

BER 1951

ARCHITECTURAL FORUM

THE MAGAZINE OF BUILDING



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HOUSES ISSUE

Architect & Client

Eleven outstanding houses, including:

← Farnsworth house by Mies van der Rohe (p. 156)

Second-story house by Milton Ryan (p. 162)

Portfolio of work by Harwell Harris (p. 166)

Architect & Builder

Five outstanding houses, including:

Coogan's \$6,850 design by Parker (p. 209)

Eichler's \$13,000 house by Anshen & Allen (p. 212)

Levitts' new \$9,990 design (p. 217)

Low-cost ways to improve

low-cost houses (p. 196)

Small house floor plans (p. 198)

New ideas for better kitchens (p. 202)

Builder round-up—plans for '52 (p. 206)

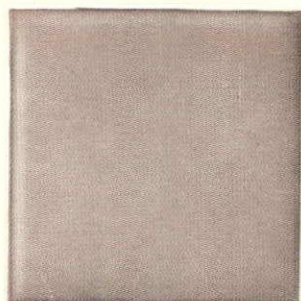
Two new magazines for the industry
(p. 153)

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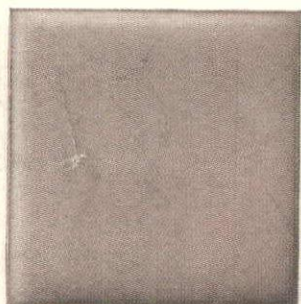
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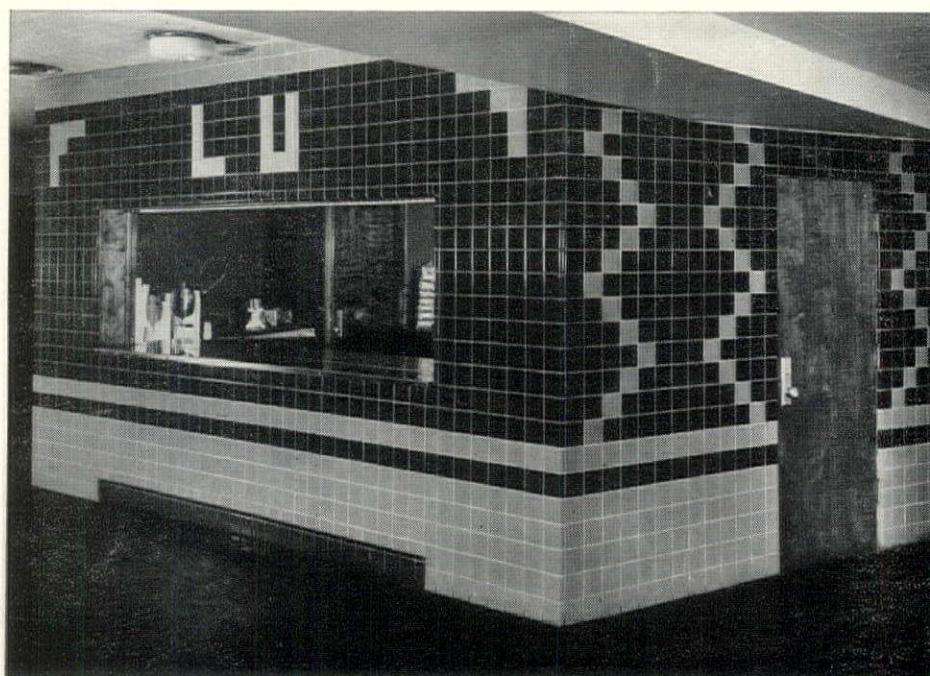
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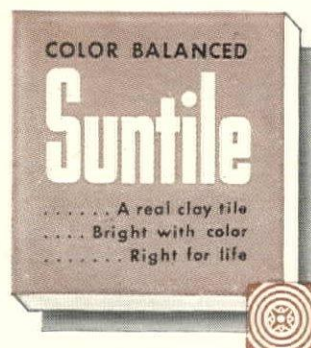
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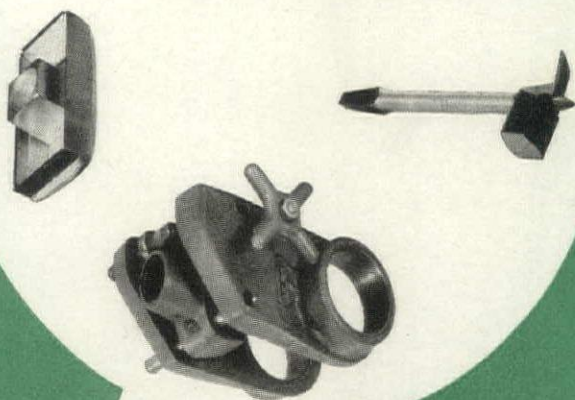
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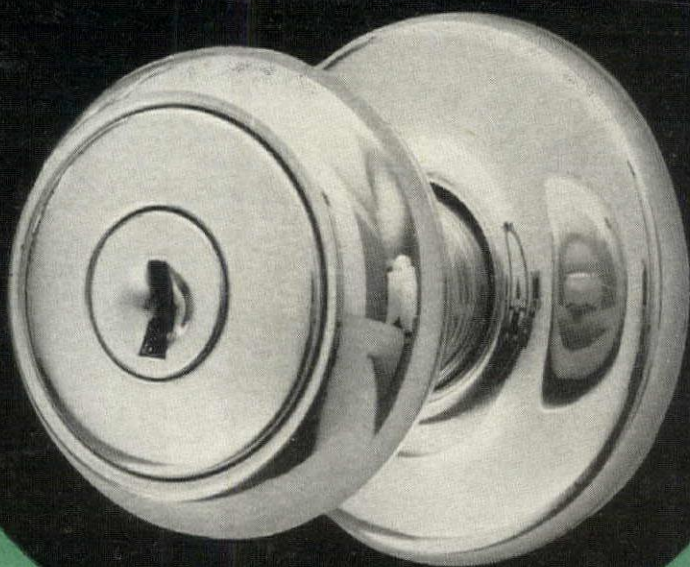


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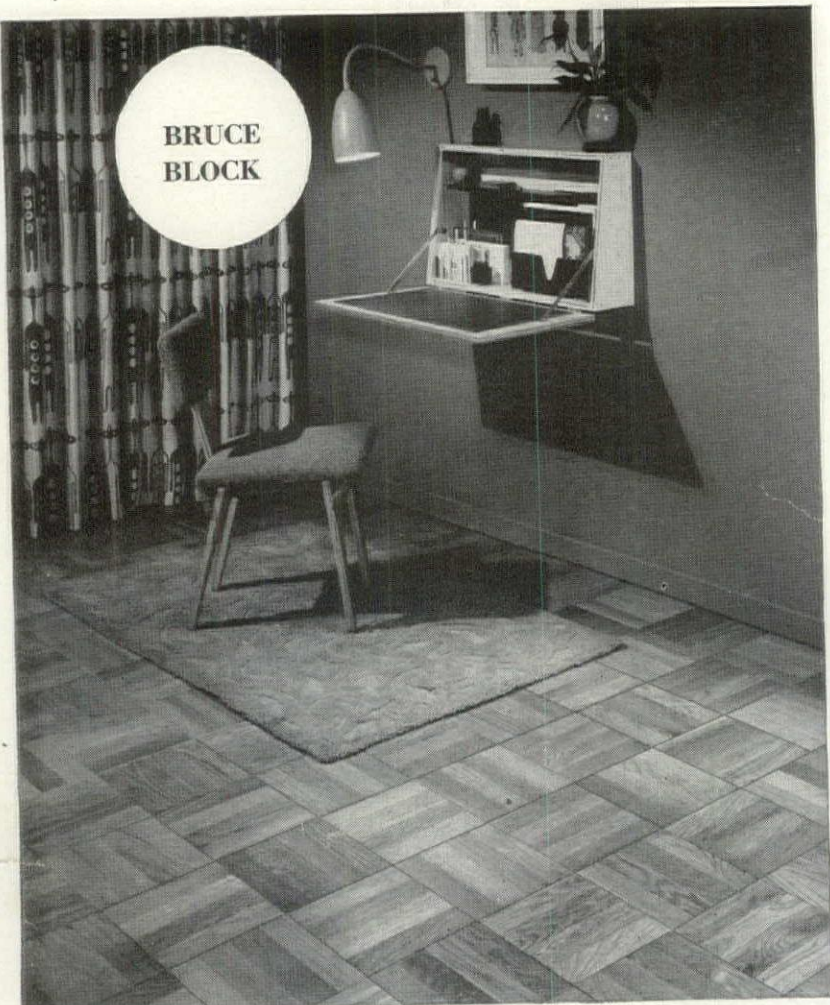
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for modern interiors

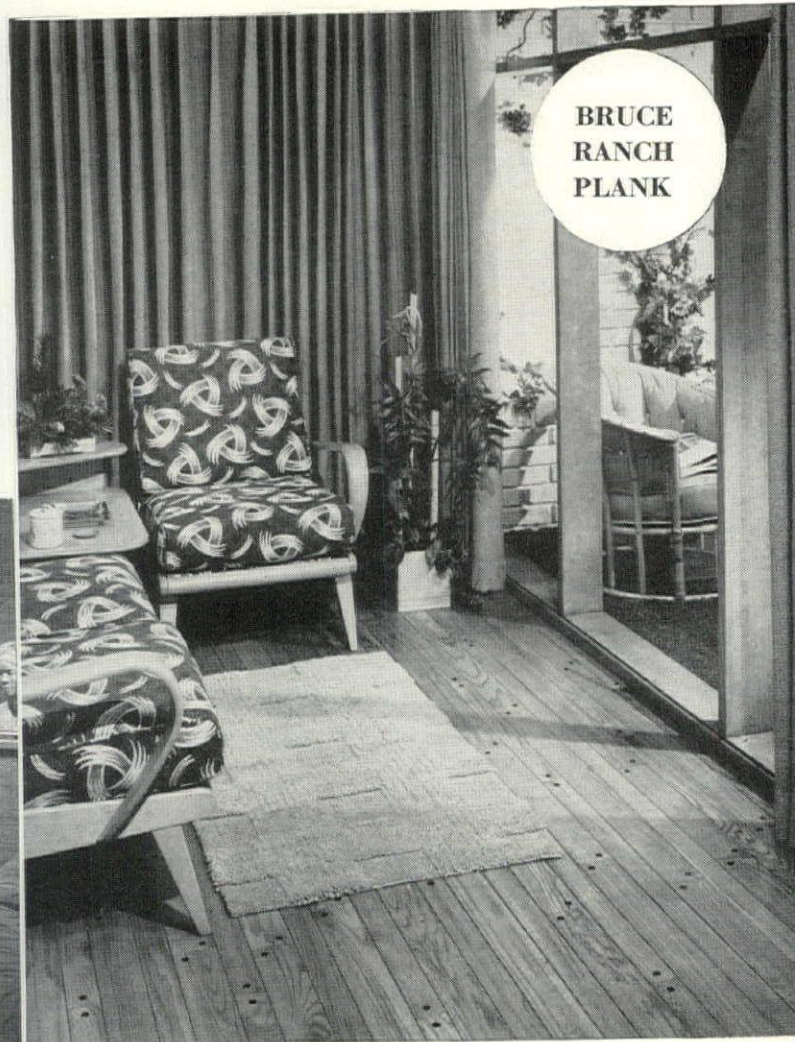
■ Hardwood floors have "gone modern" too. The floors pictured here are right in step with latest trends in architecture and decoration. No matter how modern your homes may be, these Bruce Hardwood Floors will make them more distinctive, more beautiful, more livable. Write for booklet with color photographs.

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How to solve your clients' OFFICE SPACE PROBLEMS

permanently-

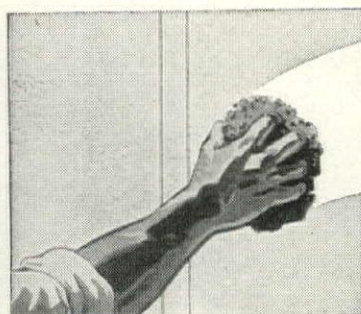
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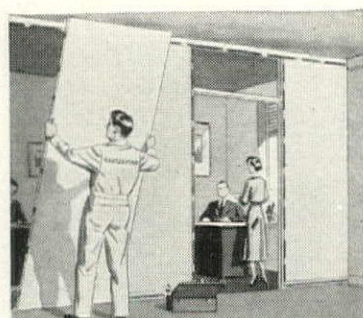
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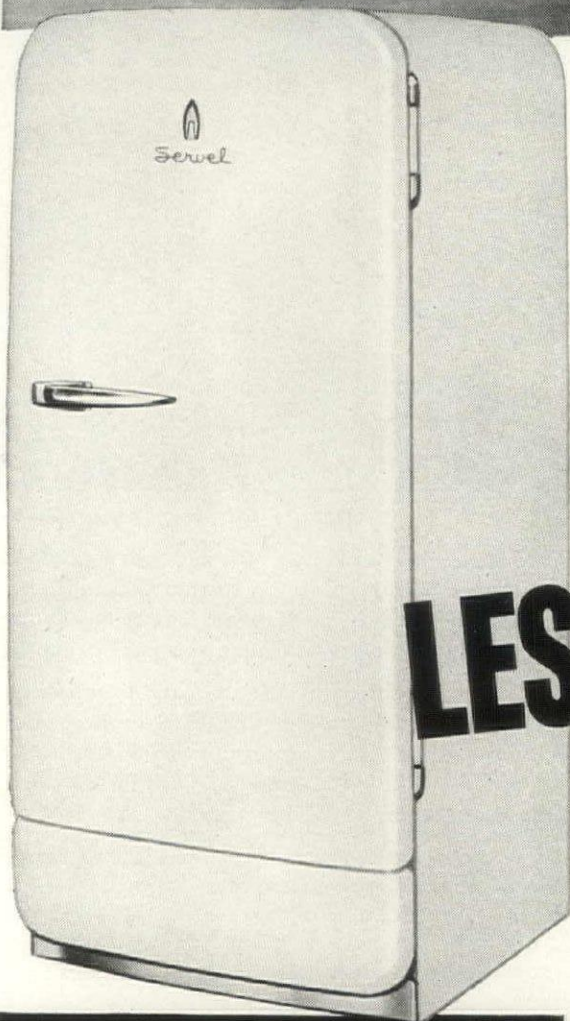
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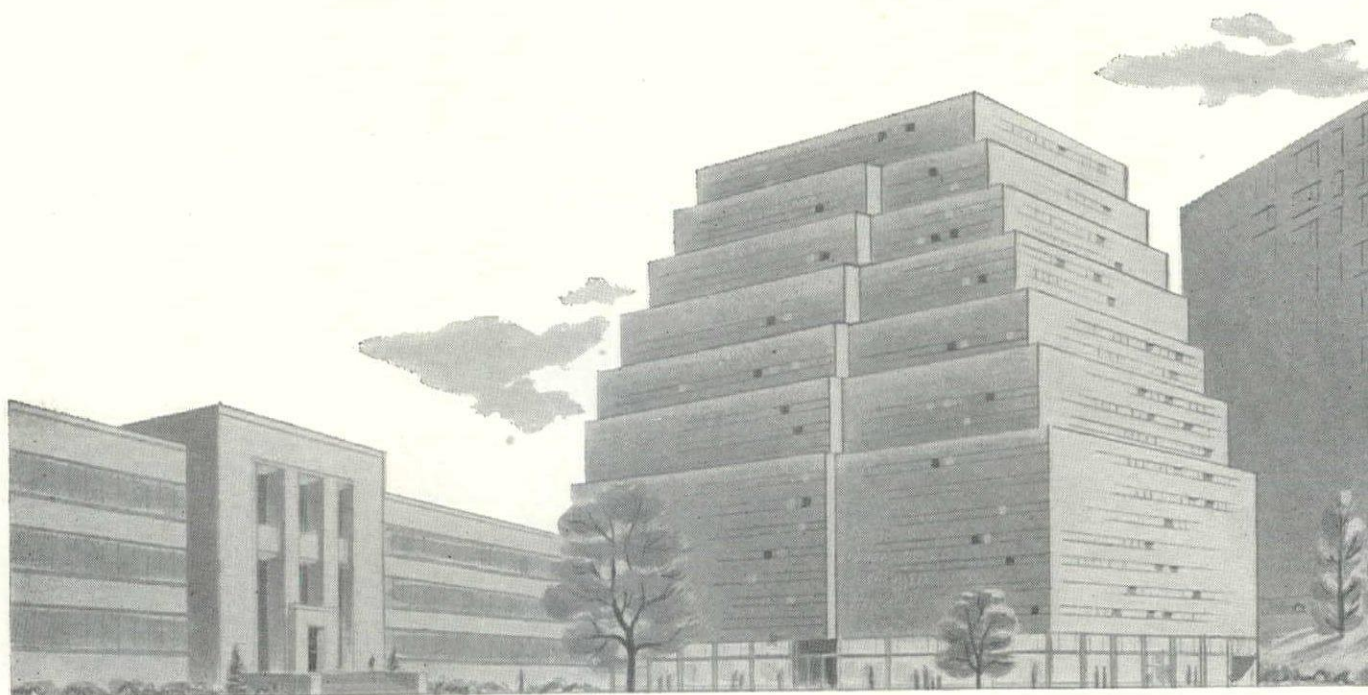
More and more project builders find **SERVEL COSTS LESS TO MAINTAIN**

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how a PAN changed building in America...



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"How can building be done better—faster—at lower cost?"

He looked at waste in the pouring of concrete floors over forms that remained in the structure forever.

Why not a removable form that can be used again and again, he reasoned... the way manufacturers mold things... or the way bakers shape cakes with pans that always are reused.

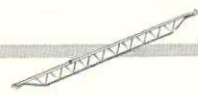
So an idea was born and from it stemmed a new method of building that changed the course of construction throughout the nation. Now concrete floors are molded around a removable pan shaped device known

as a Ceco Meyer Steelform, used over and over from floor to floor as a building moves on to completion. Today big savings are made in men, money, material—thanks to an engineering concept as simple as a pan.

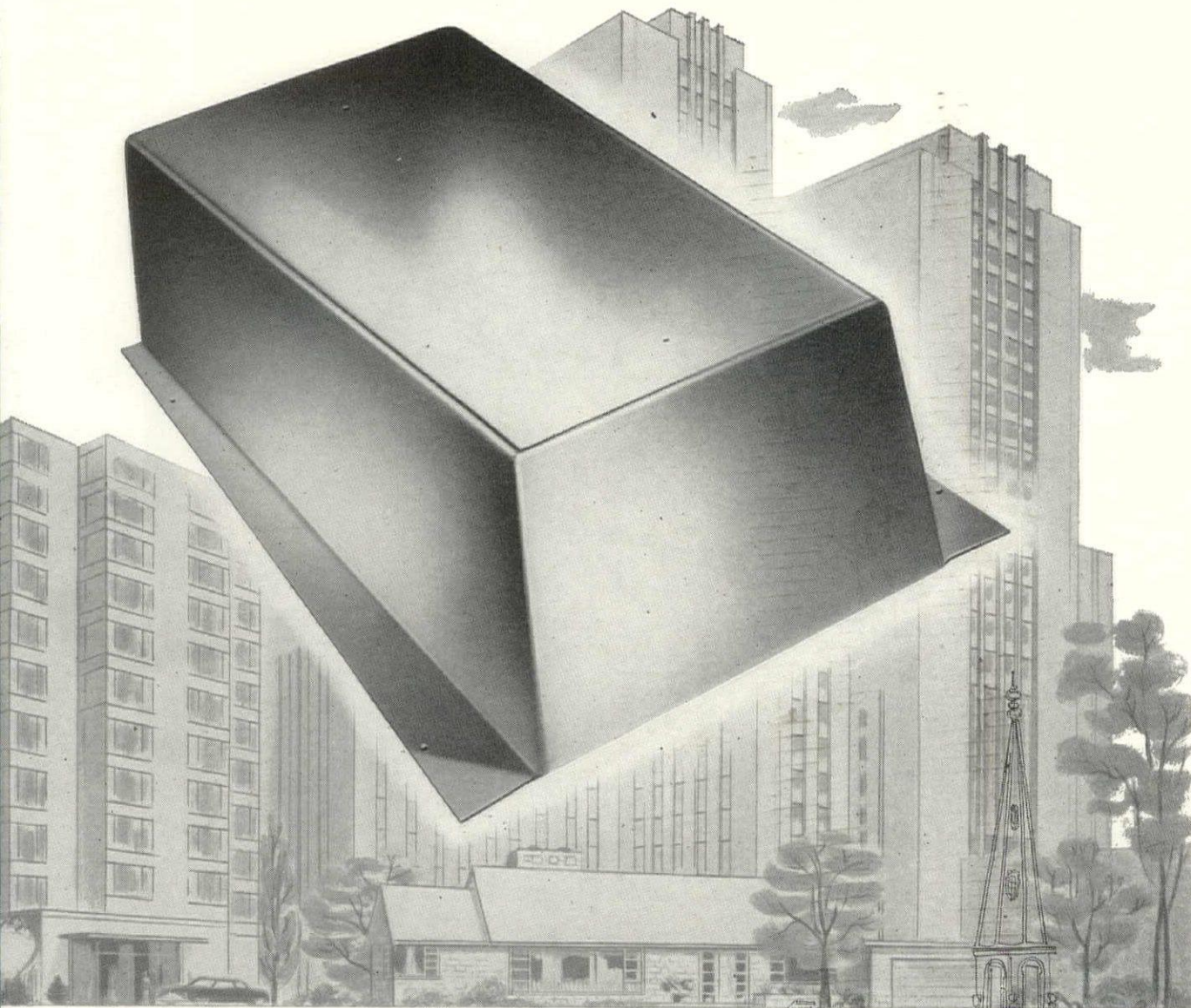
Creative Engineering has left its mark on all Ceco Manufacturing down through the years—in steel windows for every type of structure—in open web steel joists—or in products like metal lath—for Ceco builds small with the same precision it builds big.

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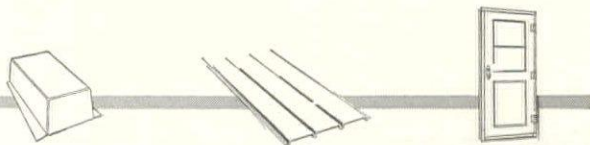
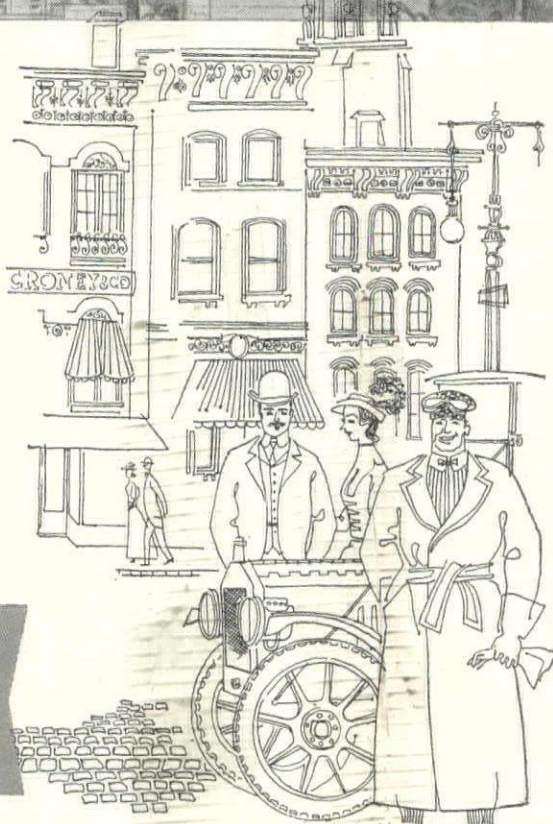


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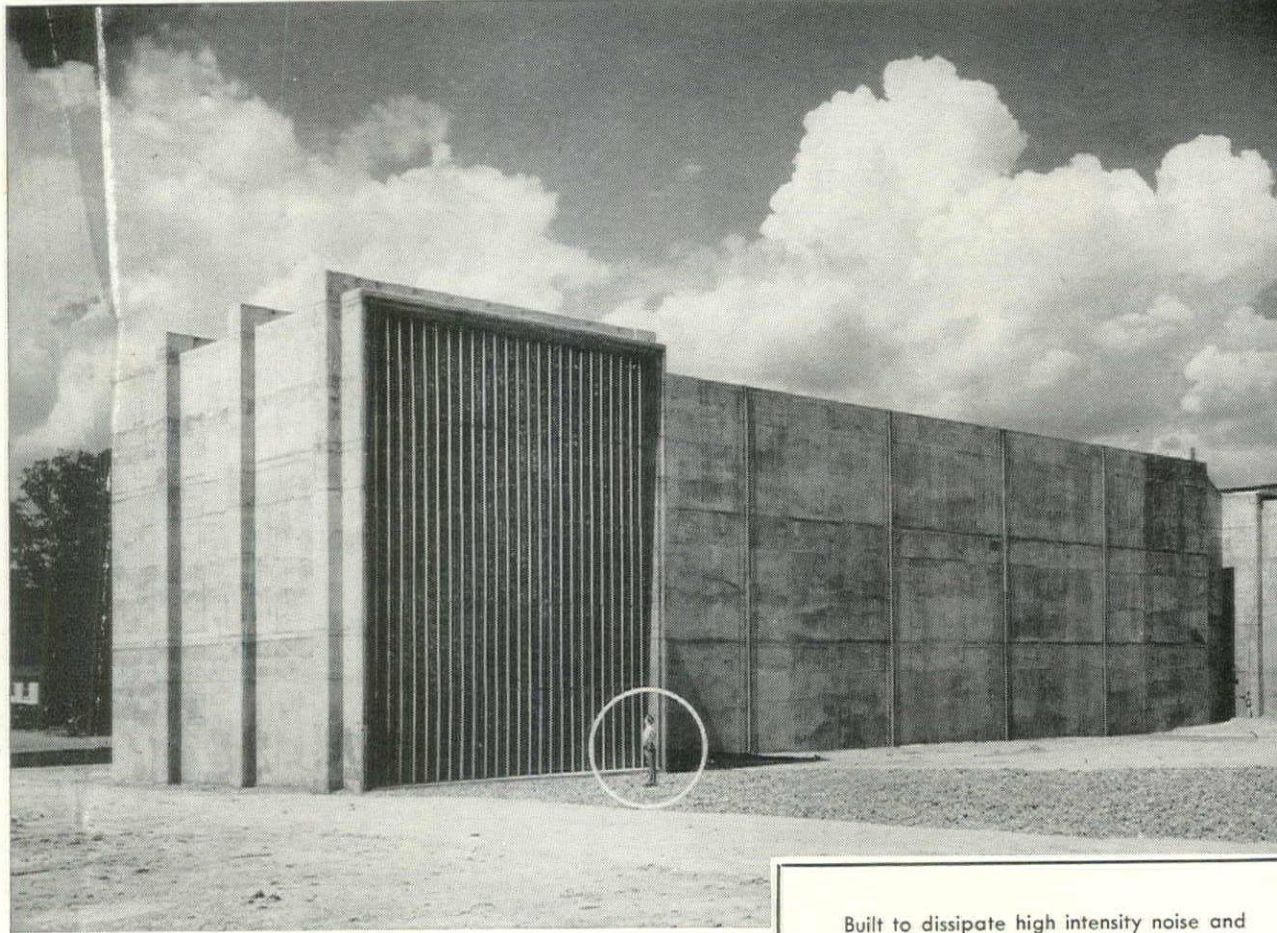
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"Douglas fir plywood concrete form panels, specified for ease of handling and for the smooth concrete surfaces required, helped get the job done fast, too. Plywood speeded formwork application time by 15 per cent."

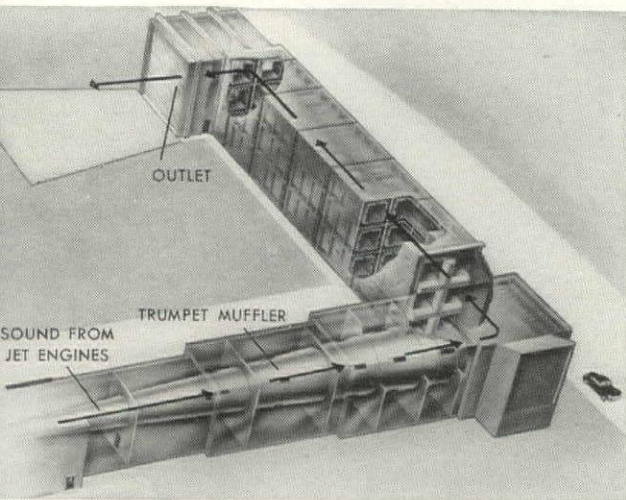
Here is just one more example of a fact well known to architects, engineers and contractors: easy-to-fabricate Douglas fir plywood concrete forms go up faster, strip easier, last longer—and provide concrete surfaces that are smooth, fin-free and simpler to finish with a minimum of labor.

Built to dissipate high intensity noise and curb low frequency pressure waves generated by "hot" ram-jet engine tests, this giant acoustical building was an addition to an existing supersonic wind tunnel at the Lewis Flight Propulsion Laboratory of the National Advisory Committee for Aeronautics, Cleveland, Ohio. The new acoustical house is 50 feet high, 33 feet wide and 190 feet long. Forms for the honeycomb of resonator-type ducts were built by placing $\frac{5}{8}$ " PlyForm concrete form panels across 2x6 studs, backed by 2x6 wales. After each use, forms were stripped, re-oiled and erected into position for next pour. Contractor was The Hunkin-Conkey Construction Company, Cleveland, Ohio.

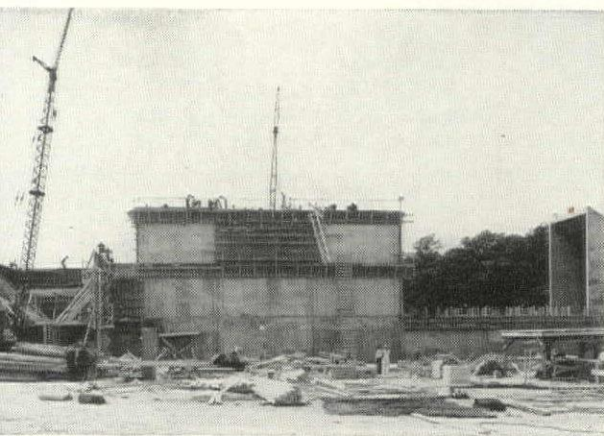
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Artist's visualization above shows layout of the complete unit. Sound from engine enters the original trumpet muffler, which screens out most low-frequency waves. A system of concrete baffles and duct mufflers in the new acoustical building stop low and medium frequency vibrations. Here, smooth concrete surfaces were required; roughness would cause a greater pressure drop in air flow and require more power to pass through the ducts. To obtain this required smoothness on the inside—and for attractive exterior appearance, too—the contractor used forms of Douglas fir plywood. Below: construction view of project, showing forms in place.



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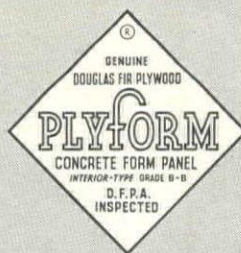
For additional data on Douglas fir plywood for concrete form work, write (USA only): Douglas Fir Plywood Association, Tacoma 2, Washington. Of particular interest are two booklets: "Concrete Forms of Douglas Fir Plywood" and "Handling PlyForm".

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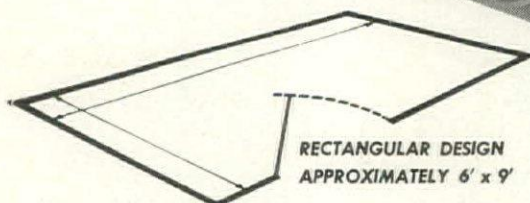
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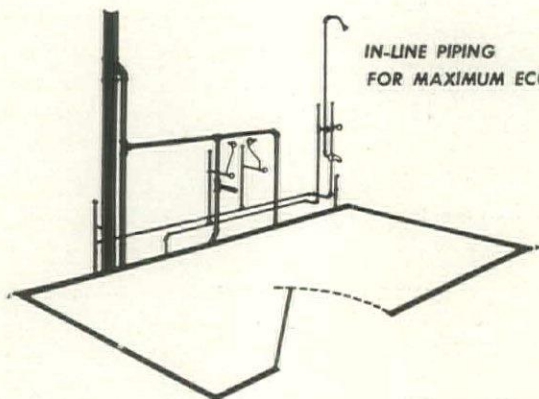
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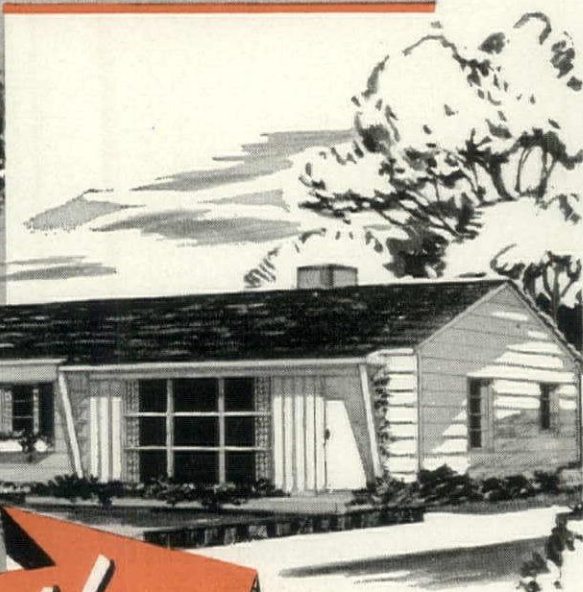
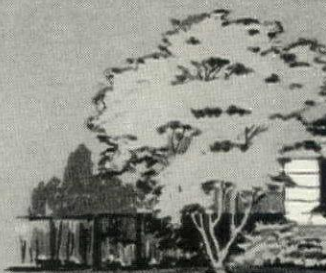
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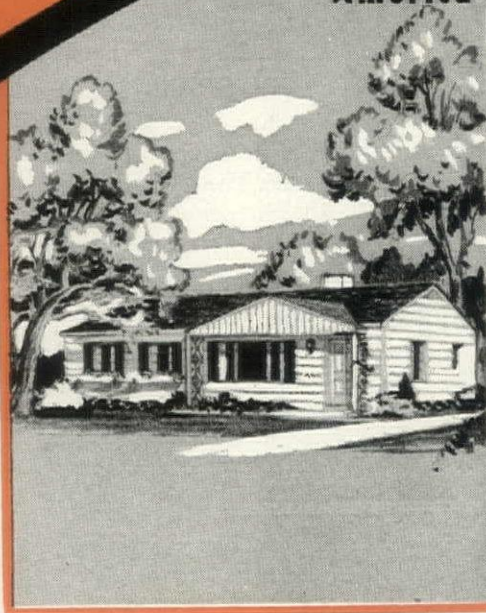
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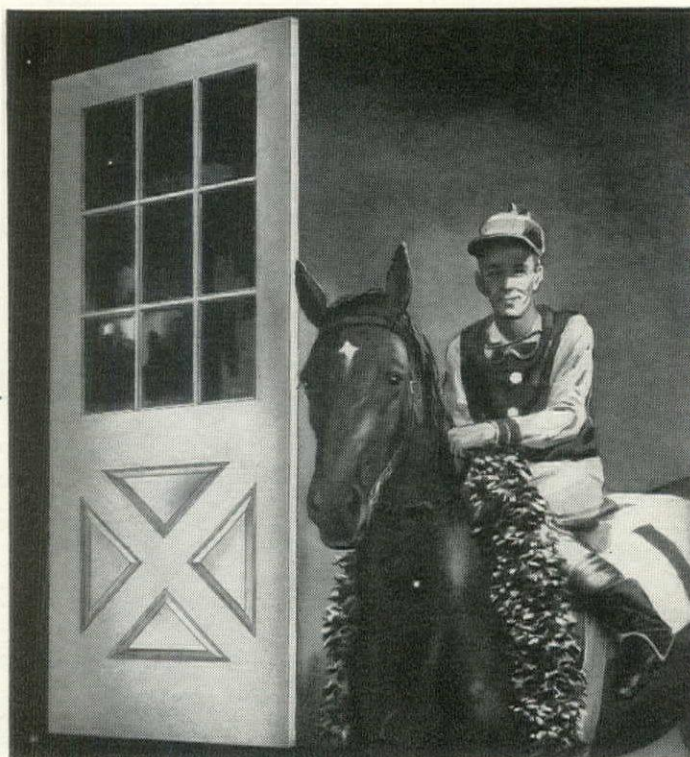
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Shown here is the popular FDI Tru-Fit No. 2035

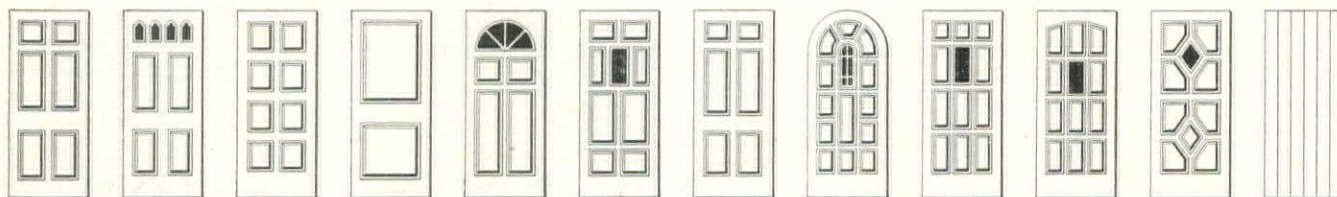
You Pick A Winner When You Specify A Tru-Fit Douglas Fir Entrance Door

It's like betting on a one-horse race. You can't go wrong. Not with a quality-manufactured* Tru-Fit entrance door. Every one of the 21 entrance door designs is manufactured of select Western softwood—Douglas Fir, Western Hemlock or Sitka Spruce. Every one is architect-designed to fit exactly today's architectural styles. Every one meets rigid quality standards.

Bonded with completely waterproof, completely weatherproof phenolic resin adhesives, Douglas fir entrance doors are precision-built to last the life of the home. The FDI Hallmark of quality on every genuine FDI-Inspected door is your positive assurance of quality, durability and craftsmanship, in accordance with rigid Department of Commerce quality standards.

Fir Door Institute

Tacoma 2, Washington



From foundry to fieldhouse—you build faster and at lower cost with Cemesto*

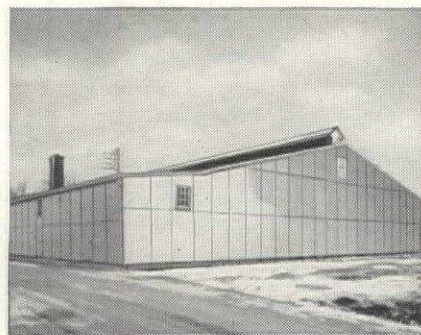
Cemesto Panels give you insulated roof decks, curtain walls and partitions for but little more than the cost of uninsulated construction!



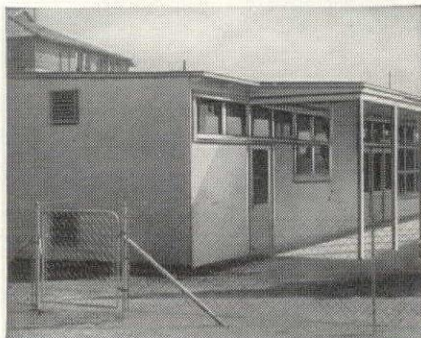
Foundry building of Cemesto Panels, Bucyrus-Erie Co., Milwaukee, Wisc. Archt.: Worden-Allen Co. Contractor: Permanent Const. Co.



Cemesto Panels used in University of Minnesota Winter Sports Arena. Architect: C. H. Johnson & Assoc., St. Paul. Contractor: Sauers Const. Co.



Practical, thrifty building of Cemesto Panels at The Ohio Mushroom Farm, Lima, Ohio. Contractor: F. H. Clausung of Lima.



Attractive, economical use of Cemesto Panels in the Alexander Hamilton Nursery School, one of 80 such units erected in Los Angeles, California.



U. S. Navy residence building of Cemesto Panels and brick masonry, erected in 1939 at Brooklyn, N. Y. Contractor: White Const. Co., New York City.

Don't Stop that Job!

... whether it's on the drawing board, or in the construction stage ... you can assure uninterrupted completion of your job by specifying readily available Cemesto Panels in place of critical materials ... NOW!

Wherever and whatever you build, chances are you can build it faster, easier, more economically ... with Cemesto Insulating Structural Panels!

Their versatility permits important economies in the design, erection and maintenance of *permanent, insulated* structural roof decks, curtain walls and partitions. No wonder more and more engineers and contractors are specifying Cemesto Panels for industrial, commercial, institutional and defense emergency buildings of every type!

Cemesto Panels Are Amazingly Versatile

Cemesto Panels consist of a core of Celotex cane fibre insulation, to which a *non-combustible* cement-asbestos facing is bonded on both sides by a vapor-resistant, moistureproof adhesive.

These rigid, pre-formed units are light and easy to handle. Yet they have remarkable structural strength! Their smooth, hard, stone-gray surfaces have a light reflection value of 58% ... provide attractive exterior and interior finish. Left unpainted, Cemesto Panels are permanently maintenance-free. And their insulating core is protected by the exclusive (patented) Ferox* Process from fungus, dry rot, vermin and termites!

Cemesto Panels Insulate As They Build

Due to their high *built-in* insulation value, Cemesto Panels

make any building cooler, more economical to air condition in summer ... warmer, thriftier to heat in winter. They promote more comfortable, healthier working conditions that pay off in improved employee efficiency, reduced accidents, increased production!

Cemesto Panels resist fire, weather and wear. Can be worked on the job with ordinary tools, or pre-cut at the mill for faster application. Quickly, easily attached to steel framing with metal clips, or to wood framing or wood members with nails. Easily demountable, *fully salvageable*.

Almost 21 years of varied use in all climates, all over the world, have proved the stability and permanence of Cemesto Panels. Discover how this modern marvel of building materials can help *you* build better, faster ... and at less cost ... now! Mail coupon below for complete information.

CEMESTO

REG. U. S. PAT. OFF.

INSULATING STRUCTURAL PANELS

The Celotex Corporation, Dept. MB-101
120 S. La Salle St., Chicago 3, Illinois

Please send me FREE your 40-page Manual giving full technical data on Cemesto Panels, plus latest design and application recommendations. I am particularly interested in ☐ Curtain Walls ☐ Partition Walls ☐ Roof Decks.

Name _____

Address _____

City _____ Zone _____ State _____

THE CELOTEX CORPORATION
120 S. LA SALLE ST., CHICAGO 3, ILLINOIS

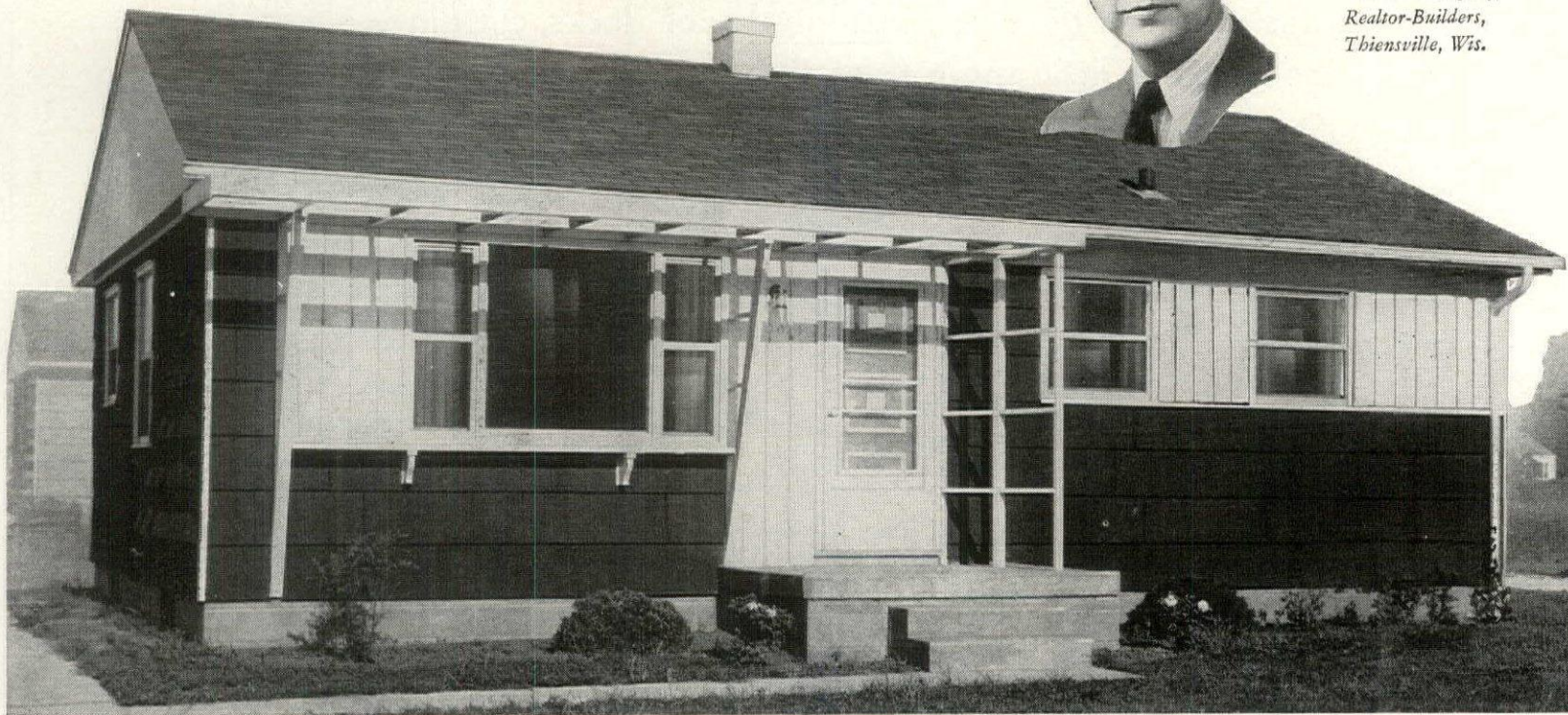
* REG. U. S. PAT. OFF.

MAIL
COUPON
TODAY!

"I Sold 41 **P&H** Homes in Two Weeks!"



*Melvin Biebl,
President,
Biebl & Company,
Realtor-Builders,
Thiensville, Wis.*



Wisconsin Builder Proves P & H Prefabricated Home Is a Better Home...Sales-wise, Profit-wise

"I'M SOLD ON the P & H Home's sales-pulling power—and my customers are sold on its down-right livability. The way they snapped up all of the 41 homes in my Thiensville, Wisconsin, project really convinced me that the P & H Home has a ready-made market.

"And they make sense when it comes to profit, too.

P & H Homes come practically complete. Just a minimum of man-hours' construction time, and they're ready to live in.

"Selling 41 homes in two weeks—and a 30 name waiting list in a month—was a lesson in the business of building I won't forget. From now on, we're building P & H Homes."—Melvin Biebl, Pres., Biebl & Co.

Here's What Sells P & H Homes

• 5 basic floor plans, 12 models of each plan • 2 or 3 bedrooms with basement or utility room • Thermopane picture window • Rusco combination windows • plenty of closet, shelf space; classic design details • rugged, factory-accurate construction • quick delivery, no waiting for materials • financing aid where local resources are limited • prices for the volume market; quick erection • easy approval of financial, government, and building code agencies

Build profitably now. Build P & H Homes.

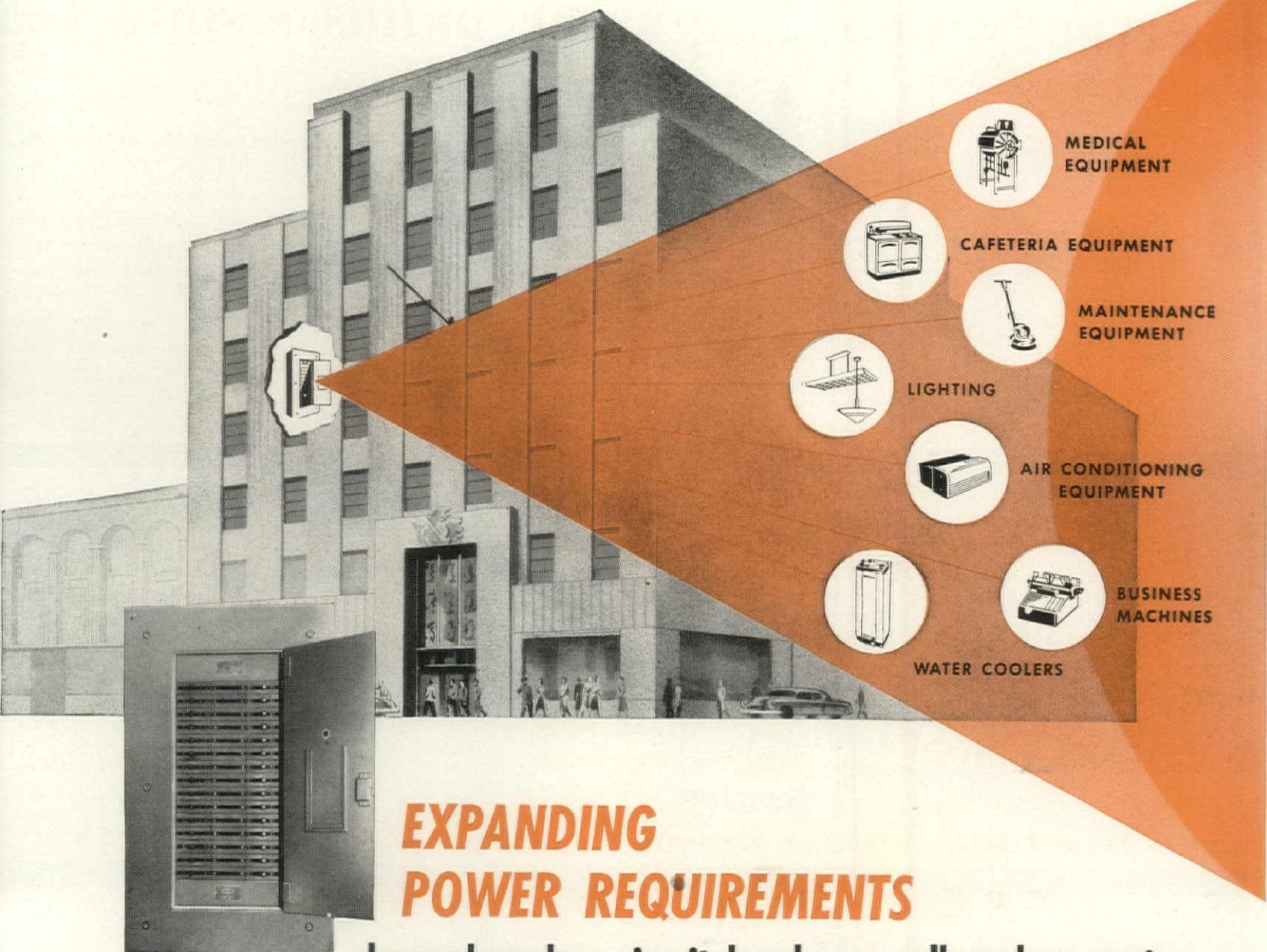
Write today for the P & H Builder Profit Plan.

P & H

Harnischfeger Corporation

HOUSES DIVISION

110 Spring Street, Port Washington, W



EXPANDING POWER REQUIREMENTS

demand modern circuit breaker panelboard protection

For every *new* commercial building, there are 30 others that need electrical modernization. Why? New, room air-conditioning units, lighting systems, business machines, medical equipment put unforeseen loads on electrical distribution systems.

Westinghouse Circuit Breaker Panelboards assure maximum protection against dangerous overloads and outages, against costly, embarrassing service interruptions—and your building is safer. Proved Westinghouse Circuit Breakers eliminate the possibility of dangerous over-fusing. Cut maintenance expense, too—in restoring power, when trouble has been removed from the line, there is nothing to replace.

You can save up to 25% in installation time and cut job costs through such features as built-in

neutral bar extension on distribution boards, sequence phasing and circuit identification on lighting boards.

Westinghouse Panelboards provide maximum adaptability for future unpredictable load demands. Change-overs are rapid, economical.

When you modernize or build, Westinghouse Panelboard specification assures quality—Be Sure!

Ask for our new booklet "Panelboard Planning". Write Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pa.

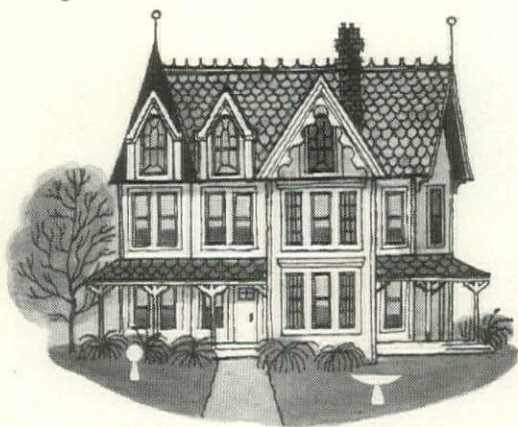
J-93465

YOU CAN BE SURE.. IF IT'S
Westinghouse

PANELBOARDS



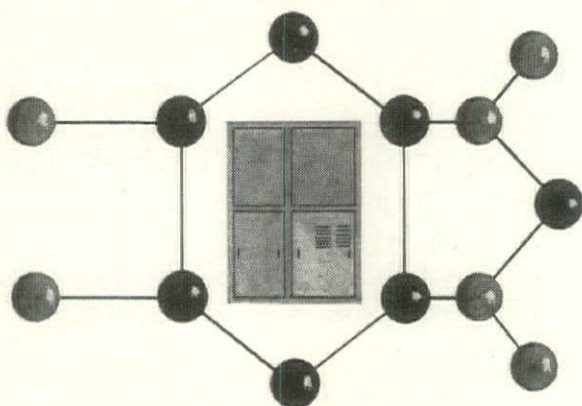
Everybody who designs or builds should read



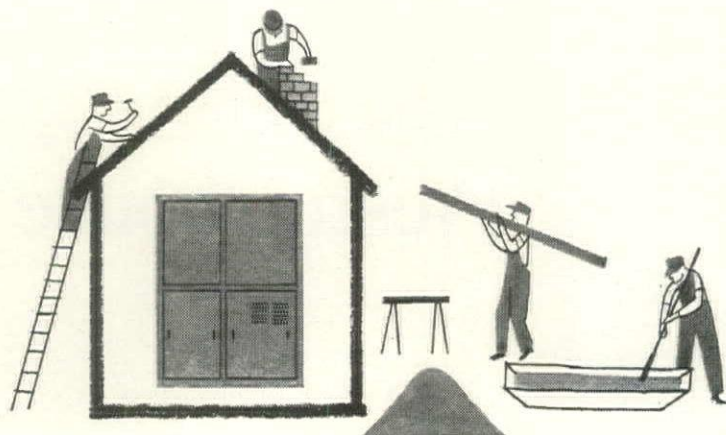
People need a new kind of home. They need it because their way of living has changed but their houses (bound by convention) haven't. They're still pretty much the same as in Grandma's day. They have new gadgets, new appliances. And central heating. But generally speaking, people today don't sleep any better, eat any better, or have less dirt in their houses than Grandma and Grandpa did in theirs.



They're living in Model T's. On the highway or on the job most people are strictly 1951. When they come home, they put on a theoretical celluloid collar. And their wives wear theoretical bustles as they swelter over their modern ranges in much the same way Grandma sweltered over her coal stove. The fact is, the homes people live in shape their lives.

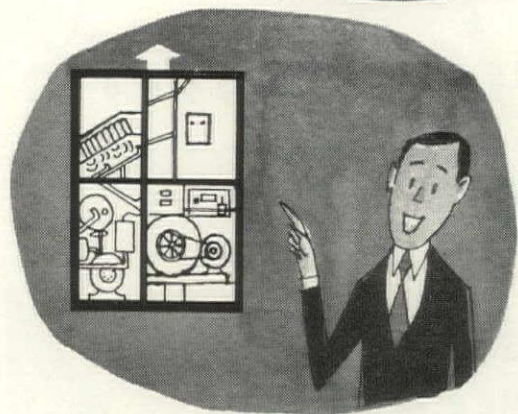


Today they need a "Comfort System." Central heating has changed houses somewhat. But it's a one-season proposition. On the other hand, the new Carrier "Comfort System" keeps you comfortable all year round. It's the Carrier Weathermaker* Air Conditioner. In a single package, it heats, cools, dehumidifies, and circulates clean, filtered air.

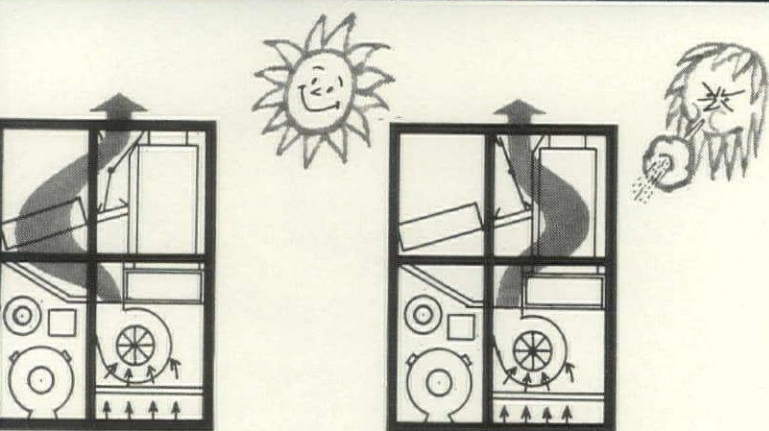


Built around air conditioning. That's the idea of the Weathermaker Home. It gives you more freedom to design a better home. You needn't use windows for ventilation — you can group them for solar heating . . . leave them on the west wall . . . place them as you want. As we know — *this is just the kind of house you've been wanting to design and build.* Well, we're here to help you.

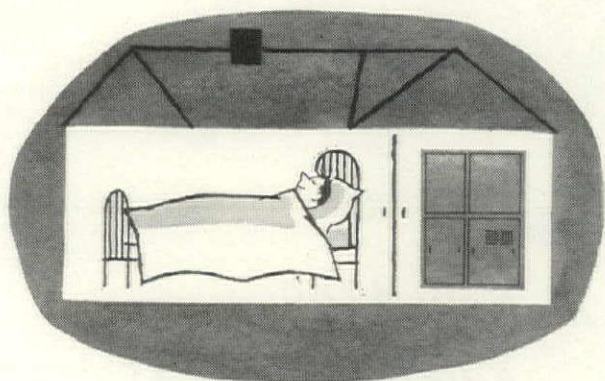
About the **Carrier** Weathermaker Home



First, we'll give you the facts on the equipment itself — the Carrier Weathermaker Air Conditioner. We'll put the best air conditioning dealer, distribution and service setup in the business at your disposal. And we're taking this story right to *your* customers, in a dozen national publications. So get the full story yourself . . . mail the coupon *today*.



Alternate air travel for heating and cooling is just one Carrier exclusive in the new Weathermaker. It delivers the necessary *extra* air for cooling, and wastes no fan power. Other exclusives: high dehumidification; choice of return air and flue connections; burner and control assembly slides out for easy servicing; entire unit serviceable from one side.



Fits anywhere. Basement, attic, closet, utility room. Only 43" deep, 52" wide, 70" high. Ships in sections to go through 30" doorways easily. Capacities: 3 hp. or 5 hp. of cooling with 100,000 to 140,000 Btu's of heating, and 5 hp. of cooling with 150,000 to 190,000 Btu's of heating. For all types of gas. Available in 220 volt, single or 3 phase, 60 cycle current. And the new Carrier Weathermaker Air Conditioner can be used in many types of *commercial buildings*. That's another part of the Weathermaker story we're anxious to send you. Write for it today. *Reg. U. S. Pat. Off.



AIR CONDITIONING • HEATING • REFRIGERATION

Carrier Corporation, 301 South Geddes Street, Syracuse 1, New York
Send me the whole story on the new Carrier Weathermaker Home.

NAME _____

FIRM _____

STREET _____

CITY _____ STATE _____

2 New Developments

that mean **LOWER COST
REINFORCED CONCRETE**



1. New A. C. I. Building Code

Early this year, the American Concrete Institute revised its building code requirements to take advantage of the benefits made possible by the new A305 reinforcing bars. Under the new code standards, these bars increase allowable bond stresses, reduce lapping at splices, and practically eliminate hook anchorage. They provide even stronger reinforced concrete structures at lower cost. In order for you to share in these benefits, your local code must be revised to conform to the new A.C.I. standards.

CONCRETE REINFORCING STEEL INSTITUTE
38 S. Dearborn St., Chicago 3, Ill.

2. New A305 Reinforcing Bars

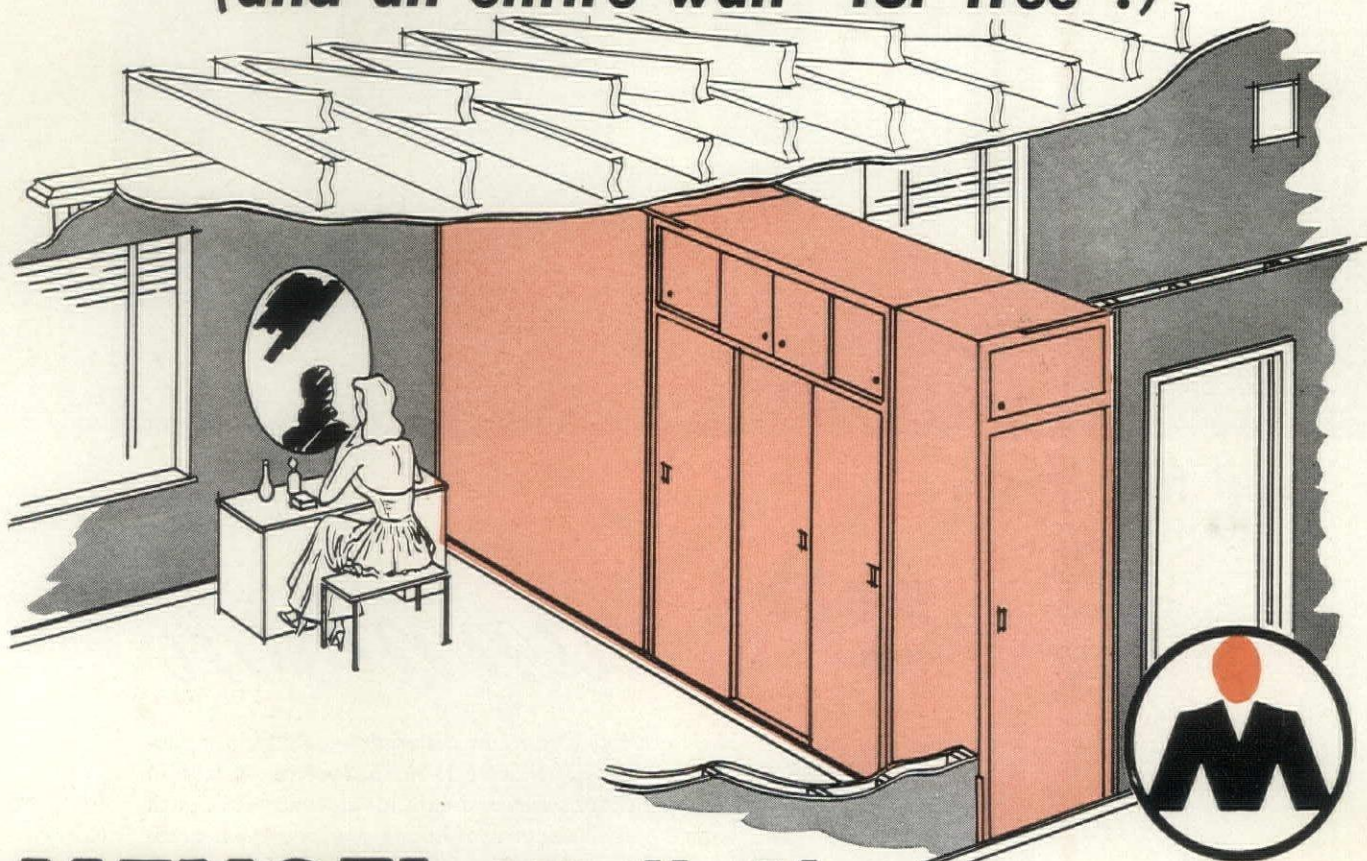
*Be Sure Your
Local Building Code
Is Modernized!*



BIGGER CLOSETS

for LESS MONEY

(and an entire wall "for free"!)



MENGEL Wall Closets

During the past two years, hundreds of architects and builders have *proved* that Mengel Wall Closets provide bigger, better closets at less cost than for conventional construction (and when used as complete partitions, *produce an entire wall, "free"!*)

Mengel Wall Closets are complete prefabricated sliding-door closets. The installation shown above is one of many possible combinations. Each bedroom is given a big 6' closet, and the hall a 2' linen closet — all full 24" deep!

For the builder, this arrangement provides all the bedroom and linen closets for a two-bedroom home, plus the "bonus" of a 14-foot wall, *assembled and installed in as little as two hours!*

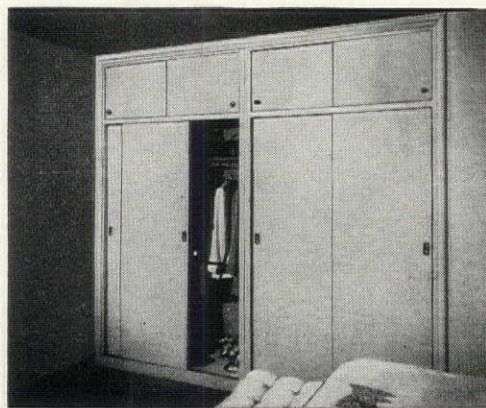
For the owner, Mengel Wall Closets mean larger, more accessible storage, scientifically designed to provide up to 40% more usable space than conventional closets. Easy-rolling sliding doors also save living space outside the closet. . . .

Get all the facts *today* on this easy, inexpensive, *modern* building improvement. Use the coupon for convenience.

THE MENGEL COMPANY

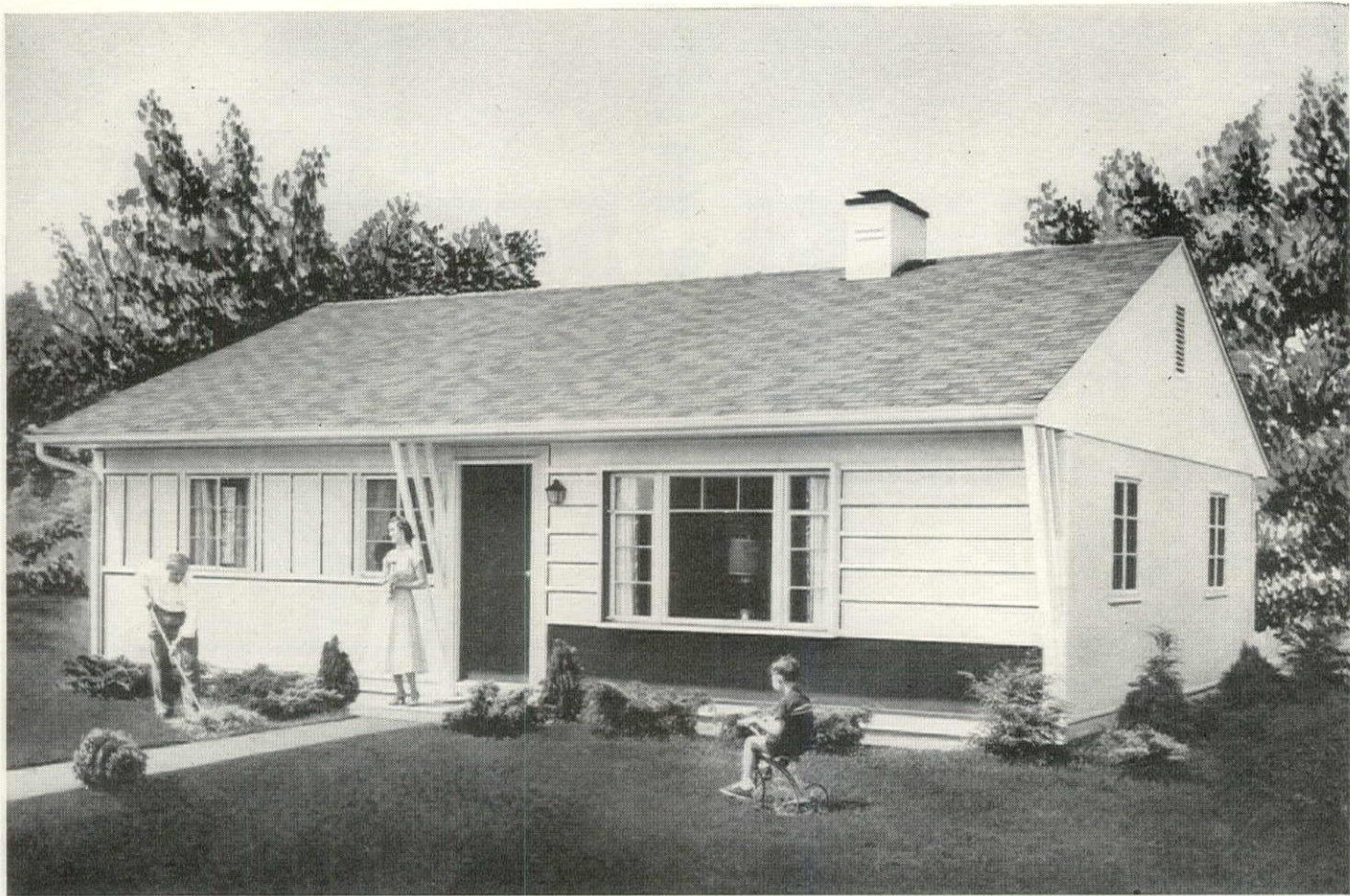
Growers and processors of timber . . . manufacturers of fine furniture . . . veneers . . . plywood . . . flush doors . . . corrugated containers . . . kitchen cabinets and sliding-door wall closets . . . largest manufacturer of hardwood products in America.

Cabinet Division
Louisville 1, Kentucky



Cabinet Division — Dept. MB-10
THE MENGEL COMPANY
1122 Dumesnil St., Louisville 1, Ky.
Gentlemen: Please send me complete information about Mengel Wall Closets.

Name _____
Firm _____
Street _____
City _____ State _____



sell the best ...

sell *Gunnison*

Sell quality! Quality in materials—quality in manufacturing! GUNNISON HOMES feature variety in designs, floor plans and exterior elevations . . . each home can be under roof in one day, ready for occupancy a short time later! Quick construction reduces skilled labor to a minimum! Above all, GUNNISON HOMES are permanent—built to endure the most strenuous treatment. Rigid testing, PLUS quality control all the way, assure soundness and strength in homes that are priced to suit the most moderate income. Yes, you sell the best when you sell GUNNISON!

Interim Financing is available to qualified GUNNISON Dealers! Choice dealerships are still available in some areas. Your personal inquiry is welcome—for complete information, write Dept. F-8.



Manufacturers of
Gunnison Coronado
and CHAMPION Homes

Gunnison Homes INC.

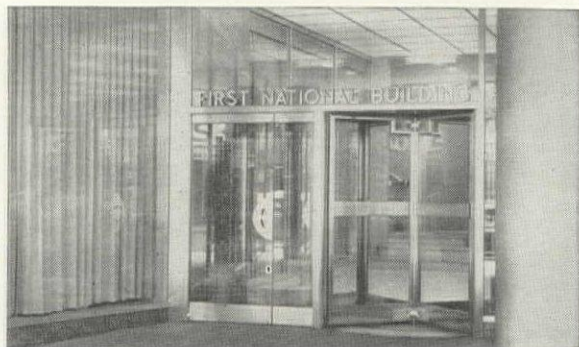
UNITED STATES STEEL  CORPORATION SUBSIDIARY
NEW ALBANY, INDIANA

"Gunnison," "Coronado" and "Champion"—T.M. Gunnison Homes, Inc.

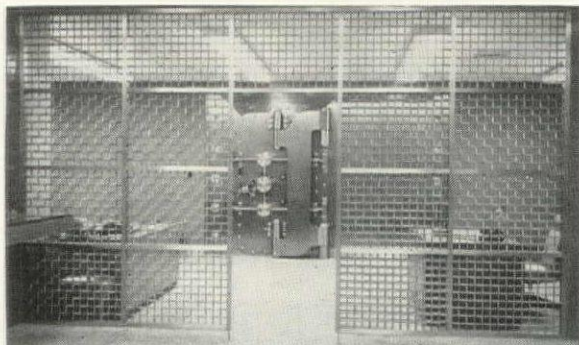
NEW BANK GOES STAINLESS

A new note in architecture for bank buildings has been achieved for The First National Bank and Trust Company, of Tulsa, Oklahoma. The new 20-story building combines beauty, dignity, comfort and efficiency.

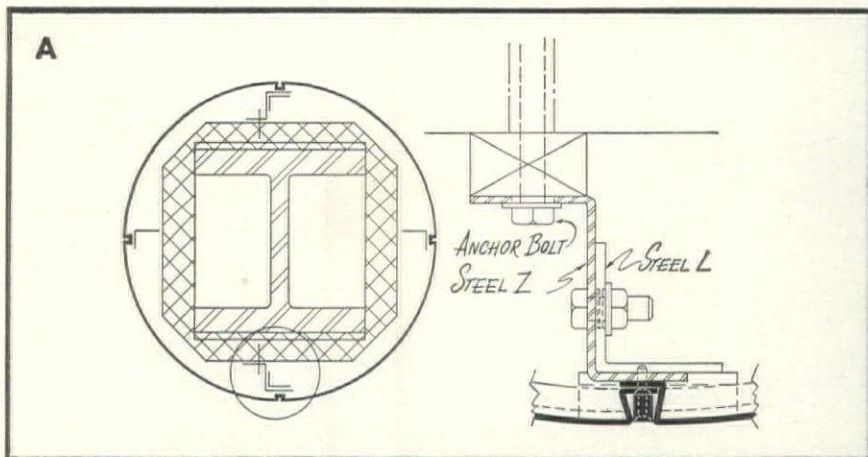
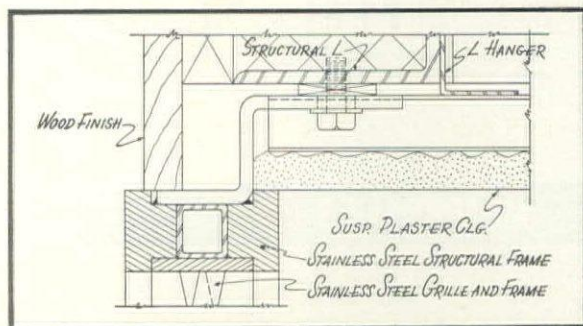
Carson & Lundin,
Architects
New York City



The street entrance, flanked by floor to ceiling windows, provides an open treatment. Window frames, mullions and door components are all stainless steel. Columns in the arcade are also sheathed with stainless steel.

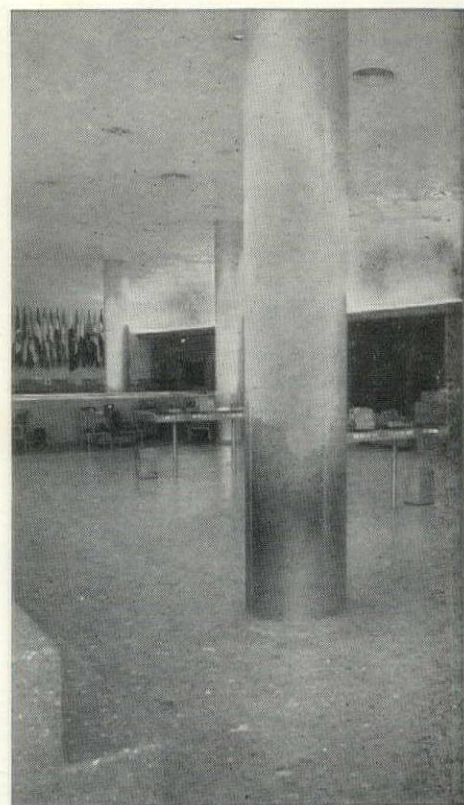
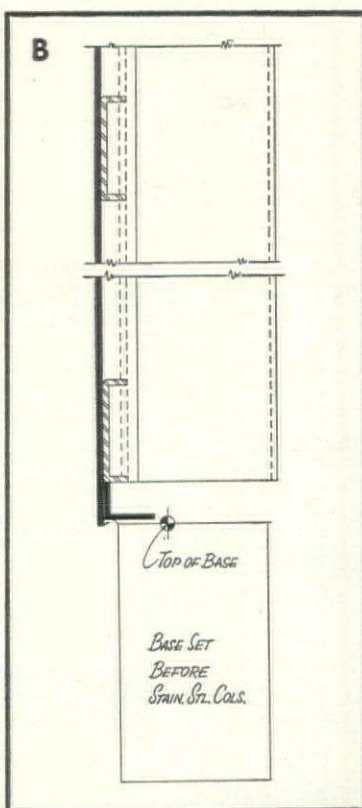


Stainless steel bar and wire form the grille work for the safety deposit area. Drawing shows detail of the stainless steel grille, frame, and supporting structure.



Stainless-sheathed steel columns support the weight of the building.
A. Cross-section of column segment showing method of attaching the stainless steel column facing.

B. Bracing detail through vertical section at the base.



The use of Armco Stainless Steel is restricted now, but here are some architectural applications you might wish to consider for the future: Doors and windows • Curtain Wall Panels • Marquees • Signs • Roofing and Roof Drainage • Restaurant Equipment and Fixtures. For detailed information see your Sweet's Catalog or write: Armco Steel Corporation, 3801 Curtis Street, Middletown, Ohio. Plants and Sales Offices from Coast to Coast.

Export: The Armco International Corporation.



"it's PEELLE engineered"

Peelle-Richmond manufacturing covers a wide variety of doors for industrial and commercial buildings, as well as Peelle Motorstairs.

In addition, the Peelle-Richmond organization is exceptionally well qualified to do the basic engineering and custom building of such products as special purpose doors and motorized partitions and to handle, from start to finish, specification jobs that must meet unusual or exacting conditions.

Those planning the construction of defense plants will find the resourcefulness and long, varied experience of the Peelle-Richmond engineering staff very helpful in solving the type of problems encountered in such projects.

Write the Peelle Company or the affiliated Richmond Fireproof Door Company for information.

THE PEELLE COMPANY

47 STEWART AVENUE, BROOKLYN 37, NEW YORK
Elevator Doors
Special Purpose Doors
Motorstairs

THE RICHMOND FIREPROOF DOOR COMPANY

NORTHWEST FOURTH STREET, RICHMOND, INDIANA
Fireproof Doors
Frames and Hardware

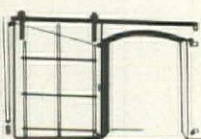


OFFICES IN PRINCIPAL CITIES

whether your project calls for equipment made to standard specifications, or for a special engineering approach and custom fabrication to rigid requirements, the Peelle-Richmond organization is equipped to serve you

The Richmond Fireproof Door Co.
RICHMOND, INDIANA

DOORS FRAMES & HARDWARE



Underwriters' fire doors:
metal clad;
single-slide
and double-slide



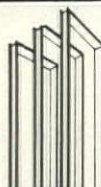
Underwriters' fire doors:
metal clad;
single-swing
and double-swing



Kalamein doors:
flush design
or paneled;
single or
double-swing



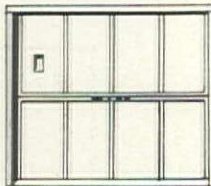
Industrial steel doors:
slide, single
or double-swing



Welded steel frames
and universal
knockdown frames
for fireproof doors;
also frames of
special widths
and heights to order

The Peelle Company
BROOKLYN, NEW YORK

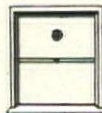
ELEVATOR DOORS



Freight elevator doors:
motorized or manual



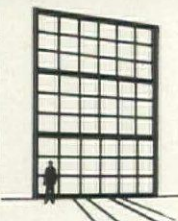
Motorized car gate



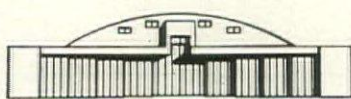
Dumbwaiter doors

The Peelle Company
BROOKLYN, NEW YORK

SPECIAL PURPOSE DOORS



3 section vertical lift
door, motorized,
stainless steel and glass,
24 x 35 feet



10 section, horizontal slide,
center parting hangar door



Horizontal slide,
re-inforced concrete,
soundproof door;
20' x 20', for
engine test cell

The Peelle Company
BROOKLYN, NEW YORK

MOTORSTAIRS



Peelle Motorstairs 24", 32" & 48"
for stores, banks, hotels, plants,
transportation terminals, theatres
and office buildings.

The wall and finish in one...

STARK GLAZED FACING TILE

for transportation terminals



Municipal Airport,
Des Moines, Iowa.
Architect, William Nielsen
& Associates
Engineer, Keffer & Jones
Contractor, Garmer & Stiles

YOU CAN BUILD the interior wall and finish with one material—Stark Glazed Facing Tile!

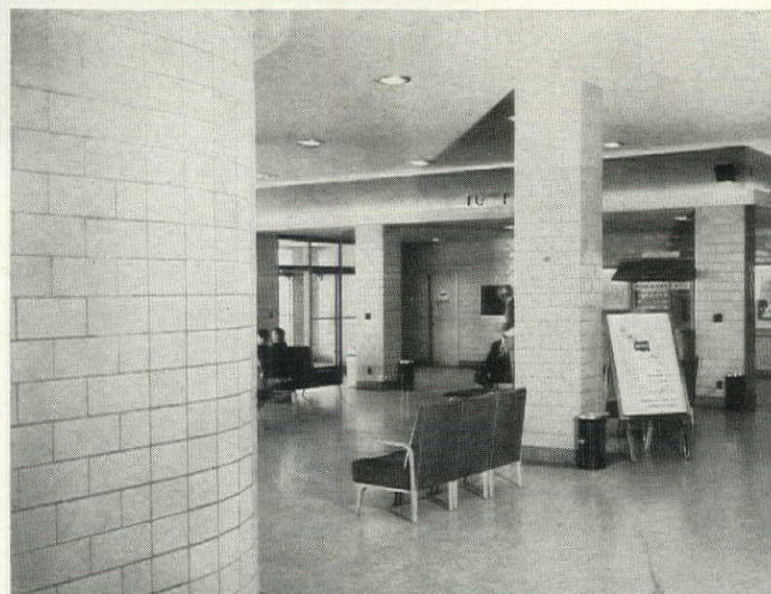
That's one big reason you find this quality product in so many types of buildings. As shown here, Stark was chosen for a transportation terminal. On numerous other occasions it has been chosen for schools, hospitals, power plants, laboratories, factories and commercial buildings, too.

Stark Glazed Facing Tile is truly a versatile building material. It produces the wall and finish in one operation, goes up fast and is modular dimensioned. This results in construction savings so important in these days of high cost of material and labor.

Daily and yearly maintenance and repair are reduced to a minimum, too. Stark Glazed Facing Tile resists the roughest usage, never needs painting or redecorating and is easily cleaned with soap and water.

Now, "color-engineering" has been added to give you more reason for using Stark Glazed Facing Tile. Stark colors produce attractive interiors that will help employee morale, reduce accidents, improve production and aid lighting.

No matter what type of industrial, institutional or commercial building you are planning, it will pay you to consider Stark Glazed Facing Tile for interiors. See our Sweet's Catalog 4f-St. or write for our free brochure.



STARK CERAMICS, INC.

(formerly The Stark Brick Co.)

Canton 1, Ohio

14305 Livernois Avenue . Detroit 4, Michigan
15 East 26th Street . . . New York 10, N. Y.

RUSCO Hot-Dipped Galvanized Prime Window



Shaker Towers, Cleveland, Ohio

A de luxe 92-apartment unit featuring the finest equipment throughout. Built by the Shaker Coventry Corporation. Rusco Prime Windows with insulating sash used exclusively on the 1,367 windows.

ARCHITECT: Joseph Ceruti

STRUCTURAL ENGINEERS: Barber & Magee

GENERAL CONTRACTOR: Roediger Construction, Inc.

winning rapid acceptance for all types of building

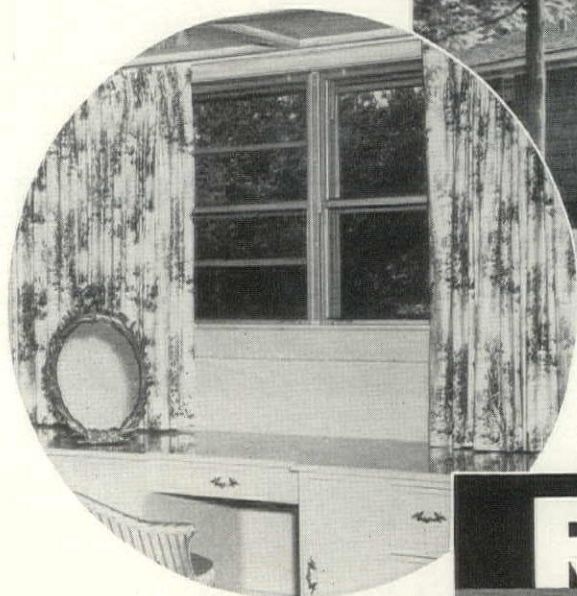
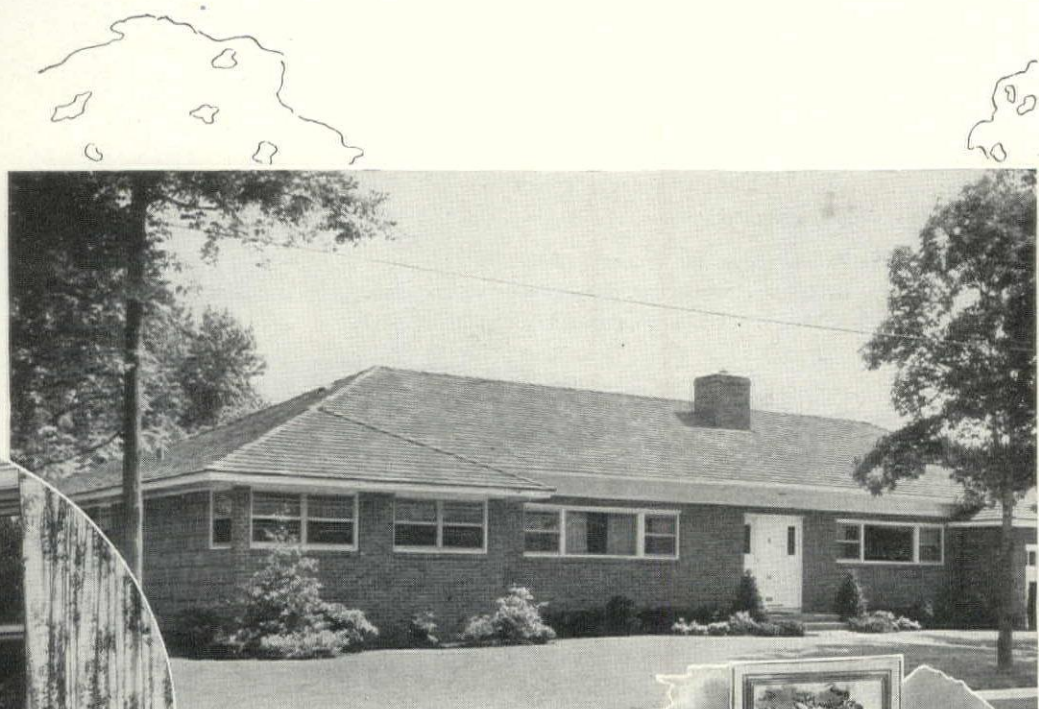
REVOLUTIONARY NEW PRE-ASSEMBLED UNIT CAN BE FULLY INSTALLED IN MINUTES... MAKES BIG SAVINGS IN TIME, LABOR AND MAINTENANCE!

Think of it! A *complete* window unit—factory painted, fully assembled with glass, screen, built-in weatherstripping, insulating sash (optional) and wood or metal casing—all ready to place in the window opening. In many types of construction the Rusco Prime Window can be *fully installed in 5 minutes or less!*

Architects and builders report substantial savings in time and labor on Rusco Prime Window installations. Maintenance is minimized, too, because of the triple weather protection of hot-dip galvanizing, Bonderizing and baked-on outdoor enamel finish. And standard-sized interchangeable glass and screen inserts permit making any breakage repairs in the maintenance shop, if desired. For full information and specifications, write Department 7, The F. C. Russell Company, Cleveland 1, Ohio.

RESIDENCE OF MORRIS GARFINKEL, FREEPORT, LONG ISLAND, NEW YORK.

Rusco Prime Windows with insulating sash are used on all windows except the fixed units of this beautiful home. Used as flankers for the picture window installations, they provide rainproof, draft-free, filtered-screen ventilation.



GLASS AND SCREEN INSERTS EASILY REMOVED FROM INSIDE FOR CONVENIENCE IN CLEANING. The Rusco removable sash feature has tremendous appeal as a convenience and safety feature.

a product of **THE F. C. RUSSELL CO.** • Dept. 7, MB-101, Cleveland 1, Ohio . . . World's largest manufacturer of all-metal combination windows

Now there are **TWO** NOVA Roller Doors

- silent, fingertip-control, flush doors
- one for closets, partitions, storage walls and compartments
- one for passageways, complete with wall pocket

Two years of constant research and field testing have produced the simplest, most economical doors to install—yet the finest so far developed.

Gone is the overhead hardware, always difficult to install—and noisy. One major expense eliminated! The new Nova Roller Doors are light, strong and warp-resistant. Two rollers revolving on pins act as guides at the top; the weight of the door is carried on two vulcanized rubber rollers at the bottom. There is no floor track; all hardware except floor guides is installed.

These are hollow core, flush doors—1½" thick—regularly sold in unselected gum, paint grade and in select White Gum, Black Walnut, African or Philippine Mahogany, Birch, Red or White Oak, stain grade.

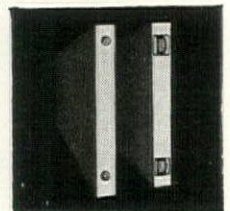
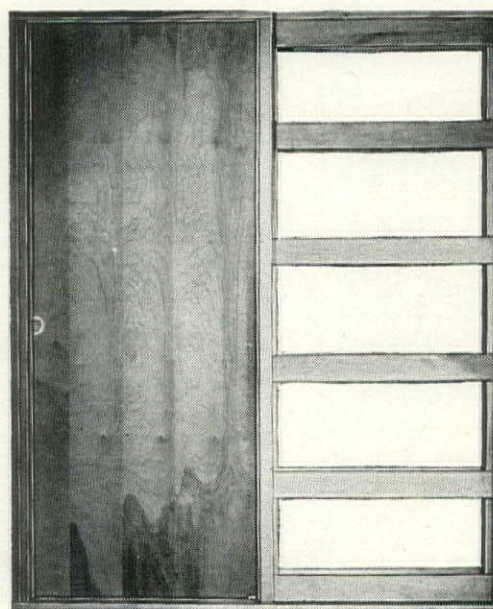
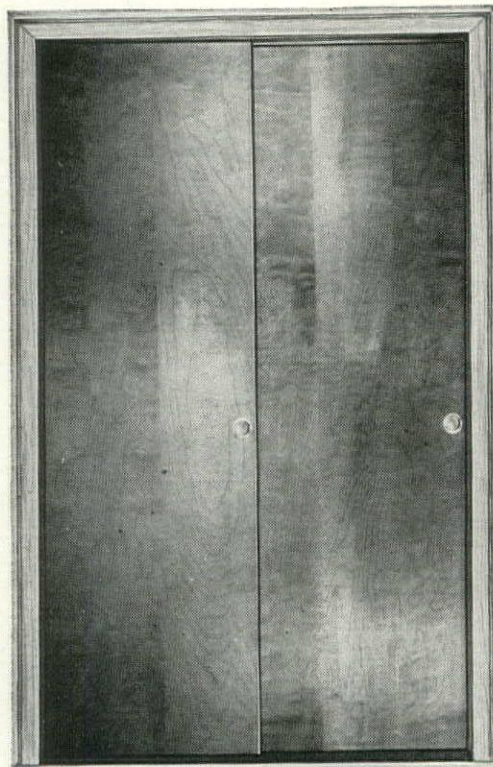
A closet or storage space may be one of the standard sizes—or extend the width of the room. Two or more doors enclose it entirely.

Instead of exposing only part of the interior, as with a swinging door, you have full access. *Nine standard opening sizes: 32", 36", 40", 48", 56", 60", 72", 84", and 96". Five standard heights: 6'0", 6'6", 6'8", 6'10", and 7'0".*

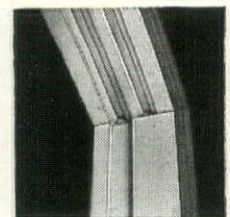
The Nova passageway door comes assembled in its wall pocket, ready to install for either plaster or dry-wall construction. *Five standard opening sizes: 2'0", 2'4", 2'6", 2'8" and 3'0".*

Special sizes to order. Each door—whether for closet or passageway—comes complete in one carton. In 30 minutes' time, one man makes the installation.

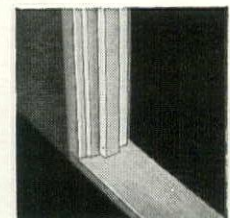
We urge you to write today for the full details. Kindly include the name of your lumber dealer.



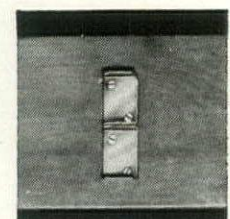
Revolving roller guides operate in head track; vulcanized rubber rollers run on finished floor.



Head tracks are accurately machined for perfect operation of revolving roller guides; side jamb is routed to receive the door.



Passageway door slides easily into wall pocket.



Simple floor guides, installed flush with finished floor, eliminate need for floor track.

NOVA SALES *Co.* TRENTON 3, N. J.

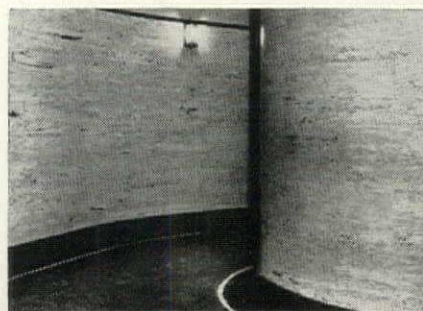
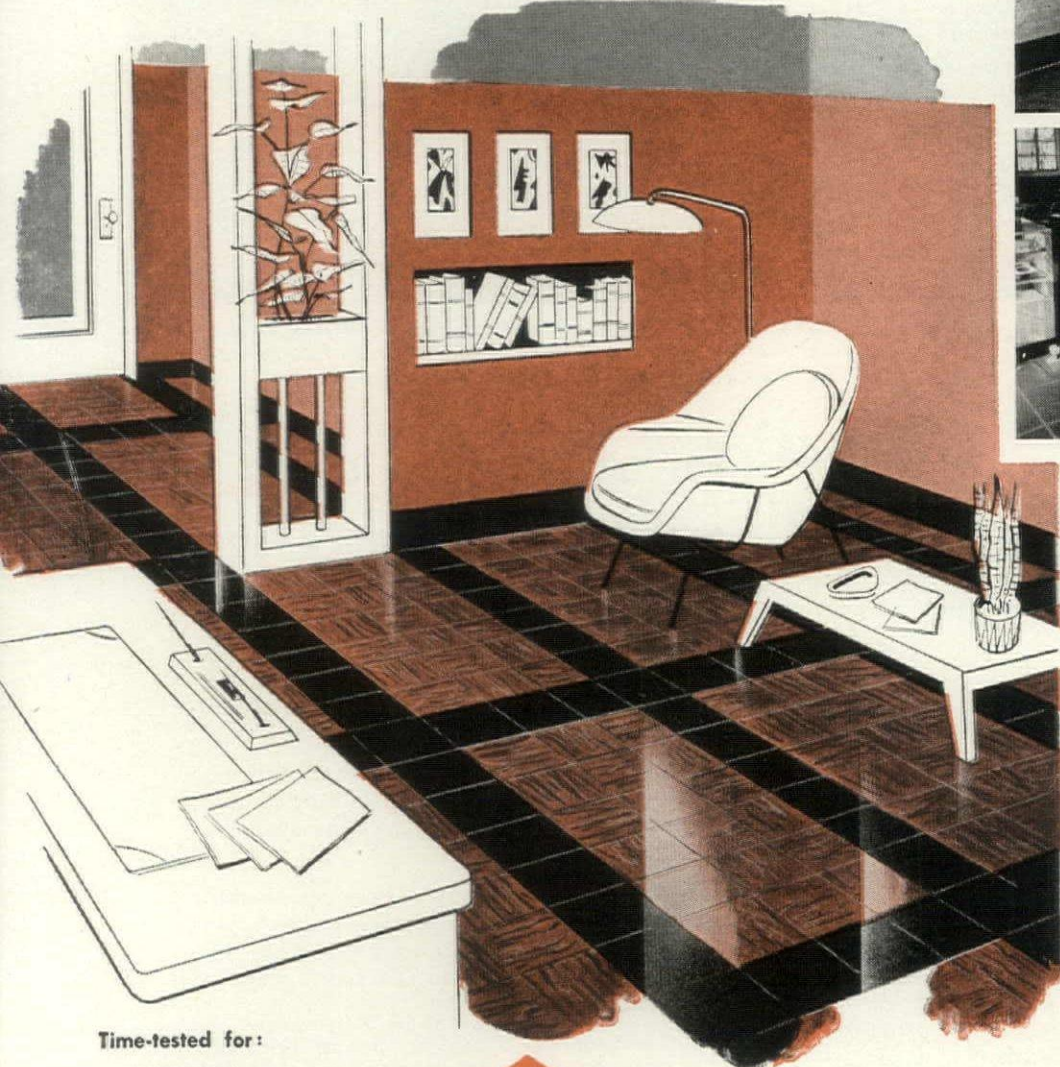
A Novasco Product

« A wholly owned subsidiary of Homasote Company—manufacturers of the oldest and strongest insulating-building board; wood-textured and striated panels; ¾" underlayment for linoleum and wall-to-wall carpeting; 25/32" weatherproof sheathing. »

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problems



The R.C.A. line fits easily into so many specifications, providing the answer to rigid requirements of wall and floor covering needs. Whether it be the extensive line of 28 colors, ensemble planning, ease of installation and maintenance, adaptability and life-long economical utility — R.C.A. has everything to simplify your job of overall satisfaction.



*WALL-FLEX

walls of rubber. New — exclusive — flexible 1/16" gauge fabric back rubber in 28 colors. Simple, quick one-man installation with the advantages of continuous corners and curved surfaces, sanitation, low maintenance and economy. You'll want to include the versatility and colorful beauty of Wall-Flex in your plans.

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*ACCESSORIES

design-planned to complete the ensemble. Feature strips — borders — cove base — corners — tread runners in the same 28 colors — of the same dependable R.C.A. rubber. Everything you need for complete planning.

ONLY R.C.A. HAS EVERYTHING FOR COMPLETE RUBBER INSTALLATIONS

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THE R. C. A. RUBBER COMPANY

Distributors coast to coast and in Canada 1845 EAST MARKET STREET, AKRON, OHIO



A Johns-Manville Permacoustic ceiling was selected for this staff dining room because of its striking textured effect, its non-combustibility and its superior sound-absorbing qualities.

For an acoustical ceiling with architectural beauty specify PERMACOUSTIC*!

Johns-Manville Permacoustic Tile has an attractive, textured surface with great architectural appeal. The texture obtained by random fissures is distinctive and pleasing, avoids mechanical monotony.

Its rich appearance makes it ideal for those locations that call for a "special effect"—conference and reception rooms, executive offices, dining rooms, lobbies, auditoriums, etc.

Because Johns-Manville Permacoustic is made of non-critical materials you can include it in your plans for present and future construction without fear of shortages. Stocks are carried in all the principal cities of the United States and Canada.

Made of fireproof rock wool fibres, Permacoustic

meets building codes which specify the use of non-combustible acoustical materials.

Permacoustic is available in popular sizes, can be installed by application to existing slabs or ceilings, or can be suspended by using a spline system of erection.

Other Johns-Manville acoustical ceilings, include *Fibretone**, a drilled fibreboard; *Sanaoustic**, perforated metal panels backed with a non-combustible, sound-absorbing element; and *Transite**, made of perforated fireproof asbestos.

For a free brochure, entitled "Sound Control," write to Johns-Manville, Box 158, New York 16, N. Y. In Canada, write 199 Bay St., Toronto 1, Ont.

*Reg. U. S. Pat. Off.



Johns-Manville Acoustical Materials

Movable Walls—Terraflex and Asphalt Tile Floors—Corrugated Transite*—Flexstone* Built-Up Roofs—Etc.

Mobilize your offices for conversion and expansion!



Use Johns-Manville Asbestos Universal Movable Walls for offices where you need them, when you need them. Made of non-critical materials, they give you complete freedom in planning or rearranging space.

● Reallocation of existing space and partitioning of new space can be done easily and quickly with Johns-Manville Universal Movable Walls. Made of asbestos, these walls are ideally designed to help business and industry meet the space problems involved in the defense effort.

The flush panels have a clean, smooth surface that's hard to mar, easy to maintain, and will withstand shock and abuse. They're light, easy to erect and to relocate. The "dry wall" method of erection assures little or no interruption to regular routine.

Johns-Manville Movable Walls may be used as ceiling-high or free-standing partitions. The complete

wall, including doors, glazing and hardware, is installed by Johns-Manville's own construction crews and under the supervision of trained J-M engineers.

TRANSITONE Movable Walls—A recent and unique development of the Johns-Manville laboratories is the Transitone Movable Wall, with asbestos panels integrally colored. Non-fading pigments are blended into the asbestos fibres, thus eliminate the cost of periodic decorative treatment. The color goes all the way through each panel.

For details about J-M Movable Walls, consult your Sweet's Architectural File, or write Johns-Manville, Box 158, Dept. MB, New York 16, N.Y. In Canada, write 199 Bay Street, Toronto 1, Ontario.



Johns-Manville

ASBESTOS

Movable Walls

INSTALLED NATIONALLY BY **JOHNS-MANVILLE**

Using **Copper** wisely in **Building Design** and **Construction**

214-year-old roof demonstrates that
COPPER SERVES BEST

The copper roof on Christ Church, Philadelphia, was installed in 1737 and is believed to be the oldest copper roof of its type in existence. It is of standing seam design and the 30 in. x 60 in. sheets used for the roof pans were imported from England, for there were no copper rolling facilities in America at that time.

A recent inspection disclosed that deterioration of the wood sheathing in one area was such that the cleat fastenings were not holding. Engineers of The American Brass Company suggested that the pans in this section be removed and that the cleat fastenings be secured to the sound purlins below the roof boards. ANACONDA Copper was furnished to replace the old pans.

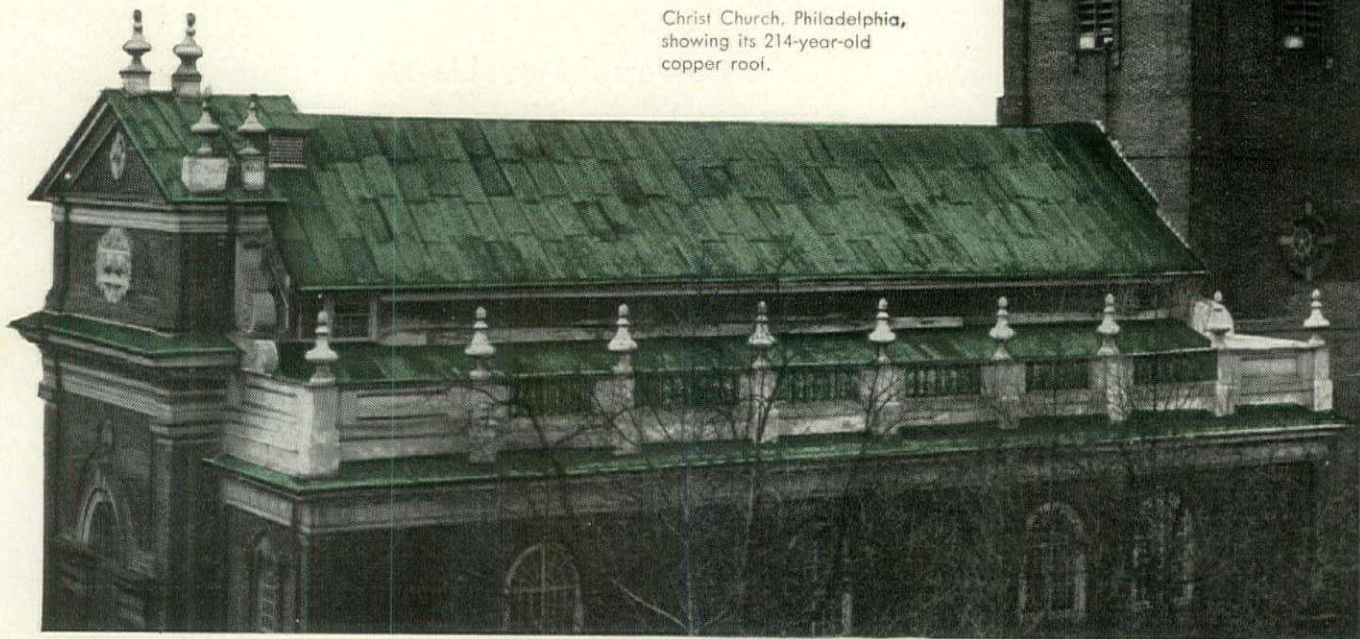
The original thickness of the copper sheets was determined by gaging the unexposed portion in the standing seam. It was found to be practically the same as our present-day 16-oz. weight. But most significant was the fact that the exposed area of the pans had lost but five thousandths of an inch after 214 years of service.

Indications are that the copper installed more than 2 centuries ago will continue to protect this historic edifice for many generations to come... an example of great interest to the architect and the sheet metal worker of today—and tomorrow.

The American Brass Company, Waterbury 20, Connecticut
In Canada: Anaconda American Brass Ltd., New Toronto, Ontario

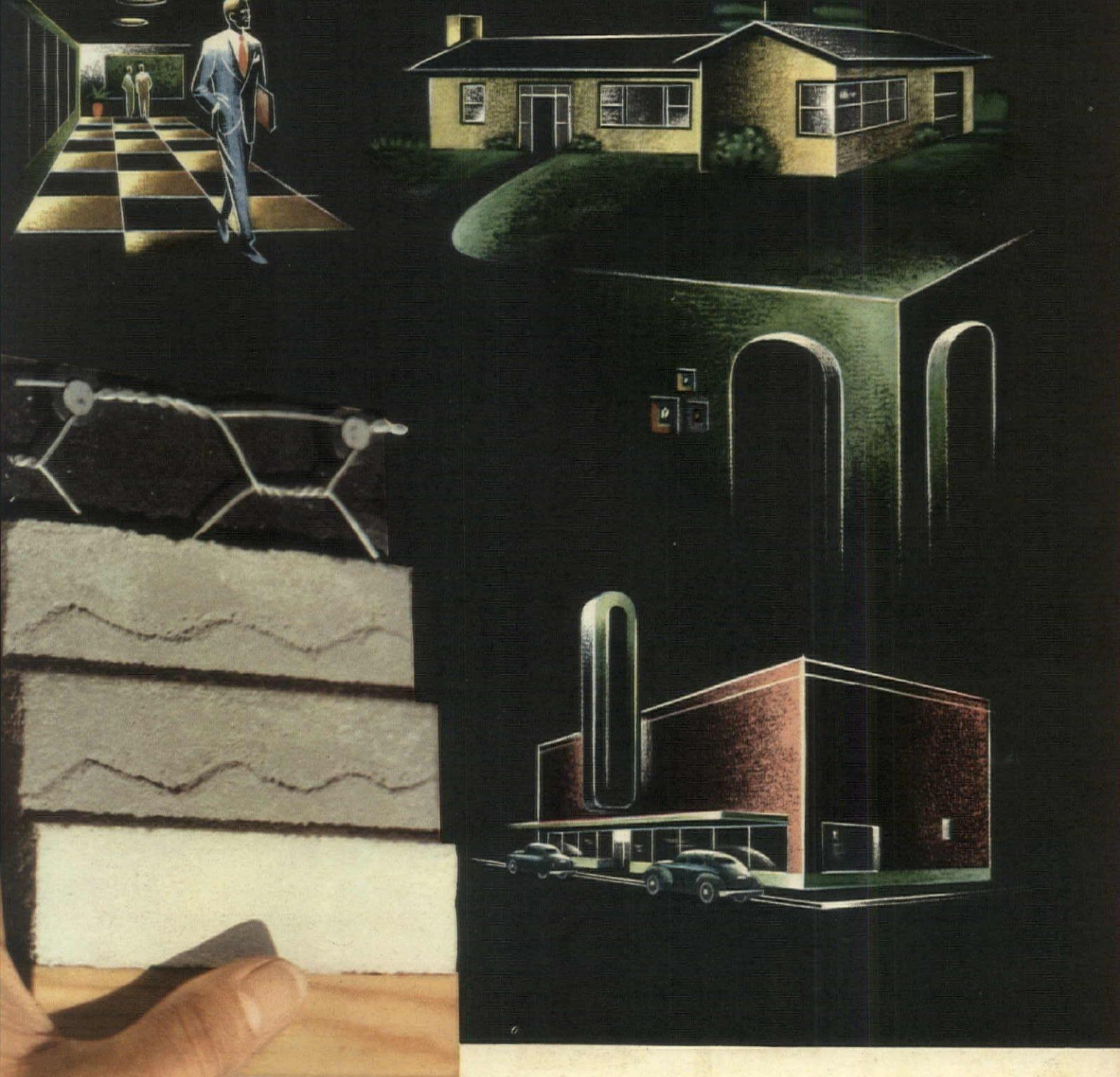
5141

Christ Church, Philadelphia,
showing its 214-year-old
copper roof.



for better sheet metal work... use

ANACONDA[®] **COPPER**



It's more than a trend

The Keystone System of Stucco Application is the modern way of getting all of the advantages and none of the disadvantages of stucco construction.

It's a solution to some of today's big building problems

Structurally, economically, and from the standpoint of design, the Keystone System of Stucco Application is worthy of serious and detailed consideration by anyone concerned with residential or commercial building or remodeling.

It's a way to reduce costs

When using the Keystone System, material and labor costs compare very favorably with any

other acceptable type of construction. Just check the figures; you'll be amazed.

It's a way to assure modern, attractive exteriors

Consumer surveys prove that the designs preferred by a large majority of home buyers and builders are adaptable to Keymesh reinforced stucco. (Details of survey furnished on request.)

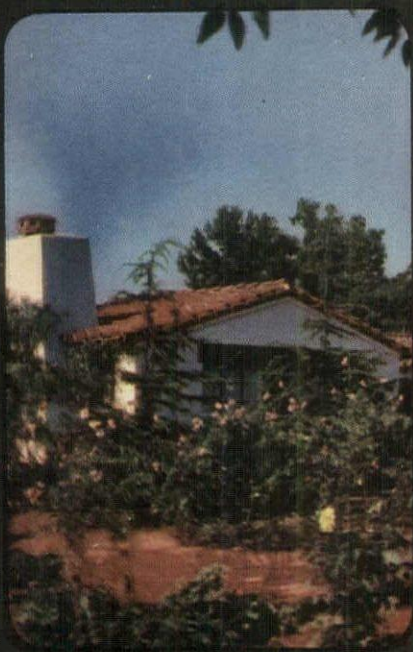
It's a way to assure durability

Unlike the stucco of the "roaring 20's", Keymesh reinforced portland cement stucco is a sturdy, long-lasting material which, when properly applied on a structurally sound building, will last the life of the building—will retain its attractive appearance with very little maintenance attention.

KEYSTONE SYSTEM OF STUCCO APPLICATION

FOR EXAMPLE ▶

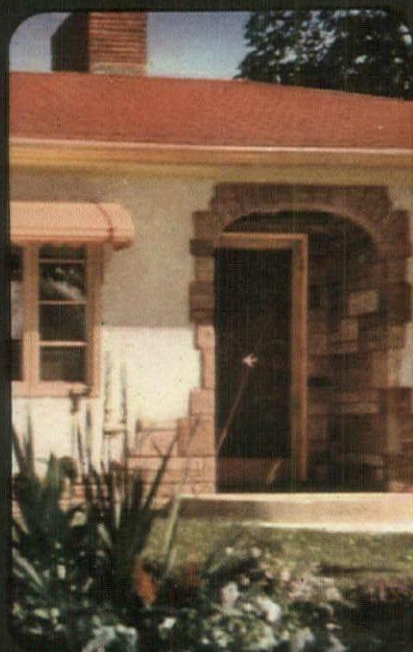
Any design—any climate—any



Color possibilities are unlimited



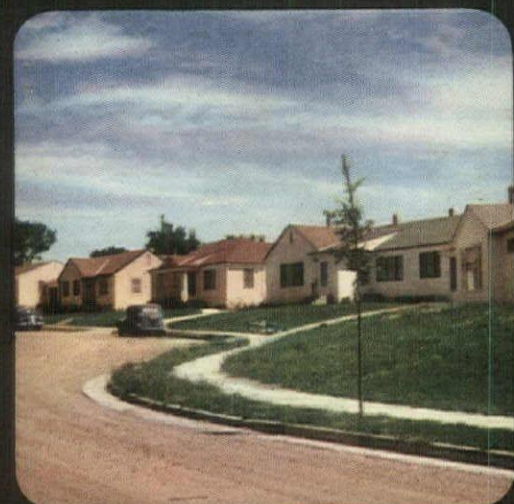
Simulated Stone and plain surfaces



Quality construction need not be costly



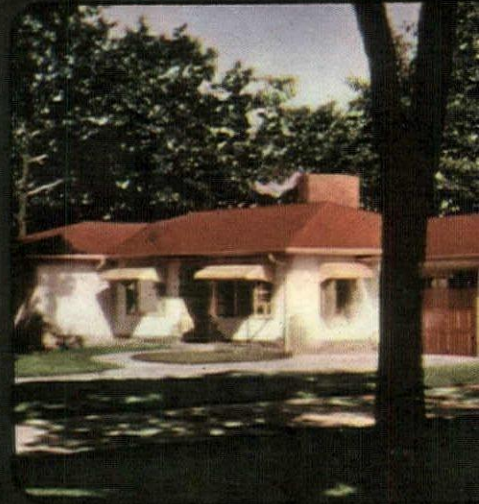
Buyer-appeal in exclusive localities



Greater value per unit in low-cost projects



Fits any owner design preference



Low maintenance and continued beauty

The Keystone system of stucco application can be applied successfully to almost any home or business structure—new or remodelled.

Alone, and in combination with other materials, it is being specified by leading architects for modern and traditional design. It is widely used to cut costs in low-cost projects, involving hundreds of units, for large multi-family apartments and for the most expensive homes in exclusive sections.

Because of its structural soundness, Keymesh-reinforced stucco is being used from Minnesota to the Mexican border, from Beverly Hills to Boston. The Keystone system affords advantages in any climate.

The Keystone system meets the requirements of virtually every locality. No special skills or equipment are required. The fire resistance, and other physical characteristics, satisfy code requirements. And, when properly designed and applied, Keymesh-reinforced stucco has high buyer and owner-appeal.

locality



Colorful new commercial building



Fast, economical multi-unit construction



Attractive appearance at low cost

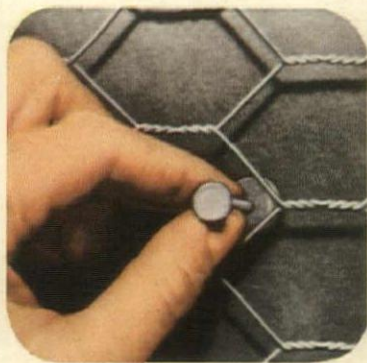


Overcoating for appearance and low cost

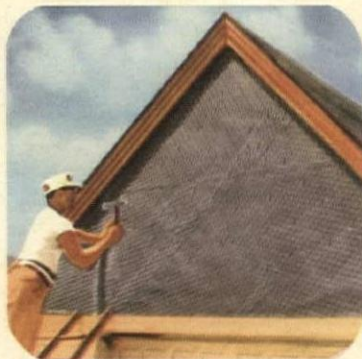
KEYSTONE SYSTEM OF STUCCO APPLICATION



Keymesh is easy, fast to handle. Convenient size roll, goes up flat, forms easily around corners.



Keymesh furring nails hold the Keymesh $\frac{1}{4}$ to $\frac{3}{8}$ inch from felt for complete embedment and maximum reinforcement.



Irregular shapes in gables and around openings can be rapidly lathed with Keymesh. Laps and joints are smooth.



Keymesh may be extended over openings. The lather quickly cuts out sections for such openings.



The scratch coat flows through and around the Keymesh, embedding it for maximum reinforcement.



The first coat, applied $\frac{3}{8}$ inch thick, is then scratched in preparation for applying the second coat.

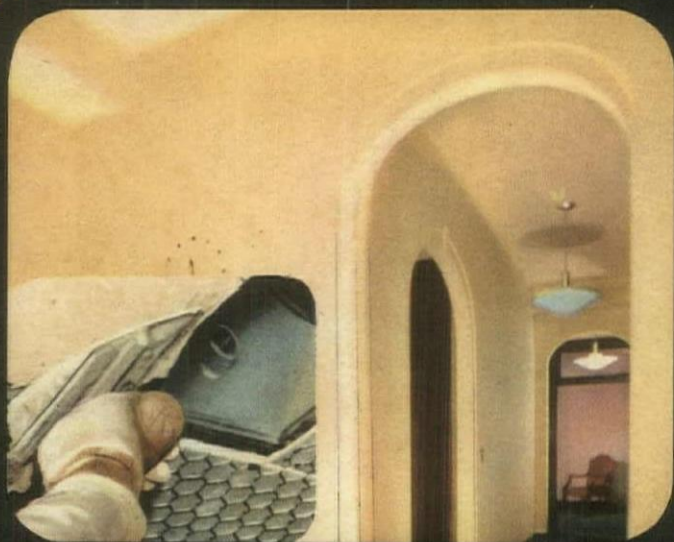


The brown coat is then applied over the uniform $\frac{3}{8}$ " thick reinforced scratch coat.



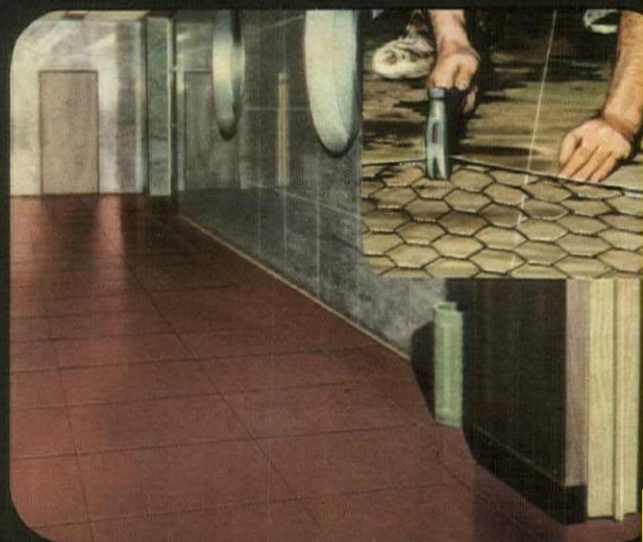
The finish coat for new construction, or overcoating, completes the durable, uniform 1" thick slab.

A wide variety of attractive finish textures, and colors, can be obtained with stucco, including the popular simulated stones.



Keymesh Plaster Reinforcing—Keymesh reinforcing provides a means of counteracting stresses. It safeguards weak points, is a precaution against cracking. Prevents problems where moisture may ordinarily weaken plaster. Arches and corners are worked in more easily, reinforced for greater strength.

In Roof Decks—Keymesh reinforcing is applied for reinforcement of the underbed. Easy and speedy handling reduces costs.



Keymesh Floor Reinforcing—Keymesh reinforcing is also used in terrazzo applications. Used as underbed reinforcing it assures an attractive, durable floor. Also used for tile and asphalt reinforcement.

For Industrial Insulation—Keymesh is used to provide a tight, durable key for cement, mastic, and insulating materials. It is economical, easy to handle and assures a trouble free job.

NEW—

"How to do it" Book

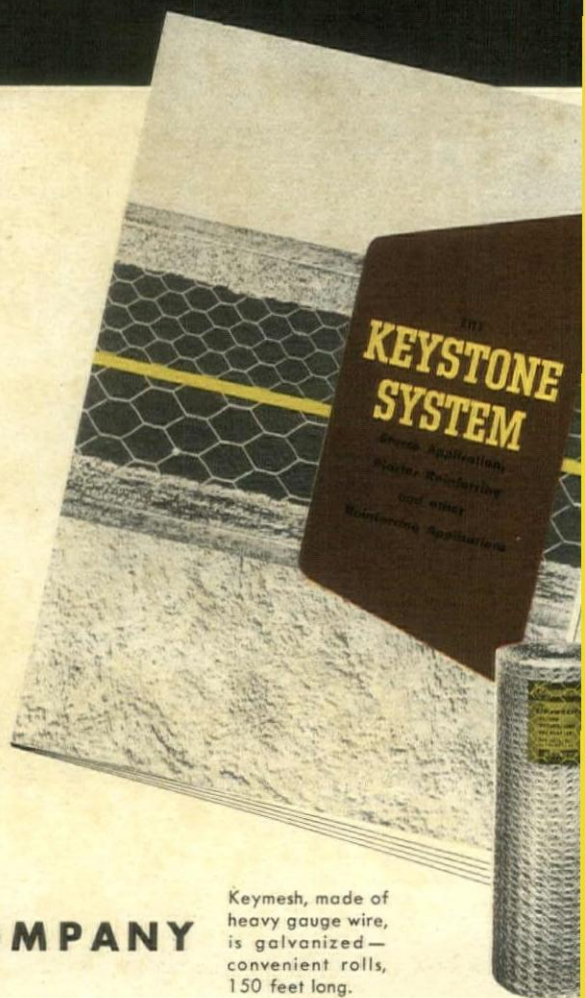
ARCHITECTS • BUILDERS • CONTRACTORS
ENGINEERS • DEALERS

If you do not have a copy of this Keymesh System "How to do it" book, write for one today.

It will convince you of the new economies and design advantages made possible by The Keystone System of Stucco Application.

This practical book illustrates and describes approved methods for the application of siding and surfacing materials where open mesh steel reinforcing is required.

Write for your copy today.

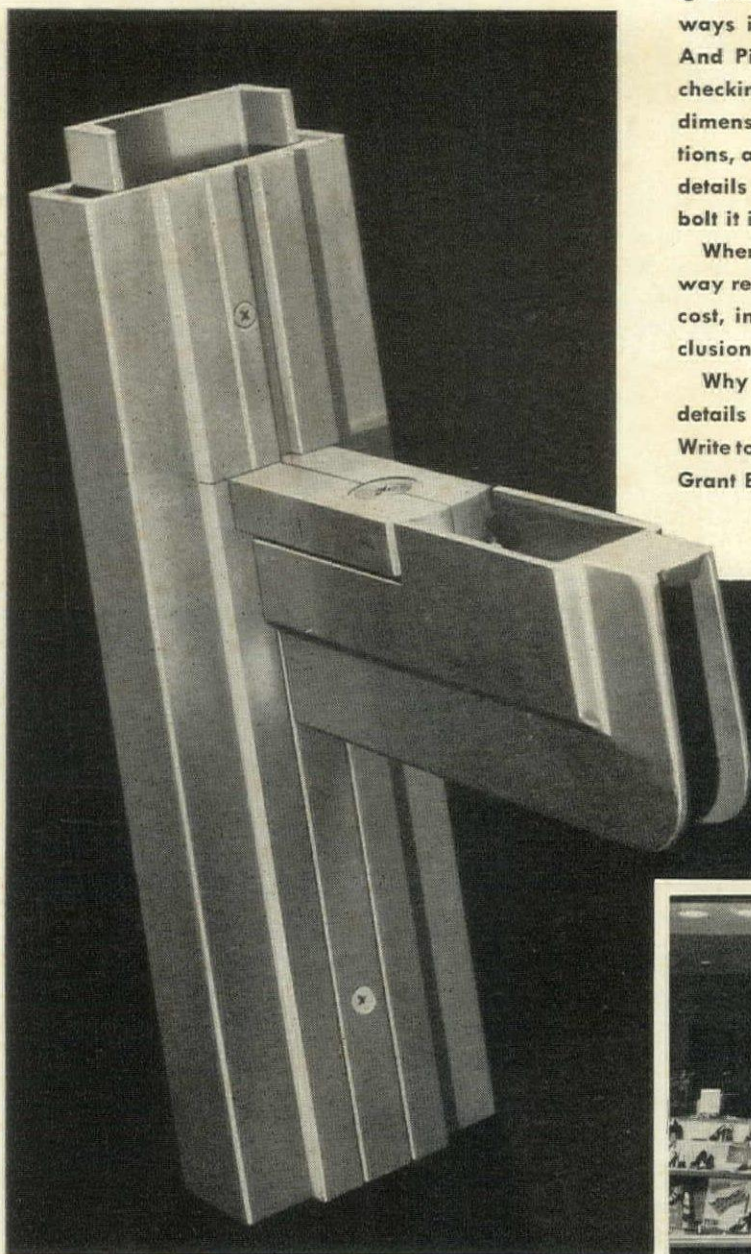


KEYSTONE STEEL & WIRE COMPANY

Building Materials Division • Peoria 7, Illinois

Keymesh, made of heavy gauge wire, is galvanized—convenient rolls, 150 feet long.

Factory-assembled to precision standards, Pittsburgh Doorways save time and money

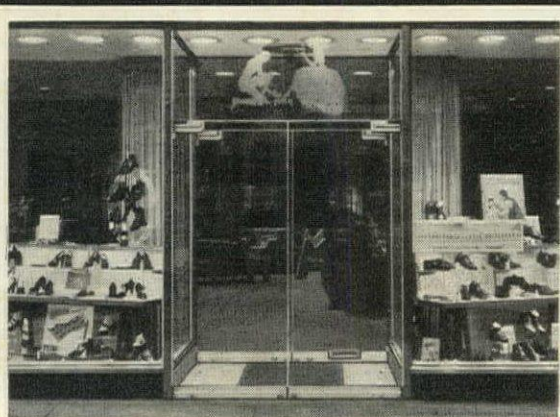


STURDILY-BUILT transom brackets (as shown here) support both the top pivot bearing of the Herculite Door and the Herculite transom glass. Without transom bar, they afford the maximum in open-vision, giving full view from floor to ceiling. Standard frames may be modified at the factory to include transom brackets instead of transom bars.

● Every detail in the fabrication of Pittsburgh Doorways is marked by quality, precision manufacture. And Pittsburgh's experienced craftsmen use special checking gauges to assure positive accuracy of all dimensions. This eliminates time-wasting calculations, as well as costly fitting, locating and fabricating details at the site. All you do is unpack the frame and bolt it into the building opening.

When you consider these facts and view your doorway requirements from the standpoint of *total-installed cost*, instead of just the list price—your logical conclusion will be: "Pittsburgh Doorways every time!"

Why not send for our free booklet? It contains full details on these outstanding Pittsburgh Doorways. Write today to Pittsburgh Plate Glass Company, 2274-1 Grant Building, Pittsburgh 19, Pa.



Architects: Solomon Kaplan & J. Joshua Fish, Philadelphia, Pa.

Pittsburgh DOORWAYS



PAINTS • GLASS • CHEMICALS • BRUSHES • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

Take it from these **SUCCESSFUL** builders!

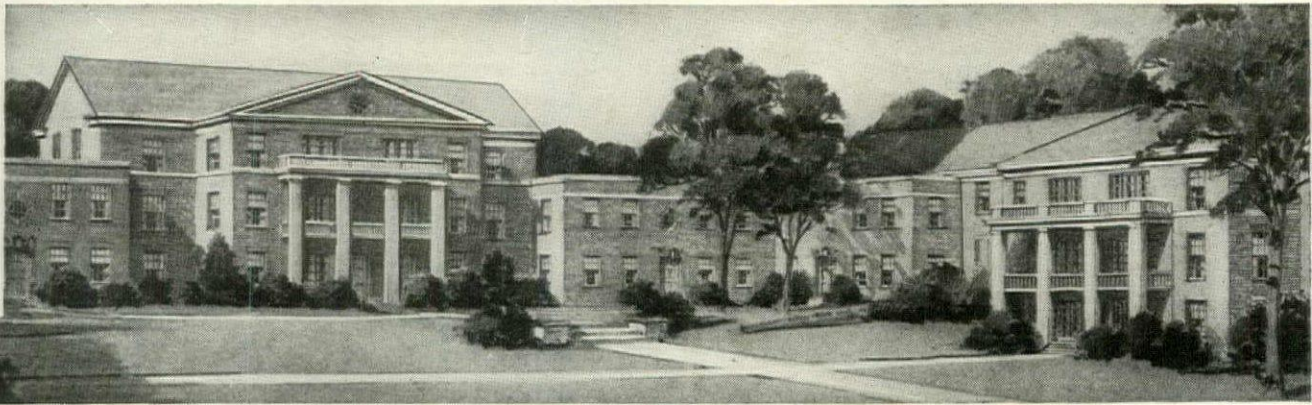
Eliminate future costs - put in new Kelvinators Now!

RIGHT NOW, every alert builder wants to guard against creeping costs and complaint headaches over unsatisfactory kitchen appliances. Which refrigerator to choose? Read the opinions of Mr. Lidsky and Mr. Gildin, two of New York's outstanding apartment-

project builders who choose Kelvinator. Then, for your future projects, be prepared—by getting detailed information on how Kelvinators save money and satisfy tenants. Write to Dept. AF, Kelvinator, Division of Nash-Kelvinator Corporation, Detroit 32, Michigan.

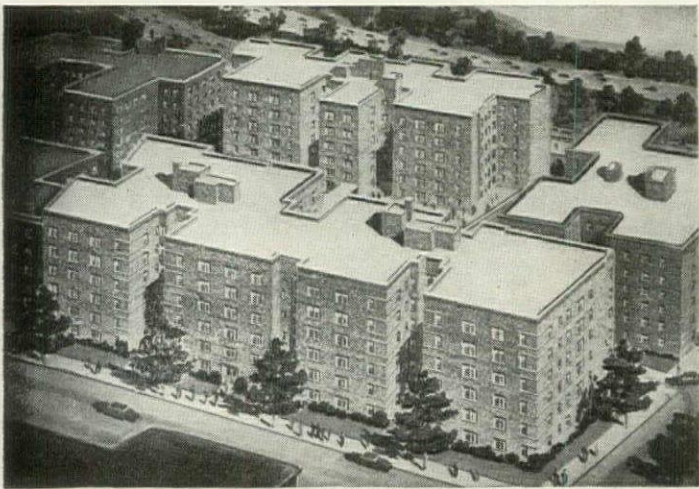


Mr. Julius Lidsky, Builder

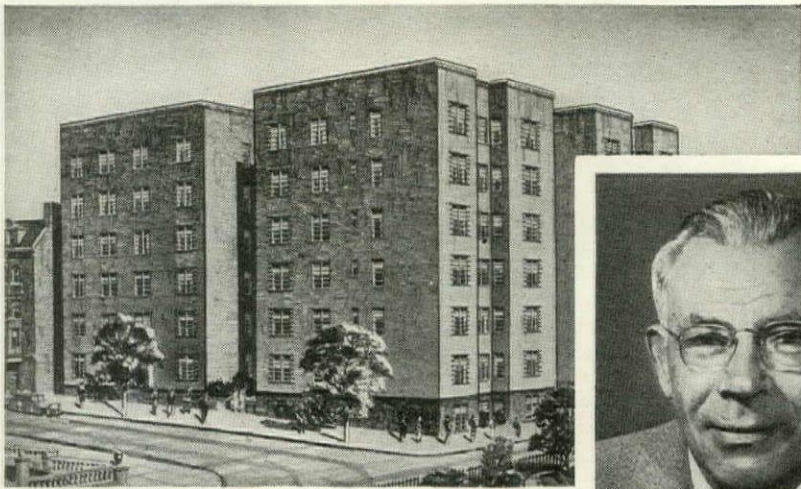


"It had to be Kelvinator for Leewood Park," says Julius Lidsky. "In this project I've incorporated my favorite ideas for gracious living—and Kelvinator is one of those ideas. Another thing I'm sure of—

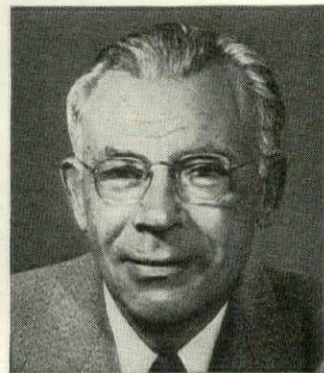
Kelvinator performance will keep service costs at rock-bottom." Beautiful Leewood Park Apartments in suburban Eastchester will feature 127 Kelvinator refrigerators.



"On past experience, I prefer Kelvinator—for elegance, for performance that is highly pleasing to tenants, and for the kind of economy I like to see on our books," says Harry Gildin. His smart new projects



shown here are the 345 Riverside Drive Apartments (above) and Lafayette Gardens (left) near the George Washington Bridge. A total of 248 Kelvinator refrigerators will go into these projects.



Mr. Harry Gildin, Builder



Kelvinator, featured exclusively, nationwide in the Good American Home Program

Kelvinator

DIVISION OF NASH-KELVINATOR CORPORATION, DETROIT 32, MICHIGAN

REFRIGERATORS, RANGES, FREEZERS, WATER HEATERS, AIR DRIERS . . . Electric, of course!

\$26-\$28 Billion Construction Seen For '52—Private Building Off 25%

Dollar wise, construction surged toward an all-time record year—probably \$29 billion, compared to \$27.9 billion in 1950. Physical volume would be down about 5%. Reasons for the boom were clear: whopping increases in all types of public building except highways and reclamation, the rush of private industrial building, big volume commercial building, surprising strength in private homebuilding. Even last month, residential starts totaled 91,000 (89,800 private, 1,200 public), the Bureau of Labor Statistics reported. This boosted the total for the first 9 months of the year to 852,000 units, guaranteeing a million house year. Housing's showing (which confounded builder prophets who said last October's Regulation X credit controls meant collapse of the housing market) stemmed from three sources:

- Momentum generated by 1950's all-time record 1,400,000 production lasted through the first months of 1951, including an unusual volume of apartment building.
- Leaks that advertised Regulation X in advance let quick-witted builders pile up an estimated 500,000 pre-X financing commitments not subject to the stiffer credit terms.
- The uneven impact of controls, which created a mortgage drought for building dependent on FHA or VA loans, did not greatly affect the 64% of the market using conventional financing.

Puzzled future. Would the new Congressional relaxation of Regulation X trigger a new housing boom just as the old credit curbs at last began to put brakes on housing? Materials producers and lumbermen were hopeful of a spring upsurge. But most builders interviewed by THE MAGAZINE OF BUILDING in 14 metropolitan centers reported this month that their 1952 plans remained uncertain, but that the relaxation would lead them to build more than they expected to a month earlier. Typical comments:

- "I usually know what I'm going to do a year ahead," said Atlanta Builder Roy D. Warren, "but at the moment I don't. If I bought the land, I don't know that I can get the pipe for gas and water to develop it."
- "I think relaxation of Regulation X will have little, if any, effect on building activity," said Builder Walter F. Hellmich of St. Louis. "We can't do much under \$12,000 any more." Hellmich built 50 homes last year, 25 so far this year in the \$15-18,000 bracket. His 1952 plans: indefinite.
- Middle-size builder Joe Monroe of Denver, who finished 20 homes in the \$21-24,000 class this July, announced he was quitting homebuilding for heavy construction. "It's too tough," sighed Monroe. "We're going after some of those Government fee-plus jobs. Our stuff was all pre-X, but we still have 8 houses unsold."



STEEL SCRAP DRIVE, crucial to mobilization effort, commanded top-drawer attention this month, as steelmen warned high output of mills hinges on more scrap. Above, Mobilization Chiefs Wilson and Fleischmann (rear l and r) inspect "Scrappy," plastic-and-cloth symbol of the campaign. Upstaging them are Admen R. D. Mossman (l) and T. S. Repplier (r).

Shillelagh in the closet. If a spring housing spurt did develop, the Government intended to clamp more stringent materials controls over home builders (see p. 56). But few builders seemed to think the public would stampede to buy, anyway.

Forecasts of building's future rolled in from all quarters, although the uncertainty of the materials outlook, the vagaries of NPA administration and the unpredictability of politics (in which the industry was thoroughly enmeshed) made prophesy even more hazardous than usual. As Economist Miles L. Colean saw it, public construction will shoot up sharply, led by "spectacular gains" in military and naval building, while big AEC and other government plant projects offset a slight drop in school and other institutional building. In all, public construction might account for well over 1/3 of the year's prospective dollar volume (about 28 billion). Private building, Colean predicted, will plummet 25 per cent below 1951 levels to about \$17½ billion, with only railroad, utilities and industrial construction continuing at high level.

Most authoritative oracle was Defense Mobilizer Wilson, who wrote in his third quarterly report to the President:

"In analyzing the prospects for consumer goods in the next few months the only serious problems appear in the area of durable goods and housing—i.e., those goods which consume metals and hence compete directly with military and industrial ex-

LAST MONTH'S WASHINGTON DIARY

- 9/12 Edwin T. Gibson resigns as Deputy Administrator of DPA, returns to vice presidency of General Foods Corp.
- 9/12 Plumbing drainage products committee recommends study of standardization of industry's products to conserve zinc, copper
- 9/13 NPA creates new emergency priority symbol, DX, to break defense bottle-necks
- 9/14 DPA's critical areas committee recertifies six defense areas as critically short of housing to impose Federal rent controls
- 9/17 NPA construction controls division announces receipt of 3,784 applications from builders wishing to start new commercial construction in fourth quarter of 1951. Of these, 458 were approved, 2,080 denied, 848 notified of exemption, 52 transferred to other agencies
- 9/29 Mobilization Director Charles E. Wilson releases 30,000 tons of copper from national stockpile for defense needs
- 10/5 Ralph Kaul resigns as chairman of critical areas committee
- 10/5 DPA waives August 18 moratorium to approve 111 certificates of necessity for fast tax write-offs on defense facilities. Total to date: 3,663 certifications, representing \$9.6 billion proposed investment. Total since moratorium: 320 approvals
- 10/6 NPA names two eminent jurists as hearing commissioners of administrative "court" for violators of regulations. Four others named 9/25. Rules governing proceedings announced 9/20
- 10/8 Critical areas committee names eight new defense areas as critical housing zones, recertifies 33 areas previously designated, without rent control
- 10/12 DPA slashes civilian use of scarce metals in first quarter 1952 allotments, cuts steel consumption to 69½% of pre-Korean level, copper to 84%, and aluminum to 63%

pansion . . . Present estimate of housing starts for 1951 is about 1 million units . . . The present rate is 40 per cent below 1950. If continued, it would result in around 850,000 starts in 1952 . . . This year, the total construction investment will be about \$29 billion, a drop of 5 per cent in physical terms from the record 1950 volume. Next year construction probably will drop to about \$26.5 billion but this will still be higher in physical terms even than the boom year of 1942.

"Next year educational building will be down a little, but can be brought back up as school authorities switch from structural steel to other materials. Highways, sewer and water construction will decline somewhat along with further declines in private housing. Private commercial building will be cut severely. However, declines in these areas will be of short duration."

Silver lining. Manly Fleischmann, No. 2 man in the mobilization hierarchy, cheerfully told the Producers' Council annual meeting that construction as a whole will not suffer from materials controls because the drop in non-defense building will be offset by zooming defense construction. Anyway, said Fleischmann, urgent defense building will be over the hump after mid-1952, and then structural steel demand should ease back toward normal.

Homebuilding will range between 8-900,000 units in 1952, insisted H. E. "Pat" Riley, construction statistics chief of the Bureau of Labor Statistics. The pattern: more like 1947 than any year since—a slow

IN THE NEWS

Among the next 29 pages, you'll find reports on these important developments:

- Congress probes defense housing . . . p. 37
- Materials producers look at '52 . . . p. 47
- Mortgage Bankers convention . . . p. 56
- What's ahead for mortgage market? . . . p. 61
- PCBOC convention . . . p. 45
- U. S. Chamber backs code reform . . . p. 45

start with a peak during the fall as both materials and mortgage money become more available.

Slump ahead? Looking further ahead, President Richard J. Gray of the 3 million member AFL Building Trades Department gloomily forecast a big construction slump starting in 18 months to two years. "We'll be rushed like the devil until defense construction is completed," Gray said at the

AFL's 70th annual convention in San Francisco, "but when that work is finished—then bing! It's dead. We will have a terrific dislocation in the economy."

The surprising thing about the chorus of prophets was the harmony—at least when they were talking about the immediate future. Most building would be in the nutcracker grip of materials restrictions and shortages for at least the next nine months.

