Macbeth Gallery in New York. The date of judgment of the designs was May 8.

Students of interior decoration in all parts of the country were invited to enter the competition, the second conducted by Blauvelt. The program, announced in the October issue of PENCIL POINTS, called for a design for a dining room for a country house in A Modern American Style, and a lighting plan.

Travel Posters

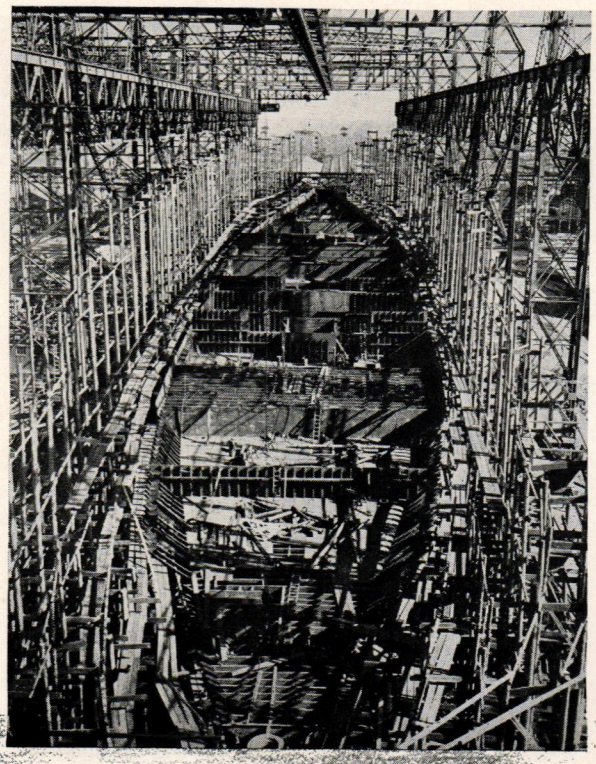
The selection of the Jury of Award in the annual national Travel Poster Contest, sponsored by Devoe & Raynolds, has been announced by De Lancey Kountze, Chairman of the Board. The judges include Norman Rockwell, one of America's foremost illustrators; Jonas Lie, President of the National Academy of Design; Don Herold, well-known cartoonist, humorist, and author; Hon. Joseph Eastman, of the Interstate Commerce Commission; C. B. Falls, poster artist and designer; and Lowell Thomas, world traveller and radio commentator.

These men met immediately following the close of the contest, on April 30, to choose those posters which, in their opinion, best illustrated one or more of the varied features of Travel. Originality, dramatic appeal, and simplicity were also considered in the final selection.

The prize money, totaling $2,020 in cash, will be divided among the winners, as follows: First prize, $1,000; second prize, $250; third prize, $100; fourth prize, $50; fifth prize, $20; and ten other prizes of $10 each. Special separate prizes of $250, $150, and $100 also are being offered jointly by Western Railroad and Pullman companies for the three outstanding posters portraying travel by train anywhere west of and including Chicago, St. Louis, Memphis, Vicksburg, and New Orleans.

Palmer Fellowship Awarded

The award of the Leonard M. Palmer Fellowship of Princeton University to Edward A. Moulthrop, Cleveland Heights, Ohio, has been announced through Dean Francis R. Bacon of the School of Architecture of Western Reserve University. The Fellowship carries a prize of $700 and a year's tuition. Moulthrop is a member of the fifth-year class of the Reserve School, to be graduated in June. Last summer he was the recipient of the Schweinfurth Scholarship, for study at the Fontainebleau School in Paris.