CMP Riles Building Industry; Architects Urge United Attack on Controls Chaos

The building industry—a hard horse to manage at best—began bucking in its controlled materials harness the minute the Government cinched up the straps. The way NPA was mismanaging controls (15 different metals claimant agencies for construction, conflicting directives and pronouncements) began driving diverse elements of the industry together in self-defense.

Most concrete step was taken by the AIA. Hoping to persuade NPA to reduce some of the chaos by clarifying and centralizing authority, AIA's governors called a mid-month meeting of a dozen major construction organizations in Washington. Said AIA President Glenn Stanton: "All segments of the industry will have to present a united front in working for controls that aren't at cross purposes with each other to prevent unnecessarily severe strangulation of the industry." In this undertaking, Stanton could count on strong support from AFL building labor, whose influential secretary-treasurer, Joseph D. Keenan, has been thumping on the same theme for months.

'Flea on the elephant'. So far, the trend was to create more materials claimants, not less. Addressing the annual State Governors Conference at Gatlinburg, Tenn., Mobilizer Wilson disclosed he plans to create a special

claimant agency for State projects. Schools, highways and hospitals, warned both the governors and the AIA, were one of the worst muddles in the construction picture. To Gov. Dan Thornton of Colorado, who complained black marketers were offering substantial quantities of highway steel at 50% above market prices, Wilson retorted: "Sure, there is some black market activity, but you are looking at a flea on an elephant's tail, not at the elephant. That would represent only about 1% of the total steel market."

Flea or larger insect, black marketing was on the rise in and out of construction. The advance warning given August 3 that CMP would be imposed on building October 1 gave shady middlemen plenty of time to grab, resell at gouging prices. Some importers, spying what they called a loophole in materials controls, circularized steel users offering French, English, German, Italian and Japanese steel in large tonnages, provided buyers would purchase "on the high seas" before ships come into the U.S. and under NPA control. In Los Angeles, a maker of aluminum restaurant equipment whose normal 180 ton a year supply was cut to 10 tons by the government admitted "I'm buying black market aluminum. Ten tons isn't enough to make it

worth while opening my doors." Atlanta contractors chorused that they paid "hellacious prices" for gray market steel to beat the October 1 deadline.

Delays, shutdowns. Generally, the bind on structural steel was only delaying, not halting, prime defense plant construction. Sample: slowed steel delivery set back expansion of Houston's Cameron Iron Works to handle an \$8 million contract to produce gun parts. But construction of a Signal Corps barracks at Ft. Monmouth, N. J., was stalled for lack of steel reinforcing bars. At Camp Smith, N. Y., work on a motor vehicle shed and garage for the National Guard halted for lack of steel. Structural steel delays forced Contractor J. W. Bateson to lay off "quite a few workers" on the 40-story Republic Bank and 10-story Gibraltar Life Insurance Co. buildings in Dallas.

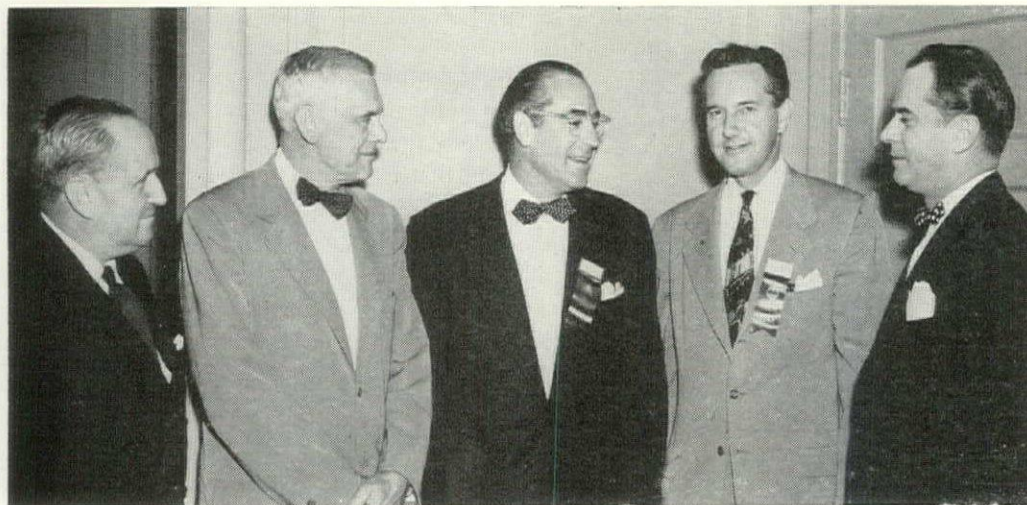
Hardest hit were schools and highways. Detroit's school superintendent, Arthur Dondineau said his \$8½ million construction program would be all but stopped in a few weeks. Miami school authorities, allocated a fifth of the steel they need for a \$1 million a month building program, foresaw portable classrooms and double sessions for a long time.

Worst to come. Even homebuilders, despite self-certification of 1,800 pounds of steel and 35 pounds of copper per house, chafed in the CMP saddle. Their worry: would there be enough Class B materials (plumbing and heating gear, window frames, hardware, etc.) to maintain production even of 850,000 houses in 1952? Generally, metals allocations to makers of Class B equipment were cut back to 50% of their base period use for the fourth quarter. But John Haynes, head of NPA's building materials division, warned the Producers' Council that the allocation may be sliced as low as 36% during the first six months of 1952.

Tighter controls? The future of self-certification itself also tormented builders. The plan began operating on October 1 so it was too soon to tell how well it was working. Even so, Economic Stabilizer Eric Johnston insisted tighter controls over all construction were vital to fight inflation. For home and commercial building, Johnston would deal out stiff cutbacks. One aim: concentrate 1952 homebuilding in the \$12,000 and under brackets. It seemed doubtful, however, that Defense Mobilizer Wilson would approve Johnston's views.

• • •

Contractor Maynard Johnston quit as construction chief of the Atlanta regional NPA office, complained he had spent two months just "wasting time." Said he: "About all we have accomplished so far has been to stop the building industry."



PRODUCERS' COUNCIL panel on how manufacturers can serve construction industry more effectively included (l to r) Lumber Dealer Norman Mason; James P. Edmunds Jr. of AIA; A. Naughton Lane, council president; Contractor H. C. Turner Jr.; NAHB President W. P. Atkinson.

Reni photos

Congress Begins to Eye Defense Housing Muddle as Critical Areas Chief Quits

The defense housing fiasco was well on its way toward becoming a first-rank national scandal.

► *Item: In San Diego, only seven of a programmed 6,000 defense homes were under construction.*

► *Item: Though shameless rent gouging of military personnel was exposed six months ago, the Defense Department waited 'til last month, then acted only half-heartedly to ease their plight.*

► *Item: Young, able Ralph Kaul, long hobbled as chairman of DPA's committee in charge of designating defense housing areas by a tiny staff and even less authority, finally quit in despair.*

Basic causes of trouble were three—the mortgage pinch (which meant would-be builders could not get defense homes financed), Congressional dallying over the Defense Housing Act (which set defense housing back about seven months), and blundering administration by almost every agency which had anything to do with the program. Boiled down, it was a case of “too many cooks.”

This month, events threw a strong spotlight on the Administration's errors: A Senate subcommittee hinted it will have some tart criticism for Defense Mobilizer Wilson and DP Administrator Manly Fleischmann for failing to organize at top level a critical areas program that works. The committee flung brickbats at the Defense Department for its niggling steps to speed military housing.

NAHB analyzed the housing mess in San Diego, came up with a well-documented argument that HHFA fouled up the program with red tape and impossible price ceilings.

The Budget Bureau stalled over an appropriation bill to make the Defense Housing Act work, thus adding more delay to the long string of administration blunders.

SENATE UNIT needles Defense chiefs for lax housing plans

Some of the keenest minds in the Senate—Estes Kefauver of Tennessee, Leverett Saltonstall of Massachusetts, Wayne Morse of Oregon—sit on its preparedness subcommittee. It has become today's counterpart of the Truman investigating committee that won general acclaim for policing the mobilization effort during World War II. Its energetic chairman, Lyndon B. Johnson of Texas, has a knack of knowing just where to put his finger on soft spots in the new preparedness program. As long ago as last July he decided that the No. 1 target for his trouble-shooters was the new crop of shoddy and makeshift housing springing up around reactivated military bases.

Acquisition begins. Early this month the committee began calling top echelon defense officials on the carpet. It started with Ralph Kaul who had just resigned as chairman of DPA's interdepartmental committee charged with the designation of critical defense areas—military as well as civilian.

Why, asked Chairman Johnson, point

blank, had the designation program fallen on its face?

Kaul gave a straight-from-the-shoulder answer that put his ex-boss, Manly Fleischman squarely on the spot: “The essential weakness was due to the fact that the committee was made up of the regular agencies that are primarily concerned with their long range programs. With a slim staff and a

NEW CONSTRUCTION ACTIVITY (expenditures in millions of dollars)

Type	September			1st 9 months		
	'50	'51	% Change	'50	'51	% Change
PRIVATE						
Residential (nonfarm)...	1,322	915	-30.8	9,219	8,078	-12.4
Industrial	101	202	+100.0	705	1,485	+110.6
Commercial ...	121	101	-16.5	863	1,086	+25.8
TOTAL*	2,095	1,860	-11.2	15,142	15,625	+3.2
PUBLIC						
Industrial	23	108	+369.6	133	643	+383.5
Military	21	118	+461.9	99	625	+531.3
Residential	28	65	+132.1	254	426	+67.7
TOTAL*	753	966	+28.3	5,184	6,770	+30.6
GRAND TOTAL.	2,848	2,826	-0.8	20,326	22,395	+10.2

*Minor components not shown in table, hence total exceeds sum of parts. Data from Depts. of Commerce and Labor.



NEW BOSS OF CRITICAL AREAS program will be Eugene F. Bertrand (r) assistant administrator of DPA. In effect he succeeds Ralph Kaul (l), who resigned, (see below). Bertrand, on leave from Owens-Illinois Glass Co. where he is sales manager of drug and chemical divisions, is fiftyish, breezy, addicted to sports clothes. Nominal committee chief, Ivan Carson, will be under Bertrand.

chairman unable to force decisions it took months to dispose of some of the requests for the critical area rating.”

As a sample of his troubles, Kaul mentioned his struggle to get a defense area rating for Morrisville, N. J., where U. S. Steel is building its \$400 million new steel plant and where the Kaiser Metal Products Company is turning out jet engines on an adjoining site. While NPA and the Defense Department recognized the need for prompt action, Kaul told the Committee that it took three months to convince the Labor Department that Morrisville should be made a critical defense area.

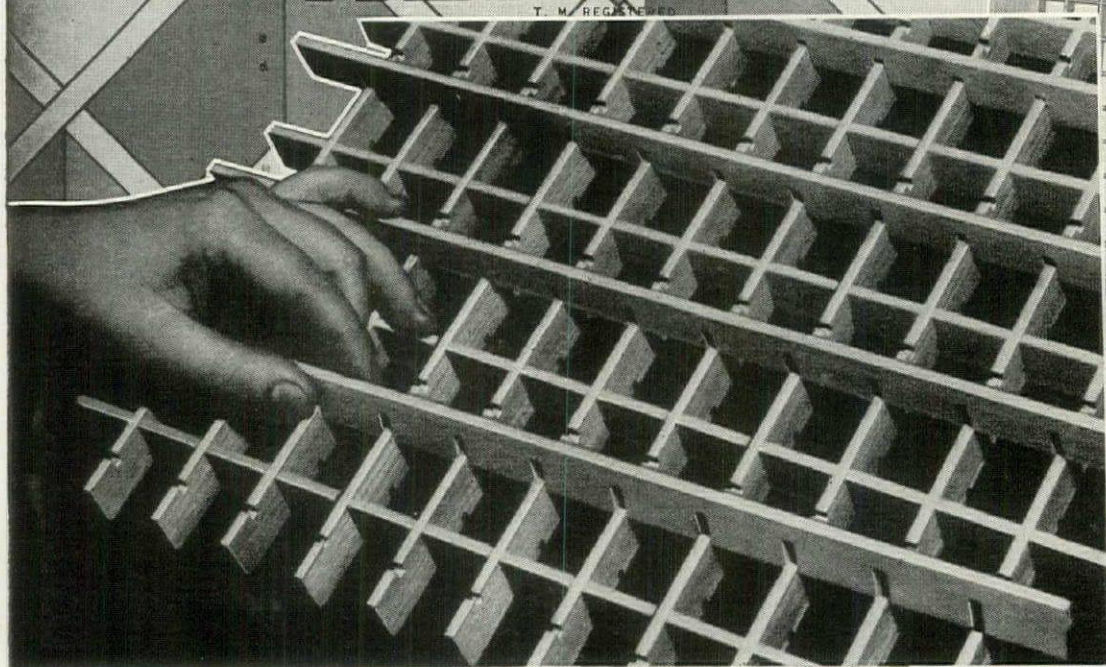
Surplus heads. Senator Morse asked why the Labor Department was reluctant to reorient its thinking. Kaul pointed out that in this as well as other instances, the Labor Department maintained that new defense installations within commuting distance of big labor markets should be treated as part of the larger area. Thus the department contended that Morrisville was part of the Philadelphia-Trenton area and did not need to attract new labor on its own or provide houses for them. Kaul eventually won the Morrisville argument by pointing out that no adequate mass commuting facilities existed and by establishing the fact that the “surplus labor” in the area did not have the right skills for the new plants.

The boxscore Kaul gave the Senators showed that his critical areas committee received 300 requests for certification. Of these the committee had approved 43 under the new Defense Housing Act, including the re-certification of all but a few of the places designated under the previous program. By this renaming process the places that received the original tagging become eligible for the more expansive aid provided by the new act. Some 200 places were still under investigation.

Feckless Regrouping. Chairman Johnson demanded to know: would the critical areas committee as reshuffled by a September ex-

(Continued on page 41)

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in this interlocked, interwoven,
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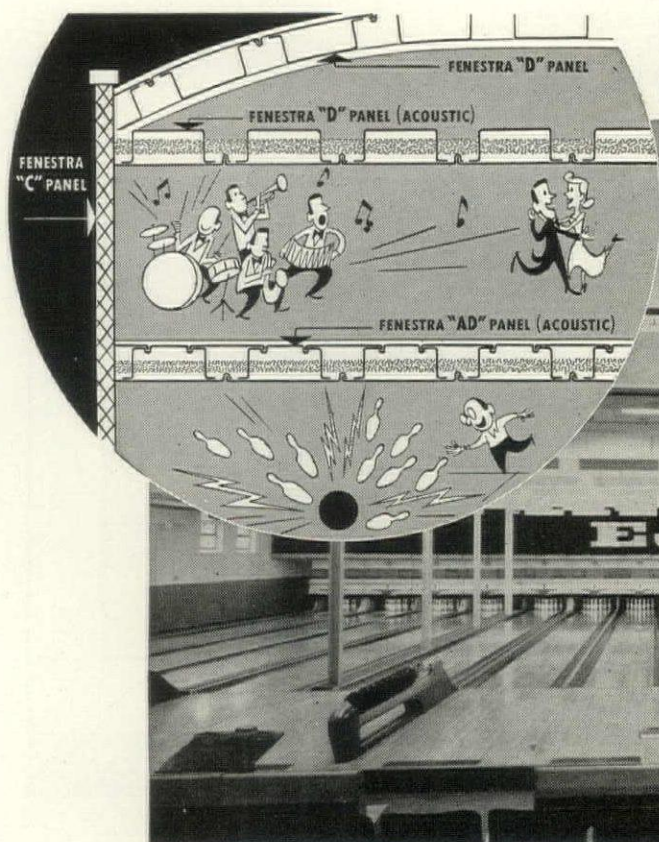
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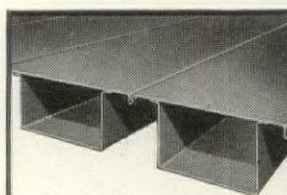
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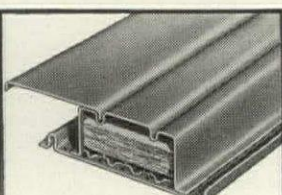
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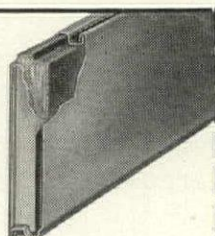
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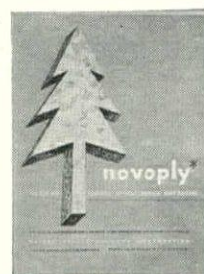
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Executive order do any better?

Kaul's candid reply: "No."

Ivan D. Carson, an HHFA subaltern who runs its defense housing program, had been moved up to the chairmanship. He had been HHFA emissary on the committee from the start.

But on reading the reorganization directive that Kaul submitted, Senator Johnson soon discovered that the role of the chairman had been reduced in importance. An assistant DPA administrator, Eugene F. Bertrand, would be the real top man. Moreover, it was disclosed that Carson would keep his HHFA job, too. To Johnson and the other Senators the changes seemed superficial. The committee still looked more like a debating society than a functioning body.

They insisted that Kaul tell them what he thought a workable arrangement would be. Kaul revealed the plan he had been unable to sell the DPA hierarchy:

The critical areas committee should be given the responsibility of making the determinations on its own. Its constituent government agencies should guide but not hamstring it. Its chairman should be on the immediate staff of the defense mobilizer, answerable only to him. Most important of all, it should have the power to ride herd over the program, do a little knuckle-rapping when a review of a particular situation disclosed that defense housing and com-

munity facilities were not being provided fast enough. Where the goals had been met, the committee should be able to decertify.

Shanty towns, chicken coops. What were the armed services doing themselves to provide better than shanty-town housing accommodations around their base? The first Defense Department witness, Assistant Secretary Roswell L. Gilpatrick of the Air Force, let the committee in on a plan that the military high command had long had up its sleeve but had not announced. An "Armed Forces Housing Agency" would be formed to review family housing requirements and establish policies. Each service would have top brass representation. The chairman would be an assistant secretary of defense. The Defense Investigating Committee had proposed just such a set-up in a recent report. So, in fact, had a long-suppressed Defense Dept. study. But the committee was annoyed at the needless secrecy. Snapped Chairman Johnson: "I don't like this business of dealing with the Senate at arms' length. Getting more coordinators on the job is not the sole answer. What you should do is go a step further: put some of your top people aboard a C-47 and let them do some straight talking to post commanders about the importance of looking after the housing needs of their family men." The Defense Department could consider its knuckles rapped for playing slugged with its family housing problem.

SAN DIEGO: NAHB blames defense housing debacle on HHFA

Hulking, blond Carl G. Lans, NAHB technical director, spent five days in San Diego last month digging into the reasons why only seven of 6,000 programmed defense houses were under construction. His fact-filled findings laid chief blame for the debacle on HHFA. Reported Lans:

► The agency naively set ceilings on homes built for sale so low that builders cannot build within them. Present ceilings: \$8,500 for two-bedroom homes; \$9,500 for three-bedroom homes. Feasible ceilings: \$8,900 for two-bedroom homes, \$9,900 for three-bedroom homes—but only if FHA agrees to elimination of garages and HHFA agrees to hike ceilings if construction costs inflate after construction begins.

► HHFA's rule that construction must begin within 60 days after the agency approves a builder's application is an "impossible" ultimatum because land near San Diego's inadequate water supply is 1) scarce and expensive (average \$1,700-\$2,000 per acre) and 2) dotted with canyons and erosion which make site preparation slow and expensive.

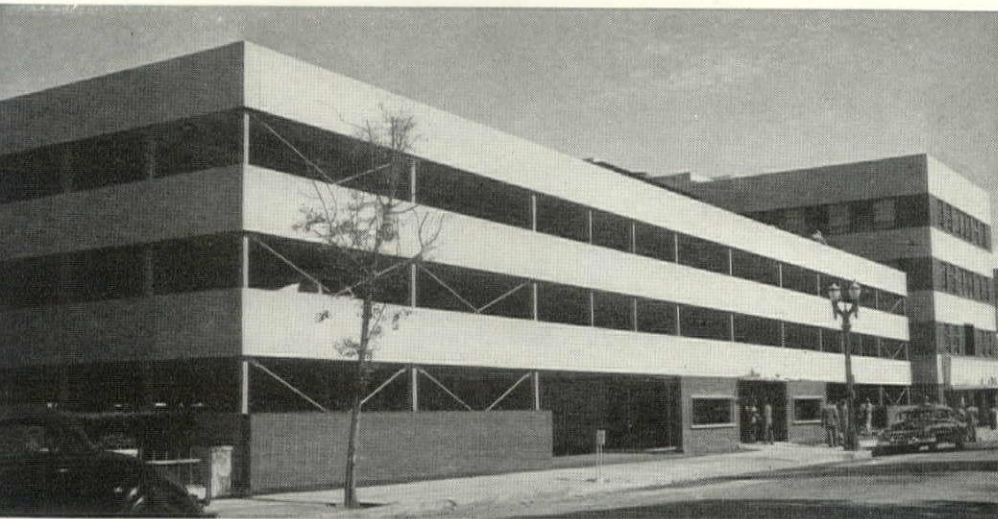
► For 4,000 rental units, HHFA idealistically set rental ceilings at \$55 per month for one-bedroom homes, \$65 for two-bedroom homes. Result: six sponsors abandoned plans to erect 2,349 units because they found the rent lid too low. New York Realtor William Zeckendorf had preliminary drawings for a 1,000-unit rent project but this, too, would probably require rents \$10 above HHFA's ceilings. (Zeckendorf's aides, however, said the project will definitely be built.)

► HHFA forbids both original and subsequent buyers of programmed housing from selling it at a profit for five years, regardless of whether there is more inflation meanwhile. This is "one of the most inequitable provisions."

► Credit rules are suspended only for defense housing approved by HHFA. This creates a stiff hurdle for builders whose already completed homes are for sale. Result: less and less building. Lans' controversial recommendation: lift Regulation X for ALL housing in a critical area until needs are met—not just housing favored by HHFA programming.

► The San Diego building code enforces a waste of at least \$50 per house by requiring back venting of all plumbing fixtures in lieu of cheaper wet venting suggested by the National Plumbing Code. Another \$100 per house is wasted by city insistence on 36" paving with concrete curbs, instead of

(Continued on page 44)



OPEN AIR GARAGE saves space, money with tiltable ramps

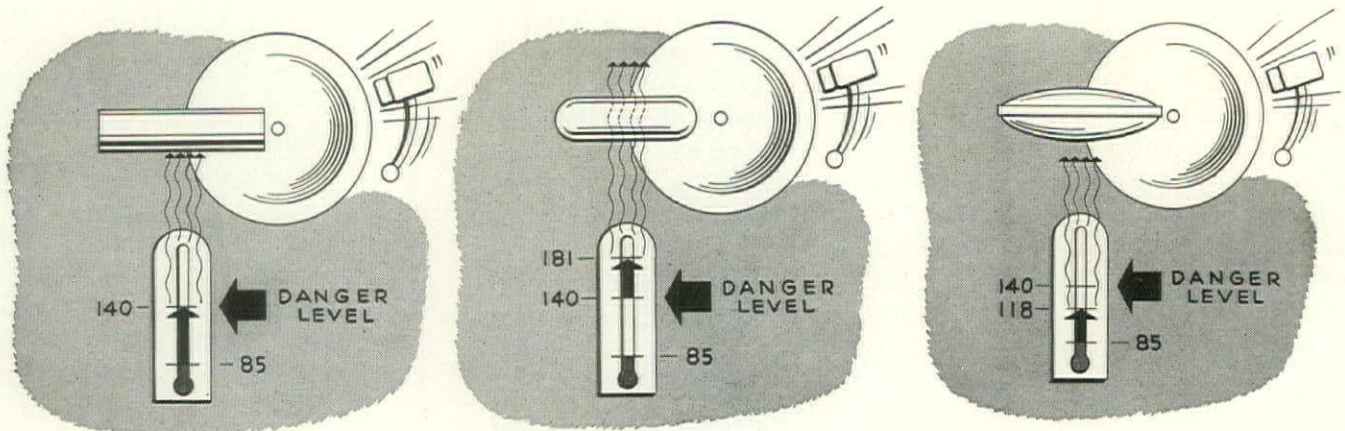
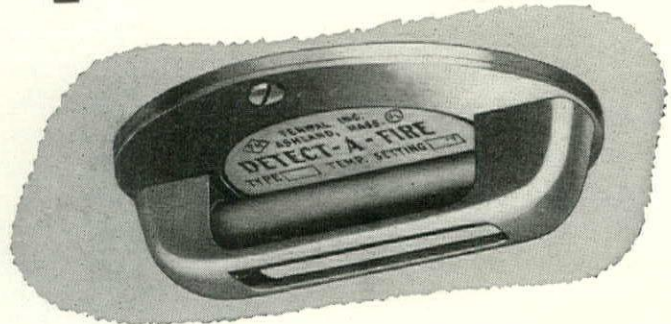
Many engineers, architects and civic officials dropped by to see the new ideas in a garage that opened this month in Beverly Hills that Executive Vice President Ralph B. Austrian of the Multi-Deck Corp., the firm that built it, found himself spending full time as a guide. The clean cut, open structure, designed by Pereira and Luckman, packs stalls for 412 cars into 94,848 sq. ft. (2,025 sq. ft. per car), a remarkably low figure. Chief space-saving gimmicks: 1) tiltable ramps which raise and lower like drawbridges so that an auto may be driven either to the deck above or over a hump and back to the same deck; and 2) surprisingly narrow clearances in stalls and ramps made possible by steel guides and a patent aligner. Explains Austrian: "Using the ramps as through-ways for driving cars from aisle to aisle inside the garage, we'll save space for 48 cars a day (with a four times turn-over). That's enough to pay for two or three more attendants."

Light weight steel I-beams support the four-deck structure because, while tires of parked autos rest on sturdy U-shaped plates, the floor between the tires is covered with 16 gauge steel—no stronger than an oil pan. At today's prices, Multi-Deck says it could duplicate the garage for \$4.25 per sq. ft. (\$401,104). Prefabrication let a steel erection crew of four men put up the garage's 600 tons of steel in 15 working days.

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26' paving with bituminous roll curbs.

Though some of the industry would quarrel with some of his recommendations, the Lans report was clearly the best documented case yet made against the HHFA Administrator Foley's defense housing errors.

How would Congress react? One of the first legislators to see it was Rep. Clinton D. McKinnon (D., Calif.) who not only comes from San Diego but is a member of the House Banking Committee which framed the Defense Housing Act. McKinnon said he was disturbed by Lans' survey, inclined to agree that the blame lay chiefly with Ray Foley.

DEFENSE HOUSING act stymied for lack of appropriations

Until Congress voted appropriations, the Defense Housing Act would remain as impotent as a bomber without bombs. Moving at snail pace, the Budget Bureau fiddled over its paper work for a full month before giving legislators HHFA's request for \$120 million to carry out the act's provisions. The House whacked this nearly in two, handed its bill to the Senate. What was left of the defense housing program could scarcely be launched before Nov. 1, even if there were no more hitches.

SHODDY HOUSING: buyer gripes bring probe by Congress

A tiny fraction of the nation's homebuilders earned their industry another black eye. In northern New Jersey, buyers of VA and FHA insured homes protested to Rep. William B. Widnall (R., N.J.), their basements flooded, sewage backed up, bricks fell out of chimneys. Neither the builders involved, FHA nor VA officials would lift a finger to repair the troubles, said victims in Paramus, Moonachie, Midland Park and Waldwick. Talking with his colleagues, Widnall found buyers in Texas, Minnesota, California and Oklahoma were also complaining to their Congressmen.

This month the House authorized its banking committee to make a nationwide investigation of defective construction under the FHA and VA programs. The inquiry will begin after Congress recesses this fall. Said Widnall: "I don't want a witch hunt."

PRICE CEILINGS for building scheduled for November by OPS

Target date for putting construction services under a tailor-made price control system was fixed for Nov. 1 by OPS Director Mike DiSalle. There was always the chance of last-minute modifications of the details but industry leaders knew pretty well what was in store for them. Contractors would be held to a gross profit of 90% of the base period, which would be July 1,

1949 to June 30, 1950. In OPS terminology gross profit includes overhead expenses. Reason advanced for the 10% squeeze was that wages and labor had gone up by 10%; the price controllers wanted to prevent profits from reflecting any percentage of that rise—a philosophy already embodied in other price ceilings.

General contractors and builders who erect houses on the order of customers or for separate owning companies would be required to keep extensive records. Contractors on an installed sales basis, like plumbing or electrical subcontractors, would have to submit special reports on each job, and also keep records. Although OPS had struggled nearly a year to draft the order, most building men still thought it would not work. The red tape looked so fearsome as to invite mass violation. Besides, argued industry spokesmen, how can you put construction, with its multiple variables, on a unit cost basis?

NATIONAL HOME WEEK brings observances in 100 cities

After a summer of flagging sales, builders and materials men needed no prodding. They teamed up to give National Home Week its splashiest observance yet. NAHB reported the week was observed in "at least 100 cities," produced "at least 100 special editions" of local papers. Mayors by the dozen, and a few governors issued proclamations. A dozen comely misses dubbed "Miss National Home Week" posed on the

tailgate of construction trucks, drove nails for photographers and enhanced parties. Denver, Columbus and Seattle splurged with home show expositions. Uncounted millions of Americans trooped through some 2,500 display homes, bought enough of them to give sales a shot in the arm.

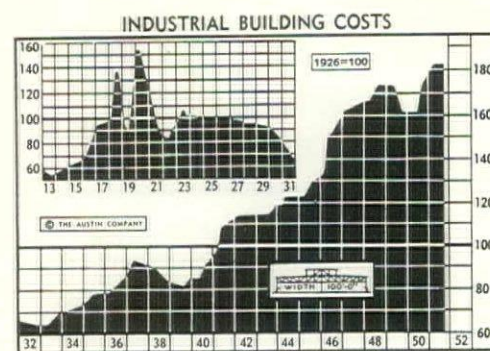
RENT CONTROL: rollbacks are ordered in 13 defense areas

Rent control's 1951 model, political dividend of rent gouging by a few unscrupulous landlords around reactivated military bases, has real teeth in it. It permits Rent Stabilizer Tighe Woods to roll back rents on all housing in critical areas which are singled out for rent control to a date before the Korean War inflated them. For the first time, rent ceilings cover living units built since February 1, 1947 (hotels, trailers, rooming houses, boarding houses, residence clubs, motor courts, tourist homes, trailer space, motels). Ordering controls into effect in 13 areas under the new law (part of the Defense Production Act extension), Woods used his full powers. The list up to the start of the month:

Area	Roll-Back Date
Savannah River Area, Ga. & S. C.	July 1, 1950
Aroo-Blackfoot-Idaho Falls, Id.	July 1, 1950
Quad Cities area, Ia. & Ill.	Oct. 1, 1950
Brazoria County, Tex.	Sept. 1, 1950
Borger, Tex.	Feb. 1, 1950
Fort Leonard Wood area, Mo.	Aug. 1, 1950
Camp Cooke area, Calif.	Aug. 1, 1950
Camp Roberts area, Calif.	Aug. 1, 1950
Valdosta, Ga.	Apr. 1, 1951
San Diego, Calif.	Jan. 1, 1951
Camp Pendleton area, Calif.	Jan. 1, 1951
Huntsville, Ala.	Jan. 1, 1951
Tooele, Utah	July 1, 1950

Cost of Construction Edges Up Again; Further Rise Expected by This Winter

The cost of construction this month gave signs of beginning another climb. Although The Austin Co.'s building cost index (below)



hovered at 182 for the second straight quarter, Smith, Hinchman & Grylls' monthly building cost index rose one point to 257. Reason: while lumber, cement and brick prices climbed only a fraction of 1%, labor performance was falling ("plenty of jobs—so why hurry"). The firm warned: "The rapid increase in government debt scheduled for the autumn and winter will boost building costs still higher despite so-called

controls." Austin's President George A. Bryant put his finger on another cost-booster. CMP was making so many products unobtainable "we frequently have to use alternate materials which either have a higher purchase price or cost more to erect." BLS' index of building materials prices, which measures only material costs and not other factors influencing the price of construction, remained steady around 222.3.

How lumber prices have held up as well as they have mystified many veteran lumbermen. Despite reluctance of retail yards to stock up, despite the housing slowdown and lack of big military demand, production of Douglas fir, for instance, seemed headed for an all-time record. The last half of September brought a break in the transit rail car market as hopeful sellers jammed freight yards at Council Bluffs, Minneapolis and Kansas City with carloads of unsold lumber. Speculators had to dump good fir dimension for as little as \$70 per thousand feet to avoid costly demurrage.

Pacific Building Officials Reject Name Change, Plan to Cut Waste in Lumber

The Pacific Coast Building Officials Conference looked as contented as a man with a royal flush. At its 29th annual meeting last month in Salt Lake City it stood pat on its policies and organization, firm in its opposition to a sound proposal for cutting waste in building.

Indicative of PCBOC's mood was its refusal, 17-42, despite the urging of several of its leaders, to change its name to the International Conference of Building Officials—a move to attract more midwestern and eastern cities to PCBOC's Uniform Building Code. Said one official: "We've got the best code. We know it. So why change?"

Gains in unification. The same pride that PCBOC feels in the adoption of its code by some 600 communities was shown in Treasurer C. D. Griffin's report on the Joint Committee on Building Code Unification: "seldom do more than 'three local building officials' attend a meeting," he related, but more and more the committee is adopting the "long-used and proved recommendations" of the PCBOC code. Griffin added: "the only progress PCBOC can make on the joint committee is by having a representative present to advise, sell, wheedle, cajole, scream and even threaten at times..."

On code relaxation, the delegates were even more pointed. Without a word of discussion or a dissenting vote, they resolved against "any temporary (i.e., wartime) lowering of standards of construction unless scientific investigation and research has indicated that such standards should be adopted on a permanent basis." The resolution called on cities operating under the Uniform Building Code to invoke three code exceptions permitting substitutions of materials, rather than adopting emergency ordinances as proposed by ODM and HHFA. Prodded by Joseph Schulte, executive research director for Builder Fritz Burns in Los Angeles and now president of his own New Products Institute of America, the officials voted, however, to cooperate with HHFA "in processing new materials and methods of construction." Schulte's aim: draw attention for a wealth of waste-saving products permitted in codes, neglected by builders.

Biggest surprise was the conference reaction to a resolution endorsing "as a permis-

—JCBCU (everything in the building industry known by initials, however complicated) is composed of representatives of 11 code writing, research or testing organizations. Since 1949, it has inched toward unifying the nation's major regional codes, a formidable task.

sive practice" the sensible suggestion of HHFA's antiwaste committee that the nominal 2" dimension of studs and joists (which is actually only 1 5/8" after finishing) be re-



RETIRING PRESIDENT A. W. Russell of PCBOC (r) hands gavel to successor A. G. Hoefer as Mrs. Russell looks on.

duced to a net 1 1/2" roughsawn to save wood and money in home construction. The loss in strength, say experts, is negligible.

Model Legislation to Modernize Codes Proposed by U.S. Chamber of Commerce

The U. S. Chamber of Commerce this month added its ponderous and important weight to the drive to get something done now about modernizing archaic building codes. In small communities, biggest stumbling block to adoption of up-to-date codes is the often-prohibitive cost of publishing the text of the proposed code in a local newspaper. Only 18 states now have legislation permitting their towns and villages to follow the only reasonable alternative: enact somebody else's building code merely by passing an ordinance referring to it.

Spark plugged by a nucleus of steel, lumber, gypsum and clay association leaders plus the AIA, 22 other building groups joined Chamber of Commerce planners early this year, thoughtfully drafted a 22-page outline, complete with suggested model legislation, to crack the worst building code problems in the way most likely to succeed politically. When the Chamber's board of directors stamped final approval on the blueprint, it meshed the gears for 4,000 local chambers of commerce throughout the nation to spearhead drives for state legislation which would:

Lumbermen opposition. Although the proposal was publicized last spring (May issue, '51), on his feet as soon as the resolution was read was Richard G. Kimball of the National Lumber Manufacturers' Association. He said: "This comes out of a clear sky. There are so many voluntary, amateur conservationists in this country... it will have to be determined by experts if this resolution means actual conservation. There may be merit in it." Griffin enlightened proceedings with the intelligence that the resolution had been initiated by "some Californian" who had served on a government committee in which HHFA had been interested. (He was Architect George B. Riddle of Glendale, a member of HHFA's antiwaste committee.) The defeating vote: 32-30.

Upped from first vice president to PCBOC president was stocky, talkative Arthur G. Hoefer, 56, chief building inspector of Spokane. The three big things in his life are building (his father was a contractor), his grandchildren and fishing. After two years in high school, Hoefer became a millwright and carpenter apprentice in Spokane. He served in the Army in World War I, went into building construction, was his father's partner for five years. He became assistant building inspector in 1930, chief six years later. Art Hoefer figures Edgar Guest's "Just Fishin'" is about the world's finest poetry. He can quote it by heart.

- ▶ Require local codes to use performance standards, not specify specific materials acceptable for building.

- ▶ Require municipalities to review their codes periodically to keep them up to date.

- ▶ Permit municipalities to adopt nationally recognized codes and "other nationally recognized standards" by reference.

- ▶ Provide legal recourse for materials dealers whose products are barred from a community by a code or its enforcement. As most laws are now written, the materials dealer—the man with the most at stake—cannot sue because he is not the actual builder of the project where the material is forbidden. The Chamber would simply broaden the definition of aggrieved persons to include manufacturers and suppliers.

Commented Chairman Norman P. Mason of the Chamber's construction and civic development committee: "The proposed legislation would offer powerful incentives to municipalities to move forward in modernizing their building codes." First push to carry out the plan may come in New Jersey.

(NEWS Continued on page 47)



Outstanding floor beauty can be achieved on a limited budget with Armstrong's Asphalt Tile. "Designer's Palette" Series E colors have muted tone-on-tone marbling. Both these and regular colors feature Armstrong's distinctive swirl graining. Singly or in combination, the two color groups offer unusual design possibilities.

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United Merchants and Manufacturers, Inc., New York City
S. Brian Baylinson, Architect; Frank A. Faillace, Associate Architect

ARMSTRONG'S ASPHALT TILE
ARMSTRONG CORK COMPANY • LANCASTER, PENNSYLVANIA

PRODUCERS' PLANS:

Manufacturers Fear Government Controls More Than Materials Shortages, Foresee Decline in Sales Next Spring

t month 25 of the nation's leading producers of building materials and equipment were asked what they thought lay ahead for their businesses (see questions, right).

While each separate segment of the building materials industry seemed to be reacting according to its own special situation, manufacturers with few exceptions

PRODUCTION & SALES OUTLOOK

	More	Less	Same	Don't Know
Full '51	12%	40%	44%	4%
1st Half '52	20%	32%	32%	16%

eed that direct government controls like CMP and NPA regulations are a far bigger threat to production and sales prospects than actual shortages of materials.

Most concerned with actual materials shortages were producers of glass (who are generally working off a big backlog of orders), paint and electric products. Most concerned with credit restrictions on housing were wood producers and fabricators of paper products. Steel fabricators, significantly, blamed CMP for hindering their ability to procure metal.

Sales up & down. Forecasts of production and sales this fall and the first half of 1952 mirrored the uncertainty and confusion spread throughout the building industry by controls. While 40% expected sales to shrink this fall, 44% expected no change and 12% predicted increases. For the first six months of next year, one-third foresaw a slump in sales either arriving or continuing, but a fifth expected sales to rise.

Also revealed by the replies:

The pinch on metals will work a hardship on producers of housing components with materials in plentiful supply, because the overall market for housing materials will probably shrink temporarily in proportion to its scarcest components.

In spite of their composite forecast of smaller sales next spring, the 25 producers still were looking forward to a good year in 1952. Typical of a wood window maker who, foreseeing a 20% drop in sales, still added "we feel optimistic about sales leveling off at normal volume."

For many firms, shrinkage in production and sales of residential items has been offset by gains in products going into industrial and military construction. But companies manufacturing chiefly

for the light construction market eye the next nine months with uneasiness.

Said Walter J. Wood, vice president of E. L. Bruce Company, big southern hardwood floor producer: "Our flooring production is currently down about 10% under the first six months of the year . . . although there has been decided improvement in business since Labor Day. Production and sales for the first half of 1952 depend on credit restrictions and the availability of critical materials—with accent on the former . . . We cannot believe that the Administration will continue to impose restrictions which result in a drastic curtailment of house building since the building industry is a very important factor in our National economy. We are not overlooking the fact that 1952 is an election year."

In government hands. As President George M. Curtis of Curtis Companies, Inc., Iowa woodwork producer, sees it: "The Federal Government now has the power to exert so many different kinds of controls that we are completely in their hands and, of course, this is almost the determining factor in whether we enjoy good business or not. . . . If controls become too stringent, they can put us out of business."

FACTORS INFLUENCING SALES

	No. 1 Worry	No. 2 Worry
NPA controls	50%	48%
Materials shortages	20%	24%
Credit curbs	15%	24%
Other*	15%	4%
*International situation 5%, general business activity 5%, natural gas restrictions 5%.		

Vice President R. S. Douglas of Weyerhaeuser Sales Co. noted that the general building materials market picked up following Congressional relaxation of Regulation X. But he warned: "There appears to be a hazard that material control, tightened credit and fiscal policies limiting the volume of available mortgage money may seriously restrict home construction and sale of building material including lumber, before increased military needs justify such restraints. During the last war the lumber industry satisfied tremendous war demand and still had lumber available for essential

THE QUESTIONS

1. In view of declining home building but increasing industrial and military construction, do you plan as of now to produce more or less of your building materials or equipment during the last months of 1951? First half of 1952?
2. Is there a difference between the production outlook for various items?
3. What factors influencing the market are likely to exert the most influence on your sales (for example, NPA controls, possible business recession, shortages of raw materials like copper, etc.)?

domestic requirements. Today lumber production is at high level and foreseeable military requirements will consume only a relatively small percentage of the total. Residential and farm construction are lumber's largest domestic markets."

No end to chaos. On the subject of what most affects their market top materials' executives grew most vehement. Said Vice President William Gillett of Detroit Steel Products Company: "We believe that NPA controls will be the major factor in influencing the construction market, because such controls will exert considerable pressure upon business conditions and will most certainly affect the volume of critical raw materials going into the construction industry. We see no end to the confusion which has been and is being created in business operations." To President Ned A. Ochiltree of Ceco Steel Products Corp. obtaining steel under the Controlled Materials Plan "is the limiting factor in our fabrication of reinforcing steel, steel joists, steel roof decks, metal windows and doors," for industrial and military buildings. But for residential casements, metal frame screens, storm windows and metal lathing products "we feel . . . the limiting factor now is the volume of business available rather than procurement of materials, although we are experiencing difficulties in obtaining materials we need for balanced operations."

Johns-Manville Corp., too, was making

(Continued on page 53)

THE PANEL

Detroit Steel Products Co.
Steel Products Corp.
Concrete Reinforcing Steel
Institute

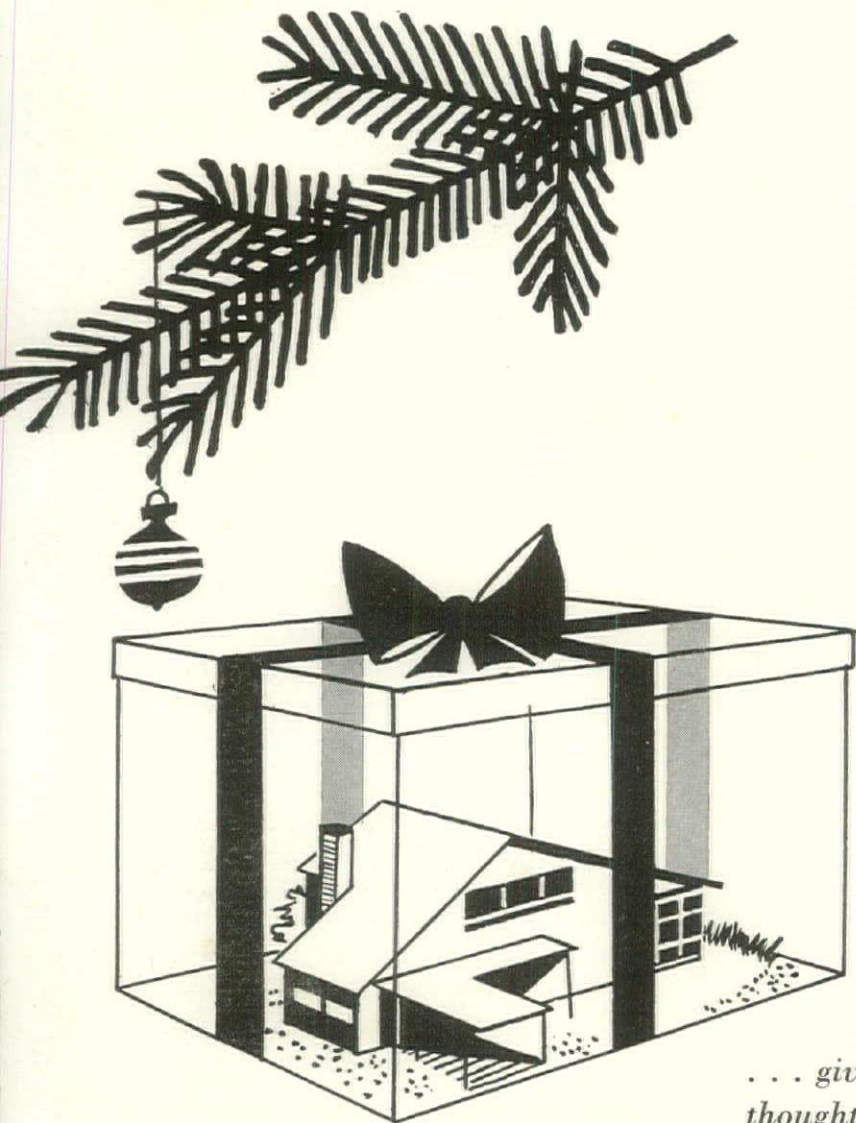
Armstrong Cork Co.
Briggs Manufacturing Co.
American Radiator & Standard
Sanitary Corp.
National Gypsum Co.

Otis Elevator Co.
Minneapolis-Honeywell
Regulator Co.
Pittsburgh Plate Glass Co.
Libbey-Owens-Ford Glass Co.

American Structural
Products Co.
Johns-Manville Corp.
American Brass Co.
Andersen Corp.

Mastic Tile Corp. of America
General Electric Co.
Westinghouse Electric Corp.
Weyerhaeuser Sales Co.
E. L. Bruce Co.

U. S. Plywood Corp.
Curtis Companies, Inc.
Douglas Fir Plywood Assn.
Minnesota & Ontario Paper Co.
Aluminum Co. of America



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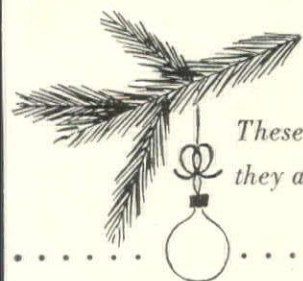
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industrial building materials at "full capacity" but producing residential materials below capacity, said Vice President W. R. Wilkinson.

Fir plywood manufacturers were in a situation becoming increasingly typical of snafu controls: NPA has ordered them to set aside up to 30% for defense business, but because Congress had not yet passed the military appropriations bill, the Defense Department was temporarily out of the market; apparently the Army, Navy and Air Force would bunch their buying for the second half of this year in the last quarter. Observed Lawrence Ottinger, president of United States Plywood Corp.: "We doubt if we will produce as much in the last half of 1951 or the first half of 1952 as we have been producing, but this is completely dependent upon government demand."

Glass. Both Pittsburgh Plate Glass Company and Libby-Owens-Ford Glass Company foresee a good chance that curtailed auto production will reduce output of laminated glass and release more mirror glass which has been in tight supply. Window glass and polished plate glass inventories are below normal. President Stanley J. McGiveran of American Structural Products Company (Owens-Illinois Glass Co. subsidiary) expects increased industrial building will offset the market he will lose for glass block in residential and commer-

cial construction in the first half of 1952.

Electric products. General Electric expects its dollar volume in wiring devices, wires, cables and conduits to remain the same or better this fall and the first half of 1952, with the copper shortage the number one brake on production—although "the mix of individual items may vary."

Aluminum. The major problem is lack of the basic metal. Observed Aluminum Company of America: "The best prospect for increased availability of metal for civilian consumption is based on the new capacity now being built."

To 16% of the materials men, the crystal ball was too clouded to see as far as next year. Mastic Tile Corp., for instance, called 1952 "very iffy."

But to President C. J. Backstrand of Armstrong Cork Company the outlook was just the other way around: "Private residential building is tapering off and our production of building materials may decline perhaps slightly more than seasonally in the latter part of this year. Barring great changes on the international scene, we look for an upturn in home building next spring."

At National Gypsum Company, where a backlog of unshipped orders has dwindled steadily for three months, President Melvin H. Baker declared "unless controls on critical materials are lifted and credit restrictions relaxed, next year we will need to look

for substantial sales to government defense building, in overcrowded industrial centers and in the general repair market." But Baker foresaw big pent up demand after the pinch on materials eases. Said he: "We are convinced the country is still short on housing, schools, hospitals and commercial and industrial construction, all of which will go forward (then). Under present controls most of this need may be deferred until well into 1953."

PEOPLE

Former **King Zog** of Albania, who has shuttled from chateau to chateau across Europe ever since Mussolini moved in on him in 1939, finally found the kind of spot he wanted to become a gentleman farmer: a 60-room, granite-block mansion with 85 acres of rich farmland on Long Island's north shore. The long vacant mansion was built in 1912 for \$3 million. What Zog paid for it, none of the brokers and lawyers involved in the deal would say, but there were hints the ex-monarch plunked down \$100,000—by check, not with "a bucket of diamonds and rubies" as first accounts had it.



Arrivals & Departures: **Walter C. Skuce**, able assistant NP Administrator who blue-printed CMP and guided its bug-ridden first three months of existence, returned as scheduled to his job as transportation products manager for Owens-Corning Fiberglas Co. His successor: **William C. Truppner**, 40, formerly his deputy. **Ambrose M. Richardson**, since 1947 design chief in the Chicago office of Skidmore, Owings & Merrill, was appointed professor of architecture by the University of Illinois. Off to enter architecture school at Cornell went **Eric Svenson**, 18, of Weston, Conn., who already has designed two \$30,000 homes under construction and one expected to cost \$65,000. Said Eric: "instead of washing dishes to pay my way through college, I'll design a house or two."

Nominated: For 1952 president of the U.S. Savings & Loan League, **Ben H. Hazen**, 61, president of Benj. Franklin Savings & Loan Association of Portland, Ore.; for national vice-president, **Charles L. Clements**, president of Chase Federal Savings & Loan Association, Miami Beach, Fla.; for 1952 president of the Associated General Contractors, **Arthur S. Horner**, Denver, Colo.; for vice president, **C. P. Street**, Charlotte, N. C. All four are unopposed.

(NEWS continued on page 56)



Bob Lackenbach, Cal-Pictures

SAN FRANCISCO ARCHITECTS give lobbying a reverse twist

One of AIA's most public relations-conscious groups is its northern California chapter. Last year, the chapter held a "meet the press" dinner, not an earful of free professional advice on how to put architecture before the public. On Sept. 1, the chapter invited ten State legislators to join it for dinner in San Francisco's Palace Hotel (above)—an idea other AIA groups well might copy. Explained Chapter President Francis J. McCarthy: "Instead of us bucking the madhouse at the capitol at Sacramento to buttonhole the lawmakers when we want something, it makes sense to get acquainted with them at home." Even legislators attended. Most made friendly,

joking talks to the architects and their wives. Cracked Assemblyman Thomas Maloney: "In my 28 years of representing this State this is the first time we were ever given a dinner in an off year." Assemblyman George Collins, chiding architects for not being represented in Sacramento during legislative sessions, remarked that in 14 years on the ways and means (appropriations) committee "I don't remember talking to a single architect." L to r: William H. Rowe, Donn Emmons, Assemblyman Bernard Brady, Francis J. McCarthy, William Clement Ambrose, Assemblyman Edward M. Gaffney, Donald Kirby, Charles Pope (back to camera), Assemblyman Charles Meyers.

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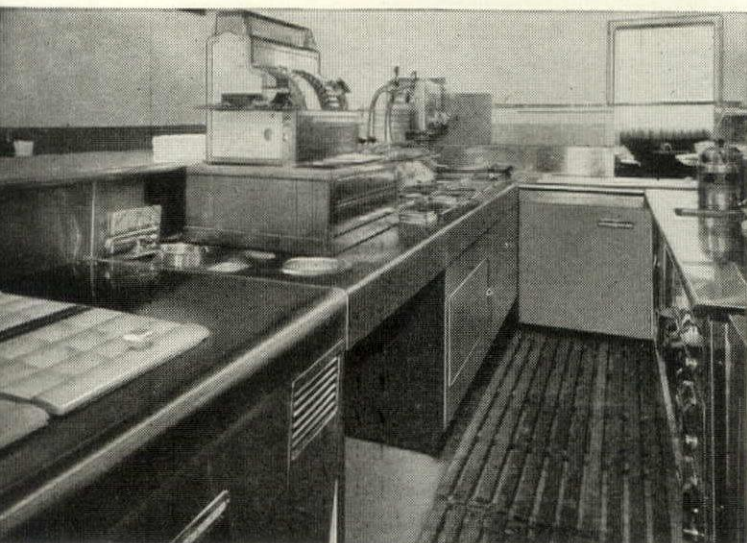
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FUNCTIONAL DESIGN of Los Angeles restaurant combines utility and beauty . . . plus unique use of Frigidaire refrigerating units



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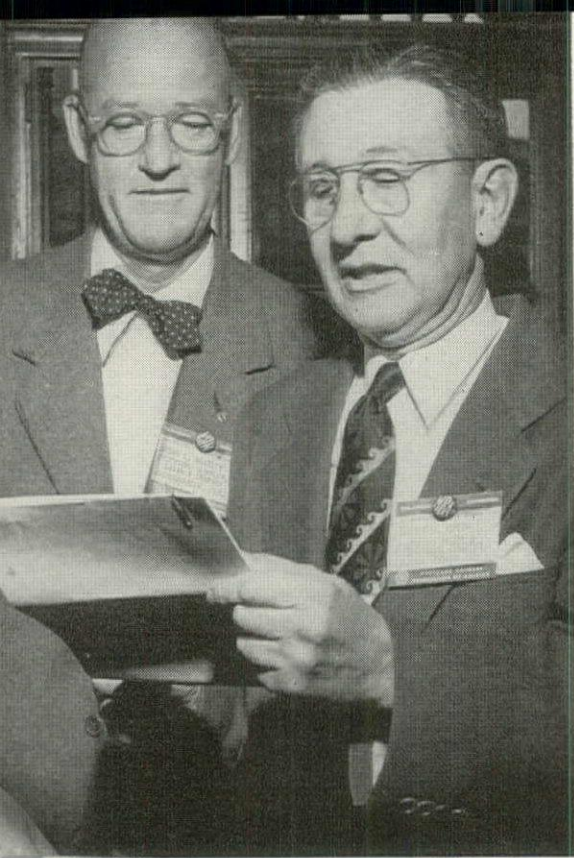
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New MBA President Aubrey Macon Costa (r) and Vice President Brown L. Whatley (l) give the association an all-Southern top command.

Costa—slight (158 lbs.), short (5' 8½") and conspicuously dark-haired for 55—is president of Dallas' Southern Trust & Mortgage Co. As MBA Chief he hopes to continue its fight for a stable mortgage market well supplied with funds, and against public housing and direct lending by encouraging more members to carry on educational campaigns "at the grass roots" and among their Senators and Representatives.

Son of a Corsicana, Tex., dry goods salesman, Costa went to work in the oil business at 18, rose to be a superintendent at 21, later wild-catted as a sideline. At 28, he decided "oil is pretty much a dog's life," shifted into his present field. From a start with two third-floor rooms, one phone & one secretary, he and Partner F. M. Love have built Dallas' largest mortgage firm. A lifelong bachelor, Aubrey Costa lives unostentatiously in a brick duplex where he sometimes entertains stag groups for Sunday morning gin rummy. For other relaxation, he likes to play bridge or golf (in the 90s). Sometimes, he fishes for trout or bass. He is a 32d degree Mason.

Tall, balding Brown Whatley is president of Stockton, Whatley, Davin & Co. of Jacksonville, Fla., one of the nation's largest mortgage banking houses. He has been a regional MBA vice president several years.



Retiring Pres. Milton T. MacDonald opened convention with warning: "Direct lending, frozen interest rates and huge public housing programs are symptomatic of a socialistically inclined administration in Washington. Unless we mortgage bankers are forever vigilant to combat these threats we'll wake up some day to find our collective businesses in a state of involuntary liquidation."

MORTGAGE BANKERS: San Francisco Con

The mortgage crisis combined with the charm of San Francisco to produce the second largest turnout (1,811 registrants) the Mortgage Bankers Association ever had for its annual convention. Among the important pronouncements delegates heard from 22 speakers, the most significant were packed into a dramatic three hour panel on the future of the mortgage market on the final day of the September 11-14 meeting.

► Spare, precise William A. Clarke, the Philadelphia broker who is probably the nation's No. 1 mortgage market forecaster, predicted the backlog of commitments which accentuated the mortgage pinch will be absorbed by December, so life insurance companies—a major private secondary market—shortly will be seeking FHA's at par or better. VA's with their frozen 4% interest will not move except at 97 or 98 for many months to come. (See p. 61.)

► VA's loan guaranty officer, T. B. "Bert" King disclosed that VA was considering—after much prodding by builders and, finally, a push from the MBA—a rule change permitting builders to absorb discounts on VA mortgages if market conditions make a discount necessary to get permanent finan-

cing. But King had a big hedge: "there is no intention to permit a builder any allowance whereby the purchaser will have to absorb that conditional future discount." (Three weeks later, it appeared that HHFA Administrator Foley had blocked the discount plan, despite heavy pressure from a joint MBA-NAHB delegation to accept it.)

► Sen. John J. Sparkman (D., Ala.), who as a chairman of the Senate's housing subcommittee is one of the upper chamber's two most influential members on housing policy, endorsed creation of a private Central Mortgage Bank to open more sources of funds to mortgages and stabilize fluctuating interest rates. With a copy of THE MAGAZINE OF BUILDING's, Aug. '51 (p. 123) blueprint for a Central Mortgage Bank spread on the rostrum before him, Sparkman declared: "I hope a Central Mortgage Bank will become a reality. When that time comes, Government can get out of the home financing business. Until it does, we can't."

► Government policy on home financing should aim at getting a million homes a year built (a few less under emergency restrictions), Sparkman asserted. Government policy, said he, should also seek to keep

Photos: Bob Lackenbach, Cal-Pictures



Fred C. Smith, vice pres. of Bowery Savings Bank, New York, and former MBA President John C. Thompson, pres. of New Jersey Realty Co., Newark.

Senator Sparkman announced "I'm a strong advocate of a flexible provision" for FHA and VA discounts on secondary market.



A. H. Cadwallader Jr., San Antonio; C. Arme! Nutter, Philadelphia; Oliver M. Walker, Washington; and William L. King, Washington.

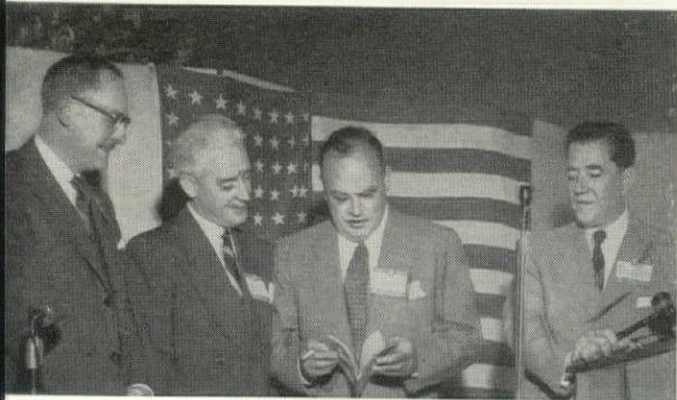


Hears Mortgage Pinch Is Ending

that volume as stable as possible because the Government realizes that fluctuations in volume is one of the big reasons for high construction costs.

Warned youthful, soft-spoken Assistant HHF Administrator Neal Hardy: "If a free flow of mortgage money makes possible financing of more housing than may be safe in view of defense and inflation considerations," NPA will use its power to allocate materials to tighten the brakes on home-building. Hardy revealed that builders won self-certification privileges under CMP on the theory that credit controls would prevent the self-certified 85% of the nation's housing from getting out of hand. But now, Congress had grabbed control of housing credit away from the Administration.

The 8½ million houses built in the last 10 years, said FHA Commissioner Franklin D. Richards, mean that the housing emergency is over; that the day is past when builders can sell pretty much anything they put up. Today's demand, said Richards, "is for well-planned houses that the mass market can afford"—i.e., people earning \$3,000 a year or less.



Speakers on collections and delinquencies were (l to r) Linden Stark, vice pres. of Anglo-California National Bank, San Francisco; William W. Salmon, secy-treas. of Southern Trust & Mortgage Co., Dallas; and Richard M. Hurd, vice pres. of Teachers Insurance & Annuity Association of America, New York. Don F. Hedlund (right), president of Carroll, Hedlund & Associates, Seattle, presided. Stark reported that foreclosures have risen from 2.46 per 100,000 families in 1947 to 6.2 per 100,000 last year, but noted this is low compared to the 14.6 ratio in 1933.

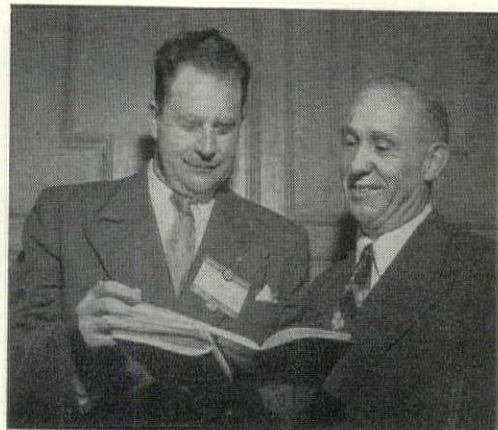
John L. Mylod, president of Pacific National Fire Insurance Co.; L. M. Giannini, Bank of America president; Owen M. Murray, Murray Investment Co., Dallas.



Convention Chairman William A. Marcus (right), senior vice pres. of American Trust Co., San Francisco, reminded delegates in opening talk that California, with only 7% of U. S. population, provides about 17% of its mortgage business, needs eastern money to finance growth. For George H. Patterson (left), convention marked 20th anniversary as MBA secretary-treasurer.



James W. Rouse, of Moss-Rouse Co., Baltimore, enjoys a chuckle in the lobby with J. M. Pringle, FHA mortgage manager, Stern-Lauer & Co., New York.



Seattle contingent included Builder-Mortgage Broker Albert S. Balch and W. Walter Williams, former head of the Committee for Economic Development.



Ex-MBA Presidents James W. Collins ('36-7) of Salt Lake City (left) and Charles A. Mullenix ('42-3) of Cleveland (right) chat with O. P. Scheller, Hartford insurance executive.

Photos: Bob Lackenbach, Cal-Pictures; except upper center, lower left, Moulin.



President Costa's room is site of backstage huddle with Washington Counsel Sam Neel. L to r: John F. Austin Jr., B. B. Bass, Neel, Costa, Philip Zinman, George Dovenmuehle. MBA governors pondered taking a stand against scheme to tap \$5.6 billion veterans insurance fund for VA mortgages, decided instead to work behind the scenes against it with American Legion, VFW.



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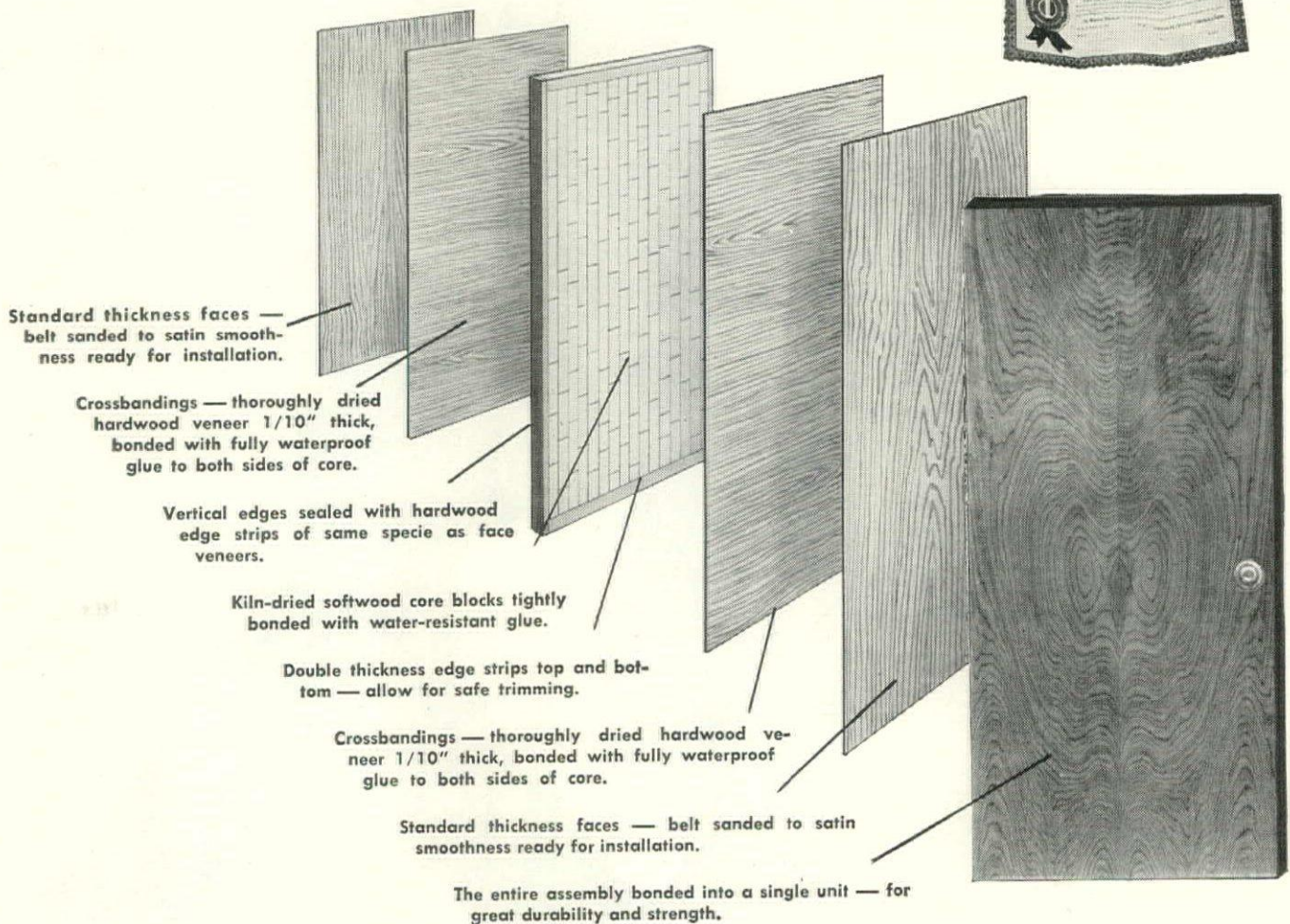
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"THESE ARE THE MEN who will most influence our business in the next three, four, or five years," said Moderator William A. Clarke as he introduced the seven members of the MBA convention's panel on the future mortgage market. What they had to say drew the convention's biggest crowd. Listeners overflowed the Mark Hopkins Hotel's gilt-ceilinged main ballroom, Peacock Court, spilled over into the adjacent lobby. Left to right: W. P. Atkinson, NAHB

president; retiring MBA president Milton MacDonald (not panel member); FHA Commissioner Franklin D. Richards; P. I. Prentice, editor and publisher of THE MAGAZINE OF BUILDING; Panel Chairman J. R. Jones, vice president of Security First National Bank of Los Angeles; Moderator Clarke; Sen. John Sparkman; Ass't HFA Administrator Neal Hardy; T. B. King, Veterans Administration loan guaranty director; Economist Miles L. Coleman.

MORTGAGE MARKET FORECAST: 'FHA GOOD, VA BAD'

Last Spring, Will A. Clarke, Philadelphia mortgage broker who is consultant to the Federal Reserve Board, made the first public forecast of the mortgage crisis. The market reacted so fast some insist Clarke precipitated the pinch. Last month, Clarke told the MBA convention he expects immediate improvement. Within a fortnight, several big investors again were buying FHAs at par. Pertinent excerpts from Clarke's impressive, statistic-laden speech:

Unlike last spring, the money market now has no one major factor affecting it. It will be materially affected by general business conditions. During the next six months, barring a radical change in the country's armament program, production will increase and so will personal incomes.

The size of the country's current operations is best shown by the Department of Commerce's figures covering gross private domestic investment. The figures show that gross private domestic investment has reached a hitherto unheard of level. The figures for the first six months of 1951 converted to an annual basis are:

Non-farm producers plant and equipment....	\$30.7 billion
Farm equipment	5.3 "
Residential construction	11.8 "
Other private construction	1.8 "
Net change in business inventories	11.9 "
Total	\$61.5 "

To understand how really dynamic these figures are, compare them with those of other years. The highest previous total was in 1948 when it reached 42.7 billion, only 69.4% of 1951. In 1939 the total was 9.9 billion, or 16.1% of current rate.

Industrial Production. The present unprecedented, industrial production is the result of the Government's armament program. You may all now say to me, "What effect does this abnormal production have on the mortgage business?" The answer is that it is background for the probable demand for money and the trend in interest rates. Every item in the above list must be financed. Gross private domestic invest-

ment at the unprecedented rate of 61 billion dollars creates a tremendous demand for investment funds. As demand goes, so goes the price for money; namely, interest rates.

There is a second group of statistics that I think is very significant.

CORPORATE NEW MONEY SECURITY ISSUES

Year and quarter	Corp. new capital sec., issues
1950—1st half	\$2.7 billion
2d half	\$2.2 billion
1951—1st half	\$3.8 billion
2d half (Estimate)	\$3.8-4.0 billion
1952—1st half (Guess)	\$1.7 billion

Issues in the first-half of 1951 were up approximately \$1.1 billion, an increase of 40% from the first half of 1950. The anticipated second-half of the year will be up \$1.6 billion or 72% above 1950. The demand for money created by the issuance of new capital security issues has a tremendous effect on the mortgage market because, in times of heavy demands for funds by corporations, investment managers are under no pressure to seek mortgage investments. Heavy demand for funds in the securities market always results in higher interest rates and this is an important factor in determining the acceptability of mortgages for the investment portfolio.

The Money Market. Last spring the government's change in monetary policy caused a great deal of indigestion in the investment market. This was accompanied by some hysteria as a great many institutional investors stopped purchasing while they took stock of their position. The peak of the indigestion was reached from late May

through late June. Long-term Governments reached their low on May 21st when the Victories of '67-'72 sold for 96 28/32nds. The present position of the money market is very much improved. Victories are now 98 24/32—up 2 points, a very substantial increase. The increase in the price of government bonds is an accurate reflection of the market as Federal Reserve banks have bought none of them. The changes in yield can be illustrated by Moody's average Baa. This is the type of security purchased by life insurance companies—the one that most affects mortgages.

MOODY'S BAA BONDS 1951

Jan.	3.17	May	3.40	Aug. 4.	3.53
Feb.	3.16	June	3.49	Aug. 11.	3.52
Mar.	3.22	July	3.51	Aug. 18.	3.51
Apr.	3.34			Aug. 25.	3.50

The peak of interest rates was reached in July, equally for all securities.

In the face of the slight declines since, we have no hope of seeing much of a drop in the average rate of Baa's in the next six months. We will not see very much drop. We may see a little.

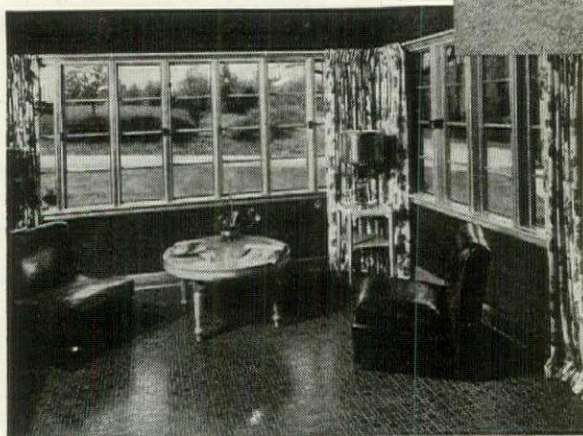
Money for Mortgages. The most important point to understand is that the great demand for mortgage investments during the past five years was a phenomenon we will not see again. A substantial part of the demand was caused by the great lending institutions of the country attempting to adjust their investment portfolios into a more normal percentage of various types of investment. The fact may be illustrated by this table:

	Mutual Savings Banks (millions of dollars)		Life Insurance Companies (millions of dollars)	
	Dec. '48	July '51	Dec. '48	June '51
Total Assets	20,471	22,978	49,556	58,091
U.S. Gov't Bonds	11,558	10,161	15,217	10,480
Corporate Securities....	1,884	2,528	17,716	24,700
Mortgages	5,576	9,059	8,924	14,921

(Continued on page 64)

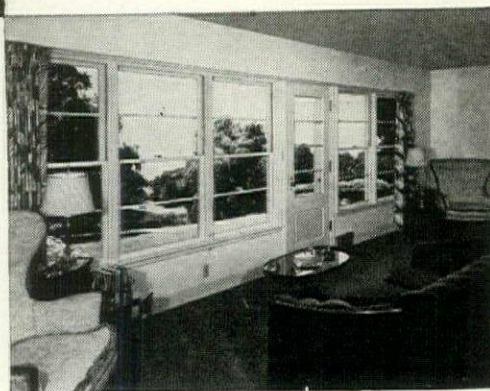
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The table shows that during the three and one-half year period, savings banks' assets increased approximately \$2.5 billions and mortgage holdings increased \$3.5 billion. In other words, over 140% of the increase in assets went into mortgages, and this type of investment now represents approximately 40% of total assets as compared to 27% of assets three and one-half years ago.

Life insurance companies assets in the same period increased slightly over \$8.5 billion. Mortgage holdings increased \$6



Clarke: "The home building industry is in a dilemma."

billion or 70% of their increase in assets. Mortgage holdings now represent 25.7% of life insurance companies' investments. This compares with 18% of their total assets invested in mortgages 3½ years ago. U.S. Government bonds now represent 18.1% of total assets against 30.7% three and one-half years ago.

The figures show very substantial changes in the various types of investments held by these two types of investor. It is my opinion that to a large extent the changes that have occurred have brought the ratios of various types of securities near the point which investment managers have wanted. *The attempt at switching from Governments to mortgages is over. From now on it's going to depend on yield.*

Investment portfolios now will probably be invested in corporate securities and mortgages according to the present percentages provided the yields from each of these two types of security are relatively in balance.

What sums can we expect to have available for mortgages? To see the problem in proper perspective we must go to history.

NET INCREASE IN ASSETS BY INSTITUTIONS
(Estimated in billions of dollars)

	Life Insurance Companies	Mutual Savings Banks
6 months 1951.....	..	\$.429*
1950.....	\$4.4	.9
1949.....	3.9	1.0
1948.....	3.6	.7

* 7 months 1951.

The anticipated inflow of new savings from September 1951 to March 1952 are, for life insurance companies \$2.5 billions—some say \$3 billions; for mutual savings banks \$1 billion.

Savings and loan assets from 1945 to the end of 1950 increased \$6.8 billions. The increase in assets to March 1952 will be about \$1.3 billions. Savings and loan institutions are going to become increasingly important.

What is the commitment position of investors? Best available figures put the undigested commitments of life insurance companies last March at \$4 billions, of savings banks at \$1 billion. There is little likelihood for these institutions to do much current buying till that indigestion gets out of their systems. On the other hand one must not forget that to acquire mortgages lending institutions must be prepared to give long term commitments; therefore, if mortgage investments are to be had after March of 1952 these institutions must begin this fall to give forward commitments.

Conclusions:

► By December, the backlog of commitments with which lending institutions were caught last March when the Government monetary policy was changed will be absorbed.

► Assuming a satisfactory yield, lending institutions from this time on will be seeking forward mortgage commitments for mortgages to be bought next spring. This trend will definitely increase.

► First, there will be a great tendency to acquire conventional mortgages at 5%—maybe 4½% if 5% doesn't work. That effort will fail. You'll get a few, but very few. Savings and loan associations will beat you to it every time. They are on the ground. They can give quick answers. By law they can lend more. . .

► There will be no great decline in yields of corporate securities in the next six months.

► What interest rates will be acceptable? I will hazard some guesses. Moody's average AAA corporates are up 20 basic points from January. Baa corporates are up 33 points. On FHA section 203 insured mortgages at par—less ½ of 1% for servicing—the annual yield is 3.79% before home office expense. This yield compares with that of six months ago when premiums of 2% were common, and assuming a ten-year life we had a base yield of about 3.51. In other words we are currently up 29 basic points from last spring, when the yield was attractive.

Conclusion: *FHAs at par less ½% for servicing are a completely acceptable instrument in today's market.* They should be purchased by life insurance companies. My guess is they'll be seeking them in large volume extremely soon. In fact, I'm beginning to feel right cheerful about getting a little premium.

VAs to yield 3.80 must sell at a discount or the rate must be raised to 4¼%. The discount would have to be between 97 and 98. The VA mortgage would be marketable at that figure. 94 or 95 is part of the hysteria.

Observations. As I see the picture the home building industry of the country is in

a dilemma. The Veterans Administration and the Secretary of the Treasury are holding the VA interest rate on VA insured mortgages at a level which makes this type of security unacceptable to institutional investors. At the same time the Congress has taken the management of credit controls away from the administrative branches of the Government and is requiring easier terms for veterans to buy houses. The change is of no avail as long as there is no money available for this type of mortgage. I see four possibilities for the VA:

1. General decline in interest rates to a point where the VA insured mortgage will again be an acceptable investment. This is extremely unlikely in the next six months.

2. A change in VA procedure which would raise the interest rate or permit discounts.

3. More money for FNMA to buy mortgages plus a change in FNMA regulations permitting forward commitments.

4. More direct lending.

The last two possibilities in my opinion are completely unsound and my only comment is "Heaven forbid." It is unfortunate that the present system of fixed interest rates on Government insured mortgages can only work when those rates are above the



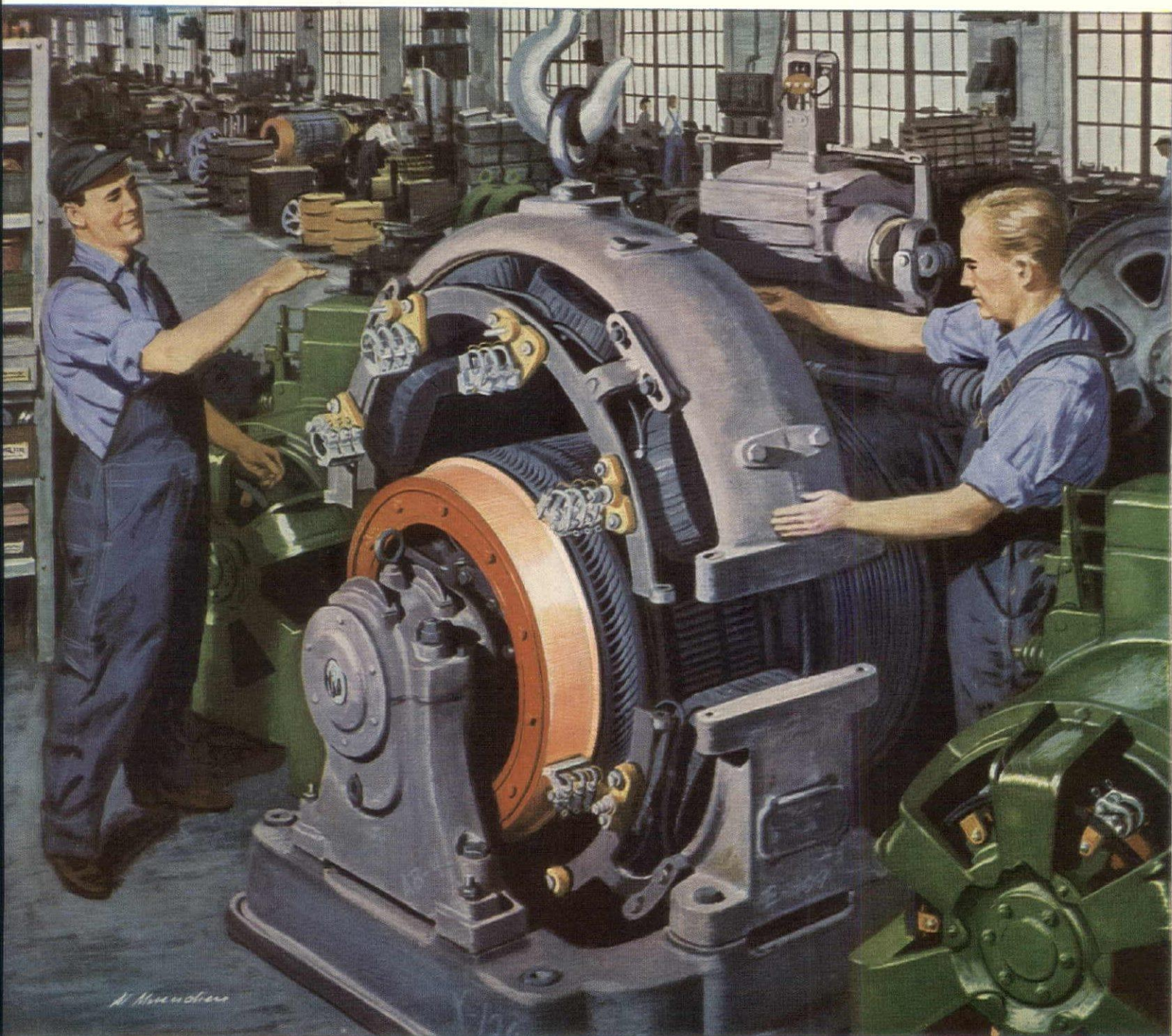
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"I don't like FNMA."

market. The system will stand premium but because of Government rules will not operate on discounts. I don't like FNMA. I hope this group will stick to a policy keeping government out of lending.

There will be no VA money until they abandon their 'holier than thou' rate. I don't like fixed rates of interest. A maximum rate becomes a minimum rate.

Inflexibility in interest rates in periods of easy money makes Government insured mortgages acceptable and home building goes forward. Political considerations which prevent flexible rates in a tight money market dry up the building business to the detriment of the home owner and the home building industry. The public pays more than the increase in rates that would be required to keep Government insured mortgages always acceptable. Housing inevitably costs more than it should when through no fault of their own, home builders cannot maintain level production. In the long term even building industry would save veterans even more (than 4% interest). I hope we can get some of that economic thinking into the minds of the Legion and VFW—teach them the facts of life.



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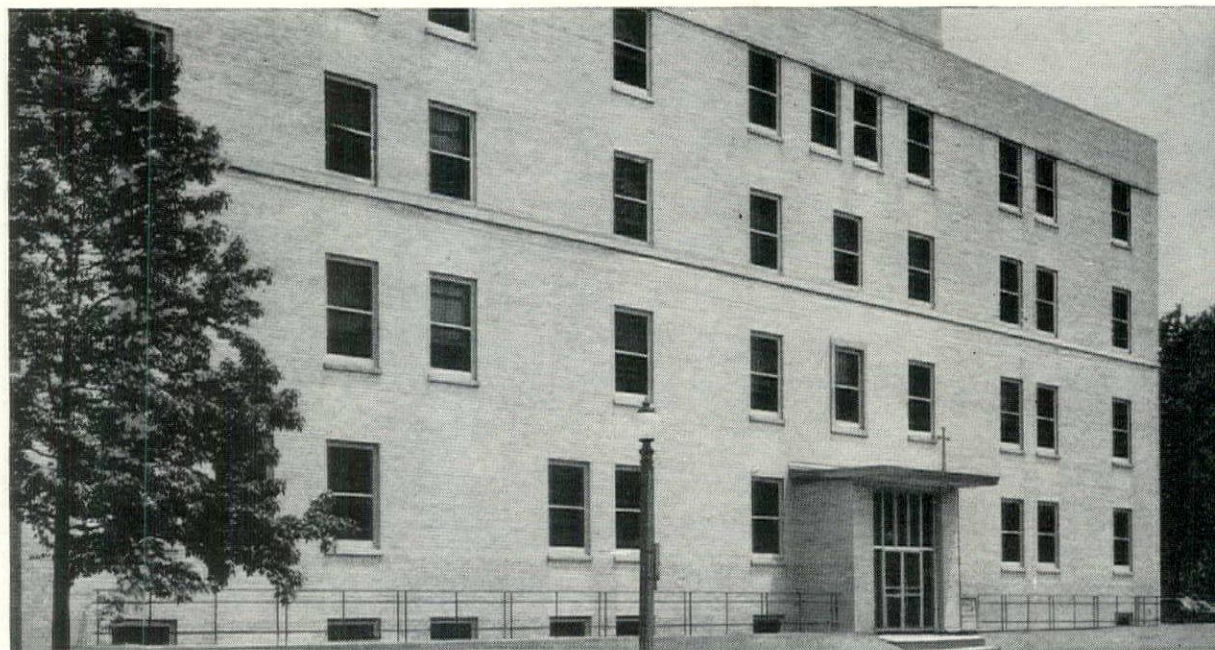
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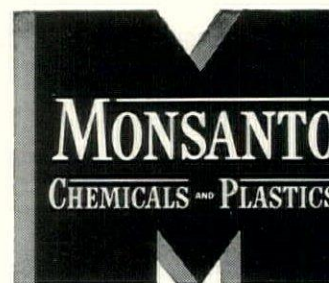
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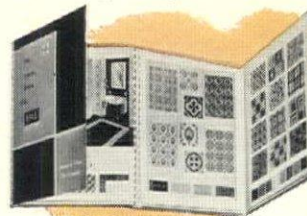


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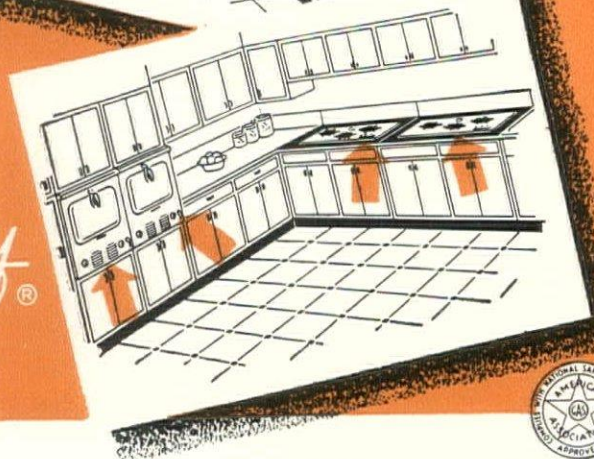
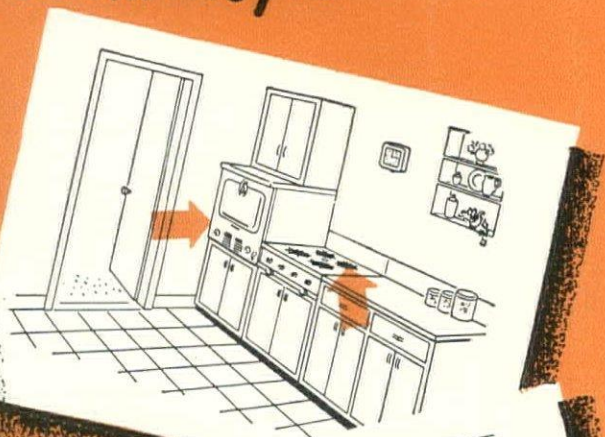
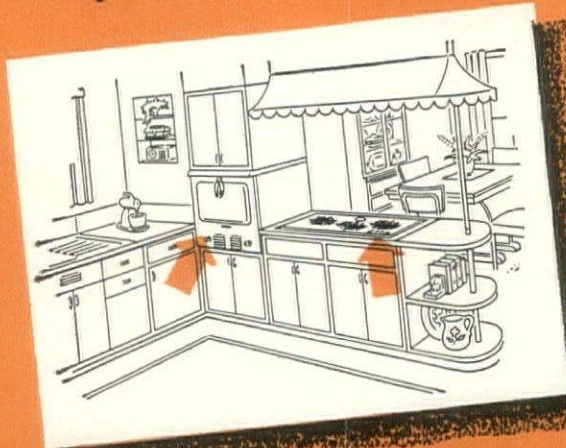


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WAIST-HI COOKING CONVENIENCE, compact kitchen design, and Chambers World Famous Cooking Performance—that saves food, flavor, time, fuel and labor—these features make a powerful sales impact on today's homemakers. You can't go wrong when you recommend GAS . . . and you're doubly right when you specify Chambers Gas Built-Ins.

Originator and Master Builder of Insulated Ranges since 1910

NATIONALLY ADVERTISED House & Garden, House Beautiful, Small Homes Guide, Better Homes, Parents Magazine, Living for Young Homemakers

Send for A. I. A. Specification Sheet

NOW!

Chambers Corp.,
Dept. AFT10, Shelbyville, Ind.

Gentlemen:

Please send me at once A. I. A. Specification Sheet and other material describing the new Chambers Built-In GAS Cooking Units.

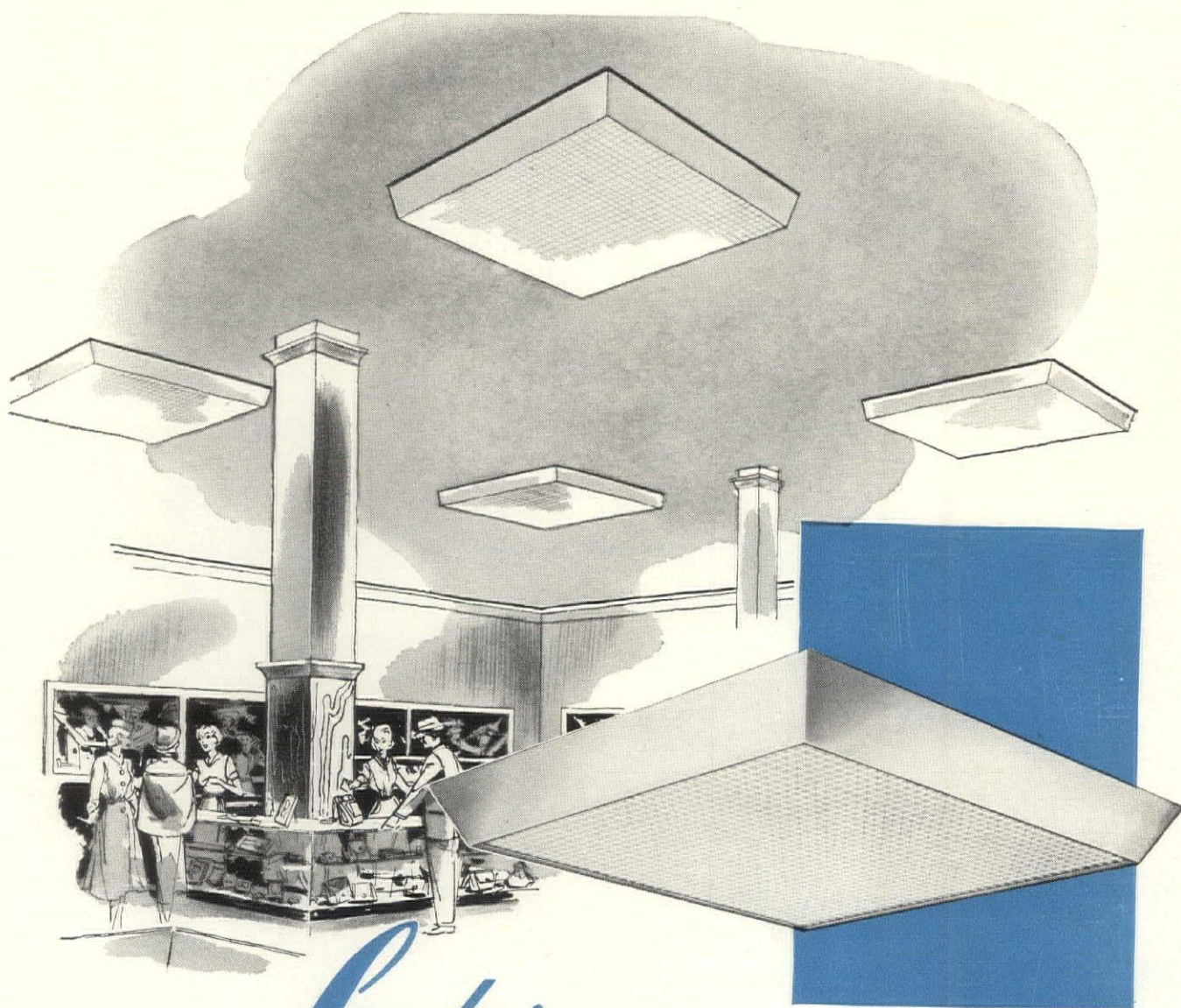
I am an () Architect () Builder-Contractor () Dealer

NAME

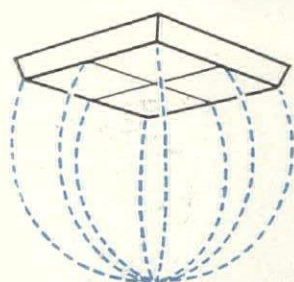
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ADDRESS

CITY..... ZONE..... STATE



The new *Leader* Square Series



BETTER LIGHT . . . BETTER MERCHANDISING

Effective highlighting is one of modern merchandising's greatest aids.

Leader's new Square fixtures flood selling areas with abundant, non-glare light. Also, because these fixtures are so powerful, no additional units are needed for overall illumination. Steel channel, housing and side panels . . . 40° x 40° featherweight plastic louver. 2' x 2', 3' x 3', 6' x 6' and 8' x 8' sizes available as well as 4' x 4' size shown.

A truly amazing light source . . .

Economical to install . . . Pleasing in design

These striking new units, for recessed, semi-recessed, surface or suspension mounting, furnish intensive light for selected areas, at the same time providing abundant overall illumination. The most popular size is four feet square, with choice of 4, 6, 8 or 10 lamps, either conventional 40-watt or T-12 single pin Slimline. Larger size of fixture means fewer units to buy, to install, to service. Voluminous light output eliminates necessity for special fixtures for intensive lighting. Leader's Square units are ideal for department stores, offices, cafeterias, drafting rooms . . . or wherever the demand is for efficient, low cost, truly modern lighting.

*Sold and installed by the better
electrical dealers and contractors*



Leader America's No. 1 Lighting Equipment Manufacturer

LEADER ELECTRIC COMPANY • 3500 N. KEDZIE AVENUE, CHICAGO 18, ILL.
Leader Electric—Western: 800 One Hundredth Avenue, Oakland 3, California
Campbell-Leader, Ltd.: Brantford, Ontario • Canada

Specify The World's Most Beautiful Flooring

WHERE is the woman who won't fall in love with the fresh, clean colors of Wingfoot Vinyl Flooring?

Styled exclusively for Goodyear by Raymond Loewy Associates, Wingfoot Vinyl is available in a wide range of rich, home-warming shades—either solid or marbled— that blend beautifully with all the new fabrics, draperies, and room decorations—in

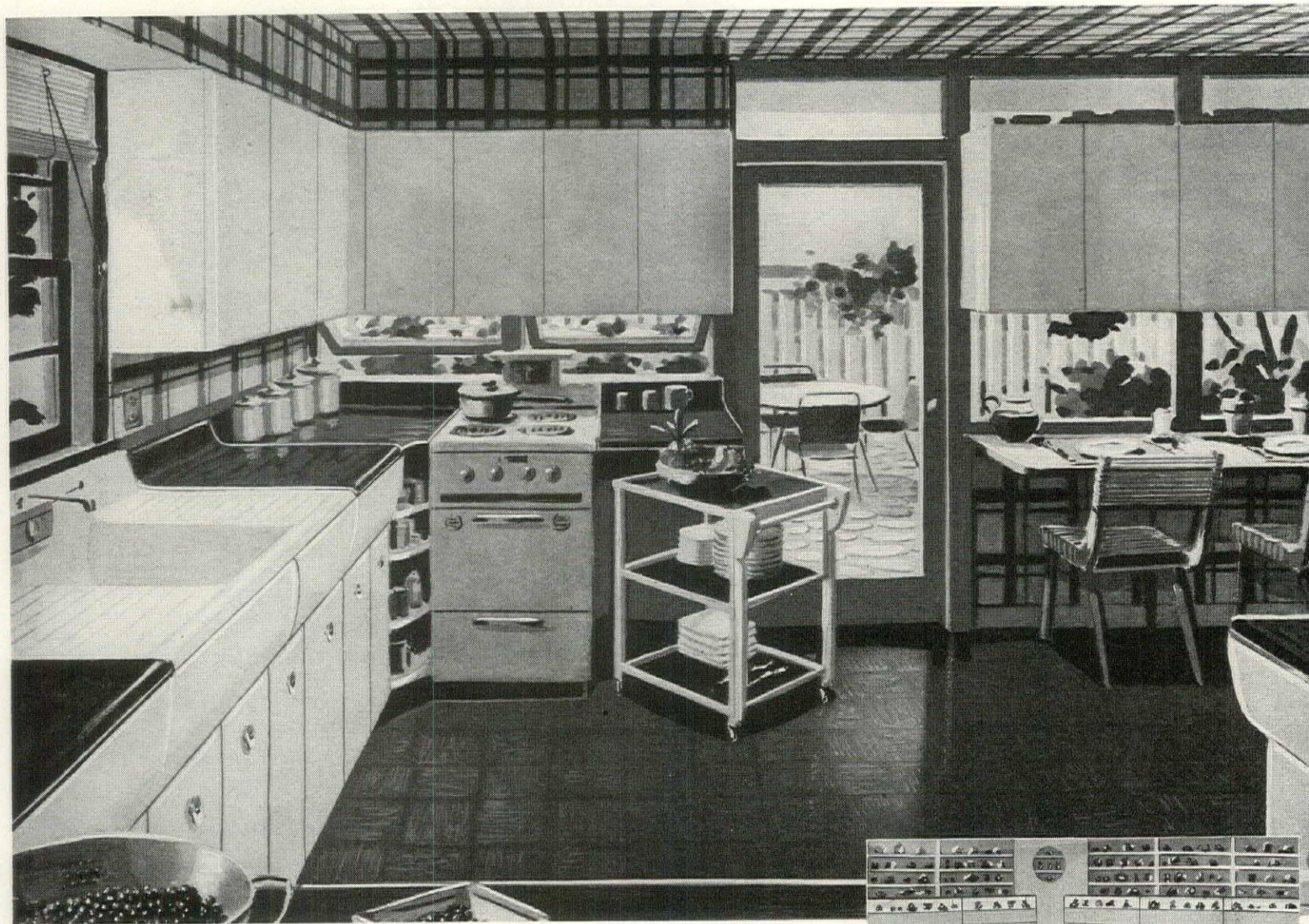
traditional settings as well as modern ones.

Won't fade, "walk off" or scrub off!

Where is the client who won't approve heartily of a floor covering that *never* needs waxing for protection or appearance? It is resistant to the actions of greases, fats, oils, mild acids, commercial cleaners, and the color is built right into the surface. Wingfoot Vinyl has the rugged, long-wearing quality of all Goodyear products.

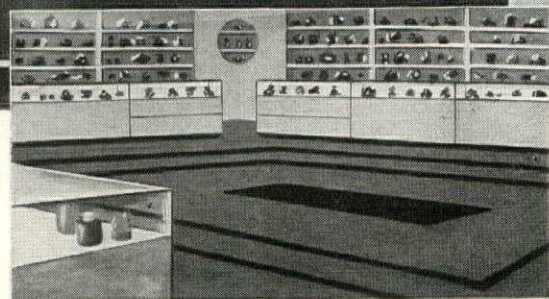
And the cost is calculated to make client happy, too. You can *always* specify Wingfoot Vinyl for *any* decorating budget.

Plan to enhance the beauty of any home, office, or store you design with Wingfoot Vinyl—it's perfect for counter tops, too. See it today at your flooring contractors' or dealers' showrooms. For specification data and color chart, write direct to Goodyear Flooring Department, Akron 16, Ohio.



Sheet and Tile — Residential and Commercial Grades

WINGFOOT *Vinyl* FLOORING BY
GOODYEAR

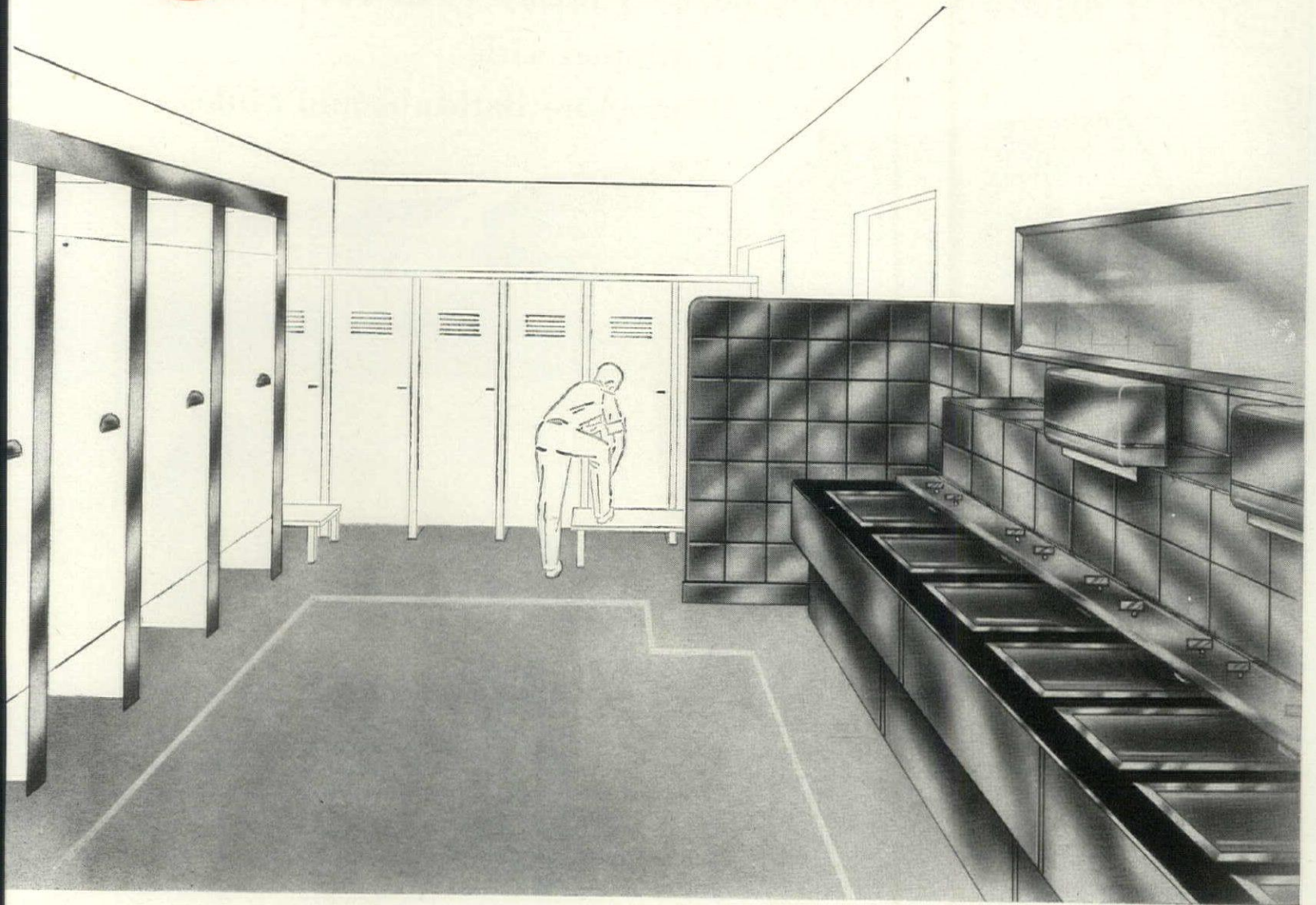


IDEAL FOR SHOWCASE JOBS. Wingfoot Vinyl is easily installed, easily maintained, lends itself readily to "personalized" floors of your own original design.

We think you'll like "THE GREATEST STORY EVER TOLD"—Every Sunday—ABC Network

Wingfoot—T. M. The Goodyear Tire & Rubber Company, Akron,

Cleaning up Wash Room Problems....



Washrooms used regularly by a great number of people present tough problems in maintenance—resulting in frequent repairs and costly upkeep.

Stainless Steel actually "cleans up" these problems—and, at the same time, adds an attractiveness unsurpassed by any other material.

The rust-resisting qualities of Stainless Steel make it an ideal material to combat natural washroom dampness. The dense surface of Stainless Steel is impervious to harsh clean-

ing compounds. Soap stains and water marks are easily removed in seconds with a damp cloth.

Leading architects, wise to the many natural qualities of Stainless Steel, have popularized the Stainless washroom for the home as well as for industry, because Stainless lends itself well to almost any design or color scheme and is unmatched when it comes to functional beauty.

At present our distribution is dictated by essential needs. In the future we will be able to better fill your requirements for stainless steel for architectural purposes.

STAINLESS STAYS NEW FOREVER

SHARON STEEL CORPORATION

Sharon, Pennsylvania

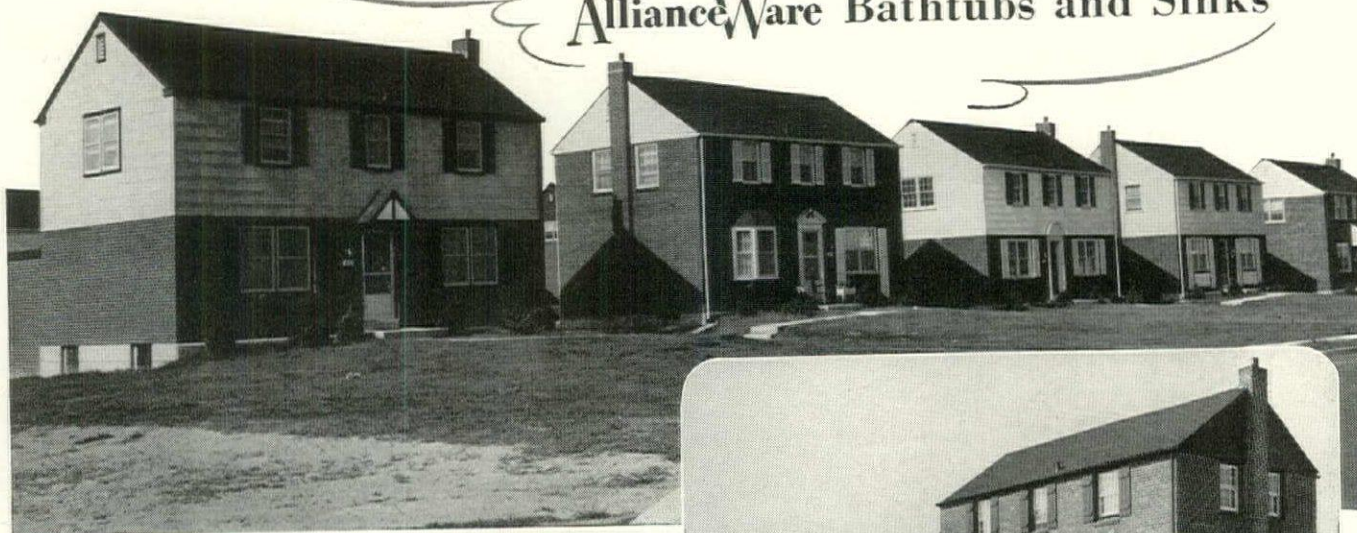
DISTRICT SALES OFFICES: Chicago, Ill., Cincinnati, O., Cleveland, O., Dayton, O., Detroit, Mich., Indianapolis, Ind., Milwaukee, Wis., New York, N. Y., Philadelphia, Penna., Rochester, N. Y., Los Angeles, Calif., San Francisco, Calif., Montreal, Que., Toronto, Ont.

SHARONSTEEL

Another Distinctive Home Development

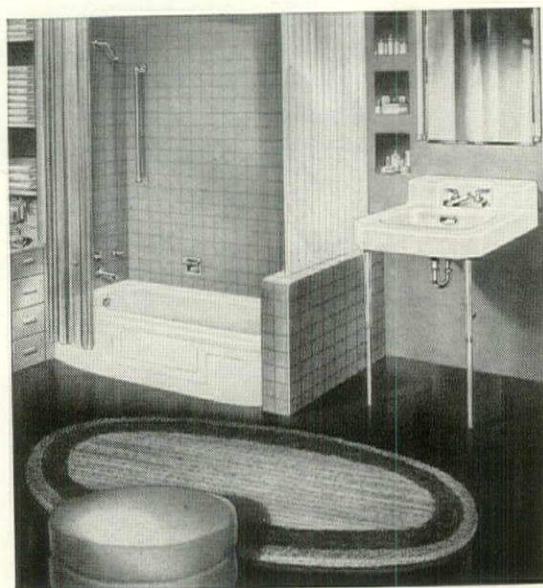
Completely Equipped with

AllianceWare Bathtubs and Sinks



Chatham Park at Haverford Township, Delaware County, Pa., a development of single homes, built by Warner West Corporation of Upper Darby, Pa. AllianceWare supplied by The Shuster Plumbing Supply Co. Plumbing contractor, Wm. J. Winter.

Attractive Bathrooms and Kitchens are among the selling features of Chatham Park homes



AllianceWare Bathtub and AllianceWare Lavatory in a typical modern bathroom.

ALLIANCEWARE, INC. • Alliance, Ohio
Bathtubs • Lavatories • Sinks

BUILDERS of more than 10,000 homes during the last several years, in the Philadelphia area, one of the present projects of the Warner West Corporation is Chatham Park, on a site which was formerly a picturesque golf course. The Chatham development consists of 514 single homes ranging in price from \$12,000 to \$15,000. Each home has six spacious rooms, including three large bedrooms—and a colorful tile bathroom.

Bathroom and kitchen equipment play an important part in the minds of the eager buyers of these Chatham Park homes. The attractive installations of AllianceWare bathtubs and sinks are eloquent selling aids.

In addition to modern styling, stainproof surface, and choice of colors that please the eye of prospective buyers, AllianceWare possesses practical details of construction which continue to win preference among architects, builders and plumbing contractors. Outstanding are exact dimensions, integral wall guard around bathtubs that stops leaks at the wall line, and anchor lugs which prevent shifting and settling of the tub—added values at no extra cost.

AllianceWare advantages are worth investigating. Ask your plumbing contractor for details or write us.

AllianceWare
PORCELAIN ON STEEL



We're Keeping This

Quiet

Offices of B. F. Goodrich Company, Cleveland. Simpson Acoustical Tile installed by The Mid-West Acoustical & Supply Company, Cleveland

THESE SIMPSON ACOUSTICAL CONTRACTORS OFFER YOU A COMPLETE ACOUSTICAL SERVICE

ALABAMA
Stokes Interiors, Inc., Mobile

ARIZONA
M. H. Baldwin, Tucson

CALIFORNIA
Coast Insulating Products, Los Angeles
Hal E. Niehoff & Associates, San Diego
Cramer Company, San Francisco and Fresno

COLORADO
Construction Specialties Co., Denver

CONNECTICUT
W. T. Roberts Construction Co., Hartford

DISTRICT OF COLUMBIA
Kane Acoustical Co., Washington

GEORGIA
Dumas and Searl, Inc., Atlanta

ILLINOIS
General Acoustics Co., Chicago
Melvin R. Murdy, Moline

INDIANA
The Baldus Co., Inc., Fort Wayne

IOWA
Kelley Asbestos Products Co., Des Moines

KANSAS
Kelley Asbestos Products Co., Wichita

KENTUCKY
Atlas Plaster & Supply Co., Louisville

LOUISIANA
Pioneer Contract & Supply Co., Baton Rouge

MASSACHUSETTS
W. T. Roberts Construction Co., Cambridge

MINNESOTA
Dale Tile Company, Minneapolis

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Stokes Interiors, Inc., Jackson

MISSOURI
Kelley Asbestos Products Co., Kansas City
Hamilton Company, Inc., St. Louis

NEBRASKA
Kelley Asbestos Products Co., Omaha

NEW YORK
Robert J. Harder, Lynbrook, L. I.
Kane Acoustical Co., New York

NORTH CAROLINA
Bost Building Equipment Co., Inc., Charlotte

OKLAHOMA
Harold C. Parker & Co., Inc., Oklahoma City
Kelley Asbestos Products Co., Tulsa

OHIO
The Mid-West Acoustical & Supply Co., Cleveland, Akron, Columbus, Dayton, Springfield and Toledo

OREGON
Acoustics Northwest, Portland
R. L. Elfstrom Co., Salem

PENNSYLVANIA
Jones Sound Conditioning, Inc., Ardmore

TENNESSEE
D. E. Madden Co., Inc., Memphis
John Beretta Tile Co., Inc., Knoxville
The Workman Co., Inc., Nashville

TEXAS
Blue Diamond Company, Dallas
Otis Massey Co., Ltd., Houston
Builder's Service Co., Fort Worth

UTAH
Utah Pioneer Corporation, Salt Lake City

VIRGINIA
Manson-Smith Co., Inc., Richmond

WASHINGTON
Elliott Bay Lumber Co., Seattle

WISCONSIN
Building Service, Inc., Milwaukee

CANADA
Albion Lumber & Millwork Co., Ltd., Vancouver, B. C.
Hancock Lumber Limited, Edmonton, Alberta

SIMPSON Acoustical Tile is "keeping it quiet" in the offices of the B. F. Goodrich Company, Cleveland, just as this superior acoustical material is "keeping it quiet" in many other offices, schools, stores, restaurants, hospitals and homes throughout the United States.

Simpson Acoustical Tile is specified by more and more architects because of its high sound absorption, exclusive Hollokore drilled perforations, beautiful washable finish, painted bevels, and because it retains its crisp beauty and its efficiency, even after it has been repainted several times.

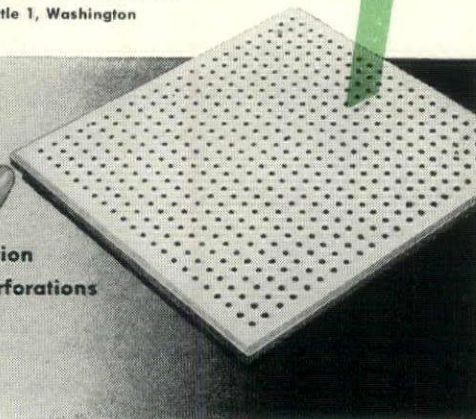
Specify Simpson Acoustical Tile for better sound conditioning. The authorized Simpson acoustical contractor nearest you is listed at the left.

SIMPSON LOGGING COMPANY

1065 Stuart Building, Seattle 1, Washington

Only Simpson Has All Five!

1. Washable Finish
2. High Sound Absorption
3. Hollokore Drilled Perforations
4. Finished Bevels
5. Thermal Insulation



Simpson
QUALITY SINCE 1895

ACOUSTICAL PRODUCTS
For Better Sound Conditioning

MAINTENANCE IS NO PROBLEM



with a
**PLASCOR
FLOOR**

Take a good look at the mop above. It's about all you'll ever need to keep a Plascor floor looking good year after year. The floor pictured (in a chemical laboratory) is now over five years old. It has received no attention except occasional mopping. Despite acid and alkali spillage, despite oil drippings from machines, despite abrasive foot traffic — the Plascor floor looks as good as the day it was installed.

Plascor Floor Tile is designed for those places where no other resilient floor tile is fully suitable: for chemical plants and laboratories, for hospitals and schools, for restaurants and theatres, for broadcasting studios, for ships. Its unique blend of Tygon Vinyl plastic and resin impregnated cork give it qualities no other floor tile can match:

Chemical resistance — skid resistance — flexibility — quietness — true resilience — beauty — and amazing long life, free from maintenance worries.

On that next "tough" floor job — specify Plascor. . . You'll be glad you did!



U. S. STONEWARE

AKRON 9, OHIO

Plascor comes in tile form, in 8½", 11", 17" and 34" squares ⅛" thick. Eleven beautiful marbled colors. For wood, concrete or steel floors. On or above grade, or over radiant heat. For samples and full information, write Flooring Division, The U. S. Stoneware Co., Akron 9, Ohio.

190C

NEWS ... NEWS ... NEWS ...

SOIL WIZARDRY: artificial pre settling permits warehouse over 40' fill with spread footings

Builders of medieval European cathedrals licked the problem of settling foundation soil by intuition: they hauled their heavy stone to the site, piled it up to heights that approximated the future weight of the church. Because it took decades to build cathedrals, the soil settled before construction was really underway.

This centuries-old trick was revived last year by Dr. Arthur Casagrande, Harvard professor of soil mechanics, to permit erection of a 1.5 million sq. ft. bakery and grocery warehouse on an abandoned quarry in Philadelphia. Result: despite fill 40' deep, the warehouse required only simple footings.

American Stores Co. found the 34-acre quarry was the only undeveloped industrial site available in Philadelphia large enough to build what it claims will be the world's largest building of its kind. (Eight football fields would fit on the warehouse roof.) But excavations at the quarry have left bedrock 40' down in spots. Comparing officials found the cost of sinking supporting piles would be prohibitive. So American Stores called in soil-wizard Casagrande.

Sandy solution. Not all soils will settle fast enough to permit the Casagrande preloading system to be feasible. A thick bed of impervious clay, says he, would take years or decades to settle under weight. Most construction jobs won't wait that long. American Stores was lucky. The quarry pits were covered with loose micaceous sand mixed with odds and ends of long-dumped rubbish. Casagrande predicted such soil would sink 12" in a wildly uneven pattern. But because it was porous and had a low water table, he forecast that settlement would come quickly. Preliminary tests revealed most of the settlement actually came in 5 days, that the compressed soil did not rebound when the weight was removed. The company decided to go ahead.

Architects' plans called for 4' of fill over the entire site. Casagrande estimated the weight of the one-story warehouse equalled 10' of fill. The solution: after the permanent fill was laid, giant earth movers pushed 6' of sand over successive zones 30 x 500', let each 260,000-ton layer of sand squish down the foundation soil for two weeks. Leftover sand was used for adjacent parking lots and around the foundations for the 3-story bakery, which rests on rock. The whole pre-settling took eight months, was completed in March 1950.

(NEWS Continued on page 78)



Brite-Lite AREAWALL

**installed by one man
in 15 minutes!**

● Here's one sure way to cut costs, save time and still give the customer more for his money. A Brite-Lite Areawall can be installed by one man in 15 minutes. Just clear necessary space, attach to wall (flanges are part of Areawall), back fill, the job is done . . . and done with an Areawall that costs less and outlasts stone or brick.

Made of heavy gauge copper-bearing steel. Galvanized, rust-resisting, attractive, reflects light into basements. Flat flanges prevent mud and silt from seeping into well.

BRITE-LITE
Super Corrugated-Straight



BRITE-LITE
Super Corrugated-Round



For low-cost housing . . .
BRITE-LITE Standard

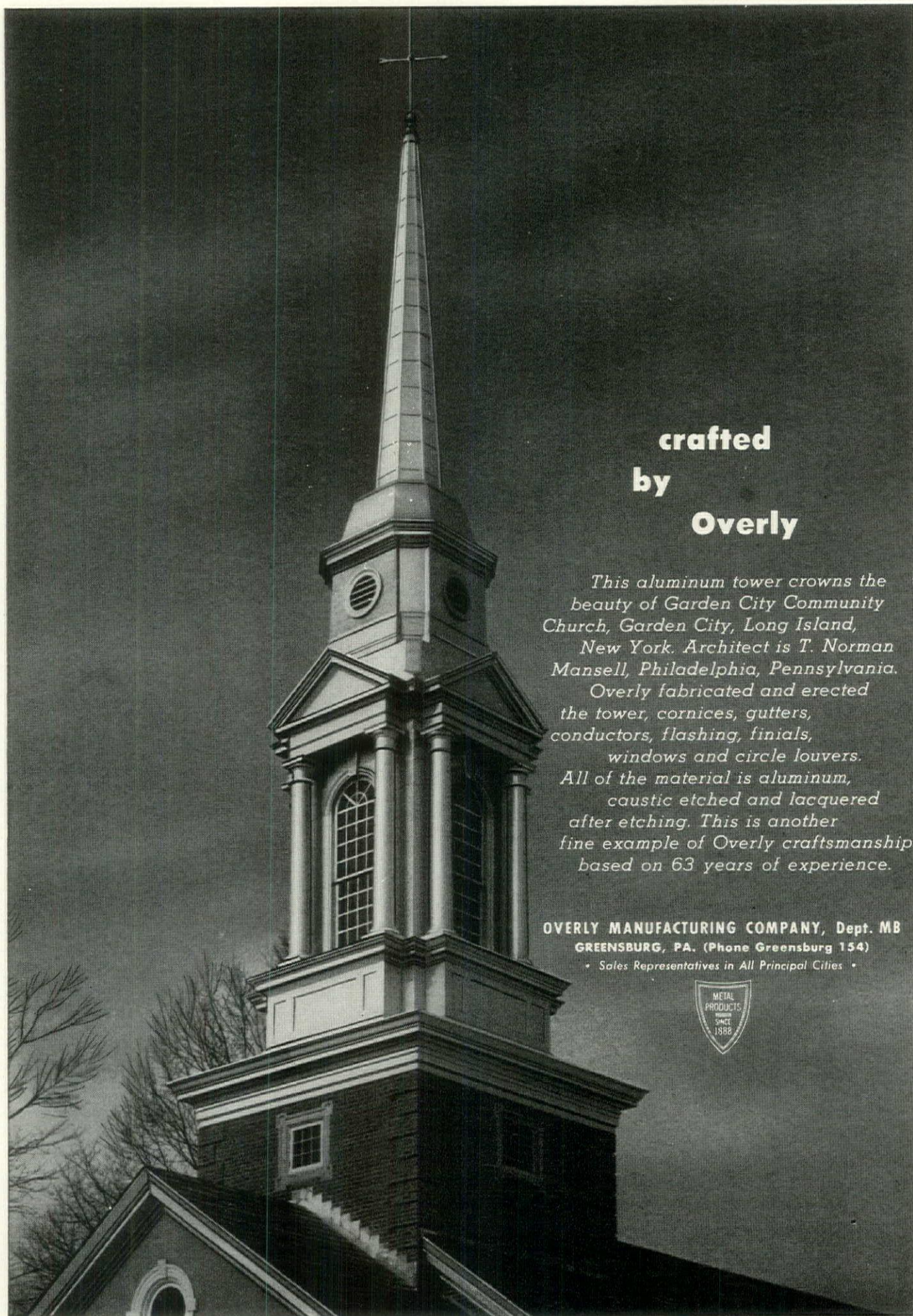


Specifications and details rushed to you on request.

WRITE: BUILDING PRODUCTS DIVISION



1510 GRISWOLD STREET, WARREN, OHIO



**crafted
by
Overly**

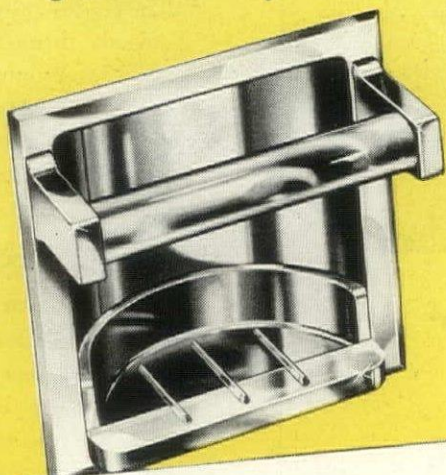
This aluminum tower crowns the beauty of Garden City Community Church, Garden City, Long Island, New York. Architect is T. Norman Mansell, Philadelphia, Pennsylvania.

Overly fabricated and erected the tower, cornices, gutters, conductors, flashing, finials, windows and circle louvers. All of the material is aluminum, caustic etched and lacquered after etching. This is another fine example of Overly craftsmanship based on 63 years of experience.

**OVERLY MANUFACTURING COMPANY, Dept. MB
GREENSBURG, PA. (Phone Greensburg 154)**
• Sales Representatives in All Principal Cities •



Quality that
quietly speaks
for itself
over the years...



HALL-MACK®

*America's finest
bathroom accessories*

Bathroom accessories are important. They are the measure of convenience...the mark of style...in a room designed for years of use. That's why it is important that the accessories you choose have the lasting style and enduring quality of Hall-Mack. Architects, builders, plumbers, tile and hardware men know Hall-Mack quality from long experience. They can show you how...and whatever your budget...a fine line of Hall-Mack accessories is within your reach.

HALL-MACK COMPANY

First in fine bathroom accessories

LOS ANGELES 7 CALIFORNIA

HALL-MACK

ADVERTISED IN

LIFE

here's why...

Architects, builders and suppliers know that lasting quality means lasting satisfaction for their customer—the home owner. That's why Hall-Mack is stressing to home owners, through national advertising in Life magazine, the importance of getting the best in bathroom accessories whatever the price class...and helping you by pre-selling the public on quality bathroom accessories.

When you specify Hall-Mack, you are backed by the quality materials, the fine construction and the modern design which have made Hall-Mack "first in fine bathroom accessories."

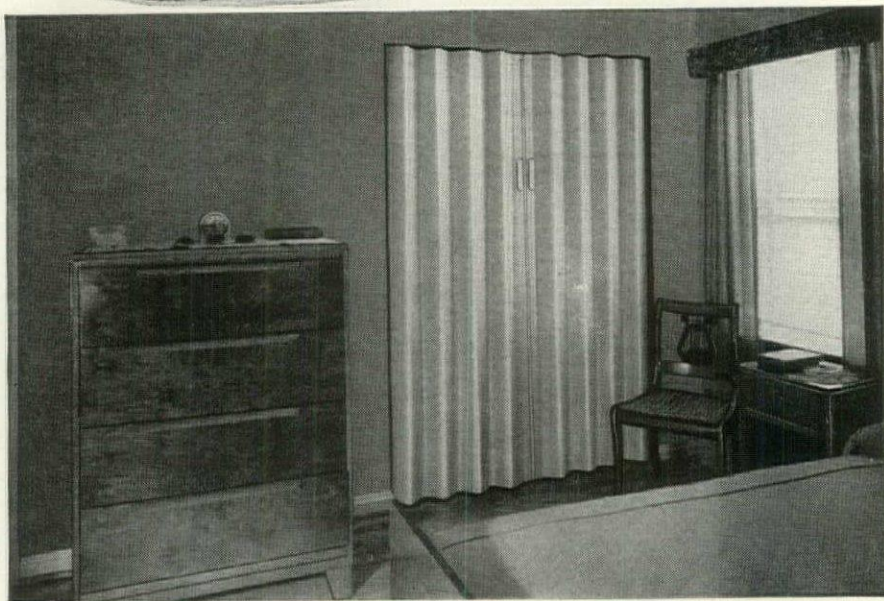
**BATHROOM ACCESSORIES
ARE IMPORTANT...**

Since a bathroom is built for a lifetime of use...make sure you get Hall-Mack's lasting style and quality.

HALL-MACK COMPANY

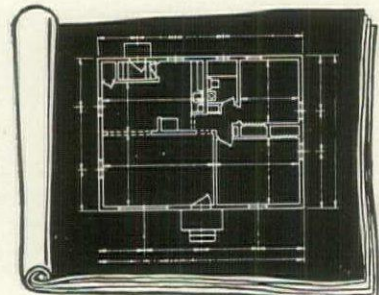
1344 WEST WASHINGTON BOULEVARD, LOS ANGELES 7, CALIFORNIA • 7455 EXCHANGE AVENUE, CHICAGO 49, ILLINOIS

FARRAR and FARRAR
General Contractors, Webster Groves, Mo.



*Found Something Different
To Spark Their Sales!*

"MODERNFOLD" DOORS



Look at the photo and floor plan. Think how much smaller these rooms would have been with old-fashioned swinging doors. It's sound selling logic to specify "Modernfold" doors—just as builders have done since 1936.

Morganford Gardens Project of forty \$12,850.00 homes is located in St. Louis, Mo. Farrar and Farrar, builders; Frank McGuire of Maplewood, Mo., architect; and J. Ben Miller Realty Company, Sales Agent and Finances.

Of course, the saving of valuable floor and wall space was the main factor in Farrar and Farrar's choice of "Modernfold" accordion-type doors for their Morganford Gardens project. However, they soon found other reasons to influence their decision to use these vinyl-covered, steel-framed doors in their next project and in individual homes.

E. A. Farrar says "Modernfold" doors were a powerful factor in selling these homes. Women buyers especially were attracted to this "something different." They were thrilled by the ease of operation . . . the gorgeous color which blended perfectly with the decorative scheme.

"And," says Mr. Farrar, "'Modernfold' doors, with all their sales appeal, cost us no more than conventional doors with frame and trim." No wonder this alert building outfit recommends "Modernfold" doors wholeheartedly—plans to use them in a new project of 103 houses.

For full details on "Modernfold" doors, mail coupon.

NEW CASTLE PRODUCTS
New Castle, Indiana
IN CANADA: Modernfold Doors,
1416 Bishop Street, Montreal



New Castle Products
P. O. Box 802
New Castle, Indiana
Gentlemen:
Please send me full details on "Modernfold" doors.

Name.....
Address.....
City.....County.....State.....

NAHB CONTEST: neighborhood developers will win 'Oscars'

NAHB's fourth annual neighborhood development contest—whose winners get the "Oscars" of the home-building industry—will take a new tack this year. Instead of classifications and graded prizes, judges will make awards of merit to all entries they think deserve it. In projects of one-family homes and garden apartments, NAHB will weight planning and layout 70% and design 30%. For complete community development projects which include several types of dwellings and shopping centers, the site plan will count for 40%, provision for adequate community facilities 30% and design 30%.

The contest, aimed at improving building standards throughout the country, closes Nov. 15. Winners will be exhibited at NAHB's Chicago convention January 20-22. Entry blanks should go to Contest Chairman David D. Bohannon, c/o NAHB, 102 Connecticut Ave., Washington, D. C.

SCHOOL DESIGN contest is set by educator's magazine

Concerned that the billions of dollars being poured into new U. S. schools produce "economical, esthetic and socially useful" results, the magazine *The School Executive* recently uncorked a better school design contest. Eligible: any school built or designed during 1951. Awards: bronze plaques and scrolls. Judges, picked jointly by the AIA committee on competition and the magazine, will be Architect Robert Hutchins, Walter Kilham Jr. and Morris Ketchum Jr. of New York, Ray L. Hamon of the U. S. Office of Education and School Superintendent Ben C. Will of Buffalo. Entries close Dec. 1. Blank forms are available from the sponsor magazine, 470 Fourth Avenue, New York 16.

FACTORY BONDS: Tennessee law lets cities woo new industries

Elizabethton, Tenn., became the first city in the State to bag a big plant under a new Tennessee law which permits cities to issue revenue bonds to finance construction or purchase of factory buildings to be leased to manufacturers. Elizabethton will sell \$4 million in bonds to provide initial financing on a \$7.8 million nylon plant for Textron, Inc. employing 1,000 workers. Rentals will pay the balance, plus principal and interest. The rent: \$1,560,000 a year for five years. But then the company has nine options of five years each to rent plant for \$35,000 a year. Bonds are not backed by the city's tax power. Tennessee's supreme court has upheld legality of the bond issue law.

Lighting matched to the job

LIGHTING CAN'T STOP at minimums

An Ohio school posed this problem: "Provide more than just adequate illumination levels at a reasonable operating and maintenance cost". Minimums were not adequate! The eyesight of second graders was concerned.

Westinghouse lighting produced these results: "Up to 75 foot-candles even on cloudy days". That's well over minimum! What's more, this level is easily maintained.

Everything in the room was considered a working part of the lighting plan. Louver shielding prevents dust and dirt from collecting. Slimline reduces main-

tenance headaches; and there are no starters to replace.

Matching Westinghouse lighting recommendations with your visual requirements is our business. That's why it will pay you to investigate Westinghouse lighting. Send for B-5254, Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30. Pa. J-04288

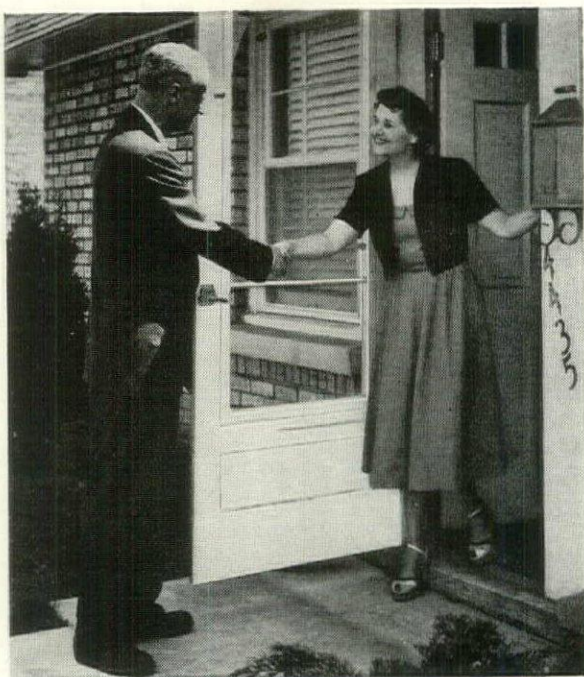


YOU CAN BE SURE... IF IT'S
Westinghouse

LIGHTING DIVISION
Edgewater Park, Cleveland



Sold 156 satisfied



Here's Mr. Abbott being greeted by Mrs. Robinson at the door of her "House of Charm," 4435 Amelia Avenue, Lyons, Illinois.

Mr. Abbott, builder of the "House of Charm" homes in Lyons, wants to get Mrs. Robinson's comments on her General Electric Kitchen-Laundry now that she's had six months to try everything.

Builder Edwin I. Abbott calls on Mrs. David E. Robinson and confirms his belief that the G-E Kitchen-Laundry is an amazing sales-clincher and goodwill builder.



"I feel like a magician with my G-E Dishwasher. In going to wash my bridge-club dishes, and presto... I'm ready to serve dinner with the same dishes. You can see yourself how they sparkle. I can wash pots and pans this way!"



"I just love my General Electric Range—especially the way it broils meat faster and more evenly than the range I had before. It's the cleanest way to cook I've ever found! Doesn't heat my kitchen up, either!"



"Imagine, Mr. Abbott, I can do a washing in the evening and still watch the television shows—thanks to the General Electric Automatic Washer! And, what's more, don't even get my hands wet! See how clean and fluffy towels come out!"

Buyers in one weekend!



I could praise my beautiful General Electric Sink till the cows come home, Mr. Abbott. And my G-E Disposall®. Well, that's *always* been my dream! No mess with garbage. I just wash all food scraps down the drain. The G-E cabinets are a *big* hit with us, too. They fit so snugly!"



"We're proud as peacocks with our giant 2-door General Electric Refrigerator. Even with a lot of entertaining, the freezer holds nearly a 3-months' supply of meats. And, you know, Mr. Abbott, I *never* have to defrost the lower part!"



Honestly, it's a miracle the way my things come out of the General Electric Automatic Dryer—smelling sweet as all outdoors, so soft and so-o smooth! My husband, in fact, tells me I shouldn't even bother to wash shorts!"



"We were really surprised how little our electric bills have been with *all* these G-E Appliances. \$6.00 or so, that's all—just a few pennies more than before! And best of all, the cost of all this de luxe equipment is included in our monthly mortgage payments. Thanks for the bargain, Mr. Abbott!"

"I feel that including a complete G-E Kitchen-Laundry in our 'House of Charm' homes was the clincher that helped us close 156 contracts in one weekend. A woman is *really* sold when she sees G-E Appliances. They have immediate acceptance with the buying public."



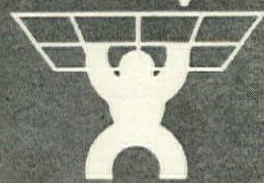
You can put your confidence in—

GENERAL  ELECTRIC

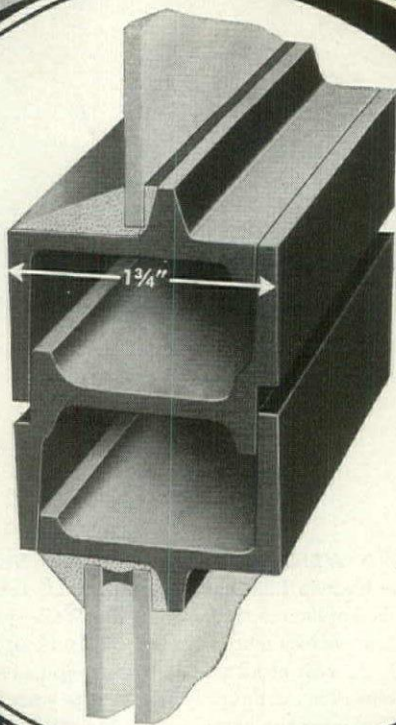
THE **BIG** DIFFERENCE IN STEEL SASH:

33% MORE STRENGTH!

Mesker
STEEL WINDOWS ... KNOWN FOR THEIR
Strength



*Today's
most versatile
walls!*



THE MORTGAGE CRISIS

rs:
Congratulations on your effort to interest various trusts in investing in mortgage loans (see Round Table report, Aug. '51, p. 121). I hope at you are successful.

Mortgage loans make a wonderful investment in these various trusts, and these trusts would be rendering a great service to the U. S. in building country of homeowners. . . .

We are not in the mortgage loan business and look at the situation from the trusts' standpoint and from the mortgage bankers' standpoint with an unbiased view. . . . It would be a great step forward to see the large trusts and the mortgage bankers get together. . . .

CARLOSS MORRIS, *President*
Stewart Title Guaranty Co., Inc.
Houston, Tex.

rs:
I was very much interested . . . business in general and our company in particular are appreciative of any sound program to keep home building on a healthy financial basis through good times and bad. . . .

D. D. COUCH, *Vice President*
American Radiator & Standard Sanitary Corp.
Pittsburgh, Va.

rs:
I have read the Round Table report with interest. . . .

CHARLES E. WILSON, *Director*
Office of Defense Mobilization
Washington, D. C.

rs:
Very informative and excellent reading.

LYNDON B. JOHNSON
United States Senate
Committee on Armed Services
Washington, D. C.

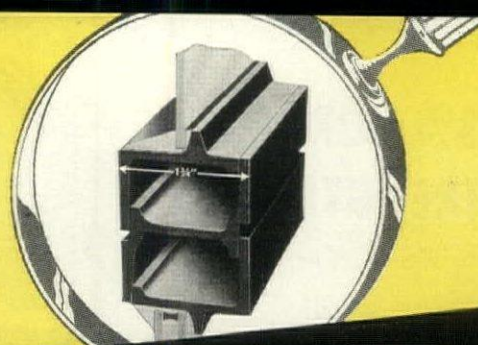
rs:
We have been exploring the possibilities pension funds in this area becoming outlets for FHA mortgages. In a preliminary discussion with the Trust Department of one large bank, we found that FHA's had been considered in connection with a recently set up pension fund, but were rejected because they figured the handling cost was too great in face of their fee which apparently they had figured on a somewhat closer than average margin. . . .

I think they may have overlooked an angle or two which may enable them to use FHA's in pension funds. . . . A good servicer and servicing contract with adequate monthly remittance forms would simplify the procedure of handling FHA's to the point where the cost would compare very favorably with other types of investment, especially if at the outset the assumption is correct that the mortgage yield would be somewhat greater. . . .

D. D. SCHROEDER
Insured Mortgages
Minneapolis, Minn.

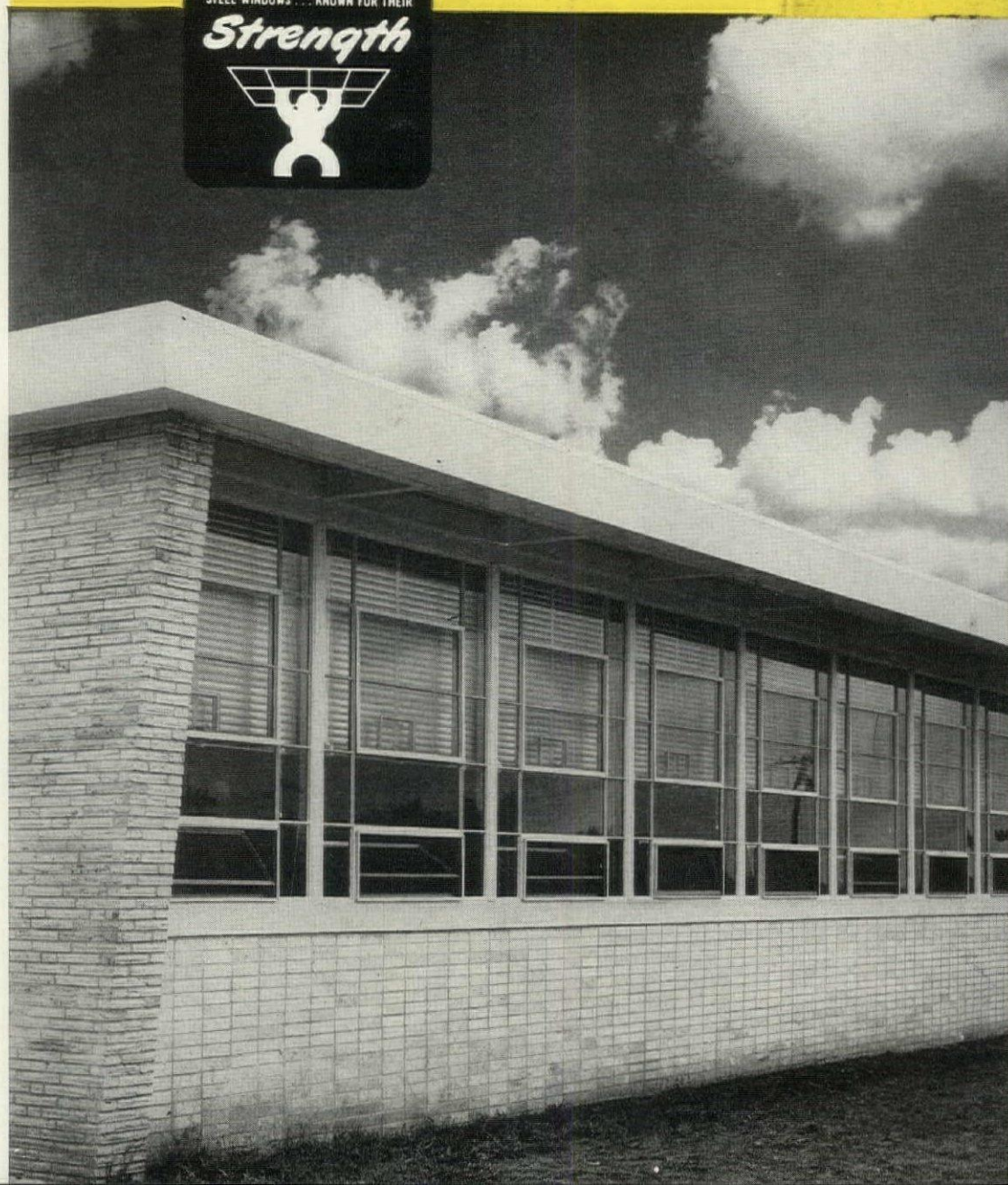
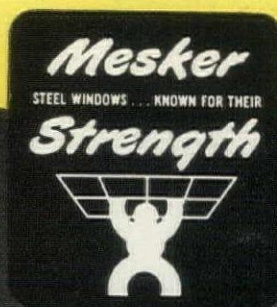
(Continued on page 84)

33% MORE
STRENGTH

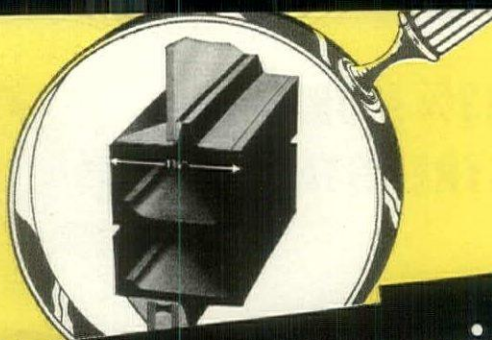


...greater DESIGN freedom

The big difference is Mesker's 33% stronger section, an important extra you'll appreciate. Busy architects everywhere put this extra strength to work for bigger window areas, simplified design. For truly versatile walls, walls that let in floods of daylight, allow maximum natural air circulation, are an asset to low-cost construction in any type architecture, look to the strongest of strong steel windows . . . Mesker Steel Sash.

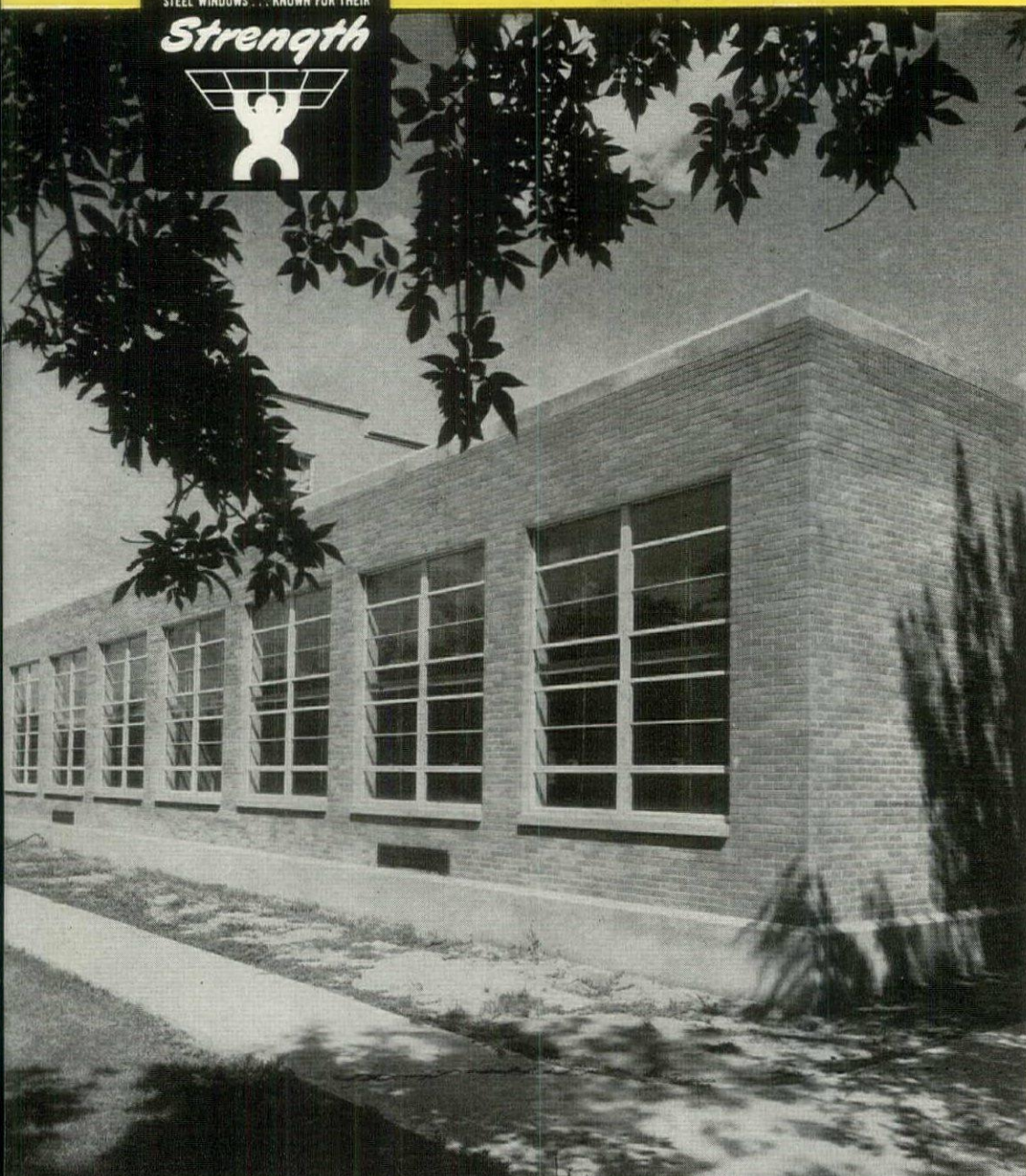
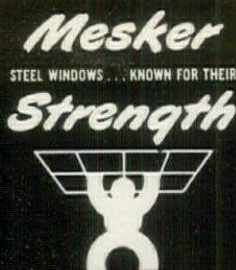


**33% MORE
STRENGTH**



... "hurricane engineering"

Why fight the strength problems, the details and figuring imposed by the use of weaker materials, or for that matter, even by the use of weaker steel windows? In steel windows, as in steel beams, a deeper cross-section means greater strength. Mesker Steel Sash have the deepest sections. Save yourself grief and worry. For the biggest walls of windows, for the ones that must take the most punishment by the elements, put your confidence in Mesker Engineering and the strongest windows made.



LETTERS

Sirs:

In 1950 the extreme and uneconomic measures taken by the government to stimulate home building resulted in an excessive amount of building which exhausted the guaranteed mortgage market and created such a demand for labor and materials that considerable inflation in costs ensued.

This year by going to the other extreme with Regulation X, lowered appraisals, withdrawal of support to the bond market, withholding Fannie Mae funds and various impractical control measures, the volume of residential building is being dangerously reduced.

Under present conditions the volume of private residential construction in the near future will be so low generally and so critically inadequate in some defense areas that public housers, rent controllers and theoretical bright boys in administrative offices will again be pushing their particular impractical solutions to the problem.

W. KEUSDER

*Davis, Keusder & Brown, General Contractors
Los Angeles, Calif.*

Sirs:

... When I read the Round Table reports on the Mortgage Crisis in your recent issues, I was impressed by the willingness of the various groups to discuss their problems. I feel that this type of meeting can do much to help solve the problems created by our changing economy. I have approached the problem of providing more mortgages for mortgages that I think will interest you.

In my work as a life insurance salesman, purely from an individual standpoint, I have on occasion to study the use of mortgages in financing homes and how life insurance could be used to protect the unpaid balance. The surprise development of my study is that I now believe that the practice of creating a reserve in an insurance contract while there is an unpaid balance on a mortgage is not a correct course. While it is mandatory that a mortgagor take or continue a policy with a cash value, it is often recommended by the agent and the company, or it is his or her let us say uninformed, inclination.

I also looked into the other financial transactions of many small home mortgagors and found that it is a common practice to borrow money from several sources at comparatively high interest rates, such as automobile finance companies, small loan companies, retail charge accounts, etc., and at the same time to save money with several accounts at a low rate of interest such as savings accounts, ordinary and industrial insurance, postal savings, E-Bonds, etc. It seems to me that the very number of institutions competing for business places such a burden on the economy that it would be well to regulate competition in an orderly fashion.

My conclusion is that a man should curtail his indebtedness before investing money at a low rate of interest than that carried by the indebtedness, and that each borrower should not have to pay more than the lowest rate of interest on his total assets justify.

My suggestion for achieving the above is to

ch individual limit his financial transactions to
e account. I believe that this could be done
encouraging local institutions to make full
e of the open-end mortgage, and developing a
ay of transferring excess savings to areas in
ed of funds.

I consider that the protection of the purchasing
wer of savings should be a function of the gov-
ernment, but that if the government does not do
is then I think a responsible group of people
ould try to do this acting independently. The
ajor effort of the U.S. for a good many years
s gone into defense or related fields and many
our financial institutions have been supported
government sponsored credit. It is my thought
at many routine financial jobs, particularly re-
el credit, and collections of all kinds, could be
ndled by banks, and that these workers could
channeled into productive work.

It is my belief that encouraging the liquidation
an indebtedness before making other invest-
ments would go a long way toward controlling
flation. Assuming that each person should set
ide a percentage of his current income for
uture spending—if this amount is applied to his
ortgage the amortization would take only a
ort period as compared with investing in sev-
eral accounts.

I think that the present practice of requiring
man to spend such a large part of his income
hidden interest charges is actually cutting
own on the consumption of goods and the ex-
change of labor to such an extent that many
ople are not able to purchase and enjoy the
provements of recent years, and that many are
such a state of insecurity that they are
coming accustomed to government help. This
uld be changed if every effort is made to en-
ourage production and consumption.

The faster amortization of existing and future
ortgages will provide more funds for future
ortgages and this will mean increased building.
A real increase in the rate of home building
ll do more to raise the standard of living than
y other single factor, especially if every effort
made to increase the quality and perhaps the
quare footage. I believe that our economy is
sed on the exchange of labor and production,
d that home building affords the best oppor-
nity to increase employment. I think that here
an opportunity for a selling job on the part of
e entire building industry and the finance
ople. At the same time production in other
lds would be encouraged; in the processing of
w materials, and the long-range development
our natural resources, particularly the forest.

PINCKNEY S. FOOSHE
Norfolk, Va.

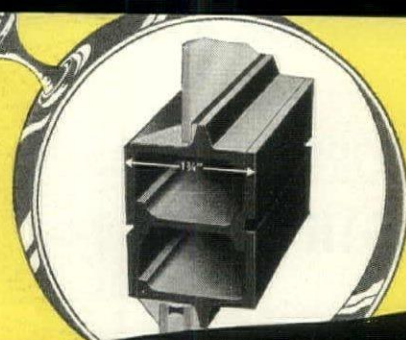
NEITHER WELSH NOR RABBIT

rs:

...I am a subscriber, an unfortunate one who
mitted himself for three years, and has to
it out until the expiration of the subscription.
THE MAGAZINE OF BUILDING is so full of ad-

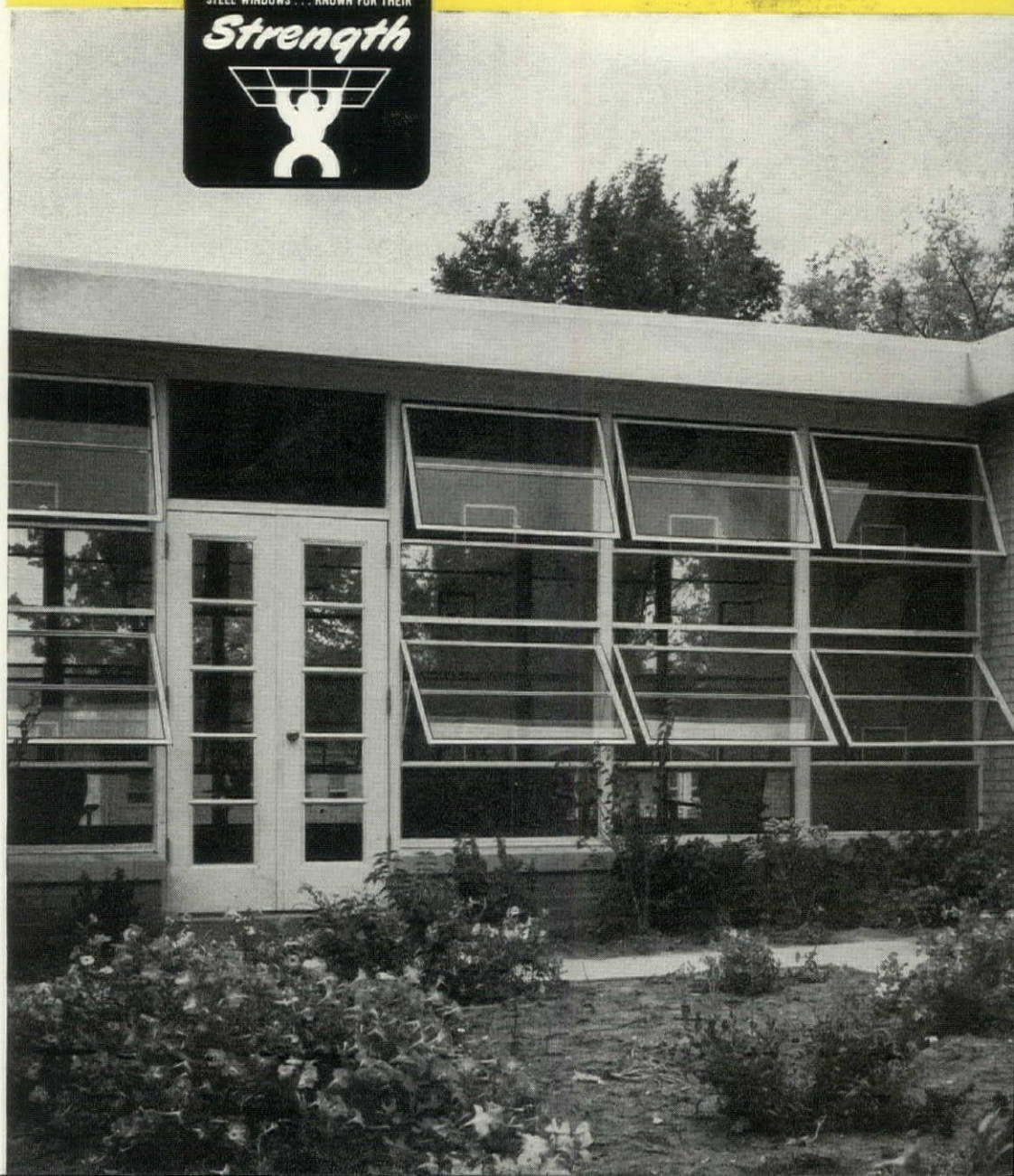
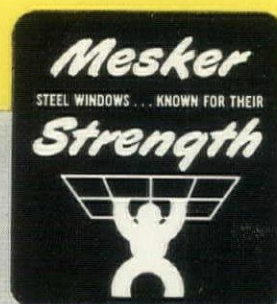
(Continued on page 36)

**33% MORE
STRENGTH**



...solid construction

It's just not in vogue nowadays to pile up a wall.
Agreed, they're permanent... also slow and expensive.
It's far better, on the other hand, to hang a wall of
Mesker Steel Sash. Finished completely, it costs about
a third that of an average 13" masonry wall. Their
greater strength (the strongest made, remember) means
Mesker Steel Sash stand the gaff of rough
handling, eliminate special site storing, leave you with less
"adjusting" to do and make owner call-backs negligible.

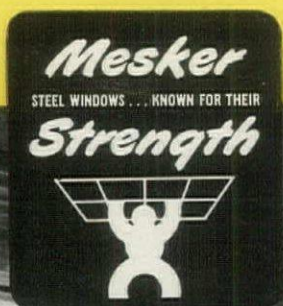


**33% MORE
STRENGTH**



...lasting owner satisfaction

Many of today's building investors will be happy years from now because today they're buying Mesker Steel Sash. As owners, they recognize the importance of Mesker's $\frac{1}{2}$ inch more strength that stands up better to rough treatment and the elements. There's more service too in Mesker's heavy bronze hardware, the famous Cup Pivot and slides and hinges, assuring satisfaction now or decades from now. Remember, steel won't burn, maintenance is practically negligible, and initial cost competes with any other window.



LETTERS

vertisements that I am not interested in reading it. I haven't the time to pore through a whole forest of advertisements in order to find one that contains information.

Moreover, the whole approach of the magazine has shifted so much . . . that I no longer care what THE MAGAZINE OF BUILDING says. It stands today as a cross between a trade magazine for home builders and an advertising outlet for surplus funds of materials' companies in these days of high taxes when they have no better way to dispose of their money. Undoubtedly the magazine is today a whopper of a financial success but the test of a magazine in the long run is whether it can hold its readers' interest.

I am one reader who is no longer interested in the old ARCHITECTURAL FORUM is now neither architectural nor a forum. It is what one once said of the welsh rabbit—it is neither welsh nor rabbit, but just a piece of cheese.

CHARLES ABRAMS
New York, N. Y.

•To Reader Abrams: refund of the full price of a three-year subscription, no charge for the copies he has not been reading.—Ed.

THE FINEST TRADITION

Sirs:

Many of us were greatly concerned that when the ARCHITECTURAL FORUM became THE MAGAZINE OF BUILDING we would lose an architectural magazine—particularly because the profession is so dependent, much more than it sometime realizes, upon the architectural press. It is, therefore, particularly gratifying to see your article on *American Barn* (Aug. '51). Not only does it indicate THE MAGAZINE OF BUILDING's connection with architecture, but it also underlines a most important point.

As we break from the eclectic pattern of the first half of this century, it becomes very important that we apply constant criticism and evaluation to the work we are doing. This criticism in turn dependent upon historical analysis. Our analysis of the immediate past has often been sadly lacking. Your article on *The American Barn* is in the finest tradition of the professional responsibility of the architectural (or must I say "building") press.

ALEXANDER S. COCHRAN, *Architect*
Baltimore, Md.

CRYSTAL BALL

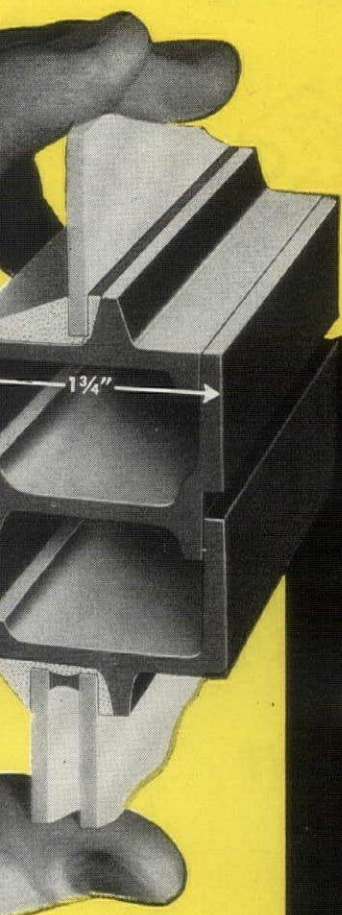
Sirs:

How very callous and foolish it is for the "Crystal Ball" prognosticator (June '51, p. 1) to say that 'those architects who merely reproduce ideas of the pioneers will be nothing but a bunch of polishers.' Some will but certainly not all. How many great works have come from 'reproduction and refinement!' There are only a few original ideas but these may be original with many men before they learn that the same thing has been done by others.

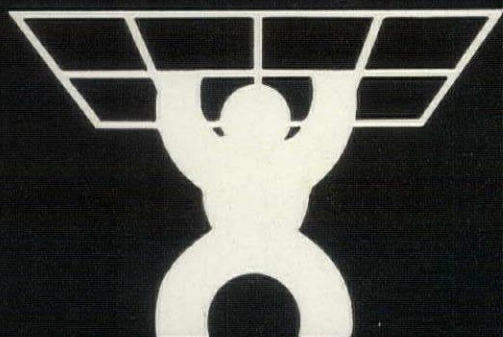
ROBERT C. DUNN
Kittanning, Pa.

(Continued on page 92)

Everybody's answer to **STRONGER WINDOWS**



Mesker
STEEL WINDOWS . . . KNOWN FOR THEIR
Strength



GET THE WINDOW WITH THE **BIG** DIFFERENCE!

If you are building for investment, or are in the building industry, depend on Mesker Steel Sash, with their bonus of 33% more strength.

They combine greater latitude for advanced design and sound construction, plus all the assets of rapid installation and longer years of service.

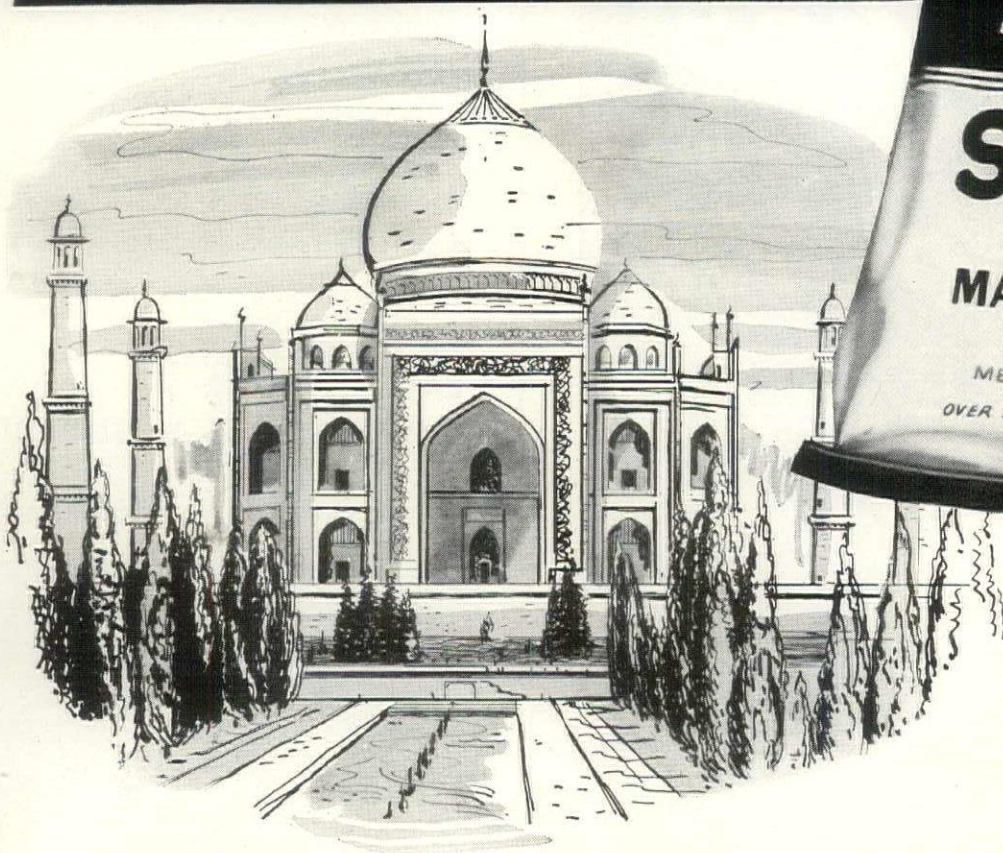
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fit for the walls of a Taj Mahal



Over 20,000 men labored 22 years to build the Taj Mahal in India, a building conceived primarily in white marble inlaid with mosaics of precious stones and said to be the most beautiful building in the world.

If the Taj Mahal, the loveliest of all world buildings, were being built today, the builders could not find a more perfect cement for setting the marble than Medusa StoneSet, white, non-staining masonry cement. In the 21 years since this amazing cement was introduced to the American architect and builder, it has found a place in setting, pargeting and pointing the most beautiful natural stone, marble, face brick, and glass block constructions in America.

StoneSet is non-staining. That means it is free from

soluble alkalis that cause stains from weeping joints or staining of the mortar itself due to impurities. Besides, it is the best of all mortar cements when tinted mortar is required. StoneSet complies with Federal Specifications SS-C-181-b Type II. It has minimum shrinkage, produces uniform color in all joints and is used for back-up masonry. Ready to use when delivered on the job—no admixture other than sand is required. These features plus its economy make StoneSet the world's finest mortar cement. If you have a really fine job, be sure to specify Medusa StoneSet.

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BETTER with*



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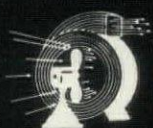
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In Electric Exhaust Ventilators **THIS ISN'T ALL** ➔

...The Blade's the thing!

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HAS THIS BLADE EXCLUSIVELY!



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Only Blo-Fan Model 210 has this NINE-position control switch that makes it as easy to control the rate of ventilation as it is to regulate the thermostat on a kitchen range.



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Blo-Fan installs over the point of air pollution—in the ceiling or any wall (inside or outside). Requires only 3½ inches behind plaster; uses standard 3¼" x 10" furnace duct.



Simplicity

Blo-Fan is easier to clean—no tools are ever required—NOT EVEN A SCREW DRIVER. All you do is unscrew the large center cap and remove the grille and motor assembly.



Experience

For over 25 years Pryne and Company has made home owners happy by manufacturing superior electric ventilators especially designed for home use in the kitchen, bath, game room and laundry.

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Stocked by more than 650 wholesalers in over 350 cities
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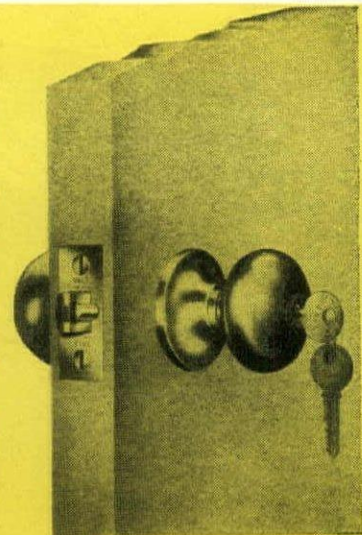
AMERICA'S *Number 1* BUILDINGS U

THE NEW FOSGATE CITRUS



YALE Compact Door Closer—Series 90, is doing an important and outstanding job in the Fosgate plant, working easily, quietly and surely on doors that *must* be kept closed. It's a Class A investment—quickly installed, inexpensively maintained, extra durable.

YALE Locksets: Available with locking and keying arrangements for any kind of door or security requirement. With plain or dead-locking bolt. Require very small mortise. Easy door thickness adjustment. Shown: door lock with key outside, push-button inside.



TOWERING SKYSCRAPERS, sprawling factories, giant housing developments, ultra-modern food plants...In these great new buildings—where the accent is on all-out efficiency—the choice, time after time, is YALE hardware.

It's new hardware in every detail, but the engineering experience that earns the specification is generations old. And *this* is what makes Yale hardware *do* more for any building...give it greater security, brighten its appearance,

cut the cost of hardware maintenance and replacement.

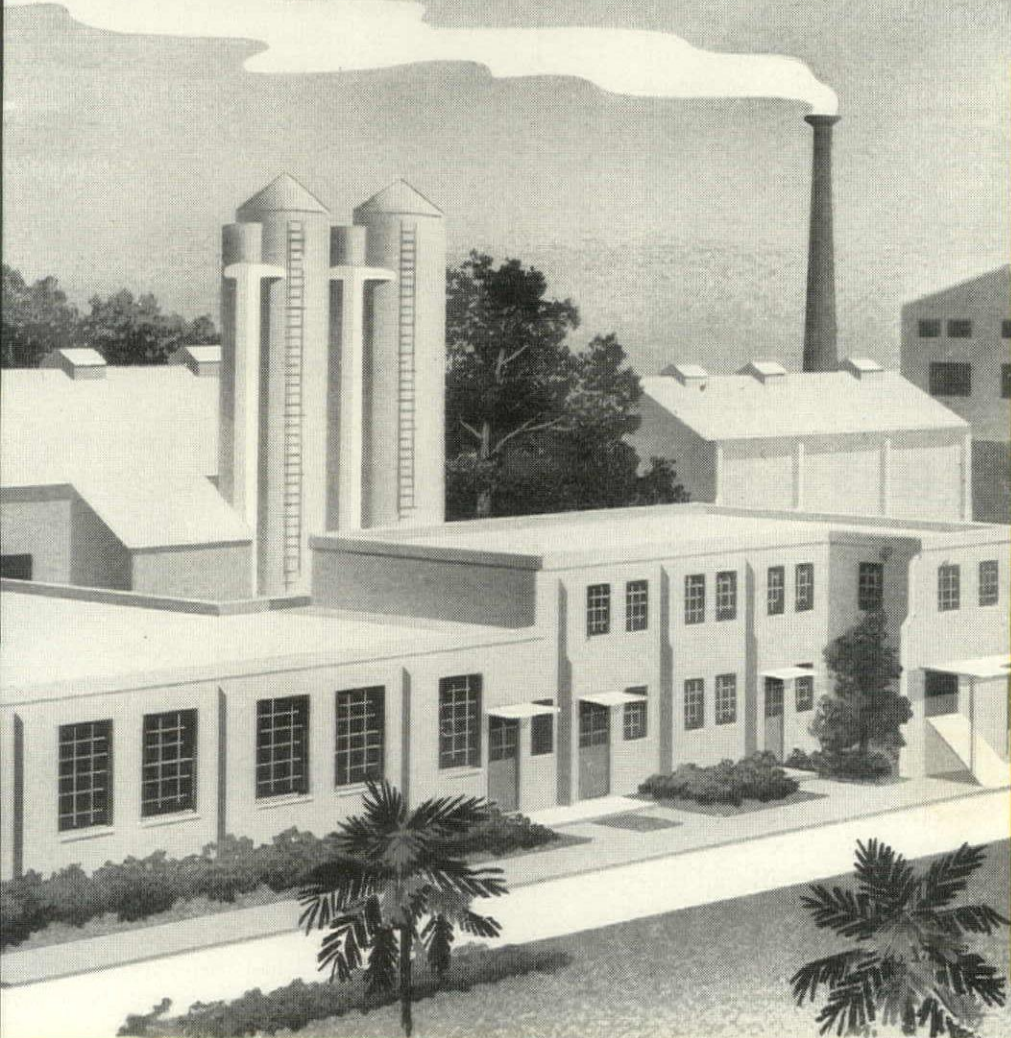
Easy to see why the long-time trend to Yale hardware is greater than ever today. And it's most likely that the job you have on the board now will be a better job for following this trend.

Let your Yale hardware distributor or consultant tell you exactly why. The Yale & Towne Manufacturing Co., Dept. S-610, Stamford, Conn. (In Canada: St. Catharines, Ont.)

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What's the best way to house a really efficient fruit processing operation?

When the Fosgate Citrus Cooperative of Orlando, Fla. built this huge, nine-building plant they took advantage of every lesson that could be learned from experiment, research and experience in older plants.

As a result, every detail of this impressive new plant is carefully planned, integrated, *right!* That's why Yale door closers are used to maintain the precise temperature and atmosphere conditions, required for fruit storing, processing, canning, freezing... why Yale tubular locksets are used to maintain the finest security and clean appearance.

...

Architect: Mr. Raymond C. Stevens, Orlando, Fla.

General Contractors: Stevens & Sipple, Orlando, Fla.

Hardware Supplier: Harry P. Leu, Inc., Orlando, Fla.

Vice President, Fosgate Coop: Claude C. Mershon.

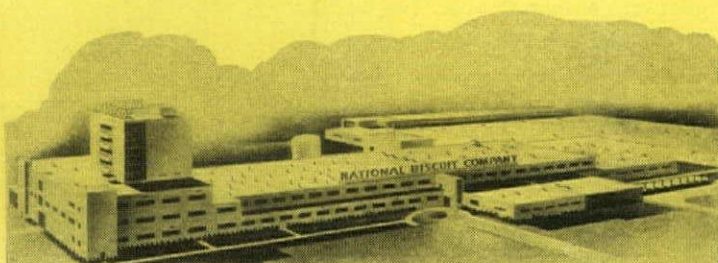
Prod'n Mgr. Fosgate Coop: J. M. Fiske, Forest City, Fla.

CHRYSLER BUILDING EAST

Like the famous Chrysler Building (in background) where YALE hardware has been in use for 21 years — this new addition, Chrysler East will be equipped throughout with YALE.



THE NATIONAL BISCUIT COMPANY



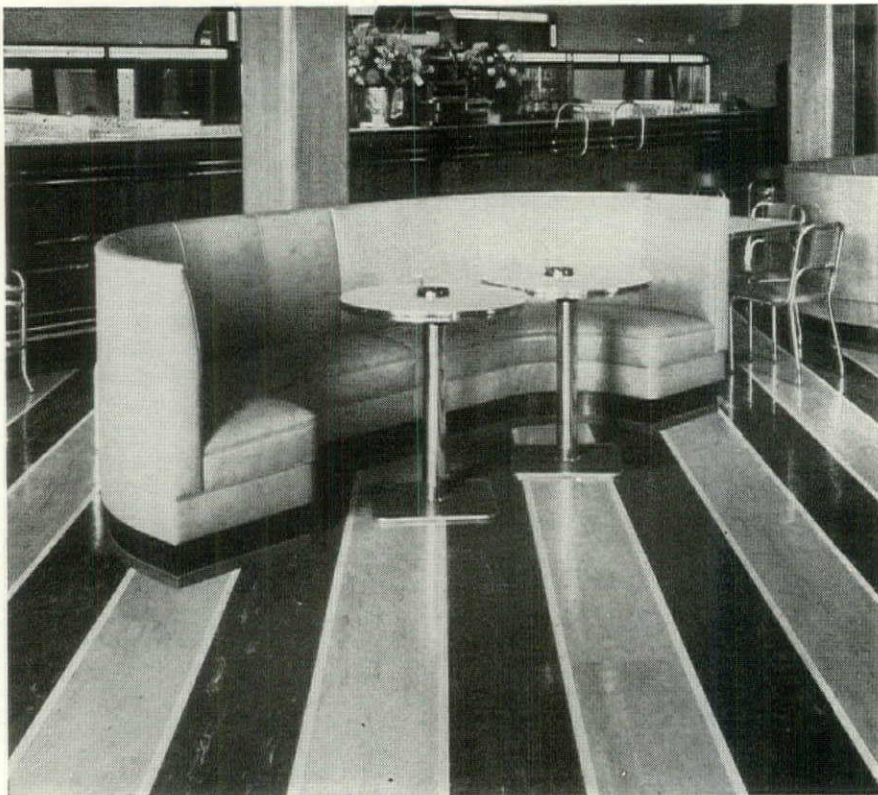
Here in this giant new 10-acre plant, at Portland, Oregon as in *three* other Nabisco plants, YALE hardware is the choice for beauty, day-in-and-day-out efficiency and lower maintenance.

THE FARM MUTUAL BUILDING



YALE hardware is the choice here in Columbus, Ohio. In this solid city block of impressive architecture there'll be greater security at lower cost for years to come.

DON'T GAMBLE WITH YOUR CLIENT'S MONEY



Specify **WRIGHT RUBBER TILE** *and be safe!*

Remember — when you gamble with cheap or untried floors you gamble with your client's money and your reputation.

You don't gamble when you specify floors of Wright Rubber Tile — because there's thirty years' proof behind every claim we make.

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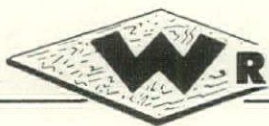
When you specify Wright, you get everything you want in a flooring — beauty, long life, comfort, ease of maintenance, and low annual cost.

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FLOORS OF DISTINCTION

- ♦ WRIGHTEX—Soft Rubber Tile
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LETTERS

Sirs:

I have read with great interest your article "The Crystal Ball" (June '51) and believe you do in the need of a "radical exploration new structural methods."

To this end everybody agrees in the convenience of cooperation or team-work with structural engineers, but what about the architect himself being acquainted with structural techniques? seems to be a forbidden question.

I am fully aware of the architect's impossibility to master every technical activity of those which integrate that complex thing today called a building, but I think that the intimate knowledge of some of them cannot be dispensed with.

The great architects of the past were thus also great builders. This statement should be a redundancy, but nobody could take it as such.

The architect must regain his lost role of master builder ("Magister operis") and, following the forgotten example of the ancients, become again the real director of the building process.

FELIX CANDELA, *President*
Cubiertas "ala," S. A.
Mexico, D.F.

BUCKY FULLER'S SHELTER

Sirs:

The Navy has initiated a development project with the intent of designing a portable aircraft maintenance shelter.

Considerable interest has been exhibited in the design features of the Buckminster Fuller Geodesic Dome (August issue, p. 144).

Please ask Mr. Fuller to communicate with
E. D. WILLEMS, *Commander, U.S. Navy*
Navy Bureau of Aeronautics
Washington, D. C.

TERTIUS TURTLE'S SHELTER

Sirs:

Your unusually interesting article on Buckminster Fuller's hemispherical dwellings made me dig up a somewhat autobiographical story about a turtle which I wrote for the child last Christmas. I had been experimenting (doodling) with spherical segments for some time previously. The trouble was, and is, that nothing has developed yet; whereas Fuller seems to be already selling his idea! Best of luck to him.

ROBERT HENRI MUTRUX, *Architect*
Wilton, Conn.

• Reader Mutrux' "poetry" (excerpts below) about Tertius the Turtle, the inventive shellback, indeed parallels the story of the inventive Bucky Fuller and his shell-like shelter.—Ed.

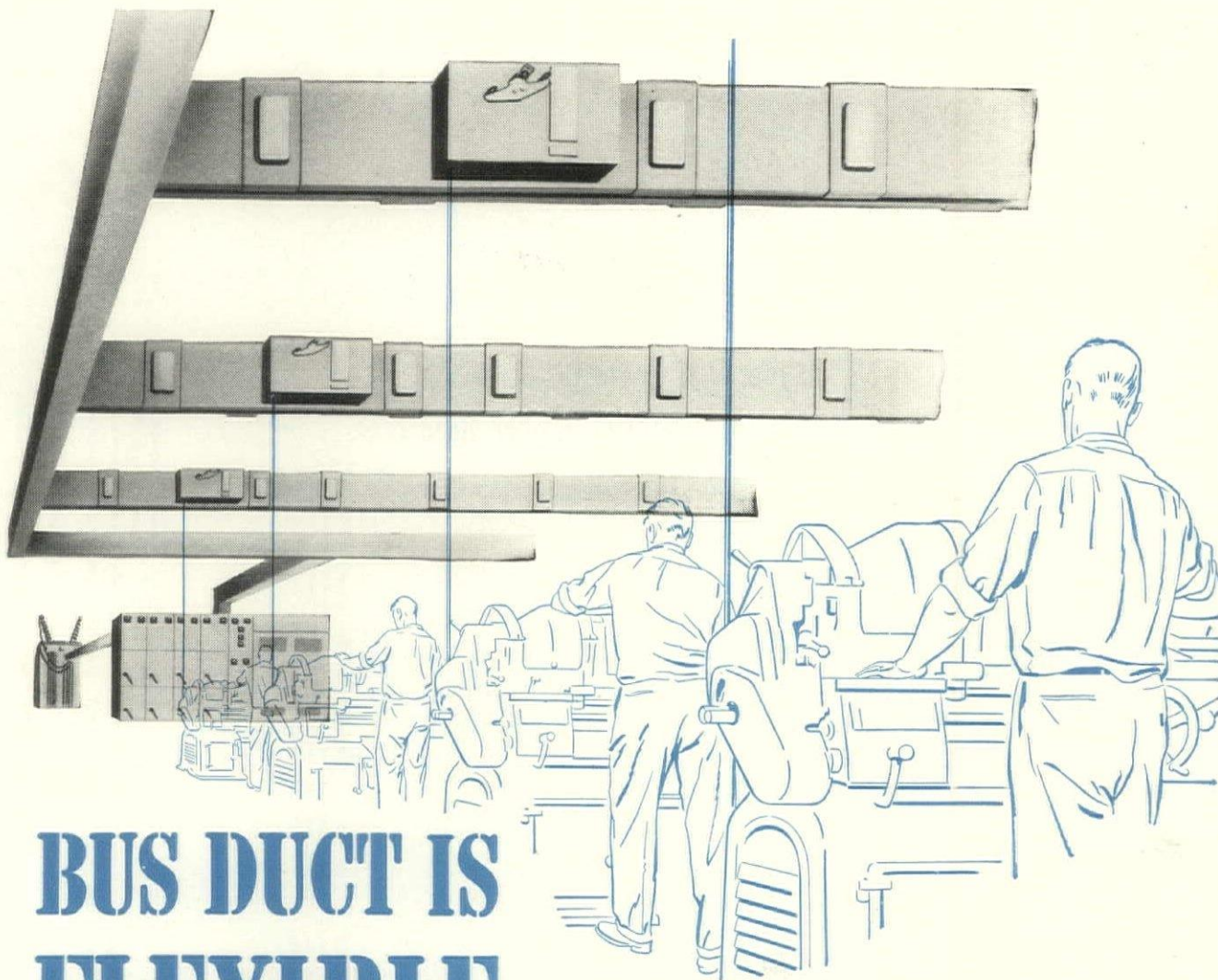
... He was an engineer, a good one too.

Physics, chemistry, math, all these he knew
And in one more way he was different:

There was just nothing he could not invent
... "Oh Tina dear," he said, "What can be done
To house the kids with winter coming on?
We cannot live in caves or—God forbid—

Go underground the way our fathers did!"
"No," Tina said, "We can't do that today;

(Continued on page 96)



BUS DUCT IS FLEXIBLE

from transformers to machines

Westinghouse Bus Duct can help you provide better power distribution and lick rising cost curves three ways:

First, Westinghouse Plug-in Duct distributes power more dependably to points of consumption—handles momentary overloads safely with minimum power loss, without breakdown. Prestite® insulators completely insulate plug-in stabs, eliminate hazards of accidental contact with busbars. Foot for foot Westinghouse Bus Duct delivers more power than same-rated systems of wireway or conduit.

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YOU CAN BE SURE.. IF IT'S
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BUS DUCT



At Chrysler "East"

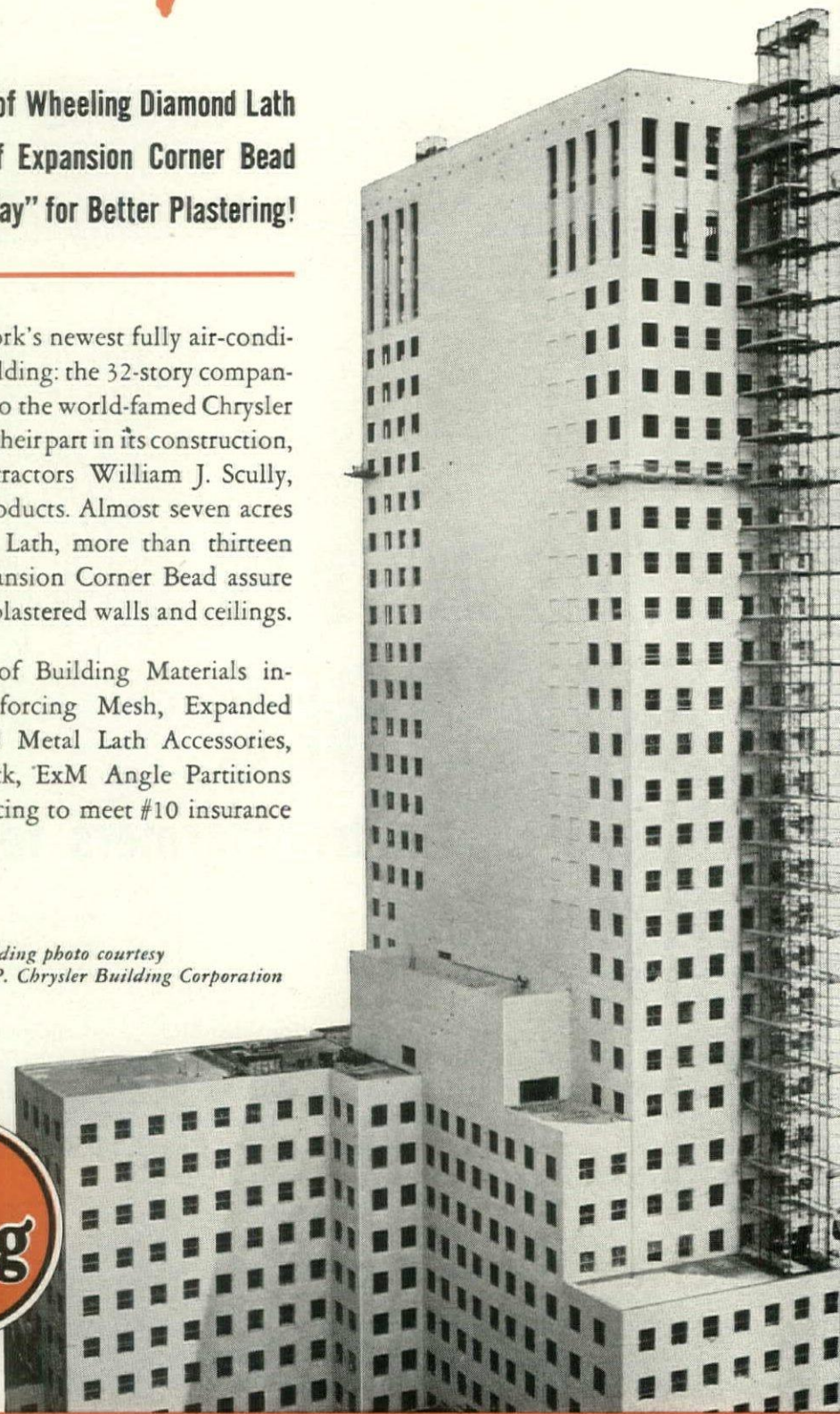


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70,000 ft. of Expansion Corner Bead
"Pave the Way" for Better Plastering!

IT'S New York's newest fully air-conditioned building: the 32-story companion structure to the world-famed Chrysler Building. For their part in its construction, Lathing Contractors William J. Scully, Inc. chose Wheeling products. Almost seven acres of Wheeling Diamond Lath, more than thirteen miles of Wheeling Expansion Corner Bead assure a firm "foundation" for plastered walls and ceilings.

The Wheeling Line of Building Materials includes Steelcrete Reinforcing Mesh, Expanded Metal, Metal Lath and Metal Lath Accessories, Tri-Rib Steel Roof Deck, ExM Angle Partitions and ExM Vault Reinforcing to meet #10 insurance classification.

*Building photo courtesy
W. P. Chrysler Building Corporation*



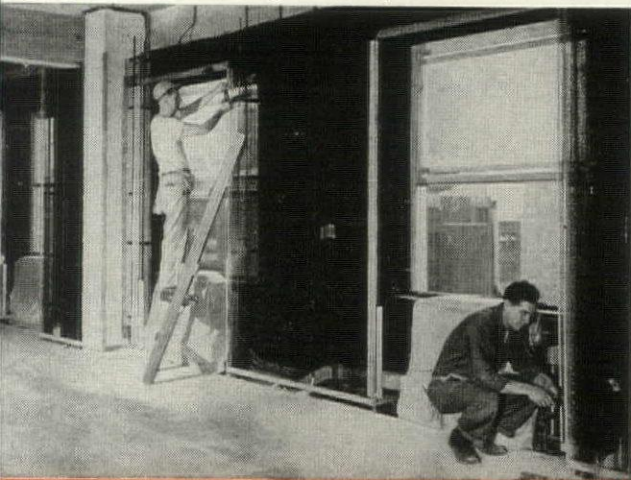
WHEELING CORRUGATING COMPANY • WHEELING, WEST VIRGINIA

ATLANTA BOSTON BUFFALO CHICAGO COLUMBUS DETROIT KANSAS CITY LOUISVILLE MINNEAPOLIS NEW ORLEANS

It's Wheeling Lath!

Wheeling Diamond Lath is sturdy and stiff, lies flat, goes on easy—even overhead.

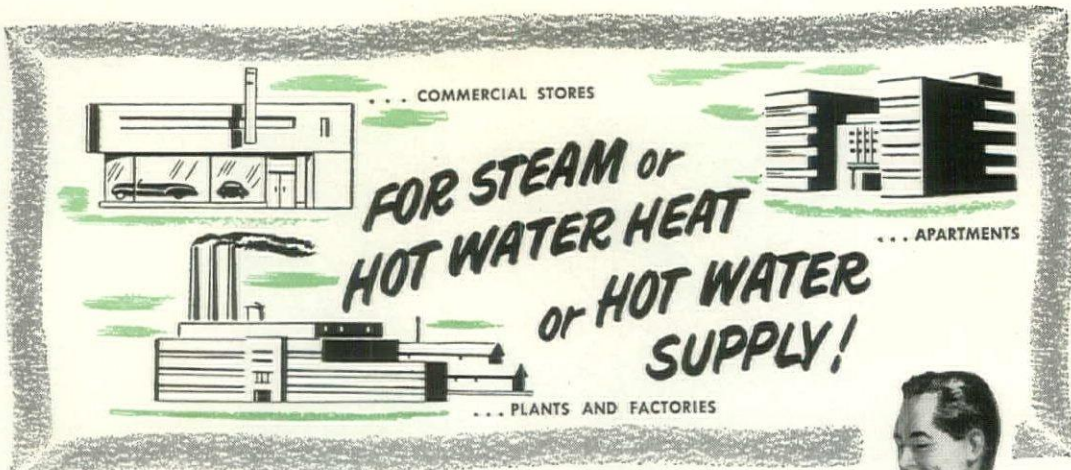
Diamond Lath and Expansion Corner Bead, both Wheeling products, make a good team for lathers to work with.



BUILDING MATERIAL DIVISION

NEW YORK PHILADELPHIA RICHMOND ST. LOUIS

• Here a lather "ties in" a length of Wheeling Expansion Corner Bead—turns the corner on another good lathing job.



Type 20 Gas Boiler —
cast iron, sectional; from
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No matter how you look at it, the Mueller Climatrol line gives you the best answer to your radiant and radiator heating and hot-water supply jobs. Quality construction, compact design, advanced engineering—all 'round boiler "know-how"—make every Mueller job low-cost from first to last:

- ✓ **Initial Costs are Low** — close-to-size capacities give you an economical installation for every job. Factory "assembled" tests make it easy to deliver an efficient installation.
- ✓ **Operating Costs are Low** — meticulous engineering of every part plus top-quality material and construction standards assure years of fuel-thrifty economy with minimum service and maintenance.
- ✓ **Future Expansion Easy** — sectional cast iron construction makes it easy to add capacity for additional loads simply by adding new section-burner units.

And that is just a brief outline of the many low-cost advantages of Mueller Climatrol boilers. Write for complete details
... L. J. Mueller Furnace Company, 2020L W. Oklahoma Avenue, Milwaukee 15, Wisconsin.

8-55

Mueller Climatrol

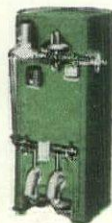
FOR GAS

FOR OIL

FOR COAL

Capacities from 54,000
to 3,780,000 Btu (in-
cluding Type 20 above)

Type 10 Gas Boiler
— for steam or hot
water heating or
hot water supply.
Nine sizes — 54,-
000 to 378,000
Btu input.



Type 11 Gas Boiler
— Same as the
Type 10 shown
above except for
the outer casing
— controls are
exposed.

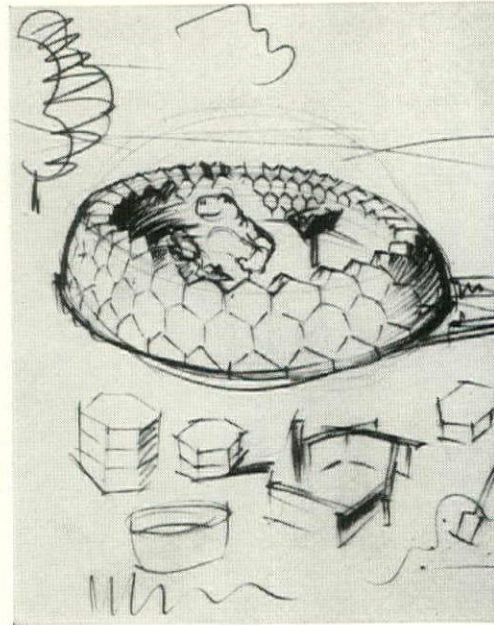
LETTERS

And she went on, "Think nothing of it!
Go sharpen up your pencils and your wit."



Fuller's Shelter

In modern times turtles don't live that way."
... "A plastic bungalow? A nylon tent?
There must be something new I could invent
Collect the flying saucers that I've heard
About—and pile them up? No, that's absurd
A saucer—let me see—a shell? A dome?
A little like the Pantheon in Rome?
A dome's a shelter (even though it's not
Gabled and square)—Ha! Now I think I've got
A scheme that might even bring me some fame
And revolutionize the building game!
... At last I think I'm really on the track
A house designed just like a turtle's back!
I must tell Tina—won't she be surprised
To see the modern house that I've devised!
... These hexagons piled up to form a dome
Need only Tina's touch to make it home!"



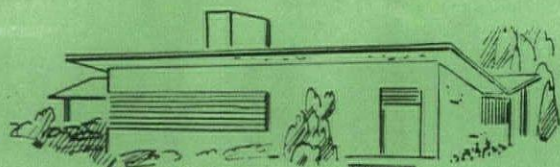
Tertiu's Shell-ter

The news of Tersh's house was so widespread
That even Washington was interested.
Inspector Jones, sent by the Chief of State
Came on a mission to investigate. . .
(Continued on page 100)





NEW YORK



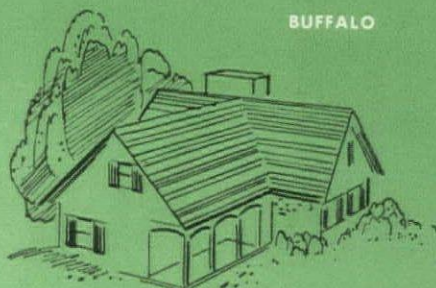
BOSTON



SAN FRANCISCO



BUFFALO

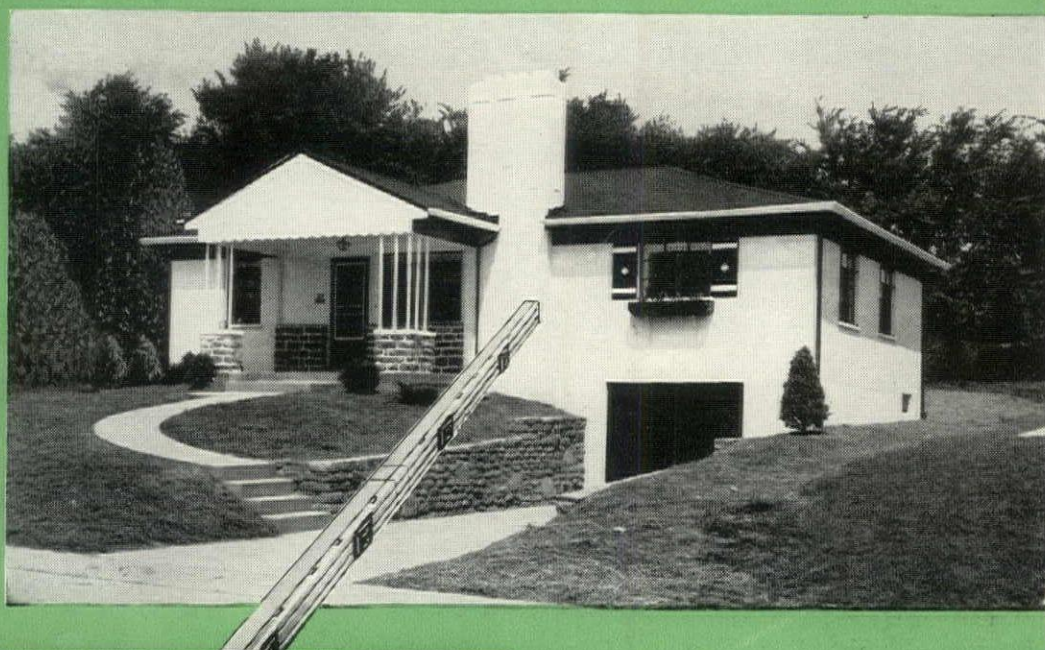


CHICAGO



DALLAS

In a recent wiring test study, Martin Holman & Sons, Cincinnati builders, installed "Plug-In" Strip in this house, providing 125 electrical outlets. In another identical house, 22 ordinary duplex outlets were installed. Yet the "Plug-In" Strip installation cost only 1/5 more and added only 1/3 of 1% to the total construction cost of the house. Needless to say, this builder switched to "Plug-In" Strip . . . and "Plug-In" Strip is now helping him sell his houses over competition.



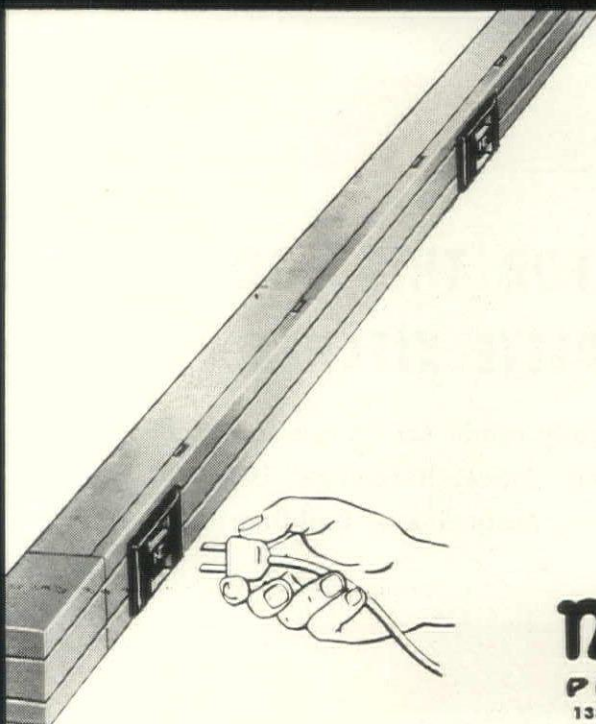
Architects and builders everywhere are specifying "PLUG-IN" STRIP!

Modern homes deserve the ultimate in electrical convenience. That's why architects and builders are including National Electric "Plug-In" Strip in their building plans. "Plug-In" Strip provides a spread of electrical outlets—every 6" or 18"—all around the room. The freedom it allows for furniture arrangement, the outlets it provides for electrical appli-

ances, lighting, radios, TV—give any home *added sales appeal*. Home owners get much more outlet convenience per wiring dollar because "Plug-In" Strip *actually provides outlets cheaper—3 to 1*.

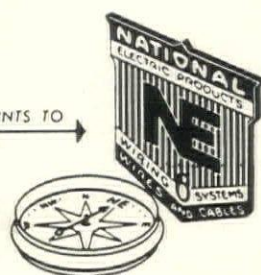
You should be familiar with "Plug-In" Strip and what it can do for you. There are three types of "Plug-In" Strip available: Type CF-2 for constant service; Type CF2-G for grounding equipment; and Type CF-3 for either constant service or automatic switch control. All listed by Underwriters' Laboratories, Inc. Write for our catalog for complete details.

Sold through leading electrical wholesalers.



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National Electric
PRODUCTS CORPORATION
1334 CHAMBER OF COMMERCE BUILDING, PITTSBURGH 19, PA.



The house with a Youngstown

Home buyers' preference **PROVES IT!...**

Put these facts in your House Reference File, and remember them when you plan . . .

The house with a Youngstown Kitchen will stay modern for years to come! Early obsolescence is avoided. Features that will soon be musts in every modern kitchen are here right now in a Youngstown Kitchen.

Home buyers' recognition is 5 to 1 for Youngstown Kitchens over the next-best-known brand of steel kitchen. This recognition has built preference.

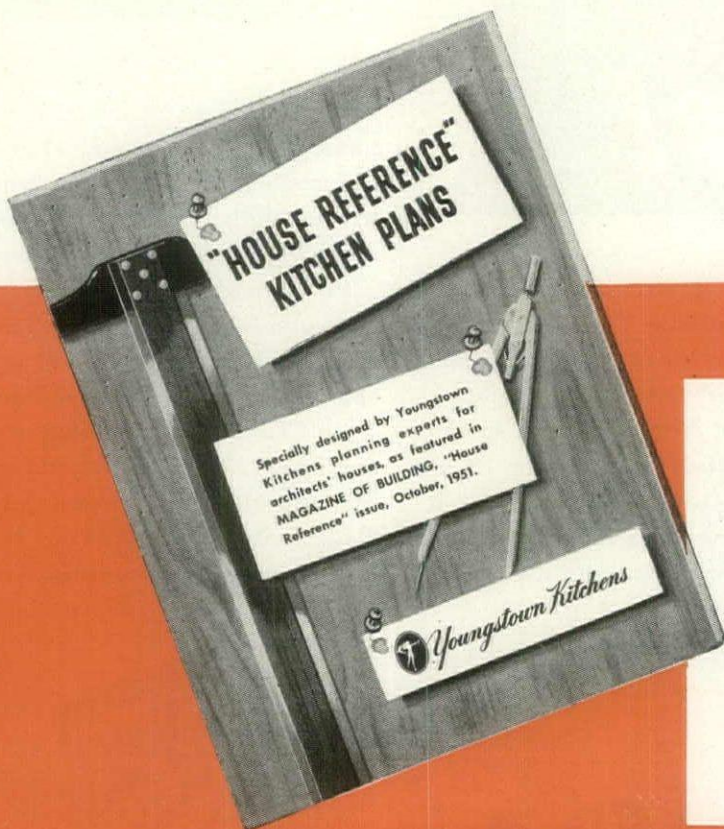
Every house you build or plan can have all the advantages of a complete, sturdy-steel Youngstown Kitchen. Write for the free services of a trained kitchen-planning expert: New Construction Division, Mullins Manufacturing Corporation, Warren, Ohio.



Youngstown Kitchens are easily planned for any house

Whether the kitchen area be large or small, Youngstown Kitchens units can be planned for greatest efficiency and most sales appeal. Installation is easy; delivery is timed to eliminate warehousing.

Every Youngstown Kitchen has complete "custom" appearance, yet units are prefabricated of steel at low cost. Many builders have discovered after installation that a Youngstown Kitchen costs less than any other.

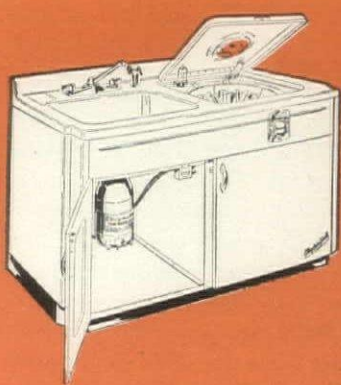


SEND FOR THIS BOOKLET OF COMPLETE KITCHEN PLANS

specially made for houses featured in
this "House Reference" issue of
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Kitchen is worth more!...

-Tower Dishwashing gives a terrific appeal



After survey has proved the housewife's most hated task dishwashing! And now Youngstown Kitchens has disclosed the secret that frees her (and her husband, too) from this task.

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Get a Youngstown Kitchens Jet-Tower Dishwasher or Electric Dishwasher in every home, and take full advantage of this promise to you that here is automatic dishwashing that does a better job than man, woman, or other machine... and does it faster, too! Get Youngstown Kitchens Jet-Tower Dishwashing, and you are of client or buyer satisfaction. This fact has been proven from coast to coast.



Youngstown Kitchens

Best ideas in kitchen planning have been incorporated by kitchen-planning experts into many of the featured in this issue of *Magazine of Building*. Use this coupon now for your free copy.

Youngstown Kitchens planning experts will assist you in any home you are building or planning. Simply check the box on the coupon; or write, phone New Construction Division, Mullins Manufacturing Corporation, Warren, Ohio.

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Youngstown Kitchens Food Waste Disposer is easily installed in any Youngstown Kitchens Cabinet Sink or Electric Sink and most other modern sinks.

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- **Longer life:** Two sets of shredder edges alternate; shredder life is virtually doubled.

New Construction Division, Youngstown Kitchens
Mullins Manufacturing Corporation
Warren, Ohio

Please send free copy of "House Reference Kitchen Plans."

Please also have a trained kitchen-planning expert contact us. ☐

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LETTERS

The inspector said, "This new type of abode
Doesn't quite seem to meet the building code
It's too unsafe, unsightly and unsound;
I'm much afraid you'll have to tear it down
...But later Tersh received a telegram.
It said, "The Government has a plan
To build a thousand shell-ters, maybe more
And set them up for veterans of the war."
...Finally Tersh became a millionaire,
And he and Tina traveled everywhere.
But they're not making shell-ters any more,
Just tiny little turtles by the score. . . .

BLAST OF COLD AIR

Sirs:

. . . The Lever Brothers building (June '55 p. 84) is most interesting. It is a very fine design indeed. But something about its economics makes me wonder: the 9' ceiling, the 12' floor to floor. That's 2' for air conditioning: in 20 stories, 40 or four more floors. Quite a price for something only really necessary about two months a year in order to get the customary respiratory disease.

Add to the four missing floors the cost of wall and frame and the air conditioning and the special glass and worst of all the fact that you can avail yourself of God's good carbon monoxide even if you want to, but must have re-used a blown clammily down your neck, I begin to wonder, as I said. Could it be that when mechanization takes command commonsense departs from the land?

HENRY S. CHURCHILL, *Architect*
New York, N. Y.

NEW KIND OF ZONING

Sirs:

A sub-head in the July article "A New Kind of Zoning" by Charles Agle reads "Today's Zoning Tools Are Unrealistic." One of the author's suggestions for increasing the effective size of the yard space of dwellings is the use of 20' wide streets with one- or two-car off-street parking bays. This is as unrealistic as "Today's Zoning Tools." There is no adequate provision for visitors' parking.

A similar situation posing the same problem occurs in the Channel Heights Housing Project in San Pedro, Calif., wherein two-lane cul-de-sacs serve groups of multi-unit structures with no provisions for off-street parking bays of one car per unit. While it may be that some units have visitor parking facilities at hand, these are inadequate for the project as a whole. Consequently rather than park on the winding project thoroughfares, visitors park their automobiles either on the lawns fringing the drives or on the drives themselves; which makes for hazardous driving, especially when children are playing in the area.

While Channel Heights is an aggravated example of the visitor parking problem, the situation nevertheless parallels Mr. Agle's off-street parking bays. In the normal subdivision tract of 50 to 60' lots such parking bays would eat up the available street frontage. One-side parking would be an expedient but not a solution; a

(Continued on page 104)



Trifari Jewels—Showroom—New York City. Satinwood Flexwood.
Architect—Kahn & Jacobs.

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PROBLEM. How to have "style" and "sparkle" in a jewelry showroom—along with a rich, warm, comfortable atmosphere.

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Please send me, without obligation, Flexwood's Case-History Book; shows
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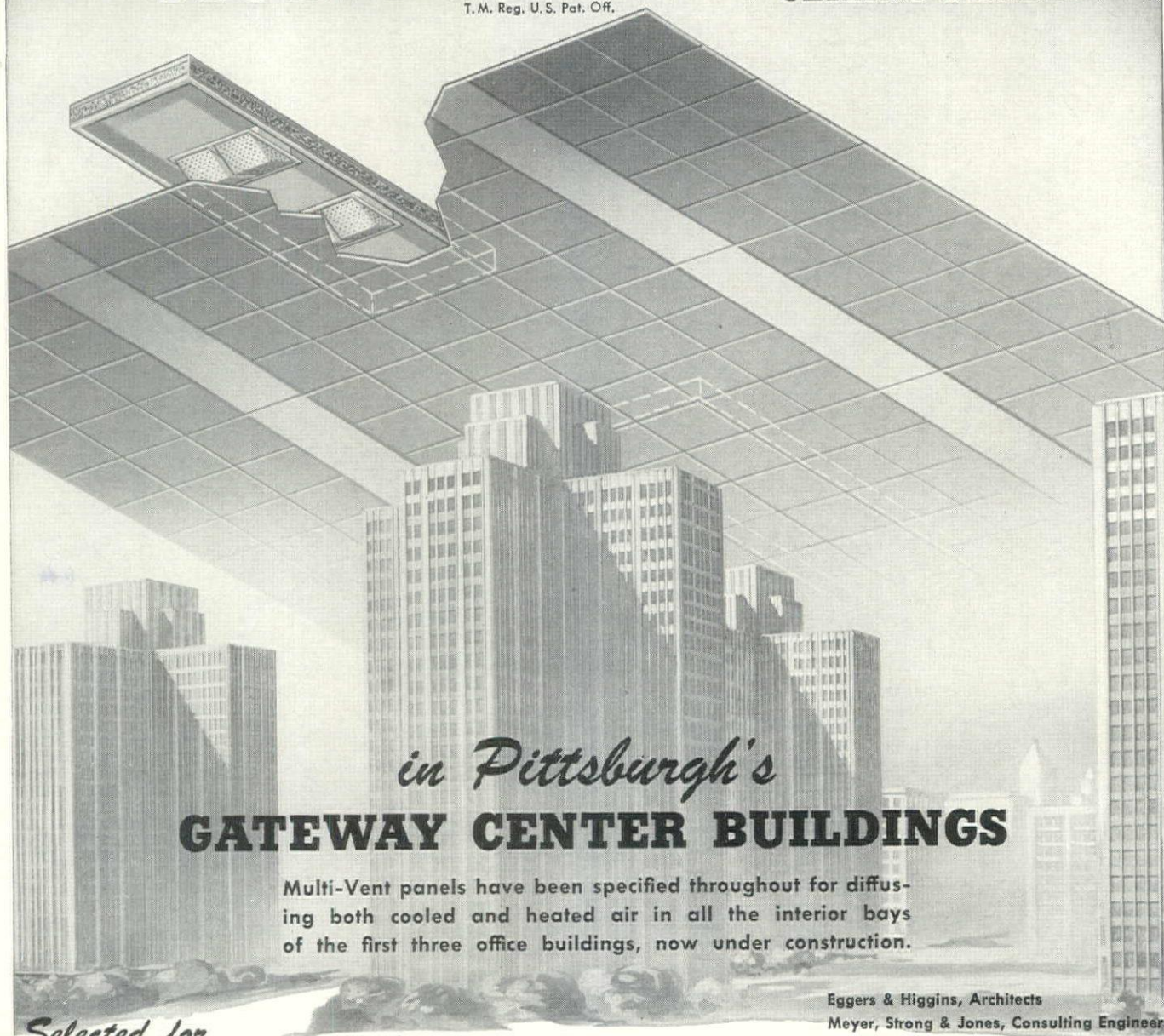
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Dept. MB-101, Pittsburgh 22, Pa.

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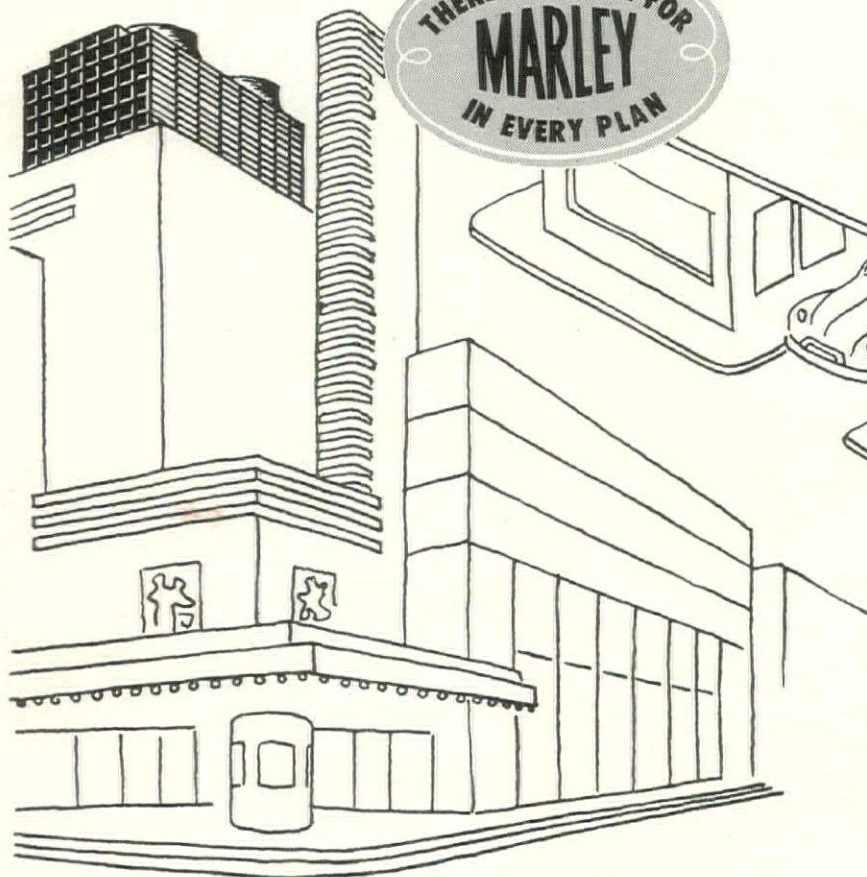
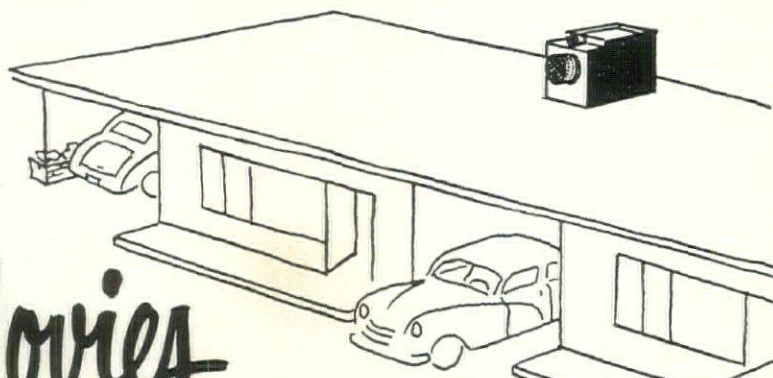


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SPRAY NOZZLES



LETTERS

two parties being held simultaneously in one neighborhood could render the street impassable. Provide adequate parking along a narrow street and the result is a wide street. . . .

BRUCE BUEHLER
Long Beach, Cal.

Sirs:

Regarding your July article, "A New Kind of Zoning," I'll take the "Street of Today" over the "Street of Tomorrow" anytime. It is friendly, straightforward, orderly and efficient. What more do you want?

Undoubtedly low elements such as carpools ought to be allowed to come up to the side lines as Planner Agle suggests, and, without the benefit of planners, homeowners have found better uses for backyards. But—

1. What does Planner Agle do with traffic on his 20' roadway when the laundry man is stopping on one side while the oil truck is delivering to the house across the way?

2. Why use public money to cut the grass on that 80' right-of-way when the private homeowner would both enjoy it more and keep it better if the extra land were his?

3. Look at the tortuous road-surfacing problem created by those "parking bays"!

4. Imagine the extra job of snow-shoveling after the town plow comes by.

5. Note that a person's car can start in one direction from his parking bay—never the same way he came.

6. No auto finish can resist weather without an overhead shelter, especially the gluey stuff that falls from trees.

The implications of Agle's scheme are horrible with the Government in complete control of the street and the individual turning his back on his neighborhood. Better that the individual have the opportunity to develop part of his own lot facing the street and thus both express his individuality and at the same time give vitality to the neighborhood.

ROBERT S. STURGEON
Weston, Mass.

INDUSTRIAL DECENTRALIZATION

Sirs:

Concerning General Electric's small suburban plants (July '51, p. 144)—decentralization of both individual industries and urban centers is inevitable and logical in the face of the atomic warfare and congested traffic conditions. Many examples and reasons for isolating industry against the atom have been presented, but attempts are being made to cope with possible traffic "freezing" of large city areas in time of crisis. A recent visit to the Port of New York Authority assured me they are planning for many eventualities. Stoppage of one or two arteries into any of our large cities would almost stop commerce and industry for that area. Much decentralization must be done for our country's defense.

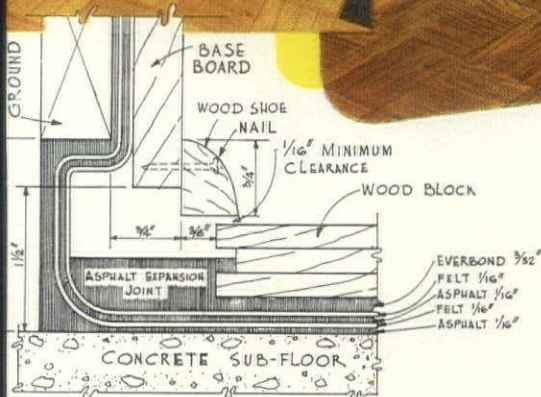
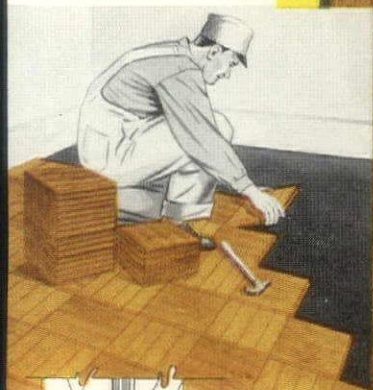
SIDNEY G. WARNER, Designer
New York, N. Y.

(Continued on page 110)

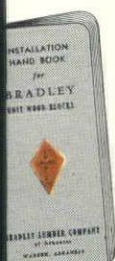
For the Supreme floor Over Concrete Slab...

BRADLEY UNIT WOOD BLOCKS

smartly styled installation of
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6" x 2 1/4", 9" x 9" Prime
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Bradley Blocks are produced in Beech and Pecan, each prefinished or unfinished. Used as wainscoting, they attractively complement block floors in private offices, club lounges, restaurants, etc.

Constant search for cost saving in home construction is accelerating the switch to slab foundations over which Bradley prefinished Unit Wood Blocks provide the supreme finish floor. Bradley blocks excel in the essentials of economy, beauty and public preference for hardwood floors. Specifically—

They are readily laid in asphalt mastic by tested low-cost methods.

They provide a factory finish greatly superior to and less expensive than sanding and finishing on the job.

They are ready for immediate use when laid.

They are of fine quality oak. Its matchless color and figure are accentuated by Bradley's exclusive penetrating finish and the luster of rich, heavy-bodied wax.

They stimulate prospective home-owners' enthusiasm for oak floors over all others with the extra appeal of modern design.

They are equally appropriate to apartments, schools, business and public buildings.

For complete data and specifications, see our catalog in Sweet's Architectural or Builders for 1951. For your copy of our Handbook on Unit Wood Block Installation, just ask us to send it.

BRADLEY



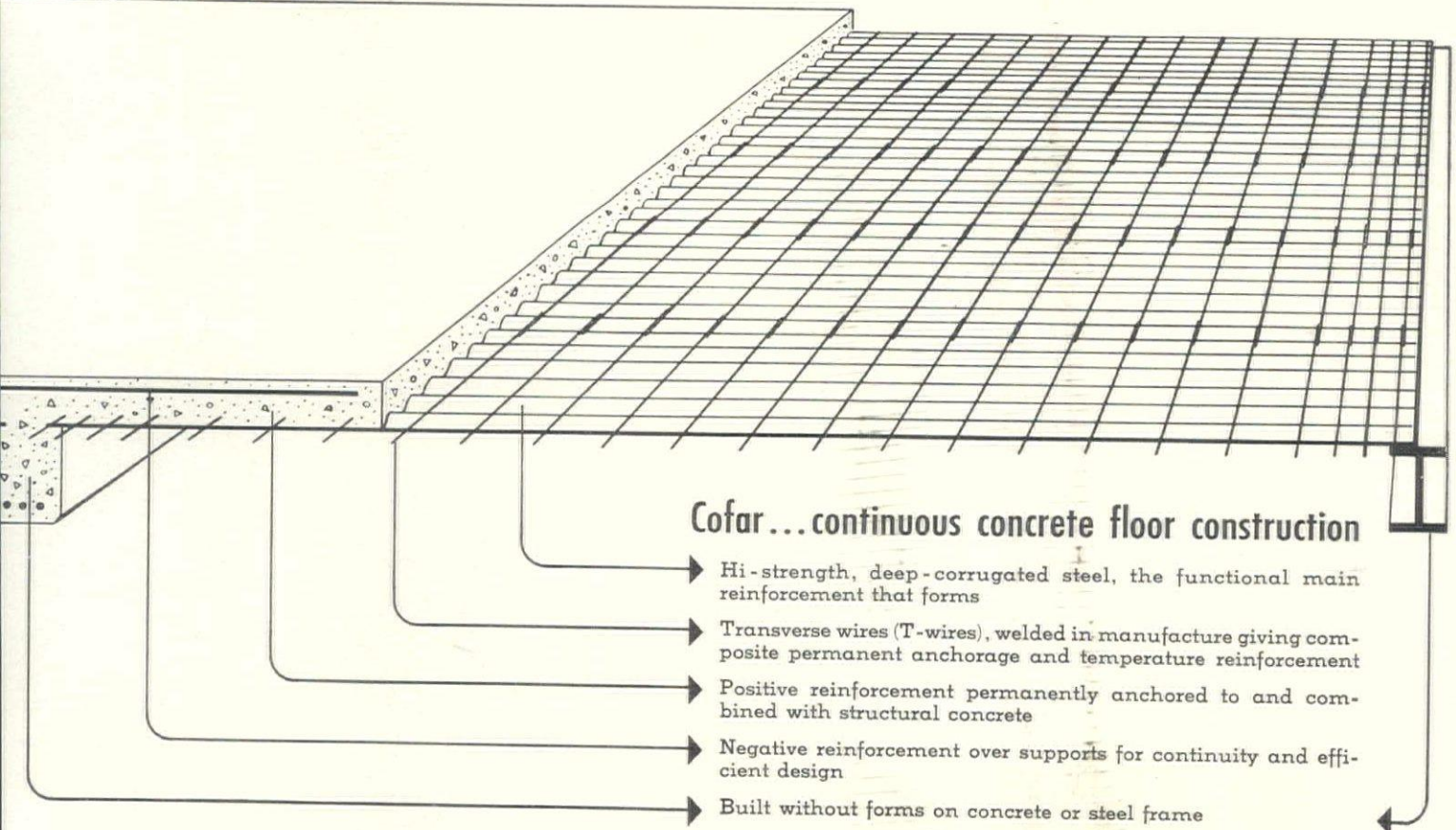
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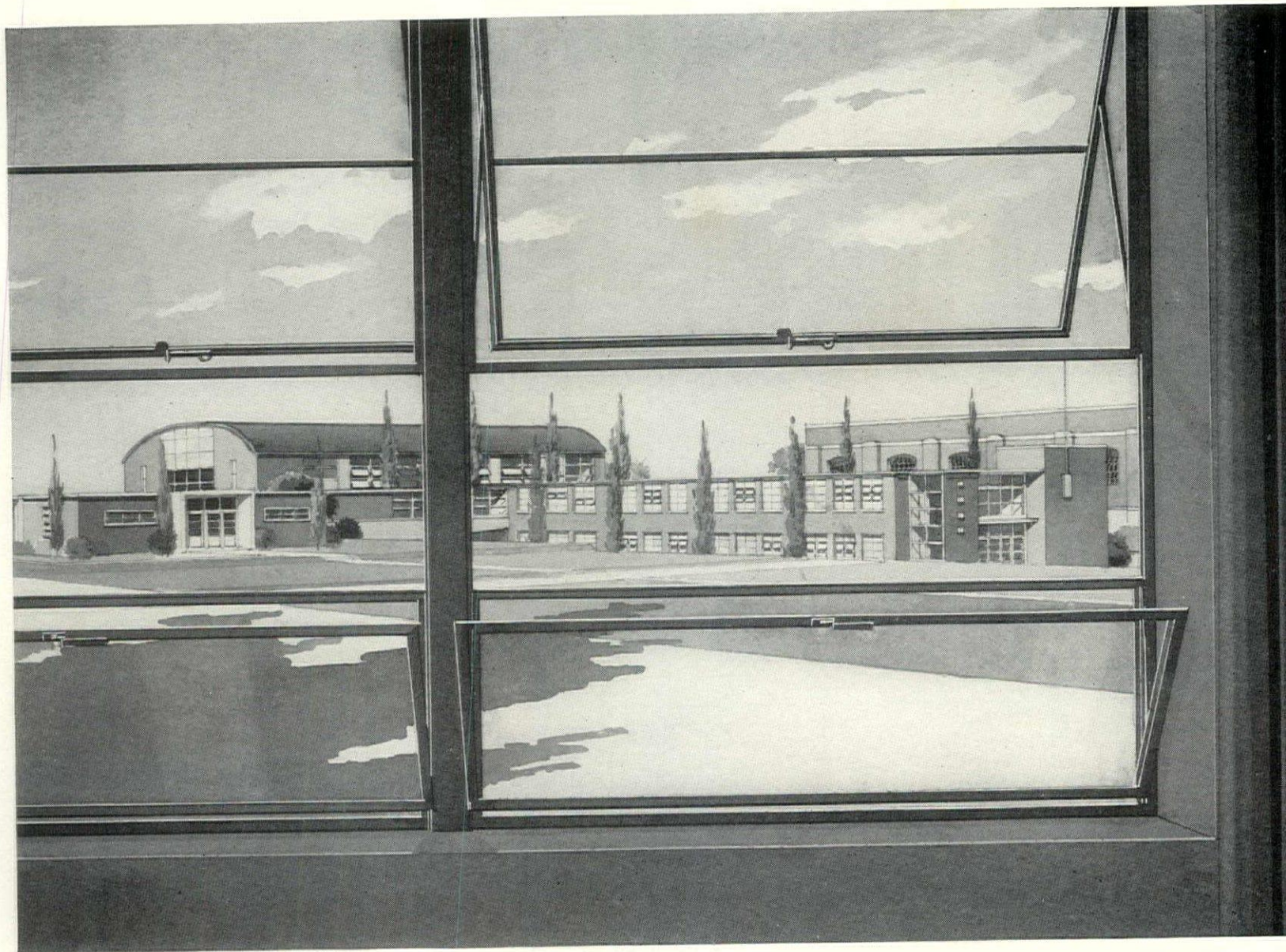
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MacEwen, Hall & Ferguson

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EARL S. SNYDER



HUGH J. BARTLEY

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We're saving approximately \$100 on every house we build—just by using INSULITE BILDRITE SHEATHING instead of wood sheathing. So far this year we've saved well over \$1,000.

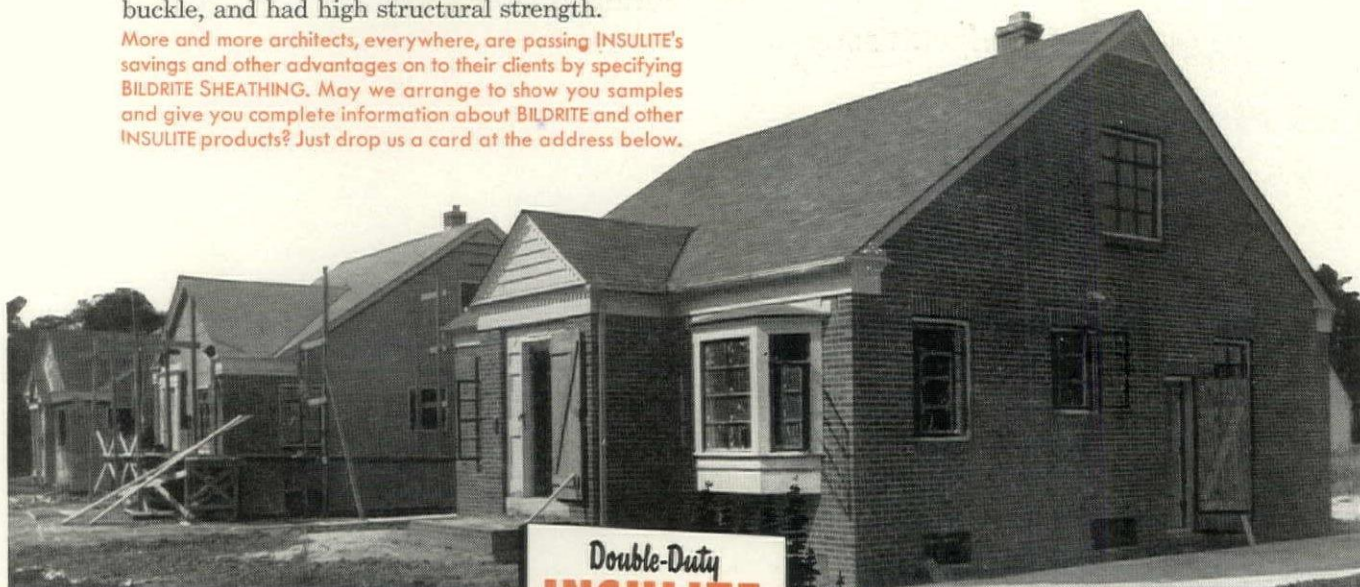
But most important is the fact that BILDRITE gives us the best sheathing, in addition to saving us money. We originally chose BILDRITE because of its outstanding weather-resistance. Continued use proved it was not harmed by long exposure to the weather, did not warp or buckle, and had high structural strength.

More and more architects, everywhere, are passing INSULITE's savings and other advantages on to their clients by specifying BILDRITE SHEATHING. May we arrange to show you samples and give you complete information about BILDRITE and other INSULITE products? Just drop us a card at the address below.

Our carpenters like BILDRITE SHEATHING because it's clean to handle, does not foul up their saws, cuts easily, and applies quickly. Our houses sell easier, too, when we tell our customers how BILDRITE will cut their fuel costs by giving them greater insulation.

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Earl S. Snyder
Hugh J. Bartley
SNYDER-ADLER-BARTLEY
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Rooms closed off for redecoration mean actual loss of income! But Varlar Stainproof Wall Covering is the perfect way to reduce costs like that—cut maintenance costs up to 40%. No skilled cleaning personnel is needed, for Varlar washes easily with just soap and water. In addition, stains that mar ordinary wall surfaces cannot stain Varlar. They wash away like magic, along with grime and soil. Cleaning time is cut to a minimum.

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Varlar, Division of United Wallpaper, Inc.
Merchandise Mart, Chicago 54, Ill. Dept. MB101

Please send me FREE specification sheets and FREE testing sample of Varlar Stainproof Wall Covering.

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LETTERS

Sirs:

... Our company, in a small way, parallels its thinking the decision of General Electric that we operate five steel joist plants and numerous reinforcing steel plants which amount to a decentralization from our Chicago operation.

Our purpose, however, is to get close to market and close to basic sources of steel which allows us to be competitive on tonnage in areas where freight is always an important factor.

R. J. WICKSTROM
District Manager
Ceco Steel Products
Wheeling, W. Va.

Sirs:

... This article shows an important trend which should be considered and will, undoubtedly, affect commercial properties and large business areas. . . .

HUGH E. PETERSEN,
J. W. Petersen Co.
Chicago, Ill.

Sirs:

... Very informative. . . .

Our modern means of transportation make it possible for plants manufacturing various articles or component parts to be in areas which have more suitable . . . labor, more beneficial climatic conditions and the possibility of housing for the workers. . . .

As for housing, I favor the approach set forth by William J. Levitt, in which homes would be built by private capital, loans guaranteed by the Government, and the buildings sold to employees at a low down payment and over a long term of payments, rather than by subsidizing on a rental basis through Federal construction. . . .

L. J. WARD, Chief Engineer
Construction & Engineering
Universal-International Pictures
Universal City, Calif.

GLASS BLOCK AT WORK

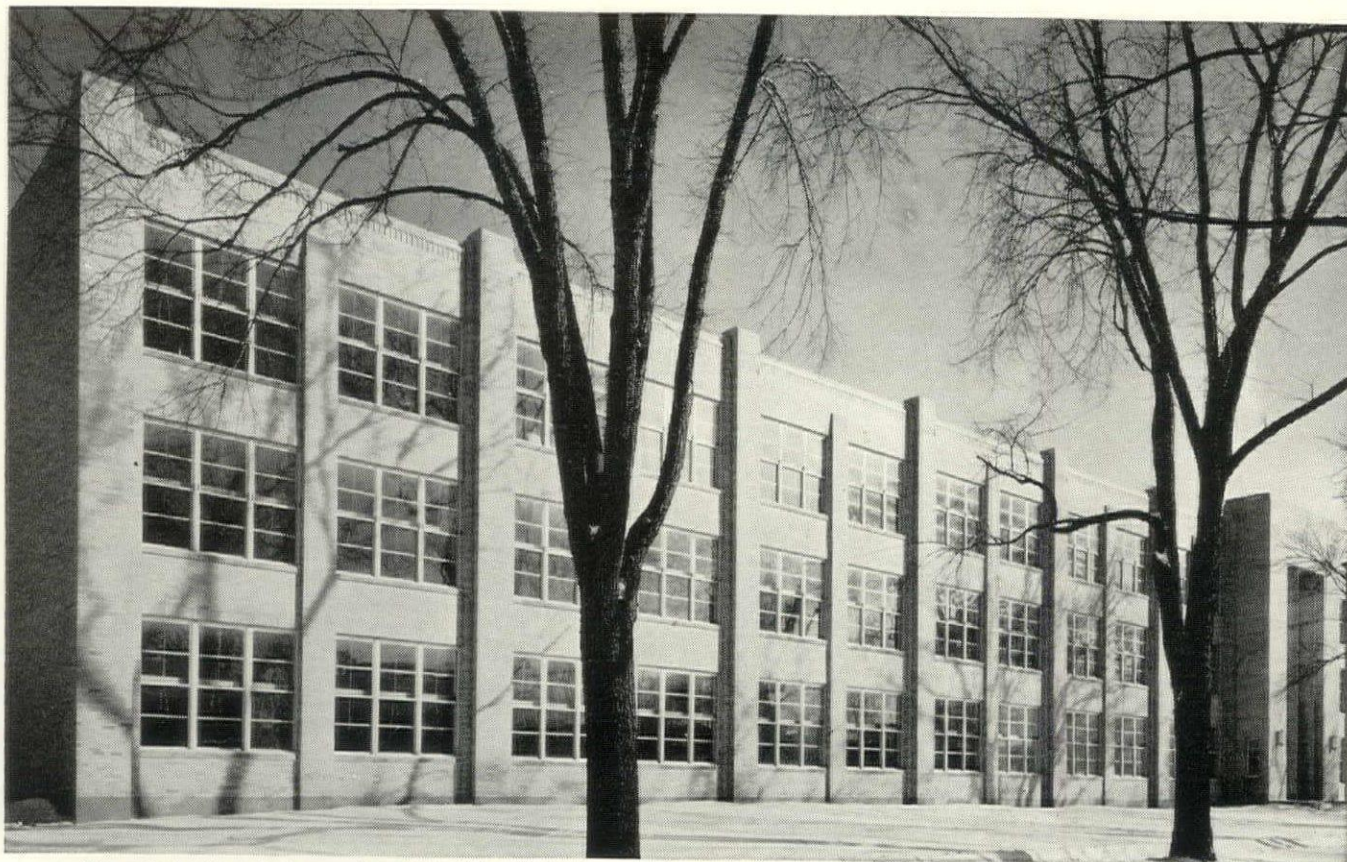
Sirs:

... Since Gurdon H. Wattle's letter in the June issue emphasizes the "structural" performance of glass blocks implying "load-bearing" applications, we feel that it is desirable to point out some of the problems related to extending the general use of glass blocks to large load-bearing structural elements.

Several different tests on glass block products confirm the high compressive strength of a properly annealed or tempered glass item under uniform loading. For the most part, these tests have been carefully conducted on a laboratory basis in which careful workmanship was insured.

Unfortunately, we cannot always be sure that equally careful attention to details will be in the field under normal installation conditions. As a consequence, there is a need for providing a safety factor beyond the laboratory practice in keeping with sound engineering practice.

(Continued on page 114)



Nazareth Academy, LaGrange, Ill., Thomas J. Higgins & Associates, C. H. Ording—Architects; George Sollitt Construction Co.—Contractor

Adlake Aluminum Windows pay their own way at Nazareth Academy

From the time that they were first installed, the ADLAKE Windows in beautiful Nazareth Academy began to pay for themselves—by eliminating all maintenance costs except routine washing. And ultimately, they will save their own cost, and more!

These ADLAKE Windows for a perfect weather seal against wind, rain, and cold—for only ADLAKE offers the combination of woven-pile weather stripping and patented serrated guides that assures minimum air infiltration and finger-tip control. And what's more,

ADLAKE Windows never warp, rot, rattle, stick or swell. They retain their smart good looks and easy operation for the life of the building.

For the full story of ADLAKE's worry-free, money-saving operation, drop a card to The Adams & Westlake Company, 1119 N. Michigan, Elkhart, Ind. No obligation, of course.

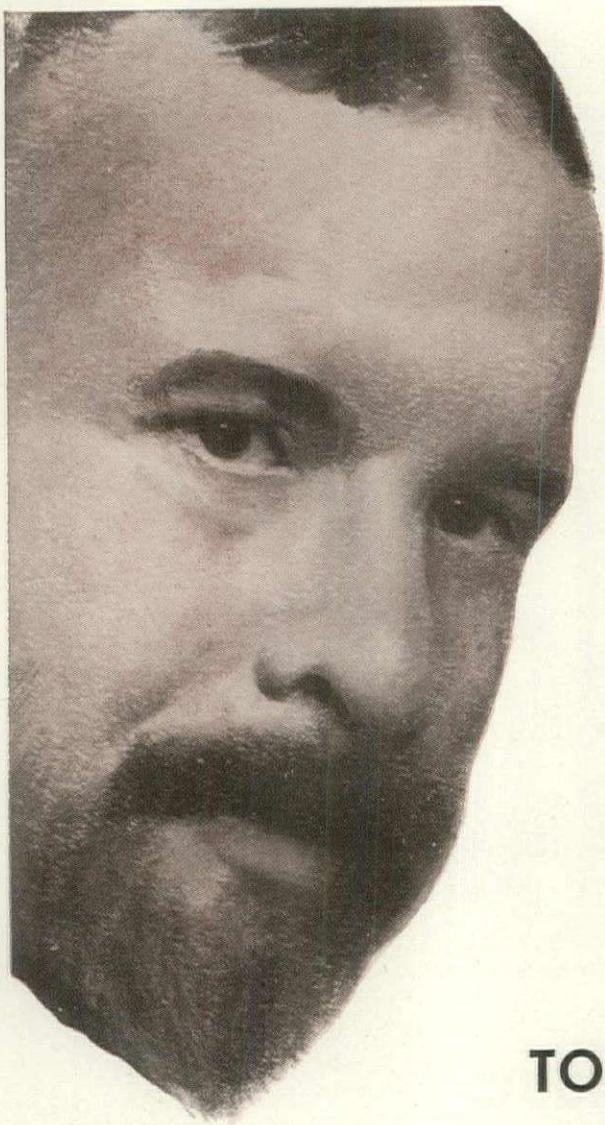
ADLAKE Aluminum Windows Have These "Plus" Features
Minimum Air Infiltration • Finger-tip Control
No Warp, Rot, Rattle, Stick • Ease of Installation
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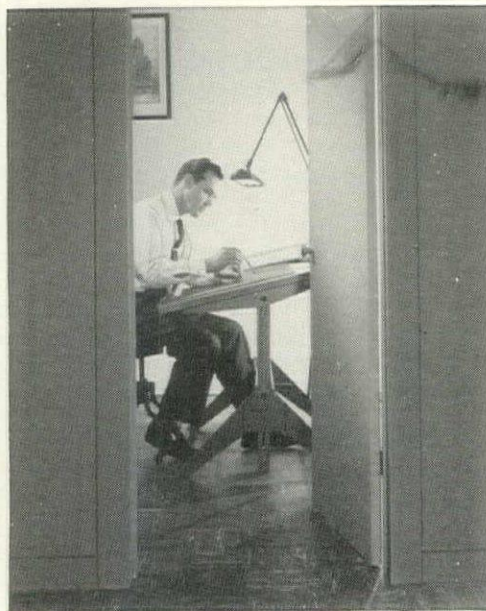


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Louis Sullivan said...
"have a similarity, an organic quality,
descending from the mass down
to the minutest subdivision of detail."

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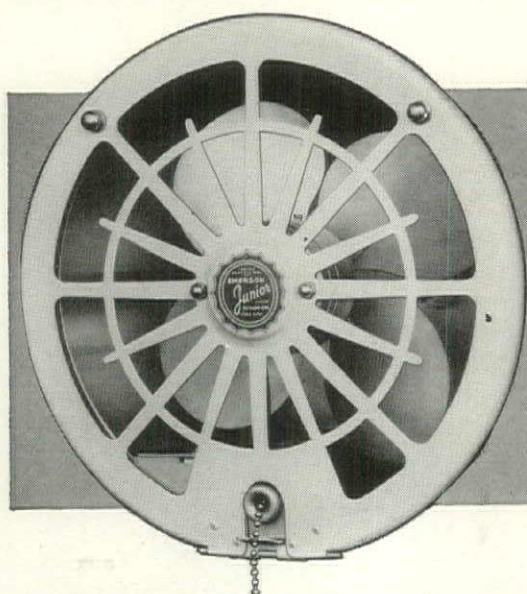
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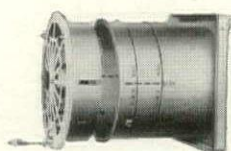
Which room interests her most? The kitchen, of course, for it is here she'll spend more hours than in any other room. They'll be pleasant hours, too, with an Emerson-Electric Kitchen Ventilator putting cooking heat and odors in their place... outside the home!

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LETTERS

recognition of a need for this safety factor which causes the glass block manufacturers to recommend details that take less than full advantage of the performance level achieved in controlled tests.

For example, though the compressive strength of 8" x 8" glass blocks in small panels has been demonstrated to be of the order of 400 to 600 lbs. per sq. in. (uniform loading), the manufacturers have been consistent in recommending glass blocks only as a non-load bearing material. The reason is simple. On the job, "point-loading" must be developed by large pieces of hard aggregate inadvertently left in mortar; by protruding brick heads or by other sharp objects at sill or head. Such point-loading might result in pressures in excess of 400 to 600 lbs. per sq. in. if panels were detailed to carry a large building load.

R. W. MCKINLEY
Development Engineer
Pittsburgh Corning Corp.
Pittsburgh, Pa.

ART AND ARCHITECTURE

Sirs:

I read with particular interest the section in your June issue, "Opportunities for Integration of Sculpture and Painting with Architecture." As a painter and mosaic-designer-craftsman I agree with Architects Stubbins, Gores, Barnes, Hebb and Koch that with mutual effort on the part of the painter, sculptor and architect we can have integration. In this day it is especially true because modern art and architecture are both concerned with "structure."

... The artist must understand the aspirations of the architect for his building. If these aspirations are fully understood and shared, the architect can then use all of his skill and experience in giving to the building that which nothing else but art can give. True, it is an added concept to the traditional concept of the studio artist, but it can be as personal and as developed an art as studio art. The fundamental requisite is that the artist must "work" in the building. The architect, in turn, has his responsibilities. In too many cases, architects are substituting textures: wood, stone, marble, brick, for color. With all due respect to these materials, they are not color in themselves. Again, speaking as a painter, architects should go to artists who share in their aspiration for the use of color. A great number of contemporary buildings show a bright surface, but not one of color-value.

From my experience in working with architects I know that this collaboration can be mutually very satisfactory. I believe that with more effort and less ego integration will become much more popular. Let us hope that architects who shout "Never!" will learn to say, "Well, hardly ever."

MAX SPIVAK
New York, N.Y.

HOW TO SAVE STEEL

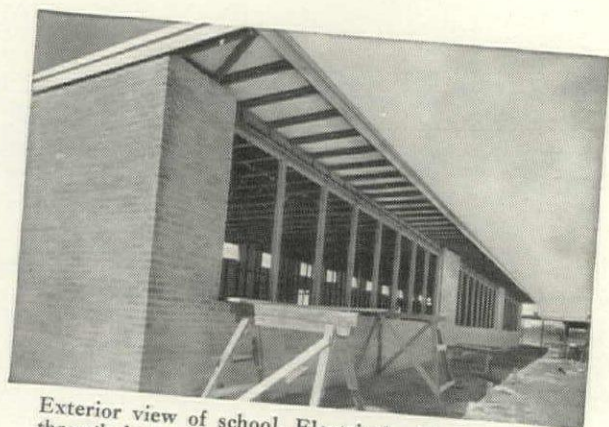
Sirs:

The pebble that Baltimore Structural Engineer Van Rensselaer P. Saxe cast into the pool of "How to Save 30% on Steel—and more," I

(Continued on page 118)

STRAN-STEEL FRAMING

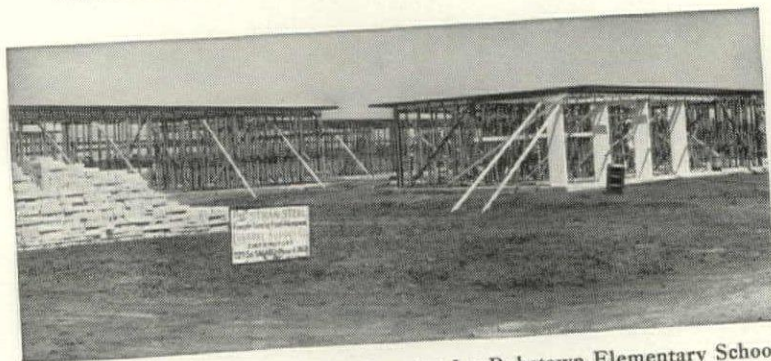
FOR SCHOOLS



Exterior view of school. Electrical wiring is installed through factory-punched holes in frame members.



Interior view of school under construction. Note how wood collateral is nailed directly to metal framing.



Stran-Steel Framing for Robstown Elementary School.

Here is what Benjamin Kenneth Wyatt, architect for the Robstown, Texas and other school buildings, says about Stran-Steel Framing:

"We have used Stran-Steel construction in several recent school buildings.

"Besides being most flexible for modern design, providing light cantilevered construction, thin window mullions used with collateral materials, economical suspended furring, Stran-Steel offers great rigidity with speed of erection for greater economy.

"Being able to nail to Stran-Steel Framing gives the economy of wood framing for dry wall construction (Knox School) also eliminates furring for metal lath (Robstown Schools) in plaster construction. Fire-safety and long life is of paramount importance in school building construction, and incombustible Stran-Steel framework meets both of these requirements."

Stran-Steel Framing makes it easy to design, easy to build **BETTER BUILDINGS** economically! If you are planning a school project, classrooms, or other type of construction, you can give your buildings a backbone of steel with Stran-Steel Framing.

Complete literature and specifications data available upon request, or see Sweet's catalog service, architectural and builders files.

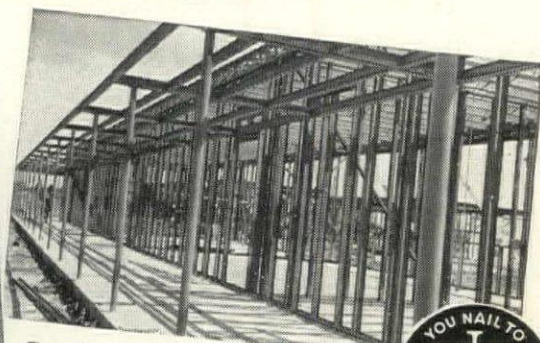
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Corridor detail of school showing Stran-Steel Framing.



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Our plant stood in 10 feet of water *but here's where we stand today:*

Here, you see our Ultralite insulation plant as you would have seen it from the air on July 15. Yet just 10 days later, we were shipping Ultralite glass fiber insulation out of undamaged inventory. And in another 14 days, Ultralite insulation was rolling off the assembly line again.

Production is rapidly approaching normal. Soon, very soon, a second Ultralite factory will go into full production — a huge, ultra-modern plant started long before the flood to help satisfy the demand for Ultralite. Soon, combined production in the two plants will make Ultralite more readily available than it has ever been before!

Already, protective measures for the future have been endorsed by the authorities, and plans have been completed. Higher, stronger dikes and levees will be built — dikes so much stronger than ever before that Gustin-Bacon is resuming production with full confidence that a similar disaster can never occur again.

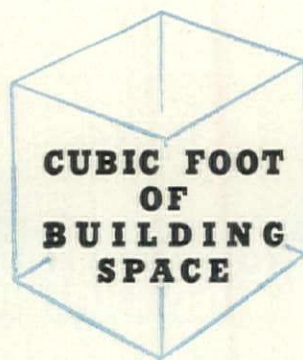
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67 Ultralite Distributors throughout the country have stocks available to fill your insulation needs. Consult the yellow pages of your telephone directory.

July 14: Flood water reaches the Ultralite insulation plant.

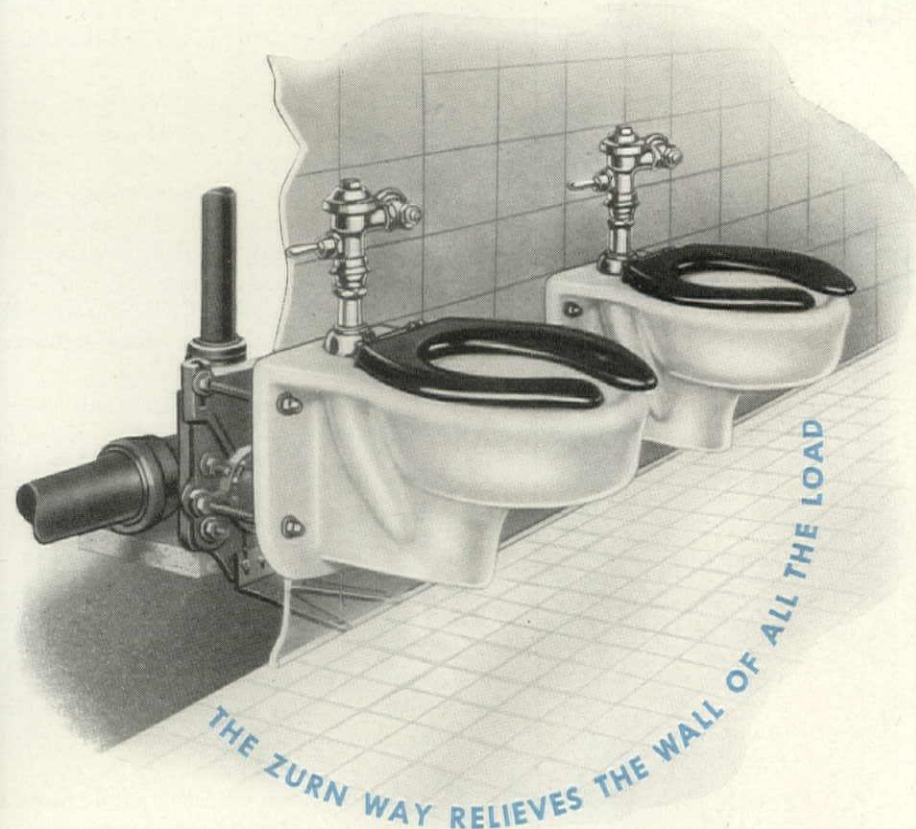
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For Less

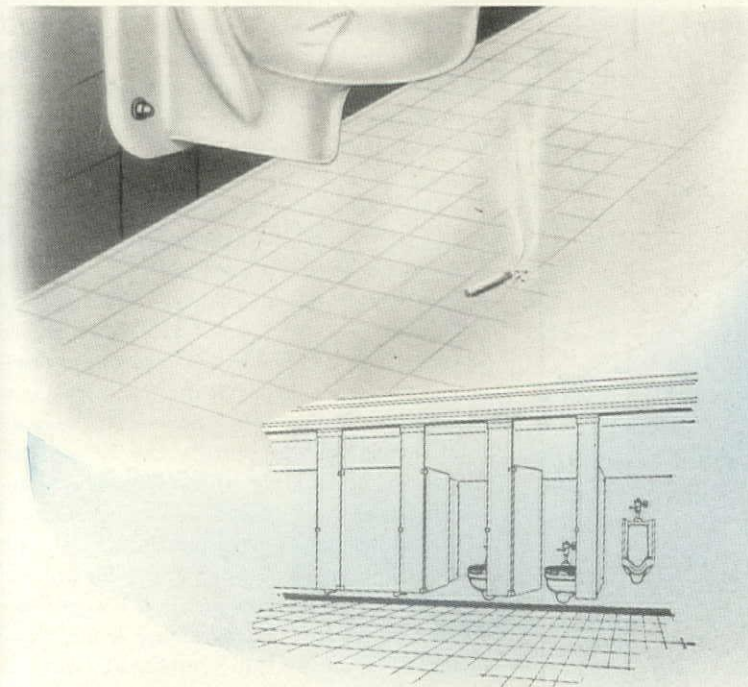
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WHAT IS SO WONDERFUL ABOUT A FIXTURE-BARE FLOOR?

Mostly "the something wonderful" about a fixture-bare floor is immaculate cleanliness, the incentive to cleanliness and the ease with which it is kept clean. Cleanliness is no problem in rest rooms where plumbing fixtures are off the floor because there is nothing to interrupt the sweep of the broom and the swish of the mop. Those who use such toilet rooms are moved to respect cleanliness and to help maintain it. Insist on wall type plumbing fixtures—they reduce the cost of rest room maintenance and protect against premature obsolescence.



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PLUMBING DIVISION

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or write for data and prices

IN-SINK-ERATOR MANUFACTURING COMPANY

1213 Fourteenth Street
RACINE,
WISCONSIN

LETTERS

'51, p. 113) has caused ripples to run nearly halfway around the world. Here in Australia where steel is really short, we grasp at any help of this kind; however, the problem seems to be a good deal bigger than just scrimping [sic] a bit on stresses and connections. It could involve a new approach to the fundamental space use, loading and the structural pattern. Savings through controlled loading.

The current pattern seems to revolve around one man at a desk or a hospital patient in a room with privacy and space to suit his status. How much mass of materials do we really need to permit the occupant with his bits and pieces to be supported efficiently? Are we to plan so sparingly or perhaps extravagantly that the floor of an office constructed to only 30% of specified standards will collapse only when packed tighter with humanity than a crowded elevator?

Surveys of two very large multi-storied buildings show that in one building 88% of the floor area and in the other 97.75% carried live loads of less than 40 lb. per sq. ft. In the latter 1.75% carried loads between 40 and 60 lb. per sq. ft. with only 0.5% carrying loads above 60 lb. per sq. ft. The maximum was 106 lb. per sq. ft. 0.25% of one building while the maximum was 90 lb. per sq. ft. for the other building.

The application and distribution of these loads were controlled only by the use of the building (i.e. as government offices) and no restrictions relating to load were issued.

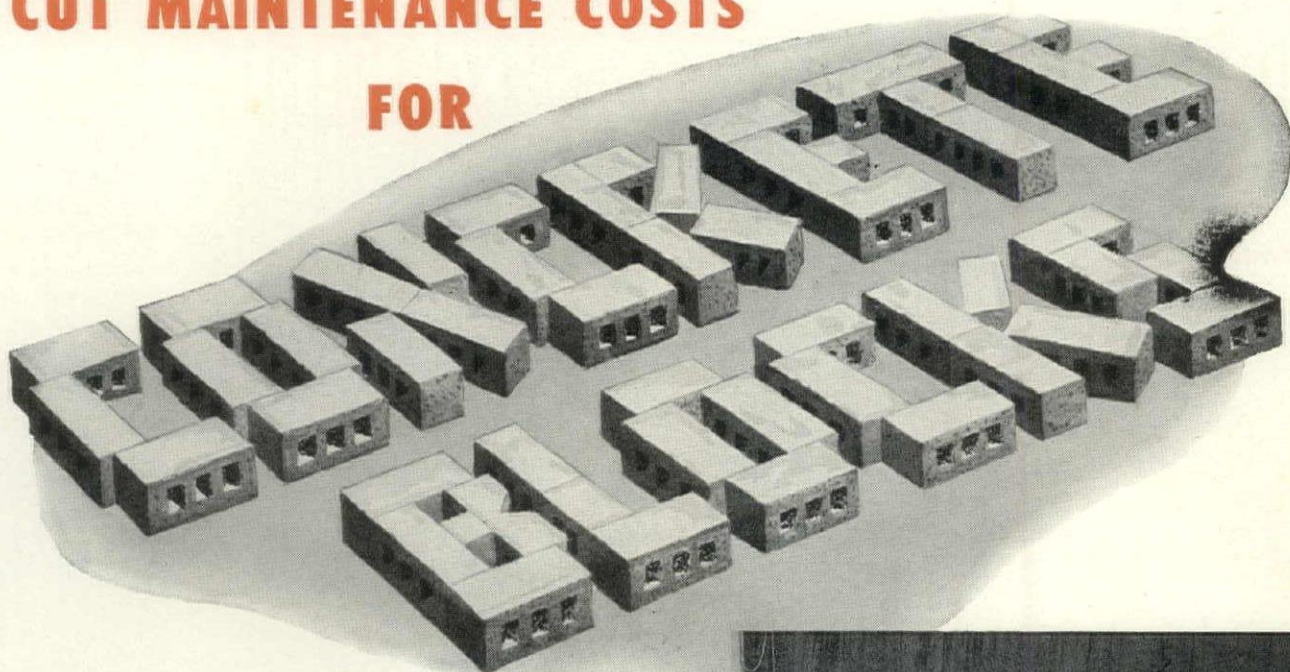
It is obvious that if the whole of the floors and beams are to be designed to carry loads approaching the maximum discovered in the survey that a vast area of floor would be loaded at any one time to a very small percentage of its capacity.

Every form of public and private use is faced with this problem and it appears that the discipline necessary to ensure that offices are released as warehouses is no different in principle from that needed to prevent heavy accumulation of loads in very small areas of large buildings. (The presence of cleaners in offices daily indicates that there is no inherent privacy to be violated and hence the owner is free to protect premises by regular inspections for that purpose.)

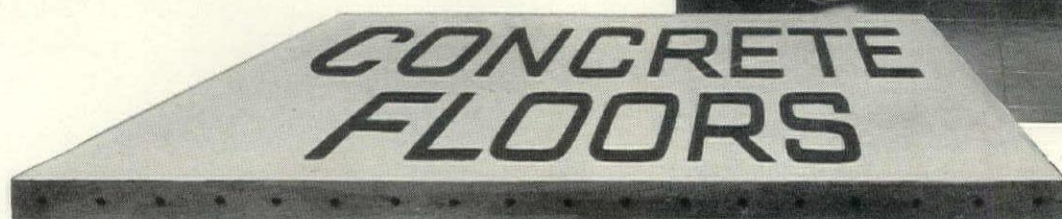
The very fact that small areas of high loads naturally occur indicates the desirability of making provision for them but in a controlled rather than in an uncontrolled manner. A practical solution might be to provide, say 10% of every 250 sq. ft. of building with a capacity of up to 125 lb. per sq. ft. so that all users have an area with a limited amount of heavy items. Certain areas could be designed as "strong areas" for particular use. This system would justify a design load of 30 lb. per sq. ft. for general live loading and a factor of 1.5 on the load computed to cause permanent incipient deformations would be a better criterion than a relatively arbitrary determination like 24,000 p.s.i. The savings of steel in the beams which follows the lower but adequate live loads proposed above follows naturally and is of course almost correspondingly greater, as the selected design stress increases.

(Continued on page 122)

CUT MAINTENANCE COSTS FOR



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Now, concrete blocks get really lasting resistance to moisture and water seepage—with an easily applied coating system based on VINYLITE Brand Resins.

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Available in a wide range of colors, they cut maintenance costs by staying on the job far longer than older materials. They're highly recommended for concrete floors, bricks, stucco, cinder block and asbestos siding—for homes, apartments, factories, chemical plants.

They're the last word in providing dry, clean, attractive walls.

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Data on concrete block coatings courtesy Perry & Derrick Co., 109 Corwine, Cincinnati, Ohio

Data on concrete floor coatings courtesy Benjamin Foster Co., 4635 W. Girard Ave., Philadelphia 31, Pennsylvania.

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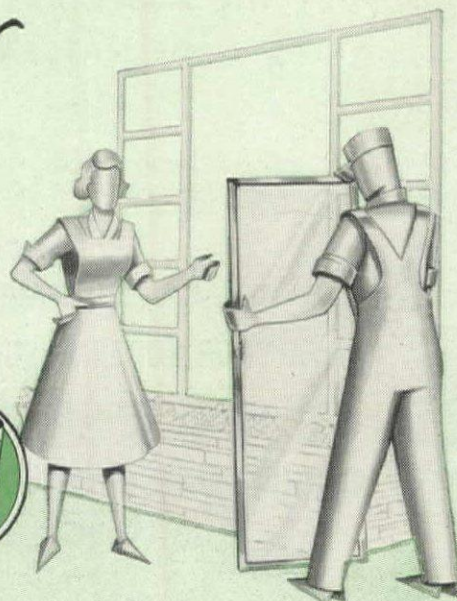
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LETTERS

A simple method of saving steel follows from the bonding of concrete floors to the supporting steel beams. Tests on bridge floors show an appreciable bond of concrete placed on painted steel beams and this later led to the development of a positive bond between the top flange and the concrete through the medium of welded stirrups capable of transferring up to 5 tons of bond per foot of joist.

This process has been further developed by upward propping of the steel beam before concrete is placed so as to create an opposite prestress of compression in the bottom of the beam. On removal of the props, the composite beam has a lower tensile stress in the lower flange and with a corresponding axial compression in the concrete flange.

For building construction, it would be very economical to use a finishing roll in the steel mill to indent the top flange of the floor beams to give the necessary bond between concrete and steel. Even on simply supported beams, this process greatly stiffens the beam by increasing the moment of inertia of the composite section by 400% or 500%, with corresponding decrease in deflection. In turn this permits a saving in steel by the use of smaller steel beams.

The history of steel frame buildings shows that the 19th Century codes restricted design by emphasizing the vertical continuity of the columns and forced the horizontal articulation of beams into short pieces butting between columns but not secured to them except by support from shelves.

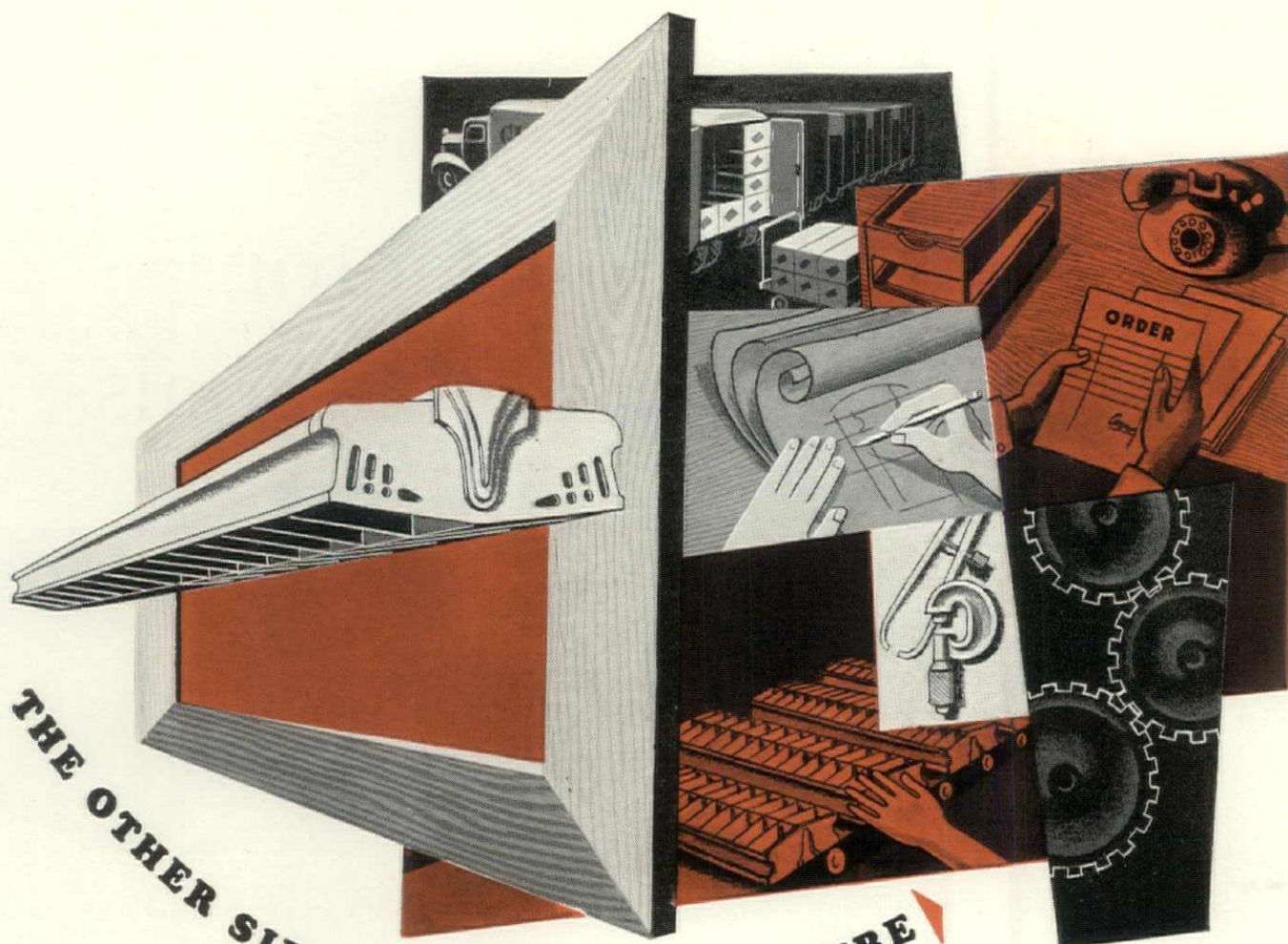
The original prohibition on joining beams to columns ceased in 1895 and various elementary connections usually referred to as "Shear" connections were evolved. These have lasted to the present day largely due to peculiar city codes and may live to celebrate their centenary for wastefulness.

Some now propose to develop full linear continuity of beams by fully butt-welding the beam to the column flange or web. This of course implies the cutting of beams into precise lengths and making the weld at the most highly stressed section where in addition to maximum bending moment the shear is also a maximum.

The obvious and immediate improvement is to the continuity of the beam system and where relatively low buildings are involved, it is practical and economical to break the columns at floor levels. It is however practicable for both tall columns and beams to be continuous and the use of a pair of Channels for both is an obvious solution, particularly as the double Channel column permits secondary beams to give continuity in the third dimension.

The structural economy is not based on what stresses are used but on how many pounds of steel we need per occupant of the building and how much per pound that steel costs.

MARSDEN G. DEMPSTER, *M. Am. Soc. C.*
CHARLES V. HOWARD, *R. A. I. A.*
Canterbury, Victoria, Australia



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The cost factor in acoustical materials

THE choice of acoustical materials, like most other building materials, often depends a great deal on cost. However, consideration of cost should not be confined solely to the initial price of the material. Several other cost factors when taken together can easily outweigh differences in material cost.

For example, the method of installation of the acoustical material has a decided effect on total cost. Beauty, fire safety, maximum noise-reduction efficiency, and other special features can also alter the price picture.

THE FACTORS THAT INFLUENCE COST

Initial material cost

Although initial cost is a prime consideration on all jobs, it grows in importance as the jobs increase in size.

Acoustical materials are available in a wide range of prices. These materials are priced by their composition and method of manufacture, not by their efficiency rating. This means you don't have to sacrifice efficiency for cost. For example, Armstrong's Cushiontone is a low-cost wood fiber material, yet it has high noise absorption (up to 75%).

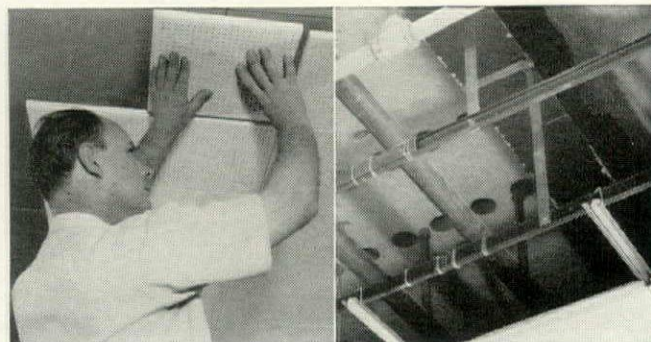
Here's how the Armstrong Line rates, from lowest to highest cost: Cushiontone, made of fiberboard; Travertone, made of a mineral wool composition; Corkoustic, made of cork; and Arrestone, a metal pan unit with a mineral wool pad.

Ceiling preparations can take time

Existing ceilings sometimes need considerable advanced preparation which can increase costs. For instance, if paint is unsound, it has to be removed before cementing tiles. Free lime must be neutralized; oil and paper must be removed. If plaster is cracked or concrete uneven, furring may be required. While little or no preparation is required on most jobs, it's wise to consult your Armstrong acoustical contractor for advice on the proper amount of ceiling preparation.

Installation methods affect cost

The least expensive method of installation is to cement the acoustical material directly to an existing plaster ceiling or to other overhead surfaces. Nailing to fur-



Cementing acoustical tiles (left) directly to the ceiling is often the most inexpensive method of installation. However, mechanically suspended acoustical ceilings (right) may be most practical in some buildings since they conceal pipes and ducts, provide access to wiring.

ring is only a little more costly because of the wood furring required. This method, however, provides slightly higher noise absorption.

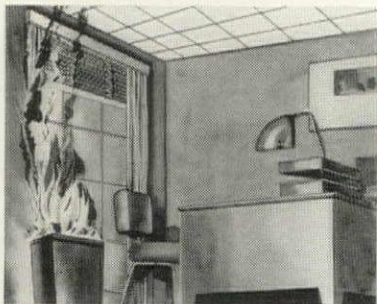
Mechanical suspension systems are generally more expensive to install. That's because they require extra materials for installation. For example, suspending Cushiontone, Travertone, and Corkoustic by the "H-runner" method—one of the lowest in cost—requires metal hangers, channels, and other hardware. Next in cost is the "dropped ceiling," such as plaster or gypsum, used as a base for acoustical materials. This requires not only the suspension assembly but also extra labor for installing the plaster or gypsum. The unique "T-runner" system of suspending a metal pan material like Arrestone is usually higher in cost, requiring special metal hangers and other parts.

Although mechanical suspension systems are more expensive to install, they offer many special advantages that can make them the most practical and economical method. Lowered ceilings do a better job of noise quieting and increase lighting efficiency at the same time. In new construction, they eliminate considerable plastering and other finishing.

The Arrestone system has several important advantages. It's especially suited for use with flush-type troffer lighting. The metal pans and fixtures can be quickly clipped into the same "T-runner" supports. Further, Arrestone units are readily removable for easy access to wiring and piping above the ceiling. This eliminates the need for access doors.

Fire safety costs more

In general, the more fire resistance required by a job, the more costly the acoustical installation. That's because the incombustible materials—made of mineral wool, steel, and asbestos—are more expensive than wood fiber or cork acoustical tiles. Unless the building itself is "fireproof" and finished largely with fire-resistant materials, a fire-resistant ceiling can add little or no extra protection. It is neither necessary nor wise, therefore, to buy more fire resistance than is justified. Most building codes are flexible in their fire provisions. While certain specified areas will naturally require incombustible materials like Armstrong's Arrestone or Armstrong's Travertone, many others can be treated with a wood fiber material like Armstrong's Cushiontone. A special paint finish is available for Cushiontone which renders the tile "slow-burning," to meet U. S. Bureau of Standards Specification SS-A-118a. This finish will meet the fire-resistance requirements of most building codes.



Consider cost of maintenance

It's always good practice to look ahead to the maintenance cost of the material. Tiles that can easily be cleaned and repainted will naturally be the most economical for the building owner. All materials in the Armstrong Line can be washed or repainted; however, the perforated tiles are especially suited to frequent repainting without loss of acoustical efficiency.

Insulation is an extra plus

Acoustical materials have high insulation value which,

in some buildings, can help cut fuel bills, save roof insulation, and make air conditioning operate more efficiently. Because of its pure cork composition and cellular structure, Armstrong's Corkoustic has exceptionally high insulation properties.

The contractor and the crew

On the item of costs, and on any other matter pertaining to modern noise control, your Armstrong acoustical contractor is ready to help you. He can give you money-saving advice and time-saving workmanship. His trained crews do a fast, efficient job, which helps to keep costs down.

SEND FOR FREE BOOKLET, "How to Select an Acoustical Material," which answers many other questions about sound conditioning. Write Armstrong Cork Company, 5410 Stevens St., Lancaster, Pa.



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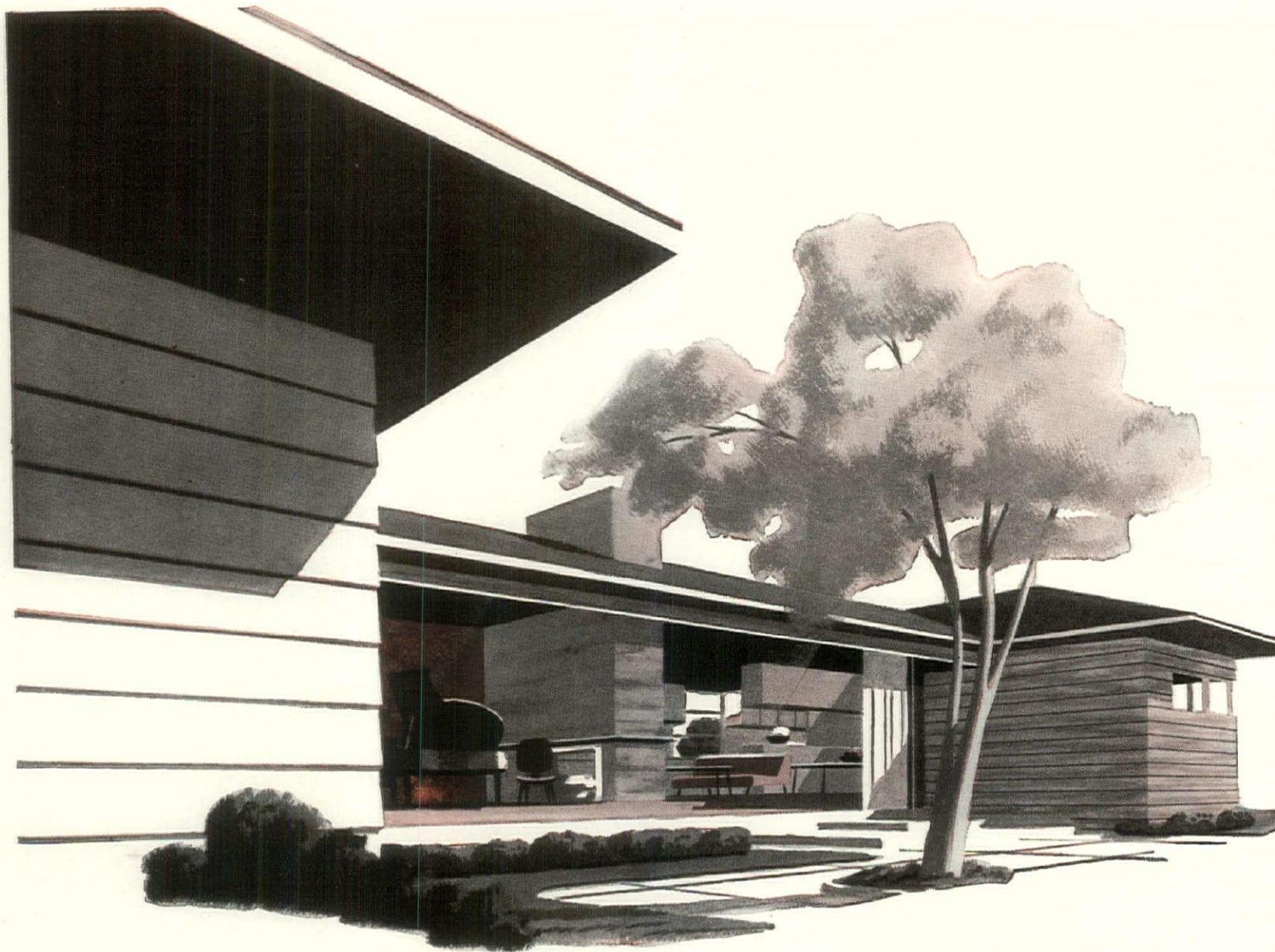
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Can the owner afford acoustical treatment?

Before spending money on acoustical materials, the building owner naturally wants to know if he will get a reasonable return on his investment. Here's why sound conditioning will save him money. Noise in business causes employee fatigue and strain . . . results in unnecessary mistakes, general inefficiency, lost time, accidents, and high turnover of personnel. A recent estimate places the cost of noise to American businessmen at \$4,000,000 each day. And dollars can't measure the damage done in other fields. For example, noise retards learning in schools and recovery in hospitals.

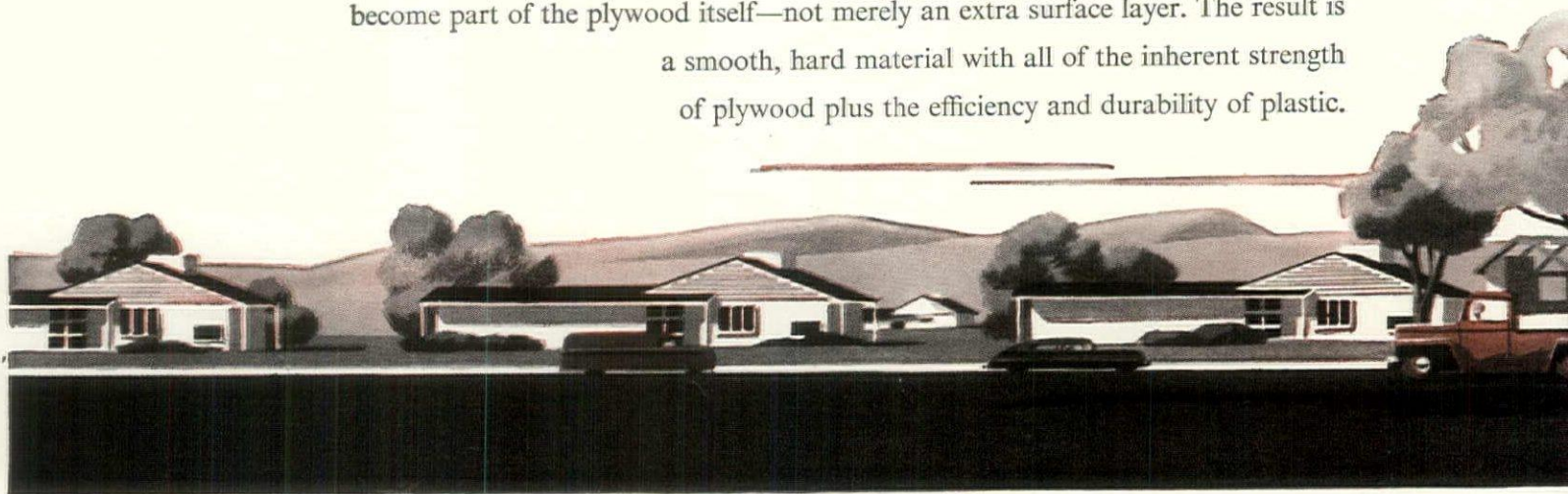
ARMSTRONG'S ACOUSTICAL MATERIALS



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Natural Wood Surfaces—for the natural wood surfaces that are so much in demand for today's interiors, specify the natural grade of GPX. Use it for sliding doors, panels, all interior surfaces. Economical and efficient, long lasting GPX saves the expense of painting, keeps refinishing and upkeep costs to a minimum.