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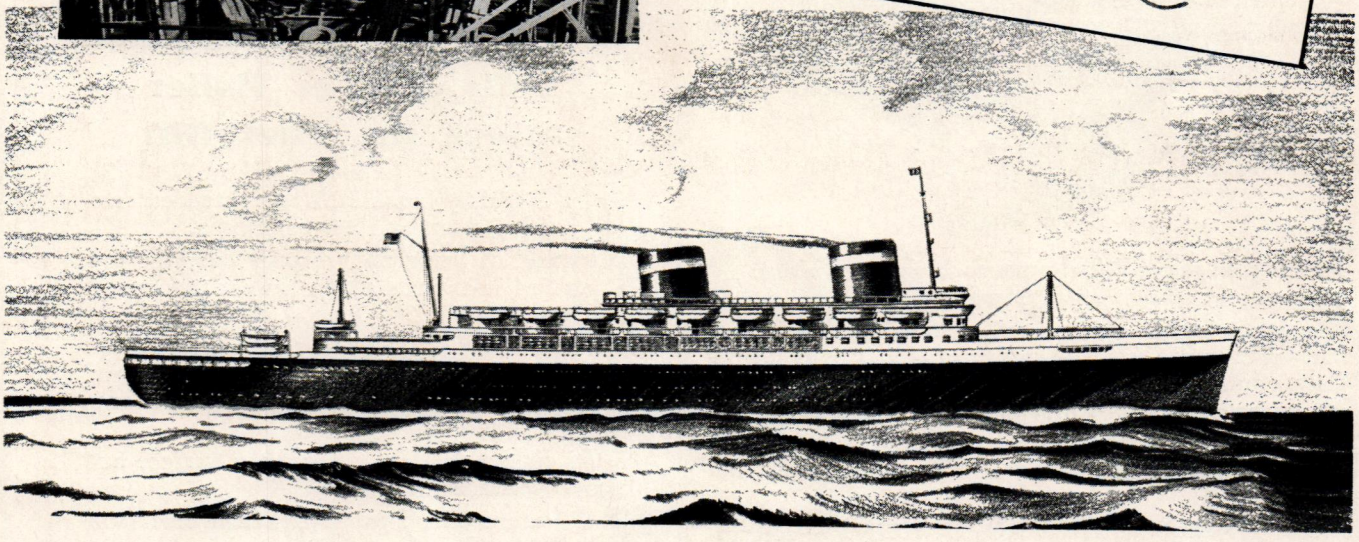

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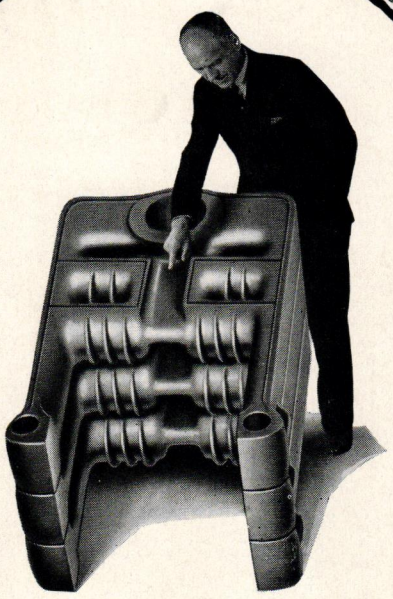

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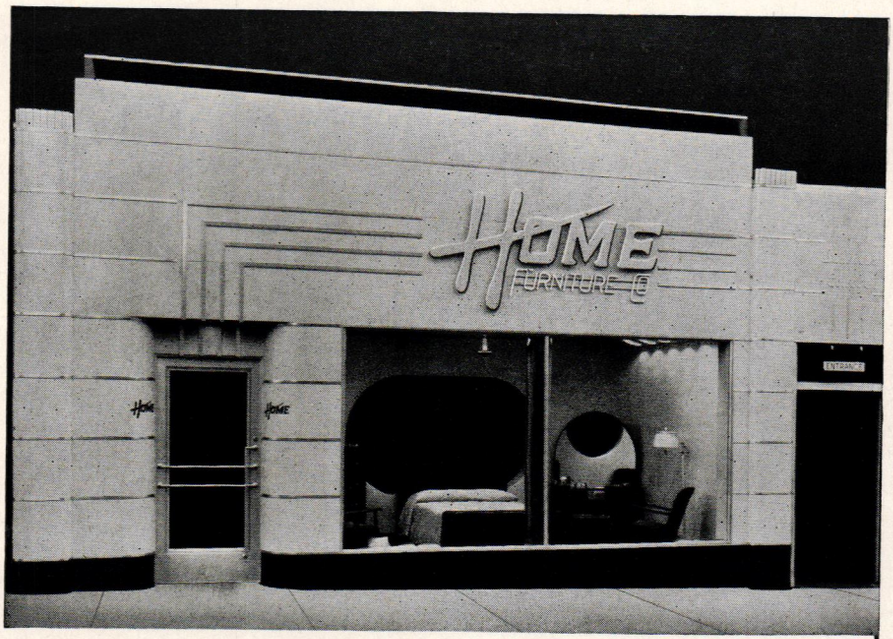
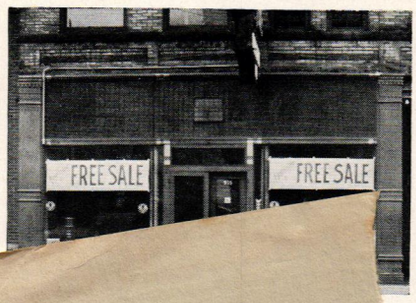
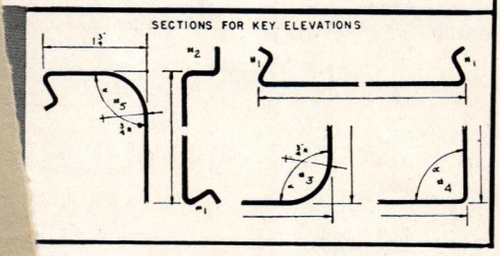