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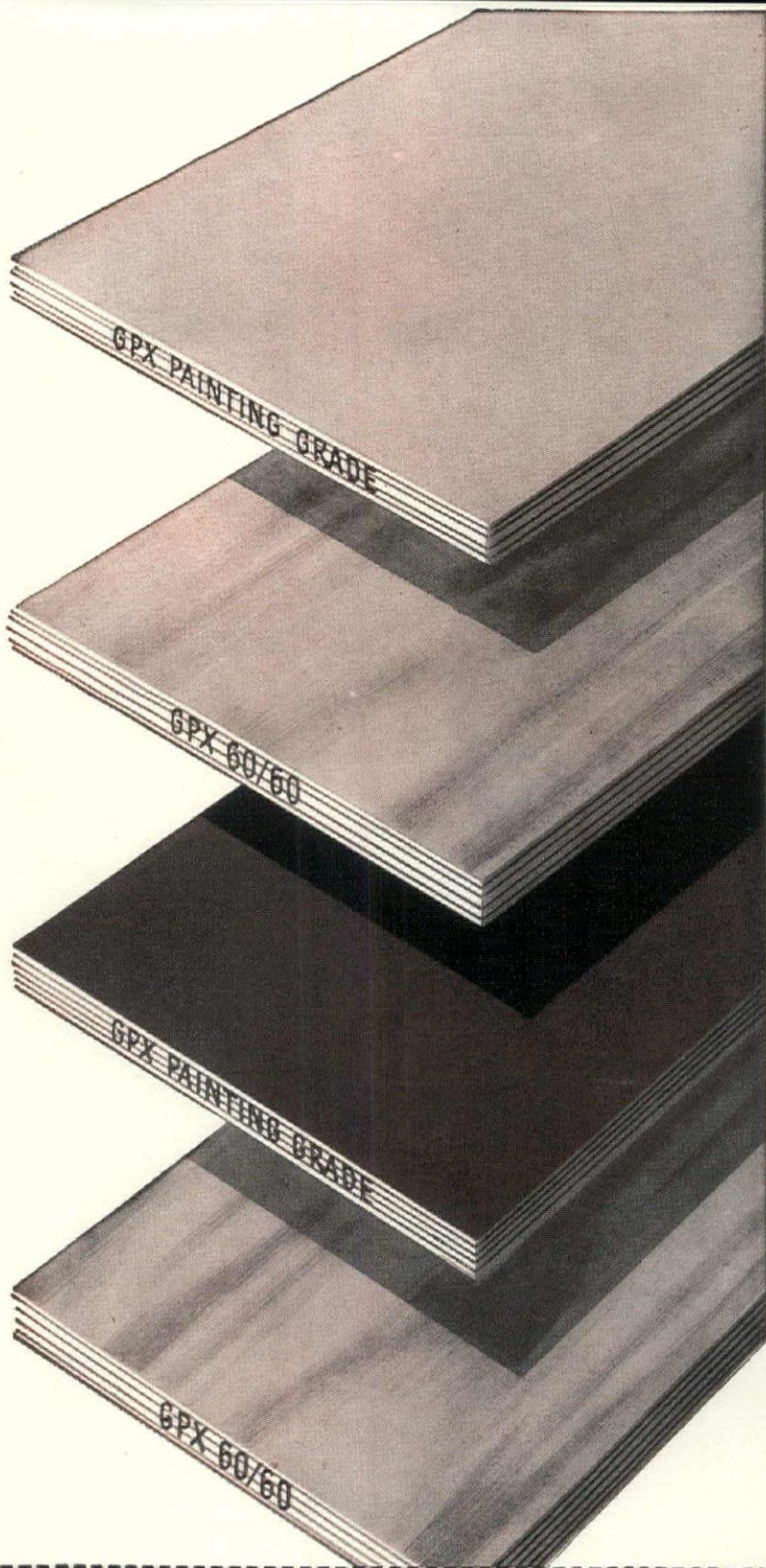
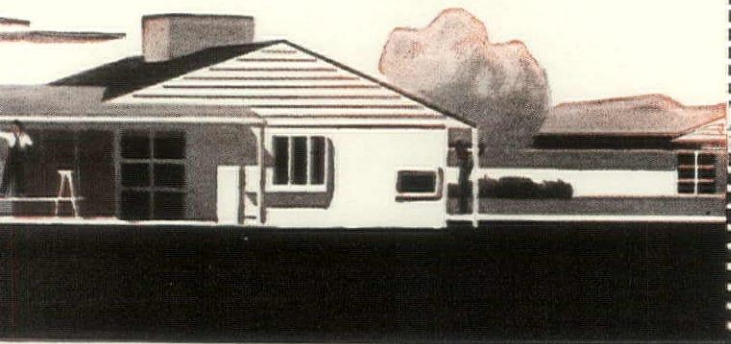
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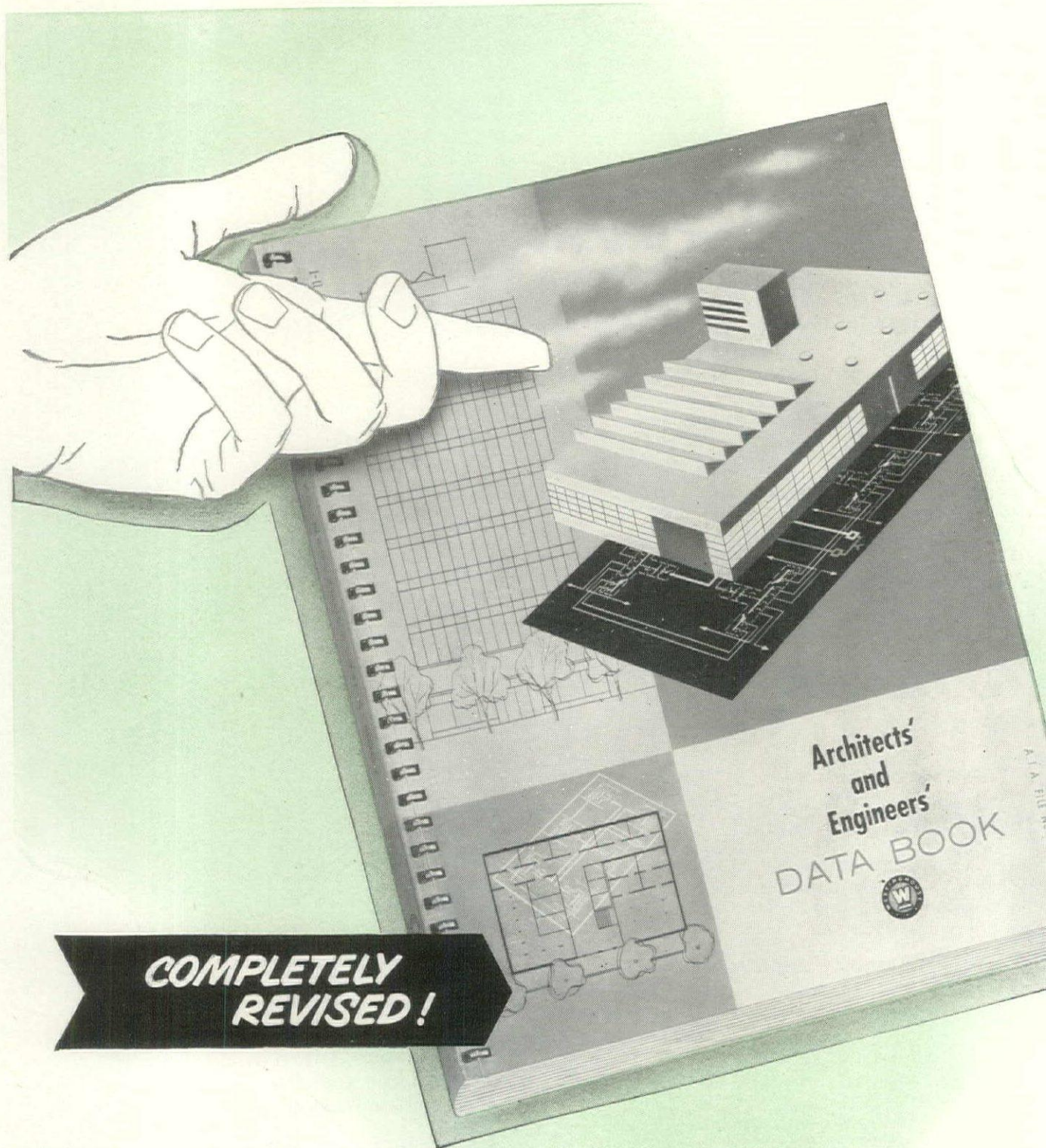
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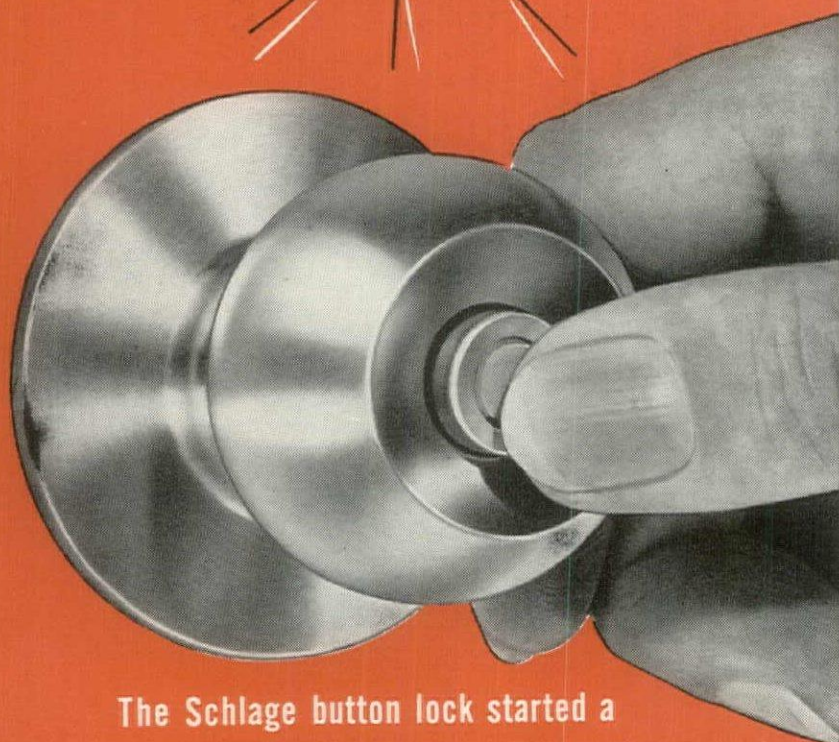
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BEHIND THE BLUEPRINTS



LUDWIG MIES VAN DER ROHE, 68, world-famous German-born architect, designed his first house in Berlin in 1907, his best known house, Tugendhat, in 1930, and a successor to the late the Farnsworth House (p. 156), last year. Known for his brilliant handling of space materials, and for the absolute, almost ascetic purity of his design, Van der Rohe has achieved his international reputation without formal architectural training. He is, nevertheless, a gifted teacher, is former Director of the Bauhaus, and current head of Illinois Tech's Department of Architecture.



Forty-six year old **MILTON RYAN** is an architect sans architectural degrees. Born in Rockport, Texas, he earned a degree in Business Administration at Texas University and promptly took a bookkeeping job with a San Antonio luncheon company. From the ledgers to the drafting table was a short jump and in a few years Ryan was a registered architect. That same year, 1938, he opened his present office in San Antonio, devoted it largely to the design of simple, functional houses well suited to his native southwest. One such structure is published this month (p. 1).



HARWELL HAMILTON HARRIS, newly-appointed architectural dean of Texas University, is a designer who couples originality with wariness. He turns out houses in the best tradition of American woodcraft. Son of an architect, Harris was born in California in 1903 and educated at Pomona College and the Otis Art Institute. Though not a registered architect in his native state, Harris has won countless awards for superlative design from his Los Angeles office. In the best Harris series are the group of houses (p. 166), published this month.



Cornell-trained architects **GEORGE NEMENY** (40) and **A. W. GELLER** (35) were partners in a diversified New York practice from 1947 to 1951. In addition to 50 handsome country houses like the group featured this month (p. 175), they designed a community of 300 modern homes for a speculative builder, an FHA 608 rental project, plus a quota of nonresidential structures. Earlier, Geller had worked for William Lescaze and Marcel Breuer, Nemeny for Emery Roth and Albert Mayer.



Harvard alumni **WILLIAM NORBREGER** (31) and **STANLEY R. S. MAN** (28) were scholarship students at the Graduate School of Design. They have won three coveted prizes since forming their New York partnership in 1946. Prior to the present alliance, Breger worked for Walter Gropius and Salazar for Skidmore, Owings & Merrill. Though predominantly residential designers with a special flair for adroitly-planned suburban homes (p. 190), they have also done recreational design, beach clubs, swimming pools and night clubs, and more recently, school planning. Both currently teach architectural design at New York Pratt Institute.



Builder **THOMAS P. COOGAN** and architect **ALFRED B. PARKER** are the talent and know-how behind one of Miami's newest modern subdivision (p. 209). Coogan, 52, is New England-born and MIT-trained, is Florida housebuilder and industry statesman par excellence. He is past president of NAHB. Parker, 35, is also a native New Englander, though a Floridian for 27 years. He studied architecture at the University of Florida, and at Sweden's Royal Academy, on a scholarship. He has had his own architectural office in Miami since his separation from the Navy in 1945. Most of Parker's work is residential, though he has also done schools, tourist courts and motels.



Architect **ALLEN G. SIPLE** and builders **EDWARD K. ZUCKERMAN** and **BARNEY R. MORRIS** designed and built the noteworthy contemporary sub-

division in southern California (on page 214). Siple, 51, has been in practice 22 years, designing houses for Hollywood luminaries and small shops for the trades people. Morris (42) and Zuckerman (43) have been building for 25 years, have 5,000 housing units to their credit (as Grandview Building Co.) since 1946.



Builder **JERE STRIZEK**, 48, and Architect **JOHN W. DAVIS**, 40, produced this year's prize-winning house model (p. 220) for Strizek's rustic Town and Country Village near Sacramento. Strizek is a graduate civil engineer, likes to call himself a "little carpenter,"

is nevertheless a capable builder and a far-sighted merchant. He created Town and Country Village by building its thriving shopping center, plus 1,700 dwelling units and two office buildings. Davis has architectural degrees from University of Illinois, has been Strizek's Design and Building Executive Superintendent since 1949. Prior to that, he had his own commercial design practice.

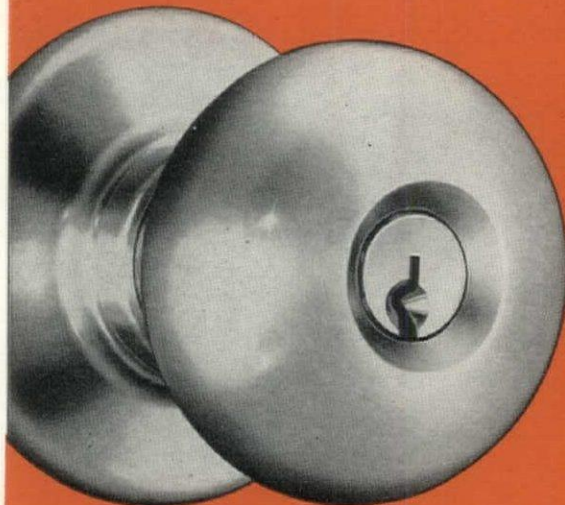


JAMES L. PEASE assumed the presidency of the Pease Woodwork Co. in 1936, succeeding his late father, who had founded the business. A graduate of Cincinnati University, Jim Pease joined the company in 1919 when it was a stock millwork manufacturer, was its overseer in 1940 when, greatly expanded, it entered the field of prefabricated housing. Featured this month are the trim, new models developed for Pease by architects Oscar Stonorov, Robison Heap, and Schwarz & West (p. 224). Stonorov is a prominent Philadelphia architect whose designs have been widely exhibited. Heap practices in Alexandria, Va., is a prize-winning small house designer. Schwarz & West have an office in South Bend, Ind., have done much to advance contemporary house design in the mid-West.

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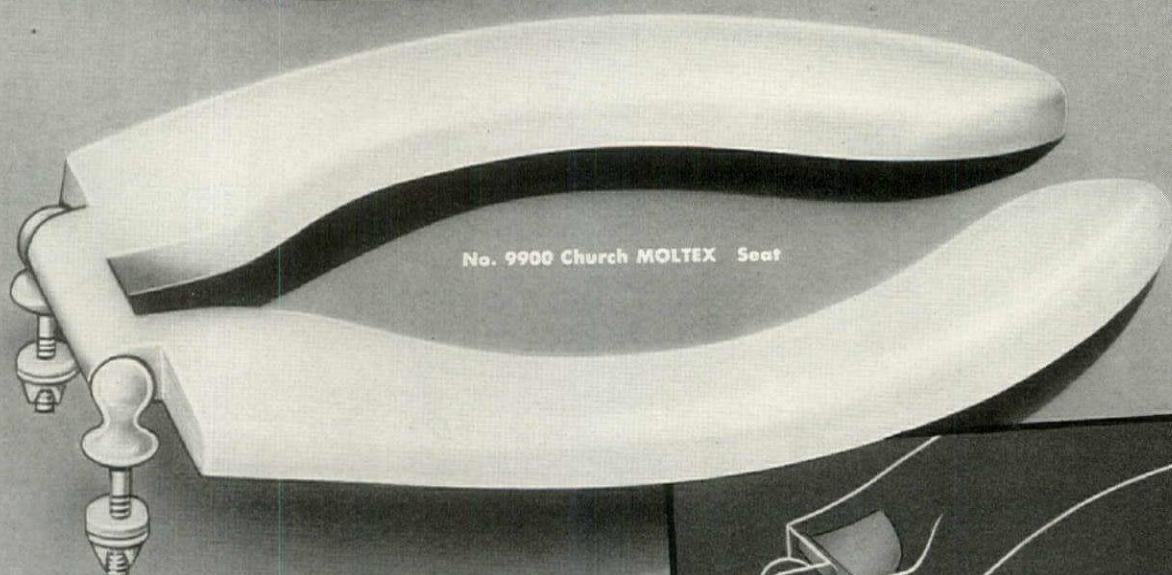
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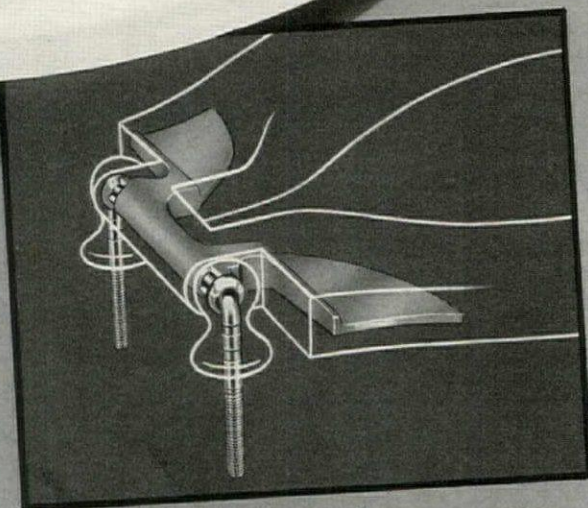
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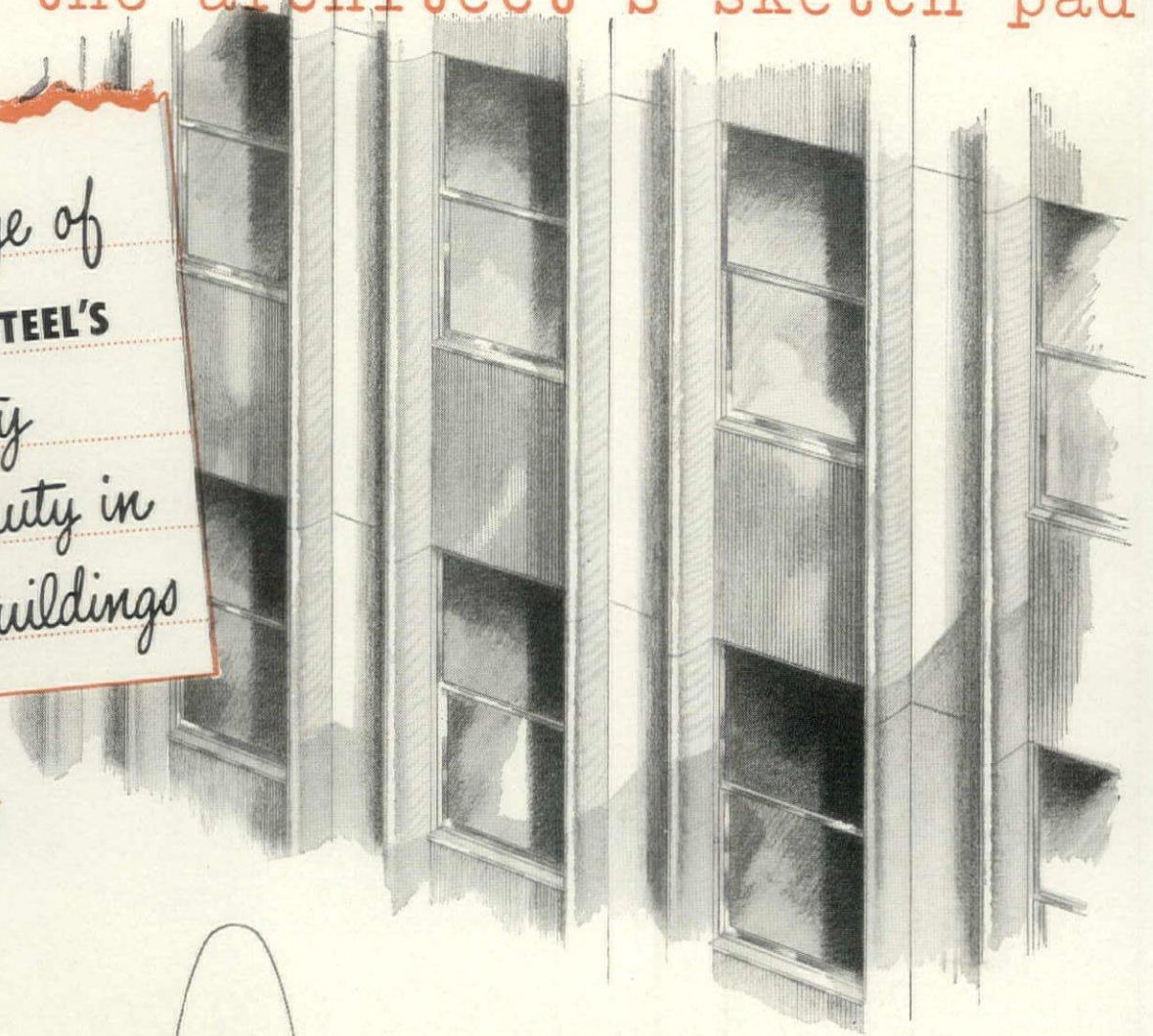
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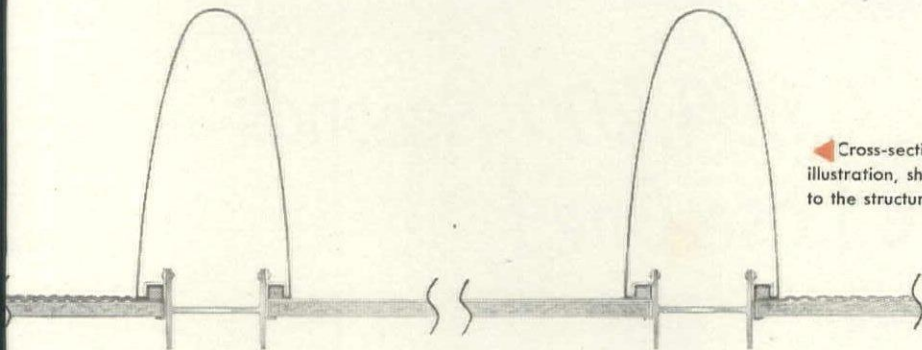
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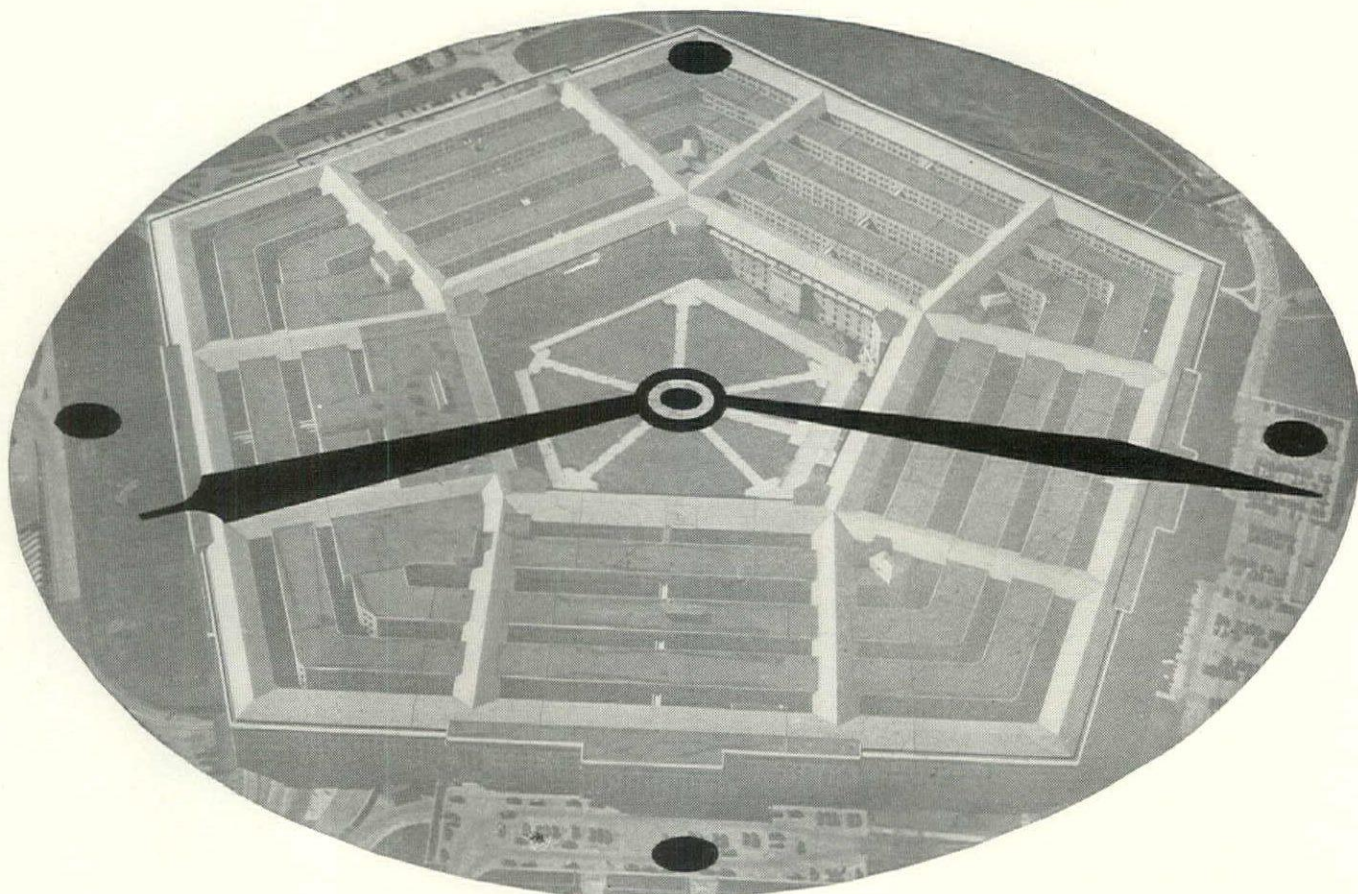
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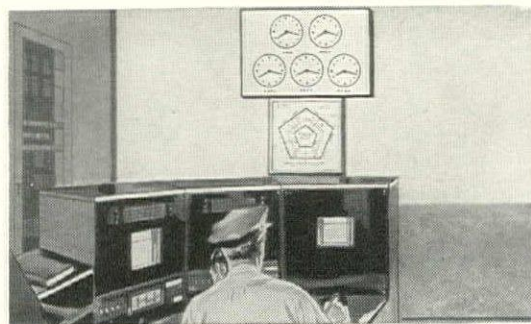


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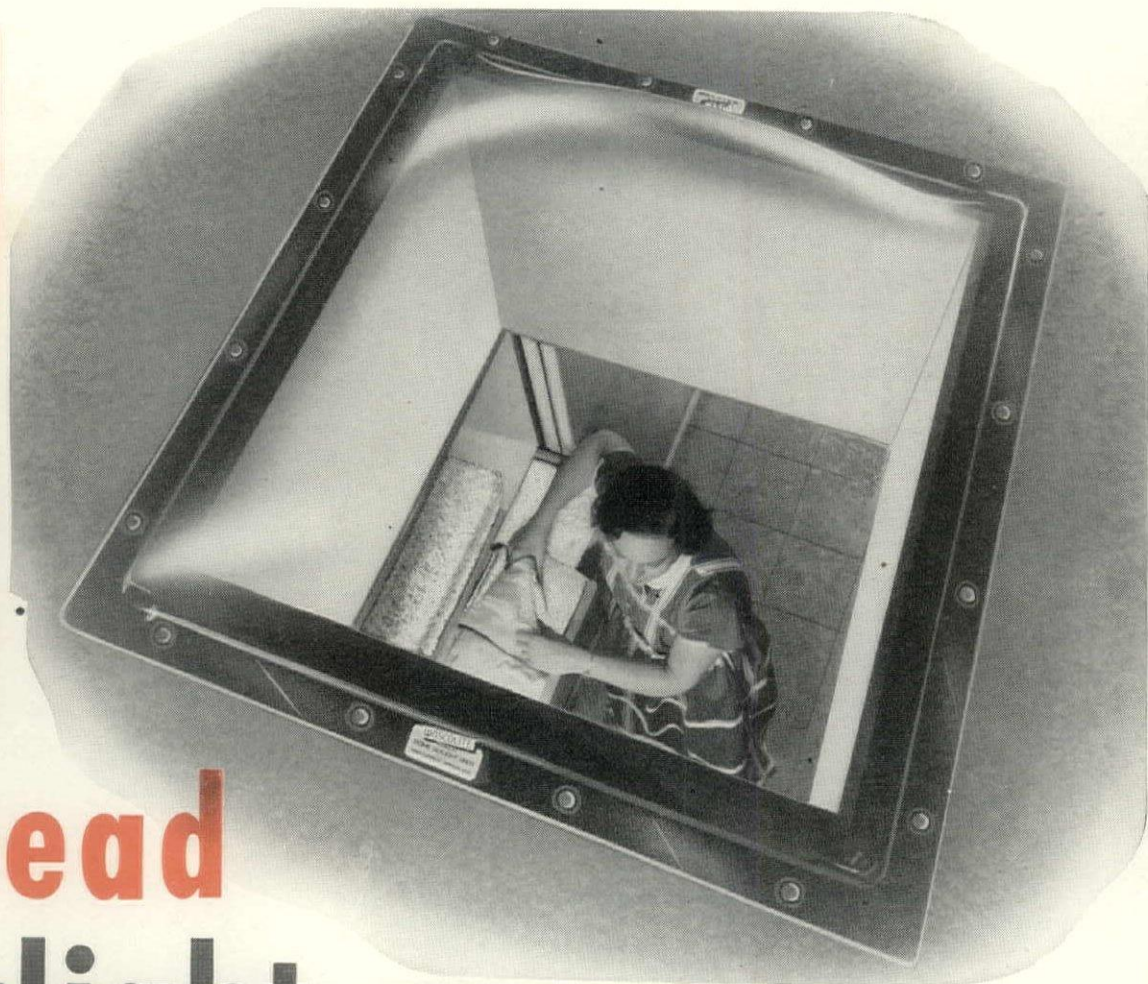
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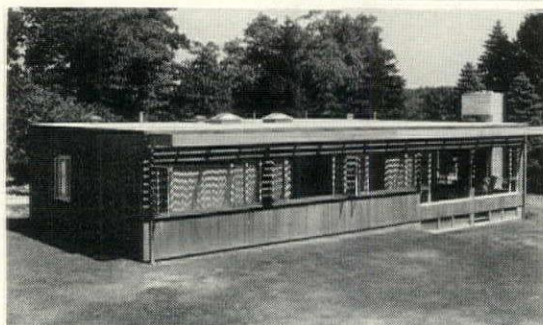
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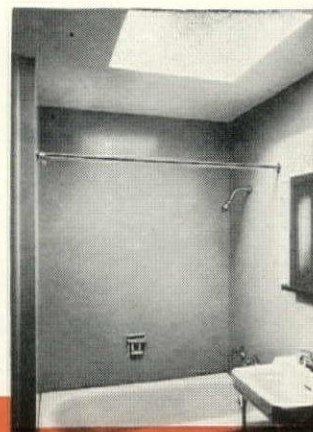
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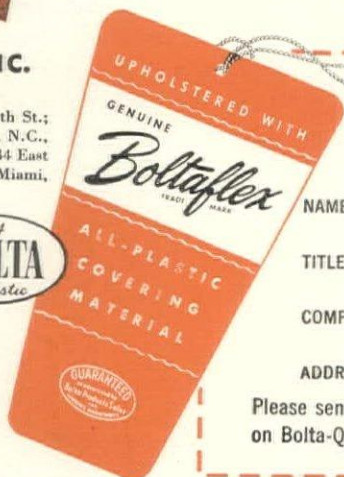


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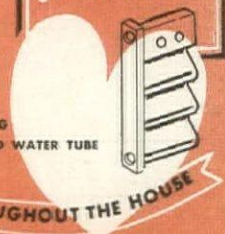
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REVIEWS

SHOPPING CENTERS—DESIGN AND OPERATION. By Geoffrey Baker and Bruno Funaro. Reinhold Publishing Corp., New York, N. Y. 288 pp. illus. \$12.

This painstaking reference work contains complete data and illustration of every major shopping center already built in the U. S. as well as coverage of a number of outstanding ones still in project form. In addition to this complete record, Funaro and Baker have provided comprehensive discussion of important points to be considered by planners under such major subjects as market analysis, selection of site, the site plan, provision of parking space, freight handling, and the store buildings themselves. While much of this discussion will be no news to those architects who have had an experience in the problem of the regional-sized center, the thorough research on parking, which seems to cover all the approaches made to this key problem by the leading architects in the shopping center field, is probably alone worth the purchase price of the book. Any body interested in shopping centers will also find it worthwhile to have the lavish illustrations of almost everything done so far at hand. There illustrations are especially effective when handled at details which may be suggestive to the designer and grouped under such headings as signs, overhangs, functional landscaping, etc. Funaro prepared much of the material under a research grant from Columbia University. He is presently working with Howard T. Fisher, one of the pioneer shopping center planners.

While a comprehensive record of shopping center development going all the way back to J. C. Nichols' famed Country Club Plaza has undeniable historical value, it does seem rather a pity that so much space has been devoted to the older centers and so little (comparatively) to the exciting new work still in plan stage by such leaders in the field as Ketchum, Gina & Sharp, etc. The authors seem to suffer, too, from a rather uncritical approach to design. Beyond such routine acknowledgments as that it is nice to keep autos off the shopping mall or that a center of a certain size will make it impossible for shoppers to reach all stores on foot, there is little to suggest the remarkable development of design skill in this field and the enormous freedom which this new building type promises the designer. Perhaps this is because the authors seem more wedded to such safe and plodding topics as relation of store space and type to available statistics defining the potential market. This is not to suggest that this topic is not of vital interest to the owners and planners of the shopping center. It is, as a matter of fact, so vital that a reference book can scarcely deal with it in any way that will be of any real use to the shopping center planner. Definition of the market potential is now the business of a horde of specialists, and it is doubtful if, for example, the minute examination of the market area of Cameron Village (Raleigh, N. C.) which the authors present will teach these specialists anything they did not know already. Few books or articles of any sort ever come close to ferreting out the intimate know-how of such men as realtor William Zeckendorf or veteran store architect Kenneth Welch or economic analyst Larry Smith. But it would be nice to hear more direct quotations from these folks. Like this one, for example, from Smith: "The most profitable lease with a major tenant will be based on a low minimum rental rather than on a high. The major tenants take the attitude that if they are required to guarantee a fair return on the total valuation of land and buildings, they should pay no percentage rent. If they do pay a percentage it will be more in the nature of an inflation clause, rather than a full percentage on sales . . . The guaranteed rent for the major tenants should be limited to not more than 4% on the land valuation and 5 $\frac{3}{4}$ % on the buildings, plus an allowance sufficient to take care of the taxes. If the guaranteed rents are higher than this rate you will either lose the tenants or lose part of the possible percentage rents."

But this is about all the incisive Mr. Smith is permitted to say, leaving this reviewer, at least, ready to trade much data on yesterday's shopping centers for more such informed opinions.—L.

(Continued on page 144)

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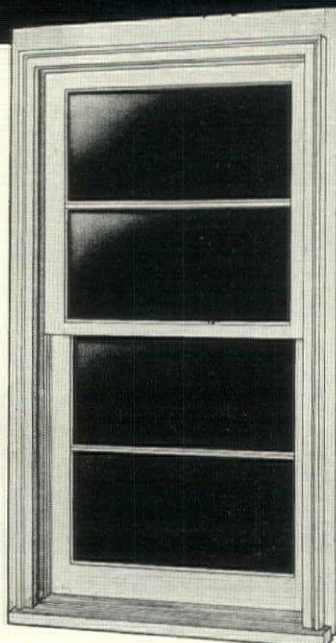
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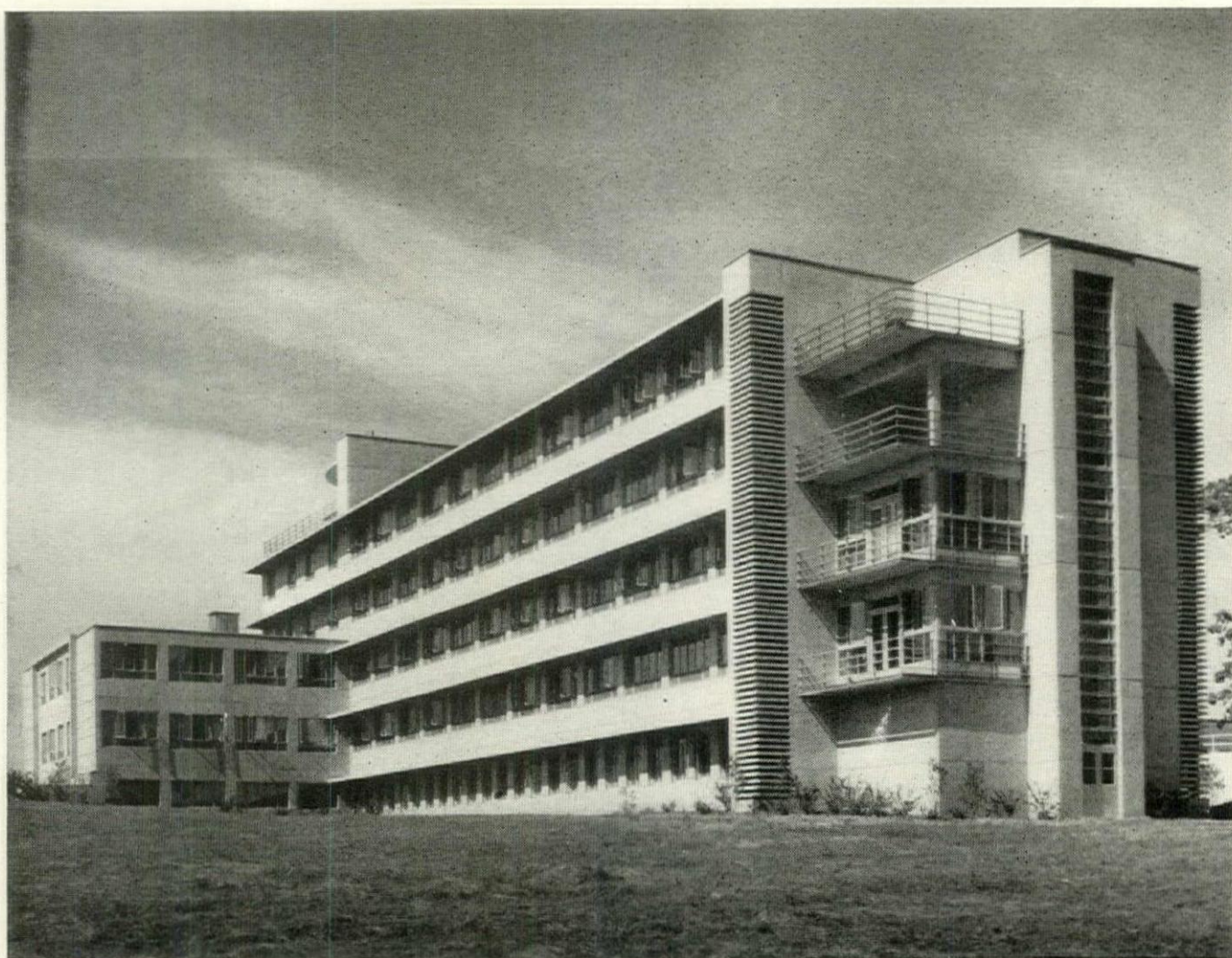
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The Jackson-Madison County Hospital in western Tennessee was designed in architectural concrete by Architect J. Frazer Smith, Inc., of Memphis. The structural engineer was A. R. Jessup of Nashville. The contractor was Harmon Construction Company of Oklahoma City.

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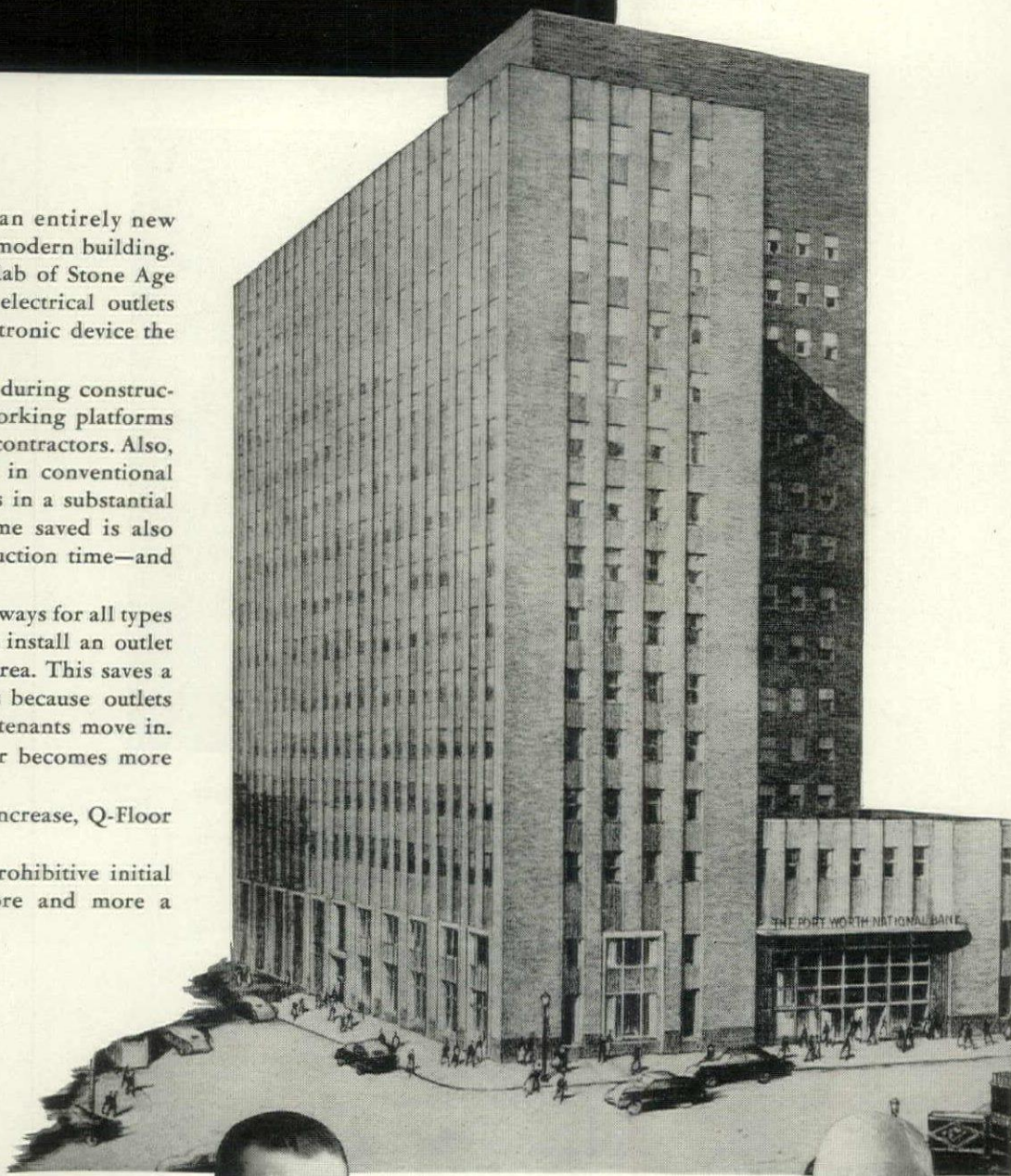
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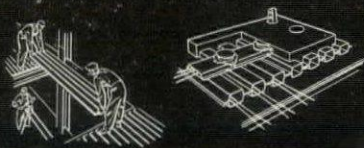
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REVIEWS

PLANNING AND BUILDING THE MODERN CHURCH.

By William Ward Watkin, F.A.I.A.
Architectural Record, 119 West 40th St., New York
18, N. Y. 163 pp. Illus. 9 x 12 in. \$8.50.

The way this nice liberal harmless book is written goes far to explain the anemia that has overtaken church building in the U. S. especially Protestant church building—despite its high current volume. Author Watkin, head of the Department of Architecture at Rice Institute in Houston, is one of those scholars and gentlemen who knew Goodhue, (in fact worked in the famous Cram, Goodhue & Ferguson firm back before 1910) traveled widely, knows history.

Like many a tolerant modern minister, Watkin is broadly sympathetic, reproduces Saarinen's contemporary church at Minneapolis along with Goodhue's or Maginnis's historical adaptation and appreciates the continued dignity, thoroughness, sincerity. What he fails to note is how fast history keeps moving, how different the terms of church building have become in ways that reach beyond the arrival of air conditioning and modern lighting. There are not only different ways of building, there is a different way of thinking about building. For one thing, today's architect wants more than an amiable discussion of aesthetics; he needs some precise, compactly packaged information about technical means, implemented with cost data. At a level a good deal higher there has been soul-searching about the meaning of the church, and some first-class re-forming of the church, as a symbol, by today's great architects such as Rudolf Schwarz. None of all this has registered in this book. Even the publishers have gone the old easy way. They have produced nice looking pages; but by now those solid columns of type 6" wide in new architectural books are getting to be an irritation.—D.H.

CATHEDRALS AND HOW THEY WERE BUILT

By D. H. S. Cranage. Cambridge University Press
51 Madison Avenue, New York, N. Y. 6 3/4 x 8 1/2
42 pp. plus Illus. \$2.50.

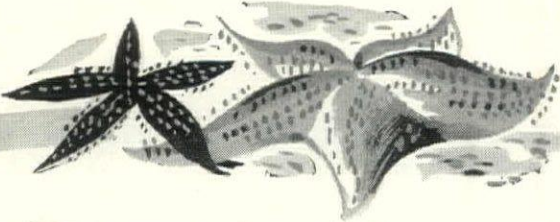
Dr. Cranage offers a short, clear account of some major principles in Gothic and Romanesque and draws the reader's attention to the structural difficulties involved in the transition between the styles. The general principles explained in the text are illustrated in the 20 plates and drawings.

WOOD TECHNOLOGY.

Constitution, Properties and Uses by Harry Donald Tiemann. Third edition
Pitman Publishing Corporation, New York. 6 x 9 in.
396 pp. Illus. \$6.

The new edition of Tiemann's valuable treatise on the basic nature, uses, and techniques of wood carries this famous wood physicist's work another step forward. The book was first published in 1942 to give a complete perspective in the field not only for specialists but for non-technical readers too. As a shorter, less specialized version of F. Kollman's Technologie des Holzes

(Continued on page 148)



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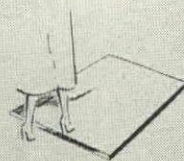
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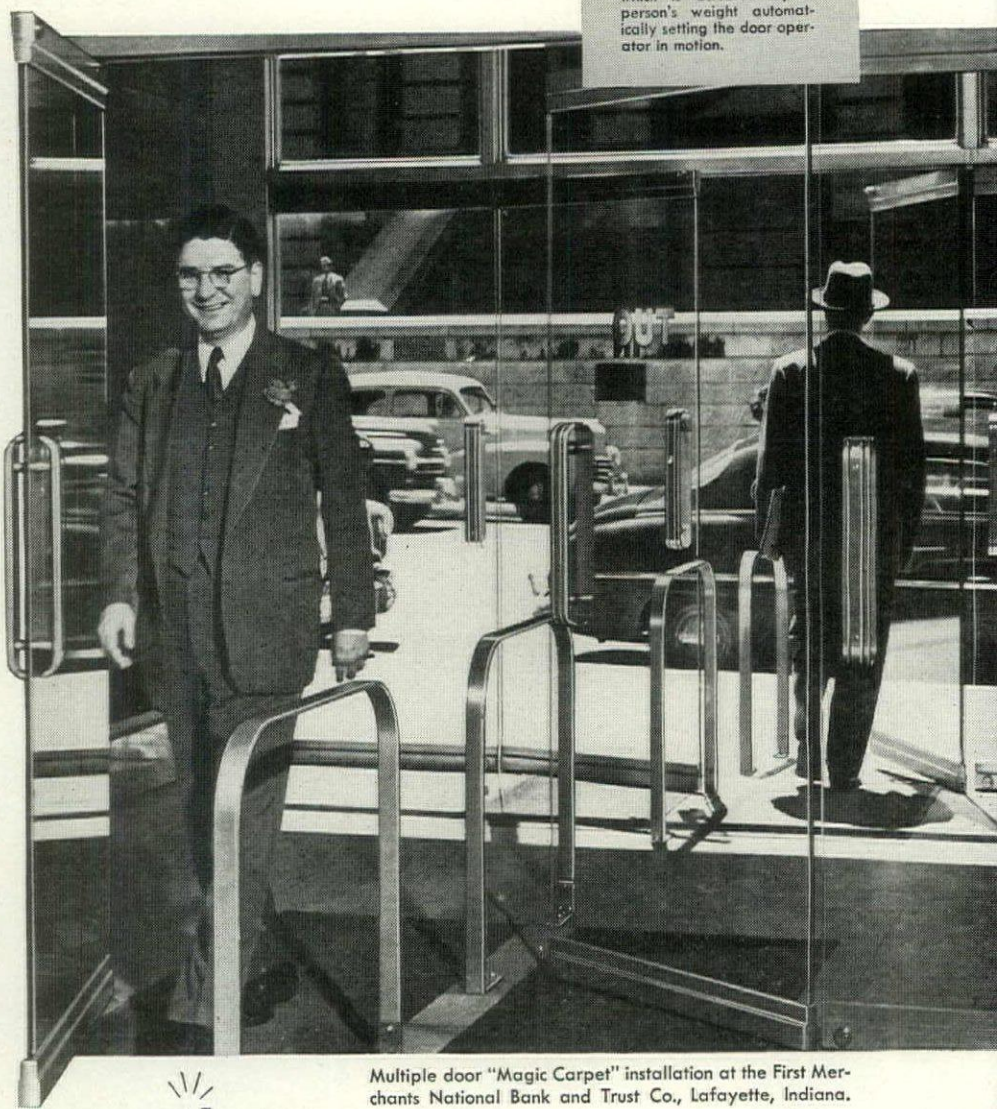
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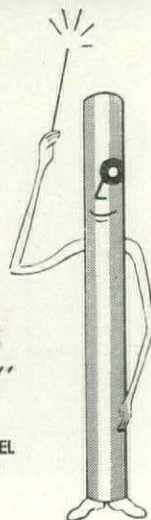
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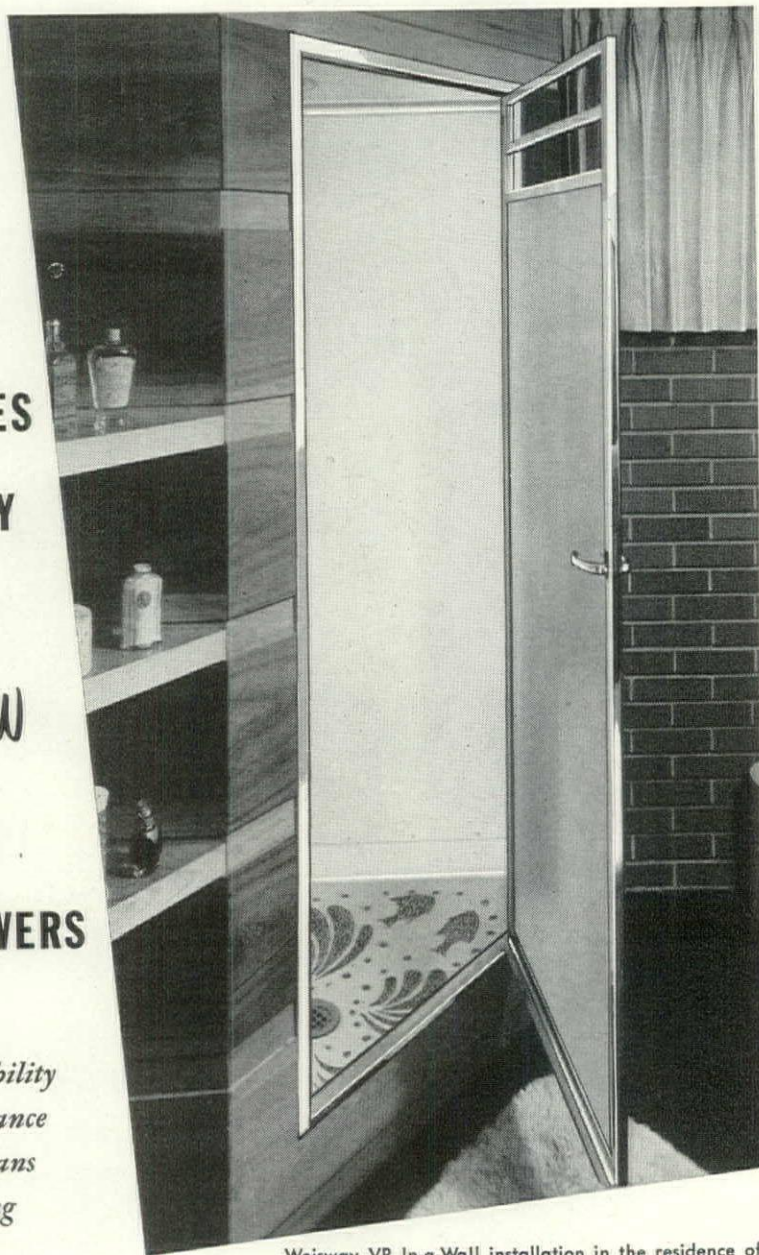
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REVIEWS

it has been composed from Harry Tiemann's long experience in the U. S. Forest Products Laboratory and in teaching; the new edition brings things up to date. The author has more to offer than arid technology; running through the book is a sense of the wonder and beauty of tree growth and an attempt to explain and share it with the reader. For example, he begins his chapter on the life of the tree and its relation to the human race:

"While I am writing about wood, the hills and valleys are a blaze of glory. Late as it is, Halloween, there has been no killing frost and the leaves are still on many trees. A month ago the hickories and ashes and elms turned a golden brown; now they are bare, but the silhouettes of their branches against the golden or crimson sunset sky are quite as beautiful in their way as the leafy tops in summer. . . ."

His has been no idle passion, as the fact-filled pages of his book testify. From it you get the big picture and many fascinating details of wood anatomy, wood physiology, timber physics, wood chemistry, timber mechanics, and utilization.

LAND PLANNING LAW IN A FREE SOCIETY

By Charles M. Haar. Harvard University Press. Cambridge, Mass. 213 pp. 6½ x 9½. \$4.

A study of the British Town and Country Planning Act of 1947, Mr. Haar's book is of interest to those who are concerned with the social, political, administrative, and legal aspects of land use, city planning and housing. He introduces the new English planning standards and concepts; analyzes and makes recommendations about the administrative problems and machinery devised for planning in England; and relates the Act to the general policy of the Labor Government. Although writing against a British background, the author, a New York lawyer, has continually kept in mind the needs of the U.S. planner.

PAINT FILM DEFECTS—Their Causes and Cures

by Manfred Hess. Reinhold Publishing Corp., 30 West 42nd St., New York 18, N. Y. 544 pp. 6 x 9. Illus. \$12.

Based on the standard German work, this first English edition has been rewritten and enlarged to include important developments in the raw material side of the paint and varnish industry. Designed as a reference work, it will be of interest primarily to paint manufacturers but should also be of value to big paint users.

THE MEANING OF ART.

By Herbert Read. Princeton University Press, 2 W. 45th St., New York 19, N. Y. 5¼ x 7¾. 262 pp. Illus. \$3.50.

A survey of the history of art (especially painting and sculpture), this book is a lesson in art appreciation and a briefing on such movements as Gothic, Baroque, Impressionism, Surrealism, Expressionism, etc.

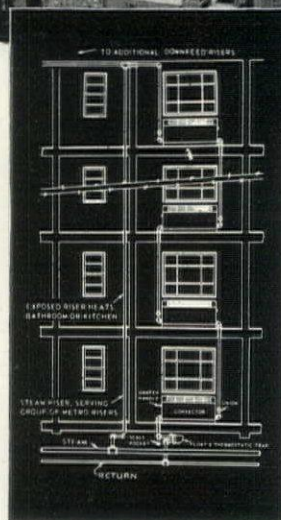
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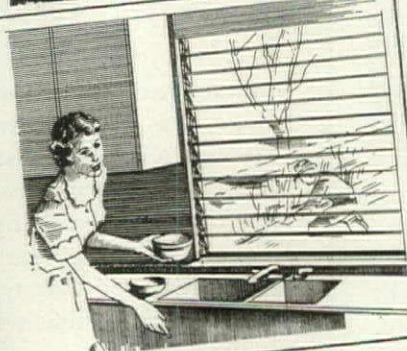
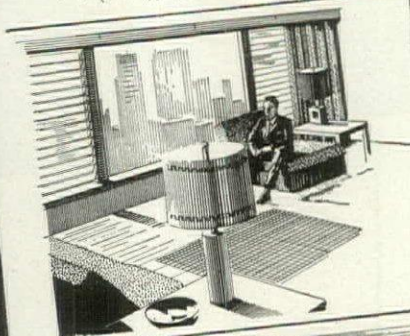
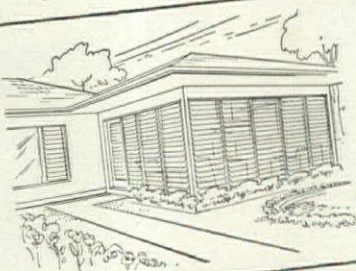
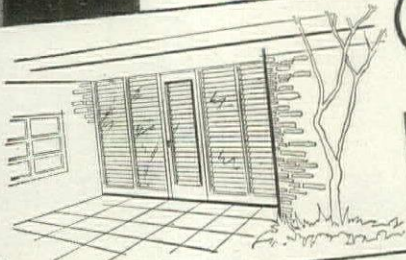
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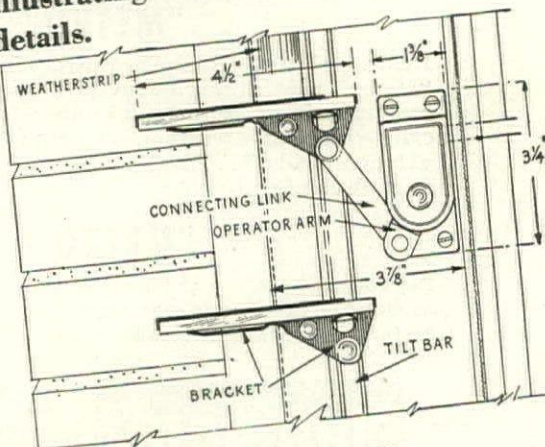
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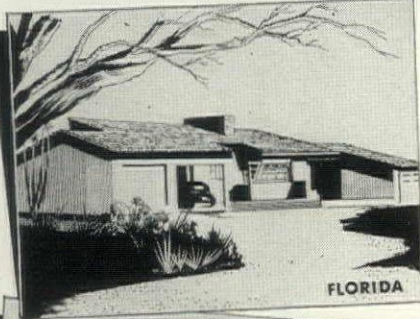
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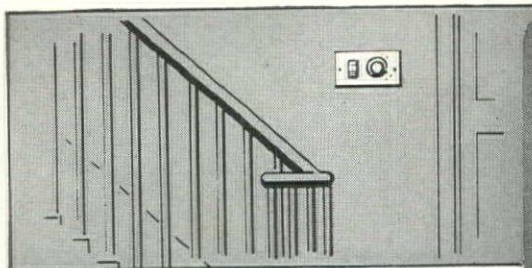
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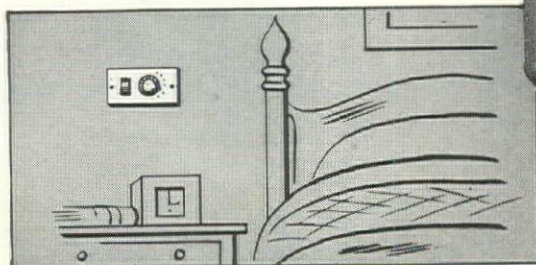
New York 17, N.Y., 565 Fifth Ave.

Washington 5, D.C., 740-15th St., N.W.

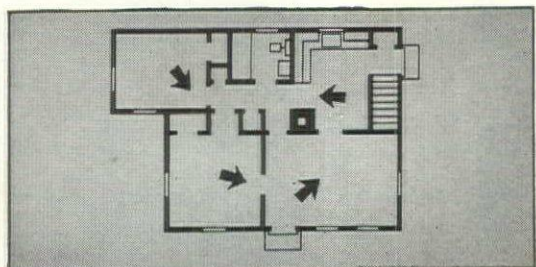
Cleveland 20, Ohio, 12734 Woodland Ave.



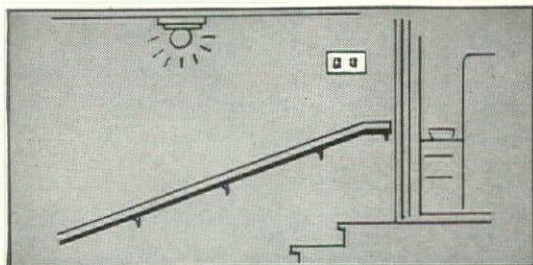
1 Master selector switch in front entrance hall can provide over-all control of lights and outlets.



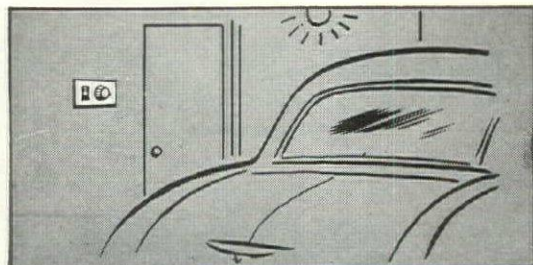
2 Master selector switch in master bedroom can be wired to control fans, coffee makers, and lights right from bedside.



3 The pathway-of-light idea lets the home owner light his way through his house with G-E remote-control switches.



4 Remote control permits practical extension of the usual two-point control of cellar or attic light by providing a switch at the bedside for these often forgotten lights.



5 For outside lights, porch lights, breezeway lights, garage lights—remote control is a natural. Control them from entrance hall, rear door, and at the lights themselves.



5 practical suggestions

FOR ADDED FLEXIBILITY WITH G-E REMOTE-CONTROL WIRING

To make a completely flexible wiring system practical and economical, the General Electric remote-control wiring system now offers a centralized control of as many as nine different circuits.

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Check the five suggested applications of G-E remote control. For first-hand information see your G-E Construction Materials Distributor—for a handy, helpful booklet, write to Section D83-104, Construction Materials Division, General Electric Company, Bridgeport 2, Connecticut.

You can put your confidence in—
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Two new magazines for Building

Dear Subscribers:

First let me thank you for the heartwarming and somewhat breathtaking welcome you have given our plans for publishing THE MAGAZINE OF BUILDING as two magazines instead of one—

one edition for houses;

**one edition for big buildings — schools, hospitals, stores,
factories, office buildings, etc.**

More than 2,500 of you have already taken the time to write us some comment on our plans, and almost without exception your letters have been enthusiastic. Of them all, only 39 were unhappy (they will get their money back).

New subscribers have been just as encouraging. The first week the news got around 5,216 new subscriptions poured in through the mail—more new subscriptions in that one week than our whole circulation when first we became part of the TIME, LIFE, FORTUNE publishing group.

New subscriptions are still pouring in. By the time you read this letter their total will be around 20,000. Twice we increased the print order for this October issue, to an all-time high of 86,000 copies. But even so, I am sorry to have to add that nearly 10,000 of these new subscriptions will have to start with a later issue.

Before we wrote you about the two-edition plan last month we were satisfied in our own minds that today's rebirth of architecture and today's revolution in construction had outstripped the limits of any one publication; we were sure we could do a much better job of keeping you up to date on the changes sweeping through home building and the very different changes sweeping through heavy building if we doubled our space and gave you two magazines instead of one.

Your instant approval has only left us wondering why we were so slow in reaching our decision.

This October issue about houses is our dress rehearsal for the new magazine about houses.

By January, with a larger staff, with more time to work things out, and with the experience of this trial issue behind us, we hope we can give you an even more exciting presentation—but in page size, in number of pages, in photographic treatment and overall physical appearance, this issue might well serve as our dummy for the new magazine.

Not all our plans are previewed here. Beginning in January, for example, we hope to have at least one article a month on interiors, with special emphasis on the importance of integrating furnishings and equipment with the architecture of the house. We shall have more to say about the values of skillful landscaping. We hope to probe

more deeply into land planning . . . site planning . . . orientation . . . climate control . . . regional variety . . .

More pages and more staff will mean more travel too—more direct reporting of houses and house developments our editors have studied at the site, so that we may act as your eyes and ears every time a promising new project turns up anywhere.

By and large, however, this issue exemplifies the concept which will control every issue of the new house magazine, a concept which will put constant emphasis on the all-important interplay between the best architect-designed houses for individual clients and the best volume-built houses for everyone.

Each issue will feature half a dozen individually designed houses that cannot fail to stimulate the thinking of other architects, houses in which the home builder will find all sorts of ideas he can borrow and adapt to give his developments better design, simpler construction, extra livability, quicker salability. And each issue will feature outstandingly successful builder houses in every popular price class, in a variety of treatments; houses that may help initiate architects into the special problems of mass production; houses from which other builders can learn how and why and for how much they could incorporate many important time-saving, fast-selling new features in their own projects.

The edition on bigger buildings will be very much like the ARCHITECTURAL FORUM as you have known it for many years, with this significant change:

With no need to share its space with houses, we will at last be able to show you the school-of-the-month not just occasionally, but every month; the office-building-of-the-month not just occasionally, but every month; the hospital-of-the-month not just occasionally but every month. And at the same time we can keep you posted on all the important new factories, warehouses, stores, churches, hotels, theatres.

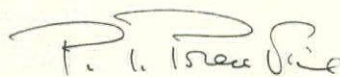
We will have space to keep you better posted on important buildings going up abroad. We can devote more attention to modernization projects. We can give you better coverage of what better engineering is contributing to better building.

Multi-story apartment buildings will properly fall within the province of this bigger buildings edition. Indeed one objective to which we have dedicated this magazine is helping to work out, on a private enterprise basis, a solution to the slum clearance and urban redevelopment problems now so largely abandoned to the disproportionate costs of public housing.

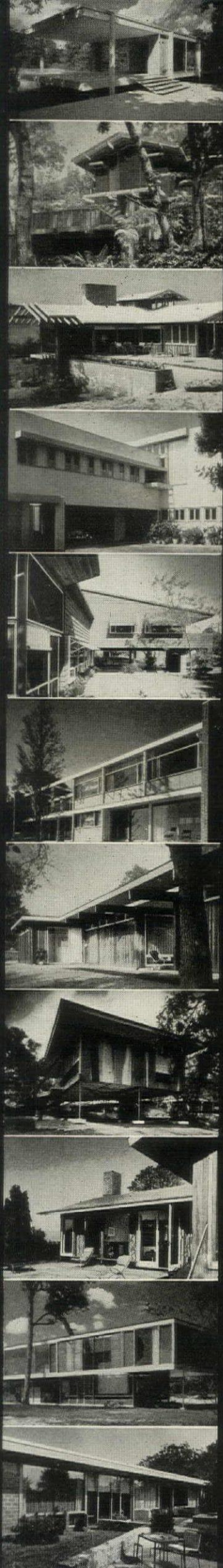
Next month and in December we will send you two magazines in one—with two separate editorial sections in each issue—50 or 60 pages of houses, 50 or 60 pages of bigger buildings.

After that, the two editions will appear separately.

Cordially,



Editor and Publisher



1. p. 156

2. p. 164

3. p. 166

4. p. 168

5. p. 172

6. p. 174

7. p. 177

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9. p. 184

10. p. 186

11. p. 190

HOUSES—Architect & Client

The seven architects who have designed these 11 houses for individual clients have shown great inventiveness in working out ideas that builders, owners and other architects will borrow. Moreover, these architects have clearly manifested in their work the wide divergencies of basic attitude with which a mature modern architecture can meet an industrial civilization.

Here are some of the innovations:

The *house on stilts* variously provides breezy upstairs living, or a usable open basement or clear air-born architectural form (House Nos. 1, 8 & 10).

The *central service core* frees the valuable periphery of the house, concentrates mechanical equipment (1, 7 & 11). The associated idea of the *re-designed roof* lets daylight into these central areas, while it enriches the design with picturesque roof structures (3) or pleasant geometric patterns (7).

The *middle buffer zone* gives expanded scope alternately to children or parents, to indoor or outdoor activities (7 & 11).

And the architects have created a whole new range of *kitchens* (see especially 1 & 4).

The use of that rare and historical material, *steel*, in some cases is only auxiliary: to help out in a wood house with problems of spanning or alignment (9); in other cases it is radical: to create an entirely new vocabulary of house architecture (1 & 8) beautifully classical or elegantly functional.

More important is the diversity in the architects' basic orientation.

Mies van der Rohe's house (1) is *modern and classical*; he has embraced industry, translated the steel skeleton frame into a house "language," provided impersonal but beautiful space to be personally arranged by those willing to live in the modern equivalent of the Doric order.

Harwell Harris (2, 3 & 4) is *modern and romantic*, serving above all the individual client in an individual landscape, climate, and tradition; he softens industry with a wood carpentry which is none-the-less strongly modular in rhythm, fitted to the power saw and stock sizes.

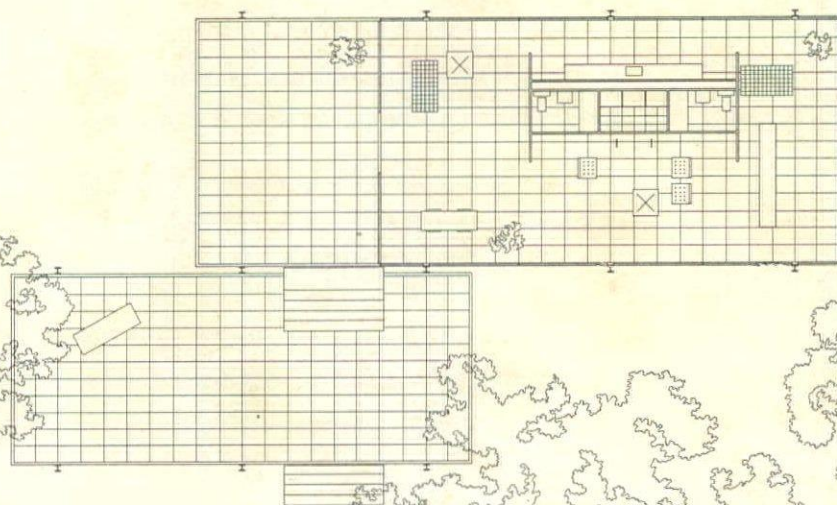
Robert Kennedy (9) is *modern and colloquial*: his polite house carries its high breeding without ostentation and, like a well cut suit, has a wide appeal and makes a high degree of sophistication in design appear casual.

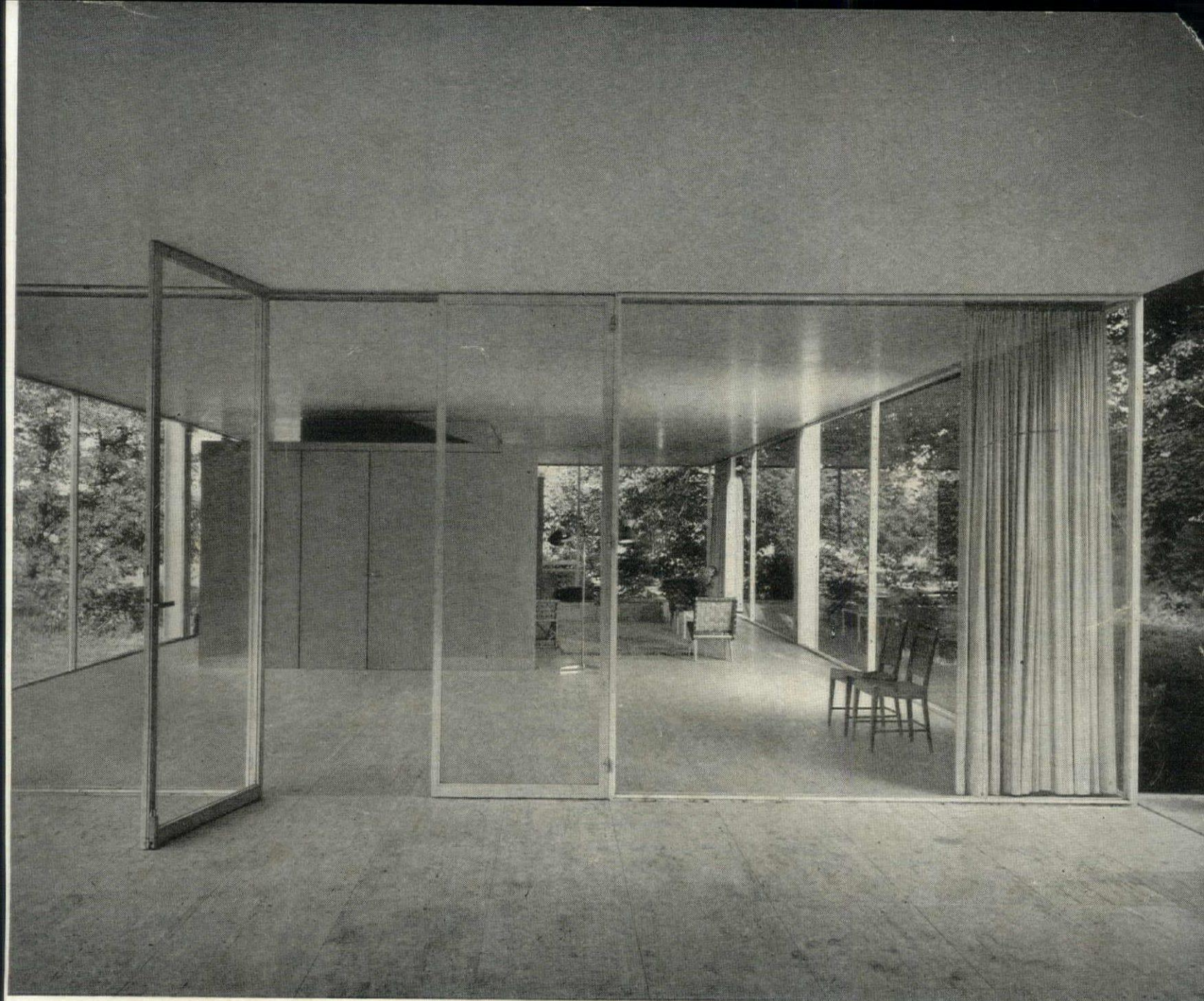
Milton Ryan (8) is *modern and functional*: compared to Mies his use of steel is that of a sensitive engineer rather than a modernized mason, and accordingly fresh, airy and delightful.

The other houses fall within areas which these four sharp types have bounded. Even those that might be accused of that supposedly frightful crime of the *cliche modern* prove in their inventiveness of plan that modern civilization possesses a negotiable architectural language, fluent, rich, and many-sided.



GEORGE H. STEUER





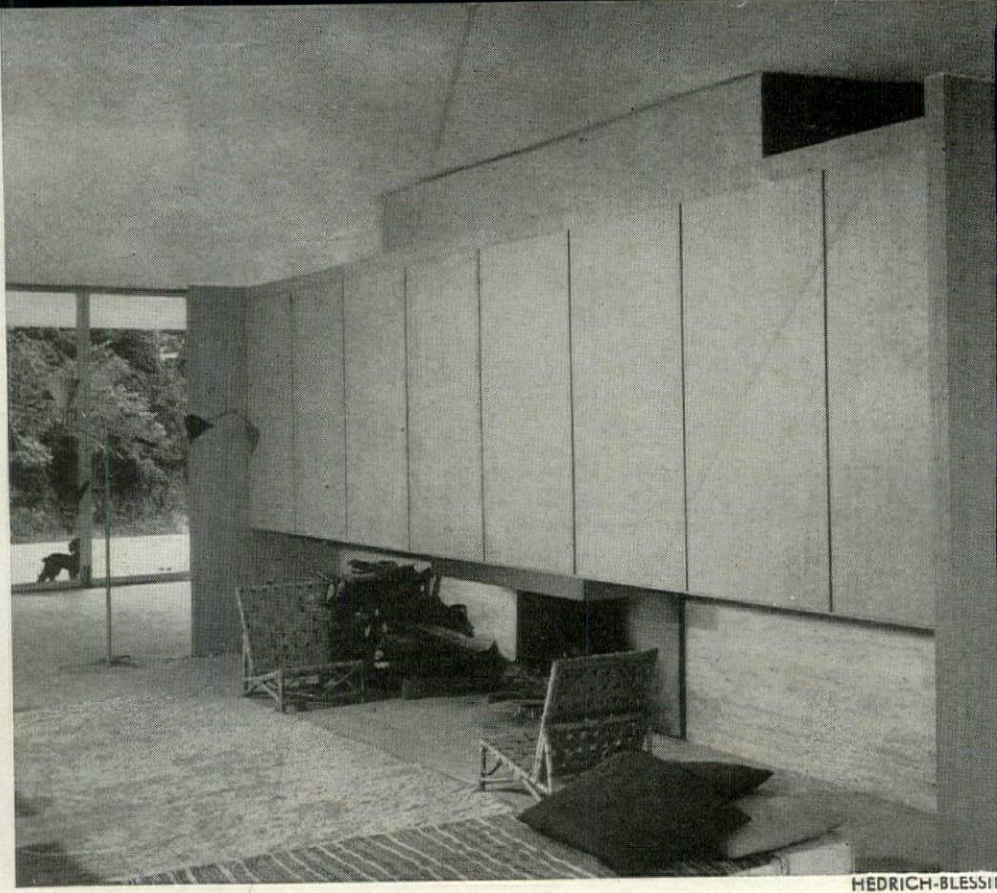
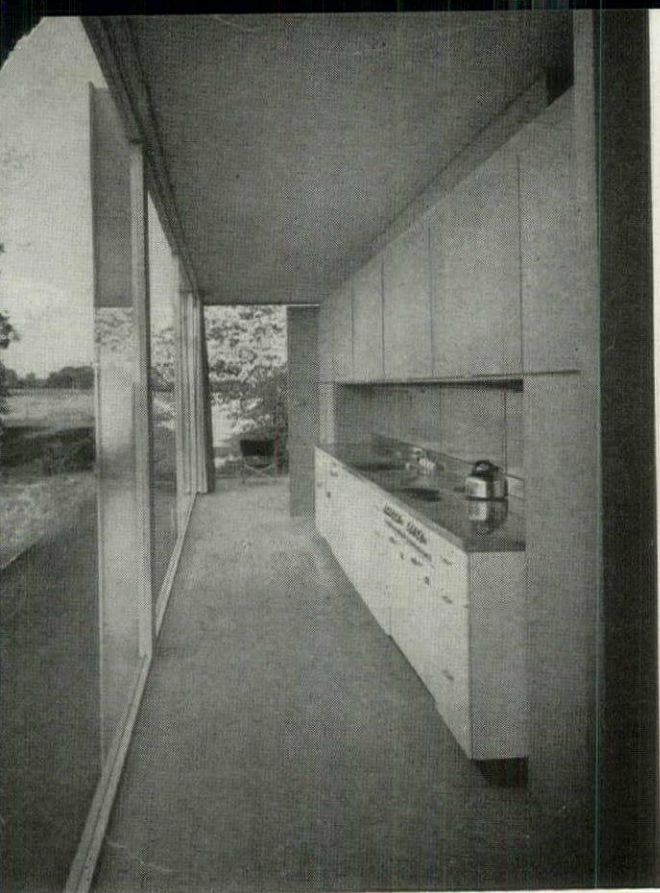
HEDRICH-BLESSING

THIS IS THE FIRST HOUSE BUILT BY LUDWIG MIES VAN DER ROHE

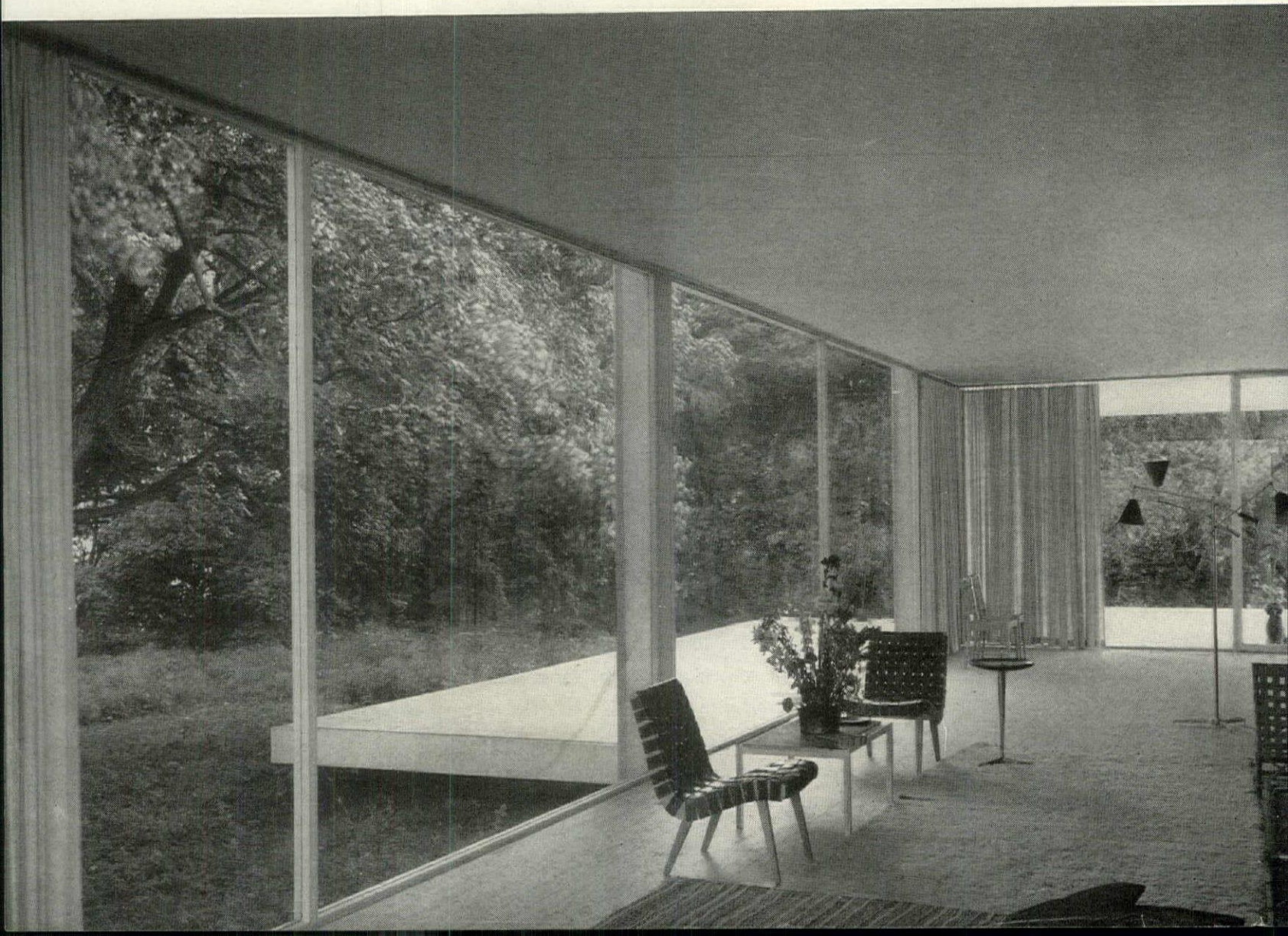
since he came to America in 1938. To some it may look like "nothing much"—just a glass-sided box framed in heavy, white steel; but to many partisans of great architecture it is the most important house completed in the U.S. since Frank Lloyd Wright built his desert home in Arizona a dozen years ago. For the Farnsworth House near Chicago has no equal in perfection of workmanship, in precision of detail, in pure simplicity of concept.

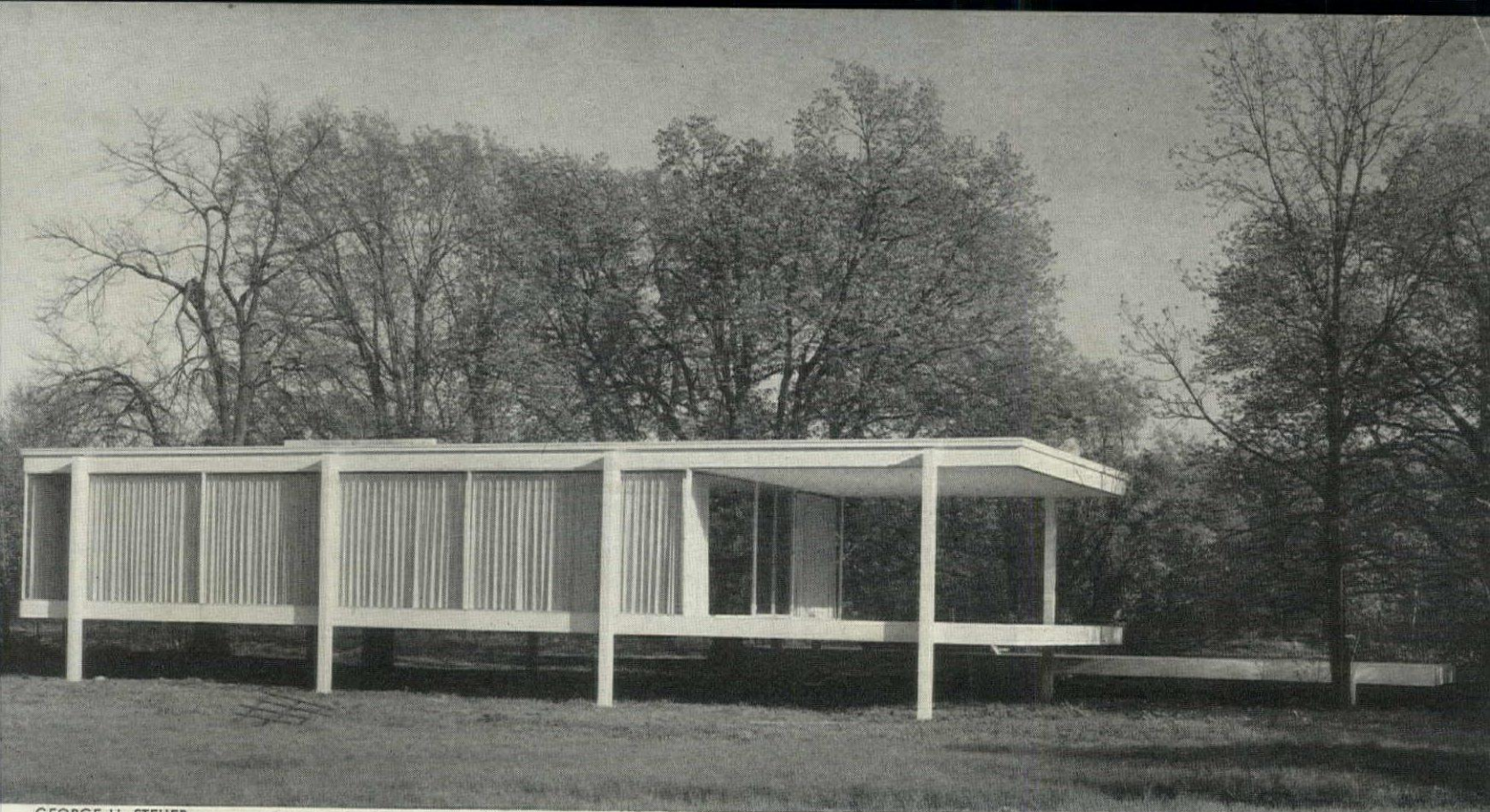
Quite obviously that concept is very special and selective in its appeal. It has little to say to those whose ideal is an informal setting for family living, or to those who seek first to express the individual personality of a client, or finally to those who concentrate on devices of climate control and scientific management of environment. The Farnsworth House was designed for something else to which all these things are equally irrelevant.

The intense and special appeal of this glass prism even for those who do not at first understand it (and can imagine no direct personal use for it) is addressed directly to the spirit. The house is above all a work of art of supreme integrity, unity and perfection. Simple as it may seem, it took five long years to design and build. It is intended to challenge not only the standards of architecture; it challenges, also, the standards by which most men work and live—for it restates certain simple and lasting values that have sometimes been lost in the shuffle.



HEDRICH-BLESSING





GEORGE H. STEUER

"Less is more"

No Mies axiom has been quoted more often than his assertion that "less is more." It is a succinct description of the disciplined world in which Mies works and by whose laws he abides; and the Farnsworth House is a part of that world expressed in glass and steel and marble.

The finished house is practically a one-room glass shell, 77'-3" long and 28'-8" wide, suspended between eight structural steel columns that hold it as if by magnetic force about 4' above the ground. Set off to one side and overlooking the nearby Fox River is a lower terrace-platform, 55'-3" by 22'-8", hung between short steel posts. (Since the Fox River occasionally overflows its banks, the house may become a glass boat for a few days out of the year, accessible only by canoe.)

Sandwiched between roof and floor planes are three major elements: a porch (soon to be screened) at the terrace end; a glass-enclosed room; and—in the middle of that room—a long and narrow service core containing bathrooms, utilities, a large kitchen and fireplace. The service core is like an island in the living space; its short spur walls at each end suggest dividing lines so that the living space appears clearly articulated with separate areas for dining, sleeping, relaxation and conversation.

"A special kind of order"

The eight structural steel columns that hold the glass prism between them are set 22' on centers. They are strong enough (8" WF) to support a much heavier structure, and some have misinterpreted their use as a functional impurity. They have not realized, perhaps, that there are demands of architectural expression quite as compelling as the demands of pure engineering, that the visual relationship of column thickness to depth of fascia and of column thickness to thickness of mullion can make or break a work of art as precise as this house. When Mies says that "every decision leads to a special kind of order," he also warns that

architecture should not "overemphasize the materialistic and functionalistic factors in life . . . (but rather) emphasize the organic principle of order . . . and the successful relationship of the parts to each other and to the whole."

The columns are welded to steel channel facias at floor and roof levels. Welding marks were ground flush after assembly. Mies did not like the texture of the structural steel next to the grinding marks and so the entire steel frame was sandblasted down to a smooth, mat silver before it was painted white!

This fascinating touch most clearly conveys the jewel-like perfection of the house. Mies has handled his materials here as only the finest Japanese cabinet-makers know (or knew) how to handle wood. The three coats of white paint were so carefully brushed onto the steel that they appear sprayed. The 2' by 2'-9", 1¼" thick Italian travertine slabs that form the floors of house and terrace were fitted into the steel frame with a precision equal to the finest *incastro* stonework. The plaster ceiling has the smoothness of a high-grade factory finish. The primavera panels of the service core were matched with infinite patience. And the steel frame was welded to such precise dimensions and so tautly that the column flanges seem almost in tension. When you strike them with the palm of your hand, they sing like a tuning fork. . . .

Yet this is not all: Even where the eye will never penetrate, Mies has pursued his quest for a "special kind of order." The floor, for example, is framed with I-beams 5'-6" apart. Between them span precast concrete planks, resting on the *bottom flanges* of the I-sections, so that the underside of the house is as smooth as the belly of a plane! On top of the precast planks Mies put a light-weight fill, slab, cement grout and the 1¼" travertine finish.

Mechanically the house is just as clean. Natural ventilation comes only from the tall double-doors toward the porch and the two hopper-type windows at the opposite end. To supplement these openings, Mies placed

a blower exhaust in the kitchen floor (so as not to spoil his ceiling and roof lines); bathrooms are ventilated through a central, monitor-like shaft that penetrates the roof, contains all flues and vents; and water-supply and drainage pipes were neatly packaged in a compact stack directly beneath the service core—a short “umbilical cord” that ties the house to the earth. There are radiant heating coils in the floor all around the periphery of the house, just inside the glass walls; but the principal heating system is forced warm air. If necessary, an air-cooling unit may be attached to this system later.

“The will of an epoch translated into space”

Many will try to compare the steel and glass Farnsworth House with the steel and glass house of Mies-disciple Philip Johnson in New Canaan, Conn. (Nov. issue, '49), which was designed a couple of years after the Farnsworth House, but finished sooner. Yet whatever their surface similarities, no two houses could be more dissimilar in philosophic concept.

Here are the principal differences: Johnson's house is symmetrically balanced, almost like a Roman pavilion; it is framed by heavy corner columns; it rests on the ground and is firmly anchored down by its massive brick cylinder; its steel is painted dark gray to blend in tone with the surrounding tree trunks; it is a delightful clearing in the woods; and you can look out of it in all directions wherever you are.

Mies' house is asymmetrical, dynamically balanced; it is a floating cage almost completely divorced from the ground; it is joined to the earth by the slimmest of plumbing stacks; its steel is painted white so as to frame the view, draw out and accentuate all its colors (subtle shades of green, yellow, red and white as the seasons change); it is a viewing stand raised above the grass and the river; and you can look out in only three directions out of four, since the service core always forms one opaque wall to back up against.

And there are more differences: Johnson's structure is quite classical, quite traditional with post and lintel construction and high (10'-6") ceilings; Mies' structure is startlingly modern, cantilevered at two ends, seemingly held up by some new structural magic, between magnetized steel pylons. Johnson, Ohio-born, produced something strangely reminis-

cent of the Old World; Mies, born in the Old World, came up with a sleek, low-slung (ceiling height: 9'-2"), very American product—an optimistic flight of fancy.

“Life is what is decisive”

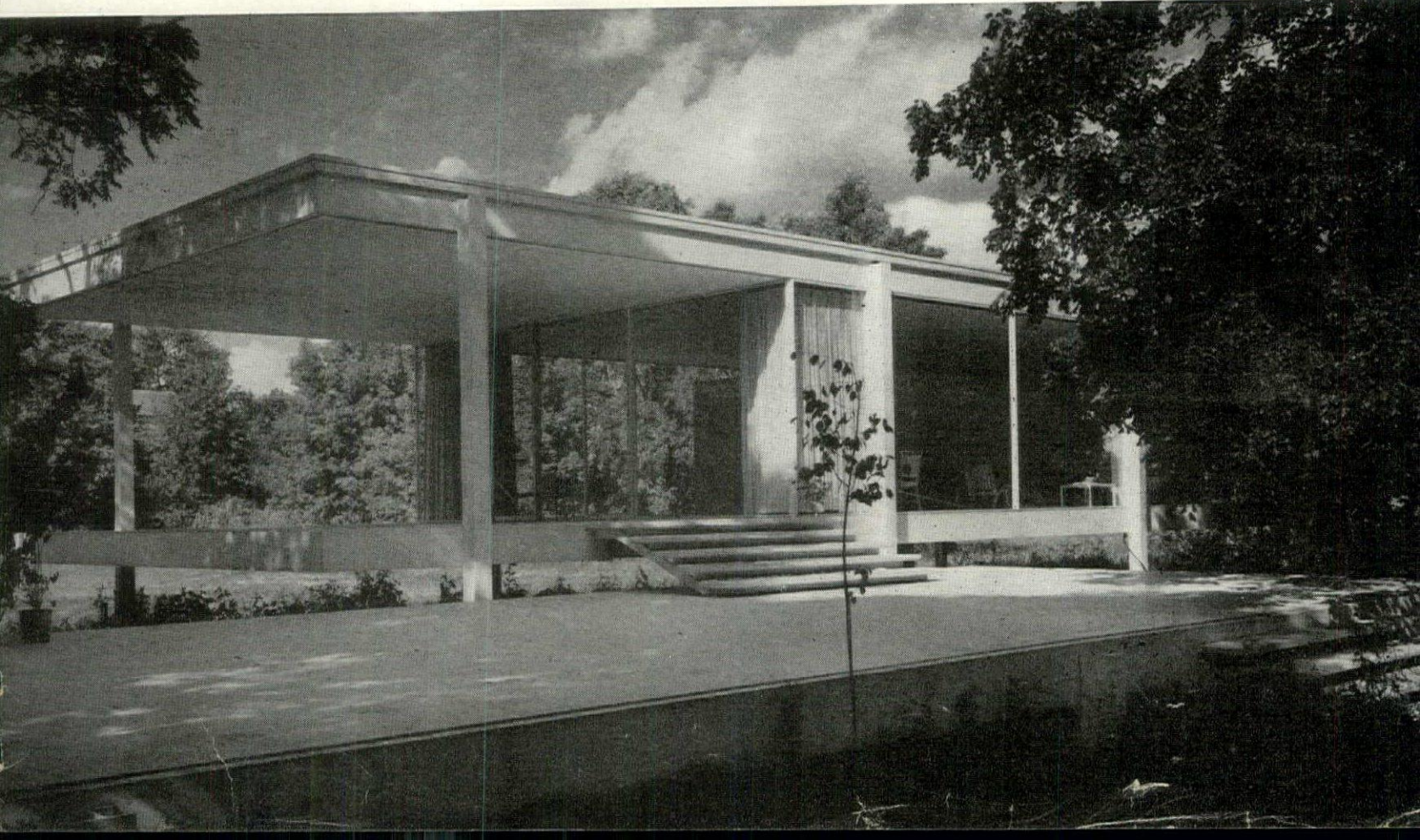
To Architect Mies van der Rohe all this is important. But even more important to him is the Farnsworth House as a statement of the relative importance of things—of the importance of architecture on the one hand, and of the individual human being on the other.

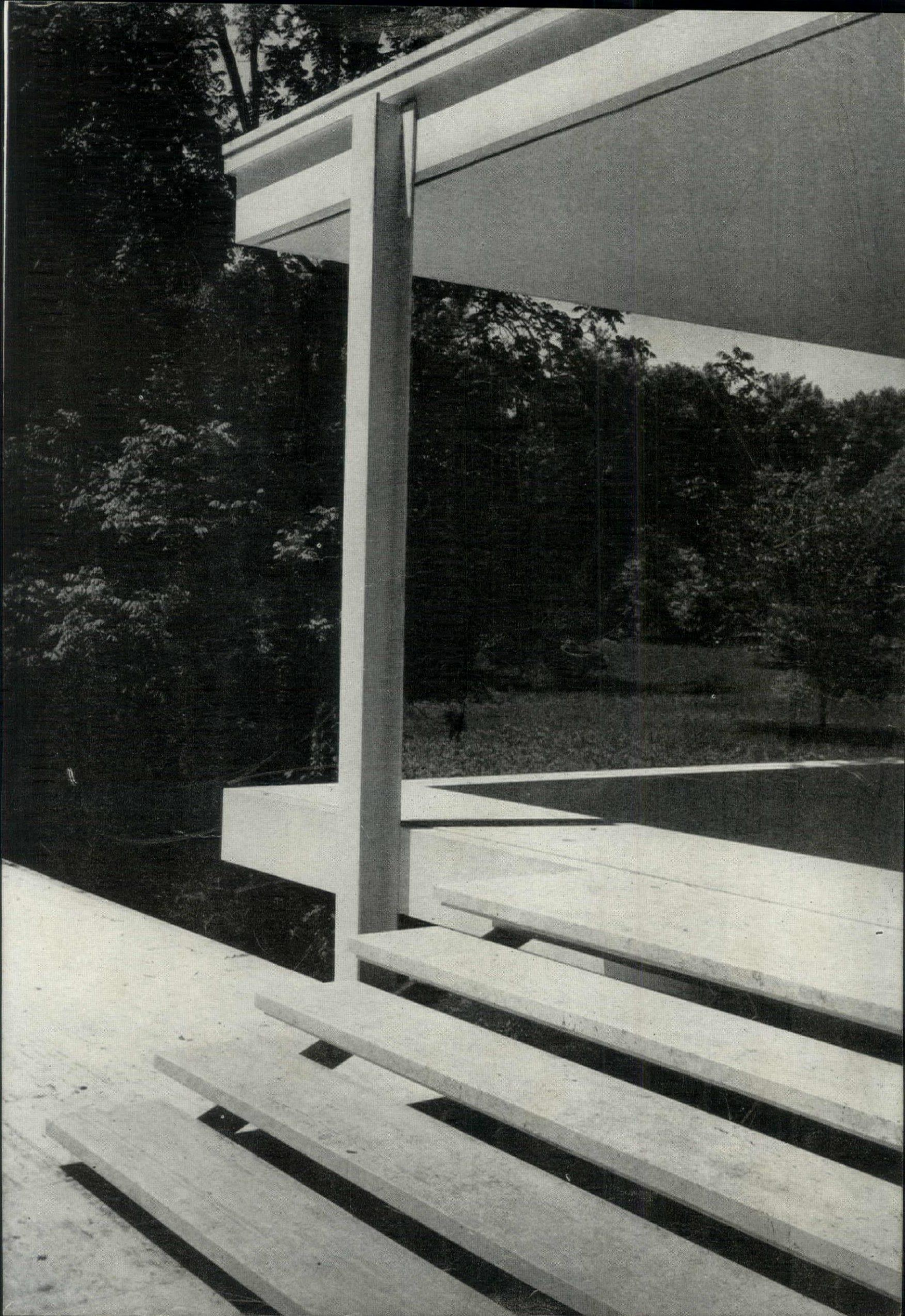
Mies is convinced that architecture should be no more than the shell within which each occupant produces his or her own dwelling. To put it another way: no romantic self-portraits of the architect, no inflexible portrayals of clients (who, in the long view, may turn out to have been only temporary tenants). Mies believes that his architecture must be objective, impersonal, a quiet and simple space, a backdrop against which each individual and all human life in its great complexities can develop freely—and develop in changing ways, from generation to generation, long after such striking clients as Dr. Edith Farnsworth are gone.

Obviously, such serenely beautiful spaces make heavy demands upon those who live in them; and, just as obviously, there will be many men and women in each generation who neither could nor should meet such demands of discipline. But for those who are willing to enter Mies van der Rohe's world, there are experiences as rich and rewarding as those in the realm of the most romantically subjective architecture.

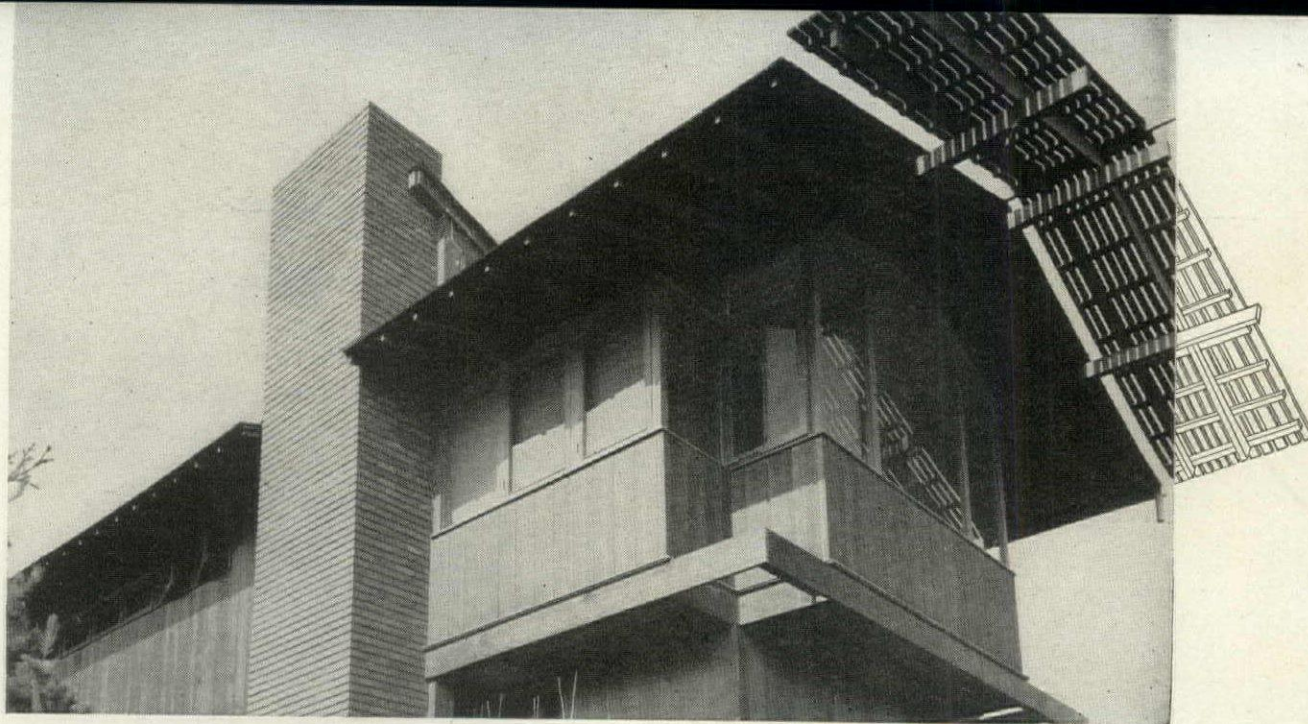
For while Mies subtracts and keeps on subtracting until all is skin and bones, the result is much like the reduction of a substance, in chemical analysis, to its crystalline parts. What remains after Mies' subtraction is a concentration of pure beauty, a distillation of pure spirit. Mies' buildings only seem to have a kind of nothingness at first glance; as time goes on, their subtle, indirect influence becomes increasingly apparent. It may be that the people who live in Mies' architecture will change, that new generations with new customs and traditions will occupy the “shell.” But this subtle influence is likely to remain—the influence of a great artist, of a great work of art, of a great discipline, of a great belief that man in architecture should be free.

HEDRICH-BLESSING









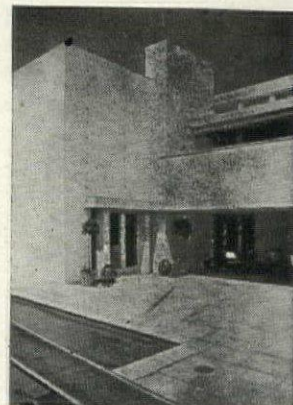
THREE CALIFORNIA HOUSES and A TRADITION REVITALIZED

HARWELL HARRIS, DESIGNER

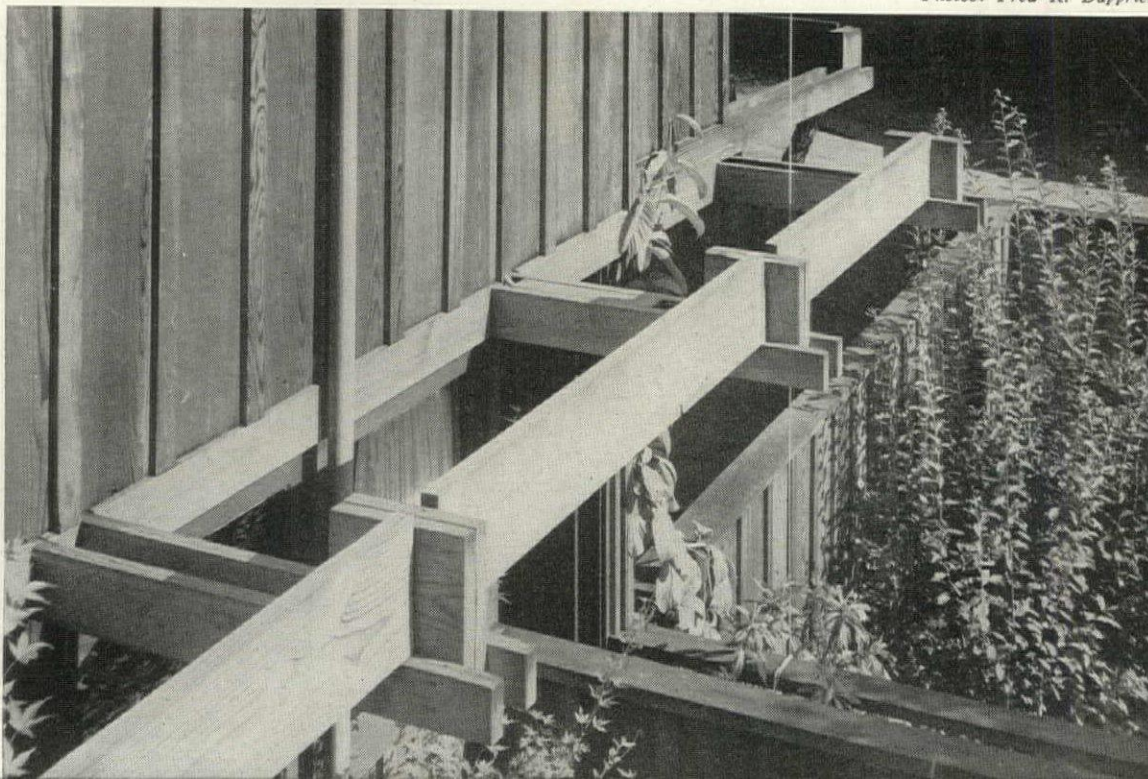
When Harwell Harris drove away from California last month to head the School of Architecture at Texas University, he left behind him many houses standing as expressions of his meticulous respect both for materials and for the subtle contours of his clients' lives. But even as Harris drove away from his homeland, away from the velvet hills, the vineyards and the avocado groves, he had already completed a unique change of direction for a young American architect. In 1946, he made a strong break with his former style. He began a second growth, shown here in three houses built since the war.

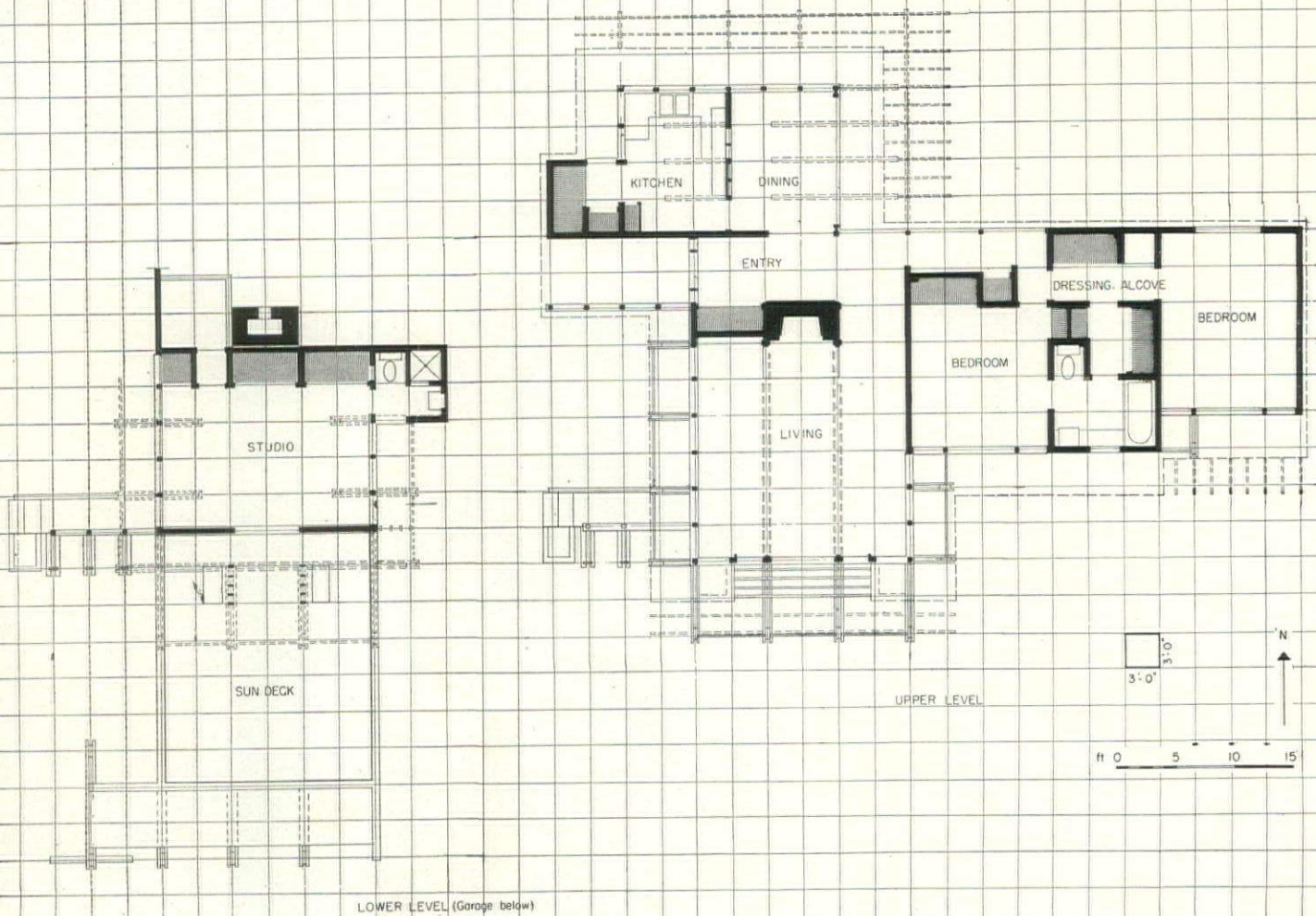
Harris has felt his profession more intensely than most young American architects. He started as a sculptor, and it was as a sculptor that he found his first style impetus in architecture, the warm indigenous forms of Frank Lloyd Wright—(it was on the day in 1925 he first saw a Wright house that he discovered the proper medium for his own sculpture; he threw away his chisel and picked up a saw). Like most talented young architects, he mastered one of the great styles rapidly and with ease, and confidently made it his own. But after a point of perfection, the next development has to be beyond that style, and this is the present frustration of most of a generation of young architects.

In these new houses, Harris hasn't forgotten what he learned from Wright. But he has gone searching "closer to home" for the seed of new growth: the genuine early "bungalow" style of Green and Green and the clear carpentry of Maybeck. He has rephrased this Southern California tradition and revitalized it. The need to grow out of an accepted style does not confront the conscience of every young architect; perhaps their elders' recent tradition of eclecticism may have something to do with their own difficulty in cracking the shell of style. It is a wracking struggle, and Harris took it on. His success is shown here.

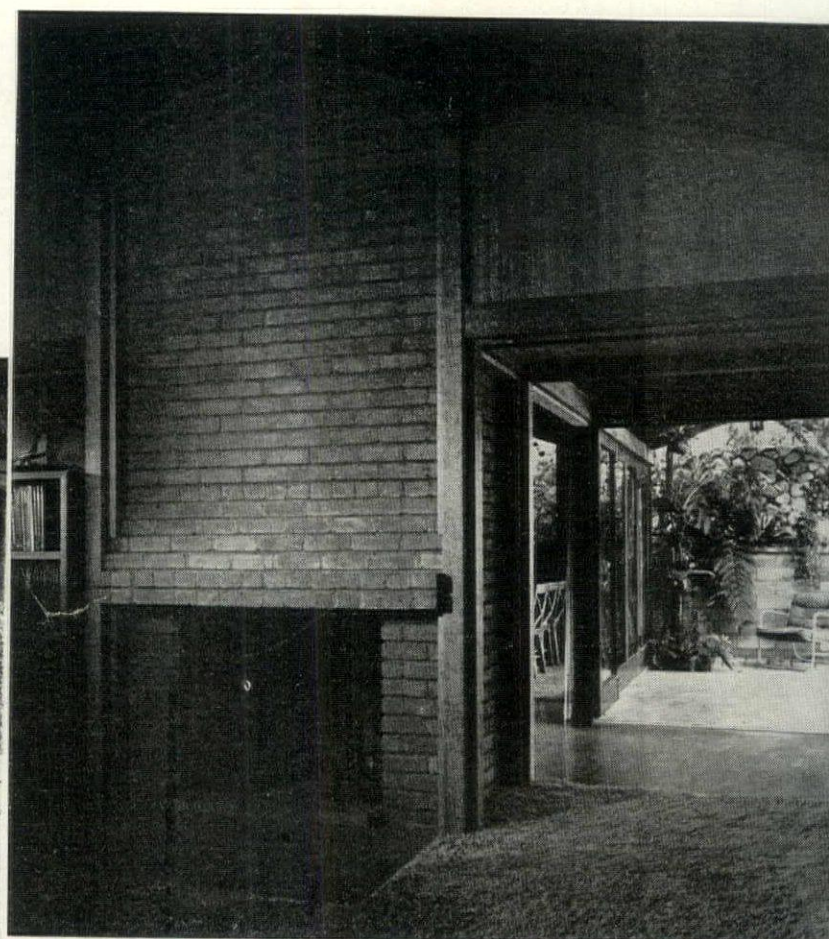


Photos: Fred R. Dapprich





Photos: Fred R. Dapprich



in living room looking North

Informality is the key word to the family's use of this house, and the house cooperates. It stands, not in the countryside, as it appears from photographs, but on the side of a hill in one of those verdant California cities, and hugs the outline of the slope. Privacy from the street is maintained by siting the garage forward under the house, with pleasant patio above it. Note that Harris' detailing of the wood is loving, but is also shrewdly adapted to use of modern power tools.

in living room looking South

I. A house in the wood tradition

The module of this house—and Harris is a virtuoso of the grid module—is the width of three 12" planks. Everything else in the house is also geared to the use of wood. But even more telling of the sophistication of the design than the skilled use of each stick of wood is the total harmony—the way the exterior texturing makes the house intimate with the garden. (For an even better picture of this see the large photograph on page 166.) The strong patterning of walls and eave soffits merges all but the roof with the lush planting.

Interior pictures on this page reveal the mechanics of Harris' wood detailing. His sizes are limited to those generally available and economical, and in their use he emphasizes the separateness of the members, to bring out individual differences in grain and color. Shrinkage is the other factor he designs for. Some of the details:

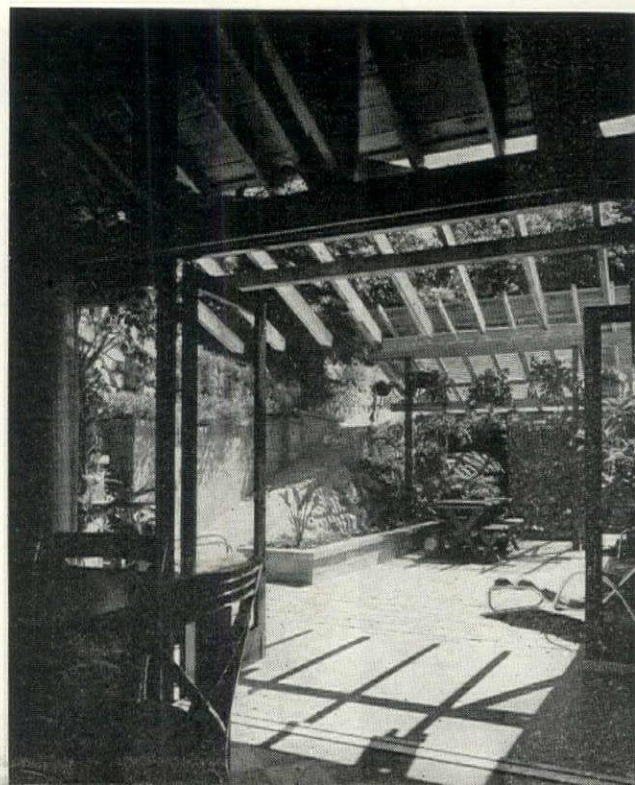
$\frac{3}{4}$ " x $2\frac{5}{8}$ " battens to cover side joints, because shrinkage in a 12" board is too much for a tongue and groove joint;

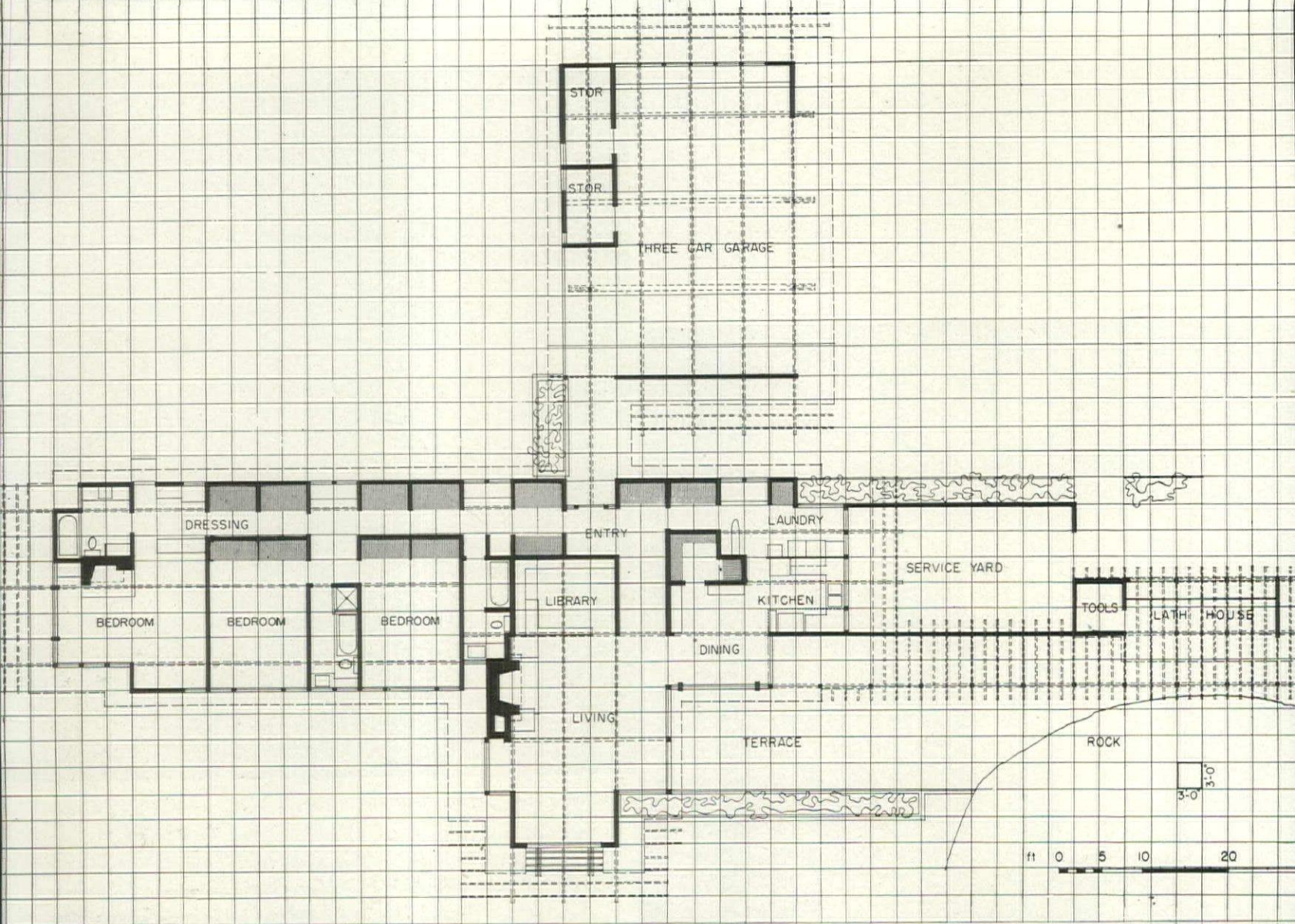
Belt course at story height to utilize short boards without splicing.

Multiple member posts under exposed girders to cover joint between post, girder and, sometimes, rafter (photo above).

In pergolas, doubled outriggers with spacers to separate intermediate members into short lengths (lower photo, p. 167).

in dining room looking East







Photos: Fred R. Depprich

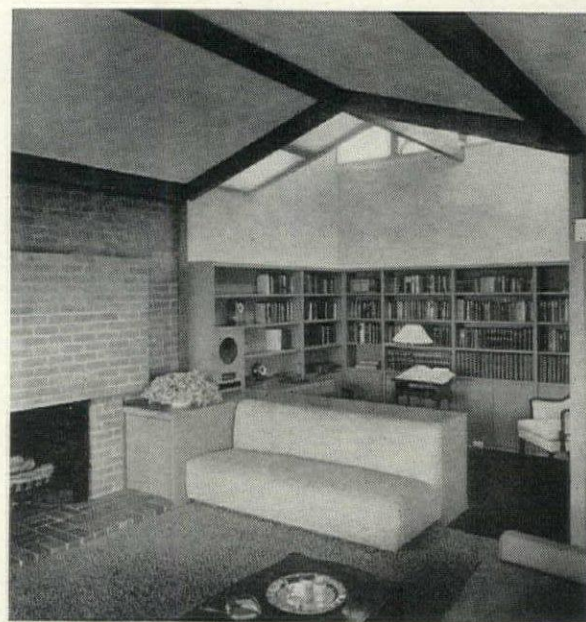
2. A farm house with a lawn of rock

This farmhouse in an avocado grove is larger than the first house shown in this group and has a less intimate but equally strong visual rhythm incorporating it with its site: the simpler, plainer structural pattern is an echo of the grid pattern of the tree rows to which the windows are correlated.

The building, while conforming to the geometry of the grove, links itself to the considerable island of a 100 ft. boulder. Harris took care to keep the house far enough to one side so that more than just the top of the boulder could be visible, and to bypass the boulder with the terrace and arbor so that the connection would appear casual.

Indoors, the living room, library and kitchen are all closely connected for convenience but relatively separated from through traffic. Only the bedrooms are isolated. Lighting of the day rooms is cooperative: the top lighted library (right) has three walls for books and maps; the fourth wall is open to the living room so that the view windows of the latter serve the library also. The library in turn provides top light for the living room. Testimony to the success of this lighting scheme is the fact that no artificial illumination was used in these photographs.

Harris' oriental roof ends, framed off nakedly to diffuse the sunlight, are one of the characteristics of his recent work (see also page 167).

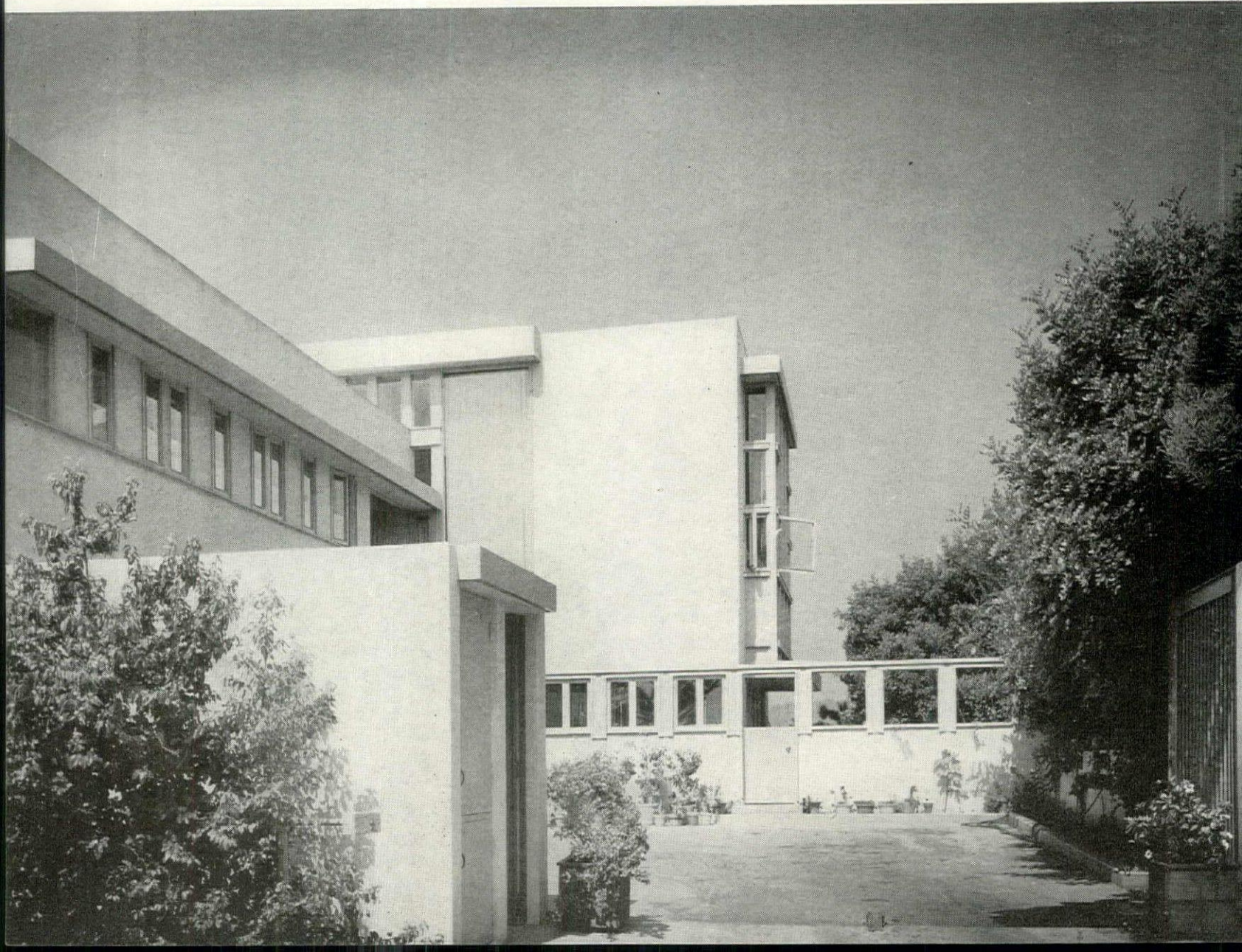


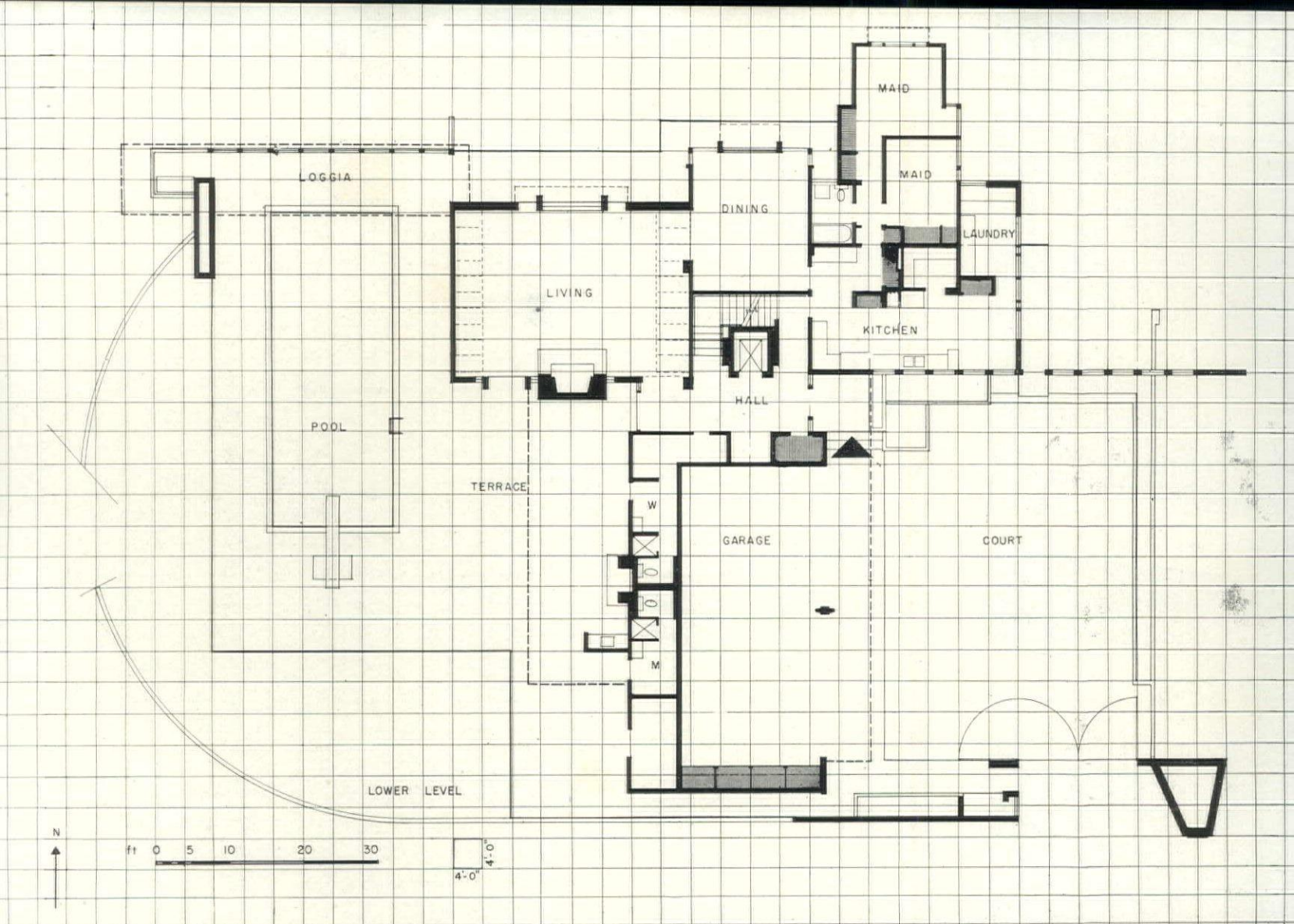
Toplighting in the library end of living room not only avoids cavernous darkness among bookshelves but also continues the definition of the ceiling slope which is so pleasant in the other end of the room (top).



A deft mechanical feature of the house is the pair of glass windshields under cantilever patio roof by the swimming pool. These are on rollers and adjust the direction of the breeze.

Photos: Fred R. Dapp





3. The idiom expressed in stucco

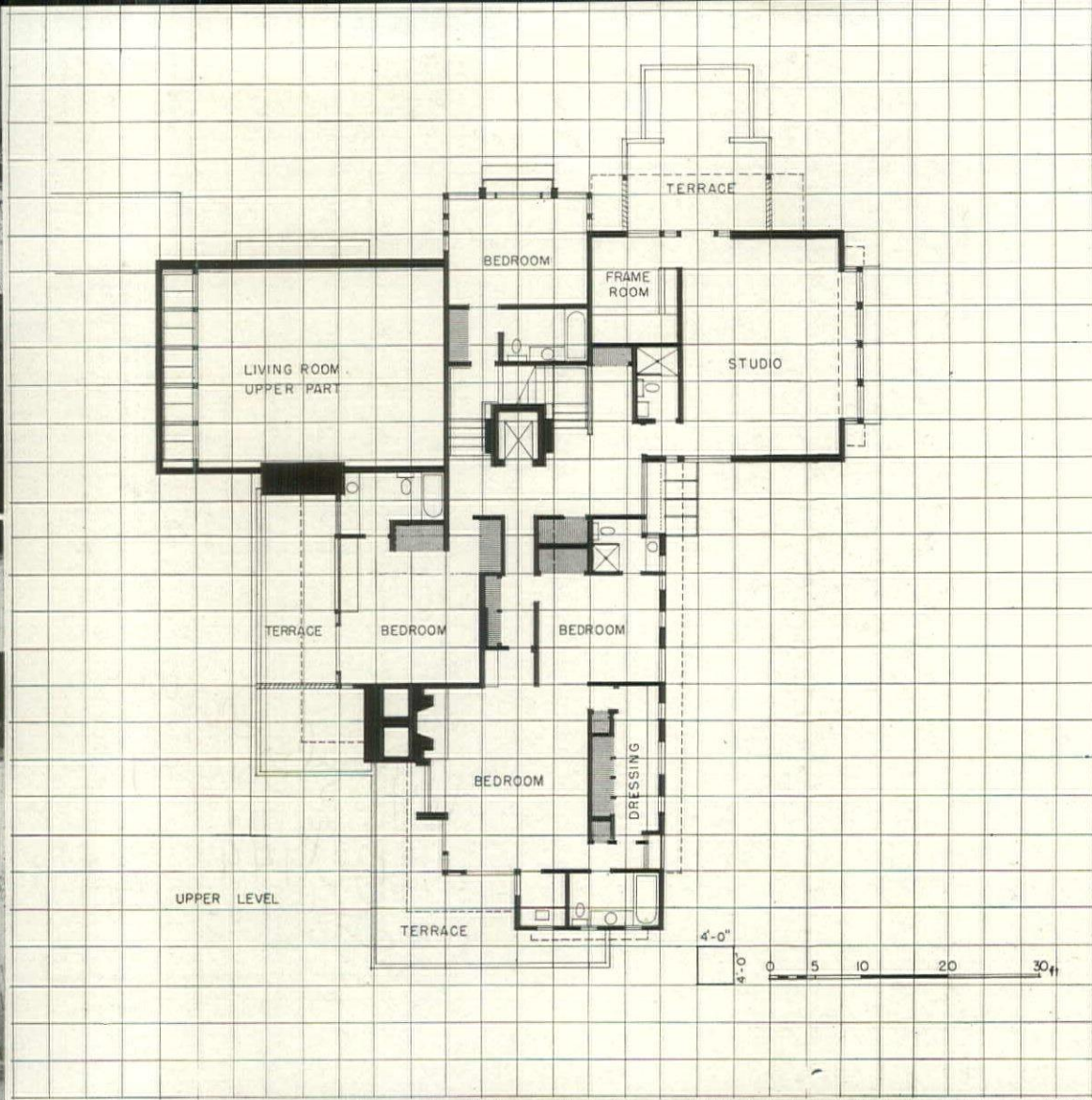
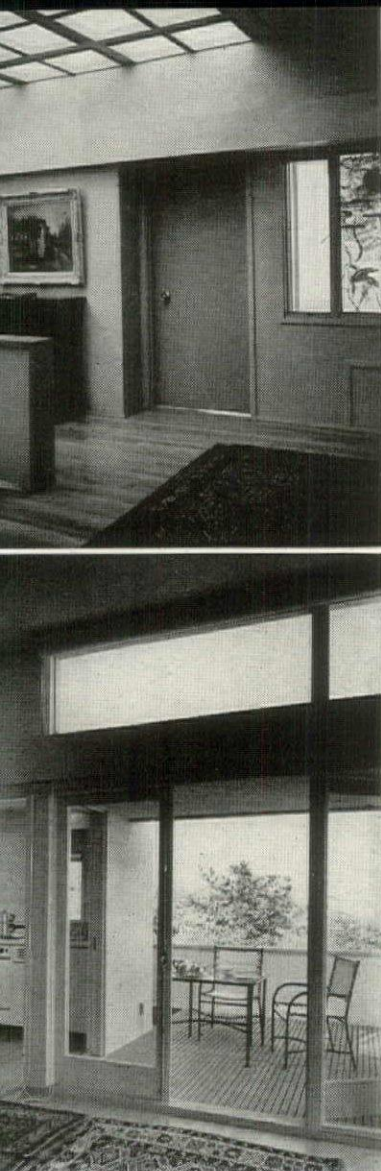
Notable among famous architects is Harris' emphasis on the client; his plans are highly personal adventures on the grid, and he tracks his clients' personalities conscientiously.

This lavish house is for a painter whose wife is very interested in cooking. The almost humorous ease with which three kitchens could be included to honor this interest belies the other pains which were taken to fit the house not only to the people but also to their possessions. It was more difficult, for instance, to shape the house to the family's paintings, sculptures and furniture, than to add kitchens. The paintings called for plaster walls as background, not Harris' more instinctive wood, and the other possessions needed high ceilings, simple shapes, static compositions, diffused lighting, keyed colors—a sense of underlying continuity to provide a background so broad that differences in the furnishings might exist without confusion.

The view of canyon, hills and distant plain from this site is dramatically varied and exciting, but it was not allowed to possess the house. The full panorama doesn't strike you as you walk to the first window; it unfolds as you walk through the different rooms and gardens and look out. Sometimes you see city lights, sometimes a lake below, sometimes a frame around far hills. Nature in this spot is prodigal; from no two stands do you have the same kind of view.

This playing with the view necessitated the building of deliberate blocks like the south wall of the living room. There, as in the second floor studio, Harris did not tolerate any distraction that would shift the center of interest from within the house to outside. To a lesser degree, a loggia wall serves a similar purpose for the swimming pool, reserving the final complete panorama overlooking a lake for a small Mirador in which the loggia terminates. In every case the viewer is deliberately made to go to the view rather than having it thrust on him.





In this house the ceiling is as scrupulously planned as the floor. The top picture shows the skylight grid at the upstairs landing; this kind of large cool light source is widely used throughout the house. Electric lights are built into the panels so the illumination source will be the same night and day. The window in the top picture holds one piece of the owner's art collection, a Gauguin painting on glass.

Directly above is a view from the owners' bedroom to breakfast kitchen and balcony. To right is a photograph of the studio on the second floor, showing the large north window. Other big windows are on east and west sides of this room and are equipped with lightproof curtains. The ceiling here is 15' above the cork floor. Ceiling lights are set in reflecting panels.

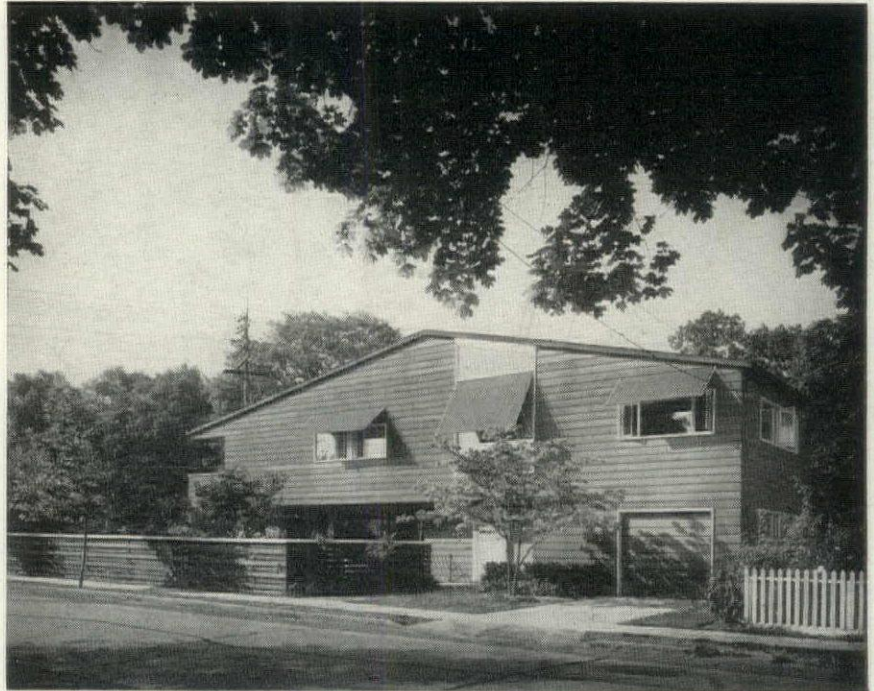


STUDY IN VERSATILITY

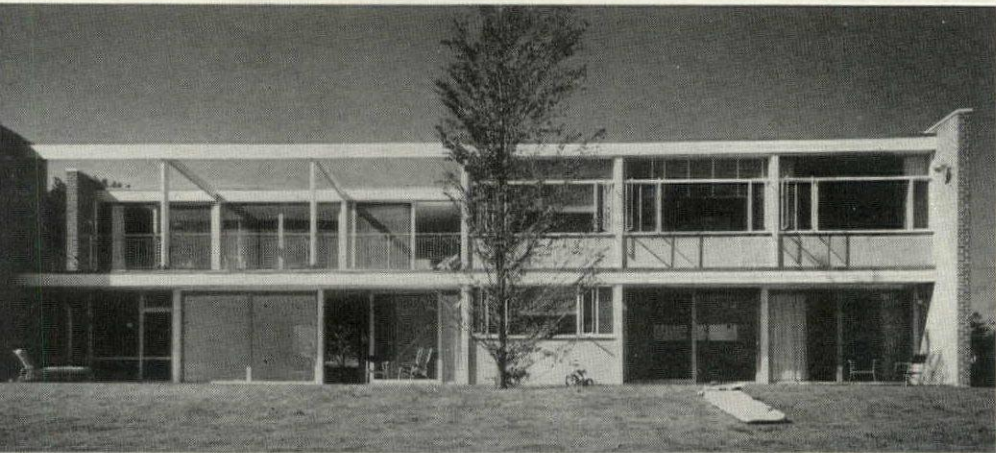
Architects Nemeny and Geller use many modern forms with equal skill to fit houses to clients.

Three houses by Nemeny & Geller attest the fact that by now the language of modern architecture is a common language. Attention can accordingly be shifted from words to sentences, from the invention of forms to their skillful management in behalf of different needs and people. Each of the suburban houses shown here and on pages 172-179 closely mirrors not only the life but the development of its owners. Each also offers fresh solutions to house problems which are common to many families.

As a group, they reflect a planning approach that has wide application. Nemeny and Geller hold that houses for mature families must provide an easy transition from old modes of living to the new freedom made possible by contemporary design. But a new house for young couples with few ingrained family habits can be completely homogenous.

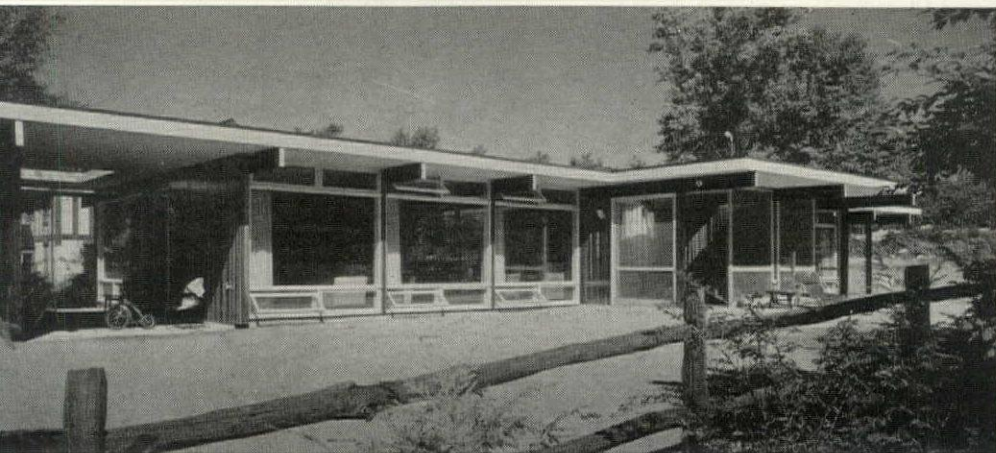


Their house for Mr. and Mrs. A (above and page 172) is in the first category. Informal lines and a warm red-wood exterior help to key it with conventional suburban surroundings and maintain the owners' habit of neighborly living. Inside, the house is sharply divided down the middle into a "Mary Ann" kitchen section to the rear, where Mrs. A can continue her accustomed simple domestic life, and a dramatic, living area to the front which enables her to play a new, exciting "Queen Ann" role.



For Mr. and Mrs. R., a young couple with a completely contemporary outlook and a bent for social living on a big scale, the architects produced a spacious, precisely articulated house with a geometrically panelled facade that opens every room to a view of Long Island Sound (above and page 174).

Young Mr. and Mrs. W's house (below and page 177) reflects their liking for easy indoor-outdoor living and their love for their children. The parents' side of the house is separated from the children's only by a free, central space which can shift to either in use. And the architects have used the rhythm of exposed dark-stained posts and beams to create an effect as warm and friendly as the character of the owners themselves.





All photos: Ezra Stoller

Split-level plan creates privacy and two kinds of living space

The house for Mr. and Mrs. A does more than juxtapose their past and present life. It actually manages to create privacy in the midst of a suburban town—and on a corner lot.

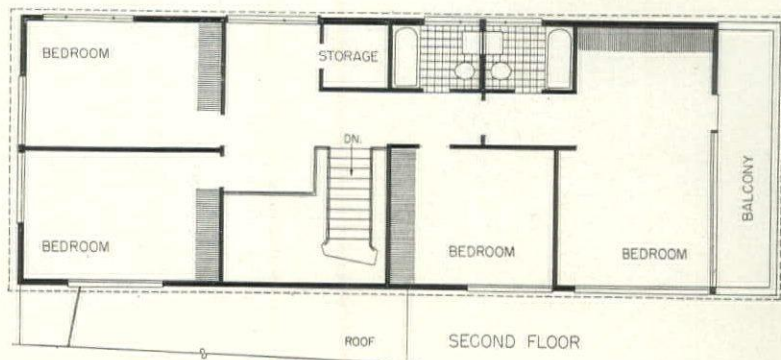
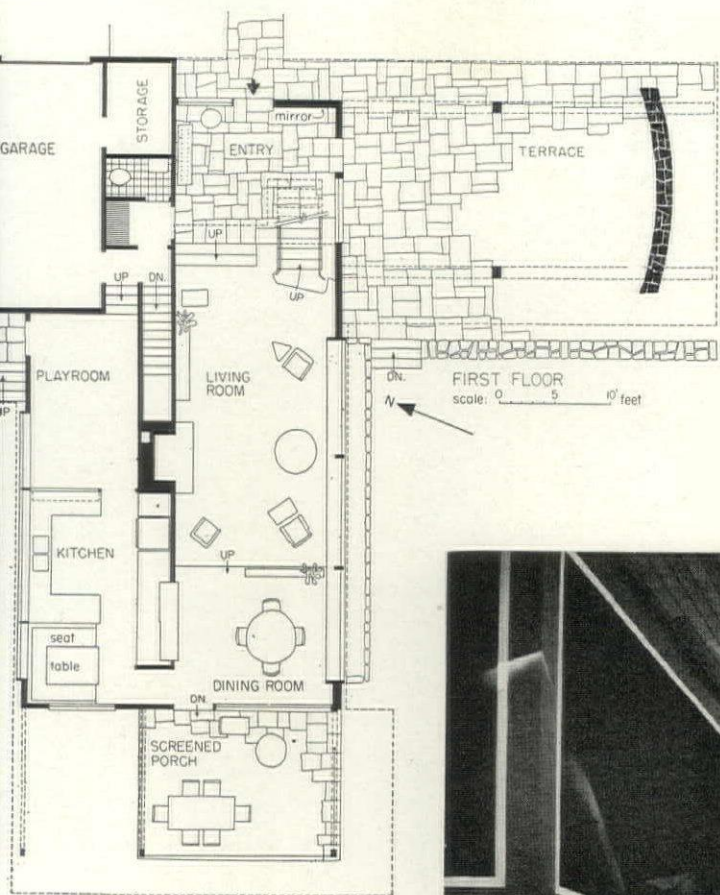
The short frontage is used for the entrance side, from which the main living wing runs back—parallel to the street but close to the lot line. At the end of the wing is a “grandstand” dining area on the highest of three levels which serve to break up the long, continuous living space. Though this dining platform is close to an adjoining house, the architects gave it full-height glass, proving that you can have your cake and eat it—the view is into a screened porch that can be filled for privacy with plants.

The short, upper bedroom wing of the house is cleverly designed to give the entrance side the wide, sheltering silhouette of a gable. This wing projects past the other to form a sheltered terrace under-

neath for the children to play in. A curved stone wall that supports the wing gives it privacy from the start.

In plan, the long first-floor wing is split down the middle into a domestic rear and a party front. On the party side next to the lawn is an uninterrupted sweep of windows opening a view from the stately living space. Behind the mahogany fireplace wall opposite these windows is a series of unpretentious, almost old-fashioned working rooms—breakfast bar, kitchen, children’s playroom—whose windows are small because they are close to the lot line.

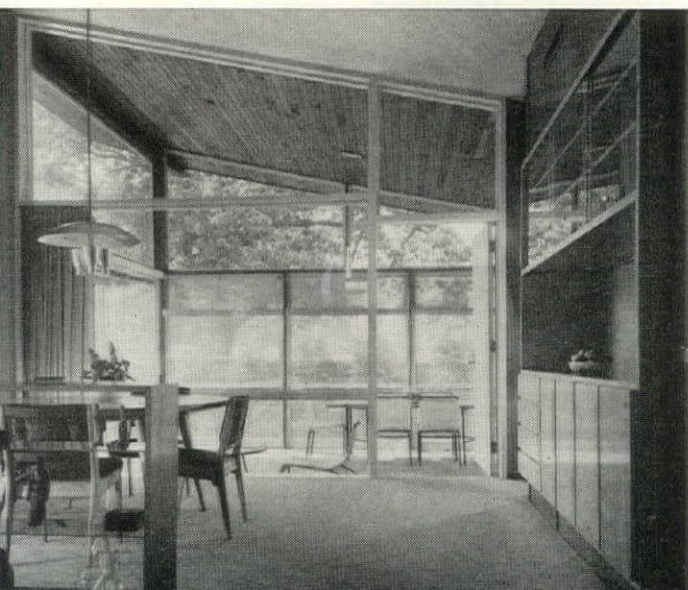
The handsome, varied use of wood throughout the house is particularly pleasing to Mr. A. He is a lumber dealer, executed much of the mill work himself and kept close tab on costs (\$800 for the mahogany wall, \$600 for the open birch and maple stair). His estimate of cost under normal contracting: \$17 per sq. ft. or about \$51,000.



Space beneath projecting bedroom wing provides a cool retreat in summer and a covered outdoor play area for Mrs. A's three children.

CEDARHURST, N. Y.
 GEORGE NEMENY and A. W. GELLER, Architects

Closable kitchen pass-through links the informal, domestic side of the house (right) with the "grandstand" dining section of stately living side (left).





All photos: Ezra Stoller

Second-story living makes for fine first-floor recreation

LOCATION: New Rochelle, N. Y.

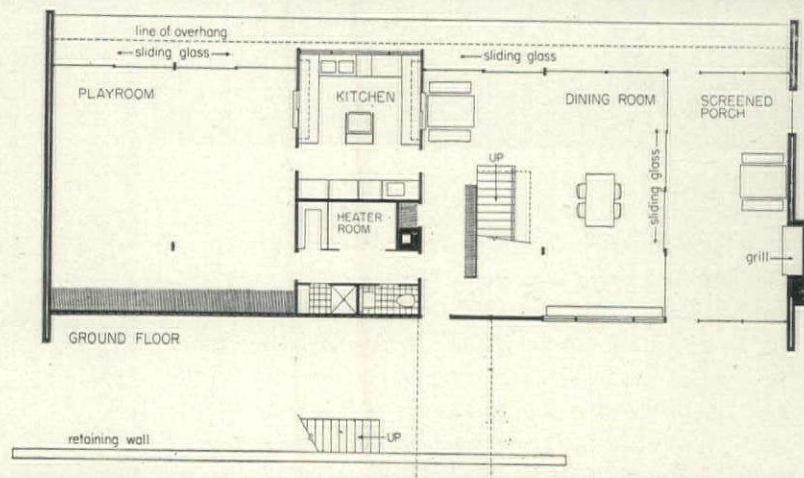
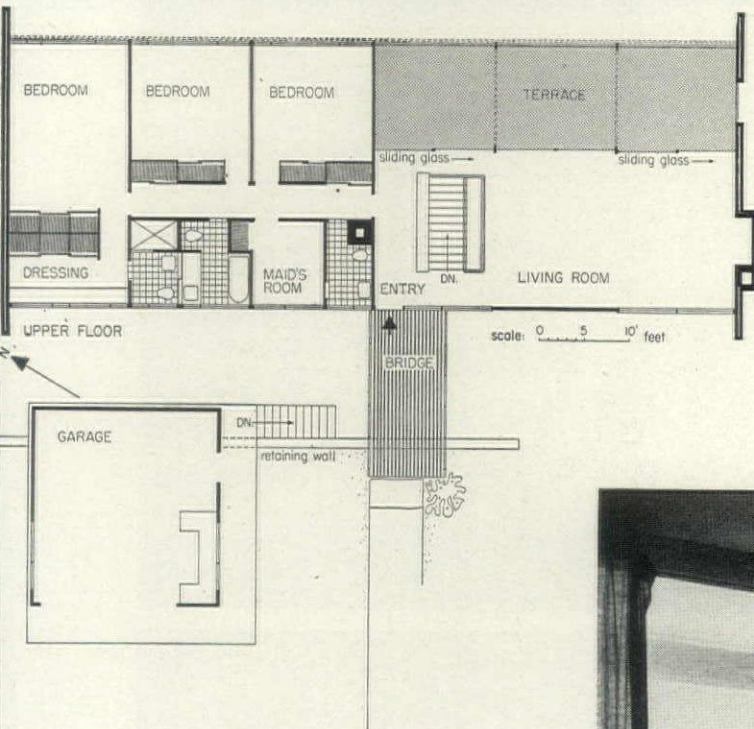
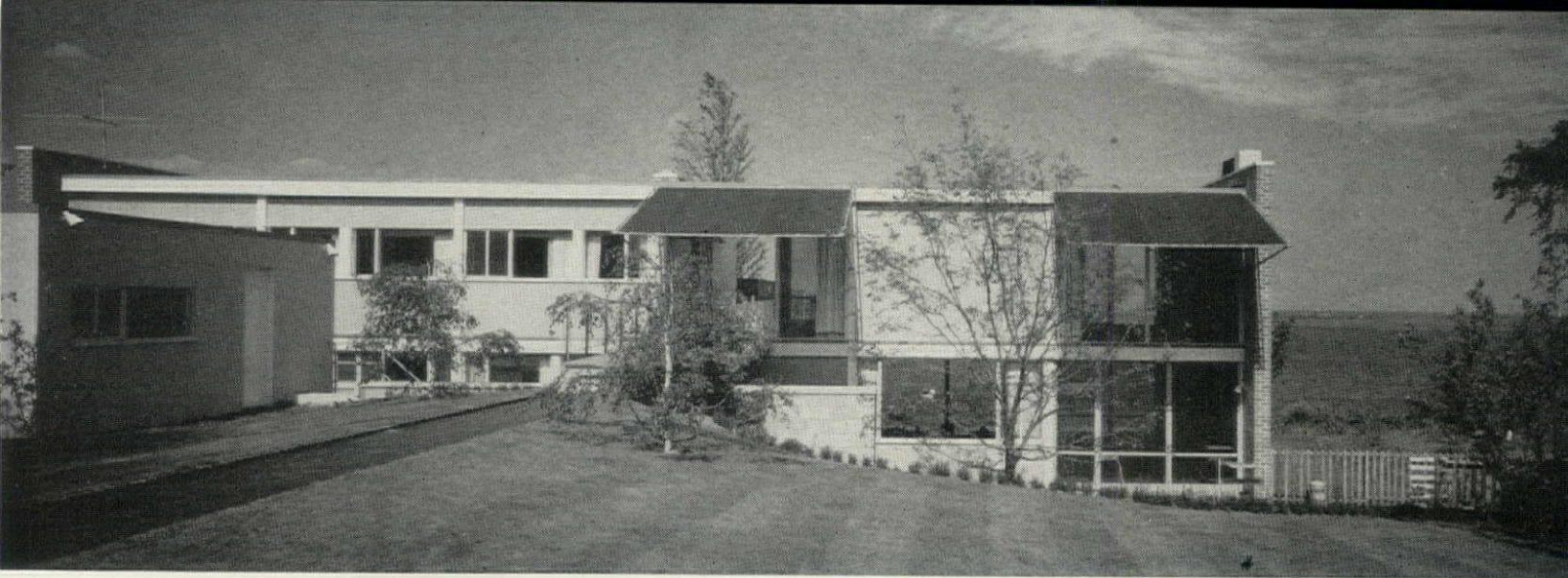
GEORGE NEMENY and A. W. GELLER, Architects

Far more homogeneous in plan and structure than Mrs. A.'s residence (p. 172), this sweeping rectilinear house reflects the fact that there was no need to accommodate both old and new tastes. Young Mr. and Mrs. R. knew from the start that they wanted a thoroughly contemporary home with ample space for raising a family and entertaining on a big scale.

Their choice of a ribbon-shaped sloping site on Long Island Sound gave the architects a chance to develop the kind of two-story plan that uses the upstairs primarily for quiet family living and rest, and the downstairs for recreation and entertainment. To create a low, one-story look on the street side yet open both floors on the water side for a grandstand view up the Sound, they notched the house into the slope. But instead of putting the up-hill side of the lower floor below grade, they cut a moat in front of it so that all rooms have sunlight and air and the moat itself serves as a concealed drying yard. You enter on the upper level via a light wooden bridge spanning the moat,

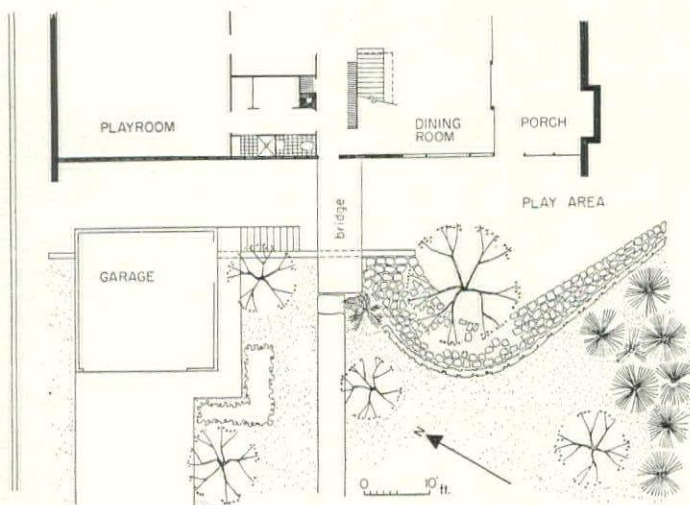
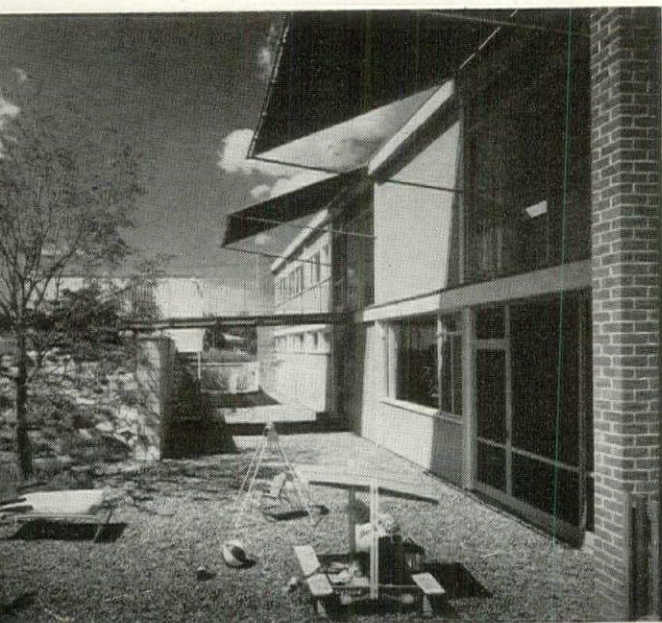
and from this high vantage point immediately get the full impact of the seaward view on the opposite side. To the right is a long, formal living room whose glass wall opens to a roof terrace and the swimming pool beyond (photo opposite). On the left is a cleanly segregated bedroom wing. Immediately ahead is a magically light, open steel stair leading down to the informal, flagstone-floored dining and recreational level.

Structurally, the house is of standard wood framing divided into clearly articulated 13' wide bays, and bracketed at each end by heavy masonry walls which project as a frame for the rich facade geometry of grey-painted wood panels and white dividing lines. The architects slotted the east wall, not only for sculptural effect, but to frame an alternate vista of the Sound and bring more sunlight and air into the living room, the roof terrace above and dining area below. The walls also serve as a screen against future neighbors—and they gave the masonry contractor owner a chance to display his skill.

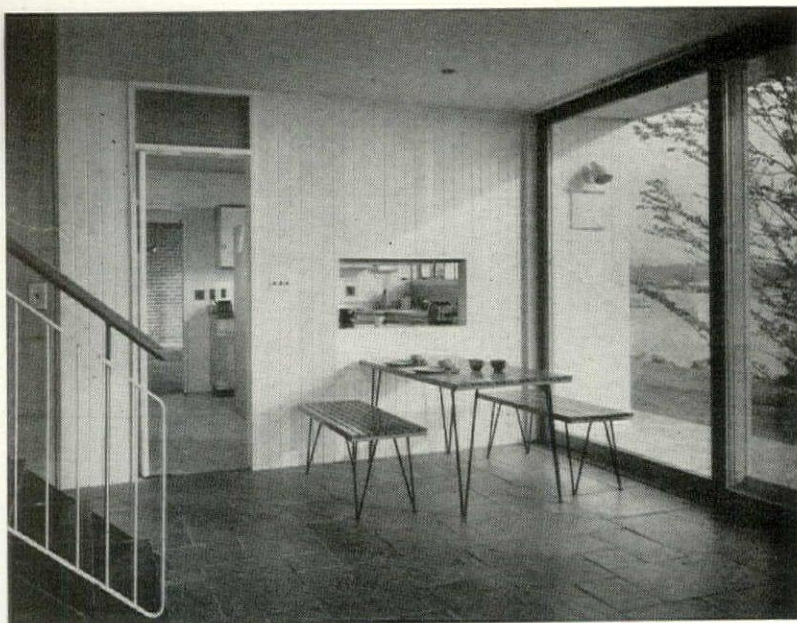


A graceful steel stair, railed in birch, links formal living space on the upper level with an informal dining and recreation area below. Pergola over the top level terrace is designed to support awnings.





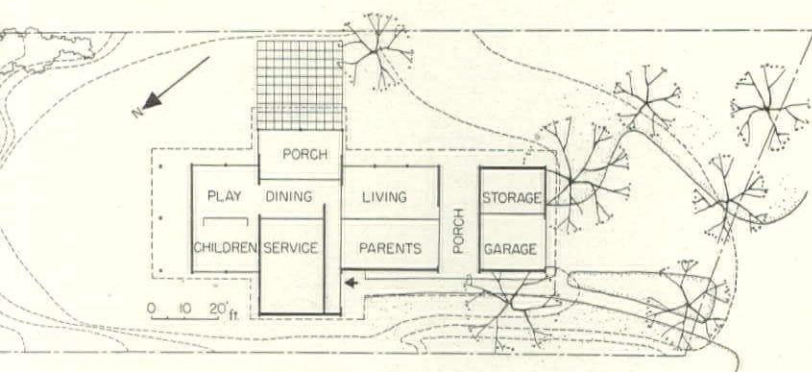
Moat between house and garage (above) broadens opposite the lower-level dining area into a sunny, sheltered garden terrace. Ground floor kitchen (right) overlooks the water, can serve in two directions. On one side is a big recreation room which can accommodate Mrs. R's drama club rehearsals. On the other is a spacious dining area, linked by sliding glass panels with a screened barbecue-porch which opens at one end to the southern terrace, at the other, to the Sound (below).





All photos: Ezra Stoller

Skylit three-zone plan captures space and light on narrow lot



LOCATION: Englewood, N. J.
 ARCHITECTS: GEORGE NEMENY and A. W. GELLER, Architects
 LANDSCAPE ARCHITECT: RYAN J. LYNCH, Landscape Architect

Young Mr. and Mrs. W. got the most interesting house of all. It features 1) a buffer zone between parents' and children's wings which can shift to either in use, 2) a skylighted service core which frees the perimeter for living areas, 3) a structural system that makes the flat roof charming as well as economical.

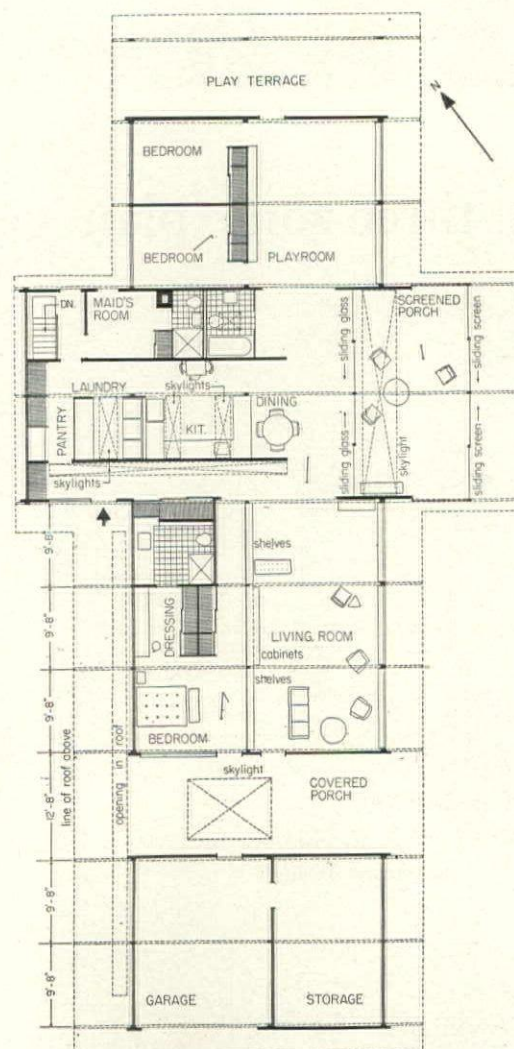
The long, narrow lot led to a long, narrow house, its roof continuous over the garage in front. The unimposing effect of this low flat roof seen head-on is countered by the sovereign remedy of a tall tree, and the great length of the northern wall of vertical cypress (above) is broken into rhythmic steps by the dark stained posts and beams of the skeleton-type framing system—the posts register on the exterior as slim pilasters; the white-tipped beams extend to carry the overhang. With no break in the roof fascia, this long mass is also pleasantly interrupted by a top-lighted open terrace between the garage and the parents' wing—a bright idea since the garage gives privacy from the street to both the master bedroom and living room.



The free buffer zone at the center of the house next to the kitchen serves normally for dining. But it can also be used as an extension of the playroom—bringing the children close to mother as she works in the kitchen—or as a continuation of the living room when more space is needed for entertaining. And it may also be combined with a projecting screened porch by means of sliding glass panels. Even when not in use this free space creates the effect of a living area that extends the full length of the house (photo, above).

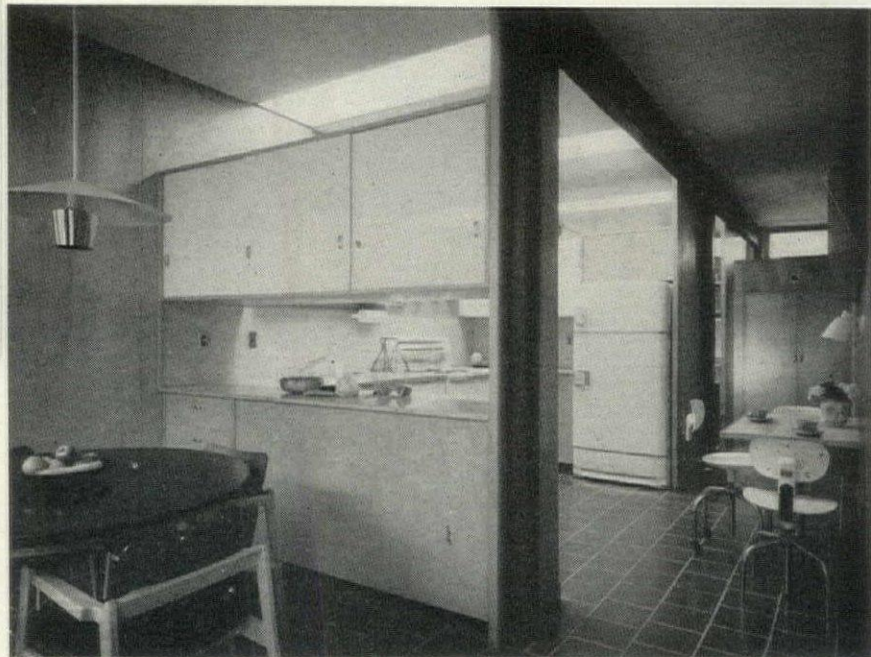
To make up for what they lost at the sides of the house, the architects reached up through the roof with a handsome pattern of skylights. These made it possible to use interior space in the transverse wing for kitchen, baths, and the all-important buffer zone, freeing the entire southeastern exposure for living and recreation space. The combination of a wide-open plan and partitions that stop short of the ceiling makes the skylight pattern visible from most of the living area, adding to the sense of continuous space.

Stained dark brown inside and out, the exposed posts and beams not only provide a warm clean modern equivalent of a rustic beamed ceiling, but also eliminate the need for bearing walls and permit windows to be set in without headers (photo, opposite). This economical structure, plus owner-contracting, held construction costs to \$10.50 per sq. ft. for the 2,300 sq. ft. of living space, including the many built-in items which reduced furnishing costs.

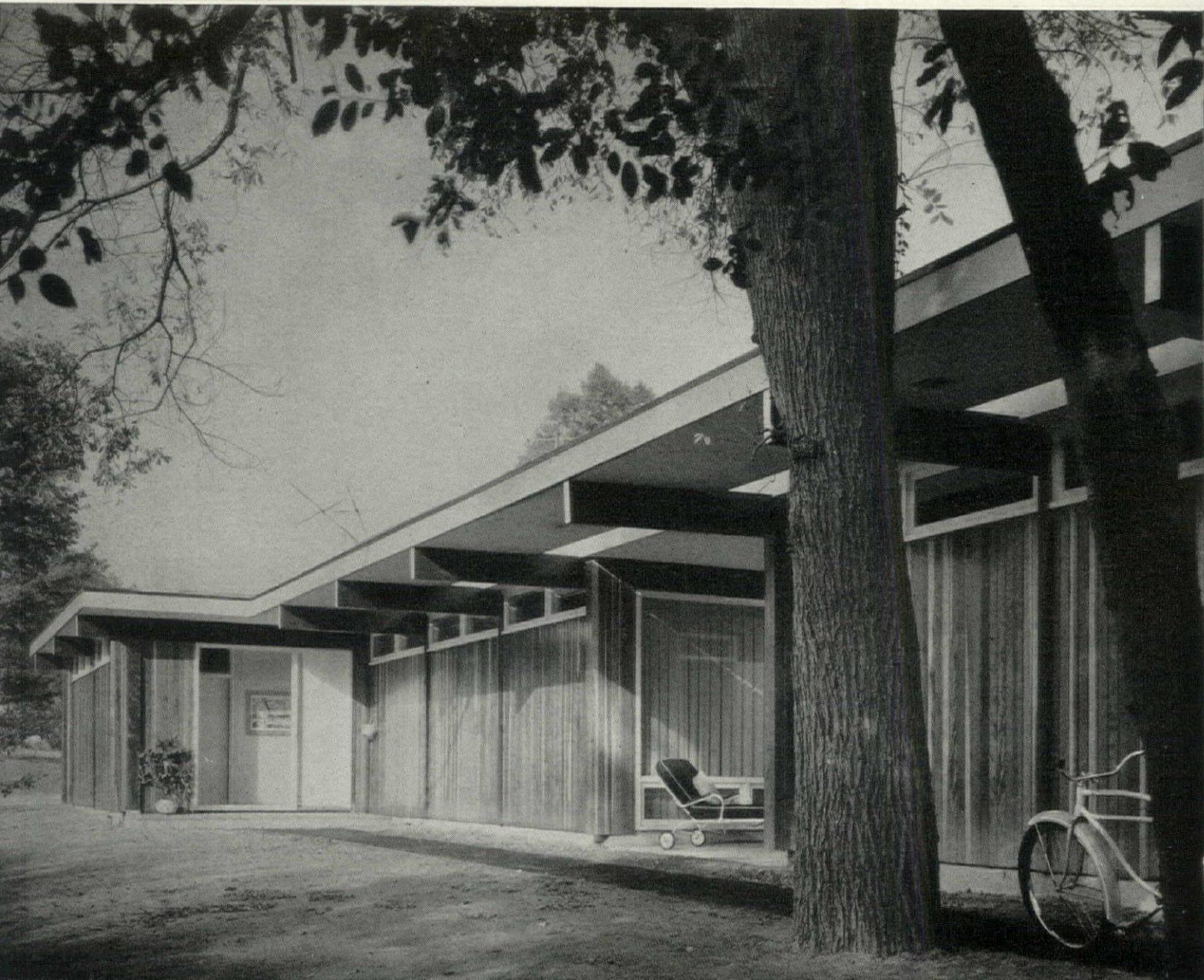




As a safety measure, clear tempered glass is used in skylight which brightens the tile-floored covered porch and the tree, central area (above). Cost installed: \$450. Skylights over kitchen and other interior areas are double translucent glass (right), cost \$434.



Theme of roof openings is carried out in the overhang which shelters the main entrance approach (below). This slot opens the planting area directly below to rain, creates a play of light and shadow on the long cypress wall.





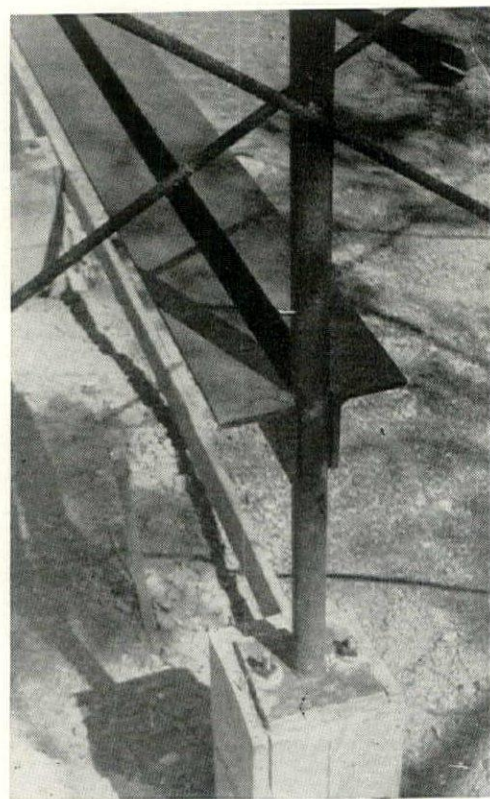
All photos: Ulric M.

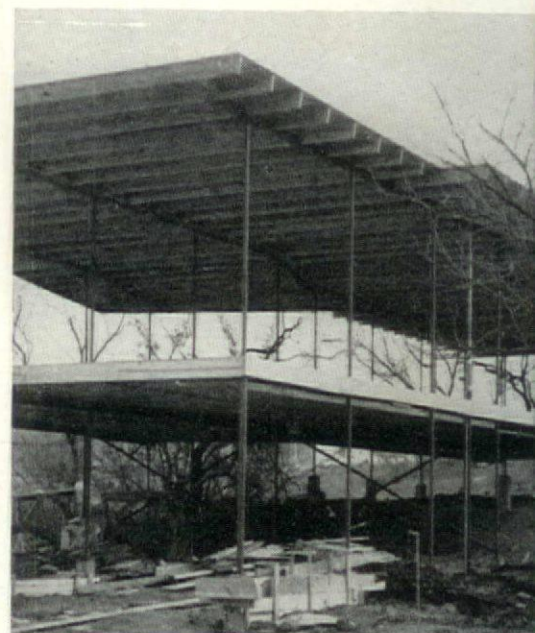
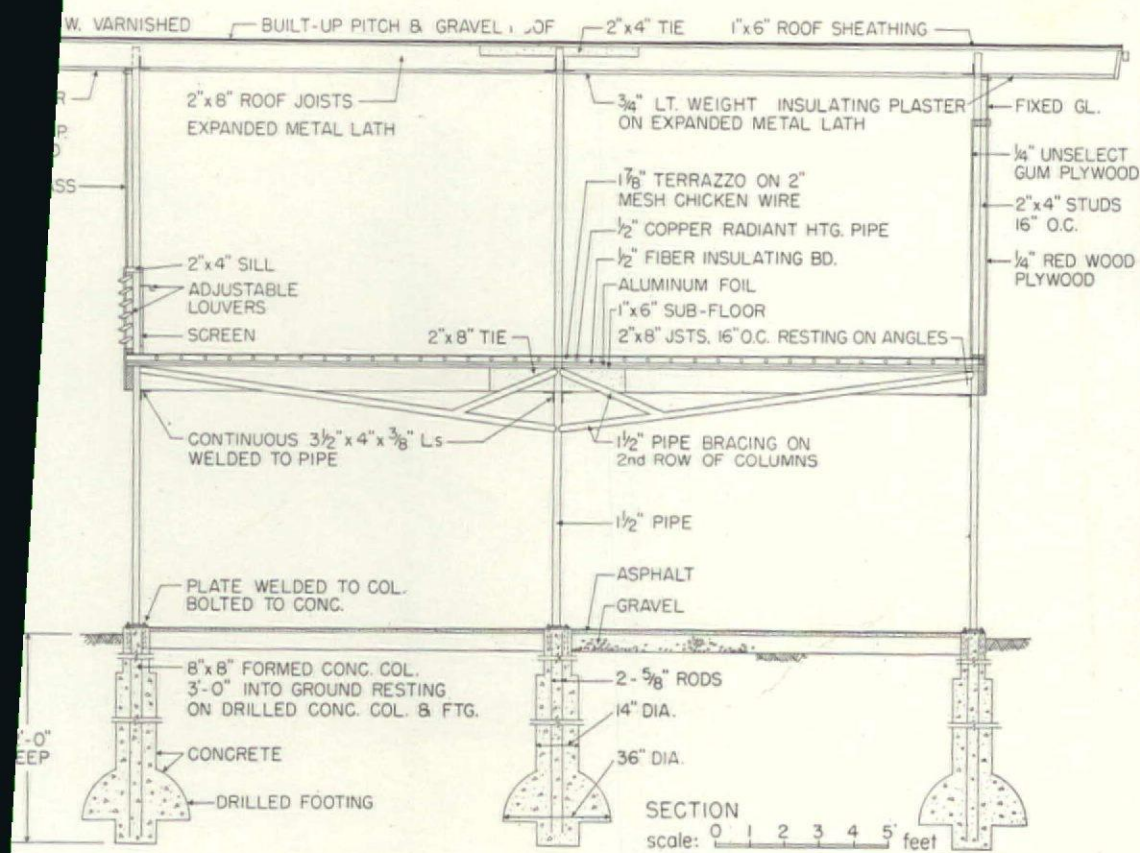
SECOND STORY HOUSE floats on pipe columns pared down the true strength of steel

Two virtuous old Texas qualities are expressed in this new speculatively built San Antonio house: openness and frankness. There is also a new virtue, industrial efficiency.

Architect-builder Milton Ryan perched the handsome \$21,000 home up on stilts, declining to interrupt the broad horizontal sweep of the southwest outdoors, and engineered the support of the elevated load with visible precision, carrying it on lean $1\frac{1}{2}$ " steel pipes which are enough for complete security and no more. The pipes, which are not filled with the usual lally column concrete, but are left hollow, are almost a diagrammatic expression of the stresses. Most people are surprised to see here how light a modern house really is. (Compare with page 186.)

Yet—although the design of this house spells unabashed, unadorned efficiency—it is kept informal and inviting. The long (as long as 4') overhangs of the roof enhance this feeling—besides, of course, being a scientific shield against Texas' unblinking summer sun and hot rains. But what really domesticates the house is the warm, almost emotional use of a single natural material, the decorative outer ply of the $\frac{1}{4}$ " redwood plywood which clothes part of the upper walls (photo above). While the thin steel legs of this house speak of vertical stresses conquered with easy contempt by modern industry, the wood grain talks of slow growth and the long friendly wear which a home gets.

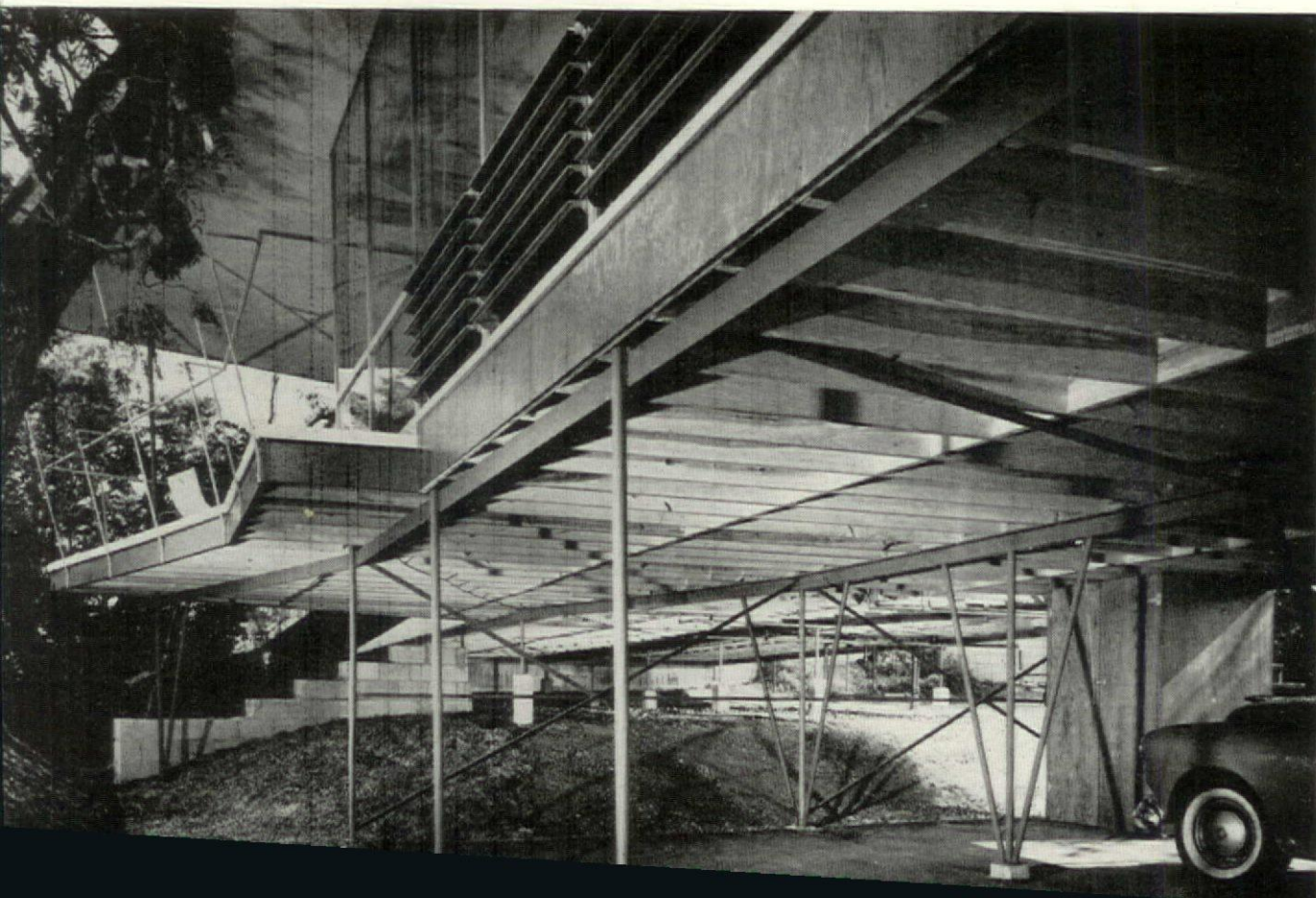




Pipe skeleton is simplified by welding, because other connecting methods might call for bigger sections. Most glass is fixed, with movable louvers and jalousies for bringing in the breeze.

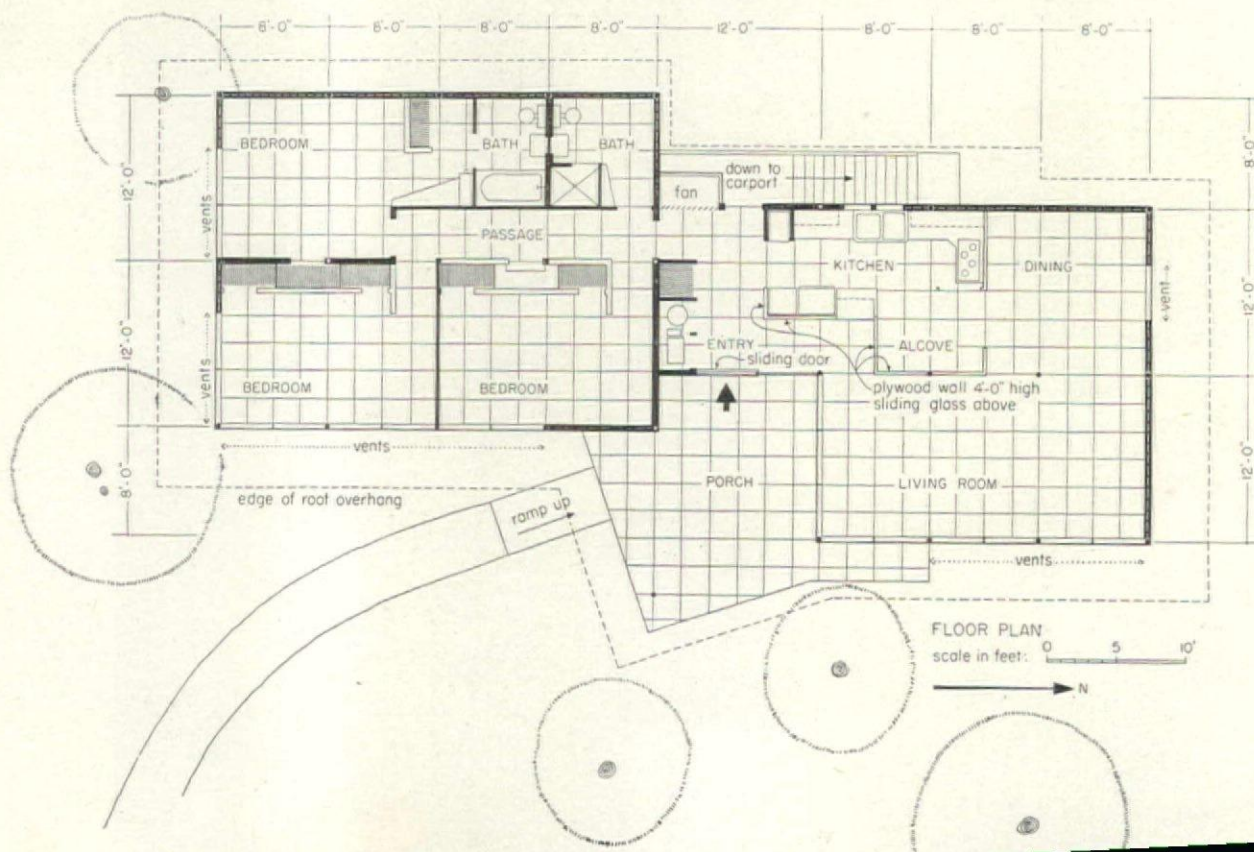
Pipe stems sprout from two levels, first, the garage plane, then the rising ground behind it (in photo below). Lateral stiffness is built in by bracing skein of pipes welded in place at end of garage, and also by braces attached to center columns under elevated floor like spreaders on a sailboat mast.

LOCATION: San Antonio, Texas
MILTON RYAN, Architect and Builder





House is surrounded completely by moat of air. Approach is up gangplank from highest site level, which is bolstered by carefully laid concrete block retaining wall.



Upstairs within walls, the space is still free and easy. The terrazzo floor is a tray carrying as few complete partitions as practical.

The porch is really a part of the entry way and living room, whose clear floor continues un-interrupted into the dining room, then turns and becomes a breakfast nook on the way to the kitchen. Go on a few steps and you're back in the entry, never having opened an inside door; indeed, never even having found a place to hang one. Everything is done with turns. And the scant 20' of partitions in this area are only head high, left open above for good air circulation in summer.

In the bedroom wing (and wing is a good word, because it seems very much at home in the air) sleep is firmly partitioned, as it should be even in Texas. This half of the house is insulated from the daytime side by bathrooms and service closets.

Ceilings and the undersides of the overhangs are light aggregate plaster to save weight, rough finished for acoustical utility against the hard polished surface they face, the floor. Heating is by floor radiation. Walls are plywood inside and out, with insulating felt sandwiched between.

Complete cost figures:

Grading	260	Wiring	1,156
Foundations	652	Plumbing	1,200
Lumber	2,832	Terrazzo	1,237
Labor	3,900	Paving	581
Painting	875	Kitchen equipment	755
Steel frame	275	Glass	581
Utilities	107	Miscellaneous	2,000
Roofing	562	Design	2,000
Heating	1,165	Land	2,800
Hardware	232	Sales price	23,170

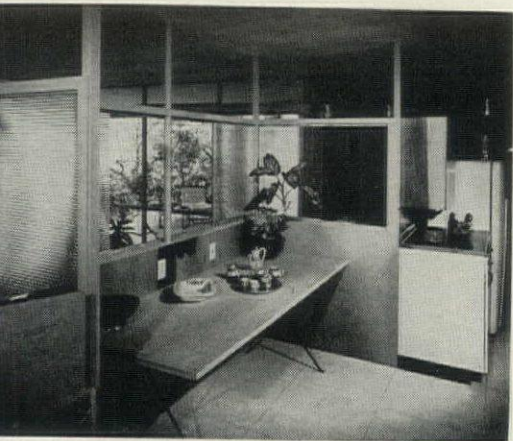
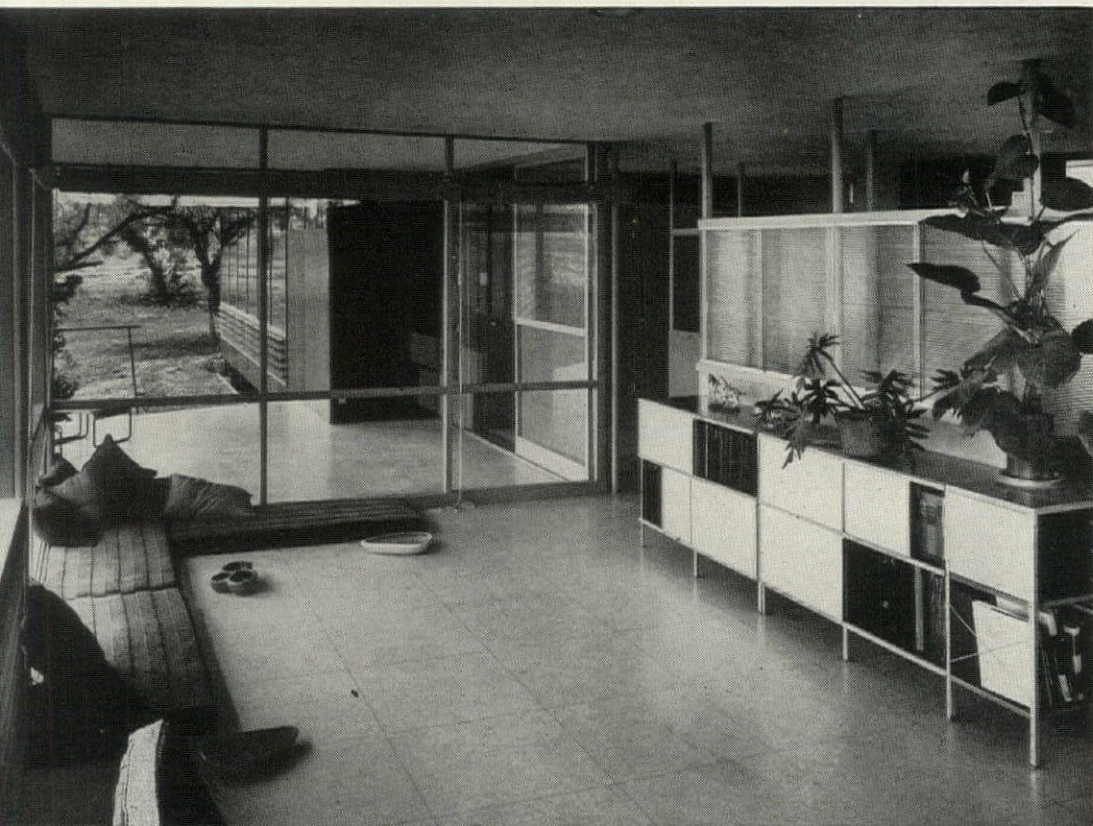


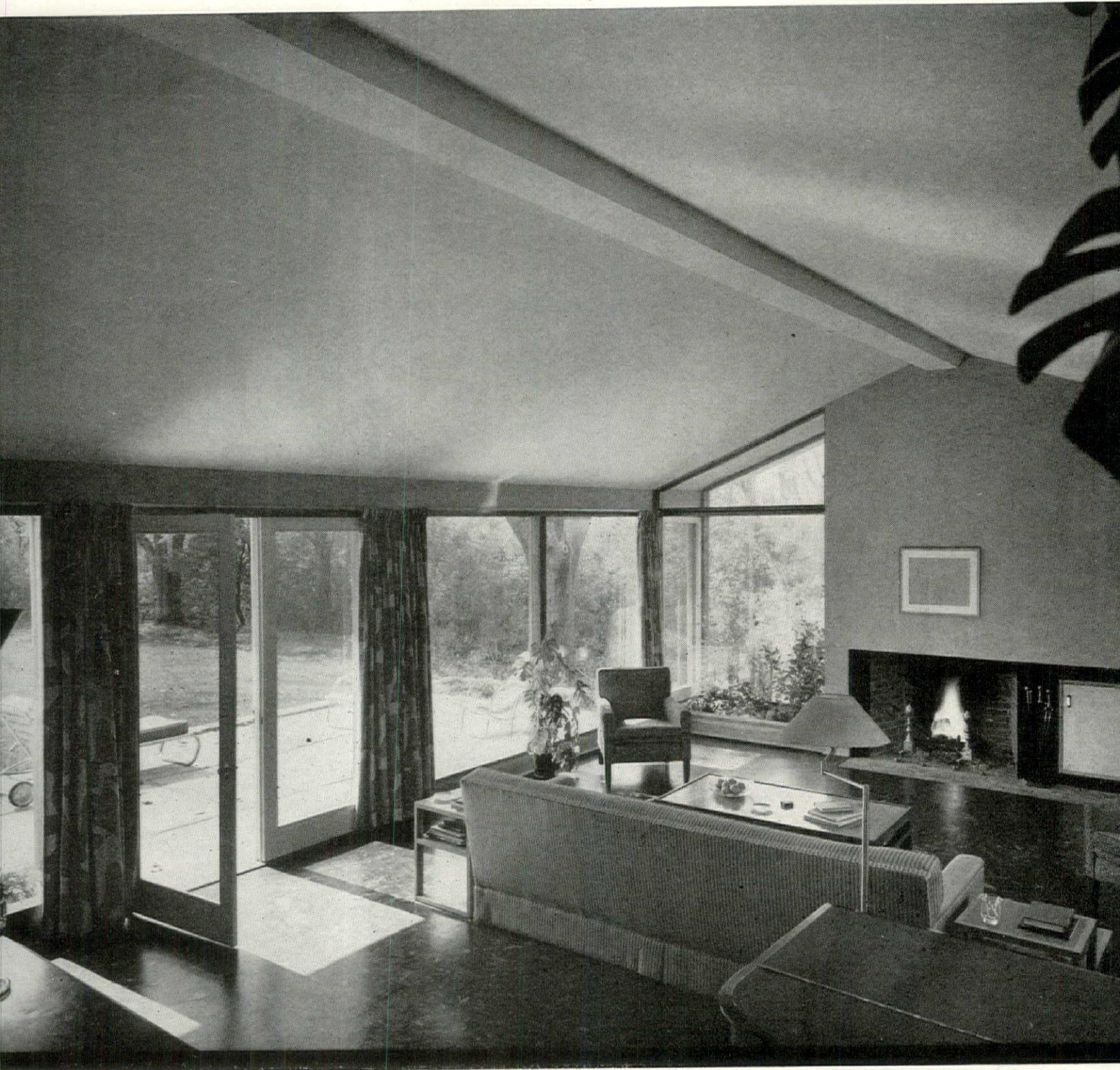
Table straddles the boundary between dining room (right) and kitchen. Division of living space of this house shows how thoroughly furniture manufacturers have gone into partition business in recent years.



Left, living room looking out toward the approach gangway. If you stand in the same spot and turn right, you see view above.

SPACE IN A CAPSULE gained by glass wall

LOCATION: Hingham, M



All photos: Damora

Viewed on a long diagonal from the entrance hall on the upper level, the big living-dining area seems appropriately scaled to its 6'-owner. The long glass wall faces south on a sheltered garden terrace. A greenhouse next to the simple fireplace frames a view of Hingham Harbor at the foot of the hill.

ing ceilings, changing levels—a graduate course in better small house design

ROBERT WOODS KENNEDY, Architect

RICHARD S. BROWN, Builder



This charming New England residence has some fresh answers to a problem which both architects and builders face constantly—how to get a really spacious workable living area in a modest-sized house. Otherwise it is basically conventional—the kind of house most families and builders are concerned with, but cleaner, better handled, more inventive.

Because his clients were a tall young couple who wanted plenty of space for informal dining and entertaining, architect Robert W. Kennedy made their living area bigger than most houses of this size can afford—18' x 27', or 34% of the area of the original 1,413 sq. ft. house. But he also made it seem even bigger by devices which are equally applicable to smaller rooms:

► He spanned the long dimension with a steel ridge beam which eliminates collar girts so that the ceiling can follow the roof planes up to an 11' height. The ceiling was plastered not only to create a lighter, more spacious effect, but because insulation required by cold winters made plaster cheaper than an exposed plank-and-beam finish.

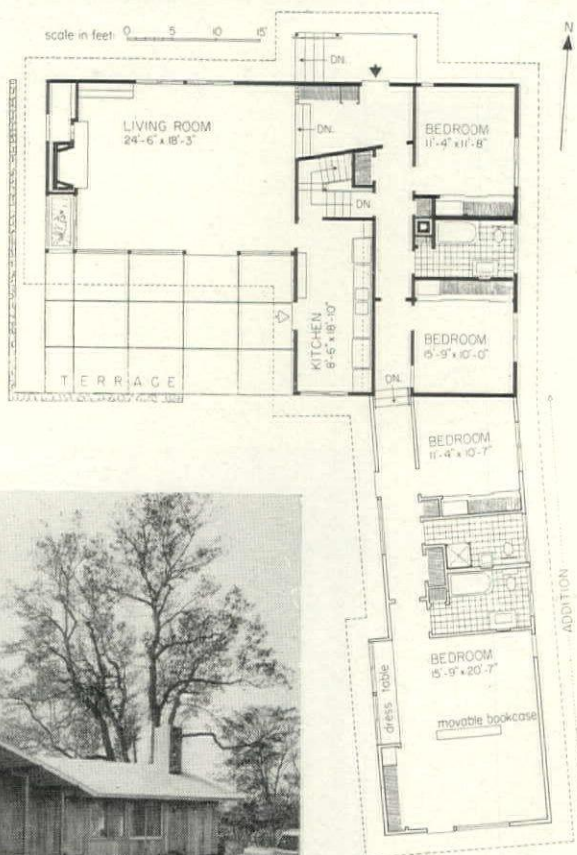
► To borrow more space from the outdoors, he walled the room on the sheltered, southern side with 1/4" plate glass, framed a harbor view on the west with a gable-high, glass-enclosed planting area. In summer, the room is shielded from sun by a great tree and a 3 1/2' roof overhang, cooled by cross-ventilation between big doors in the glass wall and smaller windows on the street side. In winter, the overhang lets the rays of the low-hanging sun into the room, and most of the solar heat absorbed through the single-thickness glass during the day is locked in by drawing drapes at night.

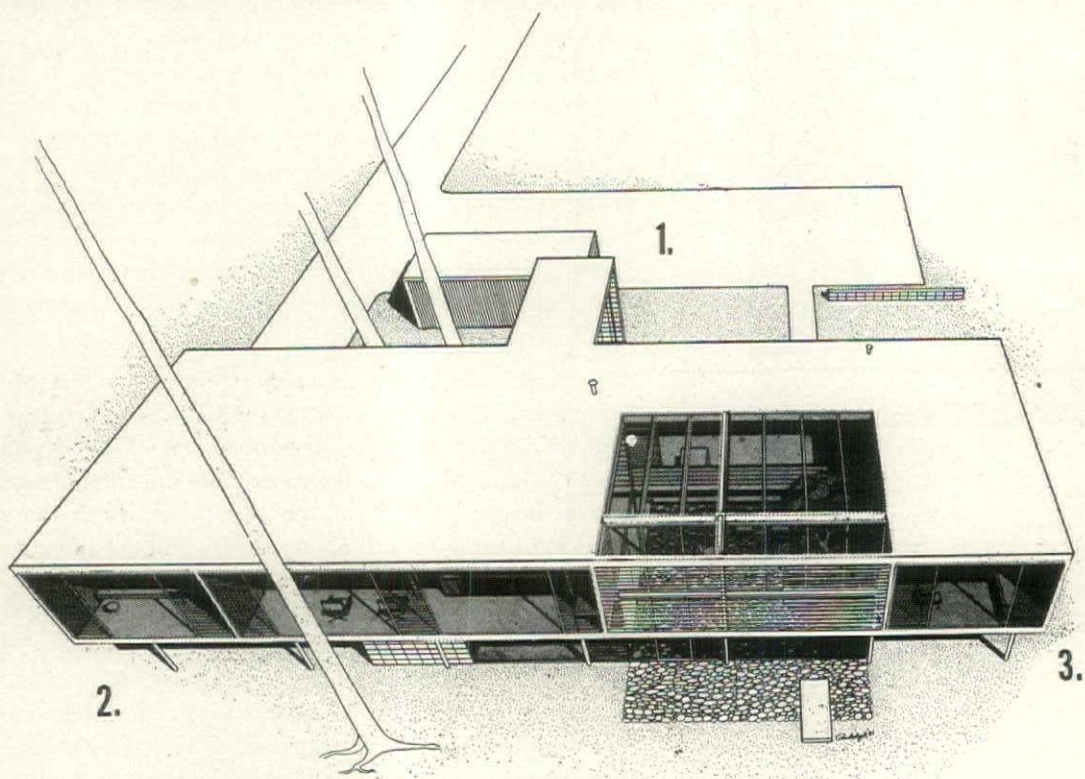
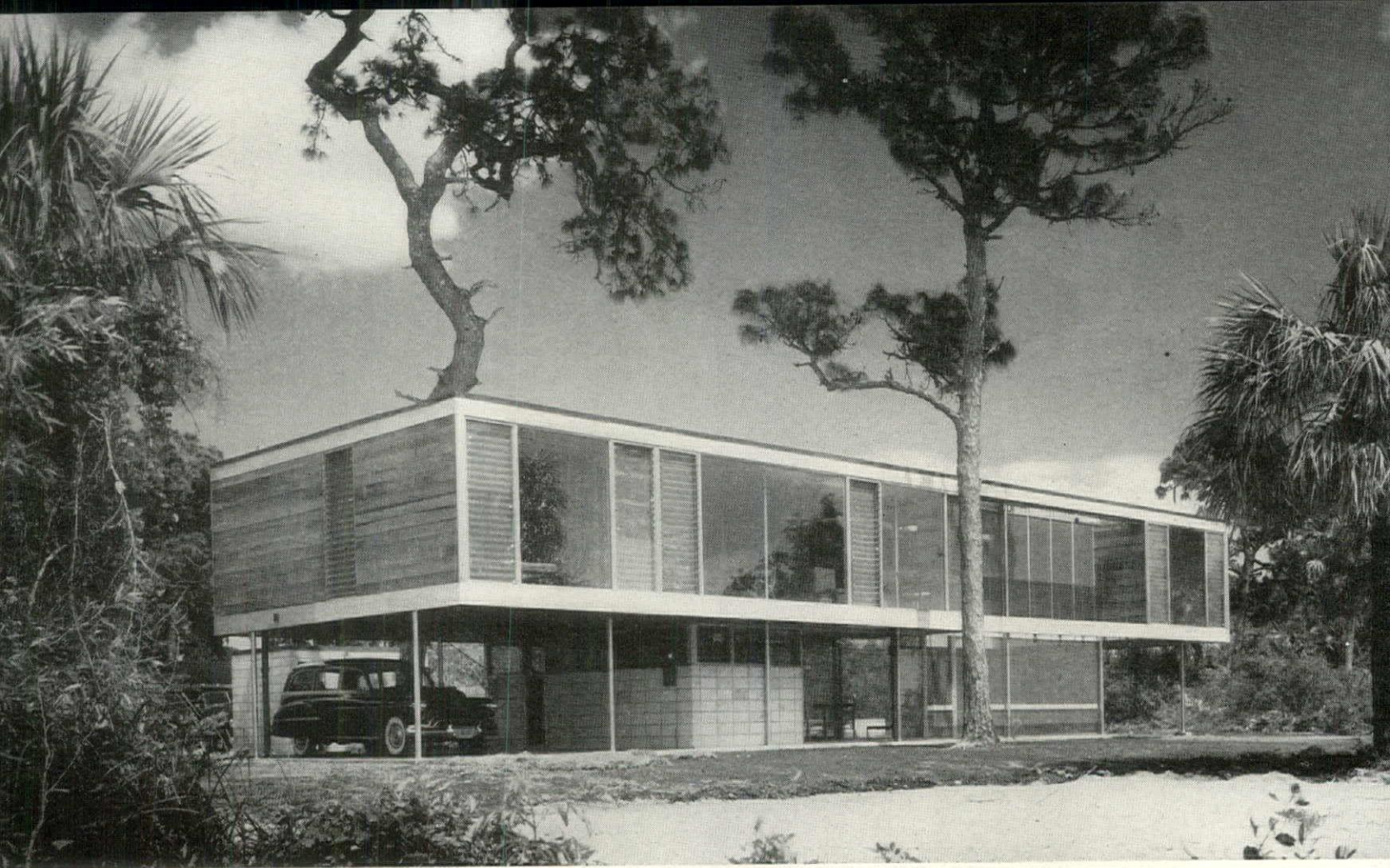
► He put the entrance hall on a higher level, splayed its inner wall and merged its ceiling plane with that of the living area. This forms a sort of funnel for a long, diagonal view of the big room, creates an optical effect of greater space. Looking down on the room from the entrance makes it seem bigger because you see more of it; when you step down into it, the ceiling plane recedes and the room seems higher as well as bigger.

This play of levels is an asset which Kennedy derived from the one serious liability of the splendid hilltop site—a sub-surface mass of New England ledge. By stepping the house down hill, he not only created interesting interior space effects and a varied roof line, but saved some \$1,000 in blasting costs that would have been added by leveling the site.

The street side of the house is as unassuming and protective as the garden side is dramatic and open. To provide privacy and shut out the north wind, openings on this side have been kept to a minimum—the main bedroom gets cross ventilation through a louvered panel next to the front door; the living area, through standard-size casements. Though this facade is finished with the simplest kind of vertical cedar siding, it is saved from monotony by a pleasant entrance portico which steps down hill with the house.

The house with two bedrooms and a half-basement cost \$22,000 or \$14.50 per sq. ft. The recent addition of a master bedroom and bath (provided for in the original plans) cost \$11.75 per sq. ft. Total cost was \$32,000.



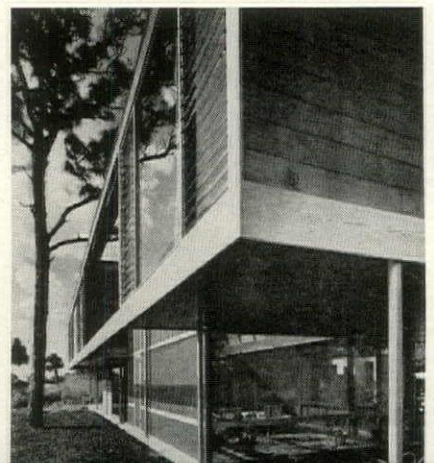


1. Stairwell

2. Master bedroom



3. Screened patio



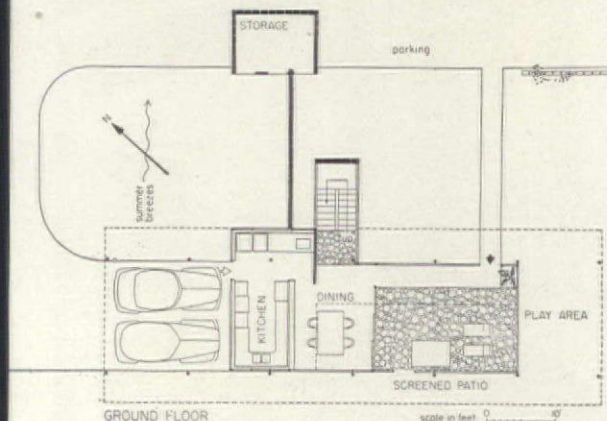
ONE-STORY HOUSE ON THE SECOND FLOOR

LOCATION: St. Petersburg, Fla.
 ARCHITECTS: MITCHELL & RUDOLPH, Architects
 CONTRACTOR: BERT GOHEEN, General Contractor

When you build a one-story house on the second floor, several things happen and all of them add up to better architecture and better living:

- ▶ First, you get a much better view of the surrounding landscape—across tree-tops, hills and neighbors' roofs;
- ▶ Second, you get a lot of cheap covered space on the ground floor which can be used for carports, porches, terraces, etc.;
- ▶ Third, you can have a glass-walled living area which has a lot of privacy and protection from nearby streets (because it will be about 10' off the ground);
- ▶ And, finally, if you happen to live in Florida (as the Leavengoods do), your house will catch more breeze and fewer bugs because it is located where the breeze can sweep through it and the bugs can't easily reach it.

These are the purely practical advantages of this latest house by Architects Twitchell & Rudolph. The photographs on these pages show that their Leavengood House is also one of the handsomest works they have completed to date.

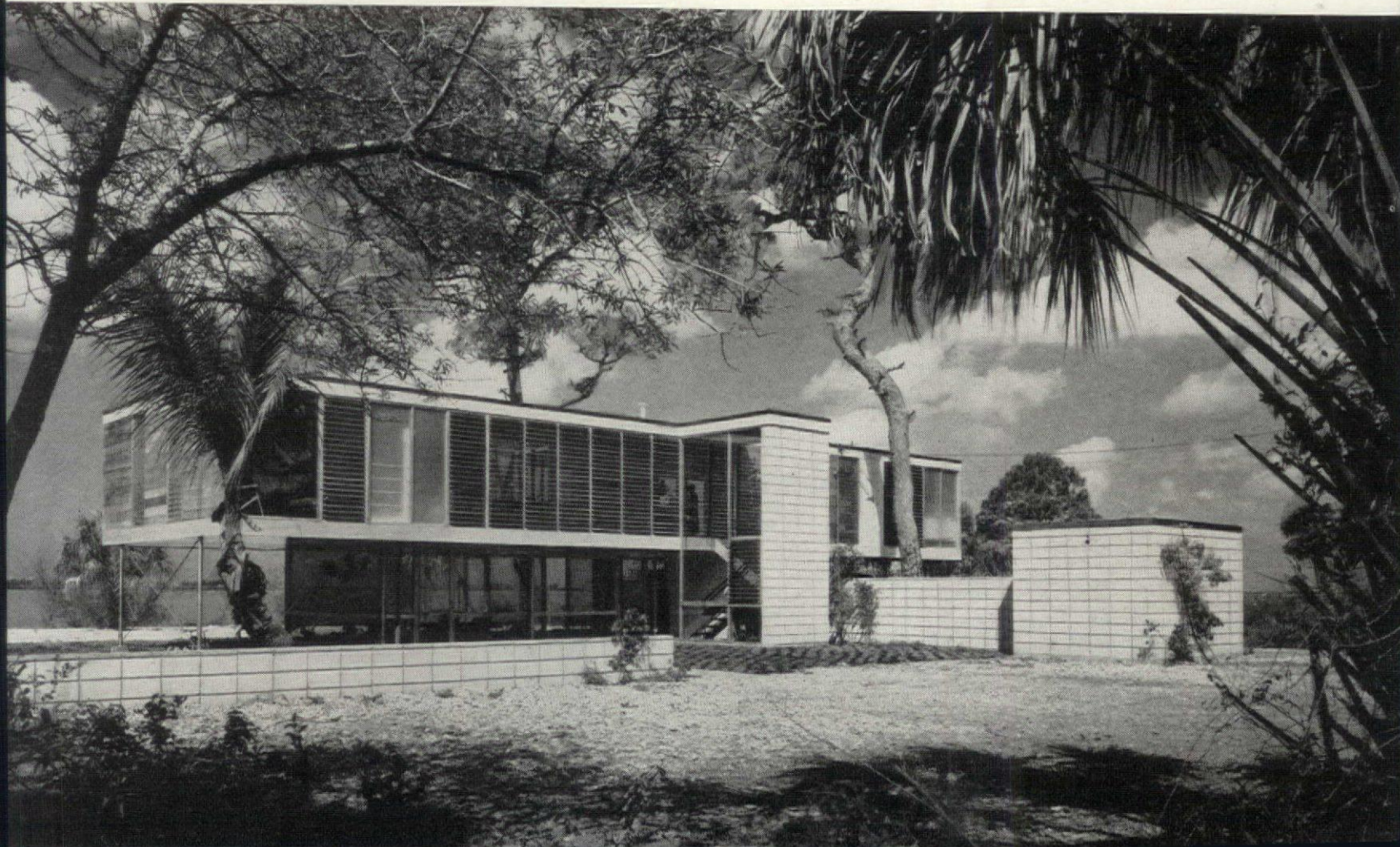


Two-story Patio

Like many Twitchell & Rudolph houses in the past, this one is a rectangular volume centered upon an interior patio. The plan is quite similar, in fact, to that of their famed Revere House (October issue, '48) which started a modern trend in screened patio living for Florida. The chief difference, of course, is that the patio here is two stories high, that services and carport were tucked away under the raised second story, and that the resulting changes in volume and space relationships add a great deal of interest to an otherwise simple plan.

The amount of living space a Florida house can borrow from the outside (for most of the year) is limited only by the amount of cubage its architect can surround with insect screening. In this house, the architect got 6,400 cheap cu. ft. by that simple

Photos: Ezra Stoller, Pictor



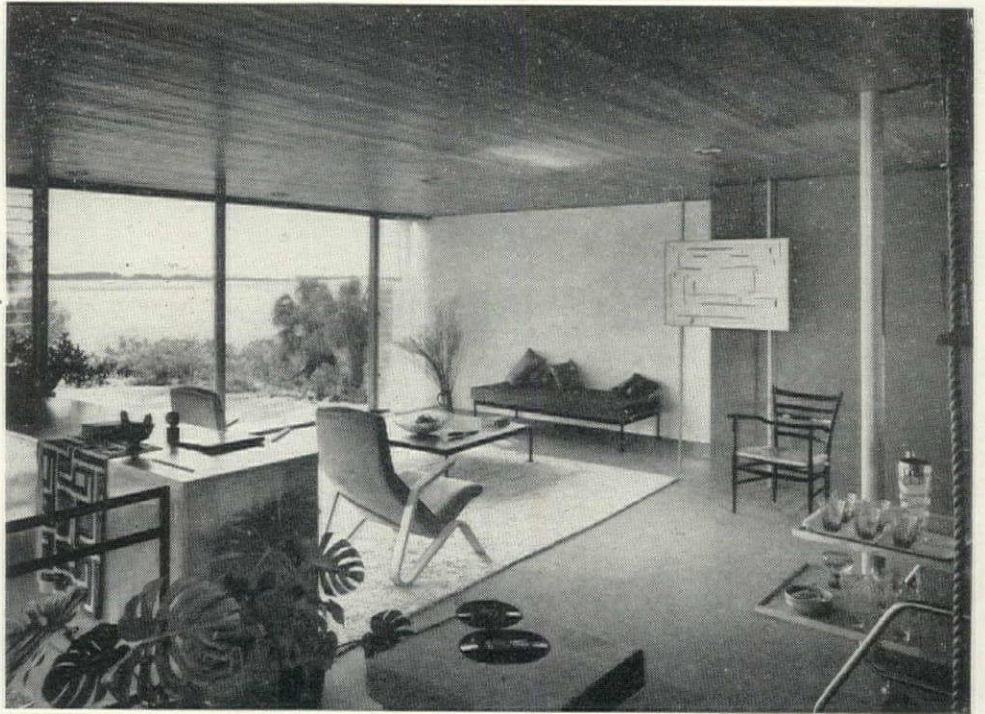
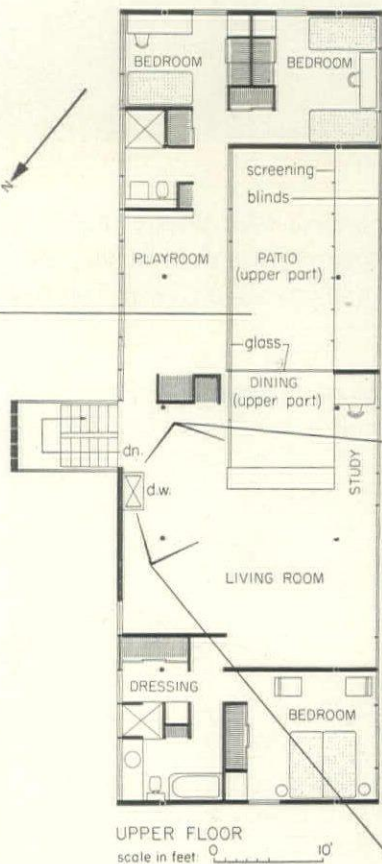


expedient. The resulting two-story patio is one of the most interesting rooms built in the U. S. this year. Moreover, it helps vastly to enlarge the apparent size of all the rooms adjoining it: on the top floor, playroom, living room and study (all quite small in reality) appear spacious because they overlook the patio; and on the ground floor the dining area becomes part of the patio, is made to look almost palatial by the doubled ceiling height.

Breezeway Architecture

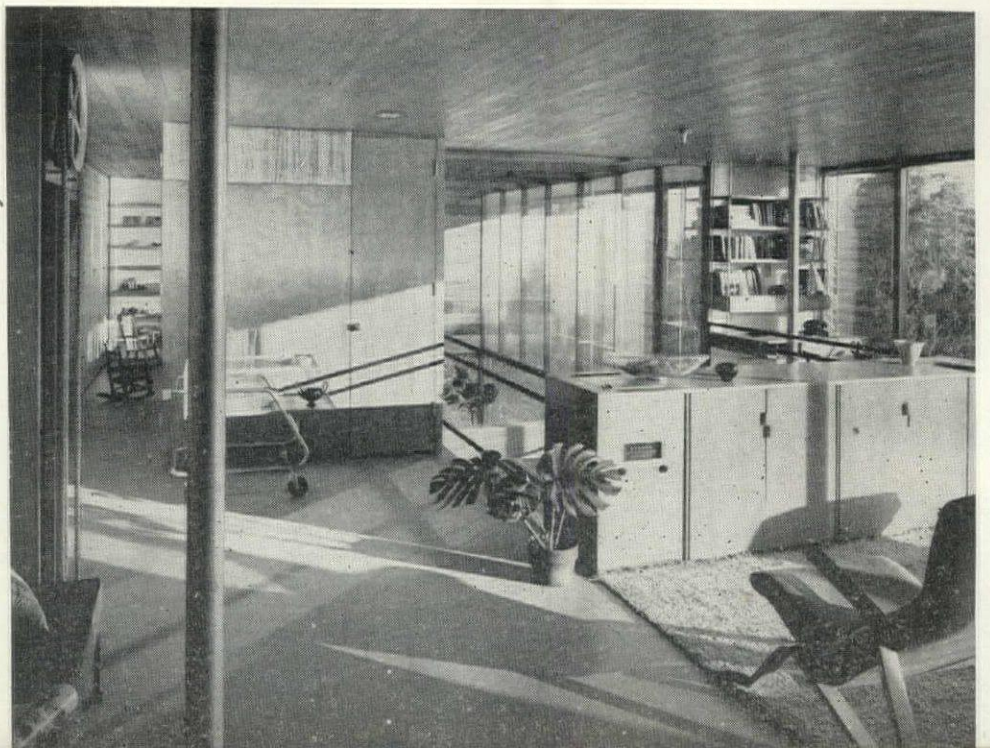
To take fullest advantage of the breezes from the southwest, the architects surrounded their second story with glass jalousies or wood louvers, turned the whole living floor into a breezeway up in the sky. The result is spectacular, points to still better planning ideas in Florida's perennial chase after cooling breezes.

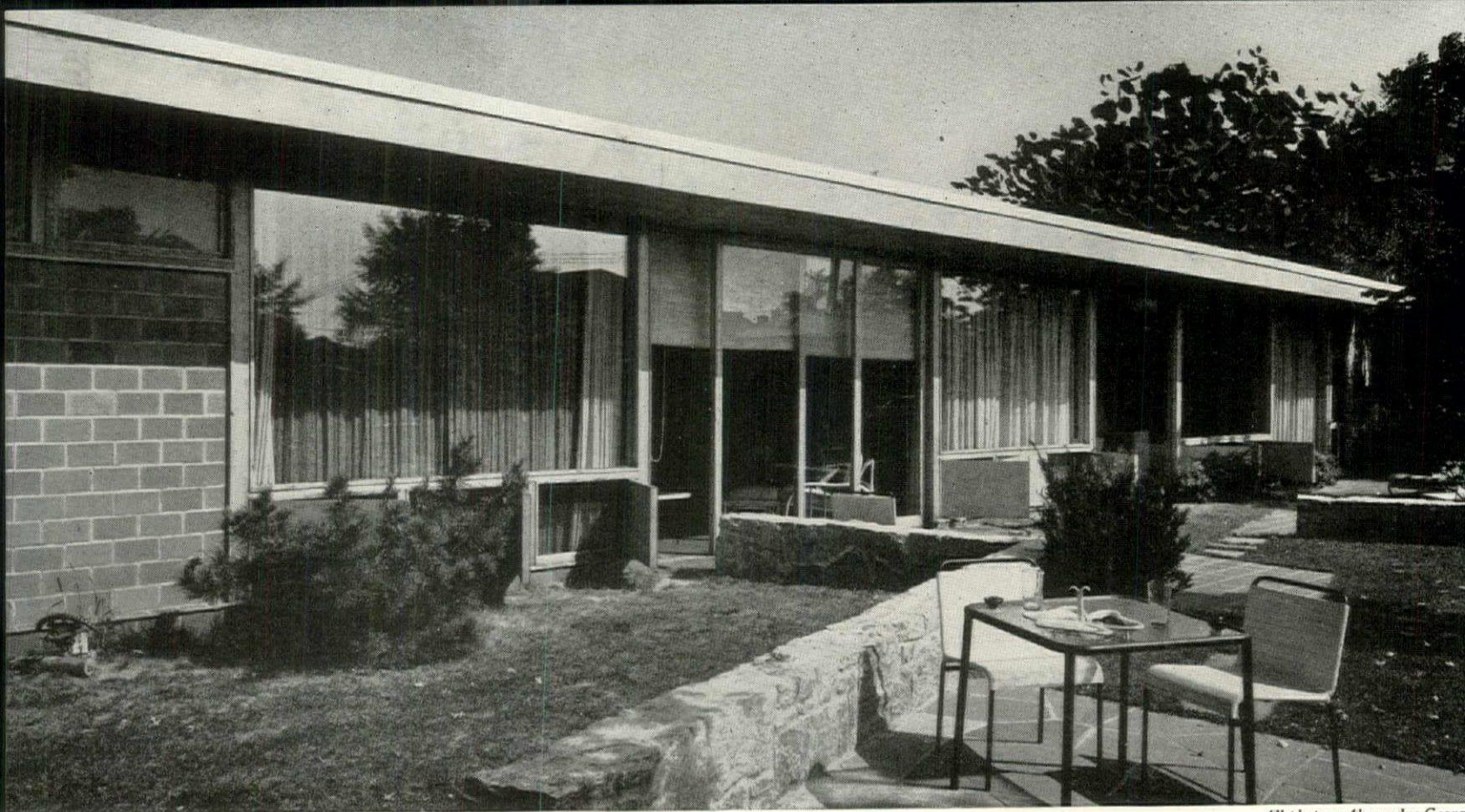
Yet raising the Leavengood House off the ground did not only give it more air, more privacy, more view and more space. It did something else which every student of modern architecture will recognize at a glance: It gave it the "*Villa Savoye*" look—the peculiarly crisp and powerful quality which Le Corbusier got in his house on stilts in 1929. For in an architectural idiom that puts a premium on precise and simple geometric forms, few devices are more successful than that of raising these forms off the ground, holding them up where they will be silhouetted against the sky, their outlines clearly defined. If practical requirements call for more houses on stilts, this one shows that architecture, too, will profit.



View from living room down into patio (opposite) shows glass-enclosed, two-story dining area immediately below, screened space at far end. Floor of patio is of cypress planks. Lally columns were painted gold. Note exciting play of sunlight upon interior surfaces—a conscious part of the design.

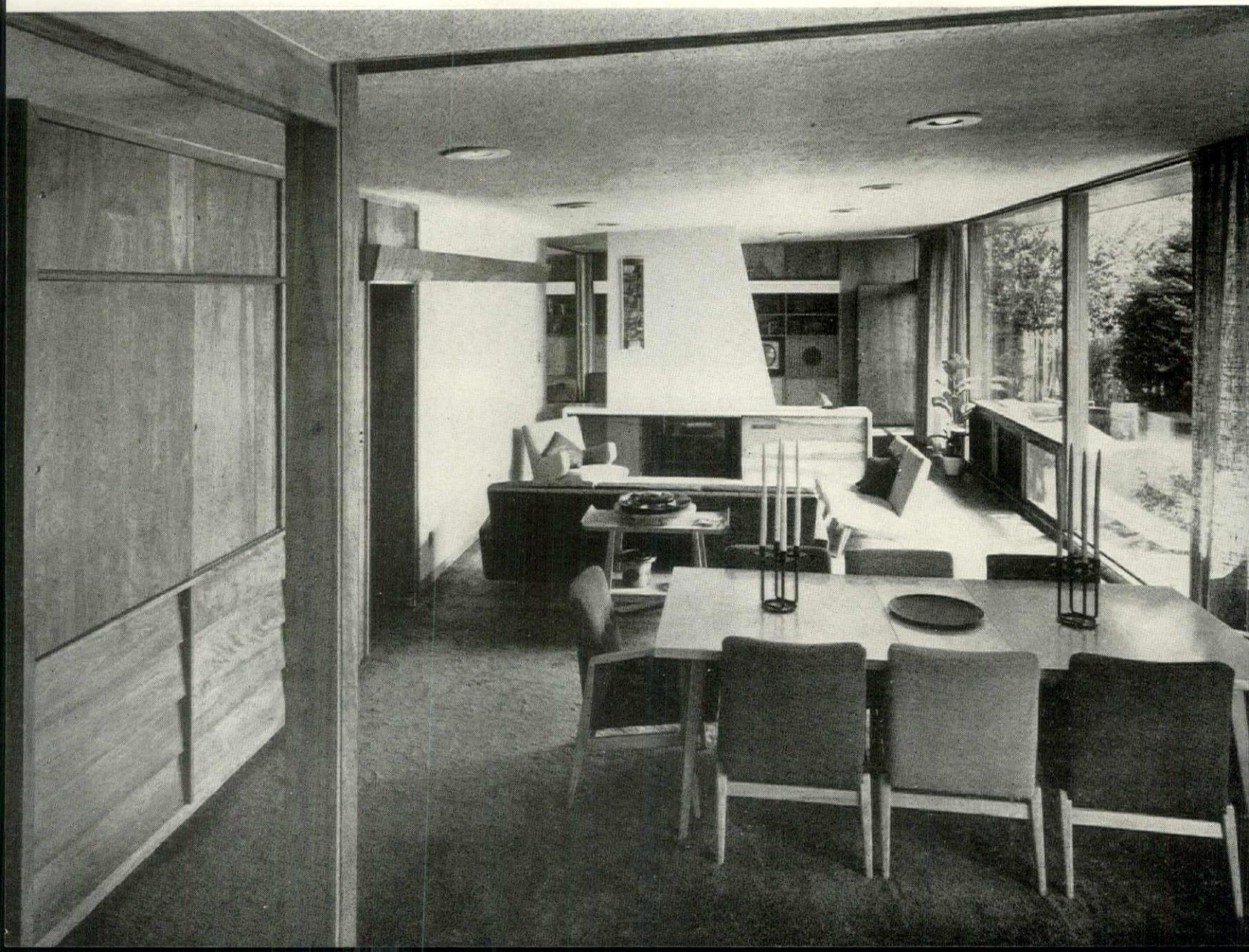
Views of living room (right) illustrate distant vistas, great spaciousness borrowed from two-story patio. Dumbwaiter links downstairs kitchen to living floor. Its mechanism was left exposed, provides handsome decorative touch. Cost of house was \$10.72 per sq. ft.—unusually low in any area nowadays.





All photos: Alexandre George

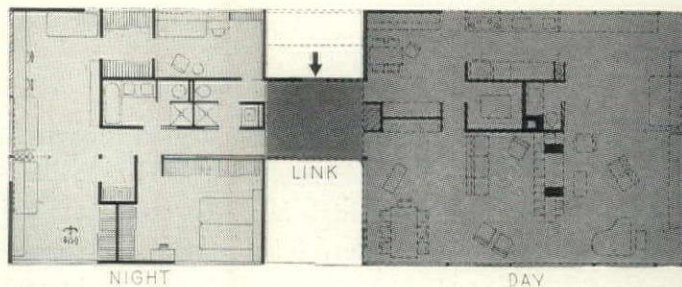
LOCATION: Manhattan Beach, Brooklyn, N. Y.
WILLIAM BREGER & STANLEY SALZMAN, Architects
ALBERT LUSTBADER, General Contractor and Owner



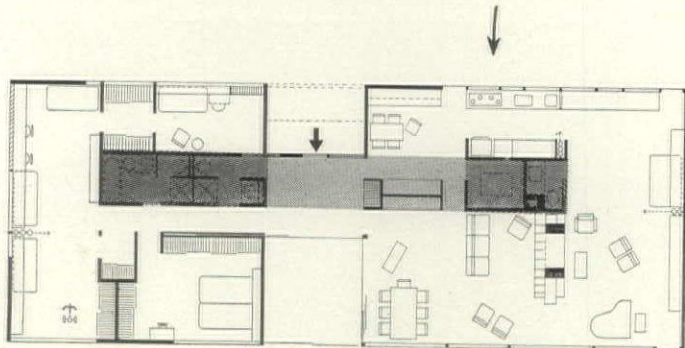
OASIS IN BROOKLYN

For flexibility of plan, for compactness as well as spaciousness and for ingenious details this tile-faced house by young Architects Breger and Salzman would be very hard to beat. By the simple expedient of doing a great deal of hard thinking and hard work, the architects have come up with a 2,600 sq. ft. house (excluding garage), every square foot of which can be used in two or three different ways. In other words, they have given their clients two or three houses for the price of one. Here is how they did it:

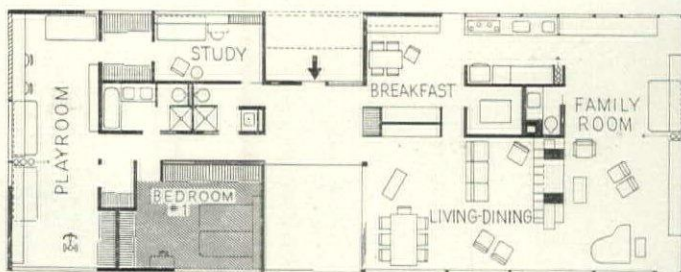
You can look at the Breger & Salzman plan in several ways. One way is to consider it as two houses—a **nighttime house** and a **daytime house**—linked by a wasp's waist entrance hall:



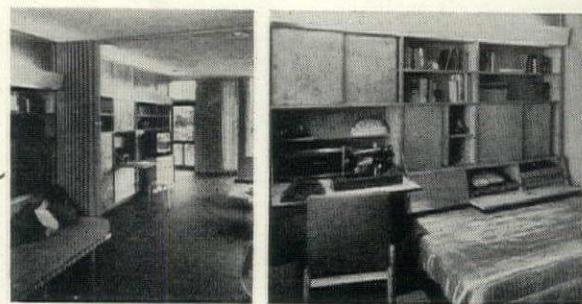
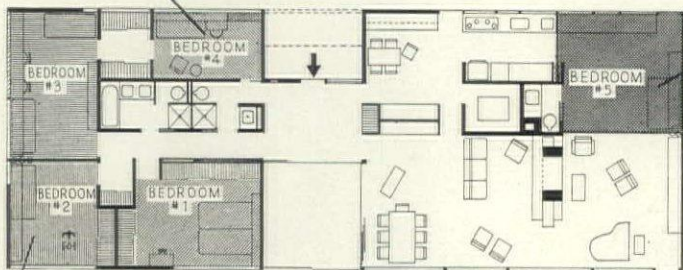
Or you can look at it as a rectangle, 85' long and 30' deep, planned compactly around a central utility-core that forms the spine of the house and is lit through a row of skylights down the center of the roof:



In daytime, this compact rectangle has **only one bedroom**:

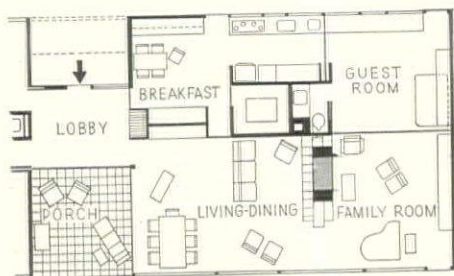


But at night it can grow to be a **five-bedroom house**:

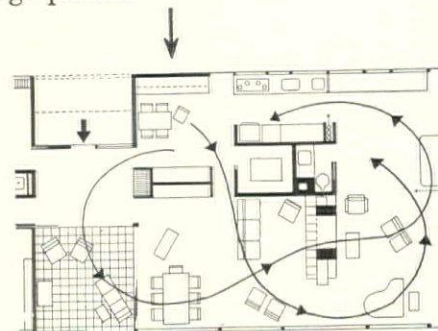


This kind of quick-change flexibility is carried through the entire plan.

Let's take a look at the daytime zone: As shown here, this wing contains **half a dozen distinct and separate rooms**:

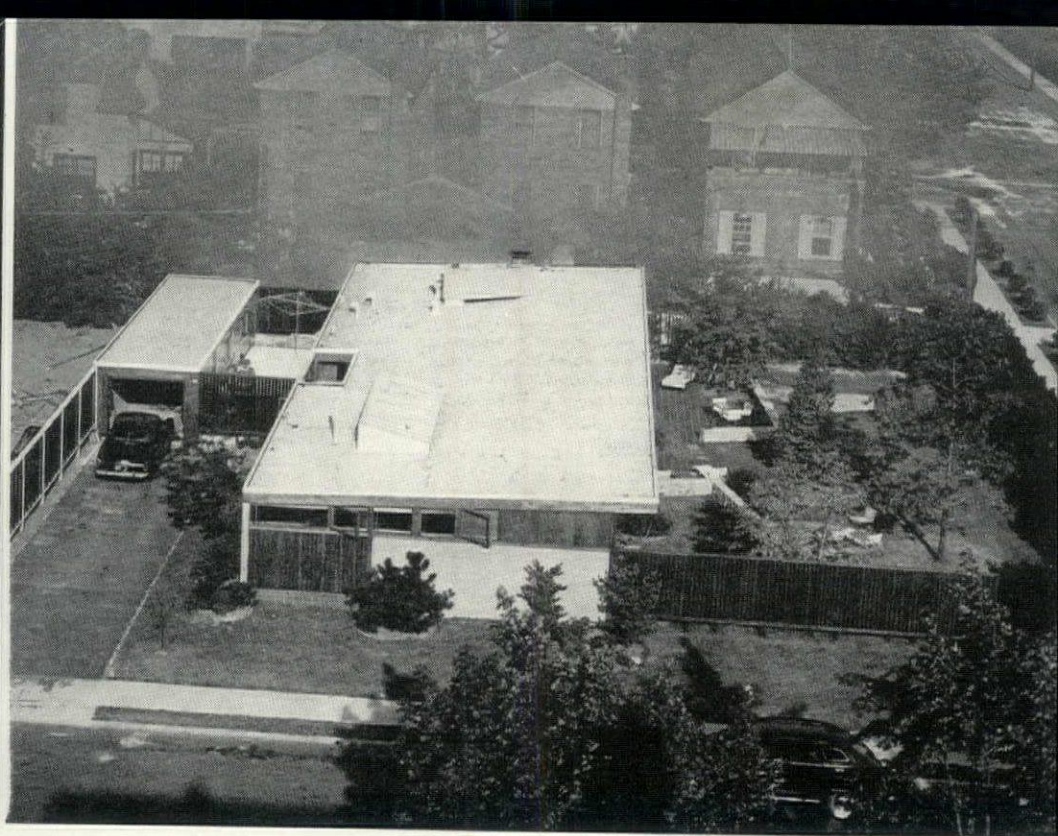
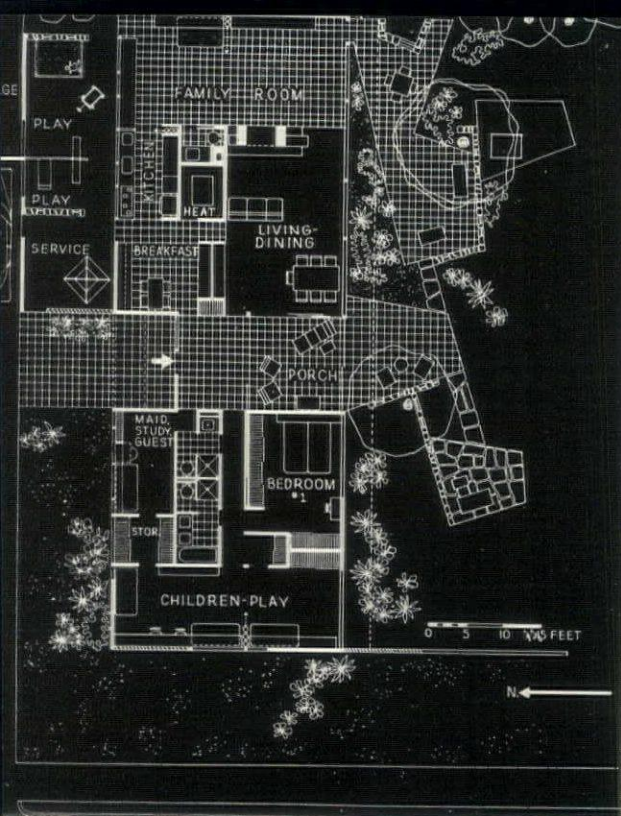


a screened porch, a living-dining area, a family work-and-playroom, a guest bedroom with its own bath, a kitchen and a breakfast room. But with all the sliding walls and partitions thrown open, and with the spaces merged into one, the entire daytime zone **can become one very big living room**, about 50' long and 30' wide, for use during large parties.

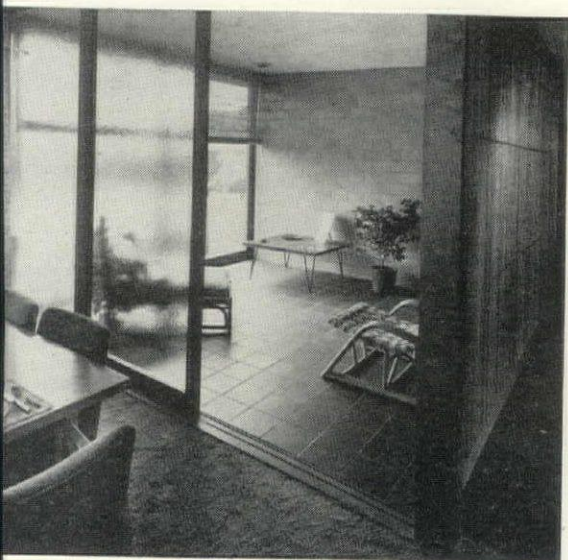


These are some of the planning devices that will be copied and further developed by architects and builders alike — because they prove that you can beat high building costs with bright ideas. But the Breger & Salzman house is more than a planning primer: It is a statement of good living — not only in material terms, but in esthetic terms as well. These architects are exceedingly sensitive designers; how sensitive is shown in the pictures on these pages.



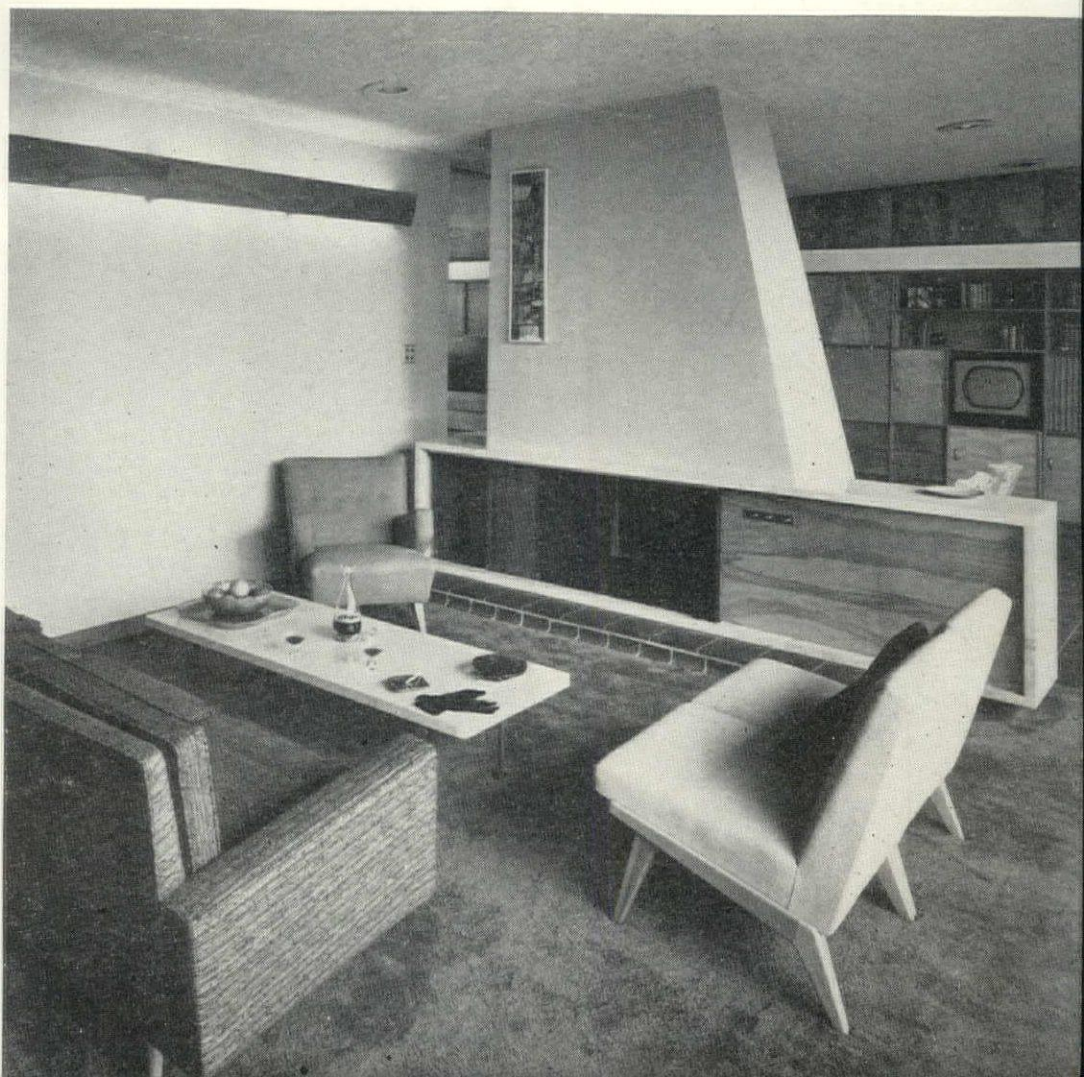


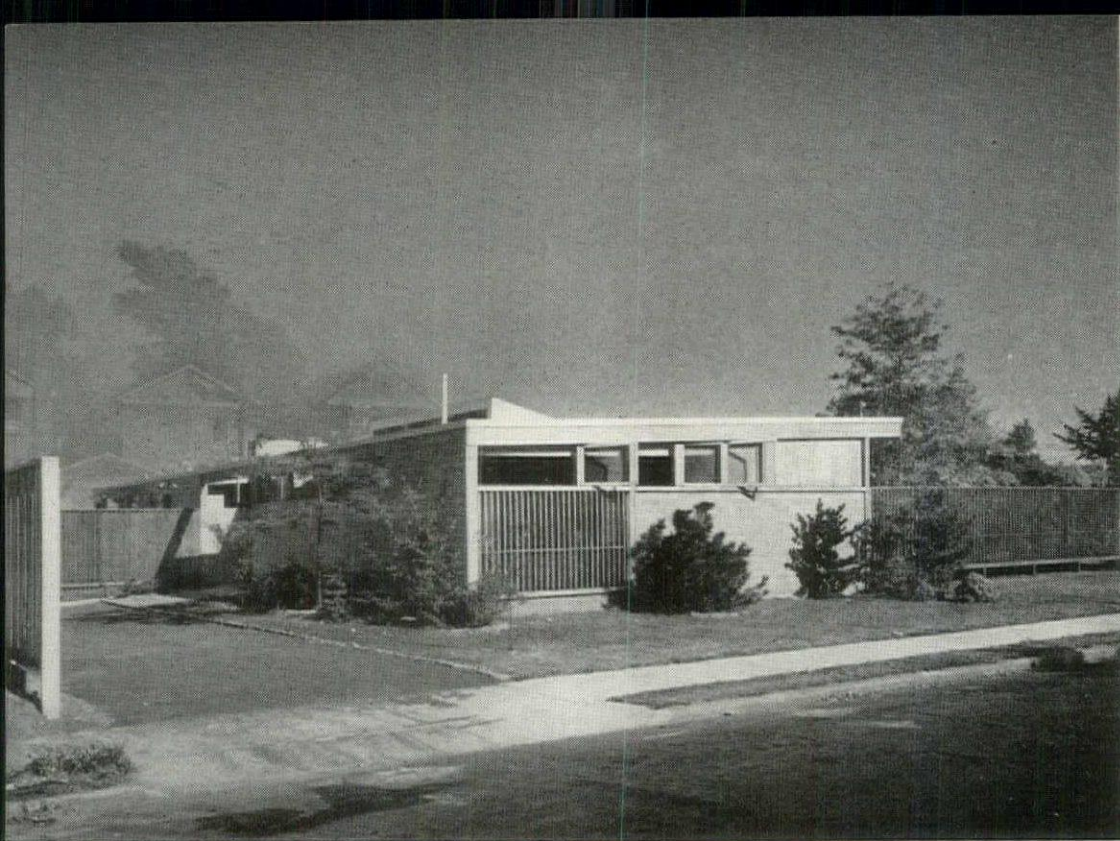
The house occupies a 100' x 104' corner lot in the Manhattan Beach section of Brooklyn, where most of the clients' relatives have lived for years. The aerial view above shows the side-street entrance and the hedge-enclosed garden fronting on the other street. The hedges, screens and other devices, together with the placing of the house on the lot, keep out an indifferent suburban neighborhood.



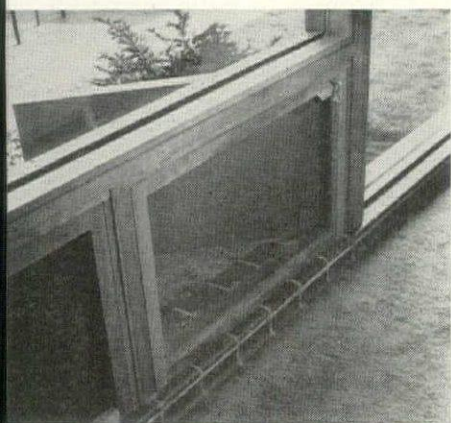
The living room was planned around a free-standing fireplace shown in the picture below. Artist Maureen O'Connor did scroll-like painting for chimney-breast. The marble-framed hearth is mounted on a tile base similar in detail to other tile sills and base strips throughout the house. Cabinet work is of birch.

Tile-floored porch (above) can be merged either with outdoor terraces and garden, or with indoor living area, since it is surrounded by sliding panels on three sides. Louvered panel at right turns entrance hall into a breezeway during summer months when porch is open to the garden.





View of west side of house (left) shows entrance and driveway to garage. Exterior panels are of vitreous tile set between wood posts, and of soleil to protect children's quarters. On the east side which faces south (below) most bays have double-glazing with wood ventilating panels underneath. These are screened and protected against rain by deep roof overhangs. Close-up view of ventilating panels is seen in small picture on this page. Note also tile sill all along glass walls. Total cost of house was \$44,000 (including cabinet work and fees). This figure is low for so well-finished a house was achieved because the owner is a tile contractor and did much of the work with his own men.



HOUSES—Architect & Builder

New design developments in builders' houses are usually inspired by ideas pioneered by architects in the houses they design for individual clients—such as those presented on the preceding pages. In the years ahead many of the ideas demonstrated on these pages will reappear in more economical form in builders houses across the nation.

This is no wishful dream; the pattern is already a matter of record. Thus, on the pages that follow are houses built for sale which show how leading builders and their architects are today adapting to the mass market the best, most practical ideas perfected in individual houses in the last few years. For example: Builder Coogan's \$6,850 house (p. 209) features such trade marks of good contemporary design as the sloping ceiling, the open carport and the slim eave line. Builder Eichler's handsome \$13,000 house (p. 212) takes advantage of plank and beam framing to achieve an open floor plan that extends from entry to kitchen. Builder Jere Strizek in his \$9,950 house (p. 220) has worked many contemporary details into his exterior designs, just as Alfred Levitt has adapted the living kitchen to his new \$9,990 house (p. 217). And Builders Zuckerman & Morris in their new \$15,000 houses are opening their living rooms to the rear garden in the accepted modern pattern (p. 214).

All these good examples of builder houses have one characteristic in common: they were designed by professionals who have made important contributions to their quality. As these examples attest, the easiest, least expensive way a builder can add quality to a small house is to hire an architect to collaborate on the design. Dozens of other low-cost ways to improve the low-cost house are suggested on the next page and—with particular reference to floor plans and kitchens—on pages 198 and 202.

Fortunately for the home-buying public, more and more builders are following these economical steps to quality (see Builder Round-up, p. 206).

The Editors Suggest:

The one thing that is sure about home building over the next ten years is that home building will be a much more competitive industry than ever before.

The war-created housing shortage is almost satisfied. Proportionately less families are doubling up than at any time since 1930. Most families are better housed than they have ever been. The sales appeal of minimum down payments, low interest and slow amortization can be pushed no further. From now on, builders must tap some new market if they are to go on selling over 1,000,000 new houses a year. That means they must either:

- 1. Get their costs and prices down low enough so the average American family (whose income even today is only \$4,000) can afford to buy a new home in which it can take pride and in which it can enjoy better living, or*

- 2. Make their houses so much more attractive, so much better designed, so much more livable, and so much better value than the homes most Americans live in now that they will open up a great replacement market.*

We believe the builders and their architects can meet this challenge and sell more houses than ever before. To meet this challenge, here are a few suggestions on which we believe the most farsighted builders and their architects would agree:

STANDARDIZE THE PARTS

Standardization on certain basic dimensions offers the one great hope of revolutionary economies.

In the past five years home building has taken one long forward step by adopting assembly line methods, but too often the assembly line has been assembling parts which still had to be cut and trimmed and pieced to fit. The next big step will be dimensional coordination to eliminate most of this piecing and fitting.

The 4" module sponsored by the AIA, NAHB, and the Producers' Council has won almost unanimous approval. Now the collaborative AIA and NAHB committees on builder house design have started an equally important movement for standardization of much larger units. They have recommended a standard ceiling height for all small houses of 8'-3/8". They have recommended a new series of joist lengths which will eliminate the lumber waste now unavoidable if rooms are to be dimensioned to avoid waste in floor covering, wall board and many other materials. They have recommended a standardized spacing of tub, wash basin and toilet to permit the use of standard prefabricated plumbing assemblies. They have agreed on one standard height and four standardized widths for all builders' house doors.

This month they are meeting again to push this standardization program much further. It would be hard to overestimate the importance of this undertaking. How can we have an efficient and economical home building industry until windows are mass produced and mass priced to fit without piecing and patching the 5' width of the standard bathroom . . . until the difference in stan-

dard height between the garage door and the adjoining man door is reconciled . . . until storage walls can be bought at quantity prices ready to move right in under the standard-height ceiling in the standardized length of most builder house bedrooms (10' or 12') . . . until . . .

These very great economies of standardization can be achieved only by cooperative effort among the architects, the builders and the material producers. In the meantime, here are some immediate steps every builder can take independently to give better value at very little cost:

WIDEN THE LOT

Builders concerned with making their huddled developments more attractive would simplify their problem if they provided a little more space between houses.

A little more land is the cheapest thing any builder can add to his house, for there are few communities where land costs have gone up anywhere near as fast as construction costs in the past 20 years. Urban economics makes small lots inevitable, but what sense does it make to crowd houses together when hundreds of acres of vacant land are available nearby?

Builder Tom Coogan added only \$100 to the cost of his homes when he widened the lot 10'. Builder Bill Levitt figures that the cost of the 10' wider lots he is now using for his \$9,990 houses is no more than most builders spend on complicated roof framing to make their houses fit narrower lots.

ENLARGE THE ROOM

Many builders scrimp on room sizes. Once a room has been built too small, it is too late ever to make its size adequate. Most builders find they can make their houses 10% to 15% bigger at only 5% more cost, and this increase in overall size would make possible bedrooms and living rooms 15% to 20% larger.

SPARE THAT TREE

There is nothing like a few old trees to take the curse of rawness off a new development. Most house buyers would gladly pay the small extra cost of having the builder work around a few trees. They will add immeasurably to the appearance and value of any house and may, at the same time, shade it from the hot summer sun. By simply instructing his bulldozer driver to spare that tree the builder can spare a customer spending hundreds of dollars and years of time on a replacement.

INTEGRATE THE GARAGE

The attached garage has many advantages and is a big improvement over the detached unit with its long, yard-consuming driveway. However, the attachment is usually at the side of the house where it blanks out a living room wall or a window in two bedrooms. More thoughtful positioning of the garage or carport could free more of the small house's precious perimeter for windows and the same time simplify circulation and enhance exterior appearance.

The Architects Suggest:

While the editors (opposite) were pondering ways by which builders could make their houses better at little or no additional cost, AIA President Glenn Stanton and the architect-members of the AIA-NAHB collaborative committees were studying the same problem.

These specialists in builder house design have amplified and detailed some of the suggestions presented at the left and have come up with many of their own. They range from such small, obvious betterments as the tasteful use of color and the skillful treatment of side and rear facades to such big and controversial subjects as the elimination of all but one entry door and the development of only every other lot.

The suggestions of nine of these architects are detailed below:

GLENN STANTON: more storage space, bigger rooms

Rooms and storage spaces are of inadequate size. While it is difficult to enclose much more space for the same money, that should continue to be a definite objective.

Thoughtful handling of the organization of rooms and circulation can often increase values without increasing costs. Simple detail and good color patterns are important value factors. Skillful site planning and placement of houses often marks the difference between a mediocre and a distinctive development.

In considering the thousands of small house developments, the most successful from an overall survey appear to have been planned by a qualified professional, often in collaboration with the builder.

DAVID B. RUNNELS: better site planning for privacy and orientation

It is bad economy for a \$10,000 house to be built on less than \$500 worth of raw land. A simple but well-planned house can become a more livable asset by better site planning and arrangement of spaces. A house can gain more privacy, better orientation for view, breeze, etc. by the builder using more imagination and variation in site planning than by almost any other idea. This planning is rarely done and the need is greater on a small lot in the \$10,000 class of home than in the more expensive home on larger lots.

Room sizes can be enlarged without increasing the square footage of the house if the builder could use better planned arrangements.

Many builders' houses have poor plans, especially where living rooms become passage ways to all other rooms. A major reason for this, of course, is the lack of a definite or clear-cut circulation pattern within the house so that the rooms may be isolated or flexible for the various activities of the family.

Many plans could also be improved if more thought were given to the placing and grouping of windows for better ventilation, better orientation, better privacy from neighbors and better arrangement of furniture within the rooms. Also in grouping windows the exterior of builders' houses would not seem so unordered and cut-up. The builder's house is invariably a "one facade" house, that is the sides and rear facade are left to chance for their appearance.

The small component parts that the usual builders can easily buy, cause trouble, too, because when they are placed together there is little coordination and they confuse the general character of the house. For example: windows with muntins and doors with panels and too many different materials combined for fake effects.

ALFRED B. PARKER: space is more important than gadgets

Gadgets sell houses for the merchant builders but for long range livability, space is more important. I say build the maximum space possible for the money and, corollary with this, place this enclosed space on the largest parcel of land that is feasible.

The extra cubic feet that spell the difference between "tight" space and a happier sense of

enclosure can be, and usually are, the cheapest cubic feet built. The omission of colored fixtures, colored kitchen cabinets, expensive detailing, etc., can make the larger volume possible.

The advantages of having the hot water heater, refrigerator, stove, washing machine, dryer, dishwasher, disposal, television set and aerial, bedpan warmer, etc., on the original mortgage are well known. These things obviously have great surface appeal. People will demand and get them one way or another. However, in many cases these things are sales dressing for ill-conceived, poorly organized plans that have little to recommend them but the equipment. There are exceptions to this of course.

Intelligent design is the answer. This includes careful attention to all phases of builders' problems of site selection, site planning, financing, mortgaging, field operations, selling, etc. The result of careful design work and close cooperation between builder and architect will lead neither to "Cape Cod" anomalies or "shoe box" barrenness. It should lead to durable, economical, handsome construction which should be a contribution to the living habits of the buying public and return a reasonable profit to all those concerned in its production.

JOHN HIGHLAND: more space inside and out—more livability

It is much simpler to point out the obvious faults of the builder house than to solve the problems which retard more rapid improvement.

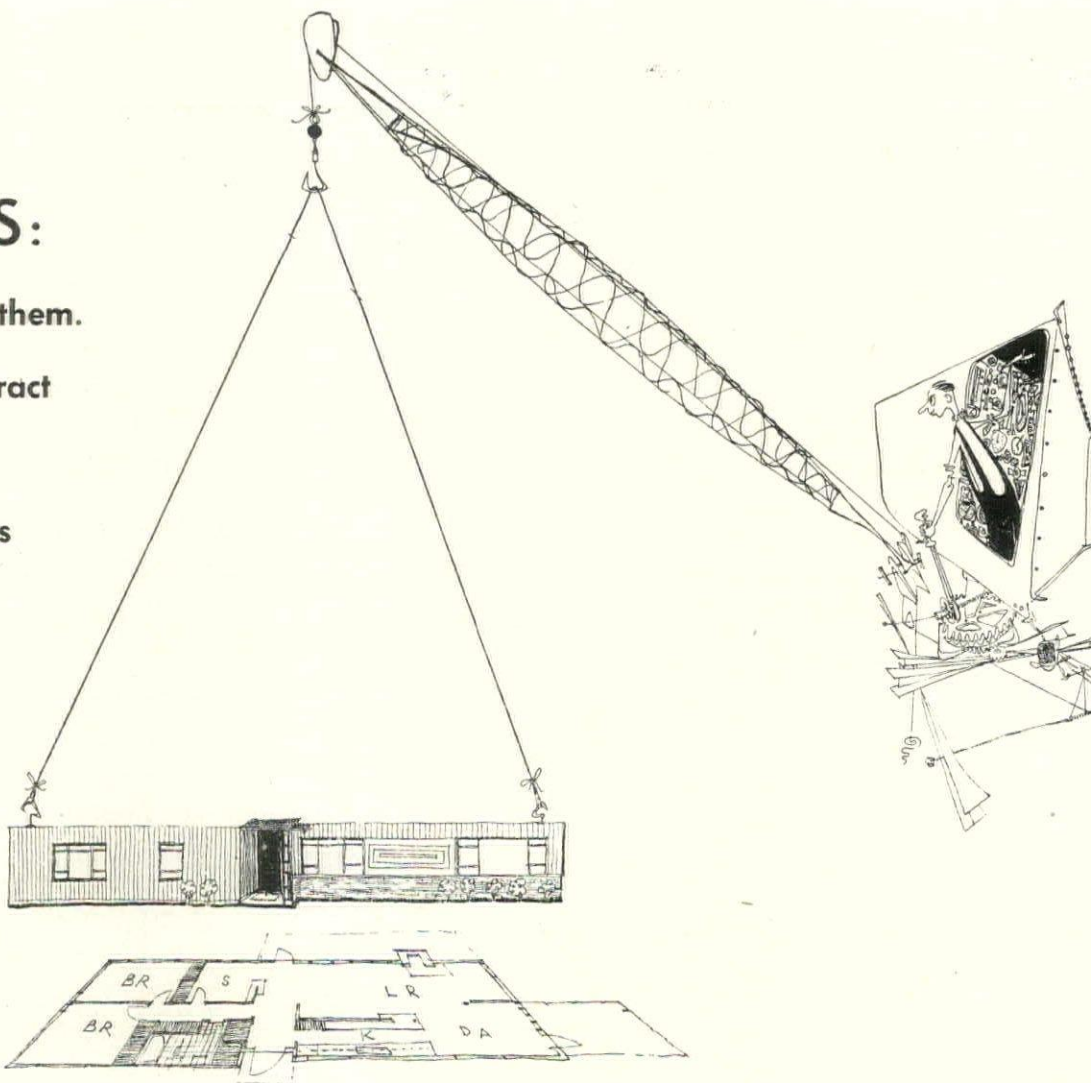
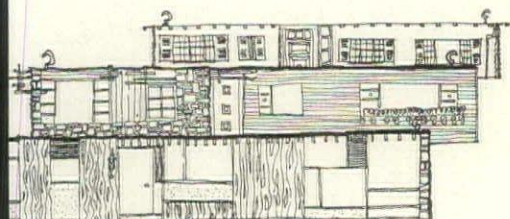
Remember that in many cases the needed improvements are obvious also to the builder,

(Continued on page 242)

PITFALLS IN FLOOR PLANS:

how to avoid them.

Good floor plans will attract
more buyers than
new facades
which only camouflage
1930 designs



For the first time in over 10 years, house buyers are getting particular. They no longer grab the first house they see. They shop around, compare houses, then buy the best.

To meet this new attitude, builders are sprucing up their lines, bringing out new models, providing features that buyers demand. (See Builders' Roundup, page 206.)

A good floor plan is the most basic of all sales attractions. And a poor one cannot be concealed by the skin-deep camouflage of a tricked-up facade.

What makes a good floor plan?

If more builders understood what makes a good floor plan more people today would be living in better houses. Since a good plan need cost no more than a poor one, builders would do well to check their designs against the following characteristics of a good floor plan:

1. GOOD CIRCULATION means the arrangement of rooms for the most efficient family living—to put rooms where they logically belong, to keep traffic out of living areas, to save a woman steps, to let children enter a house without carrying mud through the living room. A good plan has a “dead-end” living room, a close integration of kitchen, garage and service door and a minimum of hall and other “go” space. No one would think of putting a dining room far from the kitchen, or a bathroom far from bedrooms. But many a house is built with mistakes just as obvious.

2. FULL USE OF SPACE is a characteristic of a good plan. The smaller the house, the more important it is to use every square foot for family living and sometimes to use it for two or three purposes.

3. ORIENTATION: getting the most out of the site, view, sunshine, and breeze. Everyone would agree that in planning a week-end lodge overlooking a beautiful lake it would be foolish to turn its back on the lake, or to locate the house so it would get no sunshine or not shield its outdoor terrace from cold, unwelcome winds. Good orientation is even more important for a tract house. It must squeeze all possible advantages from nature.

4. INDOOR-OUTDOOR LIVING: The trend to outdoor living is so strong that wise builders everywhere are cashing in on it. They plan

their houses with living rooms that overlook the most promising vista—usually the backyard with its possibilities for garden, terrace or patio. And, they make it easy to get outdoors from the living room, kitchen and other key rooms.

5. PRIVACY is not easy to provide in a small house, yet it can be done by isolating the living room, by using doors and halls between living and bedrooms as sound baffles, by letting a bedroom serve as a hide-away sitting room.

6. FURNITURE ARRANGEMENT: Some living rooms are so cut up with traffic lanes and doors there is little space for furniture. Bedrooms should be planned for more than one furniture arrangement with room for occasional chairs and for children's study or play.

7. WINDOW LOCATIONS should be planned with reference to the view and to privacy from neighbors and street. If large enough, they can give rooms additional spaciousness by borrowing outside light and view. Finally, windows should be related to exterior design. Most buyers these days want more and larger windows.

8. STORAGE. Ample storage is one of the most important characteristics of a good plan, particularly for small houses without basements.

9. MULTI-PURPOSE SPACE: In low cost houses most rooms must serve two or more purposes. Dining areas must be usable for children's study or play; bedrooms for play, study, listening to radio; living rooms for a variety of family purposes and for privacy from the rest of the house. And the kitchen is often the laundry as well as the dining area.

10. ILLUSION OF SPACE. The smaller the house, the more it must seem to be larger than it is. When one room opens into another both rooms appear larger. If there are big windows looking to a terrace, the entire house seems larger. For kitchen-dining areas that seem larger than they are see page 202.

Three common faults with many floor plans are discussed in detail below. The floor plans were taken from real estate sections of newspapers in several parts of the country and are typical of hundreds of plans being used over and over again by builders today. While it is seldom possible to turn a poor plan into a good one by tinkering with it, an analysis of these poor plans may help designers avoid the usual pitfalls.

Good circulation is a basic requirement—

yet these typical floor plans don't have it

These two floor plans demonstrate poor circulation. After a family with children has bought the house at the right it will discover the living room is as busy as a bus station. There can be no peace or privacy in such a house unless the children are in their rooms or at the movies.

The heavy pattern on the plan shows how traffic moves in such a house. Every one coming in the front door has to cross the living room to get to kitchen, bath or bedrooms. Cross traffic from the kitchen or dining room to bath or bedrooms would also disturb anyone in the living room. When children enter the house through the kitchen or the outside

dining room door they must cross one end of the living room to get to other parts of the house. A large share of the living room cannot be used for furniture and in reality is nothing but hall space.

Compare this house for a family with children with the well planned house on page 220 which was designed especially for a family of five. Asset: the living-dining area has three exposures which would make it seem to be larger than it is and would make the most of a well-landscaped garden to the rear. Liability: the kitchen should have a window opening to the front porch so the housewife could see who is at front door.

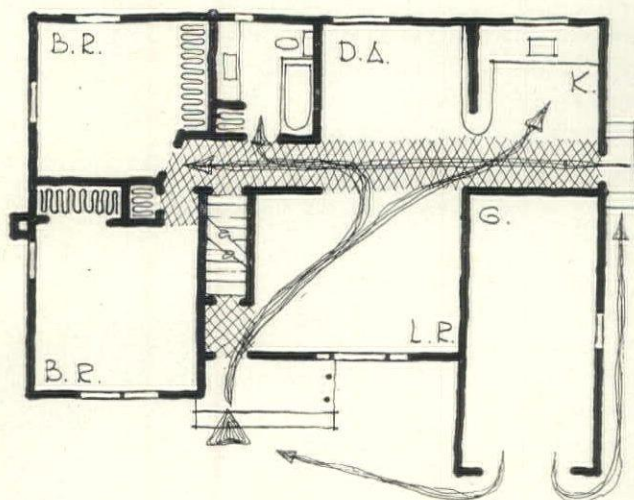
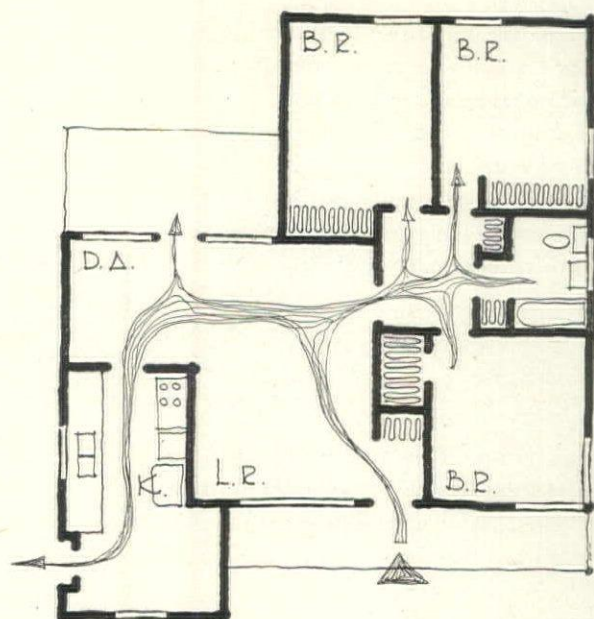
Poor circulation in the plan to the right starts with the lack of a door between garage and kitchen. There is no excuse for forcing the family to walk from the garage to the front door in bad weather, or around the side of the house to the kitchen door.

The living room is a runway for traffic coming in the front door and for all traffic from upstairs (if the expandable attic is made into bedrooms) to any part of the first floor. In effect, the back and left sides of the living room are merely hallways which make the room very hard to furnish. It actually has about half as

much usable space as if it were a "dead-end" room.

All the cross-hatched area on the plan is hallway—far too much for a house of this size. Even part of the kitchen must be kept free for through traffic.

The spaciousness of this house could be improved if the single window in the dining room were replaced by large glass doors to lead out to a rear terrace or garden. Such a glass area would make both living and dining room seem larger and would provide an easy indoor-outdoor route for summer use. It would be especially valuable when the back of the house faced south.



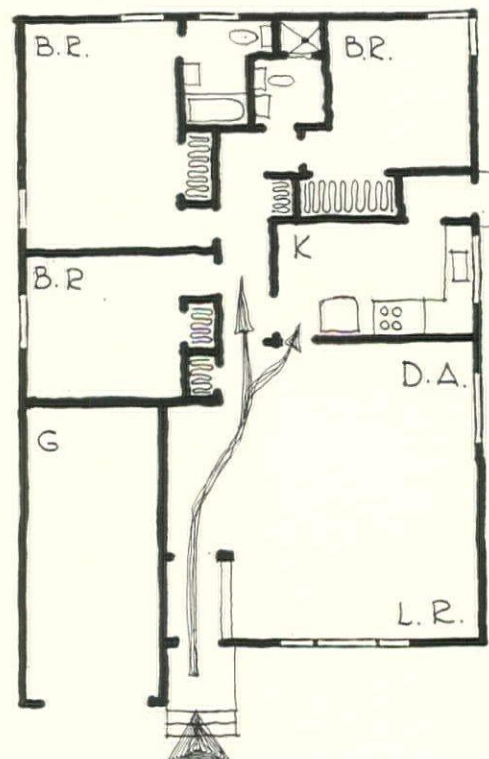
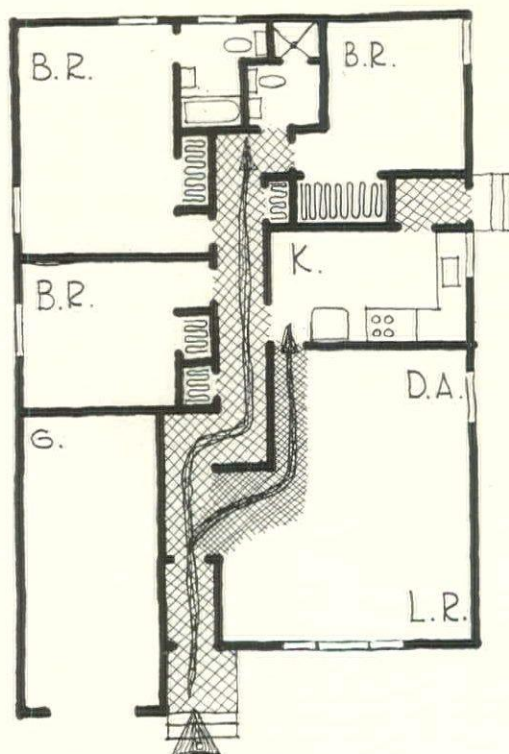
Every square foot should count—waste space cuts down living area

As houses become smaller, families need every foot of floor space they can get. Yet in houses like the two shown to the right, the buyers have been cheated of much usable space.

Cross hatching in the plan, right, shows how much space must be reserved entirely for traffic: *an amount equal to the entire living-dining area*, or nearly 300 sq. ft.

Because of the unnecessary partition between living room and hall, there are two traffic routes from the front door to the kitchen and rear of house. This plan has little to commend it, but removing the partition, as has been done in the drawing at far right, opens up the room and produces more useful space and permits better furniture placement.

Another circulation fault: the kitchen is too far from the garage. Although this house sells at over \$20,000 and should have a well-considered plan, the garage has no direct entrance to the house (and no covered walkway to the front door), the front vestibule is small and crowded, there is no guest closet near the entry, and other closets are small and inadequate in number. Nor is there a window in the garage for hobby work on rainy week-ends.

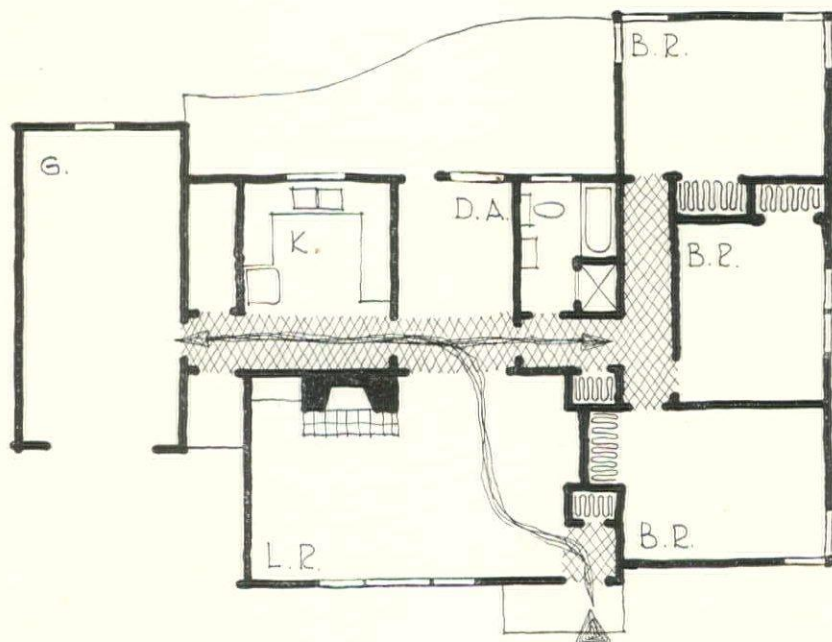


Large houses of the past could afford to throw away space in wide, impressive hallways. Today a good floor plan means a compact house that keeps halls and traffic lanes to a minimum.

The plan at right has far less living space than its 1,400 sq. ft. (plus garage) should provide. The cross hatching and traffic pattern show the extravagant amount of hall area that must be kept clear. Even the 21' x 14' living room is smaller in actual use than it should be because the right end is the path from kitchen to front door.

The bathroom would have more privacy if shower were moved to the left and the door were located in the bedroom hall.

Assets: kitchen, garage and service door are closely related. Dining room has door to rear garden. Coat closet is near front door. If rear garden were landscaped, visitor would get pleasant, spacious view when entering at front door.



Plan for all four orientations

Builders wrack their brains trying to think up new sales schemes but neglect an idea that costs very little. That is good orientation.

Orienting a house properly means planning it to get the free blessings of nature (such as big windows to the south) and then locating it on the site to best advantage. Builders with flat land and no view or trees can still get a dividend from nature if they plan for it.

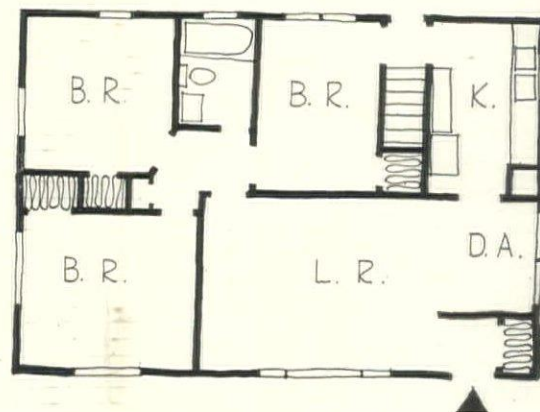
One of the greatest assets of a custom-designed house is that the architect can take time to study the site and so plan and locate his house that the family will get the free dividends of fall, winter and spring sunshine in the rooms where they want it and yet not have to fight summer sun. The cool, welcome breezes of summer blow into their bedrooms and yet winter winds are blocked off. A house properly designed and well oriented is a light, cheerful house the year around. If it has a sun pocket, in the sun but out of prevailing spring and autumn winds, it can give its owners from six to eight weeks more outdoor living per year than neighbors get. All these advantages are free if they are planned for. They are part of the indoor-outdoor living that people want these days.

But what happens with most houses is a far different story. It is illustrated below. Usually a builder has but one

basic plan which he also reverses. These two models are built facing all four compass points, regardless of where the sun, wind and weather come from. The typical floor plan has only one good orientation: with its best rooms and largest windows facing south. The other orientations are either poor or miserable. Thus approximately three families out of four who live in these houses are being denied the best orientation. To overcome this situation, a builder needs at least two basic plans, each of which is also built reversed.

The floor plan on the right, not good but considerably better than those of many builders, is at its best when facing south. The dining area gets morning sun, the living room gets southern sun through its three windows. The kitchen gets only eastern sun and would be a better room if it had a window on the north. Two bedrooms get afternoon sun but they also get cooling breezes if summer wind comes from the southwest, as occurs in many parts of the country.