SEE WHAT porcelain enamel on U·S·S VITRENAMEL has done for this midwestern furniture store installed by the Kawneer Company, Niles, Michigan. New front, above; old, below. The letters above the window were pressed into the steel before enameling, to form a permanent, attractive identification. The flexibility of porcelain enamel design makes each job stand out as an individual.

BELOW ARE standard joint sections used on this design. With the aid of leading architects and builders, we have worked out simple, effective, and low-cost methods of construction with porcelain enamel. Write for data.



MODERN developments in steel bring new business-getting store fronts within the reach of even the moderate-sized retail establishment—open up an entirely new field for architectural design.

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Wherever you want permanence, brilliance, and color at low cost, use porcelain enamel on steel. And to be sure the metal beneath the surface is the finest that money can buy, specify U·S·S VITRENAMEL. Write for complete details.

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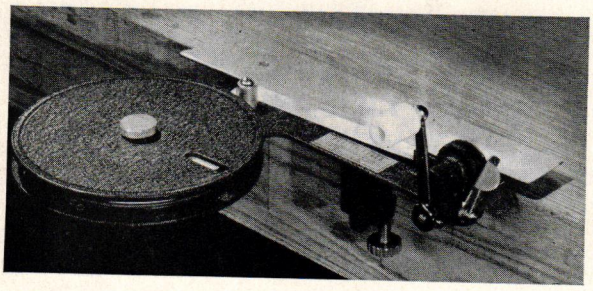
LUPTON STEEL WINDOWS

NEW PRODUCTS
Changes in Personnel, etc.

NEW SCOTCH EDGER

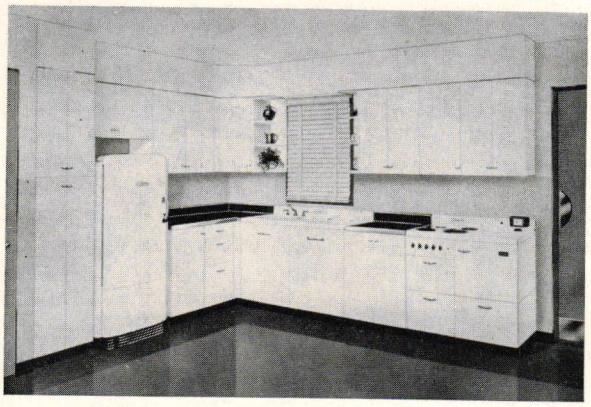
The Minnesota Mining and Manufacturing Co., St. Paul, Minn., announces the introduction of a new product, Scotch Edger, for use in drafting rooms with Scotch cellulose edging tape.



This tape seals instantly without moistening or heat, and produces a permanent edge which will not dry out, curl or loosen. Heat from continuous blue print machines will not affect it, and sheets can be filed without danger of sticking together. Simple construction and few working parts of the edger insure easy operation and long service.