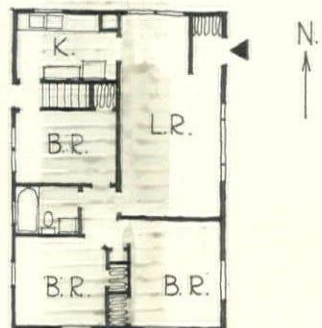
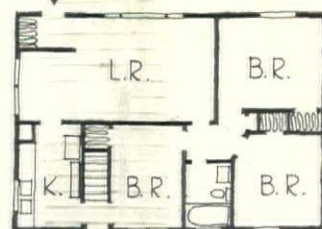
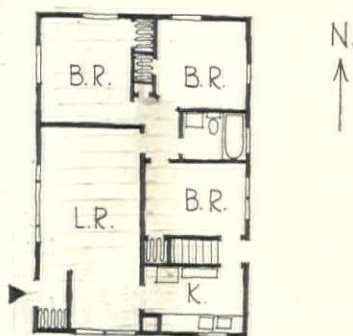
If this plan is reversed, left to right, it is not as well oriented. While the living room still gets southern sunshine, the dining area would be hotter on summer afternoons, but lighter and more cheerful in the winter. The kitchen, facing west, would be hotter in summer and darker during winter mornings.



Facing west: poor unless living room windows are properly shaded. Kitchen and dining room face south, which is good. Living room windows would let in summer afternoon sun. If plan reversed: poor. Only bedrooms get southern sunshine. Kitchen would be dark. In mid-winter, living room would get little sunshine, and yet would be hot on summer afternoons.

Facing north: poor. Living room windows let in no sunshine and would lose heat all winter. Dining area is fair. Kitchen: good but better if a window is added. Only two bedrooms and bath get southern sun. When reversed: still poor.

Facing east: poor. None of three key rooms (kitchen, dining room and living room) gets south sun. Living room would get morning sun. When reversed: better: kitchen and dining room face south, letting some southern sun into living room. This is second best of all orientations.



NEW TRENDS IN KITCHENS: the room that sells the house is changing fast.

New styles for builders' houses are set in the luxury homes.

For the second time in a generation a revolution is occurring in the kitchen.

The first revolution, sparked by manufacturers of kitchen cabinets and equipment, transformed the kitchen from a room where the housewife wanted to hide into a hospital-white laboratory which was often the showpiece of the house and cost more than any other room.

But the gleaming kitchen of 1945 was as much a room apart as the dingy kitchen of 1915, and it was often a gleaming prison in which the housewife spent a large part of her day walled off from family, children and guests.

The second revolution is releasing the housewife from this solitary confinement. For the first time since the living-kitchen of the old New England farm, it is making the kitchen an integrated part of the family living area.

Like so many other revolutions which in a few years have changed the design of countless low-cost houses, this second kitchen revolution was started by a number of today's top-flight architects who were the first to adapt their plans to the needs of a somewhat servant-less age. They extended the open floor plan past the dining area to include the work area as well, and let the housewife (or hostess) enjoy her family or guests while she was finishing the dinner or finishing the dishes.

Equipment manufacturers have helped the revolution along with exhaust fans which carry off the cooking smells and dishwashers which reduce the kitchen mess. The decorators are lending a hand by suggesting new color schemes which make the kitchen area much

easier to fit visually into the pattern of the rest of the house.

Now the biggest volume builders like Fritz Burns and Bill Levitt are taking up the idea. In houses like theirs the revolution has particular importance for they are so small that, if the separate living-dining area is big enough, then space left over for the kitchen may be too small and, if the kitchen area is made big enough, the living room may be too small.

Three years ago Levitt tried to meet this problem by hinging one wall of the kitchen so that part of the area could be used some times to make the kitchen bigger, some times to make the living room bigger. This year he has dropped that idea and has made the kitchen frankly an alcove of the living room (see p. 217). On the West Coast Fritz Burns made the living-kitchen the No. 1 experiment in his new House of Tomorrow (p. 205).

Few builders have gone so far, but a very large percentage of builders' houses now compromise with a big pass-through (in many houses it also serves as an eating bar) which enables the mother to watch the children in the living room while she works in the kitchen, enables her to join in the conversation with family or guests while she finishes her work.

Just how far the public will want this second kitchen revolution to go is still in question. Many housewives who find the open kitchen or pass-through very satisfactory at certain times, insist on something to close the kitchen off at others. And families who can still have servants will almost certainly prefer the privacy made possible only by an enclosed kitchen.

The open kitchen

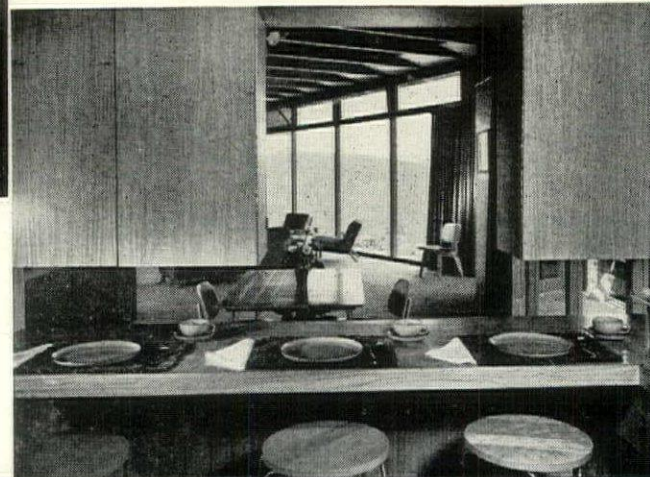
This smart kitchen illustrates several new style trends. Kitchen and dining-living areas are practically one large room. The partition does not go to ceiling and is formed primarily by the counter and hanging cabinets.

The counter serves a triple purpose: work space, pass-through and a breakfast or snack bar. Wall and cabinet finish in kitchen is natural wood to match materials and colors in living room, presenting no clash in color when seen from living area. Kitchen is near terrace for outdoor dining.

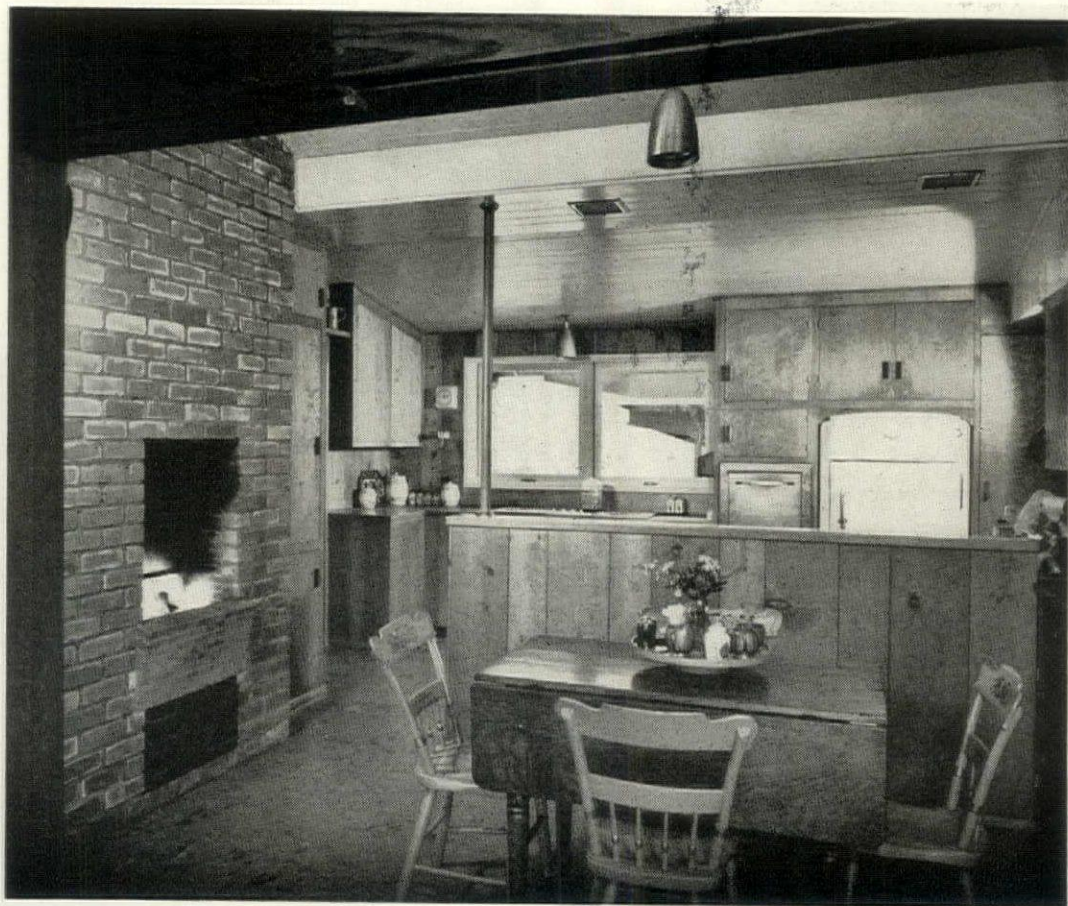
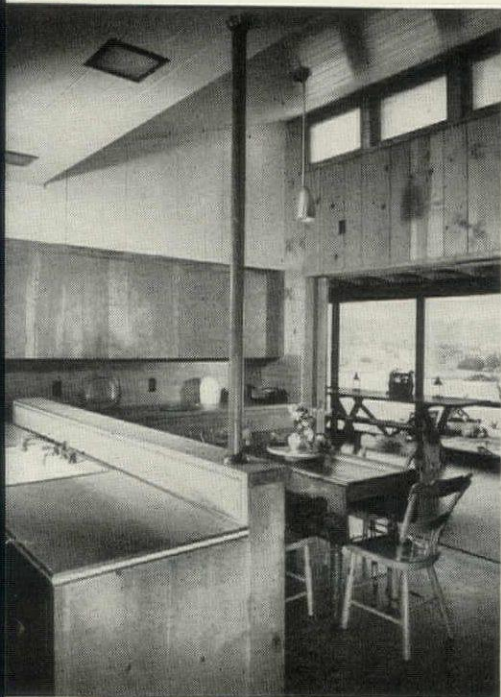
To make a kitchen like this pleasant and workable, two pieces of mechanical equipment are necessary: a strong exhaust fan to keep cooking odors out of living room, and a mechanical dishwasher to get rid of dirty dishes in a hurry. Designer: Rodney Walker.



Julius Shulman



Shulman



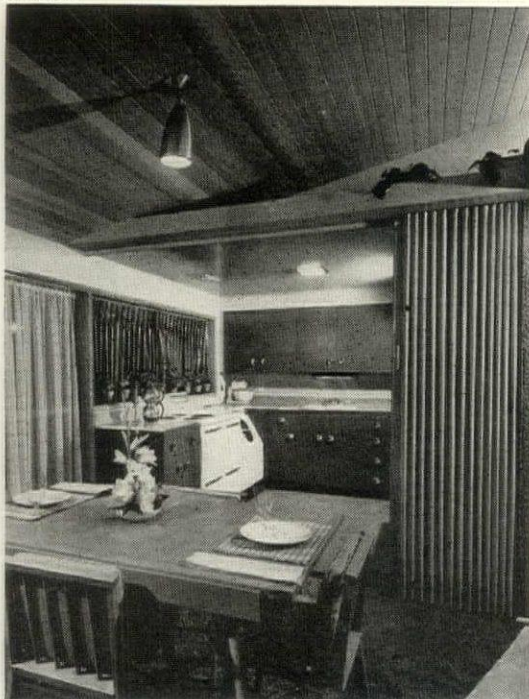
Merger of kitchen and living room

These photographs illustrate the complete merger, show how open planning makes both dining area and kitchen seem larger. Only a working counter separates the two areas. The housewife working at the sink in this counter participates in living room conversation and enjoys the view through the big living room windows. While the wood cabinets and counter carry out color scheme of living room, the white refrigerator stands out like a sore thumb. If tinted to harmonize with wood surroundings, it would be less conspicuous. Architect: Graham Latta.

Shulman

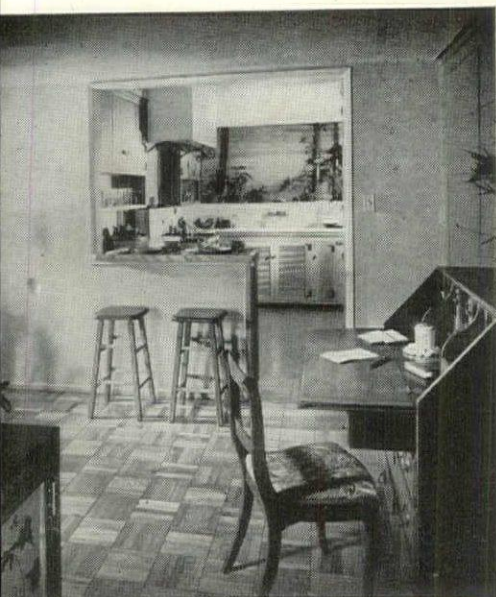


Richards

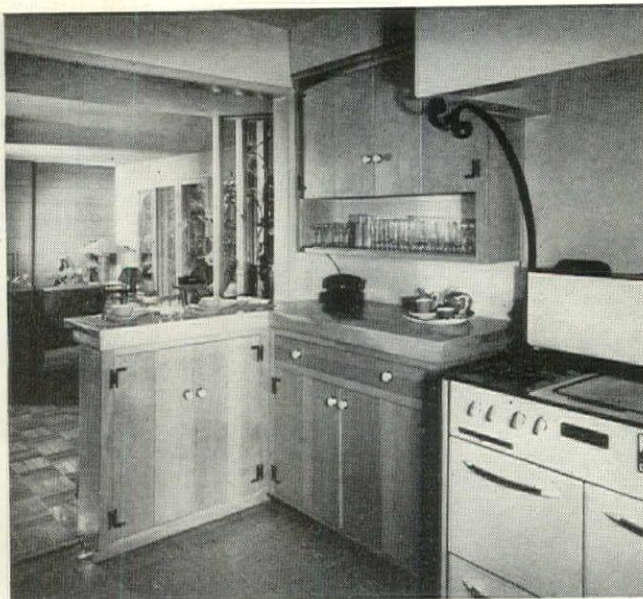


Sliding or folding doors, such as those shown at the far left, are a workable compromise between a completely open and a conventional, closed-in kitchen. At far left, Architect Milton Caughey gives his client a dining table and work counter which can be opened up to the living room as a pass-through or screened from sight. This flexible feature increases the table's capacity, for without it, the table would be in a corner of kitchen and would seat only two or three, instead of four.

The folding partition between the dining area and the kitchen in the Budget Homes house performs the same function and doubles as a door. Such doors take up little space, give more freedom for placing furniture than conventional, hinged doors.

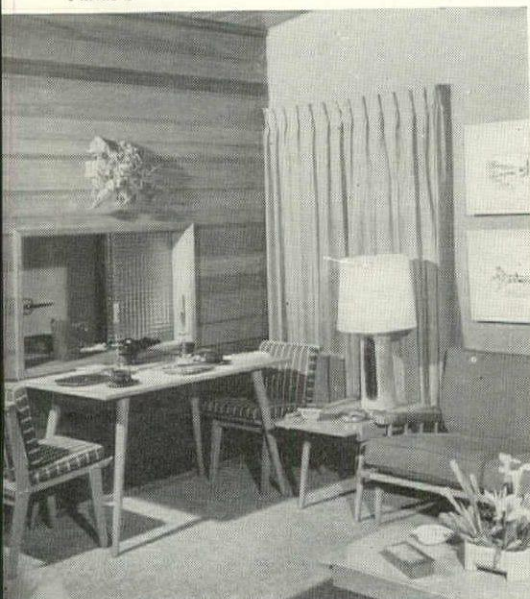


Robert C. Cleveland

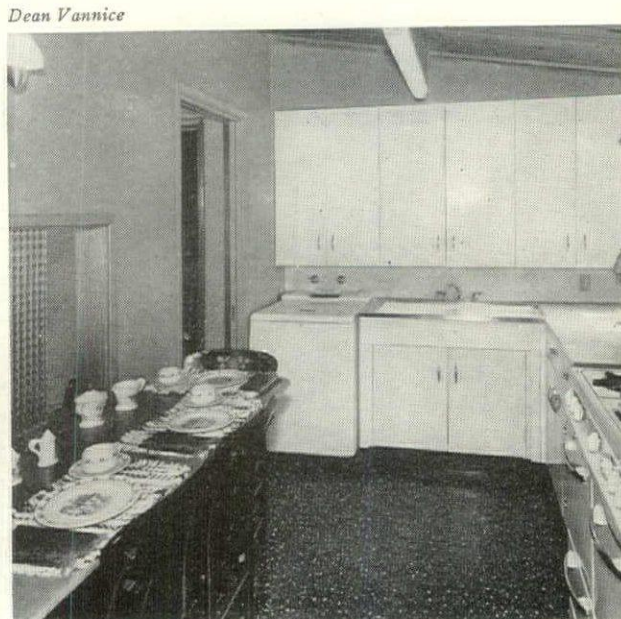


Natural wood finishes

The natural wood that Designer James Roth used in his own kitchen illustrates a trend that is already in evidence in many builders' houses. Moreover, the open planning of this small house creates long vistas that makes the house seem bigger than it is. Except for a small counter which doubles as a work space and breakfast bar, living, dining, and cooking areas are one. Roth solved the ever-present problem of cooking odors by installing an exhaust fan in the large hood over the stove. At the side of the kitchen, the stove is less apparent than if it were at the far end of kitchen.



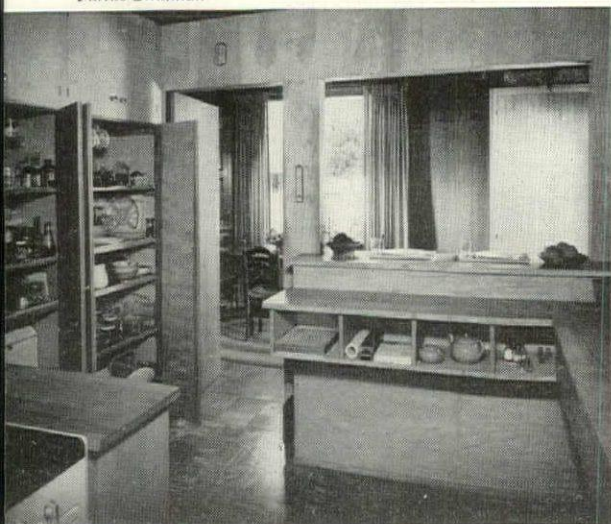
Julius Shulman



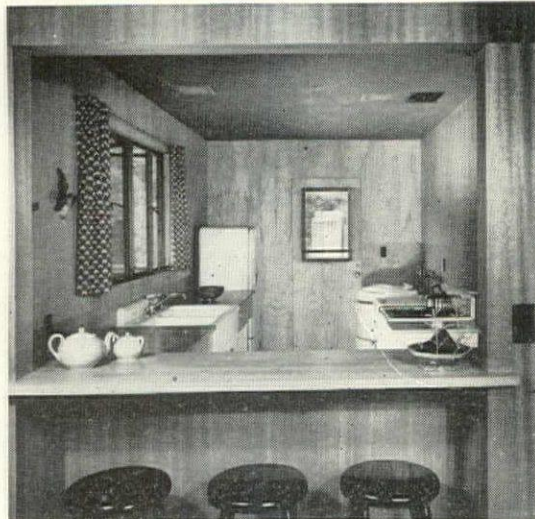
Dean Vannice

The pass-through

This small house of Fritz Burns gives a new twist to the old idea of the pass-through. The opening is larger than usual and two sliding opaque glass panels either open up or shut off the kitchen from the living room. Eating tables can be put on either side, as illustrated here. This has been such a popular feature with Burns' buyers that in some of his new houses he will go further and completely open the kitchens.



Julius Shulman



The working-eating counter

In many new houses the eating counter is also used as a work space. This house of Architect Lawrence Test shows open storage space on the kitchen side, with ample overhang on the opposite side for the knee space necessary to dining comfort. Cabinets, on the left, provide considerable storage space and their flush wood doors harmonize with wood walls. An exhaust fan is in ceiling above the range.

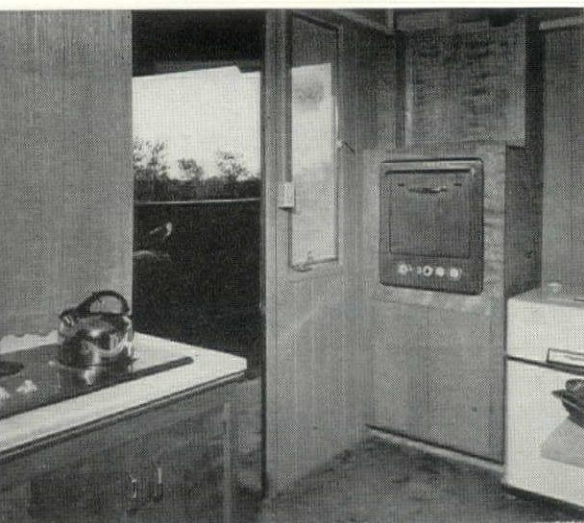


Photo Associates—by Ulric Meisel

On stove

Built-in range and oven are appearing in more and more custom-designed houses. No new kitchen equipment in the past has met with such success. Electric equipment is shown above, a new gas range and oven, below.

Electric equipment pleases both designers and consumers because it looks well, can be integrated into the counter and cabinet rather than added later as an appliance which often does not match the other kitchen elements—photo right) as the oven where it belongs: at eye level.



Damora

Open wood shelves

Open wood shelves are part of the trend to more color and natural wood finishes. They are popular because they simplify the handling and storage of frequently used utensils. (Enclosed storage space is better for less frequently used dishes which would collect dust on open shelves.)

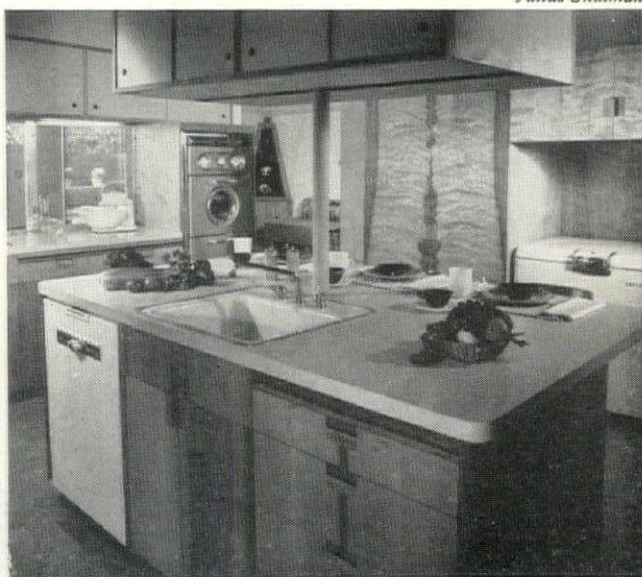


Kitchen of tomorrow?

Handsome kitchen below and at left is in Fritz Burns' "House of Tomorrow" in Los Angeles, a demonstration house of ideas that will influence thousands of people who inspect it.

The kitchen features an island counter which has sink and dishwasher on one side, eating and working space on the other. Storage cabinets above are suspended from ceiling. Kitchen has vinyl cork floor, birch cabinets, plastic-coated plywood counters, was designed by Architect Welton Beckett.

Julius Shulman



WHAT BUILDERS PLAN FOR 1952: New, lower priced designs

the new financing pattern and the public's insistence on livable h

Here are some of the trends
for 1952 revealed by a sur-
vey of the plans of 17 big
house builders whose lead
other builders often follow:

- ▶ More builders have new plans for new houses than at any time in the past years. Three out of four have new models to add to or replace their 1951 models. Builders not changing their line now are usually the ones who brought out new houses last Spring which are still selling well.
- ▶ More builders than ever before have called in architects to help them get new plans.
- ▶ Sales prices will be lower. Well over half the builders are planning cheaper houses.
- ▶ \$12,000 is the top figure they are aiming at—because above \$12,000 down payments under the revised Regulation X quickly double. Most builders who have been selling above that price are introducing a new house at \$12,000 or just below.
- ▶ Builders who have had houses below \$12,000 are planning to go still lower. A few who have been in the \$8,000 field are going as low as \$6,000.
- ▶ But many builders plan to bracket the field with houses at several prices. They are moving in both directions, with new houses both cheaper and more expensive than their 1951 models.
- ▶ Experimentation is rampant. Many builders are trying out brand new ideas in their area to see how the public will like them. Examples: the center garage, wrap-around house, Swedish-door walls and the double patio.
- ▶ More than any time since the war, builders are studying family preference, experimenting with good floor plans, analyzing the qualities in a house that make for family living. Design trends vary from section to section but the keynote is increased livability.

Presented in detail below are reports from across the country, beginning with the Northwest.

Albert Balch, Seattle: flexibility via new architects

Community Builder Balch provides an object lesson in why some big builders stay big: they change with the times.

"What people were satisfied with last year won't sell in 1952," says Balch. "A house that is a whirlwind seller one year may lay an egg the next. We are constantly experimenting with new designs to keep our merchandise fresh."

Balch is working on dozens of new designs with no less than four independent architectural offices: Grainger, Thomas & Baar; John Ridley; James C. Gardiner; W. A. Wollander; and he is having preliminary talks with Paul Thiry and Harrison Overturf of Bain, Overturf & Turner. The best architects he believes, turn out to be the cheapest. He hopes the ideas his architects come up with will make building history in Seattle.

Most of their designs, he says, have lower pitched roofs, fewer corners, more interior plywood, steel kitchen cabinets, elevated fire

places, living rooms that look out over the garden, high bedroom windows, cedar roofs and "numerous other ideas discussed in THE MAGAZINE OF BUILDING."

Dave Bohannon, San Mateo, California: roofs and wood kitchens

The Bohannon organization will add to its line a new three-bedroom, rear-living house which has such a low-pitched roof it will look almost flat. This is a co-



Bohannon's present 3-bedroom house, priced at \$11,300, features a low pitched roof and a large garage door.

break with past Bohannon design traditions. Size: 1,050 sq. ft. Price: \$9,800 on a 60' lot.

His new houses will have more redwood on interior walls and ceilings and more natural wood finishes in the kitchen. To get greater efficiency in his bath and kitchen floors he will switch from ceramic tile to rubber tile, as he has done in his more expensive houses. In bathrooms he will use more wall tile and plastic counter tops and provide glass shower doors and tub enclosures. In his more expensive houses he will provide more mechanical equipment than he has in the past—such items as garbage disposers, dishwashers, built-in electric ovens.

Bohannon will also continue to build on 60' lots the several different models of three-bedroom houses, ranging in price from \$9,950 to \$11,300 which he built this year. Moreover, architect Welton Beckett is designing three models of a \$40,000 house which Bohannon hopes to build next year. Beckett's office is doing the preliminary designs, and Bohannon's own architects follow through with the working drawings. To this extent, all Bohannon's houses are now architect-designed.

Joseph Eichler, Palo Alto, Calif.: a house for every market

Joe Eichler, the success of whose advanced contemporary designs was last year's sensation among San Francisco builders, is trying a dozen new contemporary models priced all the way from \$13,000 to \$45,000.

In addition to the new Anshen & Allen designs (one of which is reported on p. 212), Eichler has several houses designed especially for hillside lots by Architect Quincy Jones, winner of last year's AIA award for the best builders house design. Nine of these have now been built, with selling prices from \$23,000 to \$25,000.

More will soon be started to sell for \$13,000.

Fritz Burns, Los Angeles: ready for anything the market may demand

Super-salesman Fritz Burns is experimenting with an added line for a higher price field.

He has been constructing several pilot houses in both Los Angeles and San Jose in two price classes: \$12,000 and \$16,000, including land. Some experimental models have separate entrance halls, large living rooms facing a rear terrace, pass-through counters from kitchen to dining area, two wash basins in bathroom, separate toilet compartments and built-in dressing tables.

One experimental house has a living room facing a front patio, given privacy by a garage between it and the street. Another is a "wrap

around" house built U-shaped around a patio. Some will be offered with three bedrooms and others with two bedrooms and a mahogany paneled den. Production models will be influenced by public reaction to his pilot models.

A very important part of Burn's next year's building program will be the expansion of three shopping centers at Panorama City, Westchester Gateway and at San Jose's Orchard Park. Still another phase of his diversified operation is an industrial development recently started in San Leandro for small and medium sized manufacturing concerns.

He has also been carrying on pilot building operations in low-cost apartments with rentals from \$45 to \$55 and has been building duplexes called "double bungalows" that sell for \$16,500 (for the two units).

This autumn Burns' production is three houses a day, a rate he regards as marking time and plans to speed up in the near future.

Earl Smith, Berkeley, Calif.: smaller, less expensive flat-tops

Working toward lower prices, Earl Smith is bringing out a new, 740 sq. ft., two-bedroom flat-top to sell at \$6,495 or rent at \$57.50 and a 1,005 sq. ft., three-bedroom flat-roof to sell for \$7,495 or rent for \$67.50. Both these new models are about 8% cheaper and 16% smaller than his 1951 houses (July issue, p. 169). Besides cutting size, Smith cut costs with back-to-back plumbing, fewer doors, stucco instead of redwood exteriors, carport instead of garage, fewer corners and no overhang at the rear. All rooms are scaled down, but the biggest saving comes from combining the kitchen and dining room.

Alan Brockbank, Salt Lake City: contemporary design pays off

Brockbank has been feeling out the market in Utah with some interesting results. He knew there was a tremendous demand for \$7,000 houses but the nearest he could come to that figure with a quality house was a two-bedroom design for \$9,750. But the buyers wanted three bedrooms, not two. So Brockbank tried out some of these priced at around \$11,000 with contemporary design. He plans to build about 60 of these next year.

Sam Hoffman, Phoenix: 75 new houses a week in five cities

Not a man to be held down to one area, Sam Hoffman is building 260 houses in Phoenix, 577 in Albuquerque, has staked out claims for a whopping 1,600 in Denver, another 1,800 in Pueblo, Colo. and has invaded far away Cleveland to build 500 more.

Each week he starts 75 new houses in the



Typical Hoffman house has 1,345 sq. ft., sells for \$9,995 to \$11,950 depending on local codes, wage scales and land costs.

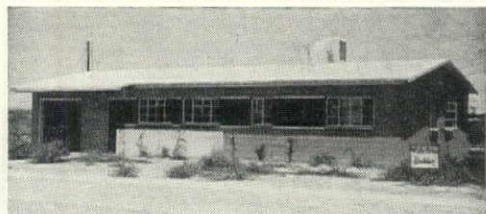
five cities. Sales in each of the cities are as much as 150 ahead of construction. In five years, his F & S Construction Co. has built 5,000 houses, putting it among the biggest firms of the country.

He has two basic models: a 1,345 sq. ft., three-bedroom brick veneer house plus garage at \$9,995 to \$11,950 (depending on land costs, codes and amount of equipment provided) and a three-bedroom, 1,080 sq. ft. house of hollow tile or pumice block with asbestos siding at \$6,995 to \$8,450. Regulation X has slowed Hoffman down, prompted him to turn to the cheaper houses.

"We look forward to 1952 as our most prosperous year," says Hoffman with every reason for self-confidence.

Walter Driver, El Paso: cinder block and higher prices

Walter Driver has been building about 100 houses a year in the \$6,850 to \$9,200 price range. Regulation X and the rising price of lumber convinced him he should do two things: 1) shift to a higher price field where he could better cater to individual tastes and 2) build with cinder block to beat the price of lumber. His new 1,134 sq. ft. (plus garage), three-bedroom houses sell for \$11,800 on 70 x 120' lots. In addition to two double-direction wall furnaces, these houses are equipped with evaporative air coolers ducted to each room. Sales are slower than on the earlier, lower priced houses but Driver says it is too early to tell if his judgment was correct in moving to a higher price bracket.



Walter Driver's 1,134 sq. ft. cinder block house sells for \$11,800 in El Paso. Evaporative air cooler can be seen on the roof.

Leslie Hill, Dallas: a smaller but more contemporary house

"I am changing my entire operation and planning a new and lower cost house of about 750 sq. ft. It has more conveniences like garbage disposer, clothes washer, etc. Both for economy and for improved appearance, the plan and design will be modified contemporary—something new in my area. With the easing of Regulation X, I expect, short of all-out war, to produce approximately 50% of my average volume under my new plan."

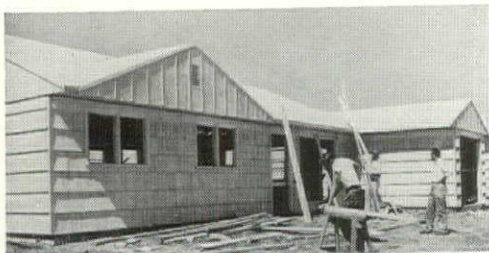
Richard Hughes, Pampa, Texas: air-conditioned design

Among Dick Hughes' new designs will be two with air conditioning. His three-bedroom house will sell for \$10,000 and his two-bedroom for \$9,000.

This year he built 475 houses selling for \$5,500 to \$10,200, estimates his output next year may reach 750, including 200 rental units in a nearby defense area.

Philip Klutznick-Nathan Manilow, Chicago: 1,500 houses for '52

Some 28 miles south of Chicago Klutznick and Manilow are building an entire city, Park Forest. Their apartments went up first, now they are building two kinds of houses: one



Builders Klutznick and Manilow use prefab panels because they are faster to erect than conventional framing. Costs are about equal.

concrete block with brick veneer; the other prefabricated—purchased from Expandable Houses of Milwaukee.

This year, despite a terrible winter and wet spring, they built 1,125 houses. Next year they hope to do 1,500, of which 500 to 1,000 may be sold as FHA section 213 cooperatives. Their present houses are selling well at \$12,525 to \$15,000 and they will continue these designs, while on an especially fine piece of their property they may encourage an outside builder to put up a few houses at \$18,000 to \$30,000.

The Park Forest shopping center is being expanded section by section.

J. C. Nichols Co., Kansas City: new slab house, but same conventional design

The Nichols Co., one of the most influential opponents of contemporary design for builders' houses, is trying out a new model with slab construction for the first time—but its design will be quite conventional. The new basic plan will have two variations: three bedrooms and two baths for \$16,500 and two bedrooms and one bath for \$13,000. Each has a generous living room (13' 4" x 23'), a kitchen with dining and laundry facilities, and a rear porch. The standard line of houses ranging from \$12,000 to \$18,000 will also be built. The Nichols Co. is also starting a new sub-division confined to houses ranging from \$20,000 to \$40,000.

This year's production is about 280 houses.

Tom Coogan, Miami: two smaller houses at lower prices

Tom Coogan has called on his architect to help him shave his costs, and Architect Al Parker has designed two new houses to sell for \$6,850 (see p. 209). This is about \$1,000 less than Coogan's smallest 1951 model.

Frank Collins, Philadelphia: rental projects for Air Force

This year Frank Collins put up 1,200 houses and apartment units in Philadelphia, Chester and Allentown, Pa., and in Dover and Newark, Del. Most sales were around \$10,000, although a few houses were priced as high as \$35,000. He expects to have about the same production next year.

One of his biggest jobs now is a 600 multi-family rental development in the Dover defense area. Most of his tenants will be Air Force personnel. Collins has not waited for the new Title IX program to swing into action; but has obtained conventional insurance company financing so that he can get going immediately and have more latitude in his operations. Another rental project will soon be started in Newark, Del.

David Zamore, Waldwick, N. J.: \$4,000 cheaper two-story model

Zamore put up 160 two-story houses this year, figures he has a good thing and should stick with it. Next year he will continue the house which has brought him considerable fame but in addition will bring out a new smaller two-story 1,140 sq. ft. model (plus carport) at \$12,000—about \$4,000 cheaper than his 1951 house.

For the first time his new two-story house will have plank and beam construction. This new feature, permitting non-bearing partitions, will let him introduce a second new idea:

inexpensive oversize (4' x 7'-6") Swedish doors to form free-standing partitions and storage wall panels and permit faster construction at lower prices. Other major cost cutting measures: elimination of the vestibule and first floor lavatory, substitution of carport for garage, reduction of bedrooms from three to two, lot size from 75' x 120' to 65' x 100'.

He expects next year's production to be about the same as this year.

Levitt & Sons, Long Island: a new \$9,990 house

The Levitts are building a whole town near Morrisville, Pa., (Aug. issue, p. 49) which will consist of three new types of houses. The design, to go into immediate production in the



This house may make building history: Levitt's 1952 model to sell for about \$9,990 in a new town now abuilding near Morrisville, Pa.

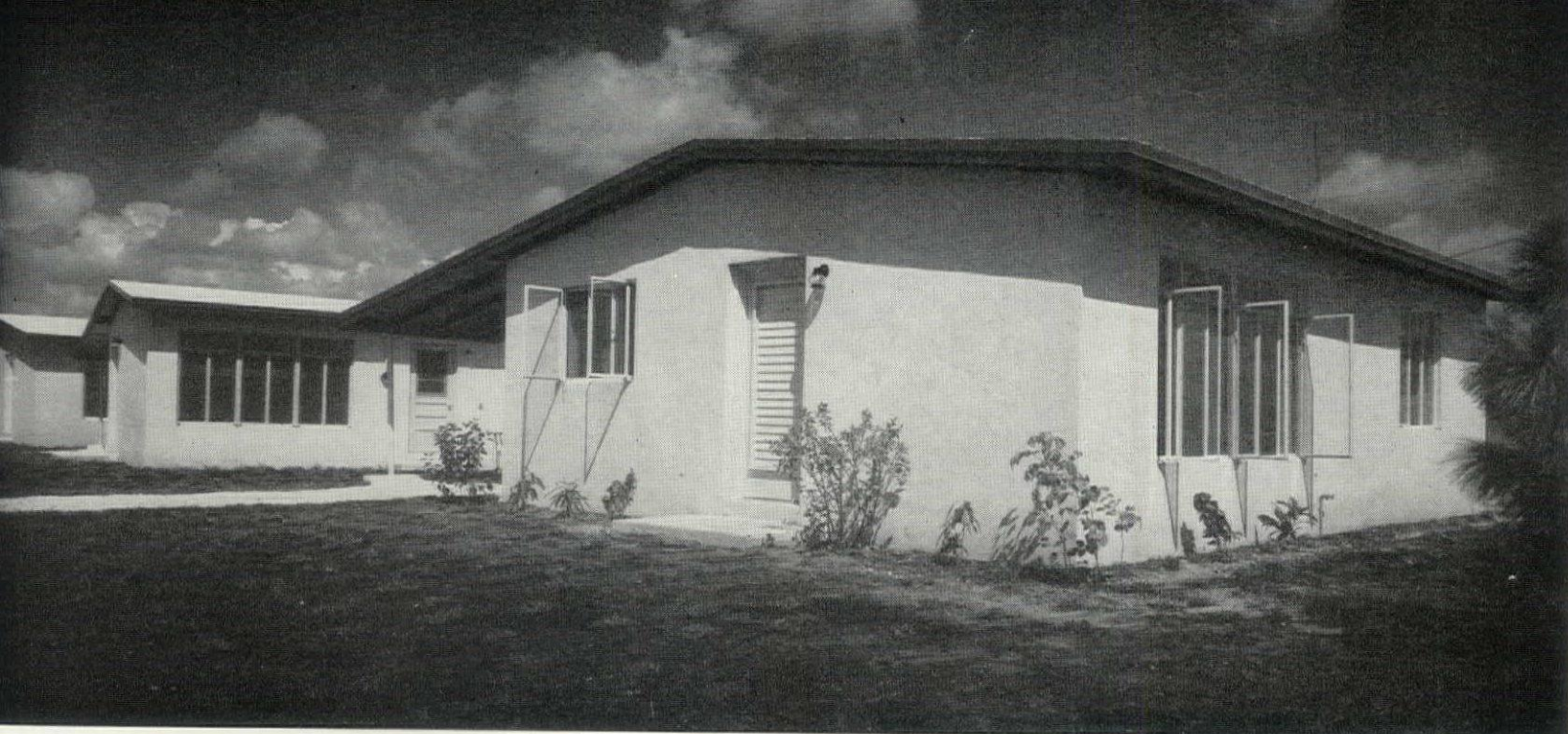
U. S. Steel plant area, will sell at \$9,990 (see p. 217). Soon a second house will be announced at \$6,990 and a third at \$16,000.

Martin Cerel, Natick, Mass.: no change in production or price

In Natick near Boston, Martin Cerel this year is building about 200 houses and expects to do about the same with no change in design, construction or price. He builds several communities, straddles the market from \$10,800 to \$19,500, also has an interest in two shopping centers.



Martin Cerel's 3-bedroom, brick veneer house sells in the Boston area for \$13,500. It is but one of many models he builds.



All photos by Brignole

HOW BUILDER COOGAN CUT HIS PRICE \$2,000

and how his architect Parker worked out what may be the year's best new builder house plan

Ever since Regulation X gave such a special financing break to houses selling under \$6,000 and ever since FHA let it be known that houses in this bracket would get special consideration, builders all over the country have been talking about a low-price house.

Miami's Tom Coogan is almost the only big builder who has actually done anything about it. And certainly Tom Coogan is the only big builder anywhere who called in an architect to help him cut costs and still retain design appeal and livability. Consequently, the story of what Builder Coogan and Architect Alfred Parker were able to do—and what they were not able to do—is one which holds profitable lessons for every builder-architect team.

LOCATION: Miami, Fla.

THOMAS P. COOGAN CO., Builder

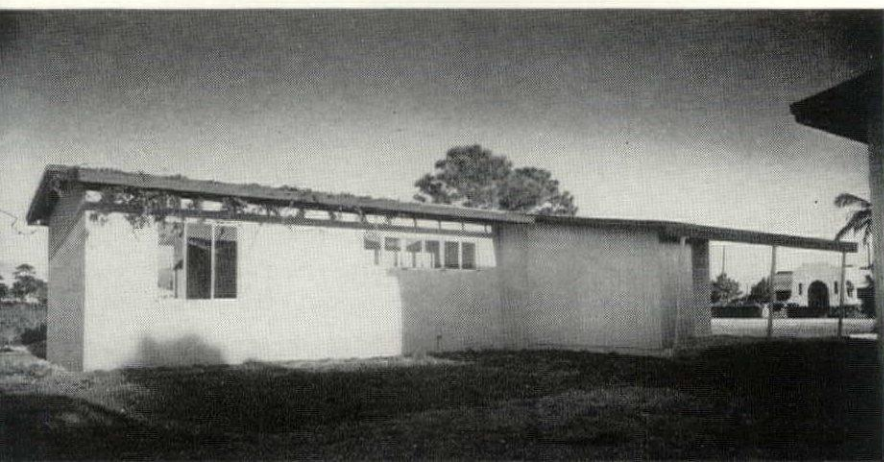
ALFRED B. PARKER, Architect

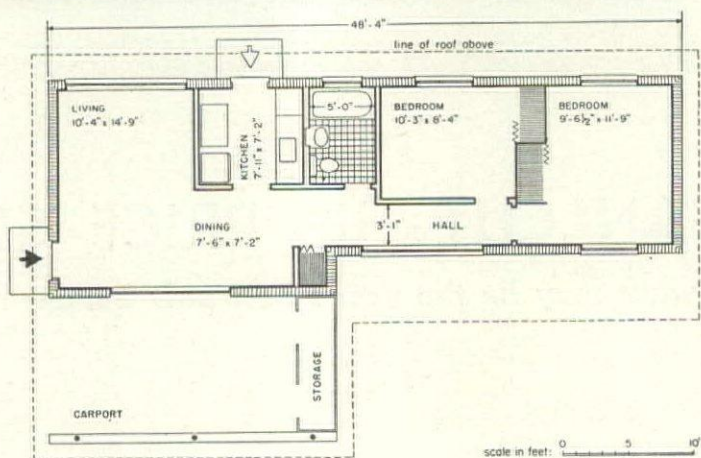
When he set his sights on the low cost field, Coogan's objective was a \$5,500 house which could be purchased under Regulation X with a 25-year mortgage and a down payment of only \$6.75 FHA or \$250 VA. But after months of struggle, the best plans Coogan and Parker could produce for this price class contained less than 600 sq. ft.—a size they considered not worth building.

They found, however, that adding 150 sq. ft. would increase the cost only \$350 and keep the selling price under \$7,000. To Coogan, this still made a lot more sense than sticking to his larger, Parker-designed 1950 models (April issue, '50). Higher 1951 costs would add almost \$1,000 to the price of his last year's \$7,800 two-bedroom house. and down payments under Regulation X would then be \$1,900 FHA and \$1,000 VA. But in the \$6,000-\$7,000 bracket 25-year mortgages would still be available and down payments would be only \$850-\$1,200 FHA and \$250-\$500 VA. Besides, most Miami builders had shifted to higher priced houses, leaving the low cost field wide open—particularly for a presentable, architect-designed house.

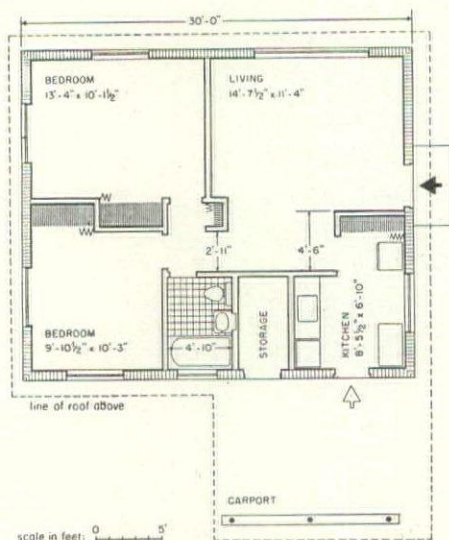
Now that Congress has relaxed Regulation X, Coogan thinks his decision to set his price under \$7,000 will really pay off. While many higher priced Miami houses are still begging for buyers, his have sold readily. And for houses just above \$7,000, FHA down payments now jump from 10% to 15% and VA down payments from 4% to 6%.

Coogan and Parker finally developed two houses with sharply different, two-bedroom plans; one long and narrow; the other, almost square. On 60' x

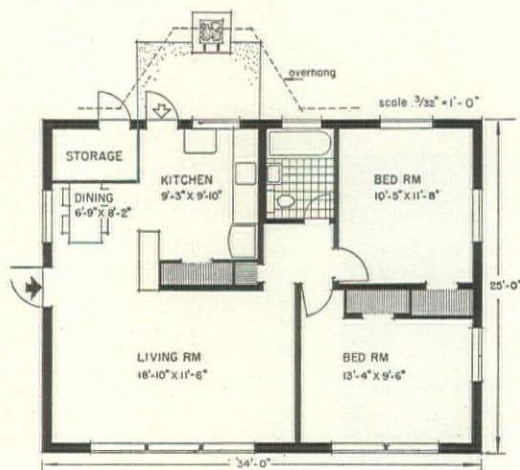




New long plan (above) now contains 690 gross sq. ft., will be greatly improved when Coogan widens it by 3' at cost of only \$300.



New square plan (right) is merely a smaller version of 1950 plan (below), contains 720 gross sq. ft. Most of 4' cut in length was taken out of living room and kitchen.



114' lots, each sells for \$6,850, plus closing costs and prepayments.

The long plan is well worth study because it offers such a fresh, livable and attractive solution to the small house problem—particularly in a hot climate.

The square plan, on the contrary, is worth study only because it is a shrunk version of Coogan's 1950 house, and so permits direct comparisons showing where Coogan and Parker were able to make cuts and where they found cuts impractical.

Long plan takes curse off small house

Parker first thought of his long house merely as a means of adding more variety to the development. But by getting away from a square shape, he not only produced a more handsome, bigger-looking house, but also one which takes full advantage of Florida's steady, cooling trade winds. Essentially only one-room deep, the house is so oriented that the prevailing breeze can sweep right through it. (Through ventilation is provided in the kitchen by a glass-jalousied outside door, and in the inner bedroom by a door-height hall partition.)

In sharp contrast to most small houses, this one is designed to parallel the long dimension of the lot. (Actually, Parker angles houses slightly to avoid monotony.) This kind of siting creates more space between houses and more leeway for the breeze, but it has the disadvantage of facing living areas toward each other and cutting down on usable area at the rear of the lot.

Three out of four buyers favor the long house over the square model, and FHA granted it \$500 more mortgage money—despite its 30 sq. ft. smaller area and \$50 smaller cost. To exploit this popular plan, Coogan plans to widen it by 3'. For a cost of only \$300, this would not only create far better living and bedroom space, but would bring the 10' long hall into more economical relationship with the rest of the house.

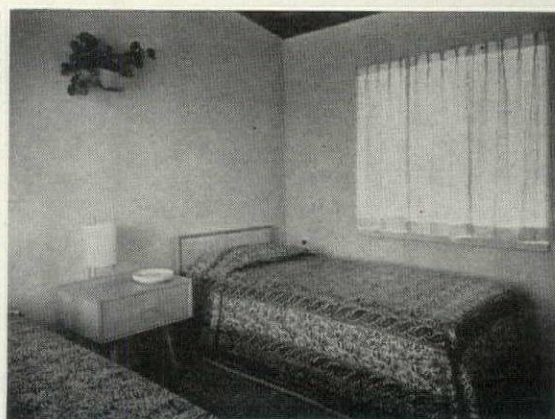
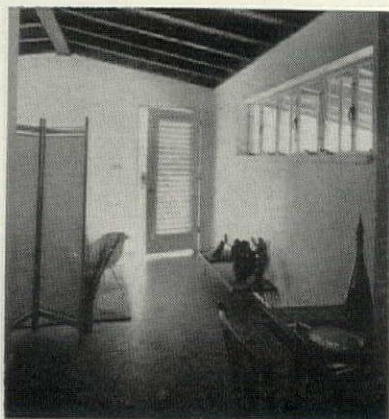
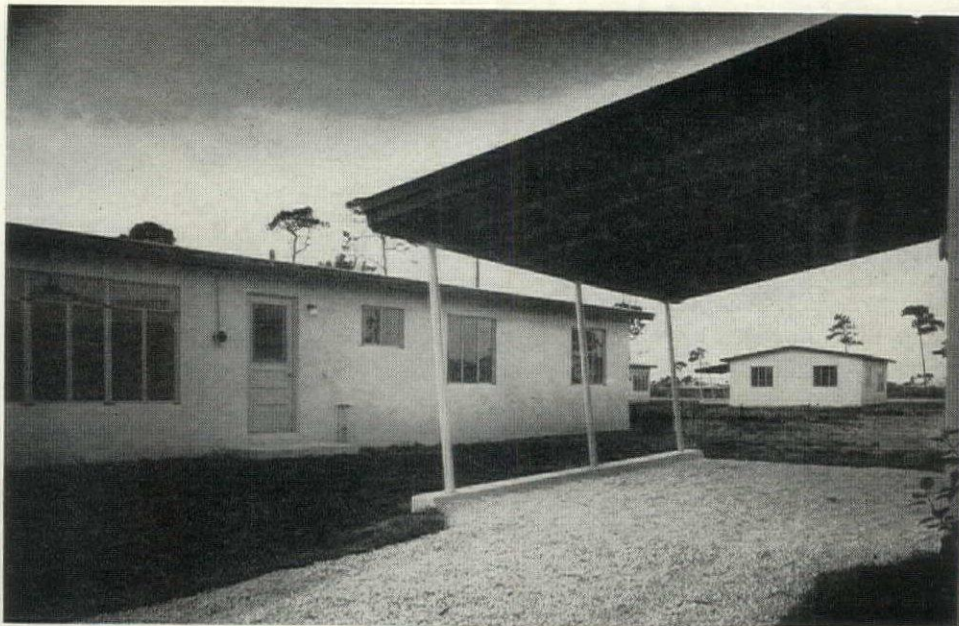
Square plan trims costs, but also lowers value

When Tom Coogan tried to squeeze his \$7,800 1950 square plan down to a size that would sell for \$1,000 less (equivalent to a \$2,000 reduction when a year's inflation is considered), he found that there was no magic way to lower costs. He had to make his biggest cuts precisely where he offered the biggest values last year—in the completely equipped kitchen, the tiled bath, the good-sized living area.

He reduced the kitchen to minimum FHA size, and achieved the biggest piece of his saving on the new house by eliminating the stove and automatic laundry and including only a sink and a reduced number of cabinets. Whether stripping down the most expensive room in the house really did the home buyer any good is a very doubtful question, since it is far cheaper for him to get kitchen equipment under a package mortgage than at retail prices.

In the bathroom, Coogan saved \$150 by substituting waterproof plaster for tiled walls. But he retained colored fixtures and gave up the idea of eliminating a tile floor when FHA agreed that these

Alternation and angled siting of two basic plans adds variety to development. Note spacious carport with slanted roof supports. Miami decorator James Merrick Smith proved houses could be furnished in good taste for total cost of only \$1,500 (below).



items could be absorbed by a price increase. He also sacrificed a chance for a single plumbing stack by letting Parker put the utility closet between kitchen and bath to vary exterior appearance of the houses. In the long house, storage space is more logically located in the carport.

The third place where Coogan made a major cut was in the living room. Almost the only difference between the plan of his new square house and last year's version is that the new plan is 4' shorter. And all of this cut was taken out of the living room and the kitchen—the bedrooms remained substantially the same. By this considerable sacrifice in livability, he saved \$150-\$200.

Besides making these principal changes, Coogan and Parker re-studied every detail of the house to find other ways of cutting costs. Typical of Parker's effort to combine design appeal and economy is his shift from vertical to angled supports for carport roofs. This not only provides more variety of line and more room for opening car doors, but cuts costs \$50 per house by combining beam and fascia in one member and simplifying column connections. To eliminate juggling with heights and angles, the roof is propped up and columns are attached to the fascia-beam before being anchored in concrete.

Among other devices used to lower costs:

1. Using dry wall construction on the interiors saved about \$150—a gain which was partially offset by the crew's lack of familiarity with this system.
2. Eliminating the kitchen pass-through saved

\$30. Last year's open kitchens were popular, but most housewives wanted supplementary venetian blinds or similar screening devices which would cost more than full-height partitions.

3. Substituting concrete sills for tile sills saved \$23—but Coogan plans to switch back to easily maintained tile.

4. Replacing last year's floor-to-ceiling living room windows with a smaller type saved \$15-\$20. (Parker also eliminated a window on the street side of living rooms, mainly to simplify the facade and make the house look bigger.)

5. Reducing the roof overhang from 3'-2" to 2' permitted the next smaller rafter size to be used. Saving: \$35.

6. Landscaping by the builders rather than by specialists saved \$35.

How to win Title II mortgages

The final lesson of Coogan's 1951 houses is that he obtained much better financing by expanding his lot frontage from 50' to 60'. The best FHA mortgage he could get for his first nine \$6,700 houses on the smaller lots was \$4,750 under Title I minimum property requirements. But by shifting to 60' lots and making some improvements, Coogan was able to raise his price \$150 and get maximum Title I FHA financing—the first of this type to be awarded to a builder in his area. VA commitment is \$6,850; FHA allows a \$6,250 mortgage on the square house, \$6,750 on the long one.

BIG SIMPLIFICATIONS

cut costs and enhance charm of \$13,000 house

LOCATION: San Francisco area

JOSEPH L. EICHLER, Builder

ANSHEN & ALLEN, Architects

This 1,170 sq. ft. house for Builder Joseph L. Eichler is a demonstration by Architects Anshen & Allen that the far simpler lines of modern architecture can yield more space, more value—and above all more sincere charm—than conventional designs. It is one of five models, 600 duplicates of which have been sold for around \$13,000 on various tracts. It has no jigs and jogs, no costly roof breaks, no “cute” bays, window boxes, shutters, or special trim, no job lot patches of different wall materials, none of the other meaningless fluff so often used for “sales appeal.” Instead, the architects have made the most of the space, have achieved the simplest possible grouping of materials.

Examples of simplification:

► Only four window sills in the house—for the reason that there are only two windows that stand alone—one in the kitchen, one in a bedroom. The rest are all in just two rows. One is a high “clerestory” row across the whole front of the house. (This is definitely a house for those who want privacy from the street.) The other is a row across the rear or garden side of the house.

► No glazed window sash. Ample light enters all rooms through the big ranges of fixed glass. Solid casements serve for ventilation only and are literally cut-off wooden doors. The architects found that they could buy a flush 6'-8" door for \$9, cut it in half, band the two halves and end up with two 3'-4" hinged casement sash complete with hardware at a total cost of \$5.75 apiece against the \$13 cost of standard glass sash.

► There are only two exterior wall materials, used for variety: redwood (creosoted) for the front, the right side, most of the left side; lightweight cement block (8 x 16 x 8") for the garden side and reaching just past the fireplace in the living room.

► No cutting of block: window sills are 4 blocks high, heads of windows and doors 10 blocks high.

► Few separate door or window heads: the two main ranges of openings frame up to the roof.

► No rafters: four heavy purlins (4 x 12") carry the 2" plank roof, covered with ½" insulation board and the built-up roof covered with white dolomite gravel.

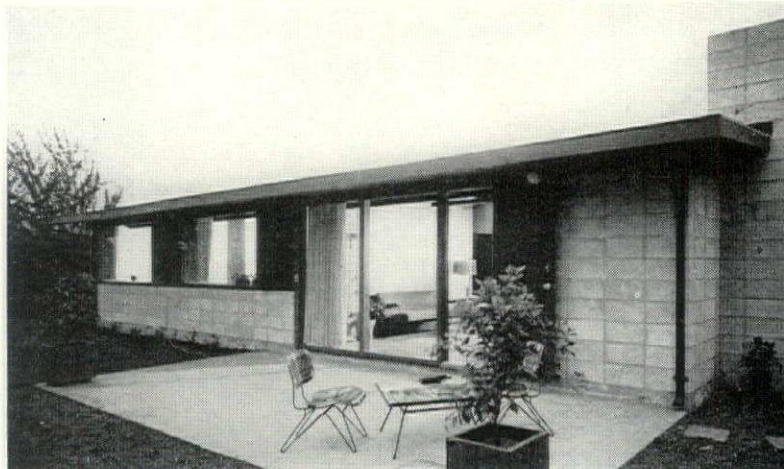
The same large simplicity ruled the management of space. The living room is 17'-8" square, but it *looks* much bigger because the head-high kitchen partition leaves visible the entire 27' expanse of the roof.

And Anshen & Allen refused fake economies such as the “economy” of cramped space. They drew alternate plans of their 1,170 sq. ft. house reducing it to 1,000 sq. ft., but found they would save only \$170 altogether or \$1 per sq. ft.; so they decided that the luxury of extra space was the cheapest bargain that the buyer would get.

And it turned out that the quiet lines and the larger spaces yielded extra sincerity and charm.

The \$13,000 sales price includes two-car garage, back terrace and service-yard fence.

All photos: Rondal Pertrid

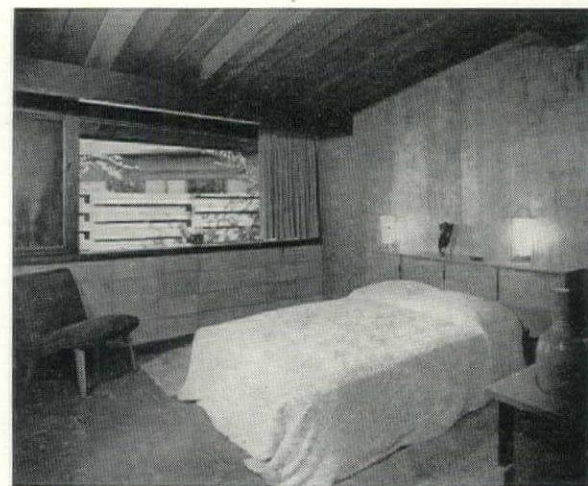
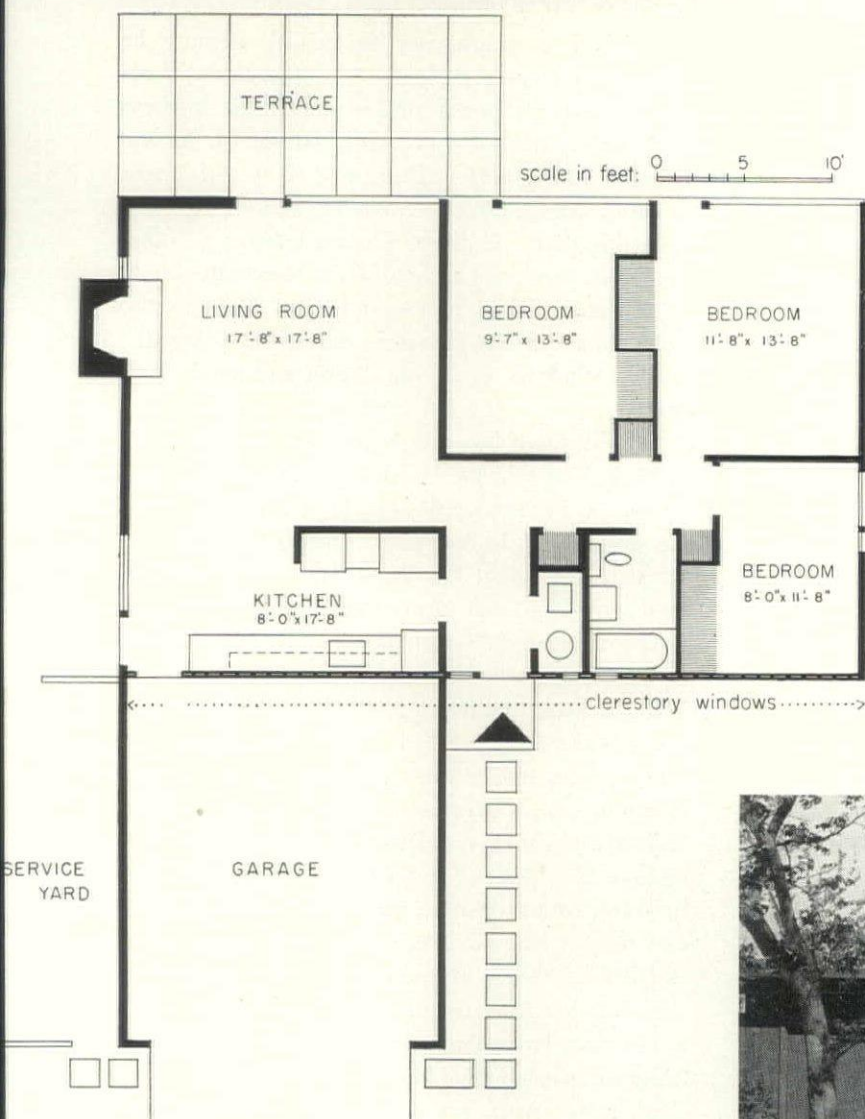


“Front” of the house is to the garden. Fitted to concrete block, framing is simple.



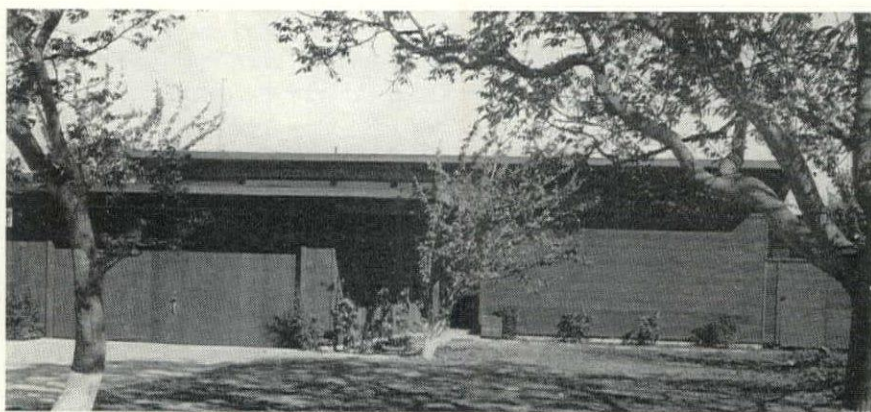
Living, dining, cooking in one big room; kitchen partition is only head-high.





Fixed glass behind drapes lights bedroom; hinged case-ment sash at left is half of a flush door, cheaper than glass.

Closed street side gives privacy; garage roof is extended as entrance shelter; clerestory extends across front.



SOLD: 100 HOUSES A MONTH

Architect collaboration pays off in the merchandising of 875 houses in Los Angeles' \$15,000-\$17,000 price class. Good design minimizes the risk in a large scale operation

Even among the big house builders of Los Angeles, where large residential projects are commonplace, Ed. Zuckerman and Barney Morris would be considered plungers.

Last February they plunged full force into building the largest group of \$15,000-\$17,000 houses in the country. Not waiting to see if the public would like their new models, they shot the works to the tune of over \$15 million by speeding ahead with their entire 875 houses. But, they weren't really gambling. A good house at a good price was sure to pay off. And it has: sales have averaged 100 per month.

The Benmar Hills development is different in two ways from any Zuckerman & Morris had undertaken in their 25 years as builders: 1) the new land in Burbank is the best site they had ever bought, and 2) the houses are the highest priced in their history.

To do justice to the site and the price class they decided to use better designs than they ever had before. While they were plungers, they wanted an "insurance policy" in the form of good conservative design—a guarantee of sales in the highly competitive Los Angeles market.

To draw their plans they chose Architect Allen Siple. The builders had seen several classes of houses he had designed: high-priced numbers for Spencer Tracy, Deanna Durbin and other luxury-minded Californians, and smaller houses in several price brackets which Siple had done for Builder Paul Trusdale. With fewer tricks and frills Siple's designs were adapted to good family living.

No odd bits and bird houses

From this builder-architect relationship have come five basic houses. The facades are not as strikingly direct and composed as Anshen & Allen's latest for Eichler (page 212) but on the other hand are not cluttered up with odd bits of brick and stone, half-timber and bird houses like too many builder houses.

Of the five houses, the smallest has 1,303 sq. ft. and sells for \$15,135. The others have just over 1,500 sq. ft. and sell for \$16,730 to \$17,255. Lots range from 60 to 70' wide and from 115 to 148' deep. The builders figure their improved lots are worth around \$3,500 because many have a \$400 retaining wall and most have high development costs of \$1,600 due to the expensive leveling of the sloping site.

The houses were put on sale late in June. In the first three months about 300 were sold, nearly all to veterans who made down payments beginning at \$1,300. The easier credit regulations that went into effect last month should stimulate sales further as down payments on the small house are now \$875.

In his designs Architect Siple never forgets that houses are for families to live in. He believes that an architect's first duty is to people's living habits and his thoughtful if conventional floor plans reflect this. In his design expression he has been cleaning up older forms rather than cleaning out and starting fresh. He has gone as far as putting the living room to the rear for backyard living, for example, but has not yet run windows down to the floor for indoor-outdoor open planning: only the doors carry glass all the way. If more exciting departures might have been made (as they were for Trusdale) it must be remembered that these were the first houses he designed for Zuckerman and Morris and this is the beginning, not the end, of a line of progress.

Siple's floor plans never waste space. There is no cross traffic in the living rooms. Children with muddy shoes coming through the kitchen door don't have to cross the living room to get to bathroom or bedroom. Kitchen, service door and garage are always integrated.

Emphasis on livability

Siple's houses are easy to furnish because he makes sure there are places for sofas, tables, beds and other large pieces of furniture. His kitchens work well, and there is enough space for an uncrowded eating place. There are no pass-throughs or eating counters between kitchen and dining room—on this point he differs from a number of other designers. Architect and builder agreed there should be separate dining rooms and entry halls in this price class and that bedrooms should have carefully located windows, cross ventilation and good closet space.

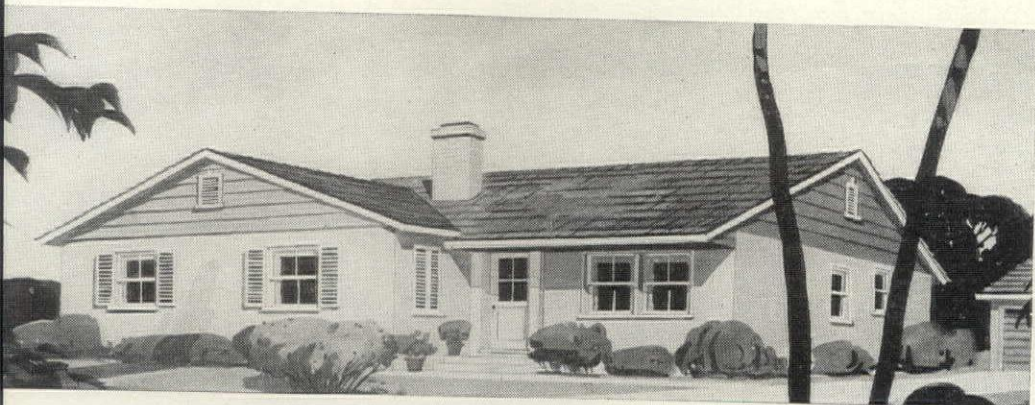
"You'll have to choose between me and the plumber," he told the builders. "Bathrooms should be located where they fit best into family living and not necessarily back-to-back with another bath or kitchen. You might save \$50 if you put the plumber first, but you'll mess up my floor plans."

The illustrated floor plans have a basic similarity: an entrance in the same position opening to a front hall that leads to a living room. Basic shape of each house is the same but Siple shifts his kitchen from side to side, moves dining area to three different locations (sometimes a separate room, sometimes an "L" off the living room). Some houses have three bedrooms, others two and a den. Four of the houses have two baths, the other has one. All have a service area next to the kitchen, a Los Angeles custom of which the builders approve.

Streets are 36' curb to curb. Sidewalks are back a few feet from the curb, a practice which both Siple and construction boss Tom Carter favor. They think rolled curbs are dangerous and believe sidewalks should never be immediately next to curbs.

(Text continued on page 216)

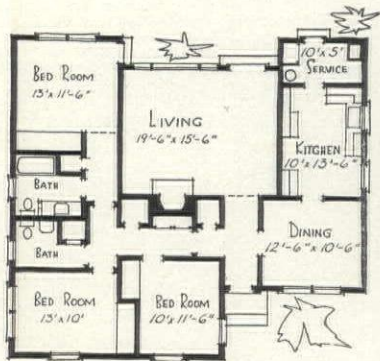
LOCATION: Burbank, Cal.
 ZUCKERMAN & MORRIS, Builders
 ALLEN G. SIPLE, Architect



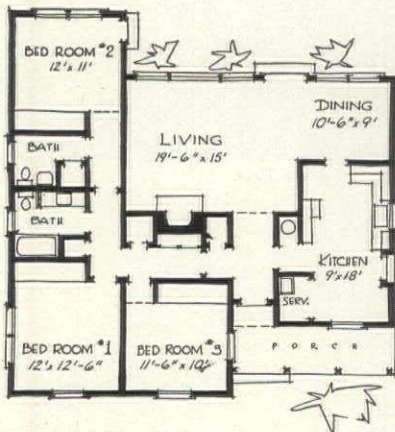
George Stiller & Assoc.



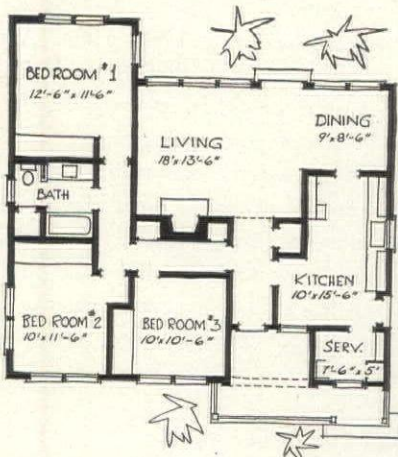
cker Bros.



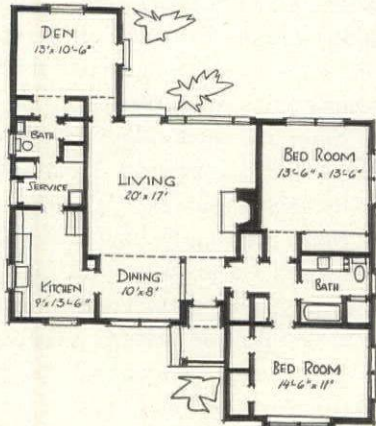
In all plans, entry and living room remain in same position. Living room always faces to the rear. This plan features an independent dining room.



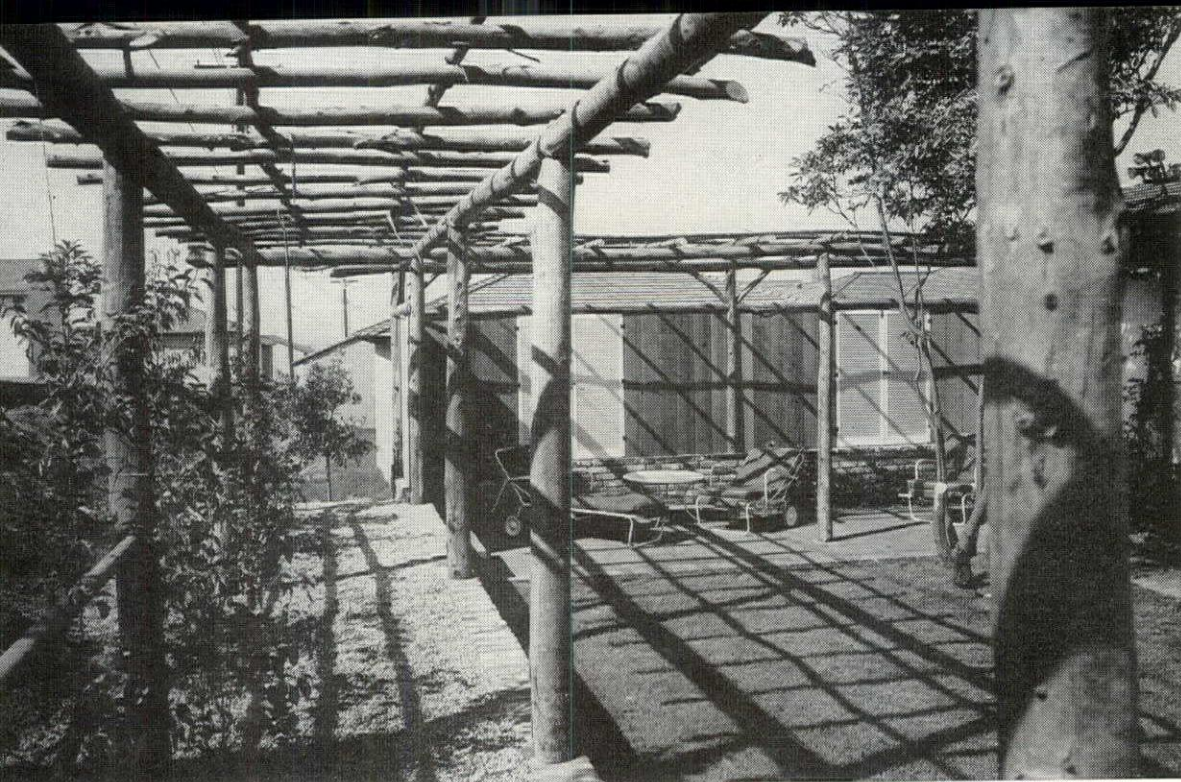
Siple does not believe in the open kitchen, feels room should be enclosed, with space for a table. Note the number and generous size of closets.



In all plans living room is out of traffic pattern. In this variation the front porch has been reduced to make way for a service room.



Garage can be attached, as in photo, or located at rear of house as is more generally done. Den is easily converted into an extra bedroom.



All photos: Barker Bros.

Architect Siple designed this rose trellis for model house to show that rear gardens could have variety in landscaping.

"All housing developments need sidewalks," says Carter, "and the cheaper the development the more kids there will be and the more they need sidewalks to play on. We don't care what they cost, they're a good investment."

A cost breakdown is given later. A good guess as to the unit cost of the house (excluding land and profit) would be \$8.50 per sq. ft. When asked about the firms' cost-cutting methods, Tom Carter says, "We have only one rule: build fast! With the interest and overhead on a big job like this we have to move as fast as we can. Our subs bid lower when they know their work is not going to drag. When we work fast, everyone gets keyed up and this fast tempo brings better work and better production."

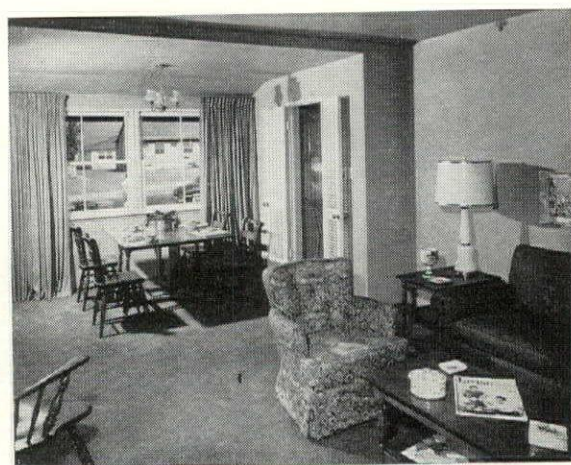
A house every four hours

The 375 houses were started last February and should be finished next January — a rate of slightly over one house every four working hours. Carter, an architect turned builder, uses orthodox methods with nothing he considers unusual. He uses standard floor framing methods (no concrete slabs) ordinary frame construction with plaster inside and stucco outside. Some redwood siding is used on the exteriors. Exterior plaster costs about 20¢ per sq. ft. or about the same as shakes.

Studs come pre-cut, but most of the cutting is done by special cutters who work in front of each house. When asked about these methods as compared with the speed of buying prefabricated panels Carter said they spend only about \$650 for labor to frame walls, partitions and the roof (not counting shingles) which they believe is better than pre-fabbing and half the cost of conventional houses if

(Continued on page 260)

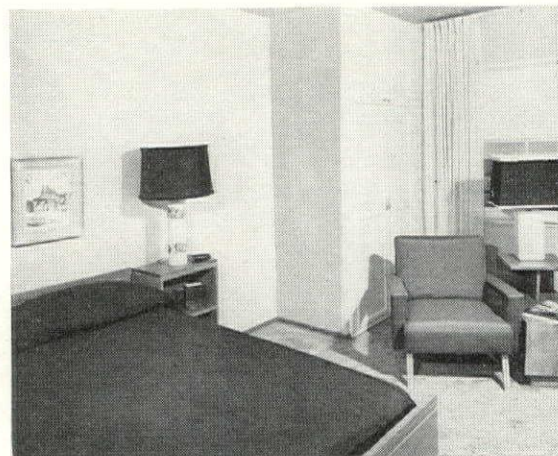
Dining space is usually at end of living room, like this, but sometimes in a separate room.



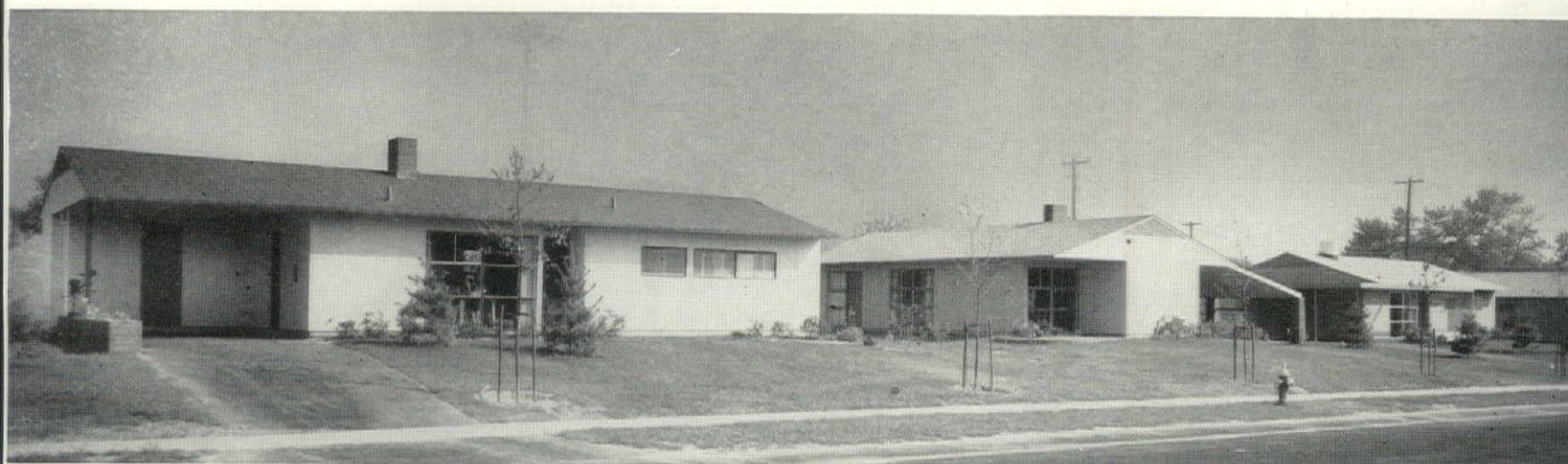
The clean, nicely done brick fireplace is one of many good detailing jobs in house.



In bedrooms there is always wall space for furniture and usually alternate locations.

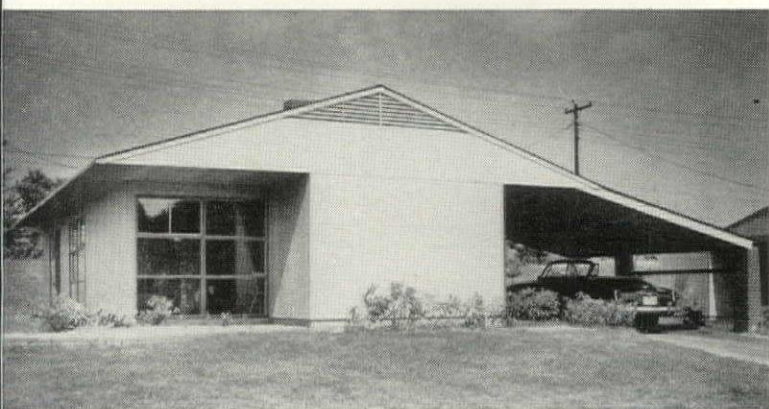


\$9,990 LEVITT HOUSES BOAST 70' LOTS, will sell to defense workers at only \$10 a sq. ft. The secret: careful pruning of metals and costs



All photos: Ben Schwall

Four variations in the basic Levitt house make this pleasant street pattern. Each of the various faces which this house presents has been achieved by simple changes in relating the carport and adjoining storage space to the rectangle of the house proper.



The \$9,990* house which the famed Levitt & Sons will start building next spring will offer the buyer 1,000 sq. ft. all on one floor. It is also the first house in this price class to offer the luxury of a 70 ft. wide lot.

The Levitts have found that this extra 10 ft. of lot is worth its cost if exploited in a simple scheme to vary the appearance of their houses. Instead of finagling roof lines and false gable fronts to relieve neighborhood uniformity, Designer Alfred Levitt has simply played with the two rectangles of the house plan: one, the house itself; the other, carport and outdoors storage space. The best part of this story is that the Levitts' studies convince them that it costs not much more to give this extra lot width and to make this kind of graceful variation than to make the special rafter cuts required by the more usual method of varying house facades. Of course, the actual cost of the extra 10' is directly proportional to the cost of the rest of the lot.

The new Levitt house is intended for a new Levittown—to be built on Bucks County farmland just two miles from the new U. S. Steel plant at Morrisville, Pa. When the Levitts bought acreage midway between the new steel plant and the Kaiser Metal Products plant, they had both a house and a town plan ready. The house and the town plan had been developed for an integrated community, Landia which they intended to build on Long Island. But when credit restrictions cut down the Long Island market below the size the Levitts need to keep their mass production operation going, they quickly decided to move their whole building organization to the new industrial area now being built around the big steel plant. This meant moving 4,000 building workers, \$1 million worth of building equipment and the vast materials purchasing apparatus of the North Shore Supply Co. It also meant cutting down a house intended to sell for around \$13,000 to a price of \$9,990.

How the Levitts accomplished this cut-down constitutes a brilliant primer in how to hold the maximum in value in a house plan while taking the maximum in cost out and is shown in detail on the following page. A big aid: plumbing could be designed to the new metal-saving national plumbing code because there is no problem of conflicting local codes in this rural area.

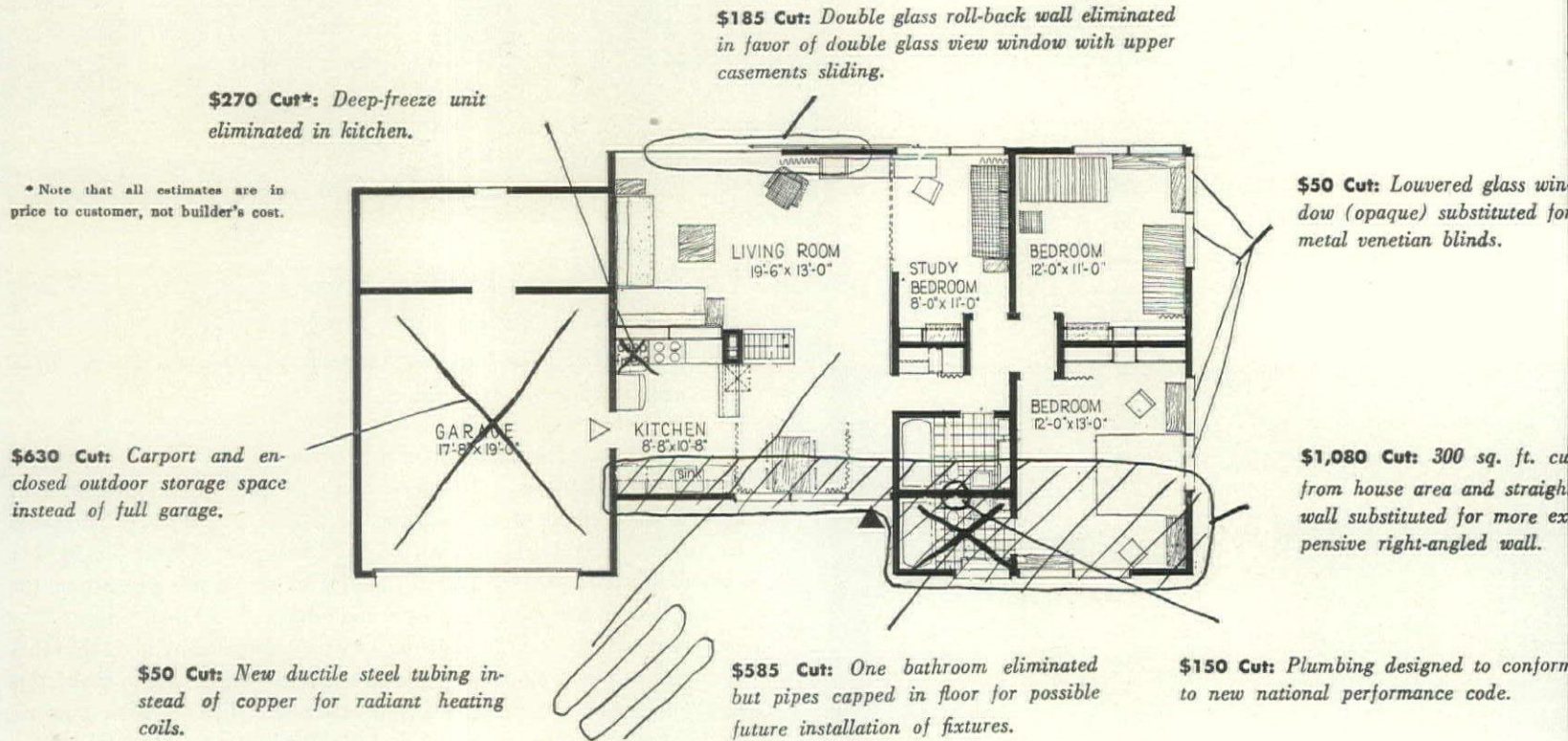
*The \$9,990 price is a target figure which may be slightly bettered or exceeded.

How Levitt Saved Money & Metals

The house plan the Levitts will use in their new Pennsylvania town is an attempt to offer the mass market a more luxurious use of space than has been attempted in Levittown, L. I. Thus the plan 1) puts three bedrooms on the ground floor, dropping the Levitt trademark of an expansion attic; 2) includes a carport and liberal enclosed storage space for outdoor things; 3) separates one bedroom from the living room by a folding screen, permitting flexible use of this space; 4) provides easy circulation around the central pivot of the fireplace.

All these elements of the plan, which was originally intended to be price-tagged at \$13,000 and built in a model community on Long Island (Feb. issue, '51), have survived the drastic cost-cutting Levitt was obliged to make to get the price down to \$9,990. Here's how Levitt pruned his luxury plan to save both dollars and metal:

Because there was no "make-work" plumbing code to interfere, chief mechanical engineer Irwin Jalonack was able to make tremendous savings by simplifying the plumbing. Most simplifications meet the provisions of the new national plumbing code. Jalonack 1) used a stack vent, eliminating the additional piping usually required for a separate back venting; 2) reduced the vent projection above the roof and thus simplified its flashing (most plumbing codes require a 1' projection); 3) used 3" waste pipe which fits in a 2 x 4" stud partition. (4" is usually required. Jalonack says 3" pipe gives sewage flow a higher velocity; if pipe is too wide, sewage tends to settle and clog); 4) eliminated the house trap and corresponding fresh air vent; 5) substituted transite pipe for cast iron underground and even under the concrete slab. (This item alone saved 60 cents a foot compared to the cost of cast iron.)



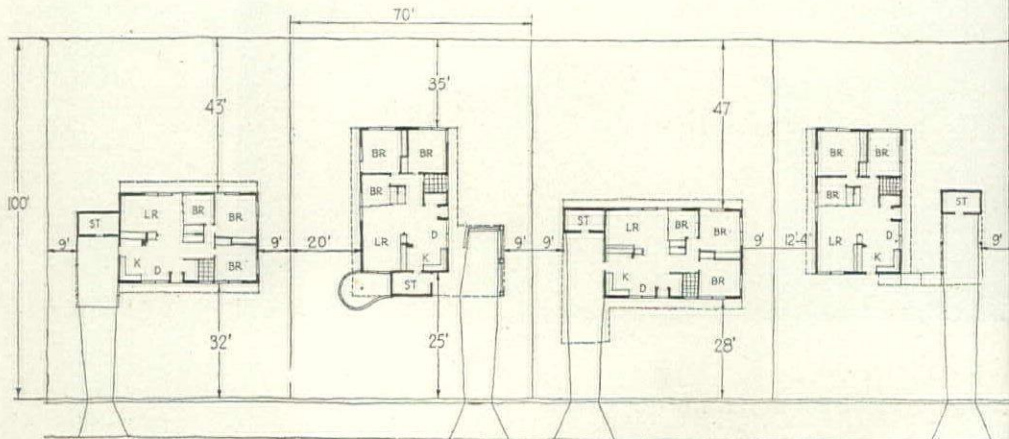
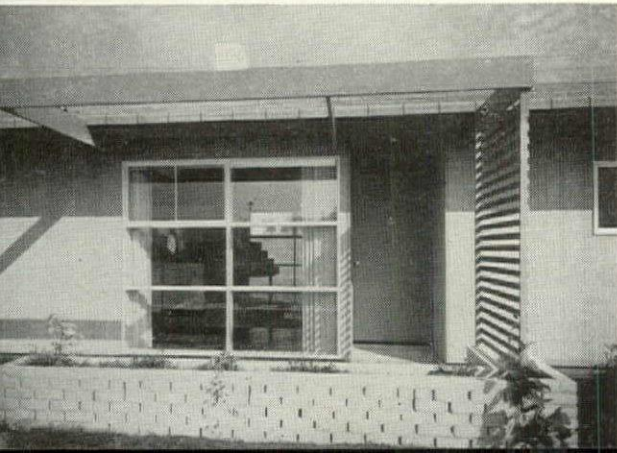
How Levitt Used His 70 ft. Lot

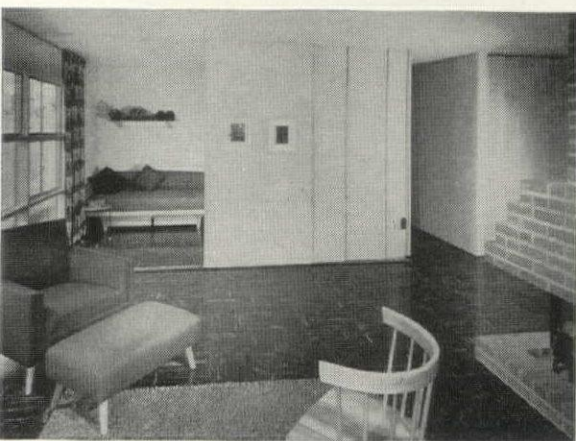
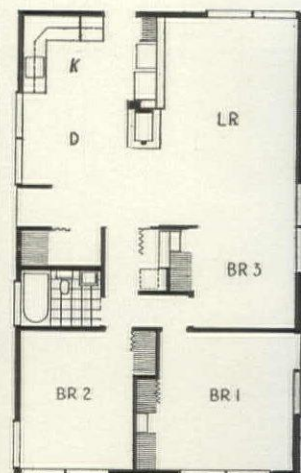
Wide lots give room for various arrangements of house rectangle, of carport and storage space and for future placement of an additional room. These arrangements, all pleasing to the eye (see photo, page 217), give each house a remarkable degree of individuality. But the scheme has some disadvantages. Note that alternate houses have been turned on end. This placement brings the living room to the street side of the house and gives one of the big living room windows a street view. Levitt has attempted to compensate for this by shielding this window with planting and a 4 ft. high brick garden wall (see photo). In this plan, the second living room window has been

drawn back to prevent it from looking directly on the neighboring house and to give at least angular view of the adjoining yard.

Levitt's scheme also has required him to place houses 28 ft. or more back from the street. In the case of house No. 4, the set-back amounts to 35 ft. This is costly in what planners now consider the most usable outdoor living space—the protected back yard. But this is offset by wider side yards, better street front appearance.

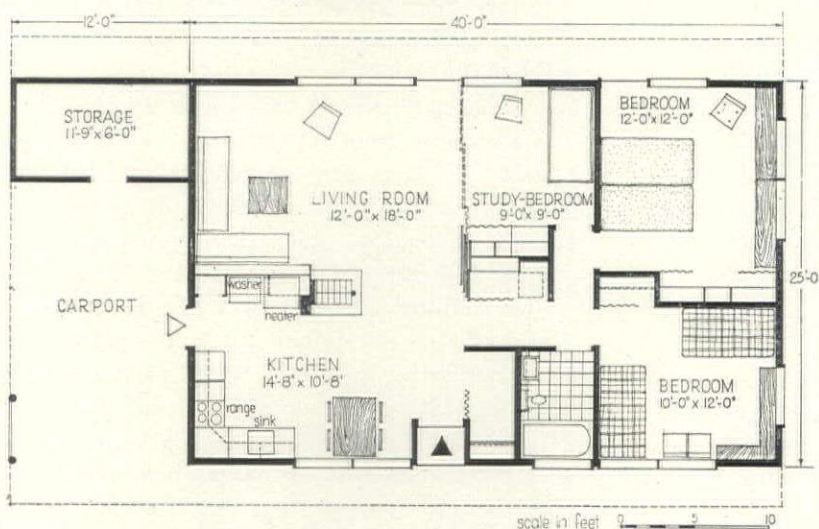
The landscaping plan is luxurious even for Levitt. In houses 2 and 3, landscaping is related to the carport in a way to give each house maximum screening from the other.





"Extra" room, separated from living room by sliding wall, can be converted from bedroom to living room extension at will. In this plan, a second view window, looking onto side of lot, opens both living room and "extra room."

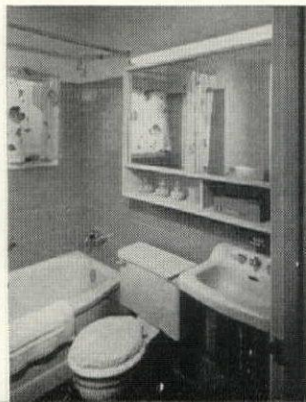
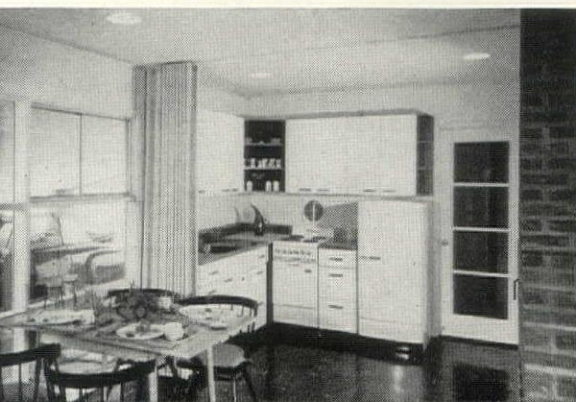
View through living room shows central fireplace stack as pivot of the plan. Dining area and kitchen shown at left of fireplace. In this plan, the view window shown looks onto the street.



Plan above can be directly compared to original plan on opposite page to see how Levitt cut 300 sq. ft. from living space without disturbing any of the essential elements.



Closet space and built-in shelving is somewhat reduced from original plan, but will retain inexpensive but luxurious looking basswood screens, folding back on ceiling tracks.



Basswood sliding screens to separate dining area from kitchen were new in original Landia plan. They slide on ceiling track to screen area from street and from the kitchen. Note how simple and attractive wood assembly will replace conventional metal "medicine" cabinet in bathroom.

3 BEDROOMS AND 2 BATHS FOR \$9,500

Jere Strizek in Sacramento sells his big, well-planned homes at bargain price to boost the profits of his shopping center

Skelton Studios



Strizek Shopping Center

Jere Strizek of Sacramento used to pay builders \$100 a house to put up homes around his new shopping center.

Now he builds most of them himself for his own account—381 houses plus 63 apartments this year.* But he still thinks the home builder should count on his shopping center for his real profit; he thinks the better the nearby houses, the bigger the shopping center profits; and so he is content to aim at a margin of only \$617 per house for overhead and profit combined.

From Jere Strizek's point of view the results

*All told, Strizek himself has built some 1,500 houses and 200 apartment units.

are fine: his shopping center is outstandingly profitable and he will soon start another.

From the home buyers' viewpoint the results are even better, for the plan enables Strizek to give one of the finest house values in the country. For only \$9,500 today Strizek offers:

1. A 1,238 sq. ft. house with three bedrooms and two baths, plus an enclosed garage, all on lots from 60 to 85' wide and some over 150' deep.
2. An ingeniously different, skillfully designed floor plan which puts the garage in the middle instead of at the end.
3. An all-round design so carefully planned that it won Parents' Magazine Oscar for the Best Home for Family Living this year.

LOCATION: Sacramento, Calif.

JERE STRIZEK, Builder

JOHN W. DAVIS, Designer

Genial, energetic and full of the bouncing enthusiasm of a good salesman, 48 year old Strizek is deeply interested in the long-term goodwill of his house buyers. He gives them as fine a house for the money as he knows how. What he now delivers for \$9,500 speaks for itself in these photos.

The \$4,500 houses Strizek built in 1941 are still considered a bargain at \$10,000 to \$12,000 or more and are snapped up fast whenever they appear on the market. Today his buyers are equally sure they are getting a bargain, and that's the way Strizek wants it. Instead of cutting out luxury items in his houses as building costs go up, he and his staff constantly try to put more in: stainless steel sinks and kitchen counters, larger windows, better storage walls and items such as a paved rear terrace.

Garage location is the key

Key to the efficient plan (see drawing) is attaching the garage to the front of the house, roughly in the center and not at one side as is more usual. By using the inside end of the garage as a passage way, traffic can move through the entire service and bedroom area of the house without disturbing anyone in the living room.

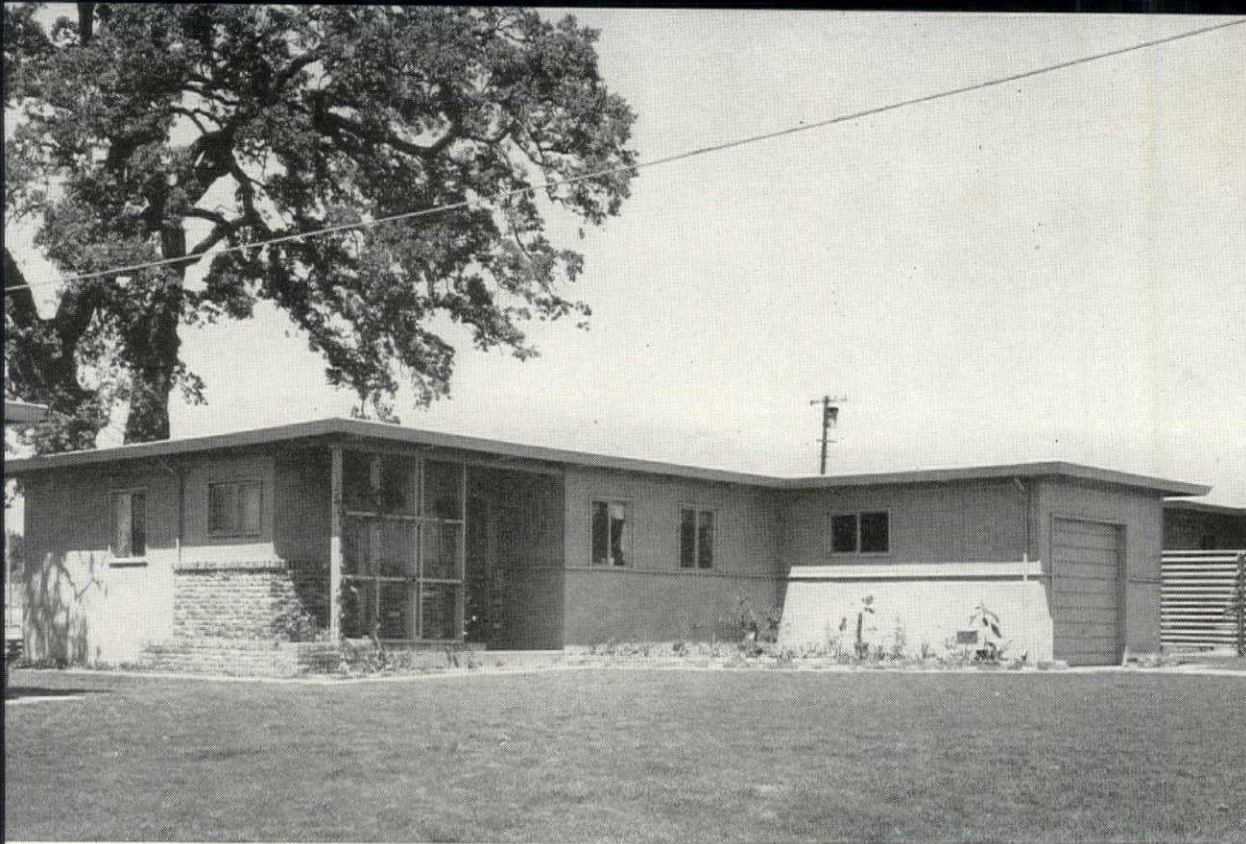
As a result, the house has the rare quality of privacy that is achieved only in much larger houses where a lot of money and space are used to get isolation. When parents are in the living room, reading, working or entertaining, the children can come in the front door, the main garage door or the service door in the garage and get to the kitchen, bathrooms, or their own bedrooms without going through the living room.

If children are having an early supper in the kitchen they can move back and forth to their rooms or go outside without bothering their parents in the living room. The children, getting equal rights, are both isolated and insulated from kitchen and living room sounds while they are in their rooms, as two doors and a hallway block the noise. This is a good feature early in the morning (it lets the children sleep while breakfast is being prepared) as well as for party nights.

Locating the master bedroom at the opposite end of the house from the children's rooms is another asset. The large bedroom with its own bath could be turned into a private suite for in-laws, other guests or could be rented. Having the parents' room so far from the other bedrooms might be a liability when children are small, but this distance can be bridged for a few dollars with an inexpensive office-communication system by which parents can hear the slightest cough in a child's room.

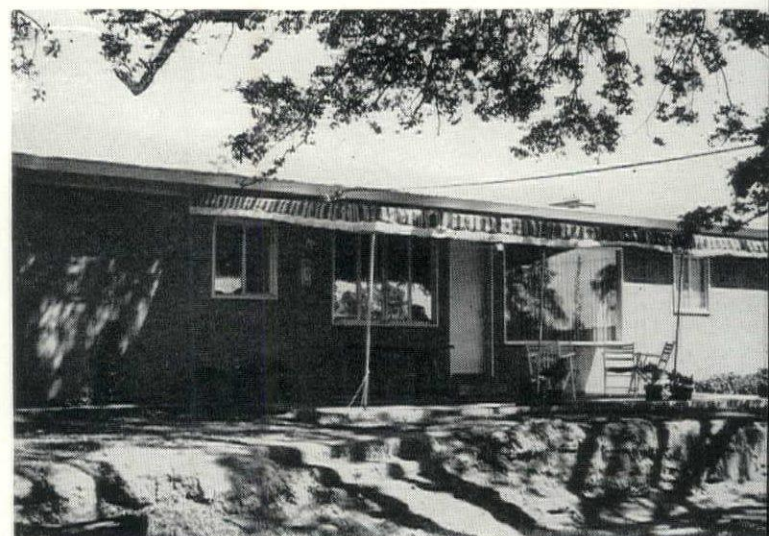
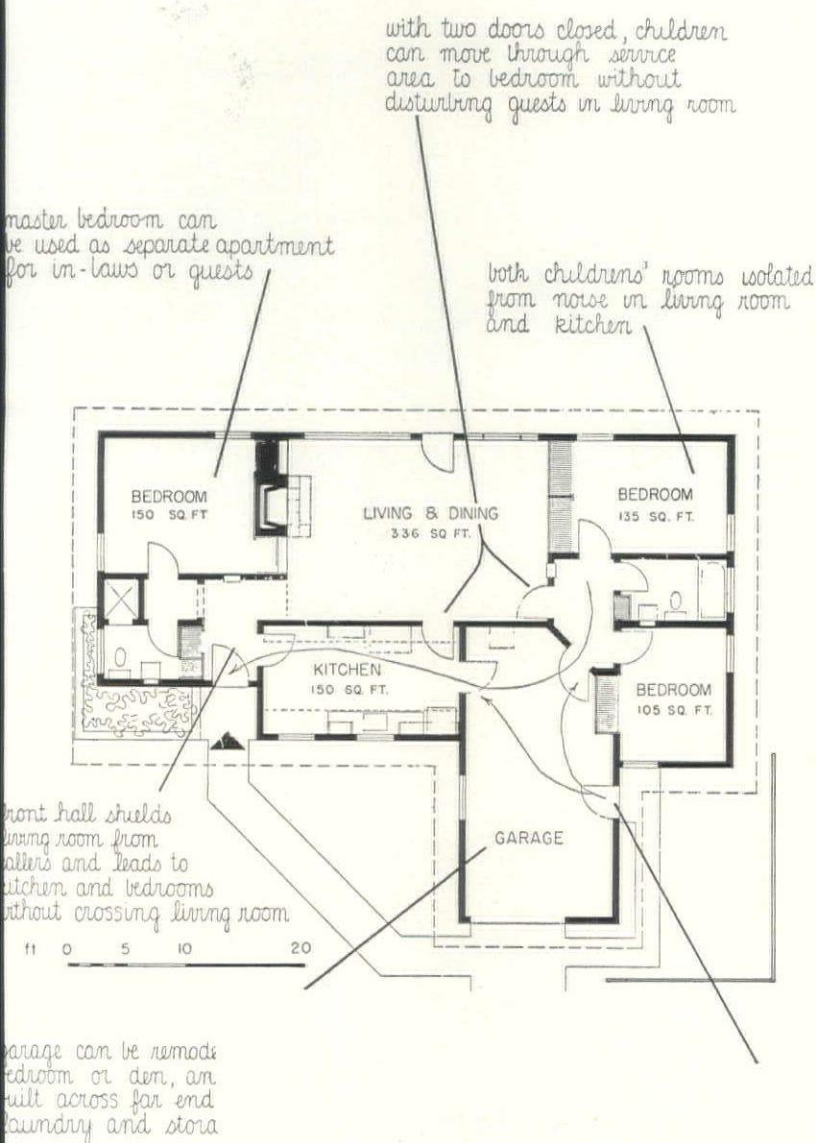
The 22 x 15'8" living room is a large, well-proportioned room with two large windows and a door on the rear garden or terrace. It lends itself well to family living and to entertaining.

The house is well planned for mothers who want to watch their small children at play. When the door between kitchen and living room is open, a mother in the kitchen can see through to the rear yard. She could also keep an eye on the front yard. When children play in the garage on rainy days, a mother can supervise them by leaving the intervening doors open. From the kitchen, approaching visitors may be spotted, and the front door is only a few steps away. (Text continued, on p. 223.)



Strizek's house is 53' long. Key to the successful floor plan is central garage location with one bedroom wing on far side, one at opposite end.

Glenn Fishback

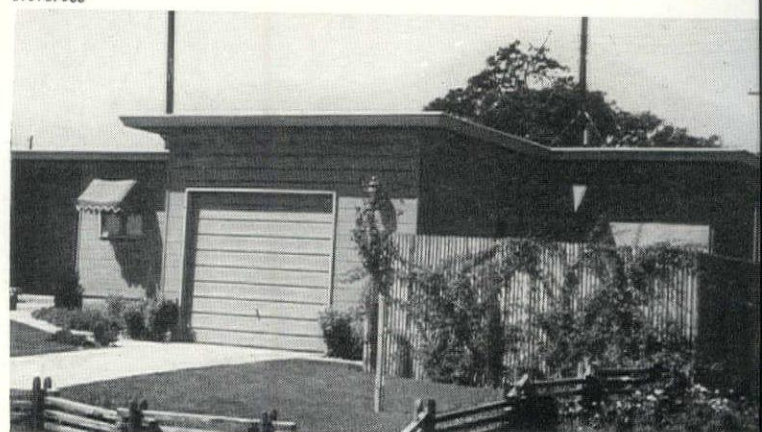


Norcross

Living room and two bedrooms have windows on rear terrace. Living room at rear is one of many assets.

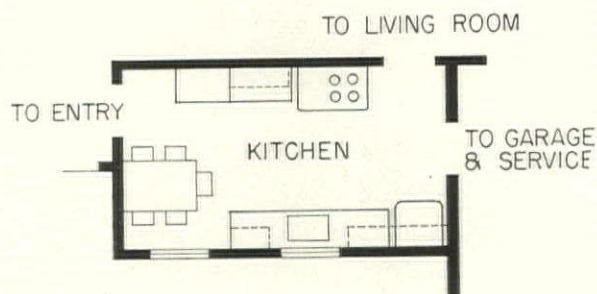
An enclosed service yard or small private garden can be made between garage and one bedroom wing.

Norcross



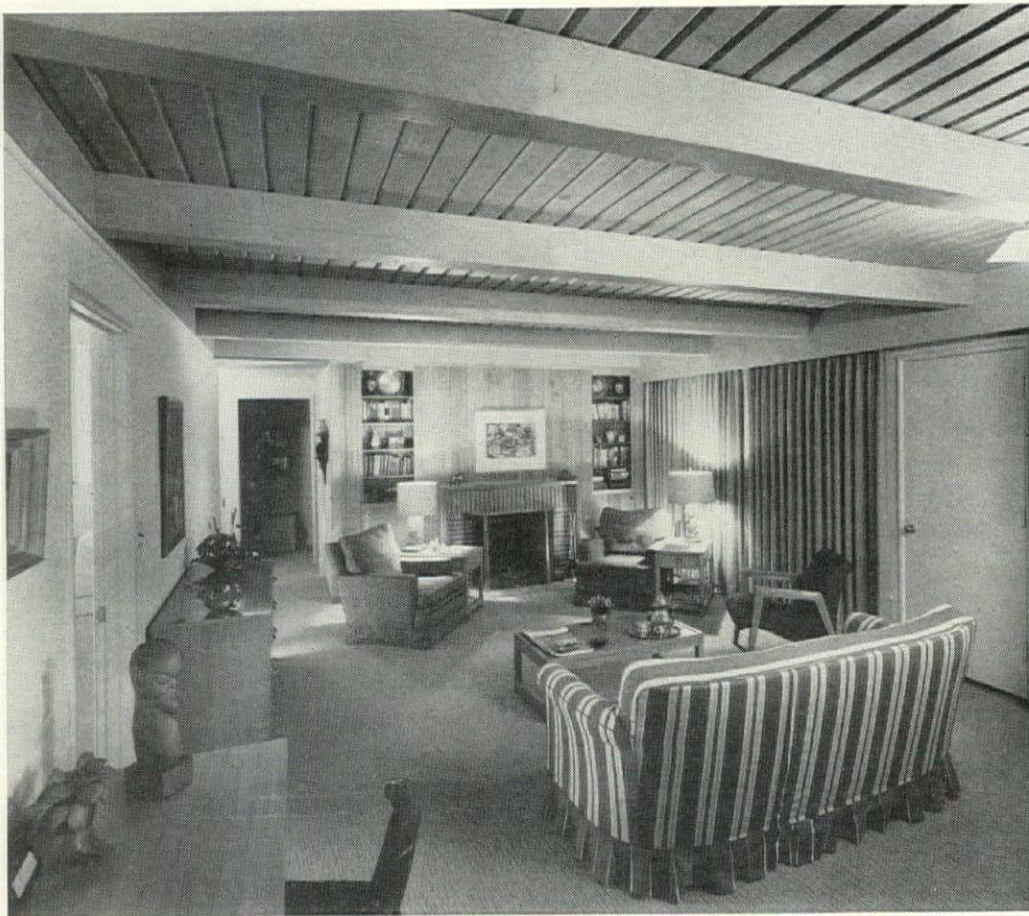


3 BEDROOMS AND 2 BATHS FOR \$9,500



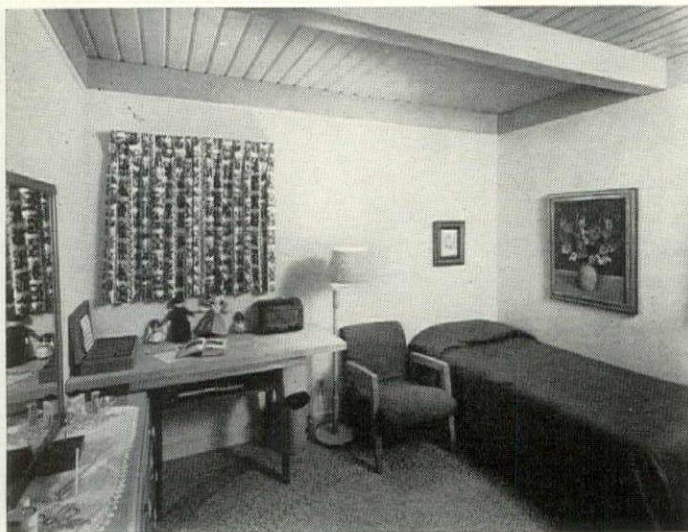
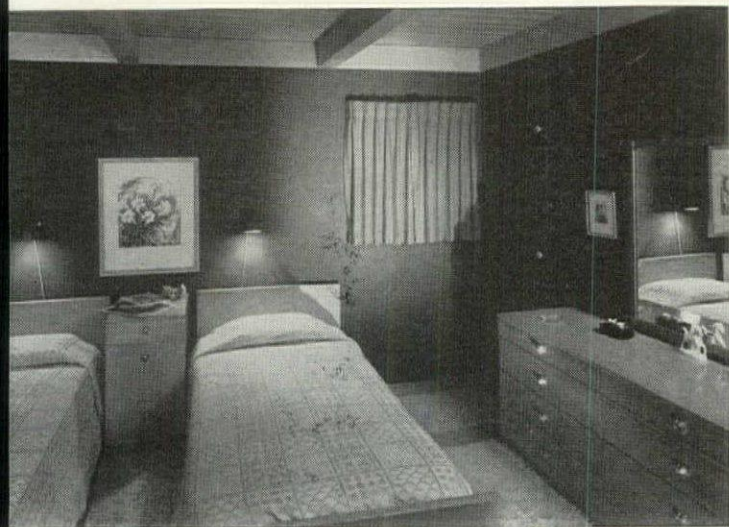
Kitchen is admirably planned for family living. Dining table near front door keeps children or guests out of traffic while a housewife is preparing meals. Door at far end leads to garage. Both front and back yards can be watched.

Living room with formal dining space is 22' x 15'-8" and gives big-house appearance. Entire right wall, except door, is of glass, opening room up to rear garden or patio.



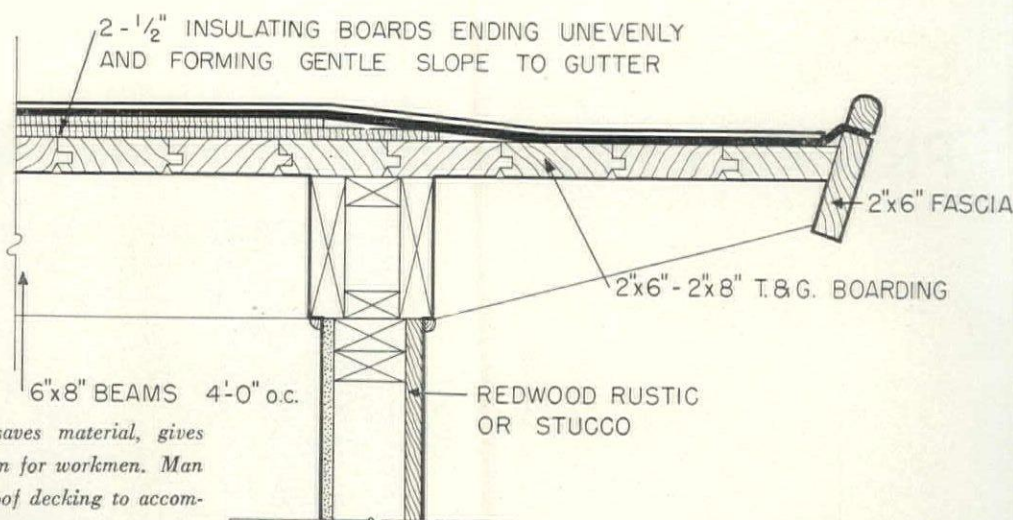
Master bedroom, below, is a suite by itself with private bath and ample storage space. Two other bedrooms have bath between them. Each has cross ventilation, large closets.

All photos: Glenn Fisher





Flat roof saves material, gives safe platform for workmen. Man is sawing roof decking to accommodate fascia board that is also gutter. Drawing shows details.



The garage can be converted into a den, a playroom or an extra bedroom with very little work, an expandable feature which many families have already taken advantage of. A carport can be added at one side of the house.

If his 1951 house, pictured here, is a lot for the money the basic credit goes to Jere Strizek, but its fine floor plan and unusual livability can be traced to the fact that his staff designer, John W. Davis, used to have migraine headaches. Davis not only had headaches but three children as well. Like all healthy kids, their noise level sometimes climbed to the decible rating of a small circus. When privacy-seeking father Davis began making sketches for Strizek's 1951 house, he decided to design the kind of house he wanted for himself. To make a good house for the children, as well as for his wife and himself, he developed a floor plan that takes most of the kinks out of family living, and that also gives a man the peace and quiet he wants after a hard day's work.

Davis gives much of the credit for the floor plan to his wife Charlotte, who had grown tired of living in houses not planned for active children. Builders' houses, she feels with some vehemence, should be designed with special attention to children's traffic, because most new developments are muddy until the lawns are well grown. In fact, mud can always be a problem unless an architect prepares for it. The Davis floor plan keeps mud out of the living room.

There is only one basic floor plan, which is also built reversed. Variation in exterior appearance comes primarily from a use of redwood or brick on the facade and from an interesting pattern of soft colors that Designer Davis has worked out.

The best orientation for the house is with the entrance on the north and the living room facing south. Undoubtedly the worst is to have the living room face west where the large windows catch the afternoon sun. But that is the orientation John Davis chose for himself because, when the project was still in the land planning stage, he spotted some large trees and an unusual lot which he liked. The trees, however, and a canvas awning shade the paved rear terrace and keep sun off the windows.

How they cut costs

As a graduate of the University of Illinois school of architecture, where he also taught for four years before joining the Air Force, John Davis has been a close follower of Illinois' Small Homes Council. He suggested that Bill Scheick, formerly of the University and now with BRAB, visit Sacramento to see Town & Country Village. Scheick studied the 1950 flat-roofed house and agreed with Davis that considerable savings could be made if FHA, VA and local building inspectors would agree to a few changes. They got together with officials and it was decided there was no good reason to put a vertical 4 x 6" post in the exterior framing under every beam, as they had been doing. Two 2 x 4's were substituted, saving the equivalent of 24 studs per house and enough labor to bring the total saving to \$90.

Scheick was also helpful in persuading officials that nonbearing, wardrobe walls made good sense. One storage wall was approved between the two smaller bedrooms and another along the fireplace wall between living room and master bedroom. Using the two storage walls saved \$40 a house over conventional closets, using two trades instead of five for that job. The new units give more space, which is also more accessible.

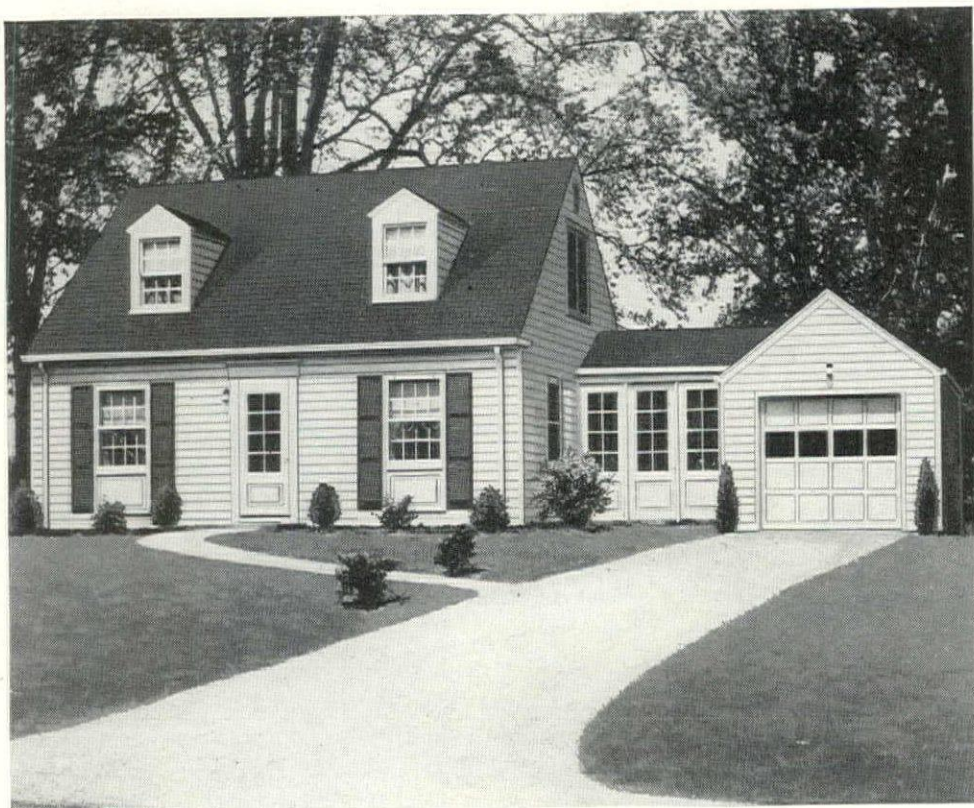
Strizek and his staff are always looking for ways to save money. They formerly used six different types of windows, one for each house variation. By standardizing on one type they saved enough to pay for window screens and hardware.

The stainless steel kitchen sinks and counter tops cost \$50 more than an ordinary sink and hard tile counters. But Davis claims they save \$150 in labor. Setting the cabinets, counters and sinks takes the time of only two men working one hour before the plumber comes. Another place where they pay money to save money is in the metal garage door. It costs \$60 installed, but once in working order there are no complaints and no follow-up by Strizek's maintenance department.

Strizek has a lumber cutting operation in his field shop which he uses to save money. He

(Continued on page 264)

PREFAB'S PROGRESS . . . from: to:



ARCHITECT & PREFABRICATOR—together they put a contemporary accent on the production line

The model T era of prefabricated houses shows signs of nearing its end.

Early glances at prefabbers' jigs indicate that some 1952 models may indeed be new models, and rumblings from the industry's scattered plants promise even more excitement for 1953. The men who manage this considerable industry somehow have been persuaded that 1) better design will sell more factory-built houses, 2) the public is at last ready for houses with a contemporary accent and 3) they need architects to design them.*

Most prefabricated houses heretofore have been solid, dependable schmaltz, usually Cape Coddish in design, whether for Gloucester, Mass. or Tallahassee, Fla. Beneath the schmaltz were smart construction details which would put some custom built \$100,000 houses to shame, but even in 1950 very few prefab houses looked as modern

as the factories that sired them, or were as functional as their own kitchen equipment.

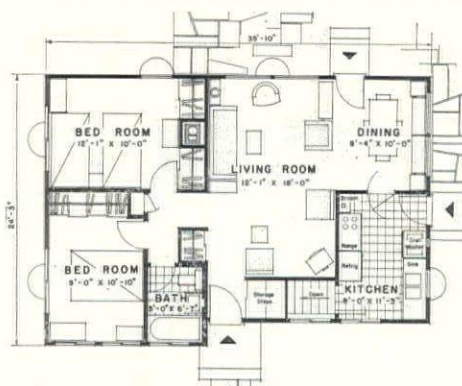
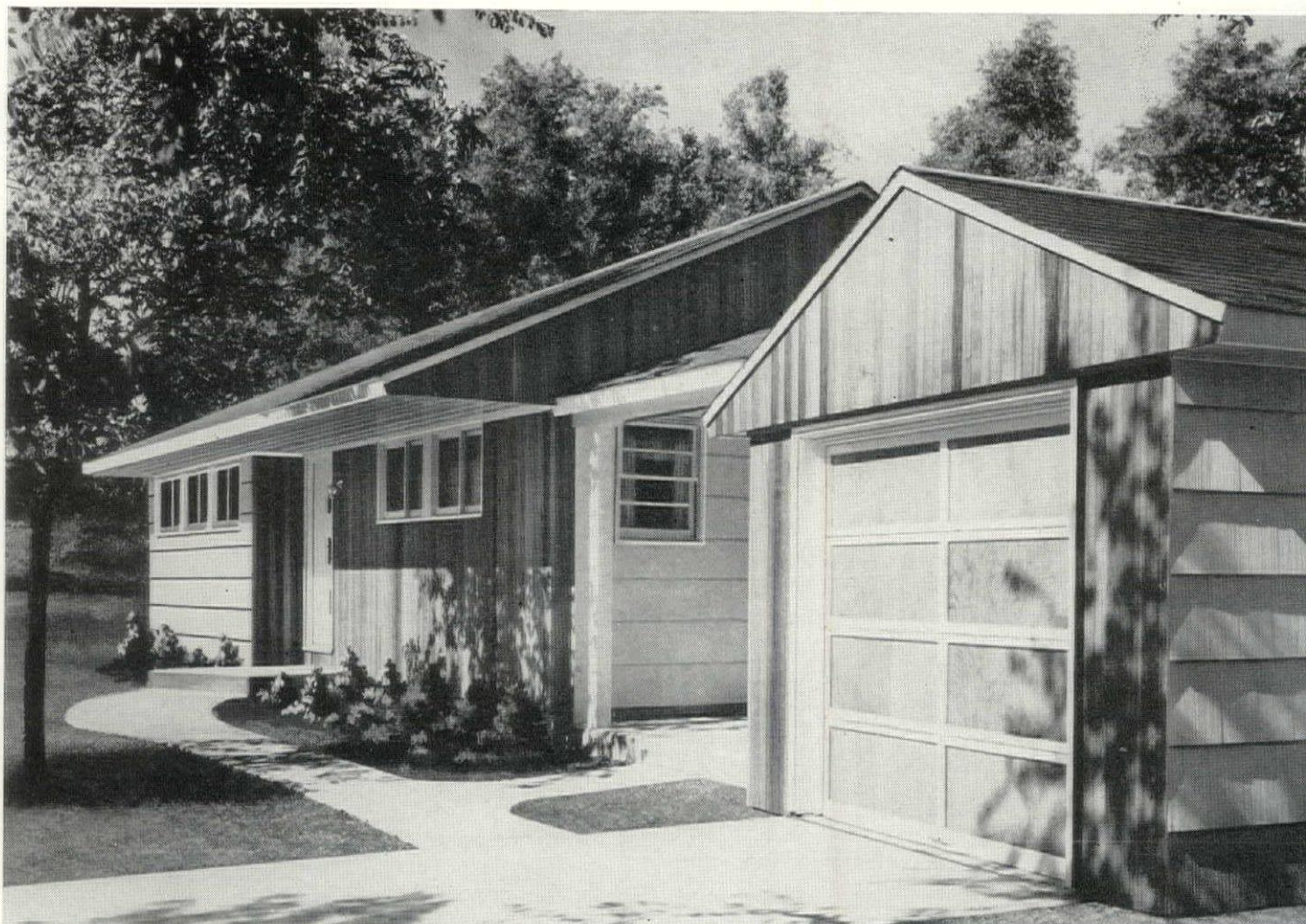
Years ago merchant builders like Levitt and Burns took a tip from Detroit auto makers and made a point of changing their models annually; but the prefabrication industry, like Henry Ford a generation back, has until recently been producing essentially the same model year after year.

Most radical of all the 1952 design changes are found in the three models recently unveiled by the Pease Woodworking Co. of Cincinnati. The architects are Robison Heap, Oscar Stonorov, and Schwarz & West. The smallest house in this contemporary trio (above, right) is by Architect Heap and contains 828 sq. ft. with two bedrooms. Set on a concrete slab, and equipped complete with such appliances as an electric dishwasher and ventilating fan, it will sell for about \$13,000, including builder's profit but not land.

The next size larger is Schwarz & West's design (next page), a 1,130 sq. ft., three-bedroom house plus two-car garage which will sell for about \$19,500. Like the first, it has overhanging eaves, and grooved red cedar siding. Stonorov's house (right) is 1,410 sq. ft. with four bedrooms. It will be priced at about \$24,500 plus land. All three models are designed for construction with basements.

Almost equally encouraging is the decision of Harni-

* Production 1950, 55,000. Predicted production 1951, another 55,000. Ten biggest producers (alphabetically): American Houses, Inc.; Gunnison Homes, Inc.; Harnischfeger Corp.; Knox Corp.; Lumber Fabricators, Inc.; National Homes Corp.; New Century Homes, Inc.; Pease Woodwork Co.; Thyer Manufacturing Corp.; W. G. Best Factory-Built Homes, Inc.



New two-bedroom model in Peaseway line was designed by Architect Robison Heap for the \$13,000 market. It contains 828 sq. ft. excluding garage. House at left typifies older Peaseway line.

Largest house in Peaseway line (1,410 sq. ft.) contains four bedrooms, two baths and a 25'-9" long living-dining room. Architect: Oscar Stonorov.

schfeger Corp. of Port Washington, Wis. to choose a contemporary architect to design a new line of houses. After much preliminary scouting, the company executives and consultants Burnett & Logan narrowed the field down to about 15, among them some of the most famous contemporary house architects. To each they sent a letter which states so clearly the qualifications considered essential by a large and shrewd housing corporation that it is well worth reading:

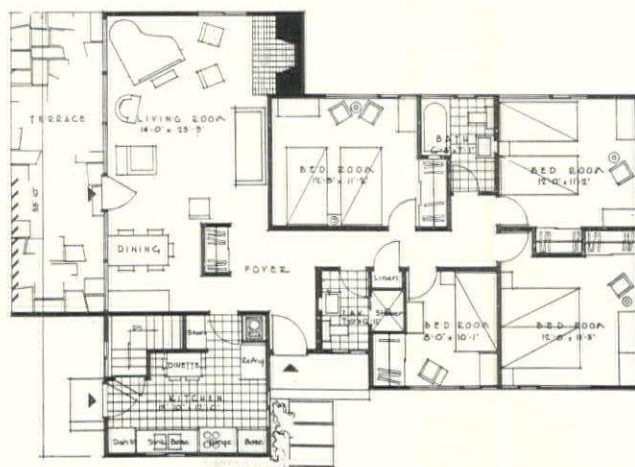
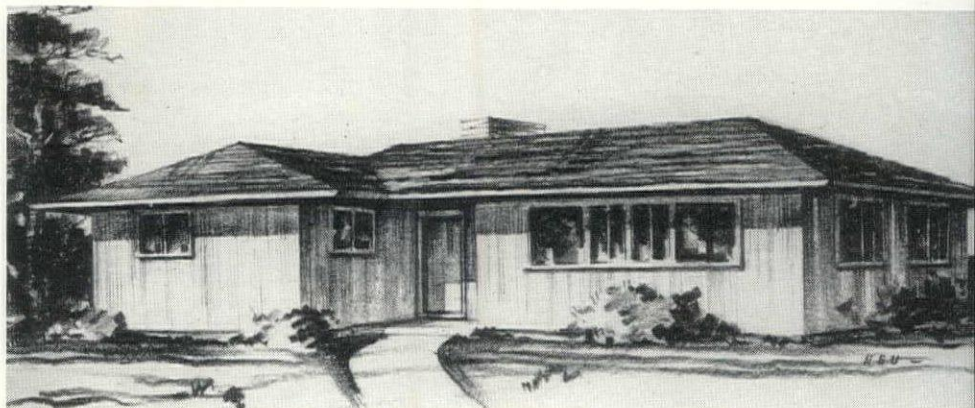
"The task is to collaborate with the corporation's own engineering staff on two jobs:

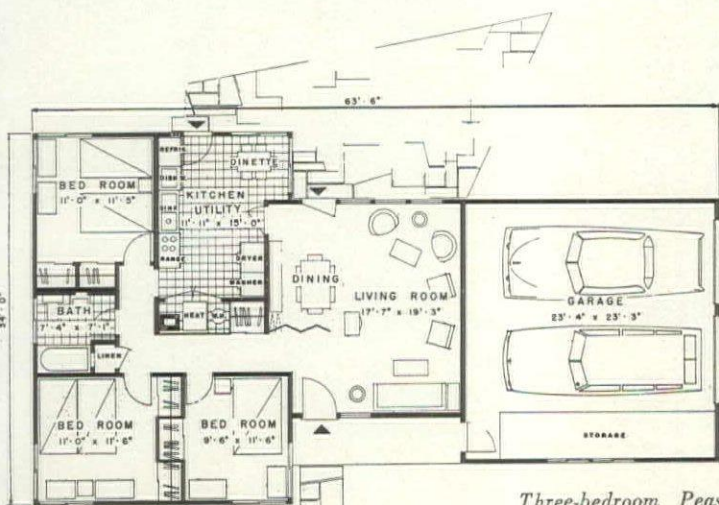
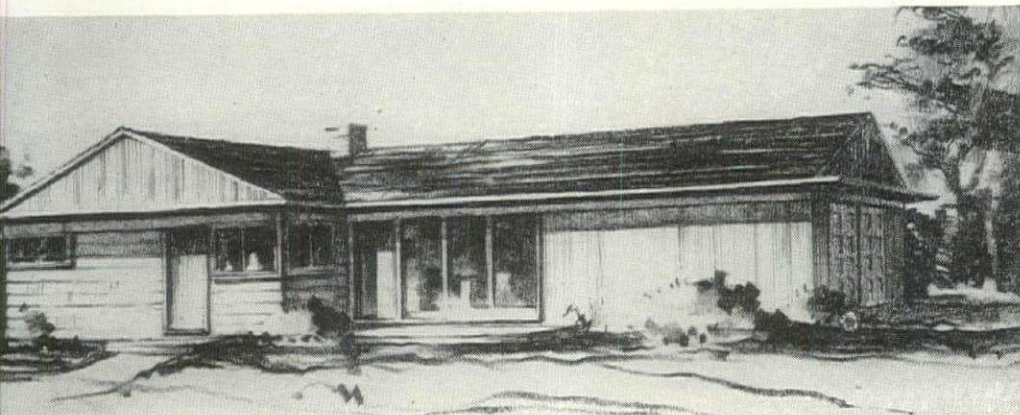
1. Continuing improvement of the planning, design and salability of the present line.
2. Developing a forward-looking system of prefabricated houses suitable for either large projects or erection on individual lots. This is a long term job, involving fundamental research on the profitable sizes of homes for future marketing conditions, as well as developments in new materials and potential prefabrication techniques. . . .

"We must consider profitable operation of the Houses Division as essential to any development program. In other words, design must pay its own way. . . .

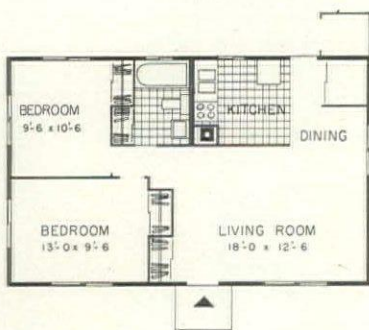
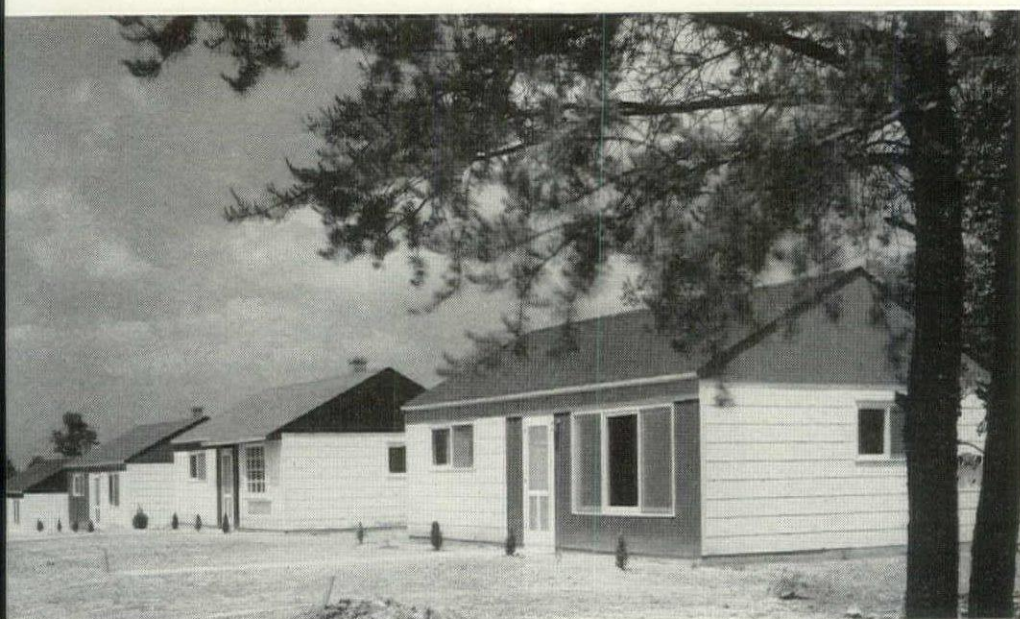
"We plan to interview several architects. . . . We believe the following factors to be important:

"DESIGN ABILITY . . . We must evaluate fully an architect's ability to understand the limitations of mass





Three-bedroom Peaseway house by Architects Schwartz & West contains 1,130 sq. ft. exclusive of garage, will sell complete for about \$19,500.



American Houses' latest model features improved fenestration and a varied use of exterior finishes. Its 703 sq. ft. inclosed space develops more usable area than indicated because very thin (1½") partitions are used. Price to owner of these houses this year was \$6,000.

market and his ability to key his design (whether conventional, temporary, traditional or intermediate) to keeping just ahead, but not too far ahead, of acceptance from the public, the home building industry, the mortgage finance community, and the government insuring agencies. . . .

"The home buying public has been educated to design considerably ahead of what prefabrication companies are offering at the present time.

"On the other hand, design must be attractive and salable to the highest possible percentage of the medium and lower income groups. We must reconcile skillfully our own desires and tastes with a realistic understanding of the market.

"RESEARCH . . . Our architect should be interested in spending some time talking with home buyers, prospective builders. He should be interested in analyzing the living and storage space requirements of families of various sizes in the middle and lower income groups. He cannot design in a vacuum. Above all he should have a genuine interest in finding and developing new materials and new methods of fabrication . . . methods and materials that will cut costs and increase salability.

"PROJECT EXPERIENCE . . . We believe that one secret of success in prefabrication is to combine plan production economies and volume with site economies gained through building from 25 to 250 homes in a single project. Many of our new builder-dealers fall in this category. Sound experience in efficient land planning and orientation of numbers of homes would be valuable.

"NAME VALUE . . . Frankly, we do not believe that many architects have a sufficient reputation with the general public to warrant heavy consideration of name value. However, recognition among builders, mortgage bankers, government officials, insurance companies and other important "public" would be helpful. . . .

"PERSONAL ATTENTION . . . We believe that our assignment calls for close personal attention and supervision by principals. . . . We expect to do most of the working and shop drawings in our own organization. . . .

"BASIS OF COMPENSATION . . . Some pioneering thinking may be needed in this department. Standard small home commissions are not practical on volume production of prefabricated homes. And our problem may be to a considerable degree one of counsel and guidance. We would like to know what you consider fair rates for working in your own shop, for visits to the plant, and for travel time and expense. For the time being, at least, we must base our budgeting on an anticipated volume of about 2,500 homes a year.

"LICENSING . . . In what states are you licensed to practice? If states in which we operate or individual cities require architectural certification of plans, what would you charge for certification. . . .

"TEMPERAMENTAL SUITABILITY . . . We expect our architect to become a strong collaborator who will contribute materially to our own management decisions. We would value ability to guide the thinking of government insuring agencies, mortgage bankers and building code officials. . . .

"We have no preconceived ideas on size or content of our future models. We are not necessarily wed to pitched roofs or any other single dominant feature in design. We would expect our architect to produce a series of basic, expandable plans which are adaptable to orientation in any quarter of the compass, and are sufficiently variable in roof lines and special features to avoid monotony in projects of 200 or 300 homes.

All house builders might ponder the competitive implications of this letter—and more architects may soon get similar mail.

J. C. Taylor, Jr. president of the Prefabricated Home Manufacturers' Institute (and also of American Houses, Inc., whose newest model is shown at the left) said recently, "The biggest preoccupation of this industry must be with design. We are no longer competing with apartment dwellings . . . We must sell houses on their own merit to people who are not just looking for somewhere to live, but really want houses. To define what they want is design."



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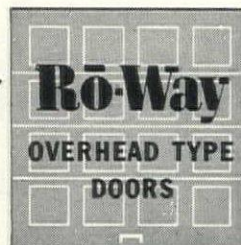
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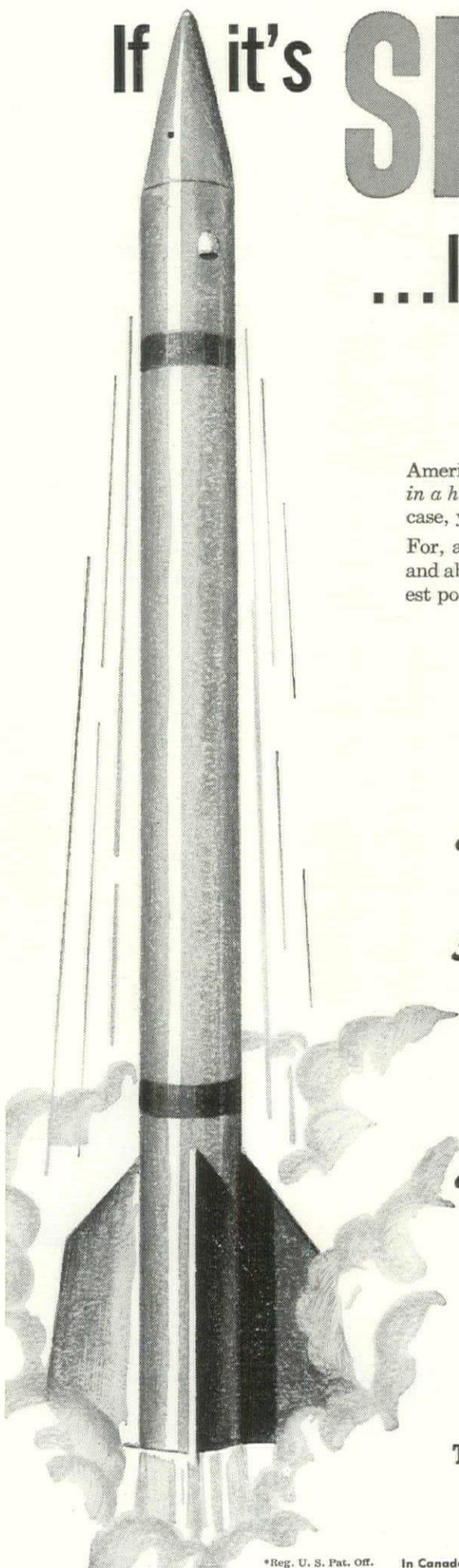
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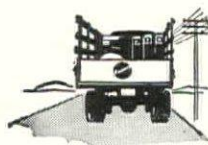
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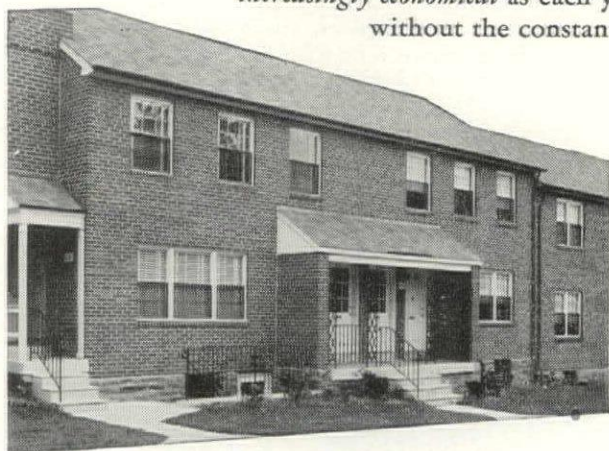
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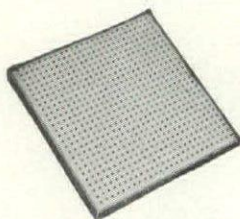
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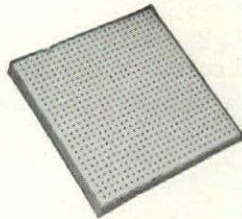
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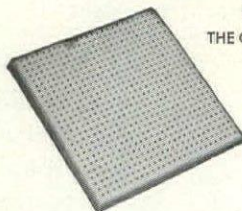
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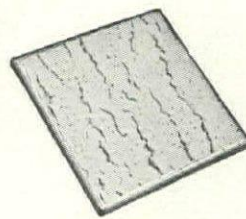
ACOUSTI-CELOTEX*
MINERAL TILE

Made of mineral fibre, felted with a binder to form a rigid tile with a universal rating of incombustibility. Perforated with small holes extending almost to the back, this tile provides high acoustical absorption plus unrestricted paintability by either brush or spray method.



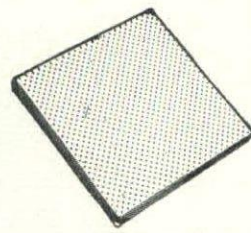
ACOUSTI-CELOTEX*
**FLAME-RESISTANT
SURFACED TILE**

A cane fibre tile with a flame-resistant surface. This tile meets *Slow Burning* rating contained in Federal Specifications SS-A-118a. It may be washed with any commonly used solution, satisfactory for good quality oil-base paint finishes, without impairing its flame-resistant surface characteristics and without loss of sound-absorbing capacity. Repainting with Duo-Tex flame-retarding paint will maintain peak flame-resistant efficiency. Supplied in all sizes and thicknesses of regular cane tile.



ACOUSTI-CELOTEX
FISSURETONE*

A totally new mineral fibre acoustical tile. Attractively styled to simulate travertine. It beautifies any interior and effectively controls sound reverberation. Lightweight, rigid and incombustible, it is factory-finished in a soft, flat white of high light-reflection rating.



ACOUSTEEL*

Combines a face of perforated steel with a rigid pad of sound-absorbing Rock Wool to provide excellent sound-absorption, together with attractive appearance, durability and incombustibility. The exposed surface of perforated steel is finished in baked-on enamel. Acousteel is paintable, washable, cleanable.

*Trademarks Reg. U. S. Pat. Off

Sound Conditioning is a Sound Investment...

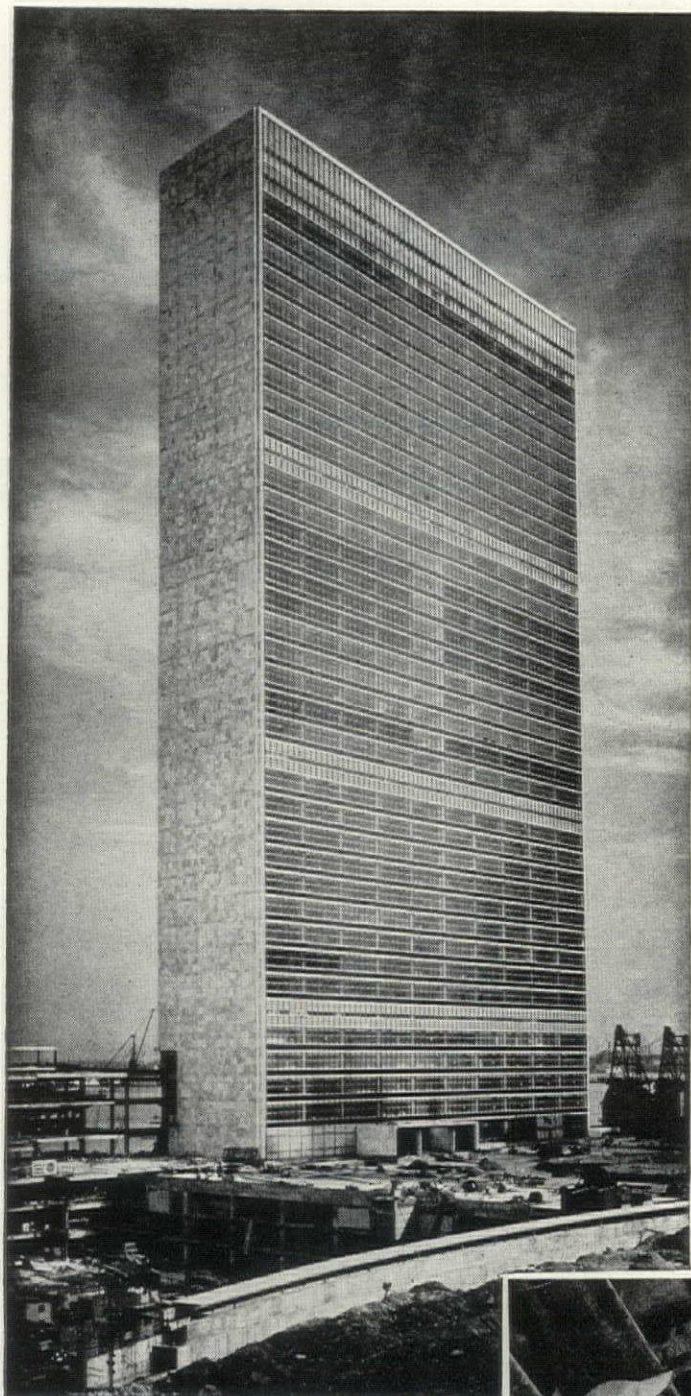


ACOUSTI-CELOTEX
TRADE MARKS REGISTERED U. S. PAT. OFF.

Sound Conditioning Products

PRODUCTS FOR EVERY SOUND CONDITIONING PROBLEM

THE CELOTEX CORPORATION, 120 S. La Salle St., Chicago 3, Illinois
Dominion Sound Equipments, Ltd., Montreal, Quebec, Canada



New UN Secretariat Building, N. Y. C.
Syska and Hennessy, Inc., Consulting Engrs.
Fuller-Turner-Walsh-Slattery, Inc.,
General Contractor
Eugene Duklauer, Inc., Plumbing Contractor
Almirall & Company, Inc.,
Heating Contractor

The UN Secretariat is a **TRULY MODERN** building

...**SILBRAZ**[®] joints made with Walseal[®] Valves and Fittings are installed

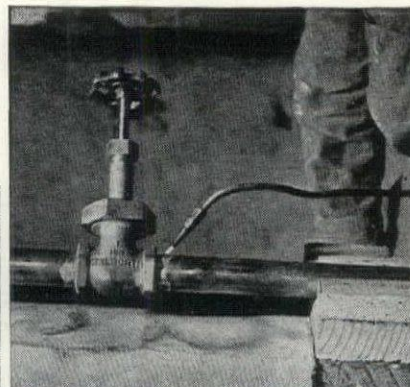
Architects and builders know that it takes modern building components to make a modern building. That's why the first skyscraper erected on the site of the United Nations' buildings has brass and copper pipe runs joined with Silbraz joints — the modern way of joining brass or copper pipe or Type B copper tubing. Silbraz joints are silver brazed — not soldered or threaded — and are stronger than the pipe itself. They are leak-proof, permanent, and will not creep or pull apart under any condition which the pipe or tubing can withstand. They literally form "one-piece pipelines" that save money by eliminating leaky connections, costly maintenance, and repairs.

Walseal Valves and Fittings for making Silbraz Joints

The Walworth Company manufactures a complete line of Walseal Valves, Fittings, and Flanges having factory-inserted rings of silver brazing alloy, for making Silbraz joints. The Walseal material used in the United Nations building was furnished by Glauber, Inc., and Asco Supply Company, Inc., both of New York City.

For further information regarding Walseal Valves, Fittings, and Flanges for making Silbraz joints, see your nearest Walworth distributor, or write for Circular 84.

Making a Silbraz joint with a Walseal Gate Valve at UN, work being done at bench.



Installing a Walseal fitting at UN, on location; note operator progressively heats small section of the fitting.



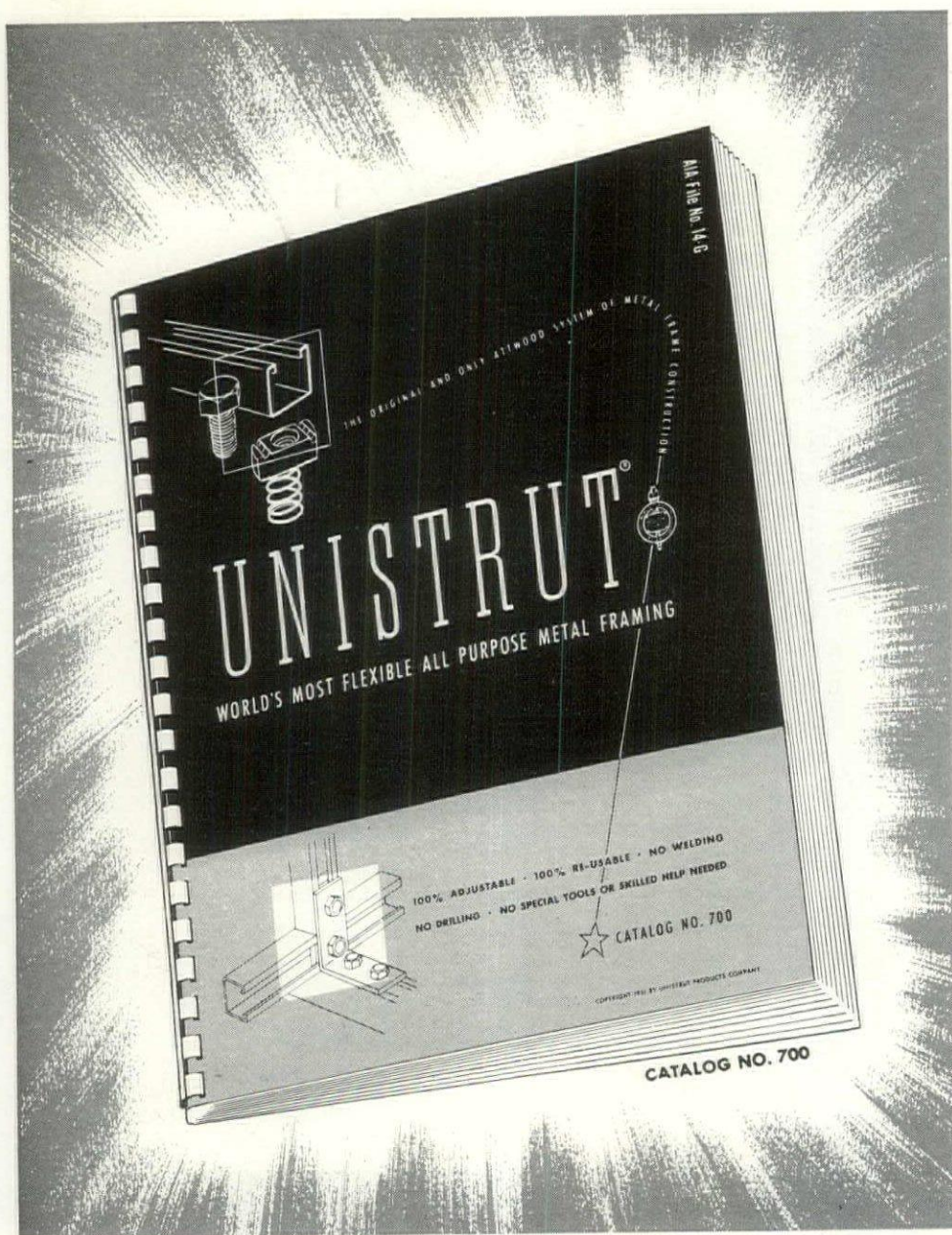
Cut-away view of a Walseal Tee, showing sectional view of Silbraz joint; factory inserted ring of silver brazing alloy; and completed Silbraz joint.



WALWORTH valves and fittings

60 EAST 42nd STREET, NEW YORK 17, N. Y.

DISTRIBUTORS IN PRINCIPAL CENTERS THROUGHOUT THE WORLD



NEW

FREE UNISTRUT® CONSTRUCTION CATALOG!

78 Illustrated Pages on How to
Frame, Hang, Support and Mount
many kinds of Mechanical and
Electrical Equipment with
UNISTRUT All-Purpose Metal Framing

Simple and Complete ... Easy to Use ...
Loaded with Pictures, Data and
Complete Information ... Shows Details
of Product and Applications ...
How to Order

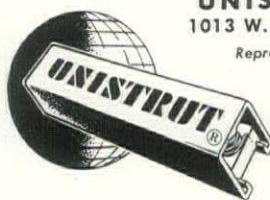
Get Acquainted with UNISTRUT Today! Write for
New Free 78-page Construction Catalog 700

With UNISTRUT you can build all types of framing, mounts, shelving, racks, tables and benches—conduit, cable, pipe and tubing hangers and supports—fluorescent fixture supports, and many other structures with just a hacksaw and a wrench.

UNISTRUT is metal channel with a continuous slot. You simply insert the UNISTRUT spring-held clamping nut into the channel at approximate point where attachment of another framing fitting is desired, slide to exact location and bolt to UNISTRUT fitting.

UNISTRUT includes concrete inserts, roller pipe supports, brackets, clamps and many other standard parts which in combination provide the world's most flexible system of support or suspension. UNISTRUT does the complete job—you need no other parts or materials.

UNISTRUT is trim framework—provides great strength without bulk. It's easy to work with, lasts indefinitely, and the finished structure assures neat and orderly appearance.



The World's Most Flexible
All-Purpose Metal Framing

UNISTRUT PRODUCTS COMPANY
1013 W. Washington Blvd., Chicago 7, Ill. Dept. F-10

Representatives and Warehouse Stocks in Principal Cities
Consult your Telephone Directories

U. S. Patent Numbers
2327587 2363382
2329815 2380379
2345650 2405631
2541908
Other Patents Pending

**UNISTRUT IS
Bonderized!**

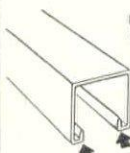
Please send items checked below, without obligation:

☐ Catalog 700 ☐ 24" x 36" Wall Chart
☐ Free Unistrut Sample

Name _____
Company _____
Address _____
City _____ Zone _____ State _____

Only
UNISTRUT

GIVES YOU THIS FAST
CLAMPING, LOCKING
ACTION AND THIS COM-
PLETE ADJUSTABILITY AND
RE-USABILITY



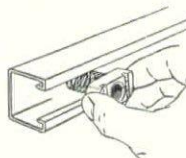
1 WEDGE SHAPED TURNED
EDGES TO TAKE SERRATED
GROOVES OF UNISTRUT NUT.

UNISTRUT
CHANNEL
WITH
CONTINUOUS
SLOT



2 SERRATED GROOVES "BITE
INTO" TURNED EDGES OF
CHANNEL FOR POSITIVE
CLAMPING ACTION.

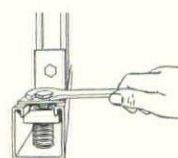
UNISTRUT
SPRING
NUT
WITH
SERRATED
GROOVES



3 INSERT SPRING NUT ANY-
WHERE ALONG CONTINUOUS
SLOT OF CHANNEL...



4 "ROUNDED
EDGES"
ROUNDED EDGES OF NUT PER-
MIT EASY INSERTION. SPRING
(YOUR THIRD HAND) HOLDS
NUT SNUGLY IN PLACE FOR
BOLTING.



5 ASSEMBLE FITTING, NUT AND
BOLT - A TURN OF THE
WRENCH, IT'S DONE.

UNISTRUT PRODUCTS COMPANY • 1013 WEST WASHINGTON BLVD., CHICAGO 7, ILLINOIS

*Store Lighting
Patterns for
better Profits*

See how Sylvania Trimline Fixtures conform to this store's arrangements . . . brighten up all display and working areas.

Quickly modernize store lighting with custom-fitted Sylvania Trimline Fluorescent Fixtures and Trimspots

Now you can make store lighting work *extra hard* . . . earn *extra profits* for your customers, too!

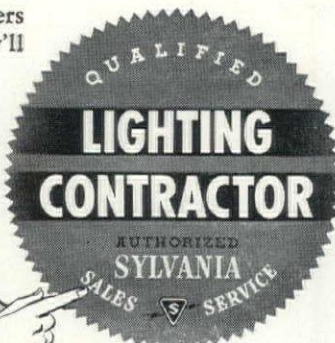
With flexible Sylvania Fluorescent Trimline Fixtures and Trimspots you can concentrate light exactly where it is needed most. You can enable retailers to accent special items, get maximum sales benefits. At the same time they'll enjoy attractive, modern ceiling lighting patterns.

A complete line

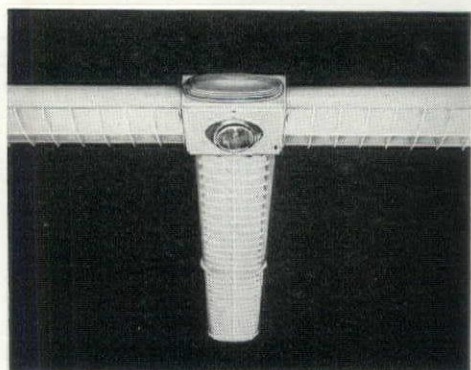
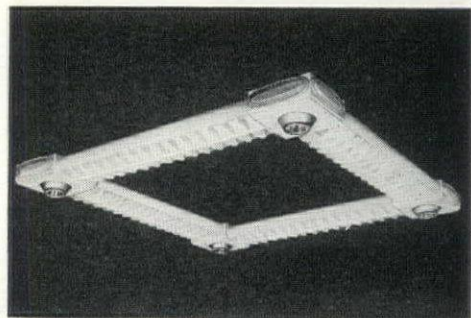
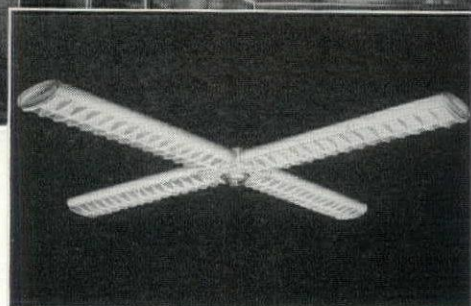
Sylvania Trimline Fixtures form a *complete* line. Handsomely "Miracoated" in sparkling white, they are now available in sizes and types for every need. Equipped with 2 or 4 Sylvania long-life fluorescent tubes. Standard or instant start . . . louvered or plastic shielded.

So, whatever your customers' lighting problems or modernization plans, get all the facts about Sylvania Trimline Fixtures. With Trimline you're in line for more business . . . more profits.

Ask your secretary to mail the coupon for new illustrated folder NOW!



This sign is important to you. The man who displays this emblem will interpret your lighting ideas and save you a lot of design headaches.



Shown above are a few of the many ceiling patterns now possible with Sylvania Trimline Fixtures and Trimspots.

SYLVANIA

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Sylvania Electric Products Inc.
Dept. L-5110, 1740 Broadway, New York 19, N. Y.

Please send me new folder illustrating the complete line of Sylvania Trimline Fixtures.

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FOR

Beauty Privacy Light

- **Beauty**... a door of jewel-like translucent patterned glass that makes your rooms dramatically modern... the *Securit** Interior Glass Door.
- **Privacy**... lets light in, but keeps glances out.
- **Tough**... tempered glass $\frac{3}{8}$ " thick - 3 to 5 times tougher than non-tempered glass.
- **Complete**... comes with Stanley Hinges and Sargent Hardware.
- **Maintenance-free**... never needs refinishing.
- **Reversible**... made in Blue Ridge Muralex pattern, doors can be hung right or left.
- **Easily installed**... comes ready to hang.
- **Economical**... you can afford to use it in almost any interior. *®

 **securit**[®] 
INTERIOR GLASS DOORS



Blue Ridge Sales Division
Libbey-Owens-Ford Glass Company
B-7101 Nicholas Building, Toledo 3, Ohio

Please send me your folder on *Securit* Interior Glass Doors.

Name (please print) _____

Address _____

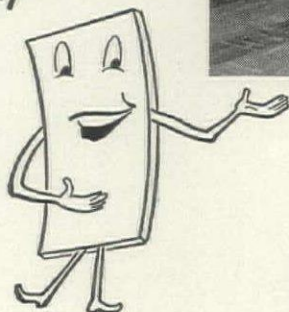
City _____ State _____

Beautiful Birch Weldwood
Fire Doors in offices of the
Consolidated Cigar Company,
New York City.

Architect: J. D. Weiss.



*"Come in!"
it says to you...*



*"Keep out!"
it says to fire*



...The Weldwood® Fire Door

Visitors feel right at home when greeted by the soft, friendly beauty of Weldwood Fire Doors.

But these doors also present a tough, *keep out* attitude where fire and heat are concerned.

With Weldwood Fire Doors on the job, *no* fire can spread should it break out in any office.

And if fire should invade from elsewhere, the Weldwood Fire Doors, with their remarkable mineral core, stand ready to give the kind of protection that earned them the hard-to-get Underwriters' Label.

So be sure your buildings have this protection.

Also, remember the Weldwood Stay-Strate Door where a labeled door is not necessary, but where fire resistance is a desired advantage.

The Weldwood Stay-Strate Door is available in the same wide range of beautiful hardwood faces as the Weldwood Fire Door . . . and offers the same advantages except that the edge banding is not fireproofed.

Like the Weldwood Fire Door, it has striking beauty . . . unusual light weight . . . exceptional stability . . . extraordinary durability . . . and is proof against rot, vermin and decay.

Send for complete information about both of these Weldwood Flush Doors today.

United States Plywood Corporation carries the most complete line of flush doors on the market including the famous Weldwood Fire Doors, Weldwood Stay-Strate Doors, Weldwood Honeycomb Doors, Mengel Hollow-core Doors, Mengel and Algoma Lumber Core Doors, 1 3/8" and 1 3/4" with a variety of both foreign and domestic face veneers.

WELDWOOD FIRE DOOR SPECIFICATIONS

Face Veneers—Face veneers are thoroughly kiln-dried hardwood of standard thickness—1/28"—and smoothly belt-sanded. Rotary-cut unselected birch is standard; other sliced or rotary-cut domestic or foreign woods are available.

Core—The core is made of incombustible Kaylo® composition, having a normal density of 20 pounds per cubic foot. The core sections are joined together with tongue-and-groove joints, as approved by the Underwriters' Laboratories. The core is smoothly sanded prior to application of crossbands and face veneers.

Banding—The edge banding is of birch, treated with Class "A" fireproofing agent. The top banding is 1/2" in thickness; the side banding 3/4"; and the bottom banding is 1 1/2" in thickness, made by laminating two 3/4" pieces.

Crossbands—Crossbands are thoroughly kiln-dried hardwood, 1/16" thick, extending the full width of the door.

Adhesives—The core and edge banding are bonded together with a waterproof resin glue. The entire core is sized on two sides to insure perfect glue bond between core and crossband. The core, crossband and face veneer are bonded with waterproof Tego film phenolic glue by the hot plate process.

Sizes—The thickness of all fire doors is 1 3/4". Available in range of standard sizes up to and including 4' by 7'.

Vision Panel—If required, a vision panel frame for a 10" x 10" light (only size available) shall be provided carton-packed and complete with screws. A baked finish of light brown metal paint is provided on all surfaces. Glazing with 1/4" wire glass shall be done by others.

*T. M. Reg. Owens-Illinois Glass Co.



WELDWOOD® FLUSH DOORS

Manufactured and distributed by

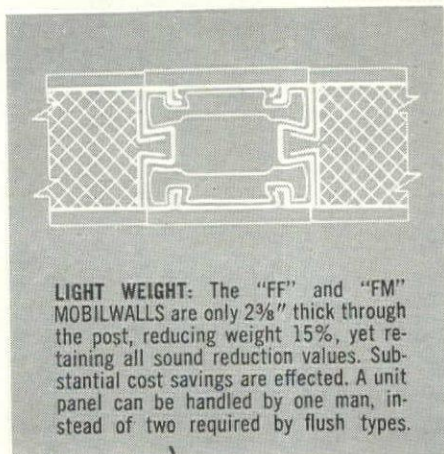
UNITED STATES PLYWOOD CORPORATION

55 West 44th Street, New York 18, N. Y.

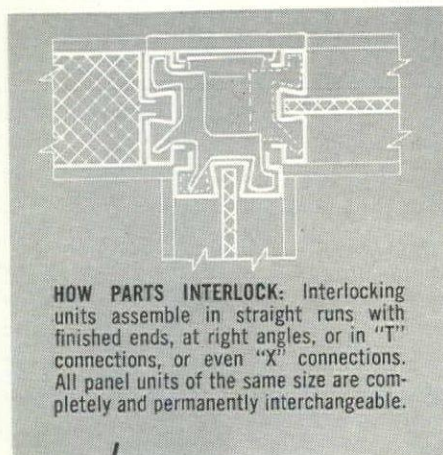
Branches in Principal Cities • Distributing Units in Chief Trading Areas
Dealers Everywhere

Steel Partitions Engineered to Save Steel:

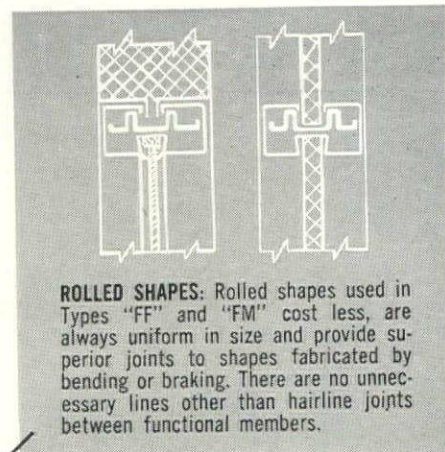
Revolutionary New VMP MOBILWALLS Type "FF" and "FM". Lighter, only $2\frac{3}{8}$ " thick, yet stronger because of structural improvement utilizing new rolled shapes!



LIGHT WEIGHT: The "FF" and "FM" MOBILWALLS are only $2\frac{3}{8}$ " thick through the post, reducing weight 15%, yet retaining all sound reduction values. Substantial cost savings are effected. A unit panel can be handled by one man, instead of two required by flush types.

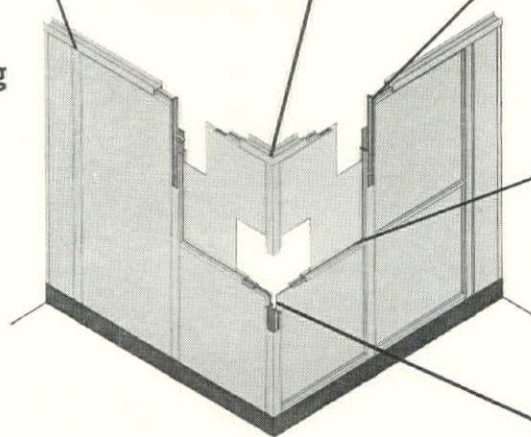


HOW PARTS INTERLOCK: Interlocking units assemble in straight runs with finished ends, at right angles, or in "T" connections, or even "X" connections. All panel units of the same size are completely and permanently interchangeable.



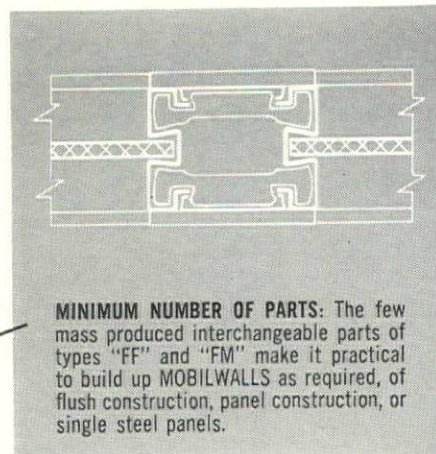
ROLLED SHAPES: Rolled shapes used in Types "FF" and "FM" cost less, are always uniform in size and provide superior joints to shapes fabricated by bending or braking. There are no unnecessary lines other than hairline joints between functional members.

Panel type "FM"
"commercial" partitioning
interlocks at all post
conditions with "FF"
flush "executive" type
of partitioning!
Perfectly matching!
Without any
special adaptors!

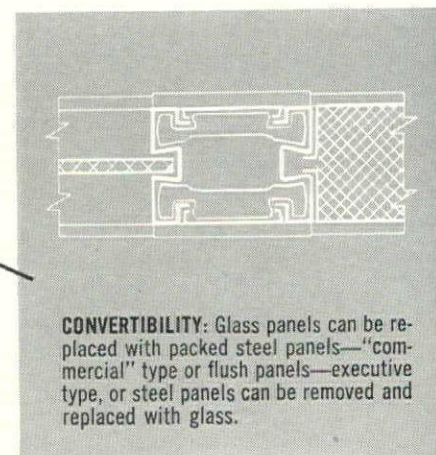


VMP MOBILWALL FLUSH TYPE "FF" Made by combining four patented rolled shapes with $2\frac{3}{8}$ " rock wool insulated flush panels or glass and flush steel panels, suitable for executive offices.

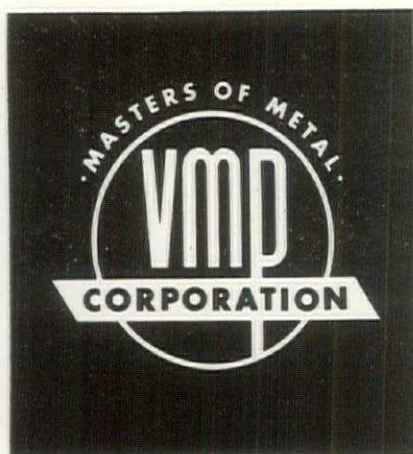
VMP MOBILWALL PANEL TYPE "FM" Made by combining the same basic shapes for flush type "FF" with $\frac{3}{8}$ " thick packed steel or glass panels.



MINIMUM NUMBER OF PARTS: The few mass produced interchangeable parts of types "FF" and "FM" make it practical to build up MOBILWALLS as required, of flush construction, panel construction, or single steel panels.



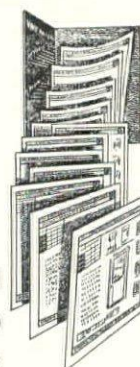
CONVERTIBILITY: Glass panels can be replaced with packed steel panels—"commercial" type or flush panels—executive type, or steel panels can be removed and replaced with glass.



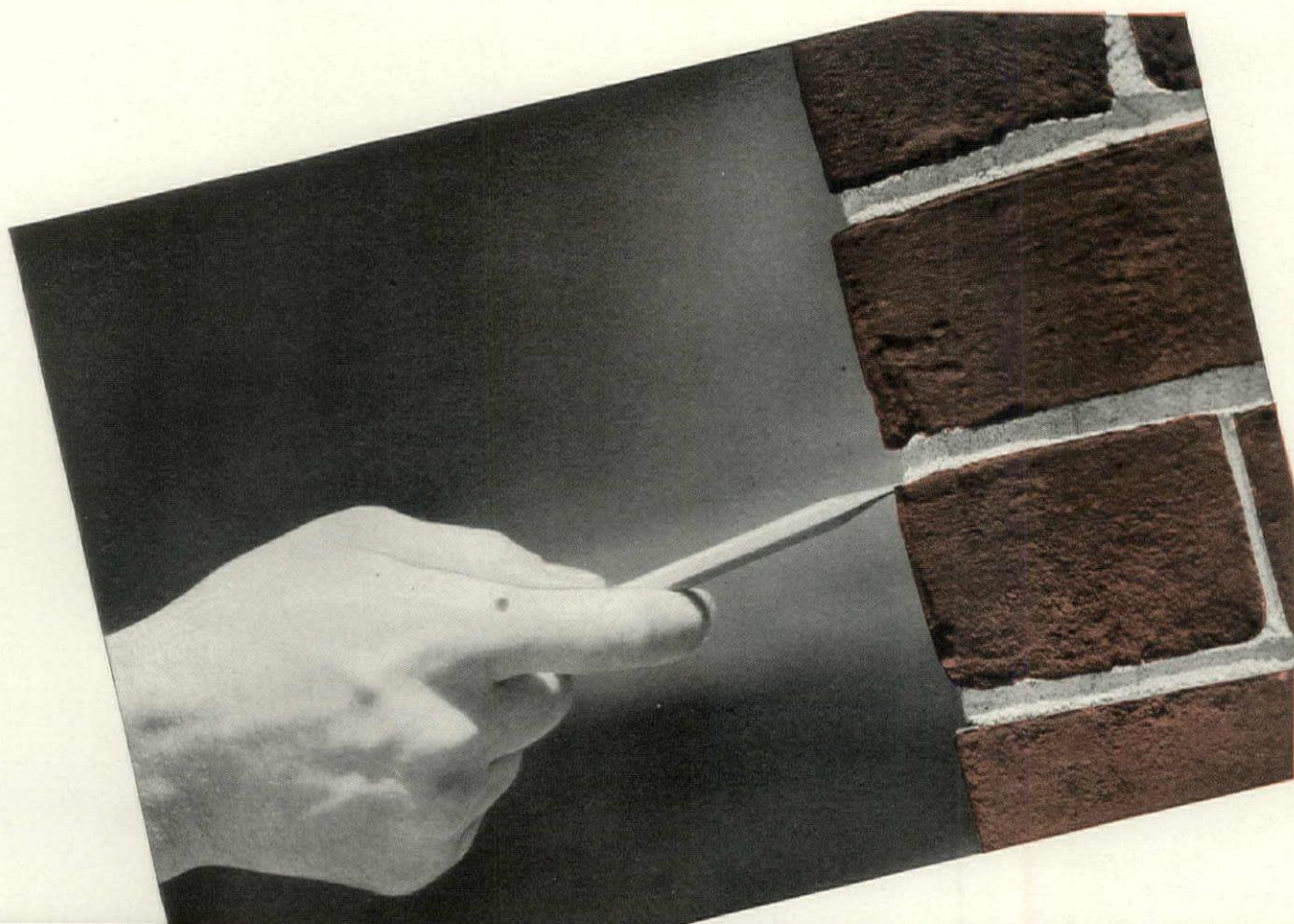
VIRGINIA METAL PRODUCTS CORP.

ORANGE, VIRGINIA

For your free copy of the twelve two-color architects and builders manual data sheets, just write "Mobilwall" on your letterhead or postcard and mail to Virginia Metal Products Corporation, 70 Hudson Street, New York 13, New York



FREE Twelve two-color architects and builders manual data sheets in attractive binder which fully describe with scale drawings this revolutionary new VMP MOBILWALL partition development. Essential for every progressive architect and builder interested in keeping up with new and advanced design data. Please write for your copy — no cost or obligation, of course. Thank you

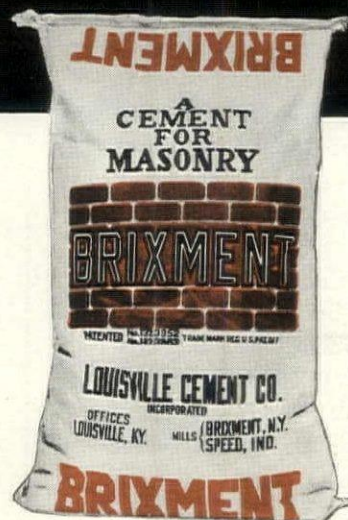


BRIXMENT

is more durable!

FOR permanent strength and beauty, mortar must be *durable* — must be able to withstand the alternate freezing and thawing to which it is subjected many times each winter.

Brixment mortar is *durable*. This durability is due partly to the strength and soundness of Brixment mortar, and partly to the fact that an air-entraining and water-proofing agent is incorporated into Brixment during manufacture. This helps prevent the mortar from becoming saturated — therefore helps protect it from the destructive action of freezing and thawing.



LOUISVILLE CEMENT COMPANY, Incorporated, LOUISVILLE, KENTUCKY

Do you know how ships help you have better temperature controls ashore?

Why do "Coordinated Classrooms" make students learn faster?

How does temperature control help give babies a better start in life? Read about it in . . .

Your Progress Report from

MINNEAPOLIS
Honeywell

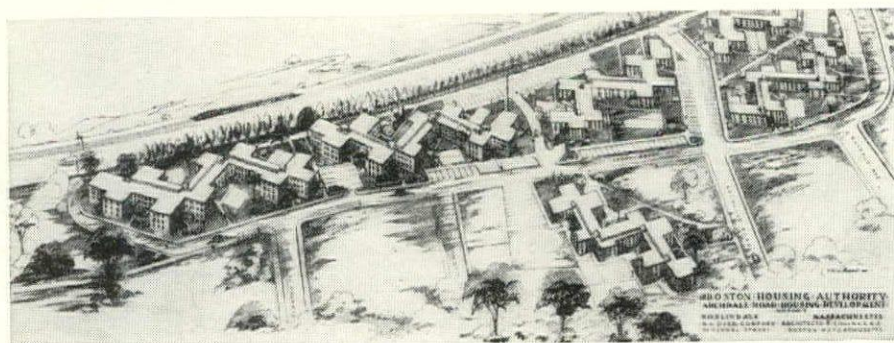


U. S. S. Independence

New U. S. Liners

"Test" Controls at Sea

The toughest use-test temperature controls have to face is found aboard ship. Here controls must give a sensitive, accurate performance in the face of vibration, shock and corrosive salt-air conditions. Experience gained in making sea-going controls expands the knowledge of Honeywell engineers, helps them design controls that give a better, more satisfying performance on land. The wide range of control applications ashore that benefit from sea-testing is demonstrated by the many types of controls used aboard American Export Lines' fabulous new sister ships "Independence" and "Constitution." Honeywell thermostats on the liners provide individually controlled comfort in every stateroom. And throughout the ships—in lounges, cargo holds, engine rooms—there are hundreds of other automatic controls. All of these long-lasting controls for heating, ventilating, air conditioning and refrigeration are built by Honeywell.



Personalized Heat Control for 336

Apartment-Dwelling Families in Boston

In the Boston Housing Authority's Archdale Road Project, now nearing completion, three boilers will serve the six buildings. But each of the 336 tenants will be able to enjoy the room temperatures he likes best—just as he would in the finest private home. For, in the Archdale project, there will be a Honeywell thermostat on every living room wall. This is Personalized Heat Control—the only temperature control system that permits a landlord to keep *all* his tenants comfortable at the same time. And it actually *saves* him fuel, because he never has to overheat a building to satisfy the few who demand higher-than-average temperatures.

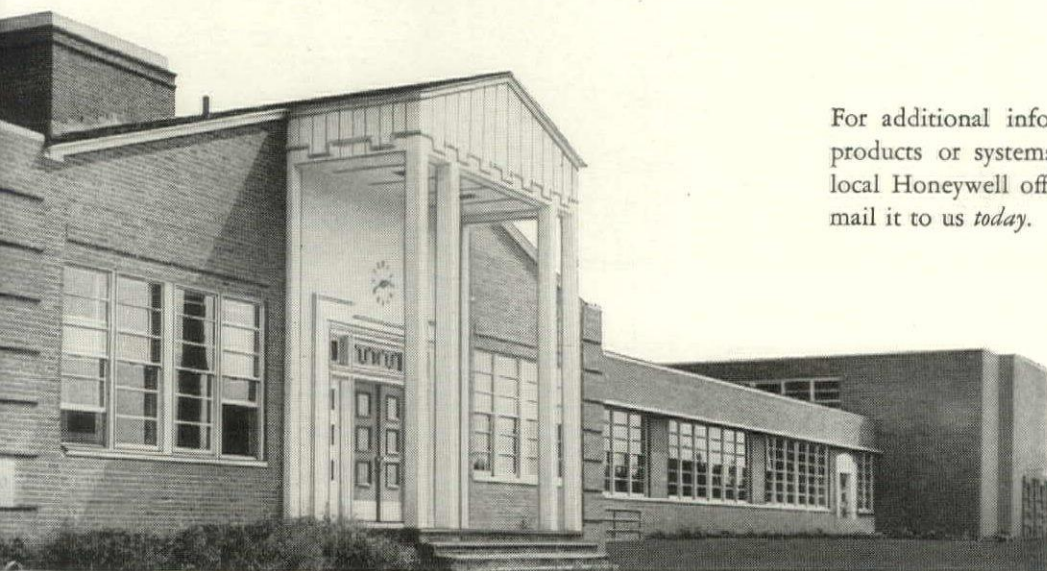
Architect: M. A. Dyer & Co., Boston; Engineers: Hayden, Harding & Buchanan, Boston; Heating Contractor: T. G. Gallagher, Somerville, Mass.; General Contractors: Jefferson Construction Co., Cambridge.



Massachusetts Hospital has Air Conditioned Nurseries, Individually Controlled Room Temperatures

Most medical authorities agree that rigidly controlled room temperatures are needed to give new babies maximum protection. That's why Lowell General Hospital will have Honeywell temperature and humidity controls in the nurseries, labor, delivery and operating rooms of the new maternity and pediatric building. Moreover, to help bring mothers back to normal faster, each bedroom will have Honeywell Individual Room Temperature Control—the only practical way to compensate for effects of wind, sun, open windows and variations in occupancy in hospitals.

Architects: James H. Ritchie & Associates, Boston; General Contractor: Daniel Cunningham Construction Co., Inc., Boston; Mechanical Engineers: C. E. Doucette, Boston; Mechanical Contractor: J. J. Hurley Co., Boston.



New Jersey Classrooms "Coordinated" for Faster Learning

What determines how fast a child learns? Indoor capacity, of course. And classroom conditions—according to recent large-scale experiments. These tests showed that in "Coordinated classrooms"—rooms where seating, lighting, noise level, heating and ventilating are properly controlled—students of all I. Q. levels make greatly improved progress. Shown above is a

new Cedar Grove, N. J., elementary school, all nine rooms of which will be "coordinated." To keep room temperatures uniform and air properly fresh, Cedar Grove officials chose simple, accurate Honeywell controls.

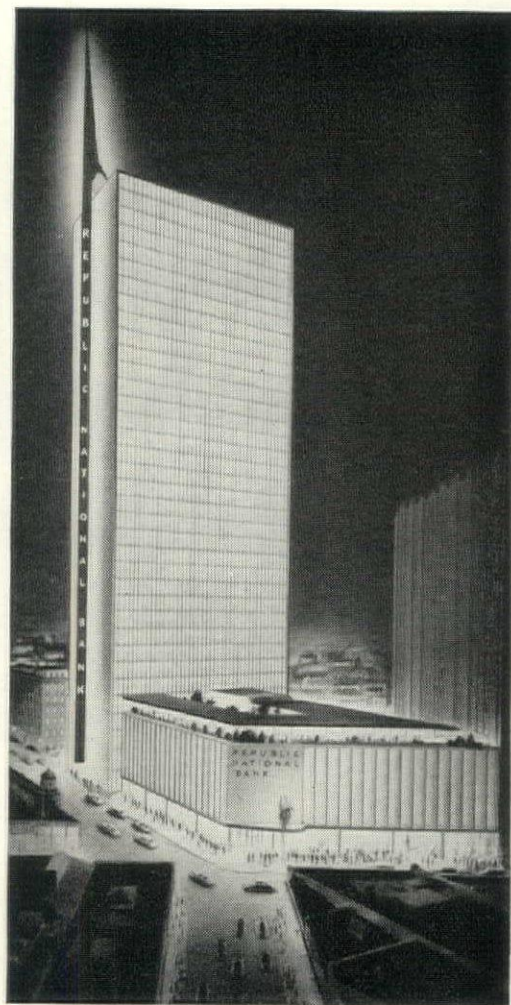
Architect: Alfonso Alvarez, Jr., Upper Montclair, N. J.; Engineers: Vogelbach and Baumann, Jersey City, N. J.; Heating Contractor: Albert F. Ruehl Co., Newark, N. J.

40 Stories of Comfort in

Southwest's Largest Building

When the Republic National Bank's impressive new home is completed in Dallas sometime next year, every room will have the wonderful kind of comfort offered by Honeywell Individual Room Temperature Control. This system compensates better than any other for effects of wind, sun, temperature and variations in internal load. It makes sure occupants always receive exactly the right amount of warm or cool air needed for comfort—no matter what the Dallas weather. Room thermostats in the new bank will be pneumatic. And, of course, all other controls needed for year-round air conditioning will be supplied by Honeywell. Instruments will be furnished by Honeywell's Industrial Division.

Architects: Harrison & Abramovitz, New York; Assoc. Architects: Gill & Harrell, Dallas; Engineers: Jaros, Baum and Bolles, New York; Assoc. Consulting Engineers: Zumwalt & Vinther, Dallas; General Contractors: J. W. Bateson Co., Inc., Dallas; Mechanical Contractors: The Farwell Co., Inc., Dallas.



For additional information on any of the installations, products or systems mentioned in this report, call your local Honeywell office. Or fill in the coupon below and mail it to us *today*.

Minneapolis-Honeywell
Dept. MB-10-192 Minneapolis 8, Minn.
Gentlemen: Please send me further information on

- ☐ Marine controls
- ☐ PHC for apartments
- ☐ Heating and air conditioning controls for large buildings
- ☐ Hospital heating and air conditioning controls
- ☐ Temperature controls for schools

Name _____

Firm Name _____

Address _____

City _____

Zone _____ State _____

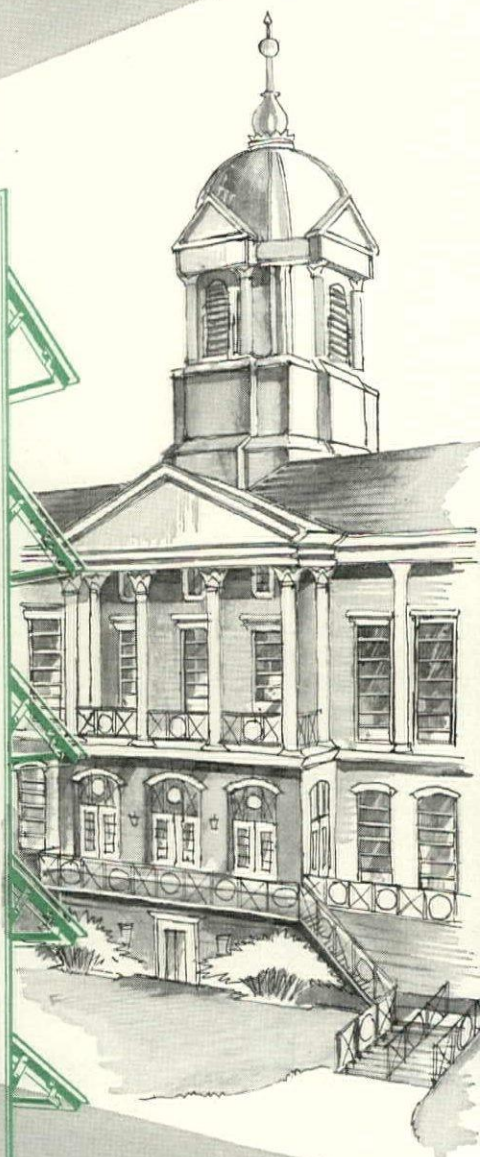
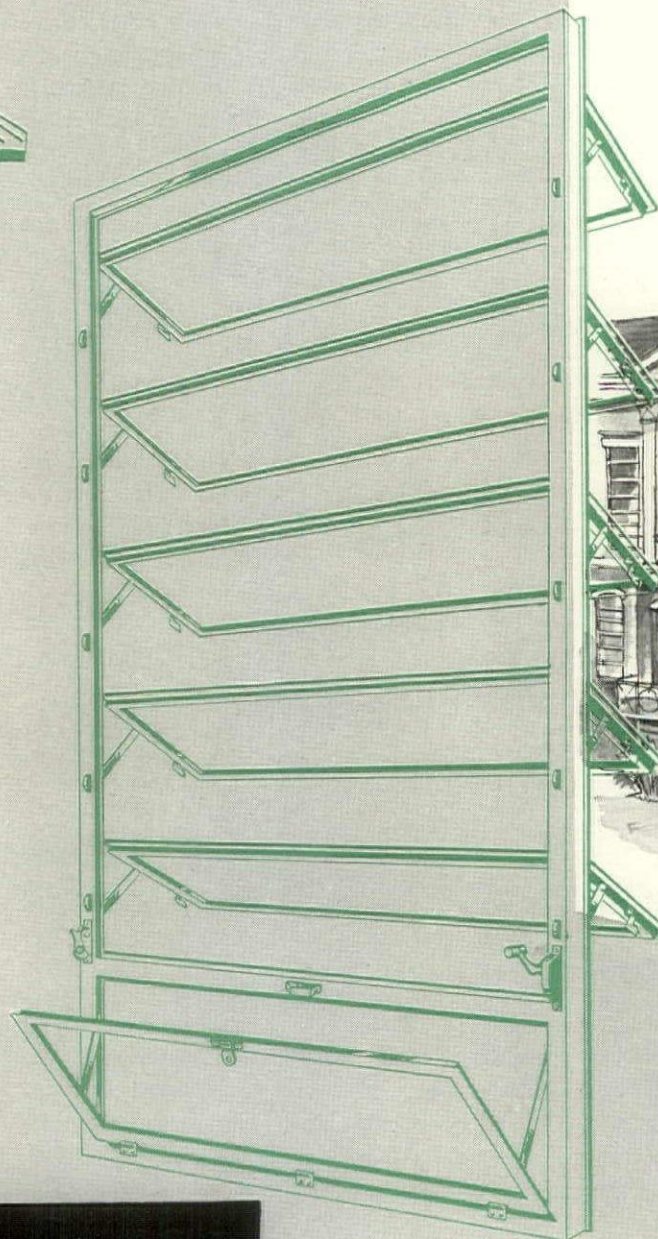
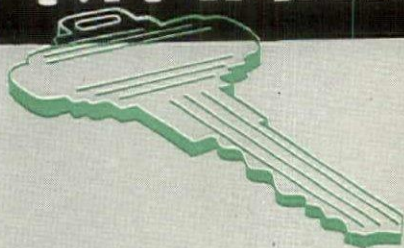
MINNEAPOLIS
Honeywell



First in Controls

how an Architect found the

COURT HOUSE KEY TO KITTANNING



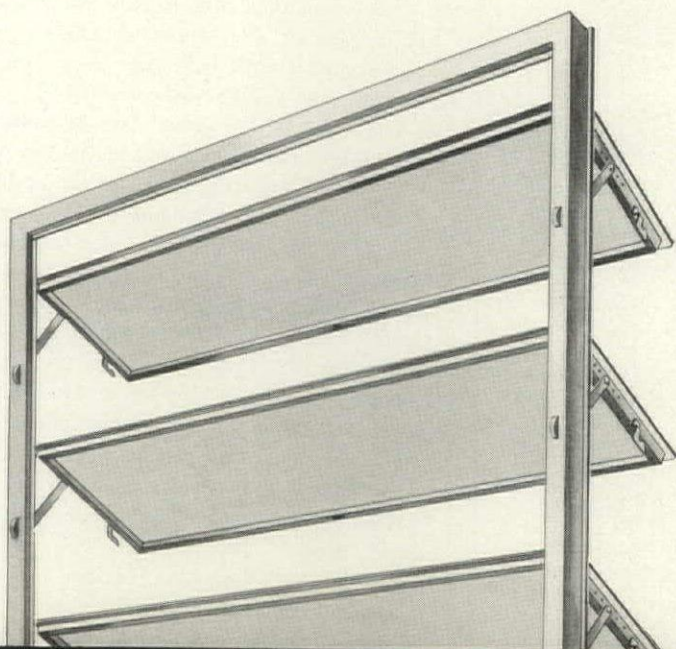
through

Auto-Lok

PATENTED

The perfect window

Architect: Charles J. Marr, New Philadelphia, Ohio
Associate Architects: Scheeren & Rittenhouse, Kittanning, Pa.
Contractor: Fred Lundgren, Kittanning, Pa.

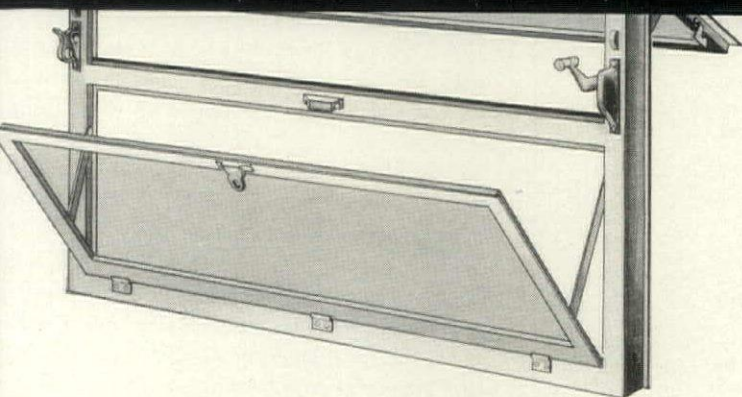


Auto-Lok is twelve ways better

- Tightest closing -- sealed like a refrigerator.
- Widest opening -- 100% ventilation.
- Ventilation -- even when it's raining.
- Fingertip control... as easy to open as to close.
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- Draft-free ventilation -- air scooped in and upward.
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- Unobtrusive operator -- no interference with blinds, drapes, etc.
- Precision balanced hardware eliminates need for periodic adjustment, absolute minimum of maintenance.
- Skyscraper to cottage, Auto-Lok meets every requirement.

Over in Kittanning, Pennsylvania, residents of Armstrong County point to their court house with added pride today. Something new has been added to the charming old structure to make it a modern, more practical building without sacrificing its period personality... Architect Charles J. Marr specified Auto-Lok aluminum Awning Windows when adding and remodeling... not alone because this is the window that seals like a refrigerator when closed... or because it affords ventilation even when it's raining. Like many other architects, he selected Auto-Lok because Auto-Lok is the only window which combines the *best features of all window types!*

Auto-Lok
PATENTED
WINDOWS
aluminum or wood
SEALED LIKE A REFRIGERATOR

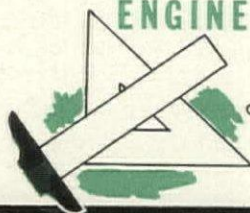


SEALED LIKE A REFRIGERATOR

Every inch of closing surface is positively sealed with Auto-Lok's specially extruded elastomeric vinyl weatherstripping. Note how horizontal weatherstripping "A" crosses over vertical weatherstripping "B." Tight closing Auto-Lok hardware, plus this unique weatherstripping combine to make Auto-Lok the tightest closing window ever made!



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To supplement their own facilities, architects and designers are daily utilizing our staff's experience in fenestration problems. May we assist you?

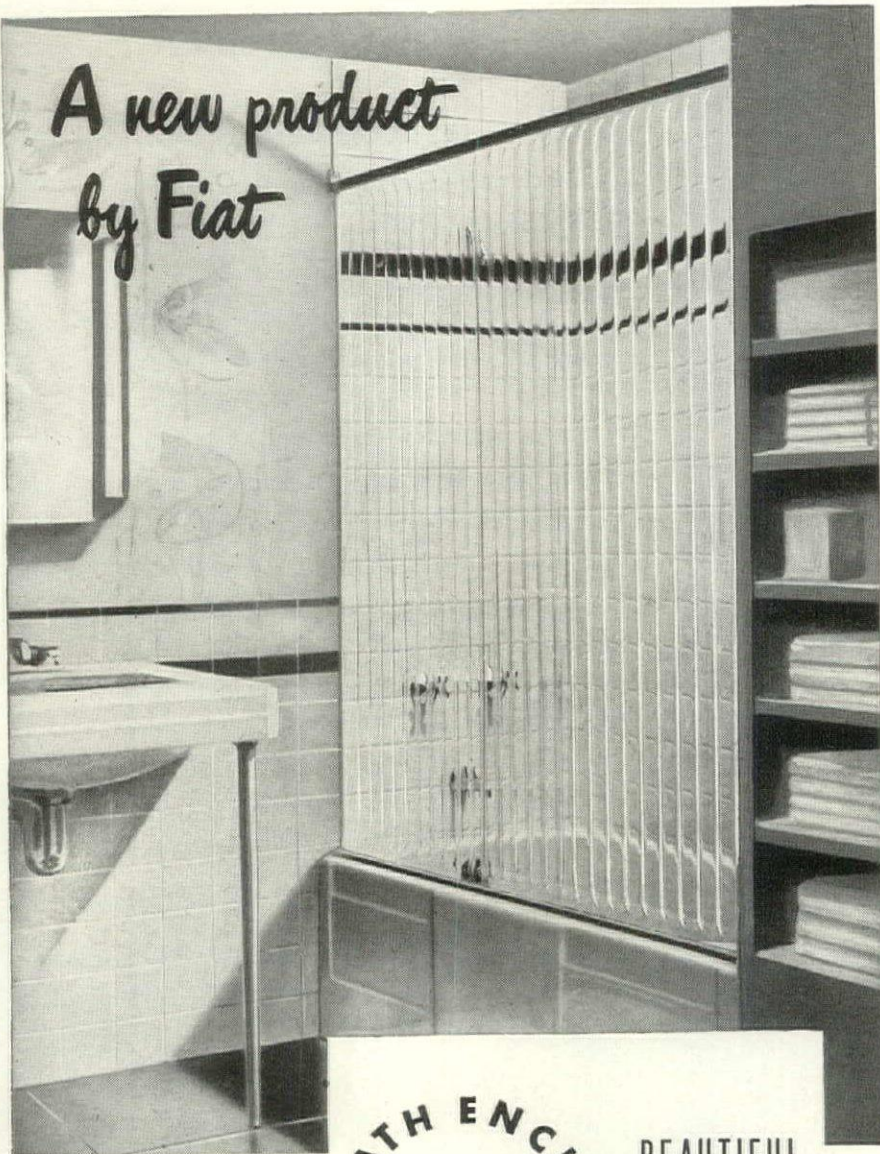
For further details on Auto-Lok -- The Perfect Window -- see SWEET'S and, by all means, write for the name of your nearest distributor and a copy of the free booklet "WHAT IS IMPORTANT IN A WINDOW?" Address Dept. MB-10.

TIGHTEST CLOSING WINDOW EVER MADE!

LUDMAN Corporation

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A new product
by Fiat



BATH ENCLOSURE
Cascade
BEAUTIFUL
COLORFUL
PRACTICAL

An entirely new concept in bath enclosures. Rigid sliding panels of Plexiglas in beautiful transparent pastel colors of crystal clarity: Pink, Gold and Crystal Clear.

Can be installed at a cost much less than a glass panel enclosure.

Plexiglas is shatterproof, withstands heat, resists water and has strength far beyond requirements present in the home bathroom.

Simple to install: (1) Cement track to rim of tub, (2) rest panels in track and adjust top rod in position, (3) fasten end plates of top rod and the job is finished. Made to fit a regular 5 foot recessed tub.

Available from your plumbing contractor.

Write for bulletin showing the Cascade Bath Enclosure in actual colors.



FIAT METAL MANUFACTURING COMPANY • Three Complete Plants
(Chicago area plant) Franklin Park, Illinois • Long Island City 1, New York
Los Angeles 33, Calif. • In Canada: Porcelain and Metal Products, Ltd., Orillia, Ontario

ARCHITECTS' SUGGESTIONS

(Continued from page 195)

but that he is obliged to start with financing, not of his choice, and work backwards to assemble the product. The product more closely resembles an assembly than it does integrated design, for the builder is a major manufacturer who has almost no control of his "stock parts."

Let us neither criticize nor excuse, but look objectively at what must be done. The builder and architect must have both the means and the motivation to create better design.

The house is too small. Due to financing, the minimums soon become also the maximums. The builders are probably ahead of the architects in their analysis of the costs of marginal space. For example, they know that, if the basic minimum area costs from \$10 to \$15 per sq. ft., additional space added to area, without addition to mechanical work or mechanical trades might cost but \$4 to \$5 per sq. ft.

However, because market analyses show that for each additional increase of \$1,000 to \$2,000 in sales price, half of the remaining potential market is eliminated, the industry cannot easily avail itself of the increased value gained through marginal space.

The basic "FHA" plan, of four to five rooms with the living room in front, used as both entrance hall and for circulation, reflects belief that while privacy is probably desirable, it is hardly necessary nor attainable.

With larger area, other obvious faults can be corrected with proper orientation of rooms, shortening of laterals, concentrating plumbing to the front of the plan, closer relation to the garden and encouragement thereby of better land maintenance.

More space per dollar can be accomplished with better and simpler windows and millwork, standardized and probably preassembled plumbing and elimination of the basic conflict in standards of plumbing and the sheet materials. These stock parts and in review of excessive requirements lie the means.

We must evaluate the use of a single entrance door for both service and main entrance. The second door requires combination door, framing, steps or stoop, light and switch, weatherstripping and usually considerable walks. The same dollar would provide many square feet. Expensive apartments often have but one door.

The houses are too close together. We must balance the cost of desirable, but excessive curb walk, and street requirements against the benefits of the same investment in marginal space and the planning improvements permitted by such space. I vote for the space and the privacy permits as a necessity and regard the deluge of curbs, walks and streets as only desirable.

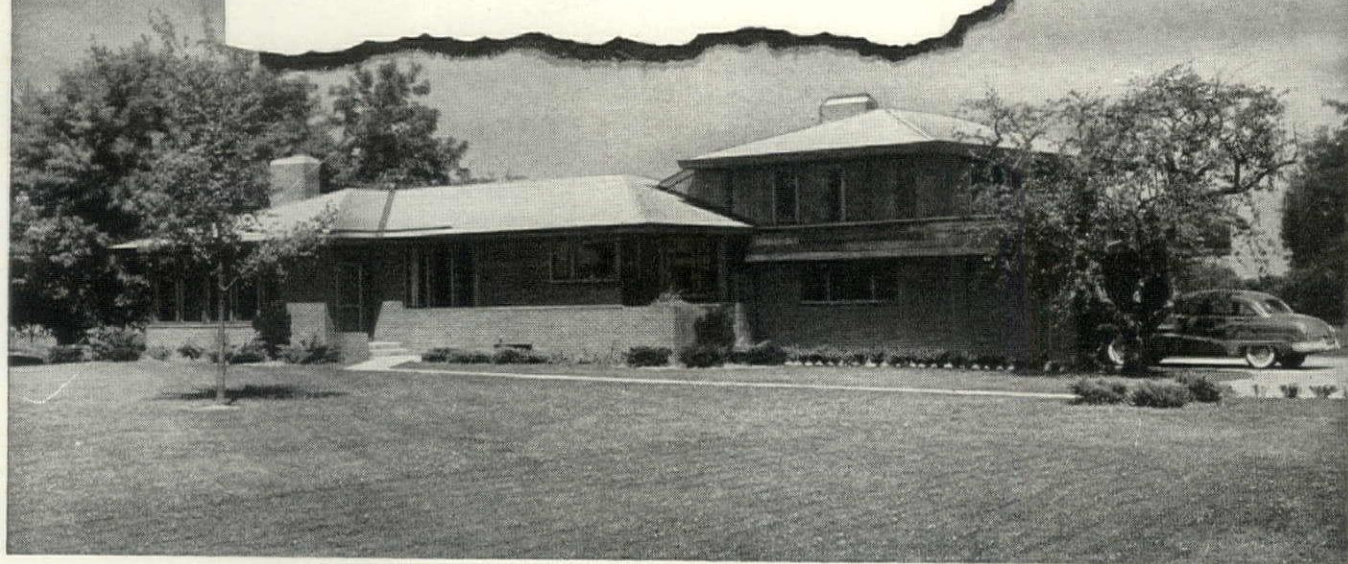
As long as replacement costs are the major determinant in financing, we shall have today's backward and negative approach to design.

Livability values—space, privacy, flexibility and conveniences—are actually the prime criteria. They are presently regarded as small "plus factors."

Herein can be the motivation.

(Continued on page 248)

Add to the beauty——
protect it permanently!



Residence of E. L. Kaylor, Saginaw, Michigan. **Architect:** Glenn M. Beach, Saginaw, Mich. **Roofing Contractor:** MacArthur Roofing and Sheet Metal Company, Saginaw, Mich. **Roofing:** "Century" No. 5 Shingles, Surf Green.

Specify "Century"® ASBESTOS-CEMENT ROOFING SHINGLES

Colors to harmonize with every architectural scheme

Attractive roofing of stone-like durability! "Century" Asbestos-Cement Roofing Shingles add to the beauty of any structure—protect it against weather; are not affected by termites; will not rust or rot. And, being entirely mineral by nature, they cannot burn—are eligible for lowest fire insurance rates... a point any home owner appreciates!

The eye-pleasing color selection is another "owner pleaser." "Century" Roofing Shingles are available in Spanish Red, Surf Green, Gray Duoface, and Black. These are "built in" colors—won't weather out; won't fade—don't ever need painting to preserve their beauty.

Attractive and durable—*economical*, too! "Century" Roofing Shingles are moderately priced; are specially designed for quick, easy application.

Get the complete story of the many advantages of "Century" Asbestos-Cement Roofing Shingles. Write us for complete information and application data on all styles of shingles for residential and commercial uses. You'll receive a prompt reply!

About the "Century" Shingles on the above residence...

"Century" Asbestos-Cement No. 5 Shingles. American method appearance; random-width, thatched butt design. Application cost is low—each unit covers more than 1 sq. ft. of exposed area; 90 shingles per square; 2 nails per shingle; self-aligning. Give complete weather protection on roof pitches as low as 4" rise per foot.



*Original manufacturers of
Asbestos-Cement Shingles in this country*

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Look to Hotpoint ... the **LEADER**

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TOPS OFF ANOTHER FAMOUS BUILDING!



THESE WORKMEN are laying FOAMGLAS on the roof of Dun & Bradstreet's new home office building in New York City. FOAMGLAS, an effective barrier to heat travel and cold transfer, is easily handled, quickly laid. The strong, rigid blocks form a firm, even base for roofing felts, do not crush or sag, thus prevent damage to roofing. Architect: Reinhard, Hofmeister & Walquist, New York City. General Contractor: George A. Fuller Company, New York City. Roofer: Jacob Ringle & Son, Inc., Jersey City, New Jersey.

More and more plans—for large and small projects, for modernizing and for new construction—include insulation. And in more and more cases the recommended insulating material is FOAMGLAS.

For FOAMGLAS not only provides excellent insulation, it also *retains* its insulating value, year after year. It is being used successfully in walls and ceilings, on roofs, under floors and sidewalks. Unusually long service, free from costly repairs and maintenance, make FOAMGLAS the most effective and economical insulation you can recommend.

Get complete information about FOAMGLAS today. Just mail the coupon and we'll send you a sample of FOAMGLAS and your choice of our latest booklets.

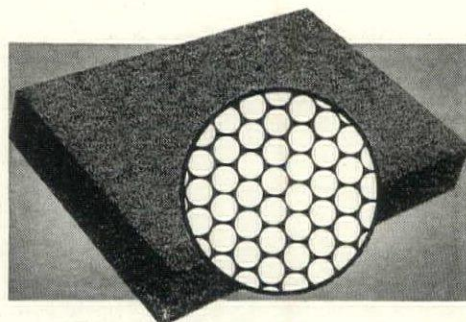
PITTSBURGH CORNING CORPORATION
PITTSBURGH 22, PA.



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City.....State.....

ARCHITECT'S SUGGESTIONS

L. MORGAN YOST: avoid standardization of the commonplace

Builders copy builders' houses until the degree of difference among them approaches complete standardization of the commonplace. Many architects commissioned by builders deliver "builders' houses" to satisfy the client. Many builders wanting the fresh approach are disappointed to receive the same old thing from the architect.

Originality and good design add nothing to

the construction cost if intelligently applied. Ponderous detail so prevalent should give way to crispness at less cost in labor and materials. Cornices can be simplified and broadened into eaves for sun and rain protection. Roofs can be lowered and simplified to use less and cheaper materials. All meretricious ornament can be removed, relying on proportion, texture, natural shadows and color to produce the lasting quality of hominess. These make better mortgage risks.

Interesting placement and variations of set-

back, not haphazard but carefully studied for vistas and relationships of open areas, can add thousands of dollars to land values. The driveway and entrance walk become one for economy and produce greater sweeps of unbroken lawn. The separate service door is as useless as the vermiform appendix. The door to the rear garden should replace it on the budget sheet as an enjoyable sales feature. The picture window must be redesigned and placed on the garden side only to deprive the occupant of displaying the ubiquitous ruffled lampshade.

If houses are designed as good places to live—rather than mere merchandise to be sold, they will sell better. Family activities have been neglected. No space for workshop, separate play groups, storage of sports equipment, hobby material—all these make home the place to be in. Much attention must be given to sound control, arrangement of spaces so traffic aisles do not preempt all the free area. Space should be simple and open, not cramped into the usual five or six standard rooms. The separate kitchen should follow the separate dining room into oblivion, though planning of units must still provide sufficient work space for easy neatness of housekeeping.

The bedroom must not be thought of as mere area but as organized space for sleeping, dressing, and writing, working or reading away from others.

In providing for family living is the real opportunity for housebuilders.



Architect Harvey P. Clarkson of Petroff and Clarkson, New York, N. Y. specified this suspended Silvray SKYLIKE installation for the conference room jointly used by the Tea Association and the Tea Bureau, Inc. at 500 5th Ave. Providing a medium lighting intensity of approximately 35 foot-candles, these SKYLIKE units represent an initial investment saving of from 1/3 to 1/4 the cost of competitive equipment offering comparable results. The lighter weight and internal simplicity of the fixtures also permits additional savings in installation time.

SKYLIKE® Lighting —
"installation-proved"
IN SCHOOLS, OFFICES, STORES,
AND PUBLIC BUILDINGS

Blending the soft, indirect light of silvered-bowl incandescent lamps with the modern look of fluorescent-type troffers, Silvray SKYLIKE units offer architects wide latitude in planning lighting layouts. As recessed, surface-mounted, or suspended units . . . in patterned groups or panels . . . for new construction or modernization you'll like the versatility, efficiency, and low cost of SKYLIKE fixtures.

Look at these typical installations!

(unretouched photographs, using room light only, demonstrate the unusually uniform distribution of light provided by SKYLIKE fixtures).



This high-intensity installation of surface-mounted SKYLIKE units was selected for the modernization of the Amesbury, Massachusetts Public Library. Note the low brightness levels at the light source . . . the 90° shielding . . . the absence of harsh shadows and sharp light cut-off lines.



This patterned group of recessed units in the dining room of the Bader Hotel in Spring Valley, N. Y., illustrates the way Silvray SKYLIKE fixtures fit 24" x 24" ceiling tiles. Note how the soft, even distribution of low intensity light helps to create the desired mood of cheerful hospitality.

GEORGE D. RIDDLE: space is the cheapest part of the house and the most important

Most builders' houses reflect a sad lack of economic planning. Too much stress is placed on maintaining area within certain limits with a perverse effect on room sizes and livability by planning too many rooms in too little space.

Space is the cheapest part of a house. Increasing area does not affect cost of plumbing, wiring, sash, doors and only to a very minor degree will occasionally increase heating requirements. Many times, with efficient planning, additional area can be incorporated at very little additional cost. For example, it is often possible to add on a 10' wide bedroom for as little as \$30 or \$40 which will provide additional space to accommodate twin beds or at least give greater flexibility in the use of the space. It is possible through efficient planning of houses in this area range to obtain as much as 8% more area for an increase in cost in the order of 1 3/4% and a builder cannot estimate his costs that close. In other words, increasing room area will cost about 20% to 25% of the unit cost of the basic house and will reflect many times that cost in increased livability, marketability and loan value.

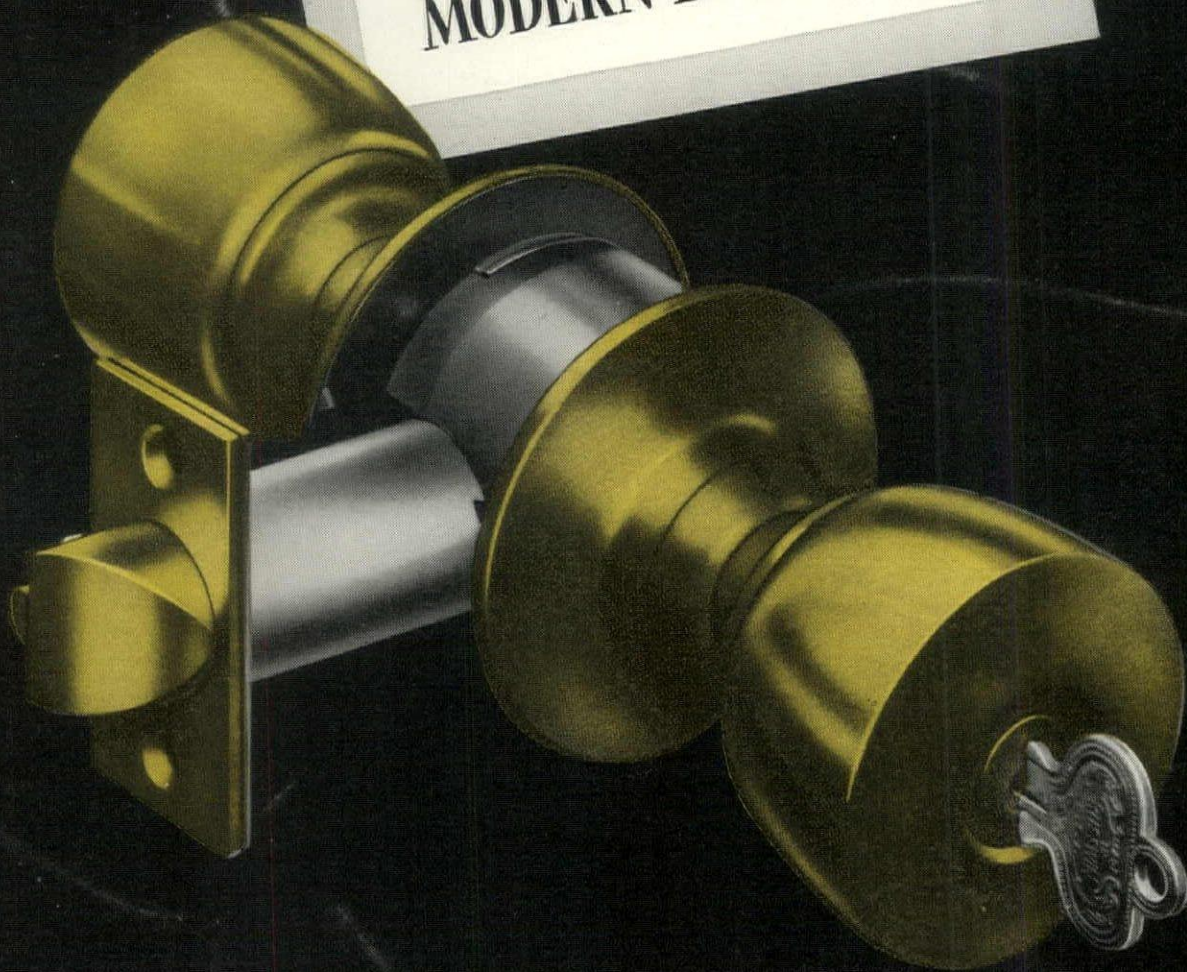
(Continued on page 252)

Send for complete SKYLIKE information. A comprehensive booklet describing the SKYLIKE system is yours for the asking. To get your copy, write Graybar Electric Company, Inc., Graybar Building, 420 Lexington Avenue, New York 17, N. Y. S19-138

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Grand "Opening"
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DISTINCTIVE HARDWARE

designed specifically for schools, hospitals, apartment houses, commercial, institutional and industrial buildings . . . two styles . . . wide range of functions . . . featuring full $\frac{5}{8}$ " throw; seamless tubular knob shank; extra large steel knob bearing on brass bushing; extra large bearing area on latch retractor; and a minimum number of parts. This latest member of a famous lock family makes the Russwin line better than ever as a single source of quality builders' hardware. Russell & Erwin Division, The American Hardware Corp., New Britain, Conn.

NEW WINDOW SYSTEM



Above, small home as originally designed.

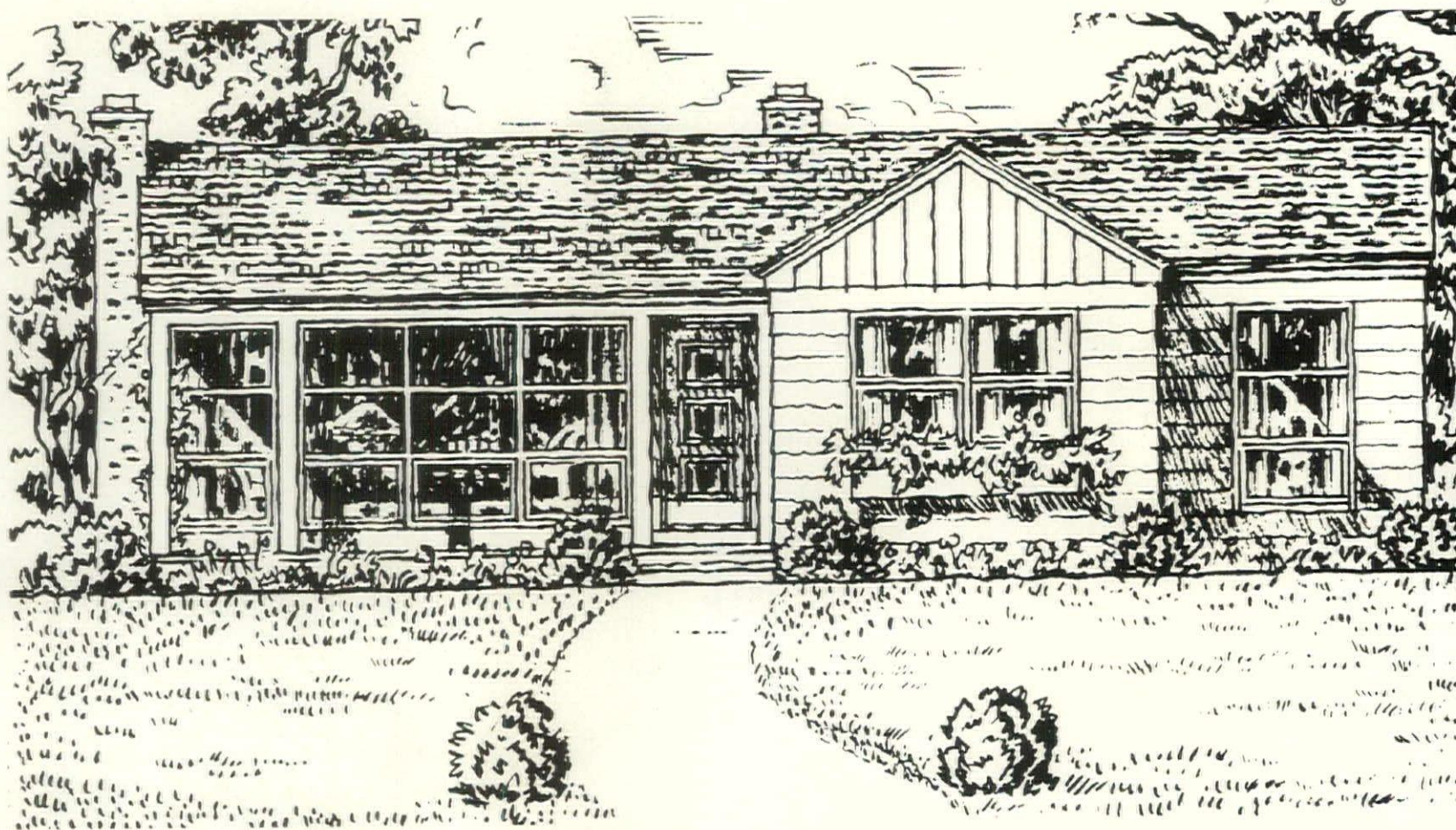
Below, same home with panel window system, glazed with *Thermopane*.

Look at these two drawings. They're the same house—one with conventional window treatment and the other with the newest idea in windows, panel window frames.

Result—better-looking, bigger window areas (and you know how popular they are) achieved so economically that you should actually be able to use *Thermopane** insulating glass throughout the house.

Panel window frames are rabbeted and joined 2 x 6's into which you can insert *Thermopane*, made of half-inch DSA window glass, as fixed lights or in operating ventilators. With only two low-cost, standard sizes of glass you can glaze an entire house—every opening, regardless of area. And it's quick—a carpenter can put together the frame for an entire 9-light window wall in 20 minutes.

These panel window frames have become so popular that in some parts of the country they are now being prefabricated at amazing low cost, shipped in a bundle to your site for quick assembly and glazing.



Why builders figure this system saves money . . . provides insulated window wall without extra cost

A number of builders have told us a *Thermopane* panel window costs no more than a conventional wall with ordinary windows.

Here's how they figure it:

The frames go in quickly, saving much labor and time.

The window area replaces siding, paper, sheathing, studding, plaster and decorating—cumulatively expensive. Figure the total square-foot cost for all those items and you'll see what

they represent in savings of materials.

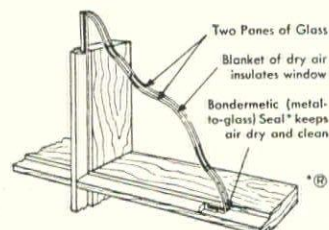
That's economical construction—but what about the glass? These builders use economical standard units of *Thermopane* made with DSA window glass. They are economical in cost, easy to handle, simple and quick to glaze.

Economical construction—economical, sealed double-glazing. It adds up to more house for the money.



Thermopane

LOOK FOR THE NAME ON THE SEAL BETWEEN THE PANES

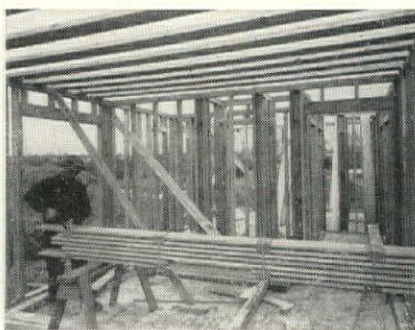


ADDS APPEAL TO HOUSES

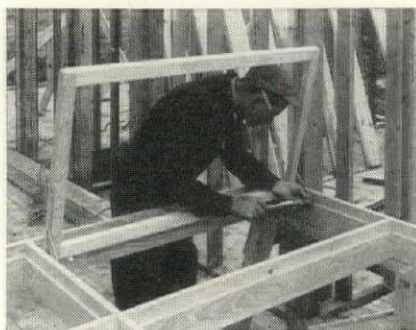
and saves time, reduces costs

Actually enables
you to use
Thermopane
in
every window
of
*low-budget
homes*

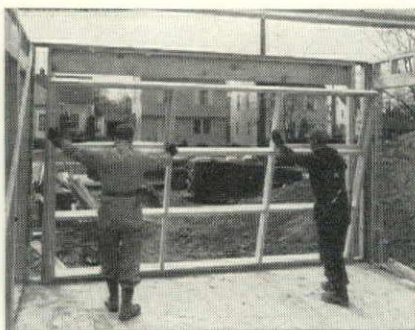
1. Frame (from one to nine lights) comes to the site as bundled 2 x 6's that are pre-cut, rabbeted, ready for assembly. Or they can be cut and rabbeted by the builder, or by a millwork supplier.



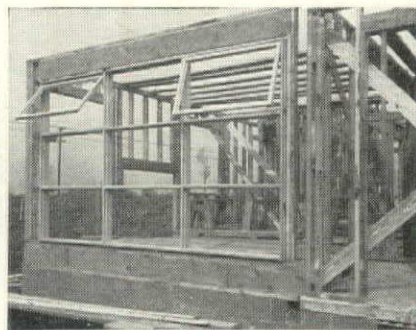
2. Carpenter simply nails the pre-cut frame together on the job. No time is taken for cutting or fitting. He can put a big 9-light window wall frame together in 20 minutes; smaller frames even faster.



3. Wood ventilator takes a standard $42\frac{1}{2}'' \times 22\frac{1}{2}''$ DSA *Thermopane* unit. Used singly or in groups, they provide excellent ventilation throughout the house. Can be screened and weather-stripped. Screened metal ventilators are also available.

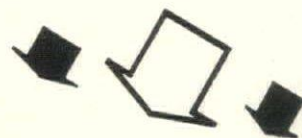


4. Up it goes, ready for painting and glazing. Fixed lights take standard $45\frac{1}{2}'' \times 25\frac{1}{2}''$ DSA *Thermopane* units. Or you can insert ventilator units, of wood or metal, in as many of the window openings as you wish.



5. Panel window frames can be combined in many ways. You can provide bedrooms, for example, with horizontal strips of windows placed high for privacy and to allow more usable space around walls for furniture placement.

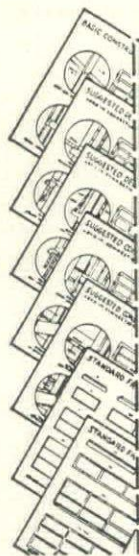
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FREE DETAILS

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We will send you free, detail sheets showing how to make and install panel windows.



Libbey-Owens-Ford Glass Company
95101 Nicholas Building, Toledo 3, Ohio

Please send me complete information on installation methods for low-cost window walls of *Thermopane*.

Name.....
(Please Print)

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City.....Zone.....State.....

ARCHITECT'S SUGGESTIONS

There is still too much monotonous repetition in tract development. Many projects show a sense of color consciousness by the builder but show lack of good advice in color selections and harmony. Many houses are built without considering proper orientation with respect to prevailing winds and to provide winter as well as summer comfort. These three problems can easily be overcome in the basic planning of a development. Relationship of rooms in a given plan can usually be made to fit at least two different orientations.

Variation in the shape of a building will usually result from efficient planning and not add appreciably to cost. Introduction of various roof types for different elevations developed for each basic plan should make possible a varied grouping in a development that, with the advice of a good color consultant, makes possible a home development that the builder, as well as the ultimate owners, can well be proud of. To accomplish this objective requires closer collaboration between AIA and NAHB. Participation in this

type of operation by more architects will result in substantial improvement in the quality of group housing. If more builders employ architects early in their program our communities will receive "face lifting" that will be more than skin deep.

GEORGE FRED KECK: bigger rooms for the north than the south

Long and careful planning is an absolute necessity, for such planning only can produce the best results. In the small house industry, intelligent architectural service is not often obtained. Fortunately there is now an awareness of this need which becomes apparent in a greater number of projects.

Enclosure of space is still comparatively expensive; the gadgets cost money. Ten years ago almost every house built was furnished only with laundry trays. Today people more or less expect washers, driers, mangles and dishwashers—expensive.

Space being relatively cheap, why isn't it desirable to build smaller rooms in warmer climates where, throughout the year one can spend more time out of doors, and larger rooms in colder climates where more indoor living is required?

Regarding cost, at any given period the economic situation dictates a specification and a tag. Fifteen years ago it was a \$5,000 house. Now it is a \$10,000 house. Fifteen years from now while the \$5,000 houses are still standing, it will be a (?) house. Who can tell? Price is not the deciding factor, the factor is what people (the majority) want. Given a time factor, if people really want an improvement badly enough, the economic situation will change so that the majority can have it. Example: an old fashioned icebox is comparatively cheap, but most people insist upon mechanical refrigeration at double the triple the cost and somehow most people get it. Why? In the case of refrigeration it does a better job. Time factor about 15 years. So with housing. Show people a better house that can do a better job of comfort and living and people will demand it. Price is secondary. It seems this type of thinking is necessary to any product that is to stand for 50 years or more.

MILTON A. RYAN: put houses further apart—perhaps on every other lot

My first suggestion would be to put the houses further apart. Changing the shape of the site so that houses are further apart would make it possible to leave natural grounds, foliage and trees between. Distance and foliage would result in a quieter, more private and softer setting. Furthermore houses could be built on every other site giving the home buyer an opportunity of looking into the adjoining lot.

Houses should be made simpler and less conventional. The living room, dining room

(Continued on page 256)



NERVASTRAL SEAL-PRUF

the
ideal waterproof sheeting
for "1001"
building applications

Nervastral Seal-Pruf Sheeting is . . .

Especially adapted for use on spandrel beam waterproofing—no mastic required except for spotting. Eliminates additional plies of other types of waterproof products, when employed for membrane waterproofing;

unsurpassed in its resistance to water, water-vapor, acids, alkalies and weather conditions;

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easy to handle—because it remains flexible and pliable winter and summer;

economical—because it reduces labor costs appreciably.

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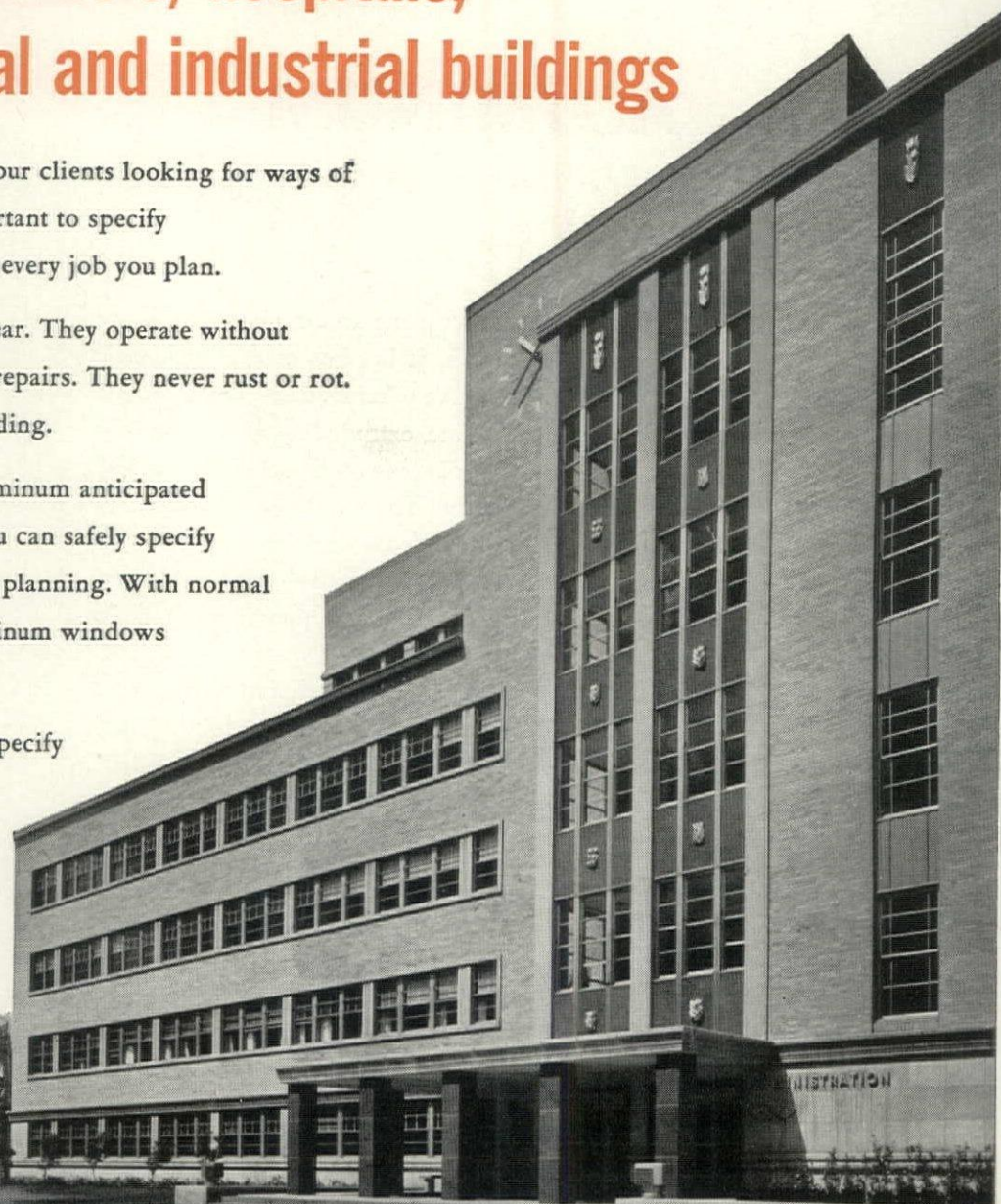
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AVAILABLE? With a reasonable flow of aluminum anticipated by all window manufacturers under CMP you can safely specify aluminum windows for any job you are now planning. With normal lead time allowed, all manufacturers of aluminum windows are ready to assume reasonable deliveries.

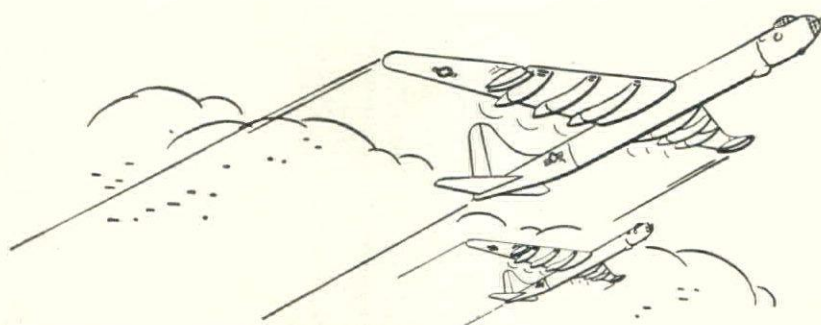
There's no need to put up with substitutes. Specify "Quality-Approved" aluminum windows (double-hung, casement, projected) now and give your clients the assurance of windows tested and approved for quality, strength, construction and minimum air infiltration. For detailed specifications and names of manufacturers consult Sweet's 17a/Alu or write direct to Dept. MB-10

General Service Building
Univ. of Michigan, Ann Arbor, Mich.
Architects: Harley, Ellington & Day



Aluminum Window Manufacturers Association

74 Trinity Place, New York 6, N. Y.

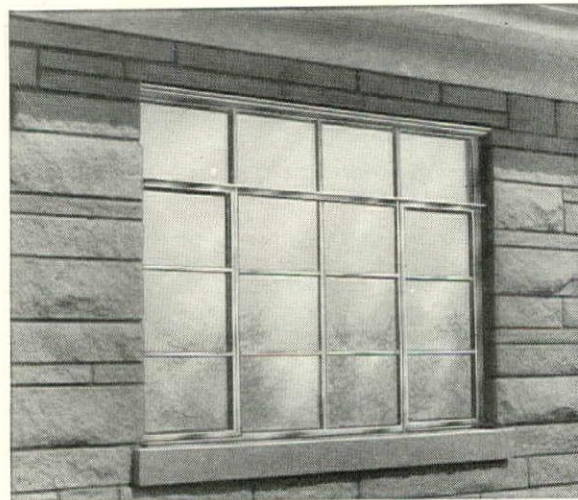


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From this extraordinary range of characteristics stems the scope of aluminum's uses. Aluminum roofing, siding, gutters and downspouts, insulation and vapor barrier, windows, screens...these have become staple building materials. Decoratively as well as functionally, the field broadens...aluminum spandrels, bas-reliefs, spires, railings, doors, moldings. And there is an increasing trend to aluminum structurals.

Reynolds, leader in aluminum building products, offers literature on technical engineering subjects such as "Aluminum Extrusions," "Aluminum Structural," as well as on the specific products shown. Address inquiries to **Reynolds Metals Company**, Building Products Division, 2019 South Ninth St., Louisville 1, Ky.



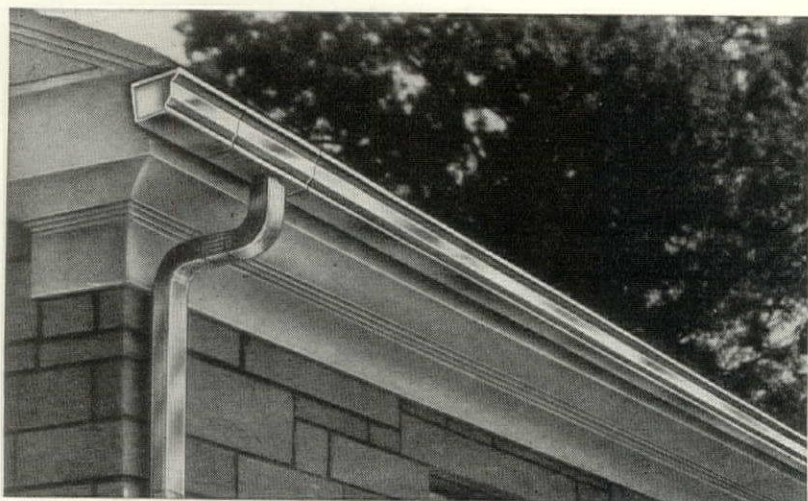
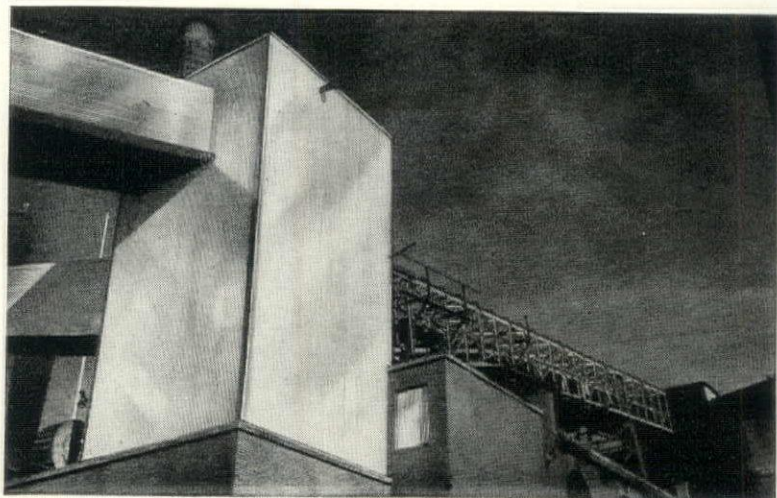
REYNOLDS ALUMINUM WINDOWS

Reynolds Residential Casement, Double-Hung, Fixed and Picture Windows have won an outstanding reputation for superfinishing for strength of corners and consequent weathertightness, for beauty of design. Military demands for aluminum affect production, but capacity is expanding. Check your supplier.

REYNOLDS

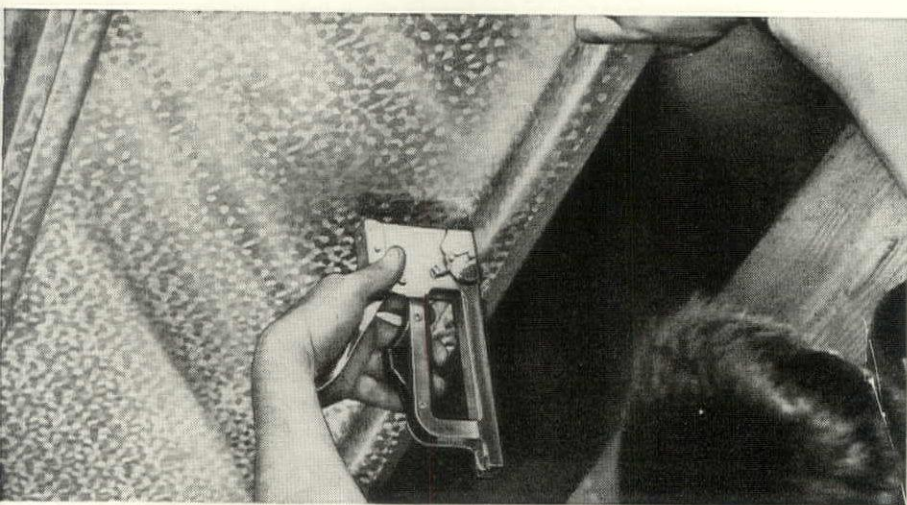
REYNOLDS *Lifetime* ALUMINUM INDUSTRIAL CORRUGATED

As used on the 600-foot coal conveyor system of the Worcester County Electric Company, New England Electric System. .032" thick, with extra deep corrugations ($\frac{7}{8}$ " deep by $2\frac{3}{4}$ " crown to crown), this corrugated weighs only 56 lbs. per square, yet supports 80 p.s.f. uniform roof load over 4' purlin spacing. This light weight combined with strength makes possible important economies in framing. For low applied cost and lowest maintenance, specify Reynolds Lifetime Aluminum Industrial Corrugated. DO-rated orders receive priority handling.



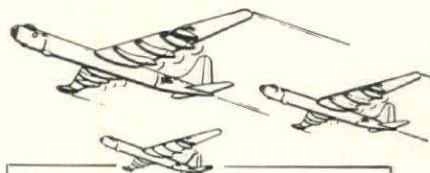
REYNOLDS *Lifetime* ALUMINUM GUTTERS AND DOWNSPOUTS

An excellent example of aluminum's economy... rustproof gutters at about half the cost of other rustproof materials. Non-staining, too! Reynolds designs include Ogee and Half-Round... 5" residential gutters, with 3" downspouts, either smooth or stippled finish. Also: 6" Industrial Half-Round with 4" downspouts. Military needs for aluminum affect production... check your supply source.



REYNOLDS ALUMINUM REFLECTIVE INSULATION

Embossed aluminum foil bonded to one side (Type C) or both sides (Type B) of tough kraft paper... 250 sq. ft. per roll, 25", 33" or 35" wide. A preferred underfloor insulation and vapor barrier over unheated crawl spaces... approximate conductance 0.10 for one layer Type B. Excellent for sidewalls (Type B between studs), and over ceilings or under rafters.



Aluminum is required for planes and other military needs. Expansion is under way, but total supply of aluminum building products is necessarily reduced. Keep checking your supplier for the products shown, and for Reynolds Lifetime Aluminum Nails and Flashing.

ALUMINUM

IF YOU SEE RUST
YOU KNOW IT'S NOT
ALUMINUM



REYNOLDS
Lifetime ALUMINUM
BUILDING PRODUCTS

kitchen could be converted into one large area with flexible divisions. The interior doors, except for master bedroom bath and possibly between the sleeping and living area, could be omitted with the remaining partition staggered, angled or baffled to give concealment; or flexible screens could be used. Partitions could be stopped at head height. Open planning would mean better ventilation, and acoustics are no worse when sounding boards are discarded.

I would suggest that builders stop covering up.

Example: Plasterboard used to cover a conventional and costly stud framing job. Joint tape used to cover an honest and necessary plasterboard joints. Size used to cover the tape; paint used to cover the size. Studs if used could be exposed at openings and used for jambs and mullions. Openings could be extended from floor to ceiling from wall to wall with headers framed into the ceiling or left exposed. This would cut the walls into individual areas and eliminate a weak link over doors and under windows. Molds,

trim, putty, paint should all be put under observation.

In this area there seems to be a general indecision as to the buyer' taste for exterior materials, and it is common practice to use a number of sure fire popular materials in ingenious manner on the same house. Roof arrangements seem to fall into the same state of indecision.

Another practice here is to jut out walls to catch at elusive south east breeze but in many cases no provision is made to complete the flow of air through the house.

Simple roof framing, more pronounced shadows and a more integrated use of materials should result in more economy and less confusion.

Control Color - Bring out the Natural Beauty of Wood!



BLONDE WOOD FINISHES

You can achieve striking effects with PEN-CHROME. Ten modern tints help you control the natural color of any woodwork or paneling—to keep it in harmony with any color scheme. Finish coat seals the surface and dries to a soft, rich, waxlike waterproof finish—revealing the grain and natural beauty of wood.

Use Pen-Chrome for commercial, industrial and residential work. It's economical! See your nearest O'Brien Dealer or write the O'Brien Corporation, South Bend 21, Indiana, today for free sample panel and further details on Pen-Chrome Blonde Wood Finishes.

10 TINTS—Graywood—Bleached Mahogany—Driftwood—Platinum—Blonde—Maple—Light Oak—Dark Oak—American Walnut—Mahogany.

← ACTUAL WOOD SAMPLE—showing color effects produced by 10 Pen-chrome tints on birch panel, 2 1/2" x 20 1/2" FREE to architects and decorators.

See O'Brien Pen-chrome ad in the October issues of Better Homes & Gardens, House Beautiful, and Living for Young Homemakers.

.....

• The O'Brien Corporation
• Dept. A-10
• South Bend 21, Indiana

• Please send free sample panel showing 10 Pen-Chrome tints.
• Name _____
• Address _____

• _____



KENNETH E. WISCHMEYER: contemporary design for better living

The design trend in residential construction the immediate future will of necessity be toward a more contemporary character with the main emphasis on good living. Under the present a foreseeable economic situation the average family purchasing a home will look for the great amount of usable area and the least unnecessary ornamentation. I do not imply a desire for a house so economical that its lines are severe and that it is without charm, but rather a structure which derives its character and its charm from simplicity of design and a frank expression of the use of good materials.

More emphasis should be placed on the factors which are now recognized as important contributions to good living such as proper orientation and a recognition of the influence of climate design. The use of solar heat as a supplement mechanical heating should be more widely used in areas where it is feasible and as the general public comes to understand its value. This should, result in new design features for more accurate and flexible control of the sun in both summer and winter.

Emphasis should also be placed on the orientation of the residence and its principal rooms take full advantage of the prevailing breeze in summer. The relationship of outdoor to interiors has become recognized as a major factor in design and should continue to contribute to the determination of materials and space relationships. The integration of outdoor and indoor living areas and the contributions of plant planned for comfort, privacy and beauty should be recognized and receive more consideration than the average home than heretofore.

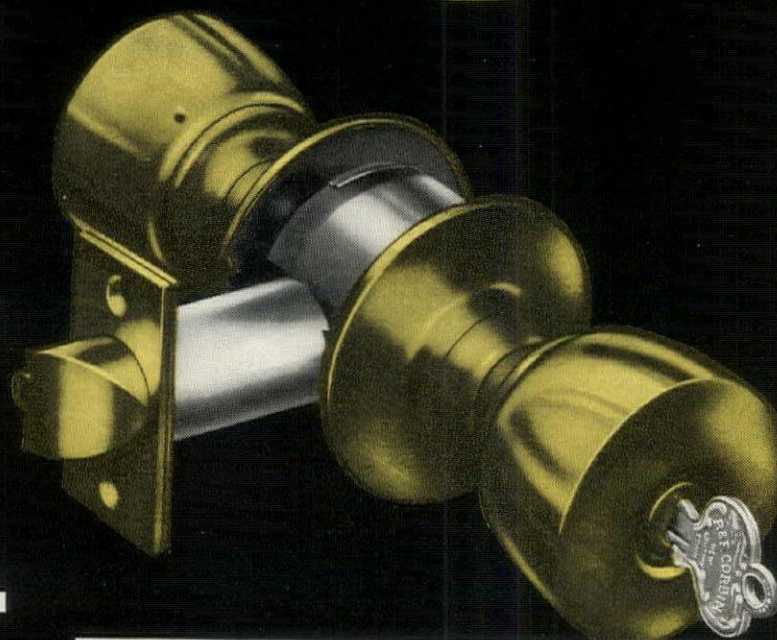
Flexibility of use and ease of maintenance should be among the primary design factors. The problem of obtaining any kind of domestic help has been apparent for some time and will remain with us. Therefore, the housewife is interested in a home in which she can entertain either large or small group with equal ease and with the assistance of a maid. She is also interested in planning which will result in an efficient and economical maintenance of both finishes and equipment.

No other cylindrical lock offers you all
the advantages of

THE NEW HEAVY DUTY



CYLINDRICAL LOCKS



Check All These PLUS Features:

- Five-Eighths Inch Throw!
- Same Smooth-Working, Long-Lasting Roll-Back Latch As Famous Corbin Unit Lock!
- 100% Reversible!
- Cylinder Easily Replaced From Inside If Keys Are Lost!
- Compact heavy-duty construction throughout • Master ring cylinder for greater protection and flexibility • No screws in roses or knob shanks • Adjustable for doors 1 $\frac{3}{8}$ to 2 inches thick • Extruded brass 5 pin tumbler standard; 6 pin tumbler for extended master key systems • Seamless tubular knob shank with long bearing surface is specially designed for easy knob action and to prevent knobs from becoming wobbly • Automatic deadlocks • Fast 2-hole installation with same size holes for all functions.

Corbin Cylindrical Locks are available with Tulip knobs and Round knobs, in cast and wrought brass and bronze.

Before you specify any locks on your next large-building job, compare this new Corbin with any other cylindrical lock you've used. Compare them point by point — feature by feature. You'll find only Corbin has all these extra-quality advantages that mean smoother operation — longer wear with less maintenance—fast, low-cost installation.

And now, for the first time, you can offer your clients every major type of lock — unit, mortise, tubular, cylindrical — from one manufacturer. Your clients can choose any of these types for different parts of a building and have all locks master-keyed as needed and harmonious in design.

The new Corbin Cylindrical Lock comes in four designs — each made in the 13 functions most frequently used in schools, hospitals, apartments, office and public buildings and fine residences. If you have not yet received complete specifications — if you would like further information on all this new lock can do — write or wire us now.

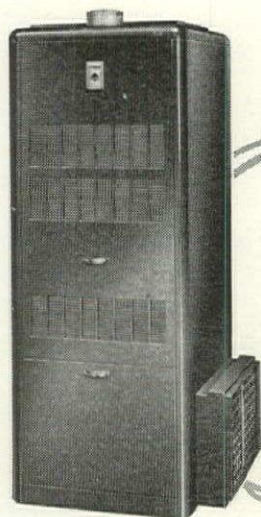
GOOD BUILDINGS DESERVE GOOD HARDWARE



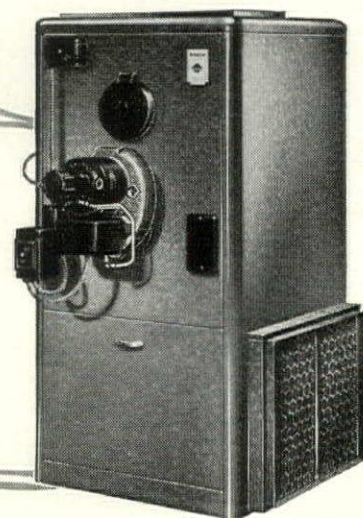
P. & F. Corbin Division

The American Hardware Corporation
New Britain, Connecticut, U.S.A.

AMERICAN-Standard WARM AIR

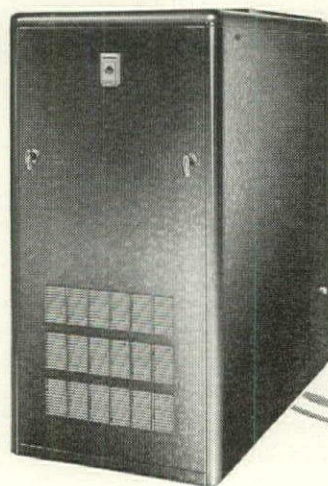


WYANDOTTE



WINTERGLO

For utility rooms, closets, alcoves. These two steel "high boy" type winter air conditioners are typical of the American-Standard line of smartly-designed heating units for small homes and individual apartments. The Wyandotte is a gas fired unit, while the Winterglo is designed for oil firing.

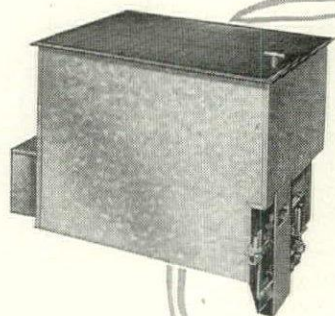


WINTERWAY

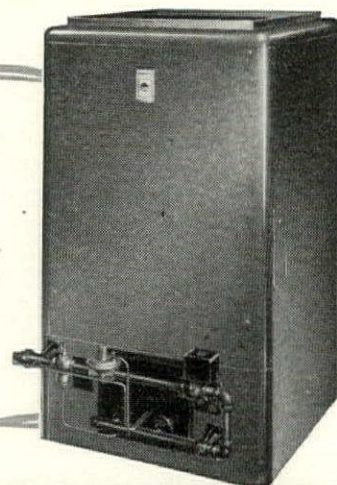


MOHAWK

For basement installations. The steel, oil fired Winterway, popular for small to medium homes, is designed for unusual flexibility and ease of installation. The Mohawk, a de luxe cast iron winter air conditioner, provides automatic gas fired heating for virtually any size home. Both are typically compact in design.



NAVAHO



SHAWNEE

For low-cost installations. The Navaho floor furnace is compact and shallow, can be installed easily in the floor of any small building, with or without basement, and does not require excavation. The Shawnee warm air furnace is ideal for installation in basements used as game rooms, laundries, or work shops. Both units burn all gases efficiently and economically.

AMERICAN-Standard

First in heating...first in plumbing

HEATING EQUIPMENT

... for every type of installation

... for every type of fuel

■ Choose American-Standard warm air heating equipment for basement installations or for small-space installations such as utility rooms, closets and alcoves. You'll find units in the American-Standard line that will fill the bill exactly. For American-Standard warm air heating equipment includes a wide variety of types, sizes and models of warm air furnaces and winter air conditioners—designed to burn gas or oil or coal—plus the new Mayfair Summer Air Conditioner and the electronic Magne-filter Air Cleaner.

This completeness of line is one reason American-Standard warm air heating equipment is used on so many jobs. It allows the widest possible latitude in designing and planning. And, too, American-Standard products are recognized for their engineering and construction advantages... for long life and dependability in service.

You can depend on American-Standard warm air heating equipment to do the job right.

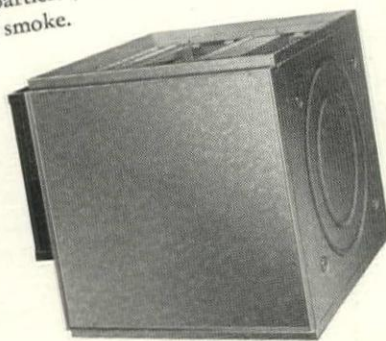


MAYFAIR

For summer cooling. The Mayfair summer air conditioner, latest addition to the American-Standard line, converts forced warm air heating system to year 'round conditioning. It uses same duct system... mechanically cools and dehumidifies the air.

MAGNE-FILTER

For clean air year 'round. The electronic Magne-filter air cleaner, installed in the return duct of any winter or summer air conditioning system, traps even the smallest dirt particles, removes pollen, air-borne bacteria, dust and smoke.



American Radiator & Standard Sanitary Corporation • P. O. Box 1226, Pittsburgh 30, Pa.

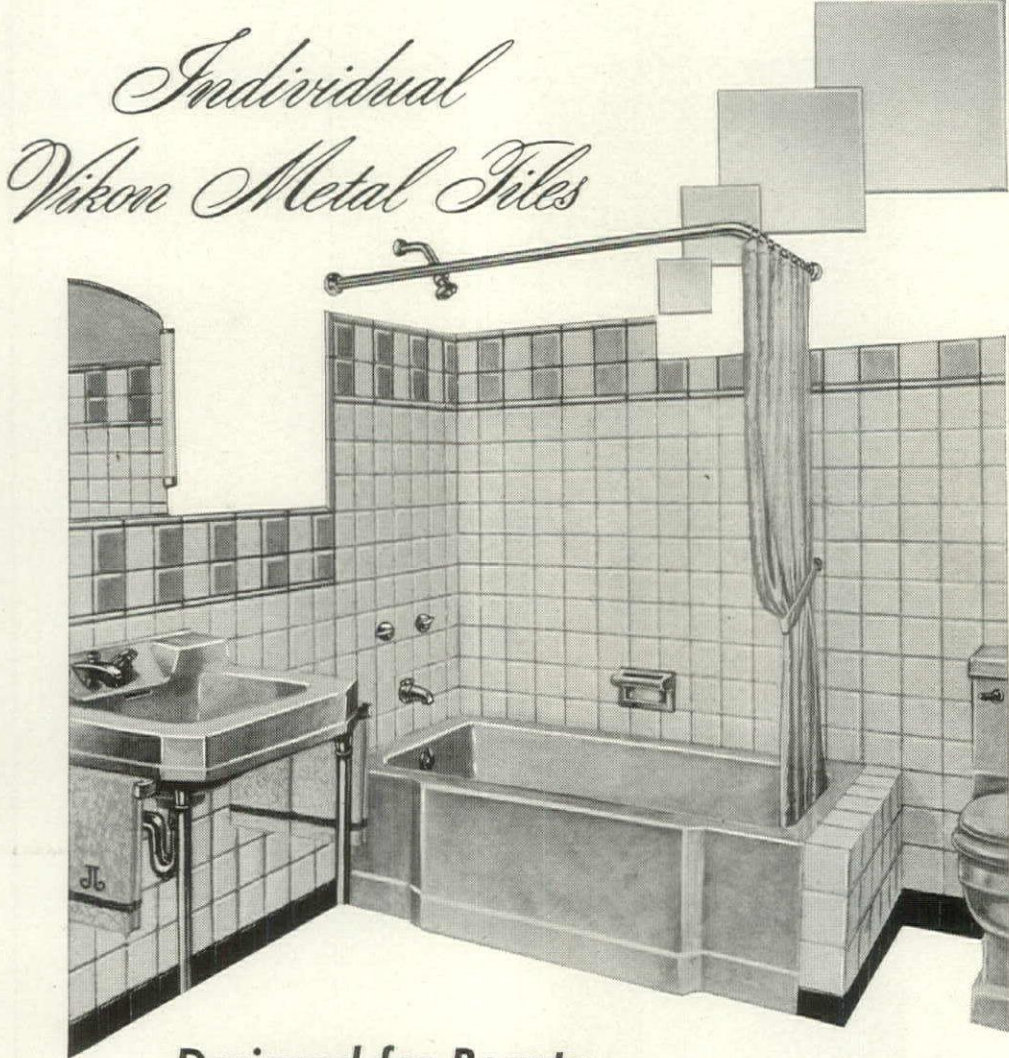
Serving home and industry
AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS • DETROIT LUBRICATOR • KEWANEE BOILERS • ROSS HEATER • TONAWANDA IRON

built one at a time. Another \$15 per house is spent for the layout of partitions, doors, windows and all other such items. Carter thinks this is pretty low and is better than buying panels from a factory.

They save time and money by using two framing specialists who move from house to house putting up all the studs that go next to the fire-place, bathroom walls, around the heating unit and other such places.

Color gives variation

One of Allen Siple's greatest talents is color styling. For these houses he worked out a pallet of subdued colors. With his colors he gets variety in his houses. For the exteriors he has eight colors, each specially mixed and blended to go with any other so that no house will clash with the one next door. Two are green (one sage and one olive), two are gray, and there is cocoa, sand, beige and an oyster white.



Designed for Beauty
...Specified for Duty

- 30 fade-resistant decorator colors and stainless steel
- Will not warp, crack or craze
- Resists heat and household chemicals
- Fire-resistant, waterproof, seals out insects



STEEL · ALUMINUM · STAINLESS STEEL

VIKON TILE

BEAUTY · ECONOMY



DURABILITY

"The Original Individual Metal Tile"
Established 1926

VIKON TILE CORP.
WASHINGTON, N. J.

An accent spot on each house is the front door painted in one of nine colors. The trim, often of white, is also worked out for best contrast with the body color of the house. Roofs are a red cedar shingles. Buyers can choose their color for houses (in contrast with many developments where exterior colors are rigidly controlled) and the favorite is dark green with white trim and white door.

Siple has also worked out seven interior color schemes and nine tile colors for bathrooms and kitchens. Every house has some wallpaper and interior trim is always white. The colors, reported the builders, have been an important sales attraction.

Architect-builder team

Architect Siple's arrangements with the builders was an annual retainer rather than a royalty on each house. Siple used the draftsmen in the builders' office and did not have to hire extra men for the job. From the builders' viewpoint the arrangement has given them the best plan they ever used and "has cost us no more than the half-baked designs we formerly used." (The fact that construction chief Tom Carter was trained as an architect has helped establish sympathetic relationships with Siple.)

Zuckerman and Morris were pleased with the arrangement. "In addition to the advantages of Allen Siple's designs," said Zuckerman, "and the value of his close cooperation during construction there has been great value in his name and reputation in our dealing with the lending agency and the buying public. His name has been featured in advertising and sales literature as well as in the publicity stories sent to newspapers."

COST BREAKDOWN

(excl. land and profit)	
Plans & research	.44
Building permit	.23
Hauling & grading	1.76
Retaining walls	3.52
Sewer connection	.46
Foundation	4.98
Lumber—rough	12.45
Lumber—finish	1.80
Plywood	.26
Carpentry—rough	5.98
Carpentry—finish	1.93
Frames & jambs	1.45
Sash & doors	3.03
Shower doors	.32
Cabinets, etc.	3.30
Roofing	4.31
Brick chimney	2.20
Heating	4.04
Sheet metal	1.01
Plumbing	9.50
Electric wiring	2.55
Electric fixtures	.33
Plastering	13.49
Painting & priming	5.19
Hardware	1.45
Linoleum-shades-blinds	.83
Weatherstrip	.48
Screens	.37
Disposal-incinerator-dryer	1.01
Macadam	.88
Lawn	.63
Miscellaneous	1.10
Construction overhead	1.32

J & L Junior Beams

SAVE 11¢ Per Square Foot

In Steel, Labor and Building Materials

AT BALTIMORE'S MARYLANDER APARTMENTS

J&L STEEL



The Marylander (above) is the joint effort of Victor Frenkil, President of Baltimore Contractors, Incorporated, and J. H. Bodinier, President of The Marylander Apartments, Incorporated. Architect was Hal A. Miller of Baltimore.

A structural design using light-weight J&L Junior Beams continuously over three spans has been selected for floor and roof joists throughout Baltimore's new \$4,500,000 Marylander Apartments. The reason—comparative estimates for floor construction showed that Junior Beams effected a saving of more than 11¢ per square foot of floor area as compared to the nearest competitive floor system.

HERE'S HOW THE 11¢ PER SQUARE FOOT SAVING WAS MADE!

1. Lower costs on original material.
2. Lower erection costs due to longer lengths of Junior Beams. Less pieces to handle.
3. Lower costs for outside masonry due to reduced floor thickness—lower over-all height of the building. (The continuity of the Junior Beams effected a saving in floor height

due to the greater stiffness afforded by this type of design. Junior Beams are the lightest weight rolled structural section that can be so used.)

(The substantial saving on interior partitions, plumbing, utilities and miscellaneous items was not estimated.)

In addition the engineers' estimates comparing steel to reinforced concrete showed that the latter cost 19¢ per square foot of floor more than the steel design using Junior Beams.

In the final design the continuity made possible through the use of Junior Beams allowed a 60% reduction in the number of pieces to be positioned during erection—further

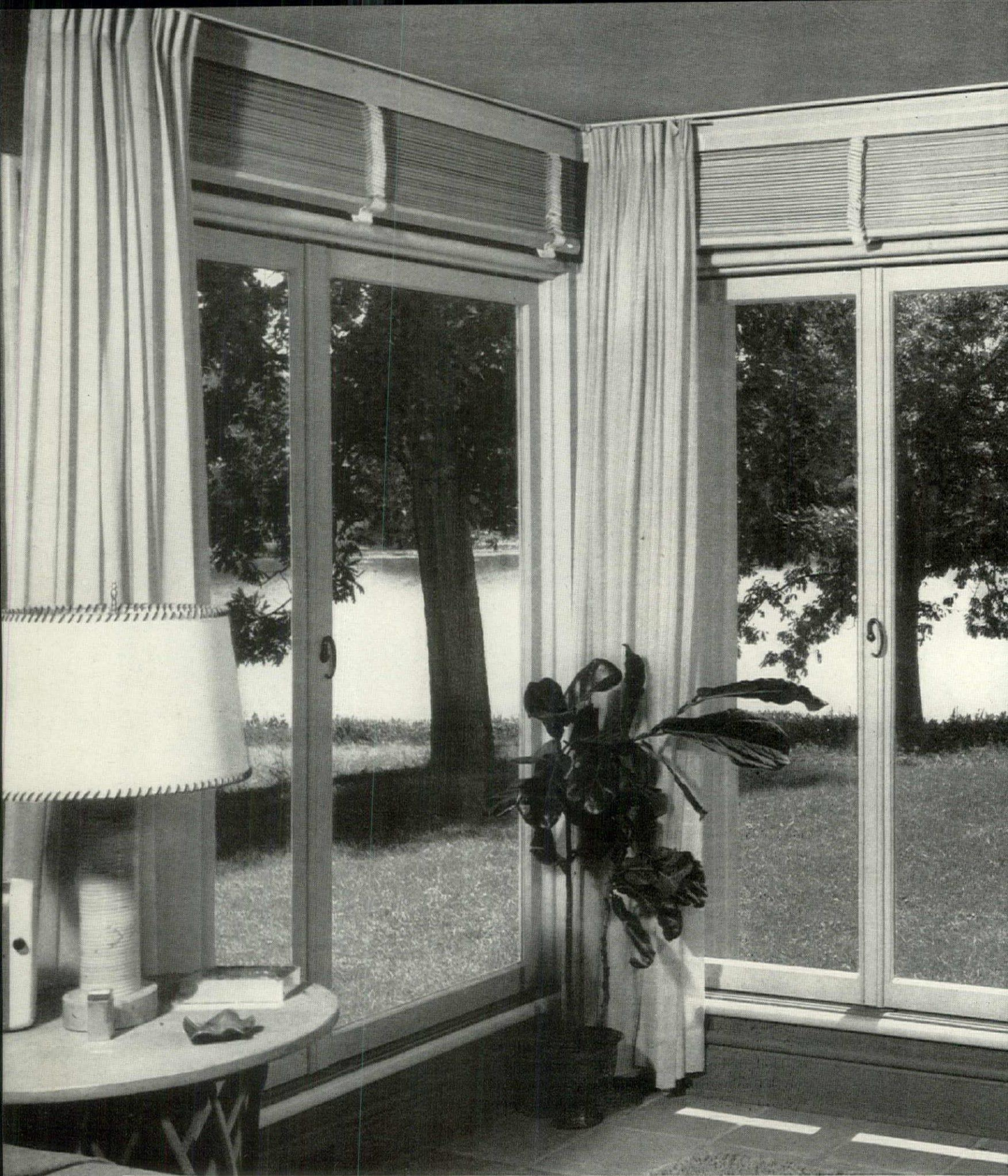
cut steel costs through the use of shallower depth Junior Beams. Labor costs were reduced because Junior Beams can be easily positioned and shipped direct from the shop to the job site without time consuming shop fabrication.

Why not take a tip from Engineering Counsel, G. E. Carlstrand who, collaborating with the firm of Candela & Resnick, New York, conceived and developed the idea of using Junior Beams' versatility and adaptability to obtain greater simplicity of framework design? Write today for descriptive literature and engineering data on J&L Junior Beams, the modern light-weight structural.



JONES & LAUGHLIN STEEL CORPORATION

401 Jones & Laughlin Building • Pittsburgh 30, Pennsylvania



Andersen WINDOWALL in home by Humphrey & Hardenbergh, Inc., architects

**BREEZE-CONDITIONED
BEDROOM with . . .**

ANDERSEN
Windowalls *



CORNER WINDOWALLS add spaciousness, plenty of sunshine and a view to this bedroom during the day. At night they glide easily open, catch every breeze that stirs. Open these three Andersen Gliding Window

Units, and you have 45 square feet of wall open for ventilation. Close them, and you have a highly weathertight picture wall. More than windows, more than walls, these are WINDOWALLS.

*TRADEMARK OF ANDERSEN CORPORATION

Andersen Corporation BAYPORT • MINNESOTA
FAMOUS FOR COMPLETE WOOD WINDOW UNITS

Write for Detail Catalog or Tracing Detail File ; or see Sweet's files for specification data. WINDOWALLS sold by millwork dealers.

3 BEDROOMS AND 2 BATHS FOR \$9,500

buys 16' studs and cuts them up himself. One man and two helpers cut 20,000' an hour. He also cuts a lot of other lumber to proper length but does no prefabrication of panels as he once did. On a batch of 2-bedroom houses he did a shop assembly of framing and wall panels and trucked them a few blocks to the building site. He got a bellyfull of this fast when he discovered he could do his framing at half the cost in the conventional way. He

likes flat-top houses, is sure they save him money, and has never found any sales resistance to them.

But because Strizek has a successful shopping center to fall back on when he needs it, let no critic assume he does an inefficient job of building or that he throws his money around. He delivers 1,238 sq. ft. of California house (roof but no sidewall insulation, no heat in the slab, no weatherstripping) at an

admirable cost of \$6.47 per sq. ft., not counting land or overhead. That's a bedrock figure which reflects nothing but credit on his ability to buy shrewdly and run an efficient operation. True, his selling price includes a paltry \$800 for developed land costs, for lots ranging from 7,000 to over \$15,000 sq. ft.—a figure about one-third that which many builders have included in their selling price. He could add a thousand dollars to the price of his house (land costs were that much higher) and still give his customers a good buy.

Construction details

Footings are 12 x 12". Strizek uses 8" gravel fill, then a waterproof membrane on top of which is steel mesh reinforcing and a slab. The slab is covered with asphalt tile.

Walls are conventional framing with studs on exterior plus some redwood or brick veneer. Interior walls are taped and textured plasterboard. One of the living room walls is of Philippine mahogany, as are some of the storage walls. Ceiling is 6 x 8" Douglas fir beams 4' centers with 2 x 6" and 2 x 8" v-groove shiplath white pine decking. On the roof are two layers of 1/2" asphalt impregnated felt insulation board and 4-ply tar and gravel built-up roof.

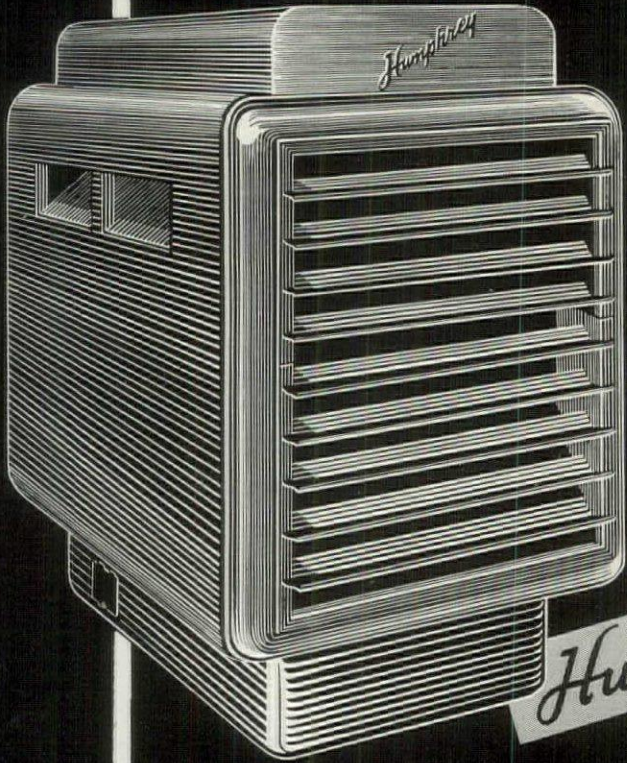
Heating is from two gas-fired wall heaters, one of 45,000 Btu capacity and another of 20,000. Windows are steel casement in milled wood frame surround with bronze screens and hardware.

Strizek does more of his own work than most builders, including all his painting and decorating (which he regards as a highly important job and for which he pays out \$500 per house), his cabinets and mill work, carpentry labor, concrete work, more than half the excavating and grading and some of the hardware installation. On a dollar basis he subcontracts about 34% of the construction work.

Breakdown of \$9,500 sales price

Excavating & grading	1.
Concrete work	6.
Brickwork	3.
Lumber & related materials	15.
Carpentry labor	9.
Cabinets & millwork	7.
Hardware & garage door	1.
Insulation	1.
Roofing & sheet metal	2.
Stucco	2.
Sash, screens & glazing	3.
Plumbing & heating	12.
Electrical work	1.
Dry wall & texturing	3.
Painting & decorating	5.
Wall & floor tile	3.
Miscellaneous	3.
Total construction costs	84.
Developed lot cost	9.
Builder's overhead & profit	6.

100.



Compare...

FEATURES...
PERFORMANCE...
ECONOMY...and
you'll agree
that...

Humphrey is...

STILL FIRST

The Humphrey Gas Unit Heater was the first one placed on the market, back in the early twenties. Since then it has been kept first, by continuous design improvements which have steadily increased efficiency and dependability. Today the Humphrey is still first, with such exclusive features as Free Flow Heat Exchanger, Tilting Front, and Dual-Flame Burner. Compare Humphrey performance, dependability, and economy with any other equipment, and you, too, will make the Humphrey your first choice.



GENERAL GAS LIGHT COMPANY • KALAMAZOO, MICHIGAN

Humphrey AUTOMATIC GAS UNIT HEATERS



**Fastens steel or wood to
concrete or steel in seconds!**

NEW CARTRIDGE-POWERED

MODEL 450

REMINGTON STUD DRIVER

Sets fastening studs up to 100 times faster than conventional methods...needs no outside power source

You can speed construction and maintenance fastening jobs and cut costs with the amazing new Remington Stud Driver. This simple tool attaches steel or wood pieces and fittings to concrete or steel . . . easily sets as high as 5 fastening studs in a minute. No outside power source or other equipment needed. It's compact, rugged, *safe*. Test-proved to be the world's finest fastening system, the Model 450 Remington Stud Driver is made by Remington Arms Company, Inc., America's oldest and foremost sporting arms manufacturer. For detailed information and the name of your nearest distributor, fill out and mail the coupon below. There may be slight initial delays on delivery until production and distribution catch up with demand.

LOOK AT THESE EXCEPTIONAL FEATURES

COMPACT AND PORTABLE — Weighs only 5½ pounds, ideal for scaffold, ladder, overhead work, inaccessible places. Comfortable to use in any position.

SPEED — One man can set up to 5 studs per minute, as much as 100 times faster than other methods. Sets stud at whatever depth is required up to 2¾ inches, depending on material.

ELIMINATES INVESTMENT IN OUTSIDE POWER — Self-powered. Especially useful in isolated places.

TRIPLE SAFE — Plainly visible red dot indicator shows when it's cocked; safety must be depressed before and during squeezing of main trigger; permanently attached safety shield must be compressed against work before Stud Driver will op-

erate. Trigger can't be accidentally tripped. Slight recoil. Low noise level.

WIDE VARIETY OF STUDS are available for every fastening job. Genuine Remington studs are trademarked for user's protection. Pull-out resistance as high as two tons in good concrete, depending on stud used. Cartridges are available in 5 power loads covering practically all fastening needs.

UNIQUE, FAST ASSEMBLY OF STUD AND CARTRIDGE — Tough plastic heel cap permits lightning assembly of any cartridge with any stud, identifies power load, protects head and thread of stud during driving.

PRICE for Model 450 Remington Stud Driver complete in rugged steel carrying case—only \$119.50.

How to operate the Model 450 Remington Stud Driver



Hand-assemble stud and power cartridge, load as unit in easy-to-open Stud Driver, close.

Press loaded Stud Driver firmly against working surface, depress safety button, pull trigger.



Explosive charge imbeds stud solidly. Open Stud Driver with twist of the wrist, eject empty shell, load again. Whole job takes seconds!

Speeds all these jobs . . . and many more

1. Hanging steel sash and door bucks to concrete and brick.
2. Anchoring wood plates to concrete floors and ceilings for setting partitions.
3. Fastening wood furring strips to concrete for attachment of metal lath.
4. Anchoring suspended ceilings, sprinkler systems and lighting fixtures to concrete.
5. Attaching conduit and panel boxes to steel and masonry.
6. Anchoring light machinery to concrete pads.
7. Erection of signs, awnings and venetian blinds on steel or masonry.
8. Hanging radiator housings to concrete or brick.

"If It's Remington—It's Right!"

Remington



MAIL THIS COUPON TODAY FOR FURTHER INFORMATION

Remington Arms Company, Inc.
Industrial Tool Division
935 Barnum Ave., Bridgeport 2, Connecticut

I am interested in obtaining detailed information on the Model 450 Remington Stud Driver.