COMPLETE GENERAL ELECTRIC STORAGE APPLIANCE LINE ANNOUNCED

Designed and built according to specifications outlined by consumers, General Electric's new line of kitchen cabinets, or storage appliances has been made available to sales outlets as of April 1, according to Webb Theleen, manager of the G-E dishwasher-disposal sales section, Nela Park, Cleveland. No changes are contemplated in the present line of G-E electric dishwashers. Four models of electric sinks, combining the two appliances, are available—with white porcelain enamel top, with stainless steel top, with Monel metal top, and with black porcelain enamel top.



The new kitchen has greater flexibility than has ever been offered in the past, and can be made to fit any room to a fraction of an inch. Although the separate cabinets are standardized the complete kitchen has a custom-built appearance by virtue of the variety of cabinet widths, finishes, and accessories. Top and base cabinets come in 15, 18, 21, 24, and 30 in. widths, and top cabinets are 18 or 30½ in. in height. Simple installation is provided by furnishing each section as a completely enclosed, rodent-proof steel box, which slides in and bolts to a simple furring. Installation cost is much lower than for previous kitchens. Base cabinets are furnished with doors or drawers.

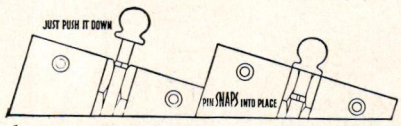
The new cabinets are simple in design, harmonizing with the 1939 G-E refrigerators, ranges, and electric sinks. They have hardware in the same motif. Exclusive features include concealed spring action hinges; adjustable shelves with a choice of wire or one-piece shelf construction; adjustable sliding shelves in base cabinets; automatic interior lighting in both top and base cabinets; and interchangeable drawers.

Accessories range from cup hooks and cutting boards to a planning desk and kitchen chair. They include a cutlery tray, bulk storage bin, cup racks, condiment shelves, pan cover file rack, bread and cake box, waste basket, detergent rack, corner decorative shelf sections, grilled doors, broom cabinets, linen cabinets, plate warmer and recipe cabinet. A choice of colors in work surface linoleum is offered.

NEW STANLEY NON-RISING PIN

The Stanley Works, New Britain, Conn., has recently announced a new development to ensure the non-rising of the pin in door butts.

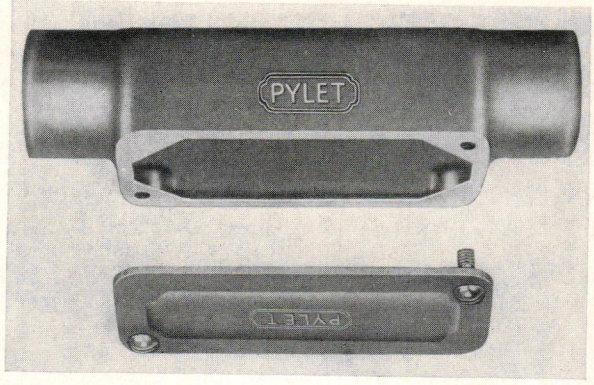
The new pin is secured by means of a split ring attached in a groove in the pin. This split ring fits into a pocket formed in the bottom of the top knuckle of the butt. When the pin, through action of the door, attempts to rise, the split ring comes in contact with the inside of the knuckles above the pocket and is prevented from further rising.



This improvement is said to combine extreme simplicity, effectiveness in operation, and ease in setting and withdrawing.

NEW PYLET CONDUIT FITTINGS

The Pyle-National Co., 1334 N. Kostner Ave., Chicago, announced the addition of new standard conduit fittings—rectangular Pylets, FS and FD series Pylets, Vaportight lighting fixtures—to its line of heavy duty industrial electrical equipment. The new Pylets include all standard types of threaded conduit fittings. The



malleable iron bodies are galvanized and provided with a baked aluminum finish after galvanizing. Large wiring space is provided, and rounded edges of cover opening prevent chafing of wires. Top surfaces are ground for perfect seating of covers, and cover screw holes are counter-bored for self-alignment of covers. The FS and FD series Pylets have square corners to take standard switch and receptacle plates, as made by wiring device manufacturers, as well as Pyle-National Triploc and Quelarc plug receptacles.

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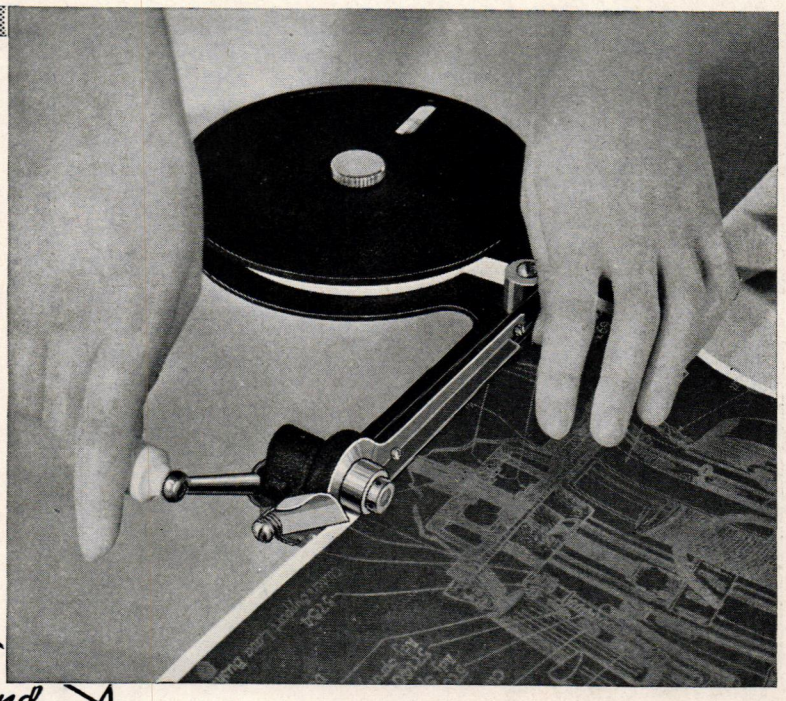

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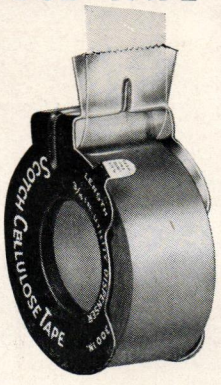

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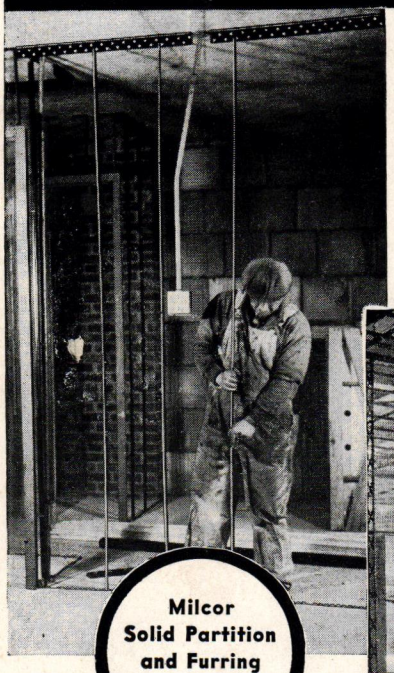

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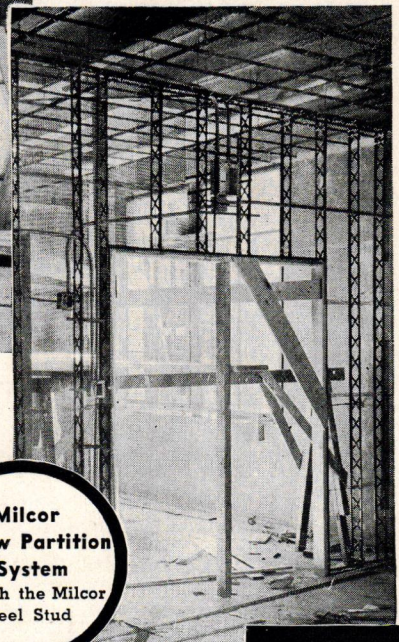

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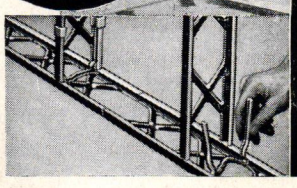

(Inset shows how metal shoe locks floor track and upright member firmly together)

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