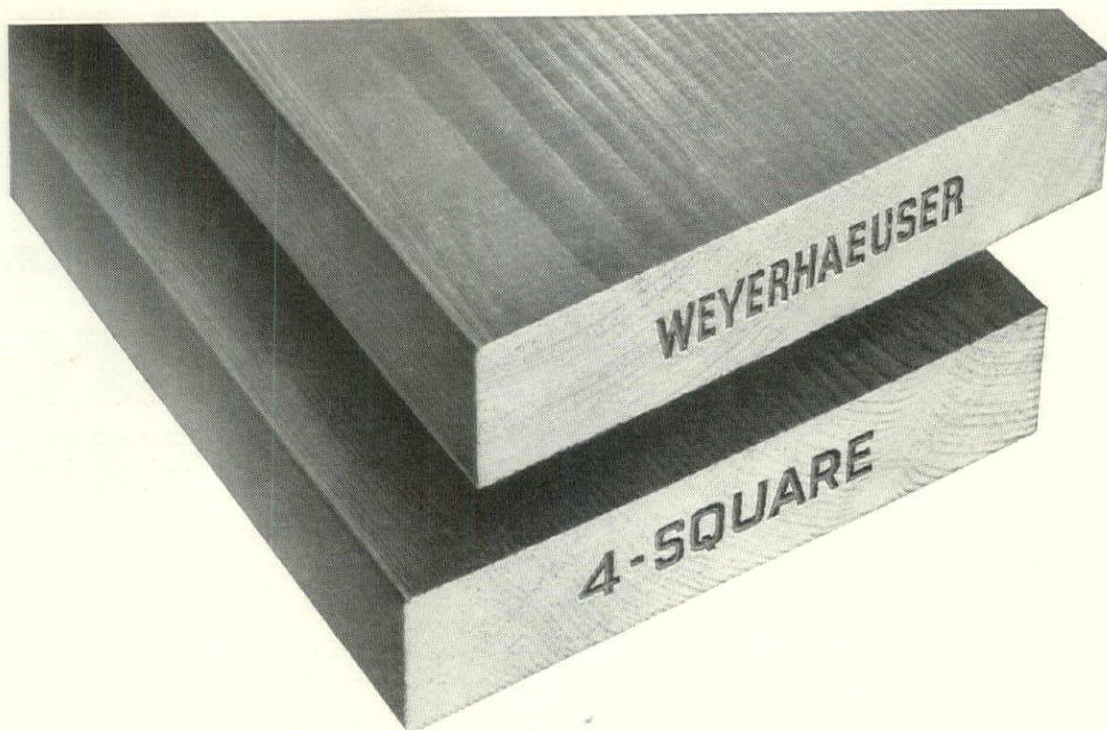
Name _____

Firm _____

Position _____

Address _____

City _____ State _____



THIS BRAND NAME ON LUMBER MEANS . .





One man hauls two logs easily, with this powerful tractor unit. Mechanized logging not only adds greatly to efficiency, but increases speed and safety in forest operations.



Loads weighing up to 125 tons are carried in one trip on mammoth Weyerhaeuser truck units. Some have two trailers in tandem, making a carrier 100 feet long.

Good Lumber... *through* Efficiency in Logging

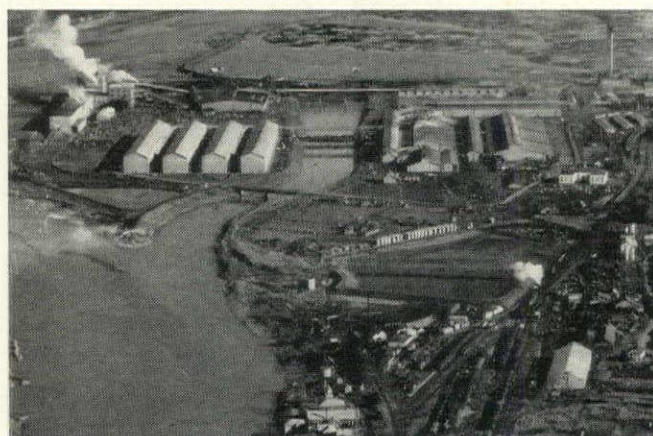
Today, on visiting an efficient logging camp you would clearly see how the operations have been modernized by economical, waste-saving machinery. You would see power driven chain saws helping to harvest the mature trees—powerful “cats” hauling logs to the roads—swift modern cranes loading them—rail cars and great diesel powered truck-trailers delivering them to the mills.

Mechanical progress has made every man-hour vastly more productive in the harvesting of timber. It has opened up new timber resources, by reaching terrain formerly called “impossible” for logging—and thereby saving many mature trees for useful service. Also, mechanized handling reduces log damage and delivers the logs to the mills in condition to produce maximum lumber footage.

Correct logging is but one of the important factors which directly affects the quality and quantity of the lumber yield. The trademark “Weyerhaeuser 4-Square” on lumber also means the coordination of modern timber har-

vesting, modern reforestation, and modern manufacturing methods. The result is the best in good lumber, which delivers the utmost in sound, economical construction.

One of a series of advertisements defining the important factors contributing to the production of good lumber.



THE LEWISTON, IDAHO MILL

At mills located on the West Coast and Inland Empire, Weyerhaeuser 4-Square Lumber is produced in a range of products from Douglas Fir, Idaho White Pine, Ponderosa Pine, West Coast Hemlock, Western Red Cedar and related species.

Weyerhaeuser 4-Square Lumber and Services

WEYERHAEUSER SALES COMPANY • ST. PAUL 1, MINNESOTA

SECURITY

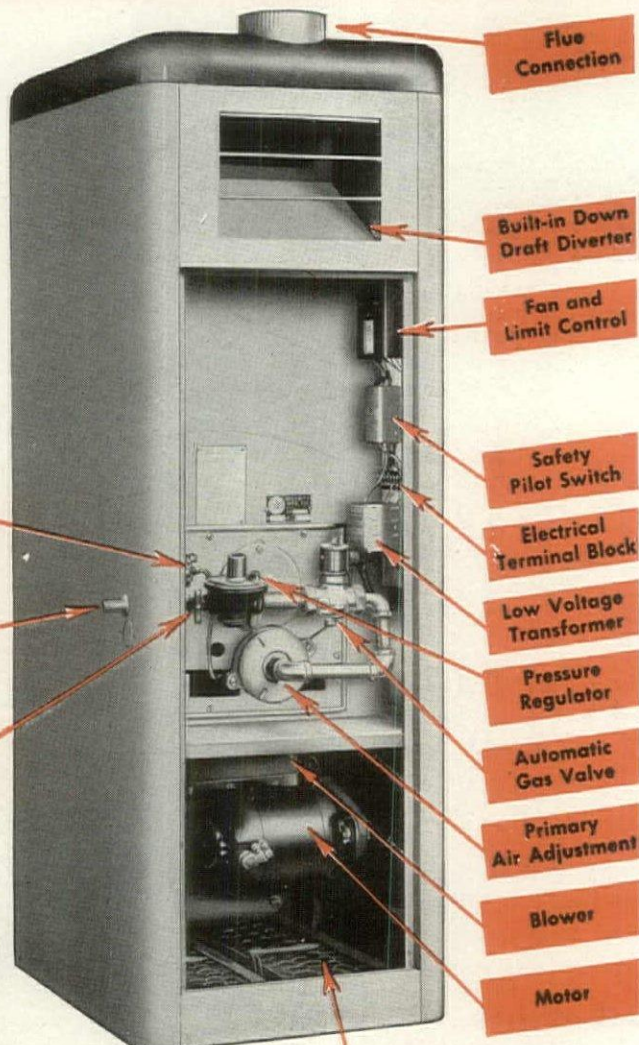
MODEL SFA AUTOMATIC GAS-FIRED
HI-LO COMBINATION



INPUT

62,500
80,000
100,000
125,000

BTU

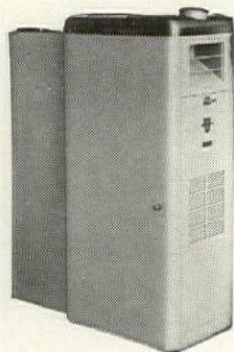


NOW . . . the TWO-IN-ONE Furnace



For Closet Installations

**Eliminates Duplicate
Stock . . . Completely
Factory-Assembled
in One Package!**



For Basement Installations

Yes, sir . . . TWO-IN-ONE because only standard Security SFA Furnaces need be kept in stock. Factory-assembled and wired to serve in closet-type or usual basement-type installations. Return air duct connector for basement application is shipped knocked down . . . can be attached to the back or to either side in a matter of minutes.

All controls are located in one compartment. Quick, accurate adjustments . . . easy replacements are expedited without disturbing other wiring. Built-in filter racks can be placed at installer's option.

Built of top-quality materials throughout. Complete information, specifications, prices and discounts available. Write today!

SECURITY MANUFACTURING CO.

1630 Oakland Ave.

Kansas City 3, Mo.

toward better understanding

Now, as never before, there is a need for a true picture abroad of life in the U. S. You can help create better understanding by sending copies of *The Magazine of BUILDING* (when you are through with them) to a friend or relative abroad, or to a U. S. Information Library.

The Magazine of BUILDING's editorial coverage—reporting trends and developments in design, construction, financing, new products, significant legislation, etc.—presents an authoritative and vital picture of the American way.

It costs only 1½ cents to mail 2 oz. of printed matter anywhere in the world. Just by rolling a copy of this magazine in brown paper—leaving the ends open—and marking it "Printed Matter"—you can contribute to the free exchange of ideas which will help assure Peace.

If you donate your magazine to the U. S. Information Library, please send it to one of the addresses below:—

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Thorsealing can be Beautiful

WHISK
BROOM

STIPPLED
FINISH

HEAVY
BROOM

LINEN
FINISH

THOROSEALING gives to the architect and builder, aside from masonry protection, distinctive textures and the opportunity to present finish coats of QUICKSEAL, in sixteen beautiful tints, without reflection or glare.

ACTUAL PHOTOGRAPHS OF THOROSEAL TEXTURES

With very little effort, many distinctive textures can be produced by the workman with THOROSEAL.



Mercy Hospital, Miami, Florida. Commencing of THOROSEAL applications. Architect—Steward and Skinner, Miami, Florida. Contractor—J. Y. Gooch Co., Miami, Florida.

The finished THOROSEAL job is shown at the top of the page.

Complete Masonry Protection

Can be secured from foundation to roof with THOROSEAL. Beautiful finish coats of QUICKSEAL can be secured without hiding the THOROSEAL texture.

WATERPLUG

To Stop Leaks

THOROSEAL

To Seal Surface

QUICKSEAL

For Beautiful Finish

Write today for our new 20 page brochure 17-A and designer's wall chart.



Standard DryWall Products

NEW EAGLE

PENNSYLVANIA



..... NOW YOU
SEE
THEM

NOW
YOU
DON'T

..with VIKING FLUSH TYPE
Sprinkler Heads



GENERAL OFFICES: MERCHANDISE MAR

Here's proof of the greater beauty of Viking Flush Type Sprinkler Heads. Notice how Viking Flush Type Heads blend quietly and beautifully . . . even ADD a note of beauty to the office in the illustration. The Flush Type Head is unobtrusive. When a fire starts it springs into action . . . equalizes the chance of water against fire by instantly drenching it. In fact, the Flush Type Head is unexcelled for water distribution.

The Viking Flush Type Head is a typical example of the farseeing yet practical engineering that makes Viking the leader in the sprinkler field. And this engineering skill is complemented by the best distribution system . . . and the finest installation and service facilities available.

ALL VIKING DEVICES ARE APPROVED BY UNDERWRITERS' LABORATORIES AND
FACTORY MUTUAL LABORATORIES

Your nearest Viking representative is ready to help you with the design of a sprinkler system for your next building. Because he maintains a completely stocked warehouse, a complete engineering staff, and an experienced, full-time installation crew, you'll find that he gives you the finest sprinkler system available. Contact him today, or write direct to the Viking Corporation.

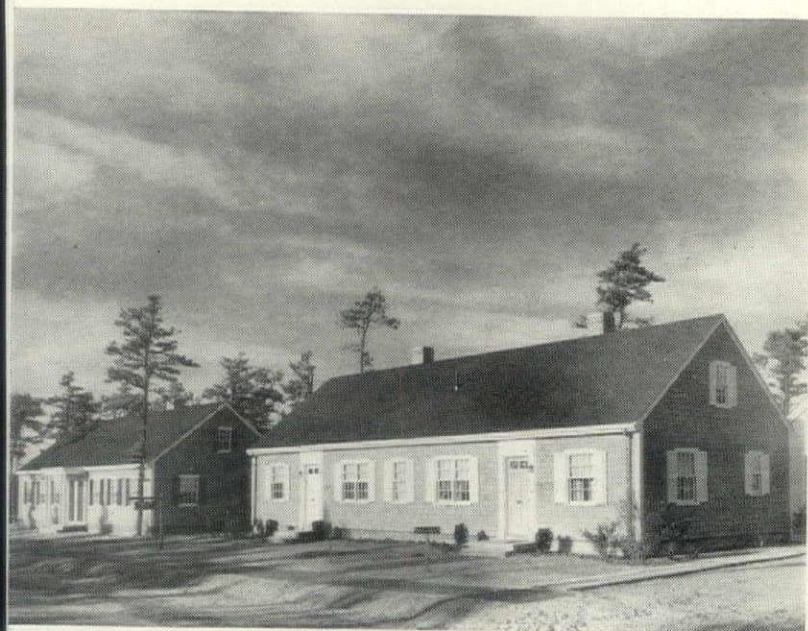
Write for your copy of "Fire and Your Business" . . . facts on how a Viking Sprinkler System can protect your buildings from fire; forever.



the **VIKING** corporation
H A S T I N G S , M I C H I G A N

OFFICES IN PRINCIPAL CITIES

Gold Bond materials saved time and money at "Hiramar"



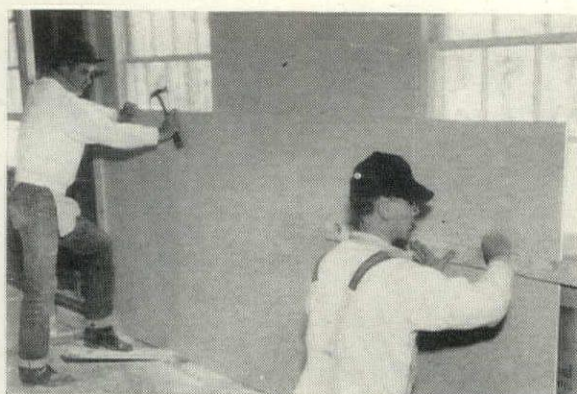
120-HOME HIRAMAR DEVELOPMENT on Cape Cod was finished in just four months. The 100% use of Gold Bond Gypsum Sheathing and five other Gold Bond Products saved on the cost of materials, in application time and in labor costs. For instance, the use of...



GOLD BOND GYPSUM SHEATHING saved \$5,700 in material costs! Because it required 60% fewer man-hours to apply than required by conventional sheathing, an additional \$675 was saved in labor costs. Waste was cut from a possible 16% to only 5%.



EACH DUPLEX INSULATED IN 12 HOURS with Gold Bond Rock Wool Blankets...at a labor cost of only \$25 per duplex. This efficient insulation permitted the use of smaller, lower-cost heating units.



ONLY 35 MAN-HOURS were needed to apply 6,500 square feet of Gold Bond Gypsum Wallboard per duplex unit! The big fireproof panels covered up to 48 sq. ft. of wall and ceiling area at a time, saved on labor and application costs.



GOLD BOND PERFORATED Tape Joint System was used to conceal and strengthen wall-board joints. Gold Bond Craftex and Sunflex wall paint helped make "Hiramar" a project any builder would be proud of!

NATIONAL GYPSUM COMPANY
BUFFALO 2, NEW YORK

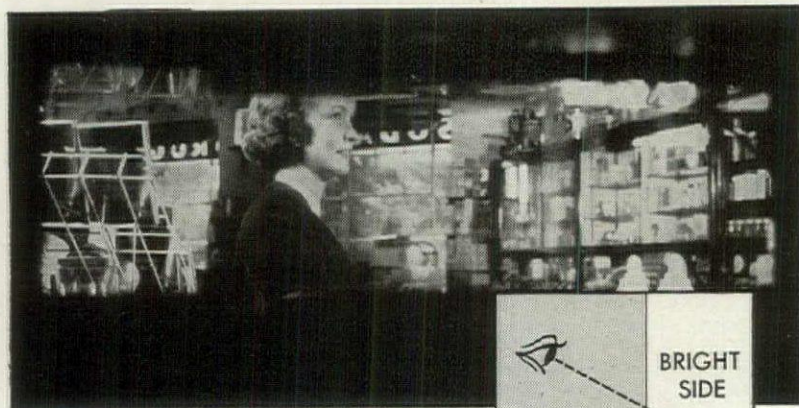
Fireproof Wallboards, Decorative Insulation Boards, Lath, Plaster, Lime, Sheathing, Wall Paint, Textures, Rock Wool Insulation, Metal Lath and Sound Control Products.

**You'll build or
remodel better with
Gold Bond**

TO BE TWO PLACES AT ONCE USE MIRROPANE



**To the CUSTOMER
IT'S A MIRROR!**



**To the PHARMACIST
IT'S A WINDOW!**

In this drugstore, customers don't go unattended for long—(and neither do shoplifters!) Even if the pharmacist is in the back room compounding a prescription, he can see what's going on out in front. There's a *Mirropane** transparent mirror in the partition. To the customer, it's a decorative mirror behind the shelf stock; but from the prescription room it's a window that shows the whole store.

The secret is in the lighting (see diagrams). When viewed from the side having the stronger illumination, *Mirropane* looks like an ordinary mirror. But from the dimly lit side, or when properly shielded from strong light, it's transparent.

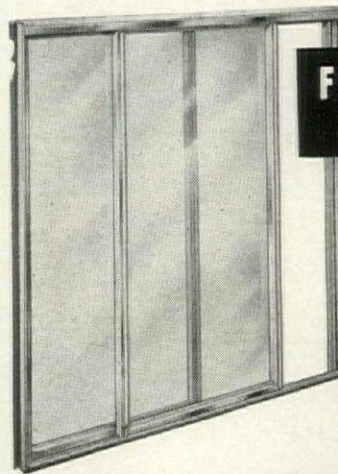
This idea, affording sight unseen, is one you can use in many places. In stores, schools, clinics, banks, offices, funeral parlors, entrance doors—whenever you wish to provide a means for observing people without being seen, *Mirropane* can be highly useful as well as decorative. Write for full information.

*®

MIRROPANE



TRANSPARENT MIRROR • PRODUCT OF LIBERTY MIRROR DIVISION
LIBBEY-OWENS-FORD GLASS CO. L-1101 NICHOLAS BLDG.
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**FOR MODERN
BUILDINGS**

60 standard sizes up
to 6' height, 10'
width, 2, 3, 4 and 5
panel styles.

IDEAL FOR FINE HOMES

Also apartments and commercial buildings. A quality unit featuring puttyless glazing. A weather-tight seal. Locks in closed and 1", 2" and 3" positions. Complete with screens and double glazing. Now available.

Mens dorm., Mich. State College

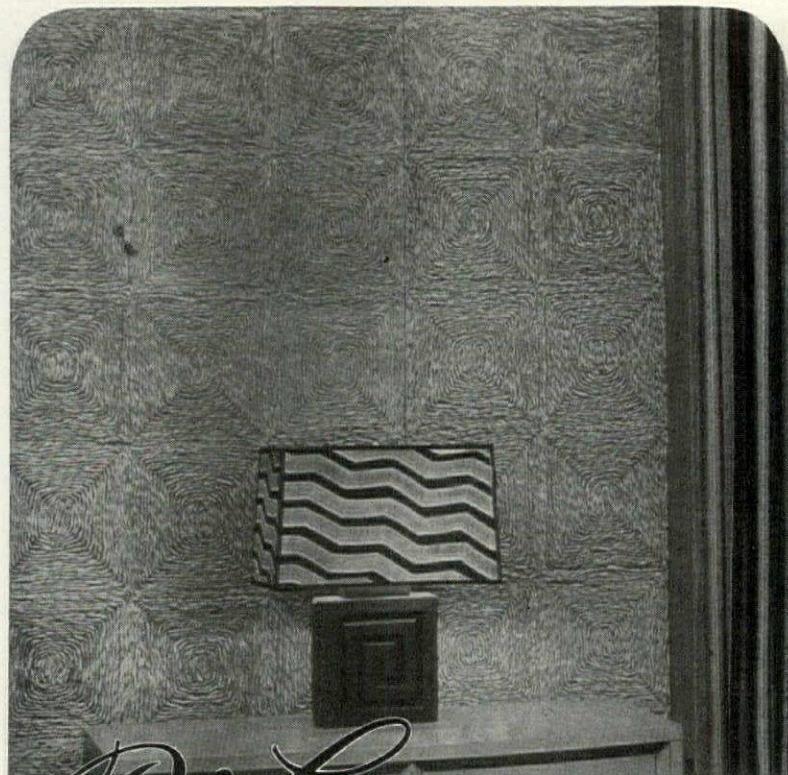


ALUMINUM
*Horizontal
Sliding*
WINDOWS

**PETERSON
WINDOW CORP.**

1381 E. 8 Mile Rd.

FERNDAL 20, MICH.



Di-Lon

WALLPAPER EXTRAORDINARY

Woven Raffia Pattern

No. 1145 Gray-Green

No. 1146 Gray-Brown

One of a wide selection
of Quality grained papers.
Write for name of nearest
Dealer and sample books.

THE DI-NOC COMPANY

33 PUBLIC SQUARE • CLEVELAND 13, OHIO

In your Modern Kitchens specify

Western-Holly

MARK OF EXCELLENCE

AUTOMATIC BUILT-IN GAS RANGE UNITS

- Western-Holly Automatic Built-In gas range units give you 'new freedom' in kitchen planning. Comfort-level cooking in these easily installed units is highlighted by such features as:
- AUTOMATIC CLOCK CONTROL
- 18" OVEN & OVEN WINDOW
- SEPARATE GLIDE-OUT BROILER
- STAINLESS STEEL, WHITE OR PASTEL COLORED PORCELAIN

WESTERN-HOLLY APPLIANCE CO.
Dept. MB, Culver City, Calif.

Sirs: Send me specifications and full details of your Built-In units.

NAME _____

FIRM _____

STREET _____

CITY & ZONE _____ STATE _____

Majestic

FURNACES *plus* PLANNING SERVICE

MAJESTIC heating engineers will gladly assist you to plan and estimate warm air heating systems—on the smallest to the largest jobs—to assure efficient, uniform floor-to-ceiling heat at low cost. You can rely on Majestic's 44 years of experience in heating developments, including the newest types of down-flow heating.

Wide variety of Majestic Furnaces—all sizes. This complete Majestic line offers units for any warm air heating need. Many are ideal for defense and public housing; slab or crawl space construction; perimeter and convection heating.

Oil or Gas-Fired Up-flow or Down-flow

Also Manufacturers of the famous Majestic BUILDING PRODUCTS

Get the benefits of this service on your defense and government housing projects that require low-cost, efficient heating.

The Majestic Co.
94 Erie Street, Huntington, Indiana

Our heating engineers are ready to help you • Write

UNEQUALLED!

The **Sterling** Line of

SLIDING DOOR HARDWARE

NATIONALLY ADVERTISED

The Choice of Architects, Builders and Dealers from coast to coast

UNEXCELLED!

The Complete Line of Sterling Sliding Door Hardware For Every Size and Type of Residential Door

The 600 Series Includes Hangers for both 3/4" and 1 3/4" by-passing doors. Track is aluminum.

No. 876 Guide Strips eliminate grooving bottom of door. Save installation time and trouble.

No. 642 Adjustable Hanger For Single Doors

No. 603 Aluminum Track For Single Doors

THE Sterling 800 SERIES

ANOTHER COMPLETE LINE OF HANGERS AND TRACK FOR RESIDENTIAL SLIDING DOORS

No. 840 For 3/4" Doors

No. 845 Has many uses

No. 850 Fully Adjustable

No. 852 For Heavier Doors

No. 860 For Pocket Doors—Adjustable

No. 862 For Heavier Doors

Write today For Catalog on Complete Line!

STERLING HARDWARE MFG. CO.

2345 Nelson Street, Chicago, 18, Illinois

TODAY'S TYPICAL HOUSE is 17% smaller than 1940's and is differently built of different materials.

HHFA survey documents the trend

The typical new house built during 1950 contains only 983 sq. ft. and has shrunk about 200 sq. ft. in the past ten years. Moreover, each of its four rooms are normally smaller than the five rooms in the typical 1940 house. This sad commentary on a decade of house building and inflation emerges from a close look at the results of HHFA's housing materials use survey, the preliminary findings of which were reported in the August issue, p. 60.

Other salient facts and trends concerning the construction characteristics of new houses were released last month after HHFA had further studied the mountain of statistics gathered on individual, detached dwelling units produced across the country during the first half of 1950:

► Water piping. Almost half the 1950 houses boasted copper or brass piping. Most of the rest used galvanized steel. This is a marked

shift from 1940, when more than 70% used steel.

► Windows. Nearly one-fourth of all 1950 houses used steel windows (double-hung and casement), compared with less than one-tenth in 1940. In 1950 about 5% used aluminum windows. Almost none did in 1940.

► Ground floors. There had been a swift growth in the use of concrete "slab-on-ground" first floor construction. Nearly one-fourth of the 1950 houses had a slab-on-ground floor. Virtually none did in 1940.

► Roof framing. In 1940 practically all single-family houses were built with wood rafter systems of roof framing. A decade later, the wood truss was used in 5% of new houses.

► Roofing material. During the first half of 1950 asphalt shingles were used on more than four-fifths of the new houses, while wood shingles, on about one-tenth. A decade ago, less than half used asphalt, while more than one-third still used wood shingles. Use of asbestos, slate and tile roofing dropped from 11 to about 2%.

► Heating Method. In 1950 the forced warm-air heating system was the most popular for new individual houses. Nearly one-third of last year's houses used this heating method, compared to less than one-fifth of the 1940 houses.

► Other materials on the up-swing: asbestos siding (at the expense of brick and stucco), dry-wall construction (at the expense of lath and plaster) and metal kitchen cabinets (at the expense of wood).

► On the down grade: fire places, gutters and down-spouts, regardless of material.

Following is a detailed analysis of the changes in the construction characteristics of houses between 1940* and 1950. It provides a handy yardstick against which builders may measure their own house specifications and gives the industry a summary of important trends in the use of various competing materials:

Characteristics	1950	1940
	% of Houses	% of Houses
Basement		
Full	36	55
Partial	3	14
None	61	31
Number of stories		
1-story	86	67
1½- or 2-story	14	33
Total number of rooms		
3-room houses	#	1
4-room houses	47	22
5-room houses	35	47
6-room houses	17	26
7 or more room houses	1	4

* All 1940 statistics were gathered by FHA in a sampling of 12,144 new detached houses built during the full 12 months of that year.

(Continued on page 278)

*For Effortless Operation
Weathertight Seal
Lasting Service*

VENTO STEEL WINDOWS

VENTO

STEEL CASEMENT WINDOWS

Extension type hinges, gracefully designed Roto or Lever type operators and positive cam action locking handles, allowing ventilator adjustment without screen removal. Available in all standard types and sizes.

VENTO

"CHAMPION" BASEMENT WINDOWS

Three ventilation openings and sash removal. Double contact with leak-proof watershed sill. 14 gauge electrically welded frame, fins welded to jambs for quick installation. Three standard sizes, putty or puttyless glazing.

VENTO

"THRIFTY" BASEMENT WINDOWS

A real economy window especially designed for lower cost housing. Two position ventilation and easy sash removal. Fin flanges at jambs for quick installation. Three sizes, putty type only.

VENTO STEEL PRODUCTS CO. INC.

256 Colorado Ave. Buffalo 15, N. Y.

See our catalog in Sweet's Architectural 17b/Ve. Write us for full information and name of nearest distributor, also facts about Vento utility and barn windows and Vento steel lintels for cost-saving concrete block and brick construction.

MEMBER METAL WINDOW INSTITUTE

BUILD HOMES NO ONE ELSE HAS



The Eastwood

Two bedroom home. Modern as this moment. Designed by Robison Heap noted contemporary architect.

build Peaseway Contemporary

Homes

Peaseway
homes
REG. U.S. PAT. OFF.
... first in better living.

Be the first builder in your area to build the Peaseway "New-Design" Homes. They're New! Exciting! The first CONTEMPORARY DESIGN homes in the prefabricated field. They're the homes that fulfill the ever increasing demand for better indoor-outdoor living. They mark the beginning of a new era in home building.

These Peaseway "New-Design" Homes were created by such famous masters of contemporary design as Oscar Stonorov, Robison Heap, and Schwarz and West! They provide unsurpassed livability, quality and durability.

Write for the Peaseway Plan and learn how these homes can be yours to build on a franchise basis in your territory. Learn, too, about the complete line (8 different designs) of Peaseway Homes you can offer—ranging from a 2-bedroom home of 691 square feet to the most recent "NEW-DESIGN" home containing 4 bedrooms and 2 baths with 1410 square feet of floor space. Prices range from \$7,000 up. F.H.A. approved.

Many Peaseway franchise builder-erectors have found that the Peaseway plan has gained for them prominence and dominance in their market. Each franchise is a valuable property and enables you to build for any market including large private and public projects. We invite you to write . . . just a few lines on your letterhead—asking for the Peaseway Plan.



The Crestwood

Three bedroom home for more and better living designed by Schwarz and West—A.I.A.



The Archwood

Four bedroom home. Another first in better housing by nationally known contemporary architect Oscar Stonorov—A.I.A.—A.I.P.

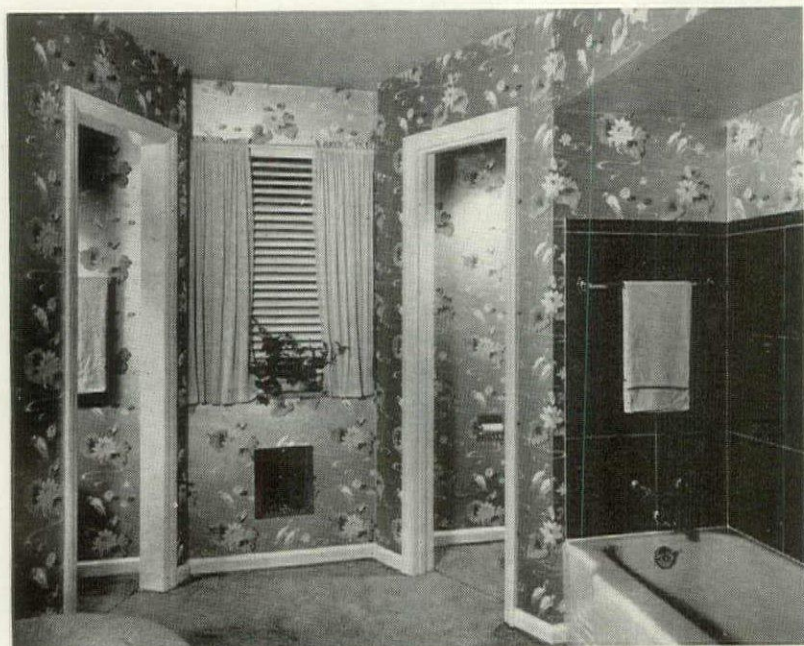
WRITE TO: ROOM 1001

PEASE WOODWORK COMPANY

CINCINNATI 23, OHIO

"In business in Cincinnati since 1893"

Wall-Tex keeps it beautiful and cuts maintenance costs!



This attractive bath-and-a-half is colorfully inviting and thoroughly practical with its Wall-Tex fabric wall covering. The Wall-Tex will retain its fresh beauty for years to come without redecorating expense. It's durable decoration—sound value!



Wall-Tex is an impressive product that wins the enthusiasm of owners, investors, tenants. Its colors and finishes are safely washable, again and again. Its sturdy fabric base strengthens plaster walls, prevents cracking and gouging. If wall repairs are ever needed, strong flexible Wall-Tex can be lifted and reapplied at a real saving. On remodeling projects Wall-Tex covers blemishes and supports weak plaster. Nearly 200 beautiful decorator designed patterns—for traditional and contemporary homes and for every type of building. Nationally advertised in leading magazines for over 25 years.

Mail Coupon for this free File Folder and Wall-Tex swatches.

Columbus Coated Fabrics Corporation
Dept. AF-101, Columbus 16, Ohio

Send your new free File Folder and sample swatches.

name _____
address _____





america's finest sinks
for america's
finest buildings

Architect: Tibbals—Crumley—Mussion, Columbus
Sinks Supplied by: Zeitler Cabinet Co., Columbus
Elkay Representative: Arthur Gibbons Co., Dayton 2

The only sink



guaranteed to outlast your home

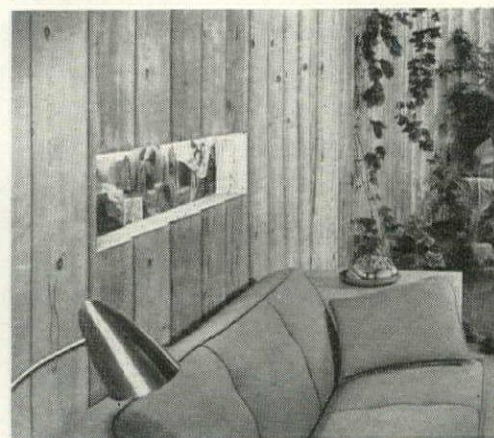
the only sink
AWARDED FASHION
ACADEMY
GOLD MEDAL
FOR EXCELLENCE
OF DESIGN



Parklawn Manor selects sinks of *Elkay Lustertone Stainless Steel* to add extra value and appeal to its 384 impressive rental units. They realize that the silvery satin of *Lustertone's* time-honored, time-defying sinks will keep their kitchens looking better forever—with minimum maintenance. Owners know that famous *Lustertone* remains permanently bright, unstained and un tarnished...never needs scouring or bleaching.

Write for literature and prices

elkay manufacturing co., 1898 S. 54th Avenue, Chicago 5
The World's Oldest Manufacturer of Stainless Steel Sinks



Architects: Clark and Frey,
Palm Springs, California

**ATTRACTIVE
VARIETY
AT
LESS
COST**

CABOT'S STAIN WAX combines a beautiful penetrating stain and a wear-resistant wax finish in *one application*. Easy to apply, easy to clean, Cabot's Stain Wax reduces interior finish and maintenance costs.

 **VARIETY OF CONTEMPORARY COLORS**
Cabot's Stain Wax brings out the natural beauty of wood grain and texture... gives interesting variety to commercial interiors. Available in modern blond shades — Glacier Blue, Seashore Gray, Ivory, White or Natural. Also traditional dark shades... Maple, Mahogany, Walnut, Redwood. White and Natural can be tinted with colors in oil.

WRITE TODAY for color card and complete information.
Samuel Cabot, Inc., 1030 Oliver Bldg., Boston 9, Mass.

CABOT'S STAIN WAX

SPENCER

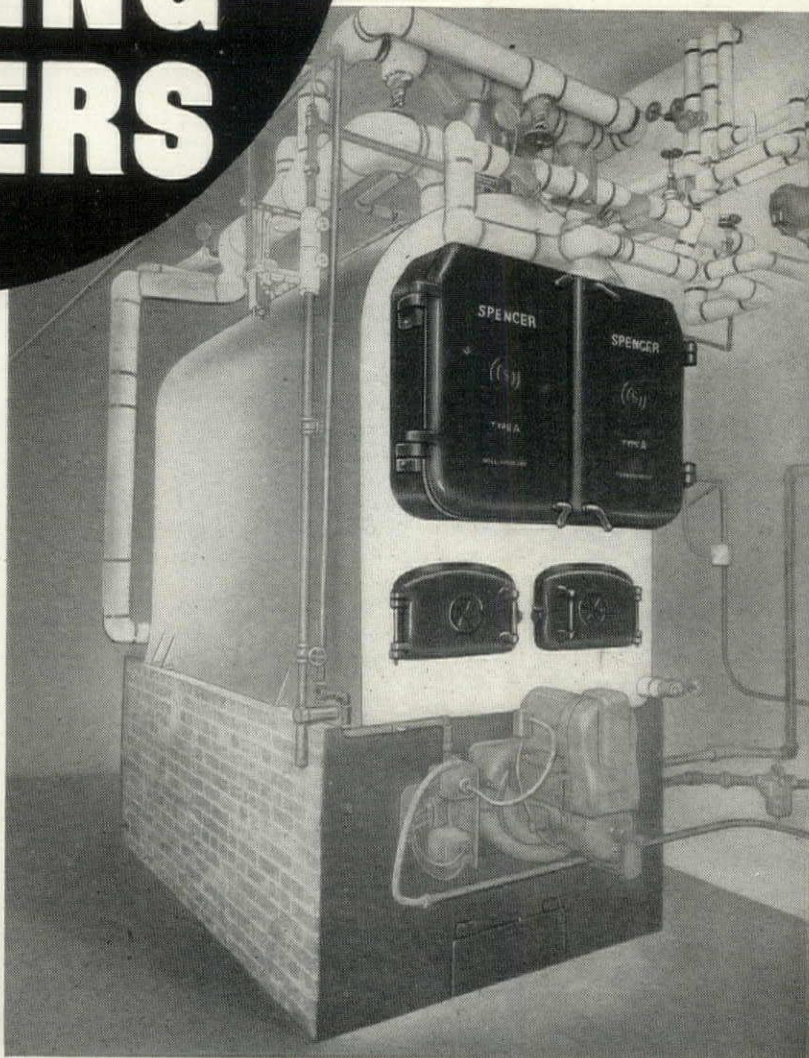
The Quality line of

HEATING BOILERS

- ***There is a Spencer
for every building,
for every fuel.***

Both cast iron and steel . . . a selection of 76 models . . . versatile, dependable, backed by more than sixty years of leadership . . . precision-engineered and manufactured to give superior, *guaranteed* service.

Write for Spencer Catalogue today.



One of the four efficient Spencer Steel Heating Boilers which supply the fifteen buildings of the modern River Edge Apartments, River Edge, New Jersey.





Profit with PREFABRICATION

Construction of prefabricated homes continues to show increases in its rate of gain compared with total home building. The swing is unmistakable. Find out how builders, lenders and realtors everywhere are learning that Prefabrication answers man-power and material shortages and why it is the economical, quick, permanent and profitable way to meet America's housing needs. For the complete story, write for FREE booklet, "Build better—build sooner"

- ✓ **Start Sooner!**
- ✓ **Complete Quicker!**
- ✓ **Sell Faster!**

Profit with Prefabrication!



PREFABRICATED
Home Manufacturer's
INSTITUTE

912 20th Street N. W. • Washington 6, D. C.

TODAY'S TYPICAL HOUSE

Characteristics	1950 % of Houses	1940 % of Houses
Number of bathrooms		
1 bathroom	93	80
1½ bathrooms	4	12
2 bathrooms	3	7
2½ bathrooms	#	1
Floor area (sq. ft.)		
1-story	941	1,009
1½- or 2-story	1,252	1,523
Average—all houses	983	1,177
Walls		
Exterior wall construction		
Masonry	11	11
Frame (including a few frame and masonry combined)	89	89
Interior wall and ceiling finish		
Lath and plaster	50	90
Drywall	50	10
Facing material		
Wood siding or wood shingles	48	48
Asbestos siding or shingles	24	4
Aluminum siding	#	—
Brick	13	23
Stucco	13	17
Part brick, part wood	2	8
Other	#	—
Roofs and roof framing		
Pitched	97	95
Flat	3	5
Wood rafters	94	100
Wood trusses	5	—
Other	1	—
Roofing		
Built-up	6	5
Wood shingles	10	36
Asphalt shingles	82	47
Asbestos	1	—
Slate	#	11
Tile	1	—
Aluminum	—	—
Galvanized or tin	#	#
Copper	—	—
Other	—	1
Gutters and downspouts		
None	32	27
Yes	68	73
Floors		
First floor construction		
Wood joist	76	100
Concrete slab on ground	22	—
Other	2	—
Finish flooring (other than bath-room & kitchen)		
Wood	81	99
Other	19	1
Windows (excluding basement)		
Wood	69	91
Steel } double-hung		
} or casement	23	9
Aluminum	5	—
Other types	3	—
Window weather-stripping		
None	55	80
Yes	45	20
Window storm sash		
None	96	94
Yes	4	6
Window screens		
None	38	11
Yes	62	89
Heat Distribution		
Piping for boiler systems		
Steel or wrought iron	24	92
Copper	76	8

* Less than one-half of 1%.

Data not available.

(Continued on page 282)

**paneling
fixtures
trim**

**philippine
mahogany**

**beautiful
permanent**

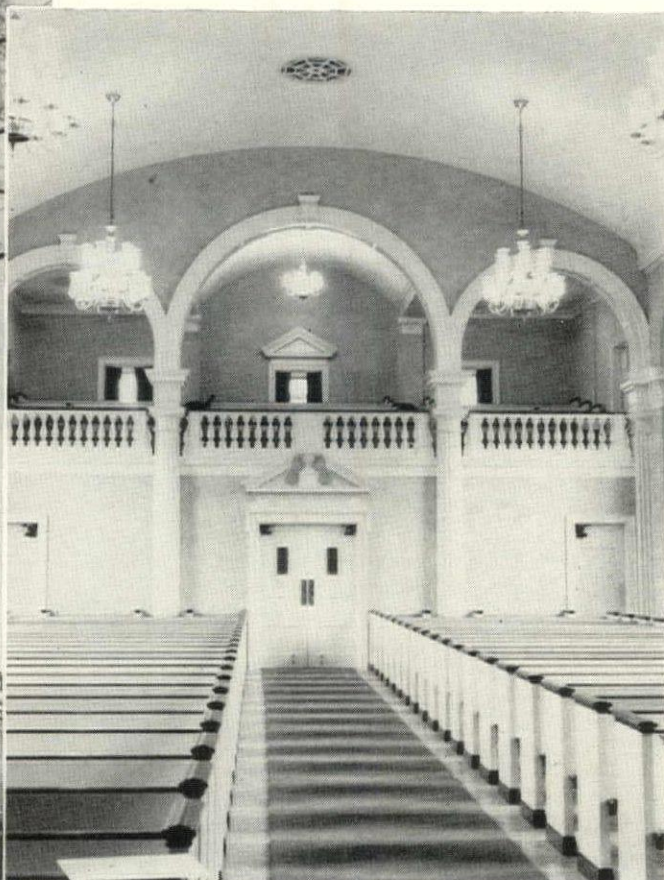
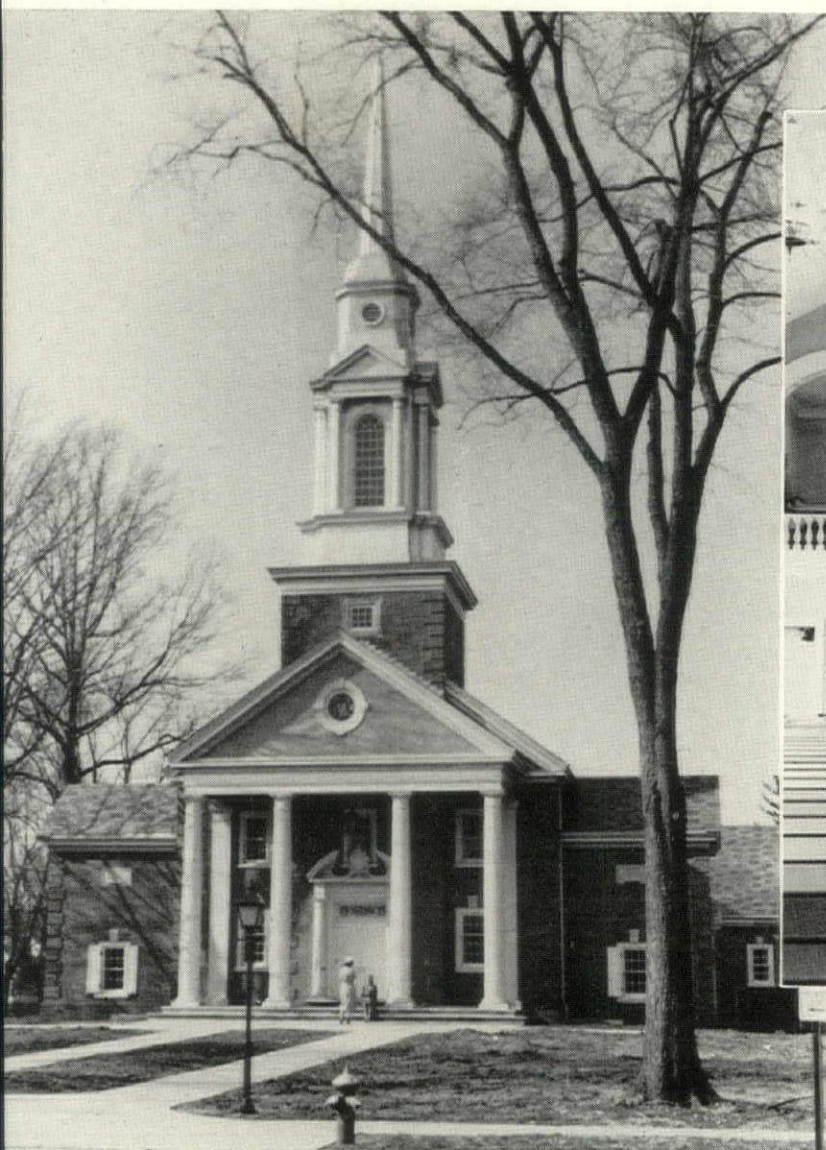
The natural color and beautiful grain of this fine tropical hardwood will add greatly to the appearance and value of both residential and commercial buildings. Available in solid lumber, plywood, or solid paneling, Philippine Mahogany will satisfy all architectural requirements. Finished natural, or in a color of your own choice, Philippine Mahogany can be used with any architectural styling, any decorative theme. For both an interior and exterior wood that will give years of service, requires little care, and actually becomes more beautiful as it ages, specify Philippine Mahogany.

Write for free literature showing residential and commercial installations, and finishes.



PHILIPPINE MAHOGANY ASSOCIATION, INC.

Dept. B-1, 111 West Seventh Street, Los Angeles 14, California



COMMUNITY CHURCH, GARDEN CITY, L. I.

T. NORMAN MANSELL, Architect, Philadelphia, Pa.

CONSOLIDATED CONSTRUCTORS, INC., New York City

MILTON SELIG & CO., INC., Painting Contractor, New York City

APPROPRIATE and pleasing decoration of this interesting church was achieved through the co-operation of the building committee and painting contractor who followed the architect's color planning for the exterior and interior.

The exterior trim was painted a limestone gray to avoid too great a contrast between the woodwork, gray limestone and red brick. The Colonial character of the exterior decoration is reflected in the narthex, nave, chancel and other rooms. In the nave, off-white woodwork contrasts with warm, neutral gray walls, providing a pleasing background for the dorsal and colorful blue choir robes. Light,

warm colors were used in rooms with north exposure. On the south, cooler colors were specified.

Pratt & Lambert "61" Enamel Eggshell, in varying colors, was used on the woodwork throughout the building. Walls were finished with odorless Lyt-all Flowing Flat in soft tints for large areas and in stronger tones for some of the smaller rooms.

The prompt co-operation of the Pratt & Lambert Architectural Service Department nearest you, is yours on request.

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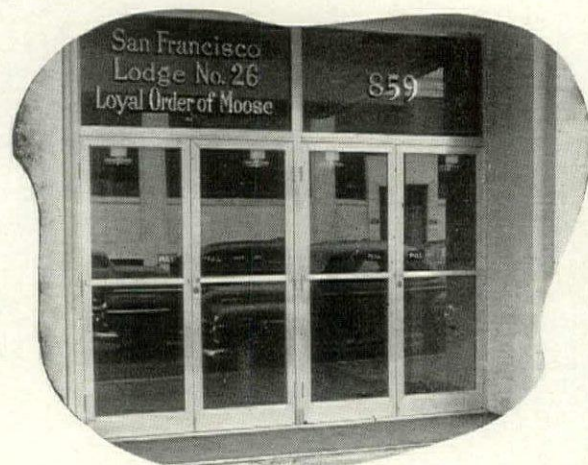


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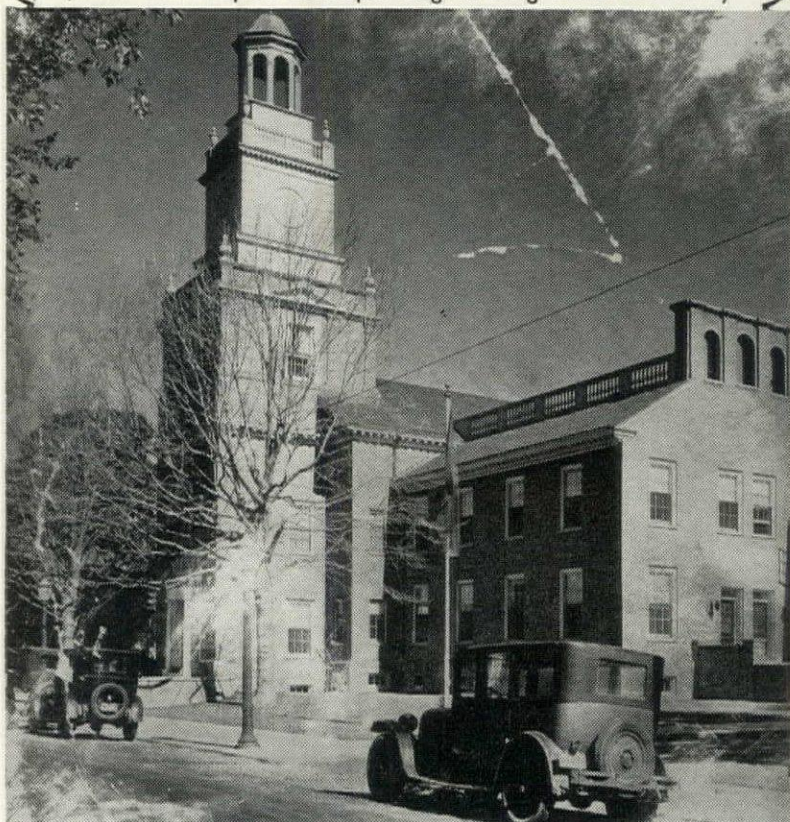
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back in

1929

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Characteristics	1950 % of Houses	1940 % of Houses
Warm air supply ducts		
Galvanized steel	87	*
Aluminum	11	*
Other	2	*
Radiation		
Conventional	8	*
Convectors	42	*
Baseboard	5	*
Radiant panel	45	*
Heating Method		
Hot water—gravity	1	7
Hot water—forced	12	5
Steam	1	9
Warm air—gravity	18	23
Warm air—forced	31	19
Pipeless furnace	#	1
Floor furnace	22	22
Wall type room heater	6	#
Room heaters and stoves	2	12
Electric	1	#
None	6	2
Heating Fuel		
Coal or wood	2	38
Oil	31	13
Gas	60	47
Electric	1	#
Other	#	#
None	6	2
Fireplace		
None	78	38
Yes	22	62
Plumbing		
Interior water piping		
Galvanized	53	71
Copper or brass	47	29
Domestic water heating		
Storage type insulated heaters	67	50
Side arm heaters with separate storage tanks	9	35
Heating equipment coils and separate storage tank	5	1
Tankless coil in heating equipment	10	#
Instantaneous gas heaters	#	8
Other	9	6
Hot water storage tank material		
Galvanized steel	85	82
Glass lined	3	#
Stainless steel	#	3
Copper	#	7
Other	2	#
None	10	8
Plumbing fixture base material		
Bath tubs—C.I.	78	#
—Steel	22	#
—Other	#	#
Lavatories—C.I.	73	#
—Steel	15	#
—Other	12	#
Kitchen sinks—C.I.	67	#
—Steel	32	#
—Other	1	#
Kitchen Cabinets		
Wood	76	92
Steel	24	8
Other	#	—
None	—	#

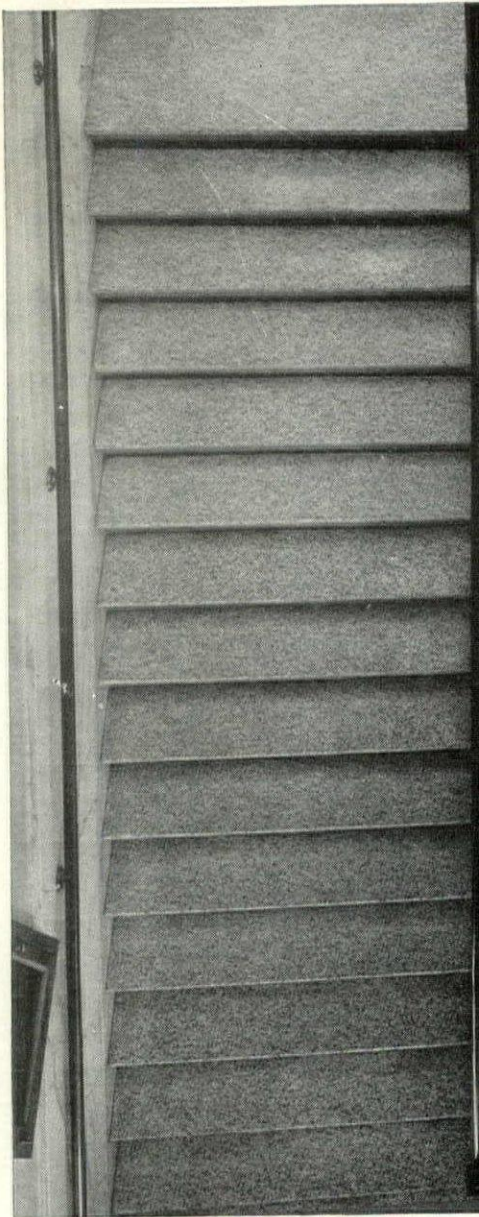
* Less than one-half of 1%.

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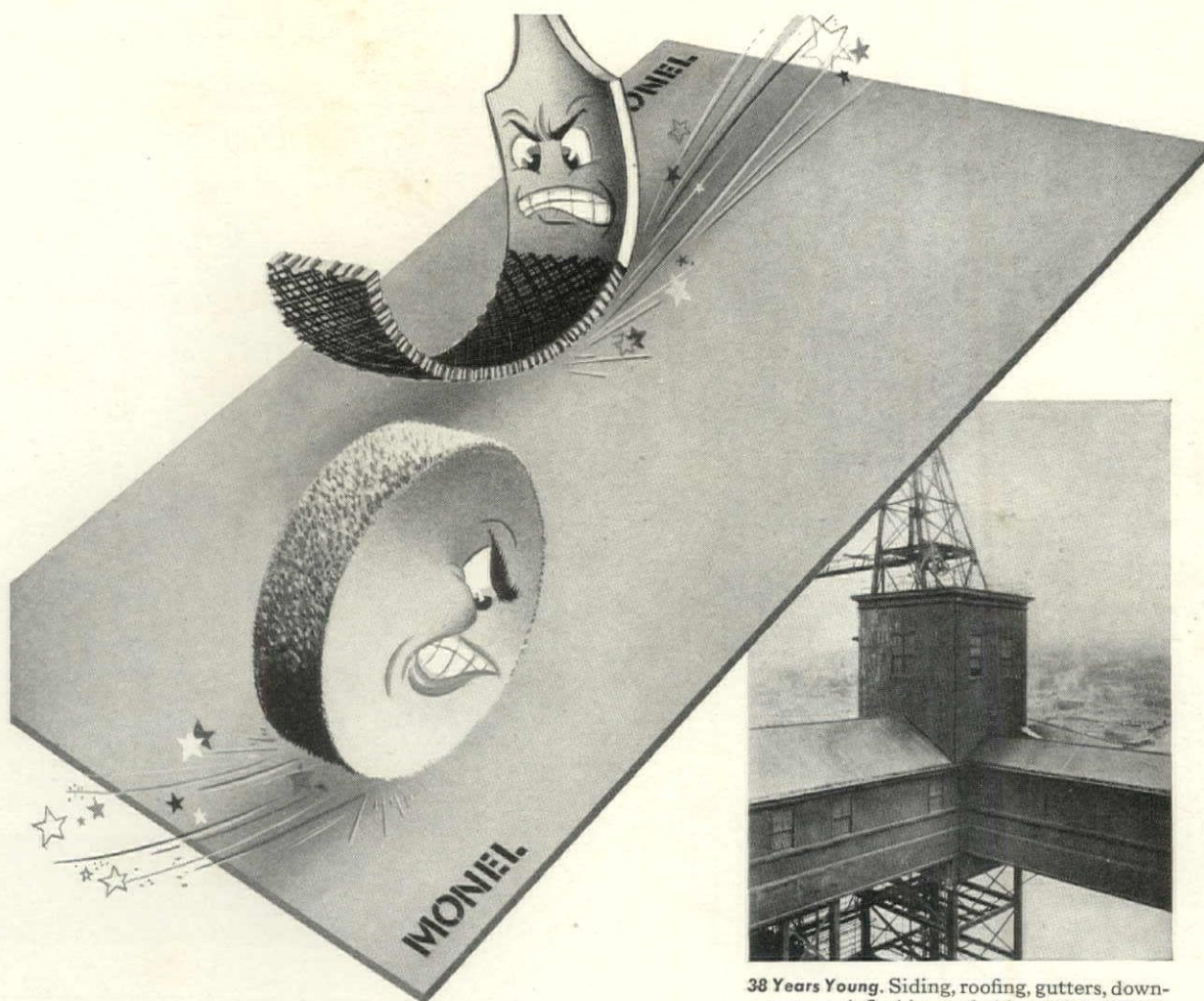
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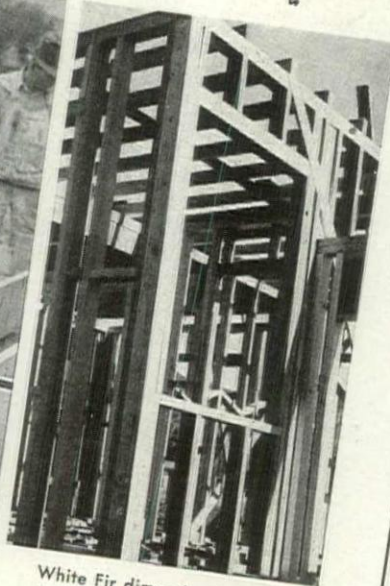
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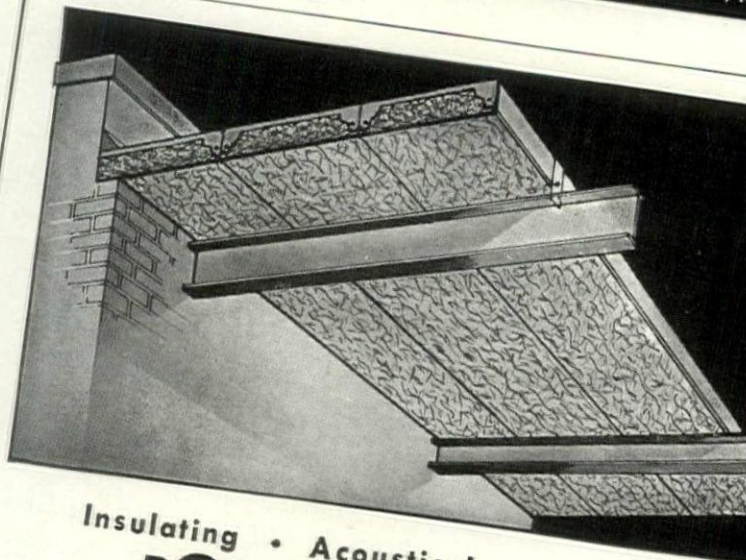
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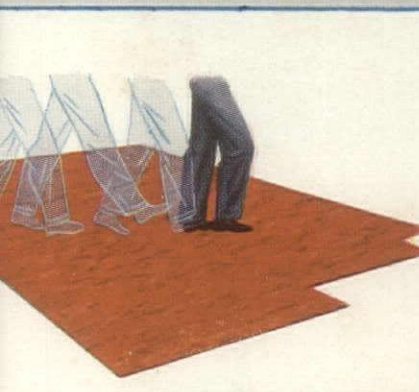
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Above: Kalistron wainscoting in corridors of New Britain General Hospital, New Britain, Conn. Planned by Justin M. Kearney, Hospital Consultant. Installation, Edwin L. Powell & Co., Inc., Boston, Mass.

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Where these walls are covered with Kalistron, they're *permanently protected* against bumping, bruising contact made by rolling tables and wheelchairs. That's because Kalistron is *Blanchardized*; this exclusive process fuses rich color to *underside* of transparent vinyl sheeting. Bumps simply cannot bruise the color! A suede-like backing adds further protection, permits easy bonding to wall surfaces.

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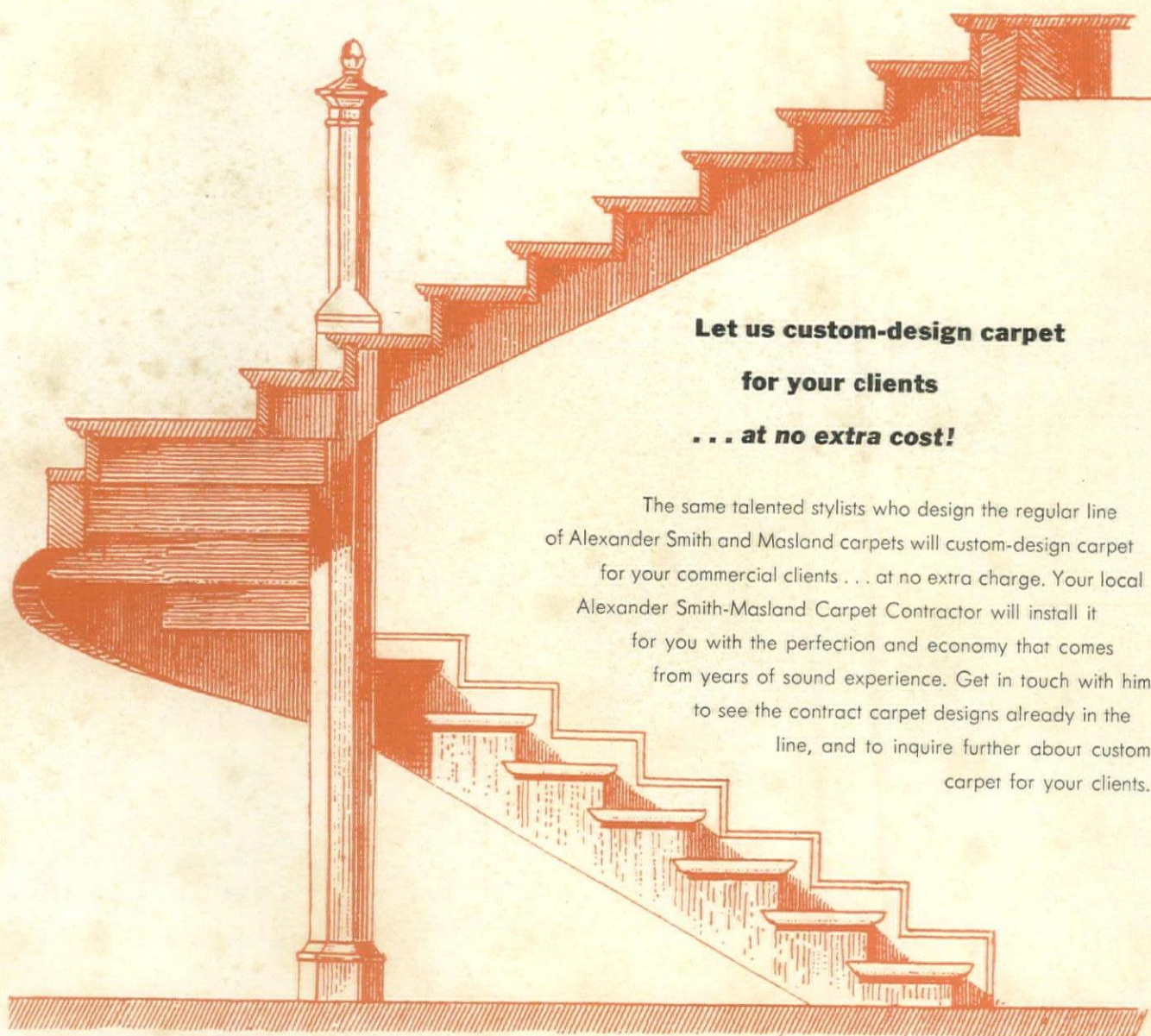
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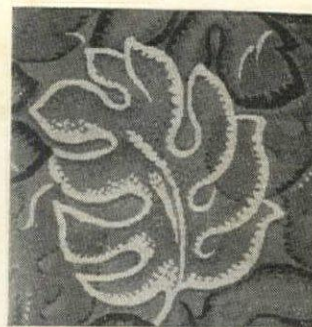
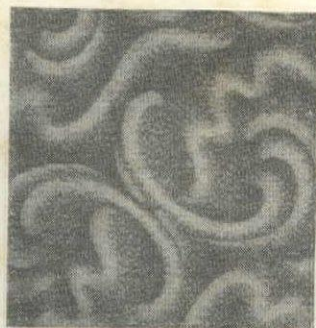
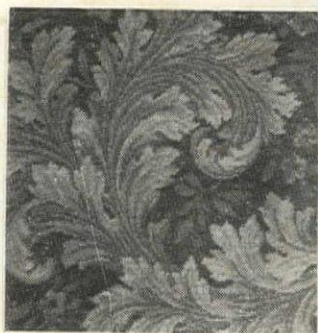
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underside of
transparent vinyl
sheet . . . backed
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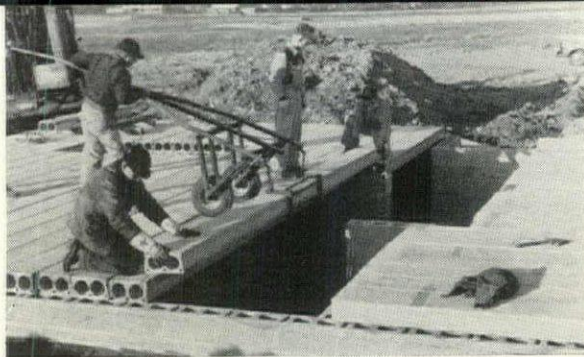
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PRODUCT NEWS

PRESTRESSED SLABS with hollow cores combine panel and circulated warm air heating

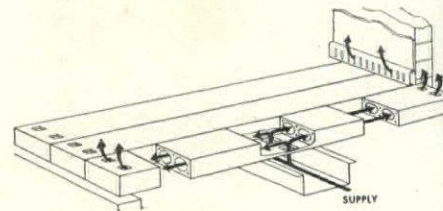
An efficient and economical heating system for homes with basements has been developed by Engineer J. R. Carroll, Jr. It utilizes the 4 5/8" diameter hollow cores in Flexicore structural concrete floor slabs as ducts to deliver warm air from a central furnace to baseboard outlets. Employing the floor itself as a panel unit, En-



gineer Carroll has designed a simple heating scheme which combines desirable features of radiant and circulated air heating, and counteracts some of their individual disadvantages. As in a conventional radiant slab system, the floor

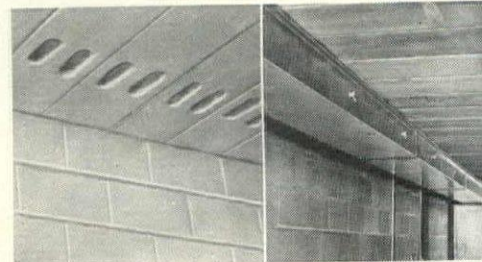
Factory-cast with prestressed steel reinforcement, the Flexicore floor units are laid and grouted to form a slab 6" deep with a clear span up to 22'.

Two hollow cores run parallel through each unit, carrying warm air from a metal plenum to the grill at the baseboard. As the air passes through the ducts, the entire floor is heated and becomes a radiant panel which serves the story above and basement below.

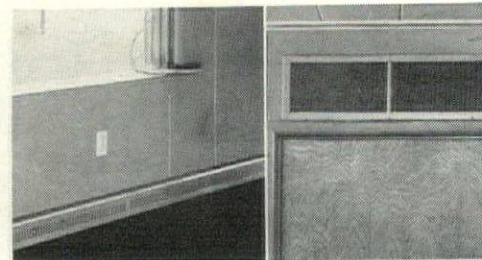


is comfortably warm, and the air temperature is said to be almost constant from floor to ceiling and uniform from room to room. Unlike a conventional panel, the split system makes it possible to dissipate smoke and cooking odors, and to control humidity during winter and summer months. Nor does the Carroll system have as great a thermal lag as a radiant panel, since the circulated air is quickly delivered to room registers, permitting rapid adjustment to outside weather conditions by means of an ordinary thermostat.

The installation is largely coincident with floor construction. Holes in the underside of the slab (precast or knocked in with a hammer and chisel, below left) permit warm air from a three-sided plenum (below right) to enter the parallel pairs of cores in the Flexicore unit. Because the structural floor forms the panel,



heating unit and supply ducts, only a small amount of metal ductwork is needed. The air travels through the slab to holes beneath a baseboard register where its flow can be regulated to each room by adjusting knobs in the grille. Released at the outside walls, the circulating warm air blankets the windows, eliminating



drafts. In a small house only one return is required. All the doors are undercut 1" to allow the air to circulate freely to the common return grille centrally located above the hall closet (above right).

When caulked and painted, the smooth underside of the Flexicore floor becomes a good-looking paneled ceiling for the basement below.

(Continued on page 290)



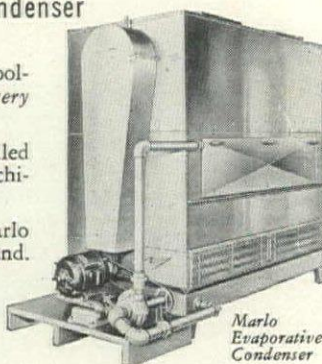
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Architect: Robert Fitch Smith & Associates. Consulting engineer: Maurice H. Connell & Associates. Refrigerating contractor: Dade Refrigerating Co., Inc., all of Miami.



*Miami News

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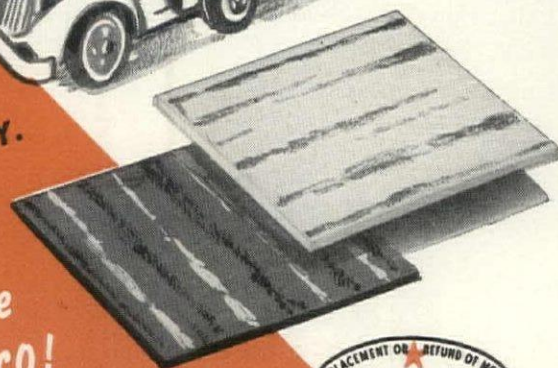
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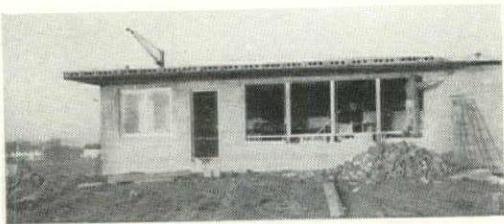
See our insert in Sweet's Architectural File, section 13g/MAS. For free samples, write us on your business stationery.



1R60

PRODUCT NEWS

acts as a radiant panel for that area, or insulation may be applied to the basement ceiling to push some of the heat back up to the living quarters. The floor surface for the first story may be finished with any conventional material or carpeted without appreciable effect on the split system. The cost of a Flexicore system recently installed in a Buffalo, N.Y. one story frame house with a first floor area of 1,134 sq. ft. and calculated heat loss of 47,000 Btu, came



to \$761 for the furnace, ductwork, electrical and gas connections, controls, and registers.
Manufacturer: The Flexicore Co., Inc., Box 825, Dayton 1, Ohio.



Prestressed units used for the roof are extended 2 to 4' to provide a simple cantilevered overhang for rain and sun protection.

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AND GRACIOUS LIVING... WITH A
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FOLLANSBEE TERNE METAL

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Follansbee Terne Metal Roofing offers you—and your clients—*color harmony*—a roof so easily painted it permits a change of color scheme *anytime*. That sort of adaptability to changing color whims makes satisfied clients!

Remember, Follansbee Terne Metal is permanent . . . weathertight . . . fireproof . . . windproof . . . and economical. It's architecturally styled to suit any type of building—for new roofs or the renovation of old ones.

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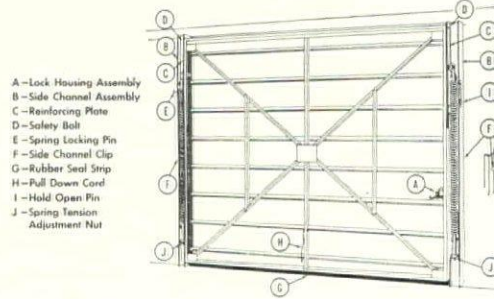
Pittsburgh, Pa. Rochester, N.Y. Fairfield, Conn.



WIDE STEEL GARAGE DOOR serves as a protective canopy when open

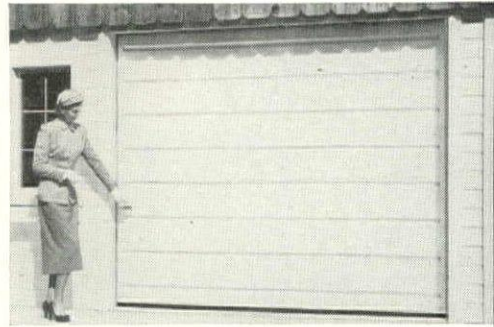
The builder who offers a wide garage door opening deprives cartoonists of material on the woman behind the wheel, but he is easy on his clients' fenders. The 9 x 7' Strand canopy-type door is built to accommodate the new wide car without strain on the motorist, and is designed for quick installation by the contractor. Its \$ price is only \$7 higher than that on the manufacturer's 8 x 7' model. The door's simple horizontal lines are adaptable to many architectural styles. When opened, the canopy extends more than 5' beyond the wall, providing a protective shield against sun or rain. A heavy cross brace adds strength and rigidity to the construction of the one-piece steel door leaf.

Other garage closures in the Strand line include a receding track-type door for 9 x 7' openings, and a receding type 16 x 7' door for double



garage openings without a center post. The models receive a galvanized zinc coating which is oxidized so that it will serve as a good base for paint without a primer. The doors are shipped with hardware preassembled at the plant.
Manufacturer: Strand Garage Door Div., Detroit Steel Products Co., 3111 Griffin St., Detroit, Mich.

(Continued on page 292)

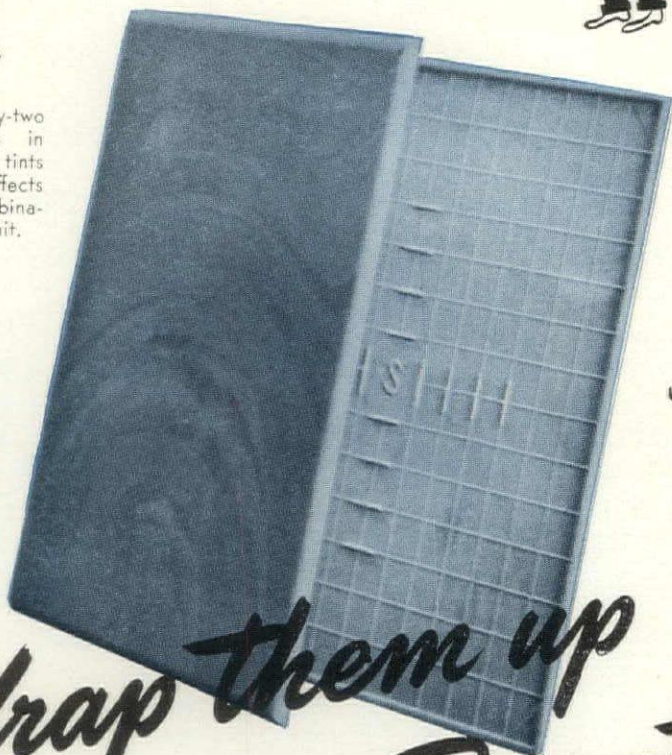




Compare! Stylon Plastic Wall Tiles are "Cushion-Edged" . . . a true tile design making grouting and cleaning easier.



Compare! Twenty-two beautiful colors in pastels, solids, tints and mottled effects for design combinations without limit.



Compare! Stylon Plastic Wall Tiles are designed with center supports eliminating "dishing" troubles forever.

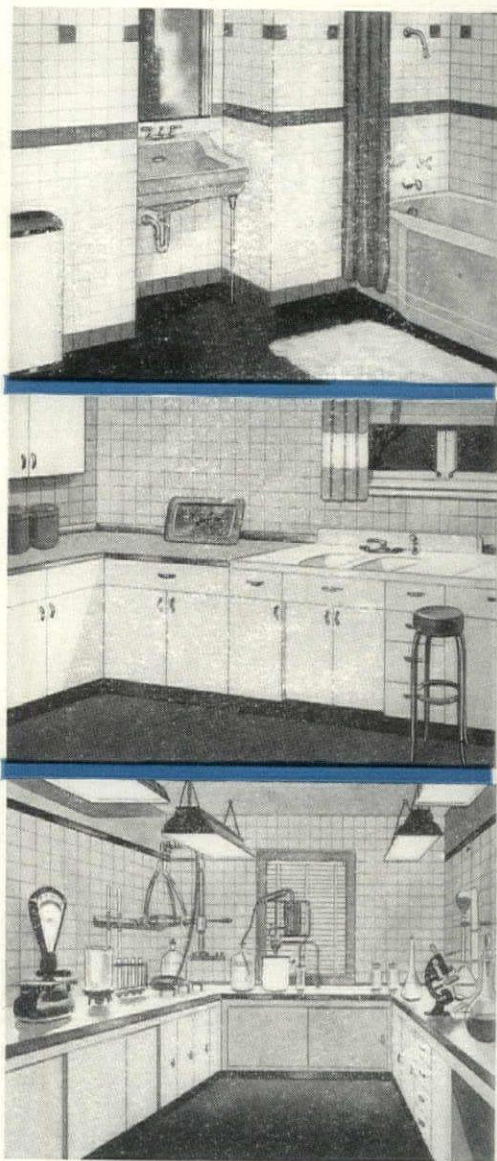


*Wrap them up
in Beauty*

WITH

Stylon

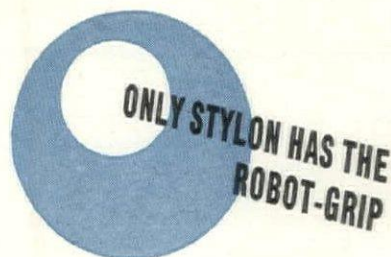
PLASTIC TILE



COMPARE! And you'll wrap them up in Stylon beauty . . . Stylon Plastic Wall Tile represents the modern, economical way to face a wall for residential, commercial and industrial building or remodeling.

With twenty-two exciting colors, hundreds of decorative patterns are possible without duplication.

Include Stylon in your plans for Stylon Plastic Wall Tile has set new standards for practical beautification of walls, and presents a new concept of beauty, endurance and economy in wall facings. As an architect, builder or installer, you can now wrap up your plans in beauty that is lasting . . . enduring . . . economical . . . Specify Stylon Plastic Wall Tile.



Compare! Only Stylon Plastic Wall Tiles have the "Robot-Grip" . . . one hundred suction cups that firmly hold the tile in place for the life of the installation.

B E A U T I F I C A T I O N F O R T H O S E W H O B U I L D

Stylon Corporation

857 Commonwealth Avenue, Boston 15, Mass.

Gentlemen: Please rush me latest literature describing Stylon Medicine Cabinets, Plastic Wall Tile and China Accessories.

NAME

FIRM

STREET

CITY STATE



Stylon . . . backed by over 20 years experience in the Tile Business.

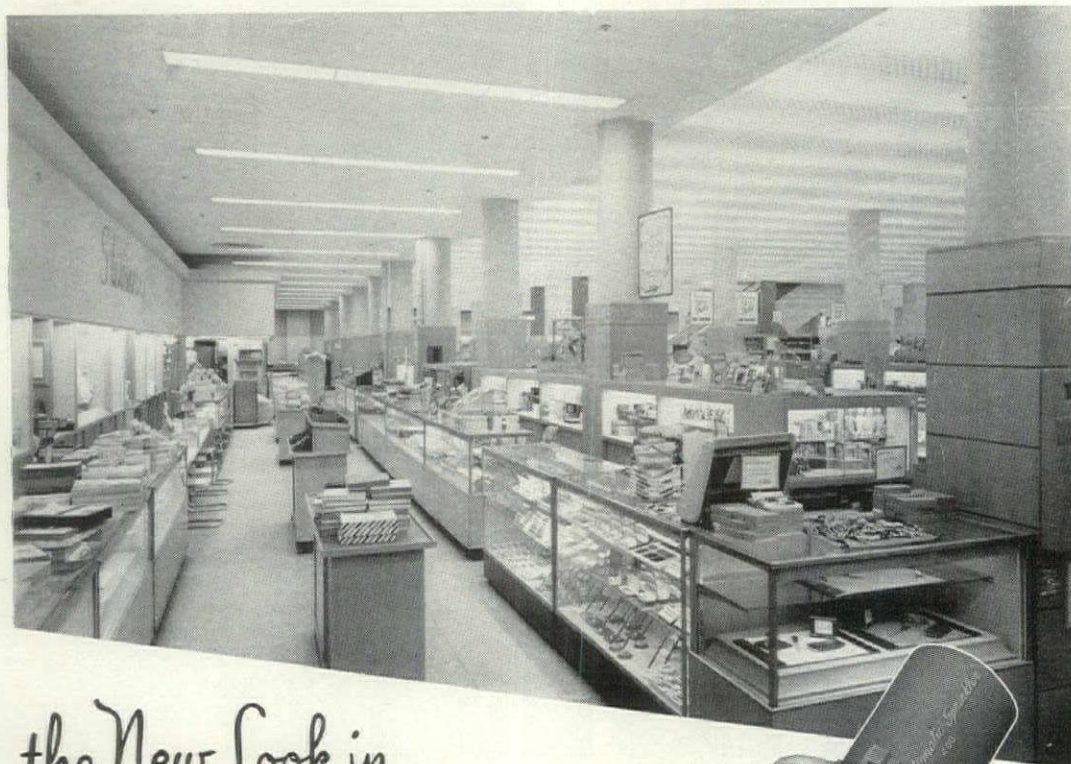


PRODUCT NEWS

STEEL SLIDING DOOR AND WINDOW FRAMES are made for double-glazing on the job

After two years of test applications, Steelbilt, Inc. is marketing Thermo-Glaze framing for field double-glazing of sliding doors and windows. According to its producer, the new steel unit provides all the benefits of factory sealed dual glazing (and eliminates some shipping and handling headaches) at savings of about 30%. The two main condensation problems in dual glazing

—drying the air space between the panes adequately and then keeping it dry—are met ingeniously. For small Thermo-Glaze doors and windows, a plate is unscrewed from the vertical member of the frame, exposing a slotted opening between the $\frac{1}{4}$ " glass sheets. A porous rack (about 7" x 12" x $\frac{3}{8}$ ") containing a silica gel dehydrating agent is inserted in the air space for about 12 hrs., or until the humidity of the trapped air is below the point of producing frost



the New Look in ENGINEERED FIRE SAFETY

No longer must you sacrifice the beauty of modern interior design in order to have absolute fire safety. Newly developed "Automatic 400" Ceiling Sprinklers provide two kinds of appeal—beauty and protection. They're designed to blend perfectly with the most tastefully arranged interior, whether office, retail establishment, restaurant or public building. And—they provide ceiling visibility, unlimited—are practically unnoticeable, yet, are ready to combat fire whenever called upon to do so.

Finished in finely polished bronze or chrome, "Automatic 400" Ceiling Sprinklers project less than one inch below the ceiling surface. They are easily installed in new buildings and may be used in remodeling any type of occupancy where piping for the existing sprinkler system has been concealed.

Full particulars on the "Automatic 400" Ceiling Sprinkler are available through our nation-wide network of district representatives or you may write direct for descriptive literature.

Plan a "disappearing act" for your fire protection with "Automatic 400" Ceiling Sprinklers.

"AUTOMATIC" SPRINKLER CORPORATION OF AMERICA
YOUNGSTOWN 1, OHIO

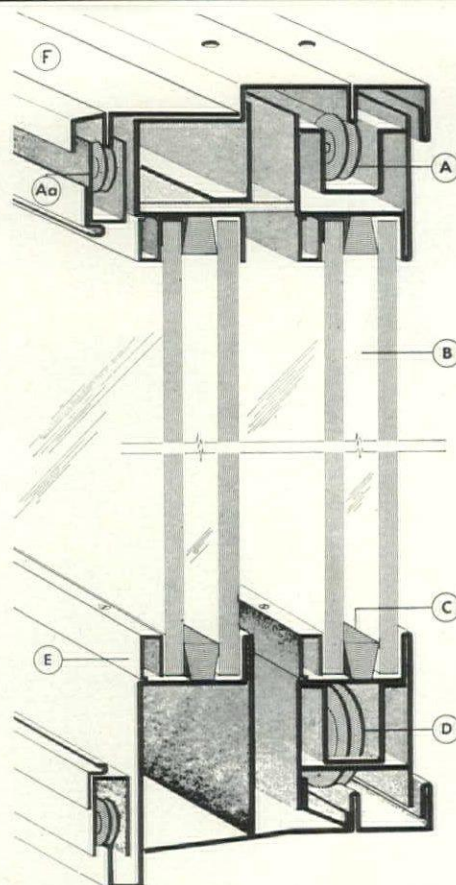
"Automatic" Sprinkler

FIRST IN FIRE PROTECTION

DEVELOPMENT . ENGINEERING

MANUFACTURE . INSTALLATION

OFFICES IN PRINCIPAL CITIES OF NORTH AND SOUTH AMERICA



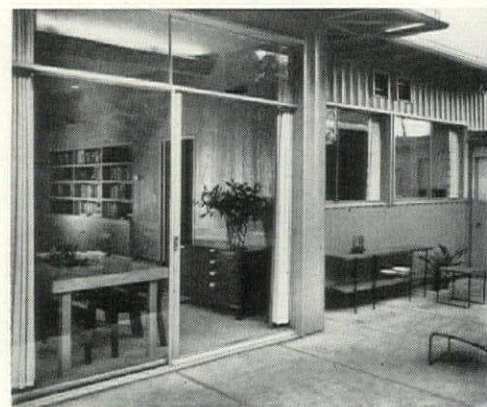
The design details of the bottom roller door are: A. spring loaded roller guide for door. Aa. roller for screen door. C. compressible sealing space. D. bottom roller with removable stainless steel ball bearings. E. rocker type glazing bead for pressure seal. F. watershed.

on the glass at low temperature. The rack is then removed and the air space sealed by compressing the spacer between the glass panes with a special glazing bead. On large doors and windows, Steelbilt reveals a practical dash of Rudolph Goldberg: A concealed copper tube and fittings are built into the top and bottom of the air space through the vertical member of the frame. The air is pumped out at the bottom, passed through a container of silica gel, and then returned to the space at the top. An hour of pumping with the patented apparatus provided by the manufacturer will reduce the humidity of the trapped air to the desired level.

Spring loaded roller guides and stainless steel ball bearings assure smooth operation of sliding units. The slender rolled steel frame is pared so that they break up the glass pane as delicately as is structurally safe. Price for Thermo-Glaze, in either top hung or bottom roller models, is about \$3.50 per sq. ft. of window area.

Manufacturer: Steelbilt, Inc., 4801 E. Washington Blvd., Los Angeles 22, Calif.

(Continued on page 294)

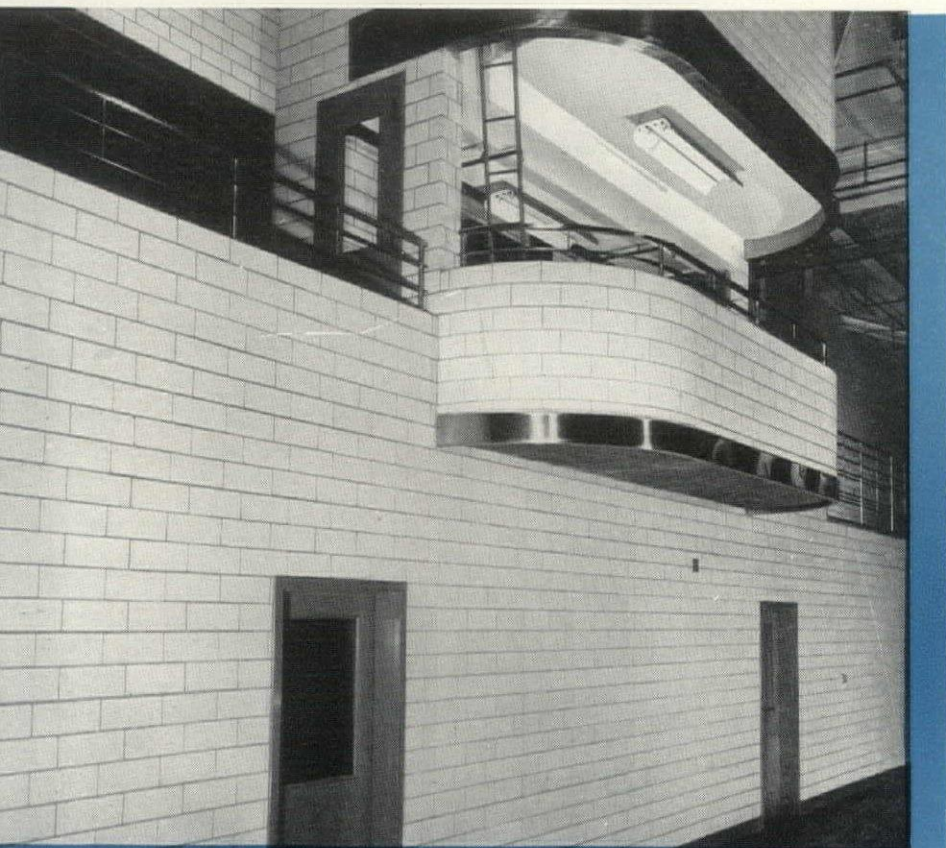


PLANT OR INSTITUTION



"color-engineered" FACING TILE

- can increase efficiency and morale
- aid lighting
- lower maintenance



The right color is important to the purpose of any building interior.

For the mechanic on the production line . . . the doctor in the operating room . . . the student or teacher in the classroom . . . color should provide the correct background for an efficient, work-aiding atmosphere.

To help you accomplish this end, Facing Tile is "color-engineered"!

This means structural clay tile has been combined with scientifically determined color. You can eliminate guesswork in your color selection for industrial, commercial and institutional interiors. You can select color with a "scientific approach."

With "color-engineered" Facing Tile, you can build a wall and finish in one operation . . . a wall that resists wear and tear, reduces construction and maintenance costs. At the same time you utilize functional color to aid production, morale and lighting.

As you design or build, please keep this important fact in mind. Facing Tile is made of clay—a non-critical raw material and the supply of clay is unlimited. Thus, your selection of "color-engineered" Facing Tile is even more justified. You save vital raw materials.

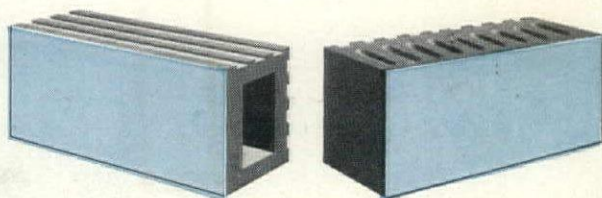
FREE BOOKLET ON COLOR SPECIFICATION

Learn how to select color on a "scientific basis." This new book tells you what color can do . . . what are the *right* colors. Write Dept. MB-10 for your free copy.



FACING TILE INSTITUTE

1520 18th Street, N. W., Washington 6, D. C.



PRODUCT NEWS

SEPTIC TANK meets new government standards

San-Equip, Inc. has announced production of a septic tank which meets requirements of the U.S. Dept. of Commerce's new *Commercial Standard for Metal Septic Tanks*—a standard accepted by the U.S. Public Health Service, the FHA, the VA, and many state and local health officials. Incorporating design details evolved through research in modern sanitary engineering, the new tank is made of 14 gauge steel with

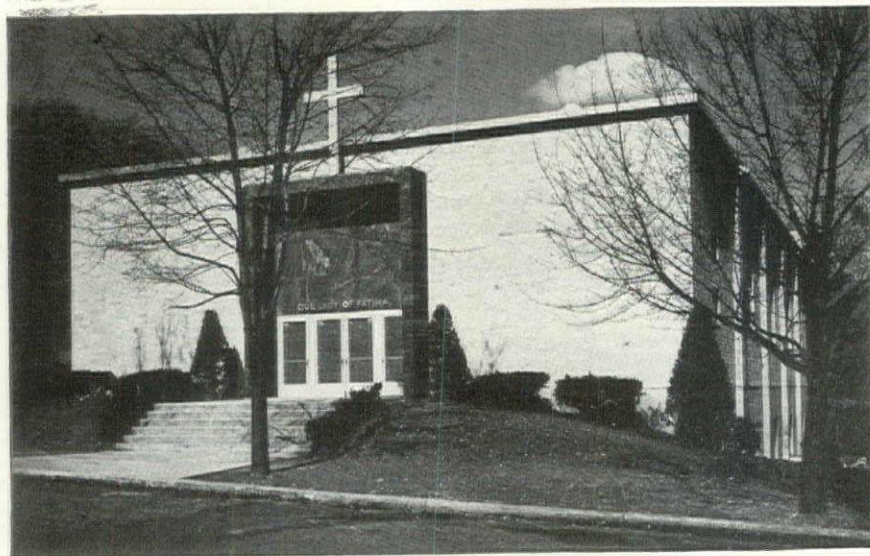


Meeting the new standards set by the U.S. Department of Commerce, this compact steel 1/4 ton tank for residential disposal systems takes the place of field-built masonry receptacles.

electrically welded seams. A horizontal octagon in shape, the #1050 measures 6' long and 3' wide, and has a liquid depth of 4'—proportion considered most satisfactory for the thorough settling out and digestion of solids. Its liquid capacity is 500 gal. An access opening (extended to ground level with 6" or 8" pipe or tile) facilitates inspection and permits pumping out when necessary without costly digging. Intake and outlet openings have set-in collars and stop lugs, and will take either 4" or 6" pipe or tile. Located at the ends, these openings are properly baffled to reduce the possibility of clogging. In addition to the heavy hot dip mineral asphalt coating applied inside and out, the inner surface is also coated with a bituminous emulsion which conforms to the CS specifications, and is said to add years of trouble-free service to the life of the tank. Cost, not including installation, for the #1050 is about \$100. It weighs 430 lbs. Excellent installation directions and typical layouts for septic tank sewage disposal systems are provided by the company.

Manufacturer: San-Equip, Inc., East Brighton and Glen Avenues, Syracuse 5, New York.

Our Lady of Fatima Church, Scarsdale, N. Y. • Architect: Robert A. Greene, Tarrytown, N. Y.
Contractors: Caldwell & Stott, Inc., New York City

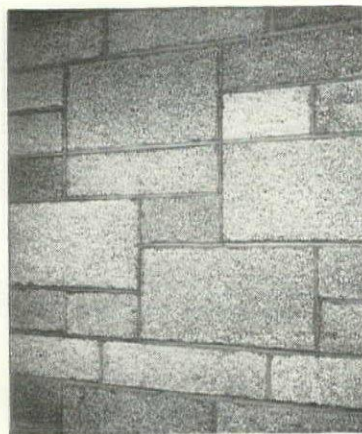


All at one low cost

... AN **INSULATIVE** STRUCTURAL WALL

... A **DECORATIVE** INTERIOR FINISH

... COMPLETE **ACOUSTICAL** TREATMENT



Close-up showing sizes, texture and joint treatment.

Churches, schools and similar structures built with Waylite masonry have stability and great architectural beauty. In addition, they offer a three-fold advantage.

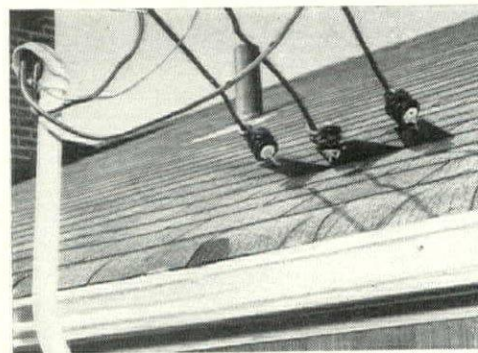
These masonry walls have high thermal insulative properties in addition to adequate structural strength. The exposed surface of the units eliminates need for additional acoustical treatment.

And finally a very wide range of decorative effects is achieved with varying size of units ... textures ... joint treatments ... and colors. For illustrated data book, address the Waylite Co., 105 W. Madison St., Chicago, or Box 30, Bethlehem, Pa.

WAYLITE MASONRY UNITS

ROOF BRACKET simplifies handling of service wiring for single level houses

Priced at \$4, the Anchor Easy bracket more than pays for itself in conduit and labor savings on many one-story construction jobs. By providing adequate height for bringing in electrical wiring



directly above the place of entry, the device eliminates the need for attaching conduit to a gable or other high point on a roof and running it around the building to the desired location. Savings on the average house installation made possible with the bracket are estimated by the manufacturer at 15' of steel conduit, 45' of 6 copper wire, and 3 hrs. of labor time. Available to most types of roofing, the Anchor Easy is small and durable. It is made of galvanized steel, and is rustproofed with red zinc oxide. Manufacturer: N. E. Patton Co., 303 S. Doren, Champaign, Ill.

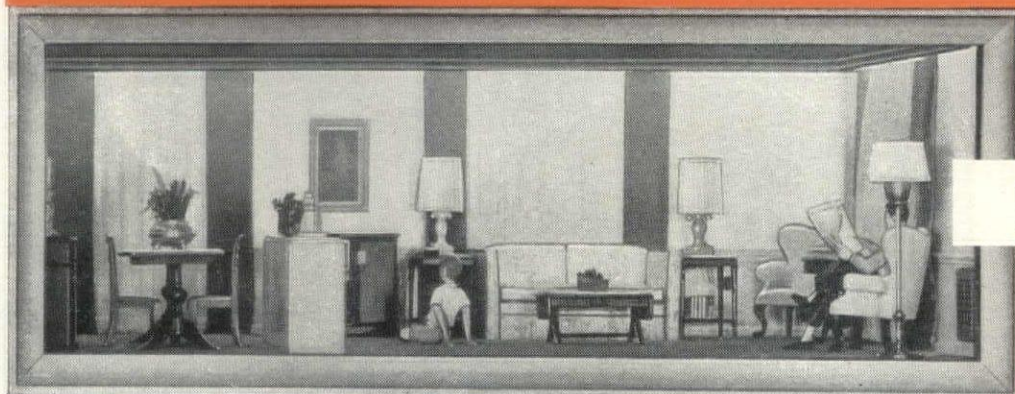
(Continued on page 296)



1880



1951



Living Patterns Change

... SO DO HOUSE MERCHANDISING METHODS

Sure you can sell a bare house shell.

But the builders who will cop tomorrow's house markets are equipping their houses with electric appliances—the complete works.

Why have hundreds of builders turned to this new method of house merchandising? Because tremendous financial strain is placed upon the average person if he is required to equip the house he buys under separate financial arrangements. That's why customers are boosters for

the builder that gives them a completely equipped home on an easy-to-pay-for package mortgage.

Send the coupon below for your copy of the 1951 Westinghouse Appliance Catalog. It will help you plan homes for electrical living. As you page through this booklet, notice how each appliance from the top to the bottom of the line is built on the same basic-quality structural fundamentals that win homemakers' approval regardless of model or size selected.

YOU CAN BE SURE..
IF IT'S
Westinghouse

Westinghouse Electric Corporation
Electric Appliance Division—Mansfield, Ohio
Please send me your 1951 Appliance Catalog.

Name _____

Street _____

City _____ State _____



REFRIGERATOR



VENT FAN



LAUNDROMAT



DRYER



ELECTRIC SINK



WATER HEATER



WASTE-AWAY



RANGE

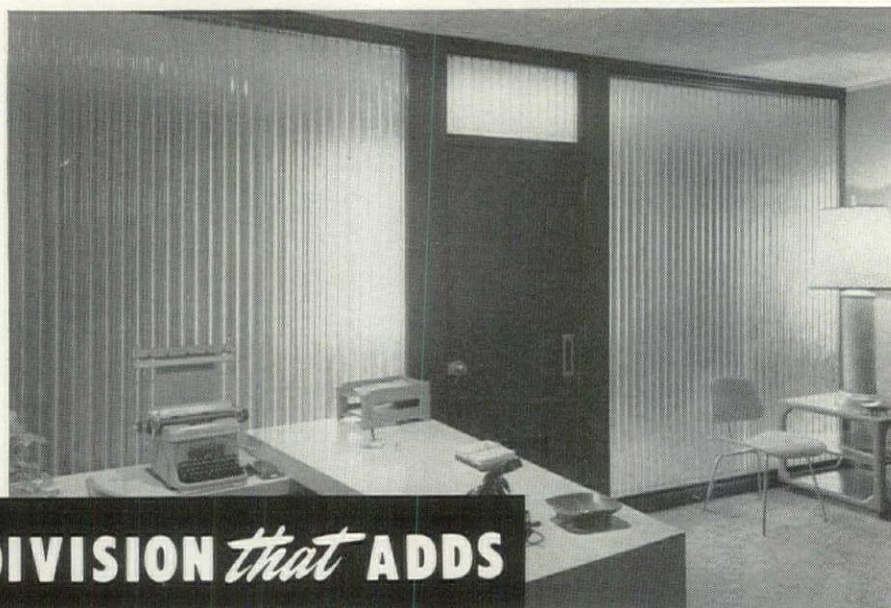
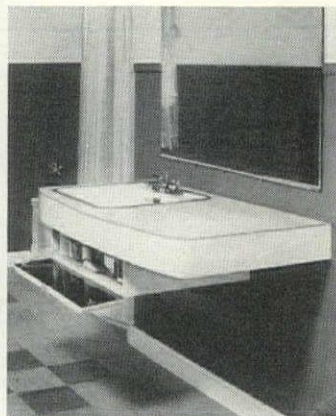
PRODUCT NEWS

WALL HUNG LAVATORIES have storage compartments, dressing table tops

An office desk maker, Globe Wernicke, and a famous plastics firm, Formica, have pooled fabrication facilities to produce the Vanitory—a dressing table-lavatory with the detailing of a custom built unit at an assembly line price. Made in four practical styles executed by Brooks Stevens, the new fixture should find its way into many homes as well as apartments and hotel



Three successful combinations of a Formica chassis vanity, storage space and wash basin.



The DIVISION that ADDS

Figured glass with its many advantages is fast becoming the favorite divider for business and industry. Translucent panels protect privacy but permit borrowed light to flood rooms with soft, cheerful illumination. Interesting textures strike a modern note conducive to morale and efficiency.

NO SHORTAGES

Figured glass is a non-restricted material in plentiful supply. Rhythmic glass patterns by Mississippi can be used to solve almost every partition problem.

MODERN APPEARANCE

Architects everywhere prefer Figured Glass by Mississippi both for its functional applications as well as its beauty.

EASY MAINTENANCE

Simple to install, easy to clean, its use eliminates mortar joints . . . painting . . . refinishing. Figured Glass never wears out. If necessary, partitions can be removed and used again elsewhere.

Send for new, free booklet, "Figured Glass by Mississippi," containing nearly 100 actual photographs of installations of this versatile modern material in business and industry.



Available in a wide variety of patterns wherever quality glass is sold.

MISSISSIPPI GLASS CO., 88 Angelica St., St. Louis 7, Mo.
Gentlemen: Please send me your free booklet, "Figured Glass by Mississippi."

Name _____ Address _____
City _____ Zone _____ State _____

MISSISSIPPI *Glass* **COMPANY**

88 ANGELICA ST. SAINT LOUIS 7, MO.
NEW YORK • CHICAGO • FULLERTON, CALIF.



WORLD'S LARGEST MANUFACTURER OF ROLLED, FIGURED AND WIRED GLASS

suites. The 28" wide model has a generous rim of the durable, stain and mar resistant Formica laminate around its sink for convenient placement of toilet articles. Containing a spacious storage space beneath the basin, the compact model should be doubly useful in bathrooms and powder rooms where space is at a premium. The three larger models (one 36" and two 44") have the added utility of dressing table tops and shelf ledges. Approximate costs to build range from \$76.50 for the small unit without the storage compartment to \$139 for the complete fitted 44" size.

Distributor: Thomas W. Berger, Inc., Cincinnati 2, Ohio.

WATER CLOSET styled for modern bathroom

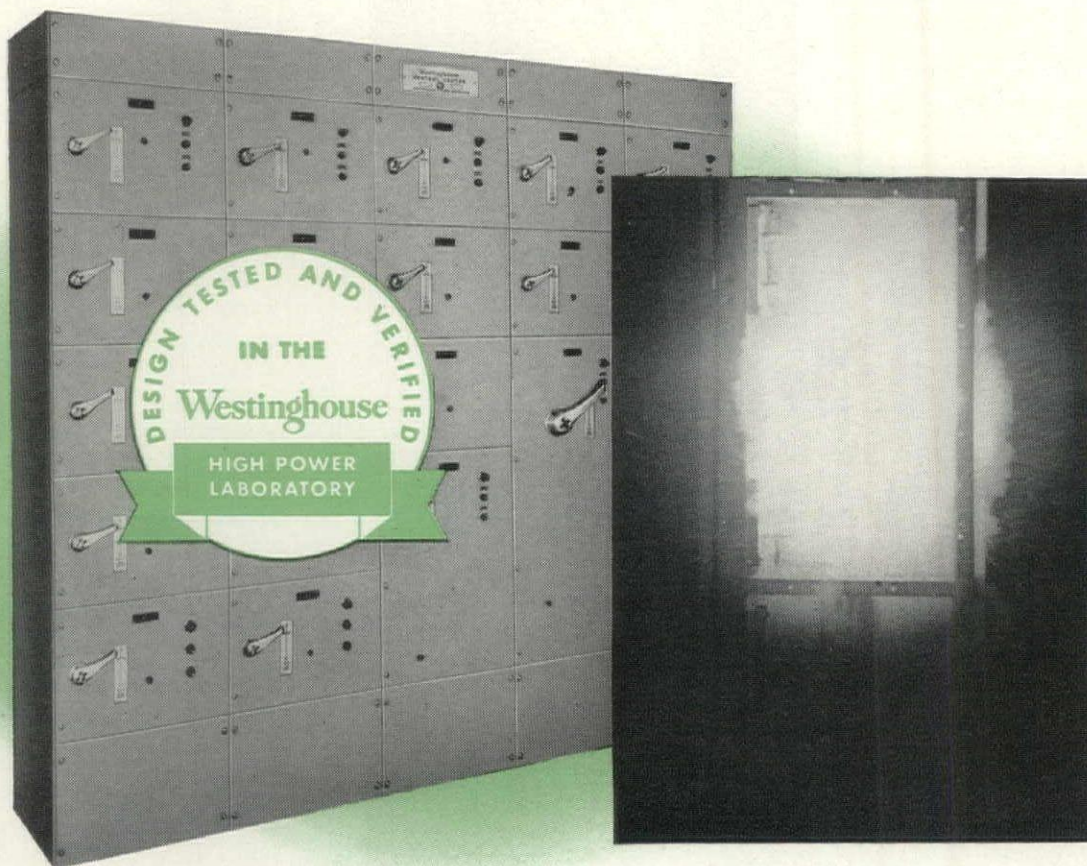
Few are the homes built without one, yet scarcely has been interest in its design. Cheers, then, Crane Co. for calling upon Henry Dreyfuss, revamp the water closet, and to the illustrious industrial designer for his successful resculpting of that basic fixture. For the "Criterion Close" Crane has used its best pastel palette—pastel jade, citrus yellow, shell pink, ivory, sun tan, French gray, and sky blue—and to the pioneering decorator, offers Persian red. The model 3-101 has a Moltex correct posture seat with

saddle cover (right). With tank and trim, china bolt caps, less supply piping, the fixture sells for \$180 in color, \$130 in perennial white. Model 3-100 (below) has a flat top telescoping cover over the posture seat. It costs \$200 in color, \$180 in white.

Manufacturer: Crane Co., 836 S. Michigan Ave., Chicago 5, Ill.

(Continued on page 298)





What other control center gives you this **TESTED PROTECTION**

Your control center holds the life line to your motors. Such guardianship demands top-quality construction, at *every* point, to provide complete protection.

Westinghouse Control Centers are built to give you this protection and laboratory tested to prove it:

1 Complete Baffling of each starter unit in Westinghouse Control Centers is a typical example of the fruits of this thorough testing at the Westinghouse High Power Laboratory. When interrupting a short circuit on a starter unit of non-baffled design, tests showed the short circuit could spread throughout the entire structure. Each Westinghouse starter unit is completely baffled to prevent these explosive chain reactions. Unusual arcing is localized if faults occur.

2 Ample Interrupting Capacity is another tested feature of Westinghouse Control Centers.

Each starter circuit breaker has a capacity of interrupting a fault current of not less than 15,000 RMS amps.

3 Sturdy, Self-Supporting, Tight Structures also are on the list of Westinghouse quality features. Each panel is built to stand by itself and to protect the internal electrical equipment.

You will want to know of the many other points of quality that make up Westinghouse Control Centers. Write for your copy of Booklet B-4213 which contains all the facts. Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pa.

J-27010

YOU CAN BE SURE.. IF IT'S
Westinghouse

CONTROL CENTERS



PRODUCT NEWS

PARQUET BLOCK laid directly on concrete slab costs no more than strip flooring

Medley blocks bring the luxury of hardwood floors within budget range for low and medium priced home construction. For less than \$300, a 1,000 sq. ft. floor area can be covered with this parquet flooring. Made of selected hardwood strips cut in random lengths and bonded to a waterproofed membrane of 30 lb. asphalt-sat-

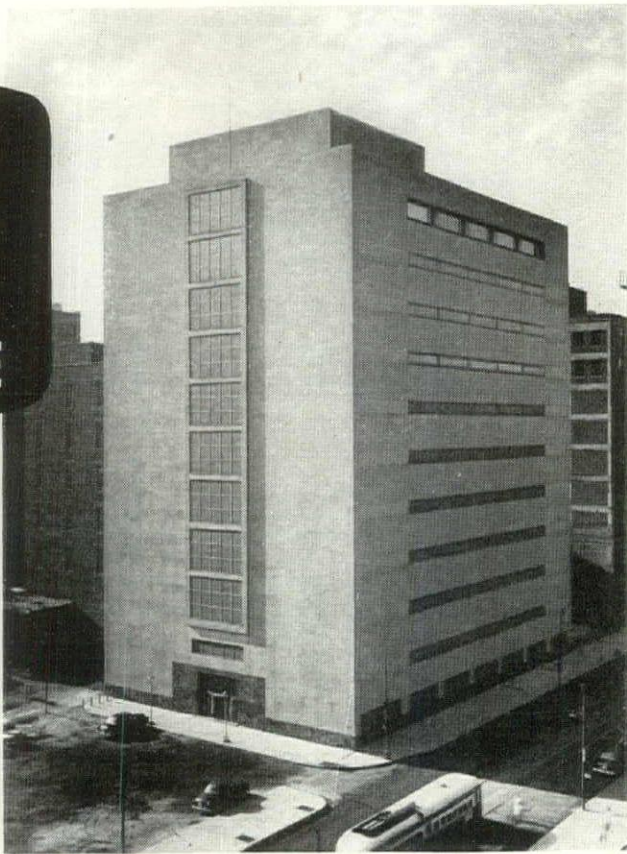


Applied on concrete slab or plywood subfloor with cold mastic, pre-assembled parquet blocks offer richness of hardwood flooring at a modest price.

urated felt, the blocks are flexible in both directions so that they may be set firmly over minor surface irregularities. Like composition floor tile, Medley wood blocks are laid with cold mastic, and may be applied directly over concrete or plywood subflooring. They are made in two sizes: 9" x 9" x 13/16", and 10" x 10" x 5/16". The larger block retails to the trade for \$290 per 1,000 sq. ft.—a price said to be competitive with most grades of strip wood flooring. Because the blocks have no tongues and grooves on their outside edges, all the scrap from cutting and fitting around doors and walls can be utilized. The blocks may be arranged in a variety of attractive patterns.
Manufacturers: H. G. Macdonald Co., 134 Railroad Ave., Monrovia, Calif. Macdonald-Anderson Mfg. Co., Inc., Fordyce, Ark.

3091 FEET OF
CLOW
(threaded)
CAST IRON PIPE

USED IN
CONSTRUCTION OF
MODERN
COMMUNICATIONS
BUILDING



Modern communications building recently erected in Chicago.

- ARCHITECTS: Holabird & Root & Burgee
- PLUMBING CONTRACTORS: Hanley & Co.

Clow Cast Iron Pipe was selected for all 3-inch and larger downspout, waste and vent piping because of its superior features. More than 3,000 feet of Clow Pipe was cut, fitted and installed for such services in this new, distinguished structure.

Here's why the Architects specified Clow (threaded) Cast Iron Pipe:
The Architects, Holabird & Root & Burgee say that Clow Cast Iron Pipe was specified on this job because of its long-lasting, corrosion-proof qualities.

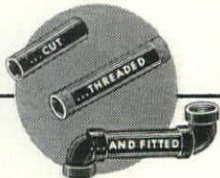
It's a well known fact that Cast Iron Pipe has a useful service life of more than a century, thus eliminating the need for costly replacements.

Here's why the Plumbing Contractor chose
Clow (threaded) Cast Iron Pipe:

"We chose Clow (threaded) Cast Iron Pipe because it lasts longer and gives better service than other types of piping," said Mr. Grable Weber, Vice President of Hanley & Co. "We have used Clow Pipe on a good many jobs and have found it easy to handle, which means a more rapid installation. Also Clow Cast Iron Pipe is readily available, which is important, at prices we consider quite reasonable."

Clow (threaded) Cast Iron Pipe has some O. D. as wrought pipe, is available with plain or threaded ends, in 3, 4, 5, 6, 8 and 10" sizes in 18' random lengths. Also available with integral calking hub on one end (other end plain) in 18' random lengths in 4, 6 and 8" sizes.

CLOW CAST IRON PIPE CAN BE



on the job, with ordinary tools of the piping trade.

JAMES B. CLOW & SONS

201-299 North Talman Avenue

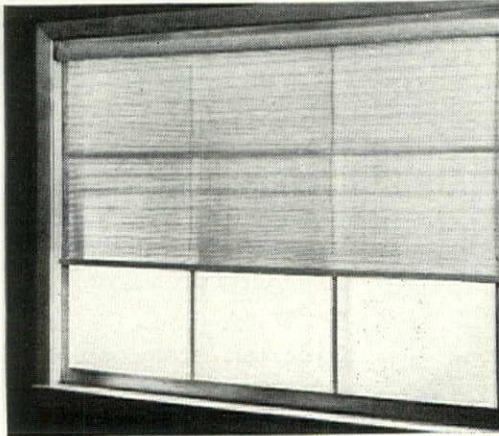
Chicago 80, Illinois



and their National Cast Iron Pipe Division, Birmingham, Alabama; subsidiaries: Eddy Valve Co., Waterford, New York; Iowa Valve Co., Oskaloosa, Iowa.

BASSWOOD SHADES AND DRAPES add decorative window treatment to interior

Lattishades and Lattiswood draperies are as practical as they are attractive. Made of 1/4" basswood staves woven together with soft finish cotton yarn, they permit light and air to filter through without sacrificing the privacy of room occupants. The type A Lattishade is mounted on a 1 1/4" spring roller and may be pulled up



and down like an ordinary window shade. When a 6' long shade is drawn up on the roller it has a diameter of only 2 3/4". Maximum size for the type A is 36 sq. ft. For larger openings the type B which rolls up from the bottom may be used. It has a 2" wide pine headrail which conceals the operating mechanism. An automatic cord lock holds the shade up at any height; no side fastenings are needed. Both A and B styles are made with special brackets for inside and outside installations and for hanging them from the ceiling. Retail prices range from 50 to 60 cents per sq. ft. The draperies are of the same basswood fabric, woven vertically, and have a 2" tape sewn along the top edges for attaching hooks. Standard colors for both the drapes and shades are: natural, off-white, gray, green, yellow and walnut.

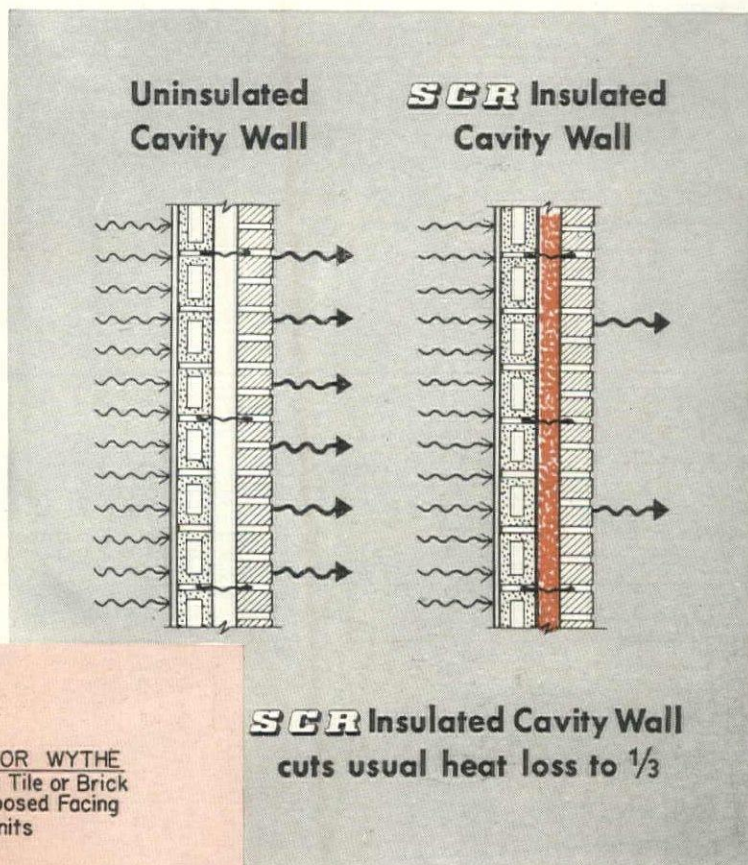
Manufacturer: The Columbia Mills, Inc., 22 Fifth Ave., New York, N.Y.

(Continued on page 300)

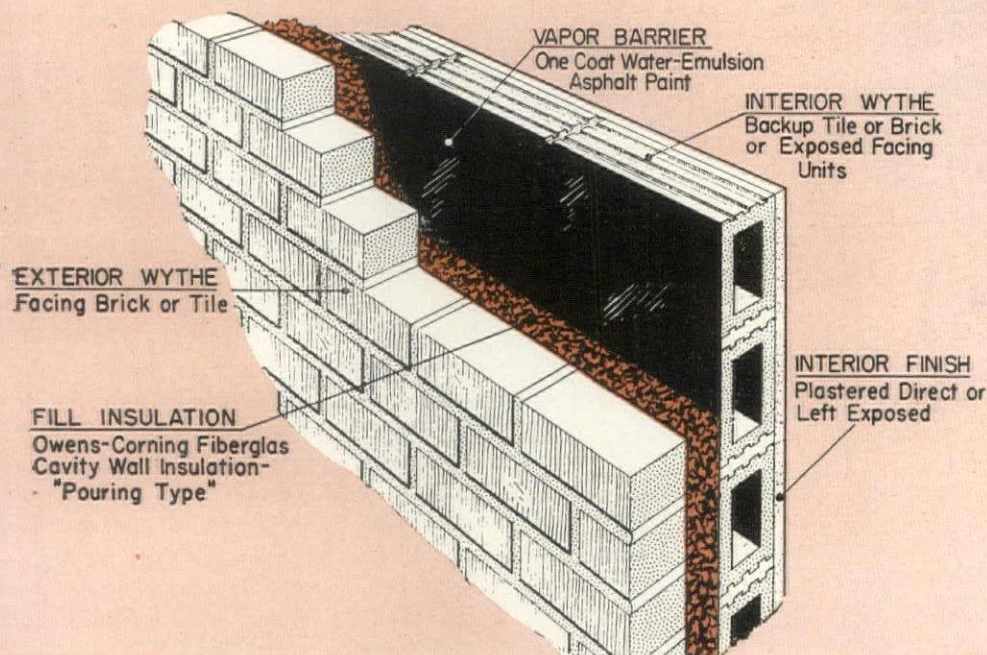
See how this new **SCR**^{*} INSULATED CAVITY WALL

*provides full insulation and
moisture-resistant construction
without furring or lathing*

It's insulated with Fiberglas^{**}
Cavity Wall Insulation—Pouring Type



SCR Insulated Cavity Wall
cuts usual heat loss to $\frac{1}{3}$



The new **SCR** Insulated Cavity Wall is the latest development in masonry construction.

It is insulated with Fiberglas Cavity Wall Insulation—Pouring Type, specifically developed by Owens-Corning Fiberglas Corporation for this particular wall.

The **SCR** Insulated Cavity Wall not only eliminates moisture penetration, but also provides the extra insulation so necessary for low heating and air conditioning costs.

This **SCR** Insulated Cavity Wall has a tested U value of .12.

It needs no furring or lathing. And it can be plastered directly, or interior surfaces can be left exposed.

For these reasons the **SCR** Insulated Cavity Wall makes it possible for you to design better *without* change in structural or code construction specifications—lets you give your clients "more house or building" at less cost.

If you have any questions, or desire additional information and factual data, our technical staffs are at your service. Just write us at Dept. MB-10 on your own letterhead.

*Trademark, Structural Clay Products Research Foundation
**Trademark, Owens-Corning Fiberglas Corporation



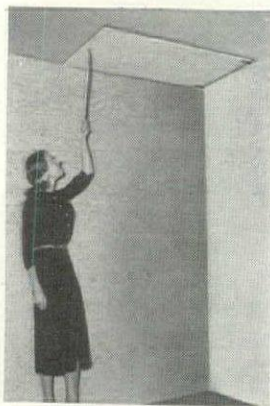
STRUCTURAL CLAY PRODUCTS INSTITUTE

1520 18th STREET, N. W., WASHINGTON 6, D. C.

PRODUCT NEWS

ECONOMY STAIRWAY nests in overhead space

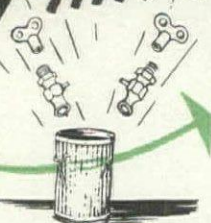
When costs squeeze footage in new or remodeling plans, the E-Z Way folding stair can be utilized to convert waste attic and garage space into needed living or storage quarters. Built in sections, the stair unit folds up into the overhead space so that no floor area below is sacrificed. A flush panel attached to the assembly closes off the ceiling opening. A hooked dowel rod is used to lower the stair, and a spring mechanism



Overhead space easily and safely reached with E-Z Way stairs.

makes it easy to retract. Safety features include a self-locking device which keeps the stair rigid when in use, a handrail, and non-slip treads on the steps. The E-Z Way model 18 for ceiling heights of 7 to 9' is made of fir plywood and sells for \$50, f.o.b. factory. The hardwood model 22, for 7 to 10' heights, is \$60. The firm also makes a disappearing ladder priced at \$24 for attic scuttle openings where alteration and installation expense must be held to a minimum. *Manufacturer: E-Z Way Sales, Inc., Box 300, St. Paul Park, Minn.*

LET'S THROW AWAY ALL KEY AIR VALVES



They're as old fashioned as THE FIRST FLYING MACHINES



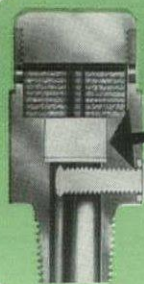
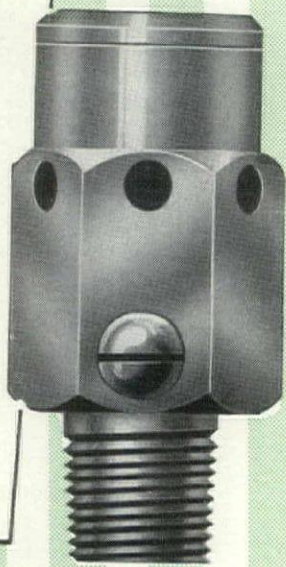
install TACO VENT

AUTOMATIC HOT WATER AIR VALVE

AUTOMATICALLY VENTS

RADIATORS, CONVECTORS AND BASEBOARD RADIATION ON HOT WATER HEATING SYSTEMS

NO MORE OLD FASHIONED HAND VENTING



NO ADJUSTMENT NECESSARY...

Just install it . . . and forget it!

SAFETY PLUG MEANS YOU'RE ALWAYS SAFE

Porous bronze plug safely controls water flow to valve mechanism

**Better Heating-
Better with Taco**

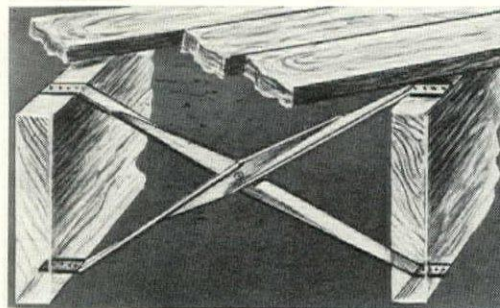


TACO HEATERS, Incorporated

137 South Street—PROVIDENCE 3, R. I.

METAL CROSS-BRIDGING strengthens floor joists, cuts construction time

By eliminating on-the-job sawing and fitting of wood cross-bridging, Chan-L-Cross metal braces speed floor construction and reduce labor costs. Made of 16 gauge strip steel, 3/4" wide, the new units allow more space between their centers and the floor joists for wiring and piping than do conventional wood supports. They have factory-drilled flanges which are simply nailed to the top and bottom edges of the beams. The flat ears do not obstruct laying of the subfloor and have sufficient nailing surface so that joists which are off center may be fastened as securely as those accurately placed. The braces will not separate from the joists when under load or as the lumber shrinks. They distribute the concentrated load to adjacent joists, helping to reduce



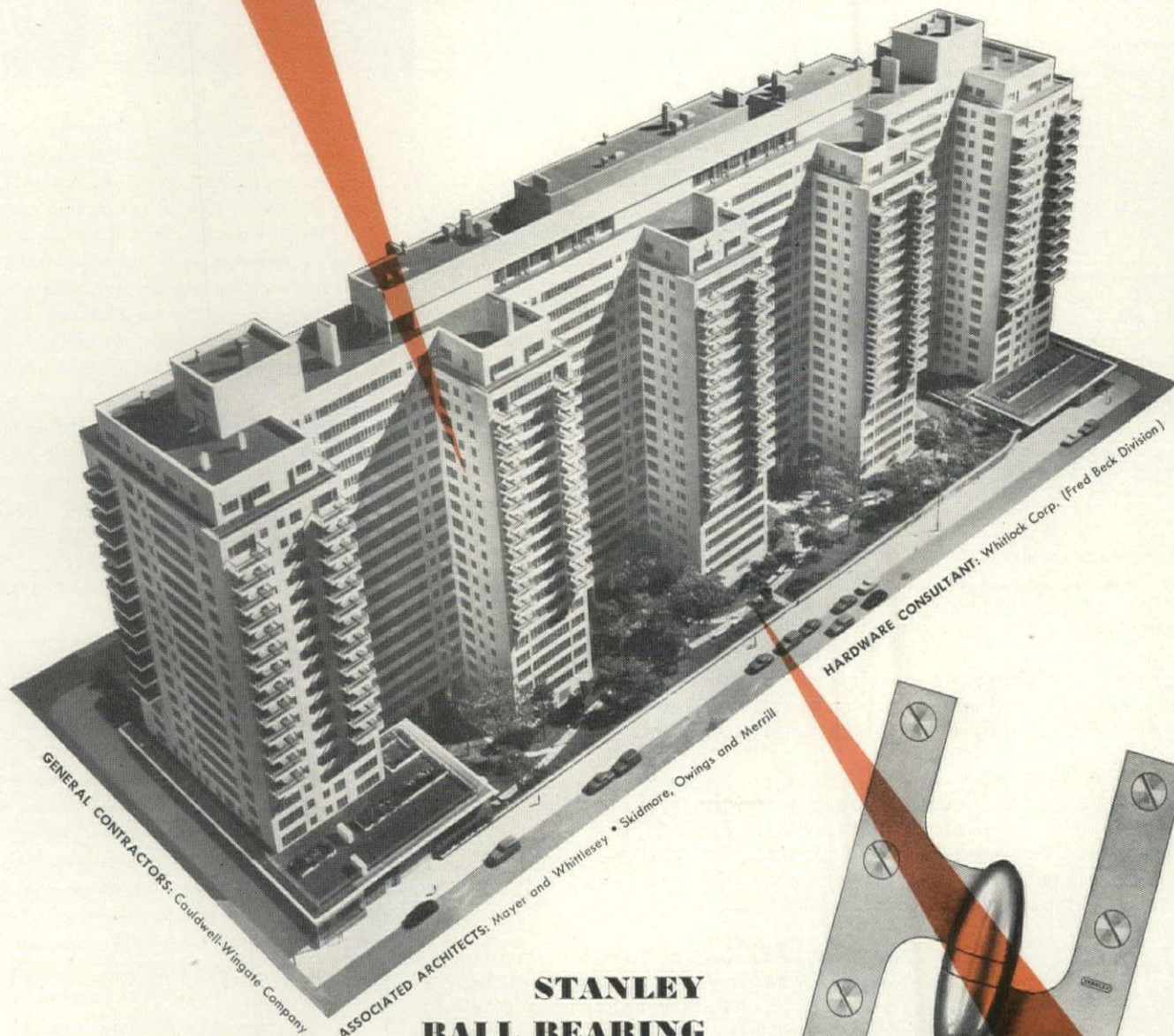
beam deflection. Coated with a rust-resistant finish, the steel bridging units hold their neat appearance where joists are left exposed. Junior Pro, the manufacturer, suggests that the product is suitable for arched ceiling construction.

Chan-L-Cross braces are made in three standard sizes for use with 8, 10 and 12" joists, and are packed in cases containing 150 units. Price to builders is 18 cents per pair.

Manufacturer: Junior Pro Products Co., 320 Morganford Rd., St. Louis 16, Mo.

In Manhattan House

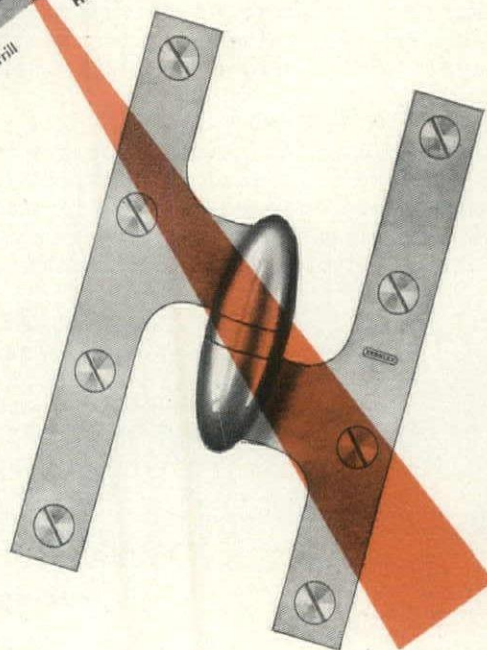
new ultra-modern 582-apartment dwelling



STANLEY BALL BEARING OLIVE KNUCKLE HINGES

Manhattan House, new apartment building owned and operated by the New York Life Insurance Company on New York's East Side, can boast a *score* of unusual features. One feature of this ultra-modern structure, however, will be as familiar to architects and contractors as bricks or mortar. When the doors of Manhattan House open this fall, they will open on Stanley Ball Bearing Hinges.

For generations this Stanley Olive Knuckle Hinge has been an architect's favorite. There is no smoother, more efficient means of opening and closing doors. To insure *lasting* client satisfaction, include Stanley Ball Bearing Hinges in your building plans. Then you've provided quiet, trouble-free door operation *for the life of the building*. The Stanley Works, New Britain, Connecticut.



REMEMBER . . . THREE HINGES TO A DOOR

STANLEY

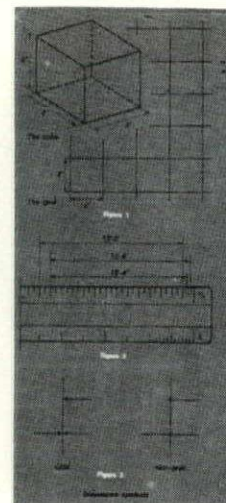
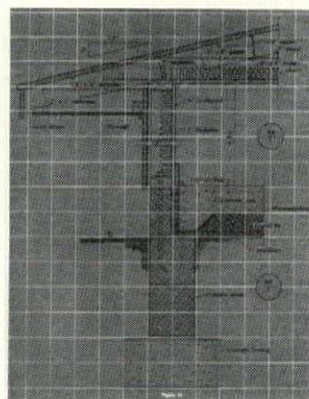
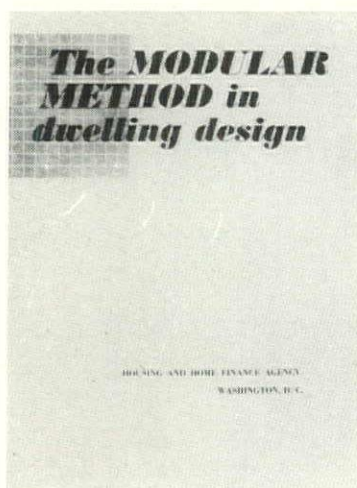
Reg. U.S. Pat. Off.

HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

TECHNICAL LITERATURE

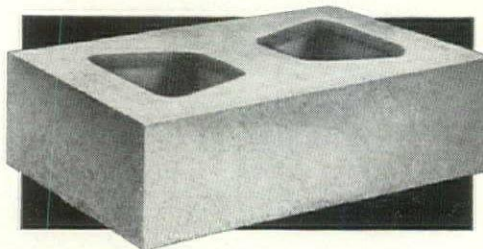
MODULAR COORDINATION. The Modular Method in Dwelling Design. Housing and Home Finance Agency. Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 54 pp. 8½ x 11". 30¢.

Aware of the time and material savings realized in construction through modular planning, the HHFA flings a white glove at the house designer. For, in his role as coordinator, the architect bears a large responsibility for lowering building costs.



BRIKCRETE

The World's Most Practical Masonry



Inherent structural values — planned beauty — low cost — ready availability. Considered in these terms Brikcrete qualifies as the preferred masonry where pride and price are running mates.

Brikcrete is for homes or housing projects. For apartments, motels, schools and other public buildings. For practically all types of commercial and industrial construction.

Squeezed out of Brikcrete price are freight and distribution — two of the biggest costs ordinarily present. For Brikcrete is a decentralized industry, processing local materials for local or nearby consumption. Savings effect drastic price reductions without sacrifice of basic quality.



TYPICAL of Brikcrete economy is a national average price of \$358.44 for sufficient units entering into the exterior 8" "solid" walls of the 37'x 24' "Brikadier" as illustrated. Equivalent square-foot price is available for any other building. Prices may vary slightly according to local conditions.

Factual Information

Two sizes: 8x12x3½; 4x12x3½ (laid up). Half and corner units for each size.

Self-contained insulation values because of a large void.

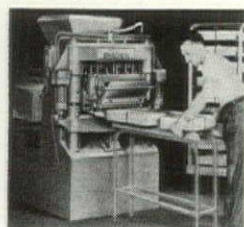
Meets all required compressive strength and absorption tests.

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buffs, browns, tan. Six pastel shades for interior walls.

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Write for A.I.A. File Folder and name of plant nearest you. We will cooperate in the short-haul procurement of Brikcrete for any size building or project, or arrange to establish job-site facilities where the size of the project so justifies.

Brikcrete Associates, Inc.
4681 Division Avenue South
Grand Rapids 8, Mich.

"Historically, and by training, the architect has been a dominant factor in the creation of man's physical environment. In the past, his designs have been executed out of bulk raw materials by the skilled handiwork of artisans and craftsmen. The introduction of mass production to the materials of building construction has presented a new challenge to the architect for the development of design and construction techniques efficiently utilizing mass-produced materials."

Manufacturers receive constant pummeling from the American Standards Association to make their products in modular sizes for the building industry's and their own welfare. Although many are cooperating, only a more general acceptance of the modular method by the architectural profession will bring this economic and philosophic approach to structure to full reality through the creation and application of integrated materials and equipment. "Sufficient modular materials are now available in masonry products, steel and wood windows, kitchen and other equipment to fully warrant modular planning and detailing by all architects. A bold adoption of these methods by the entire profession would rebound in availability of many auxiliary coordinated products and would in time relieve architects of much needless and repetitive detailing, permitting more time for study of basic planning and over-all design and resulting in work of higher quality."

Far more than a sermon (the plea, in fact, is contained on a single page in the back of the book) *The Modular Method in Dwelling Design* deals primarily with the drafting room phase of modular coordination. It presents explanation of the basically simple techniques for applying the modular method in working drawings for frame and masonry construction; and for integrating floor plans, elevations, and details. The illustrative material is well chosen; the text is concise, easy to follow. Wisely, the book is directed at the designer; for no matter how many sticks and stones come off assembly lines in prescribed sizes and shapes, it is his job to use them intelligently and imaginatively. The "creative" architect who still scoffs at any regimentation (grid, indeed!) cannot see the form intrinsic to structure. He may as well discard his T-square and triangle or, if a self-style Wrightist or Goffian, his compass. The most disciplined of the arts, architecture has as its essence, integration. A grid is not necessarily a girdle.—M.G.

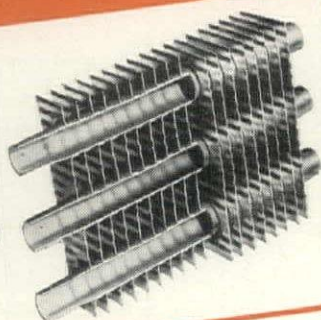
(Continued on page 304)

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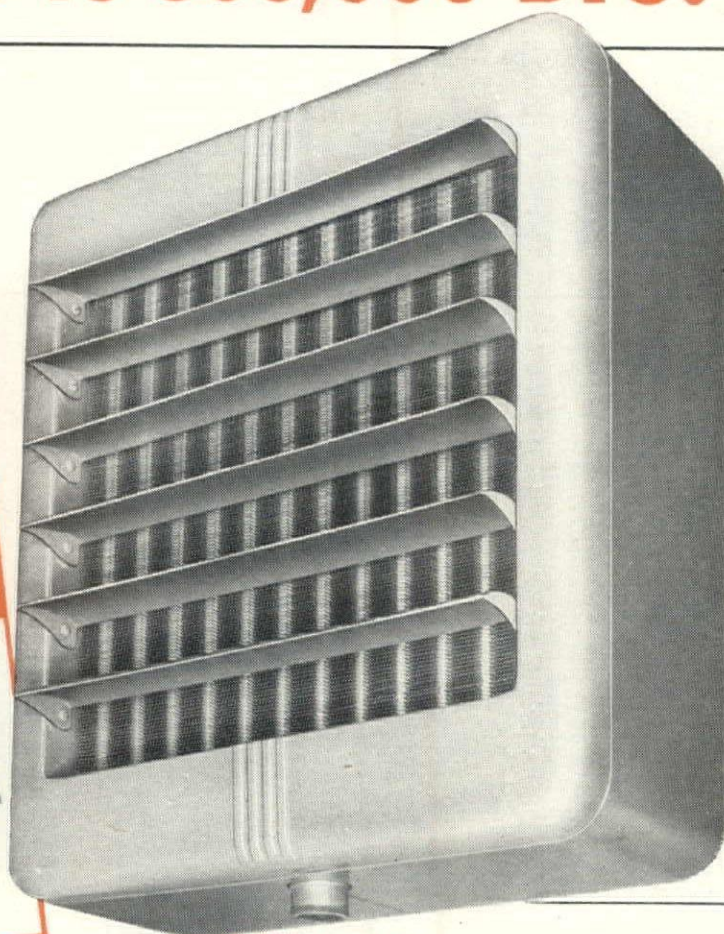
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Within the wide range of BTU capacities, you're sure to find McQuay Horizontal Unit Heaters to fit your needs. Every unit has the exclusive Ripple Fin Coil construction . . . with these advantages: more heat transfer surface, greater flexible strength, cleaner operation . . . flexible copper tube headers that accommodate unequal expansion and contraction. Tubes expanded into fins having wide, smooth collars, without the use of any low conductivity bonding agents, provide a permanent mechanical bond. The famous Ripple Fin Coil plus modern cabinet styling, quiet motor fan assembly and Test Code Ratings add up to maximum performance and trouble-free service. Get all the facts from the McQuay representative in your city; or write to McQuay, Inc., 1609 Broadway St. N.E., Minneapolis 13, Minn.

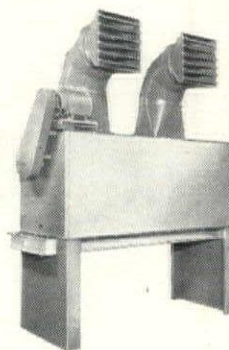
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DOWN FLOW UNIT HEATERS

This McQuay "vertical" unit heater, suspended near the ceiling, utilizes the warm air in that area and distributes it down to the floor level. No wasted heat, no cold spots. Four types of draftless diffusers available.



BLOWER TYPE UNIT HEATERS

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HEATING. Perimeter Heating Engineering Installation Manual. The Lennox Furnace Co., Marshalltown, Iowa. 36 pp. 8½ x 11". 75¢.

Economy and simplicity of installation of perimeter warm air systems have gained much popularity for this heating method which attacks heat loss at its principle outlet—cold outside walls. Written for builders and heating contractors, this manual tells in detail how to plan, lay out and install perimeter heating correctly in

homes with slab floor, crawl space, and basement construction. The text's typography is well chosen for legibility, and the heavy gloss paper should stand up under the constant thumbing the book will surely receive.

HEATING. Mor-Sun Suggested Design Procedure and Construction Details for radiant Warm Air Heat. Bulletin 51-7-A. Morrison Steel Products, Inc., Mor-Sun Furnace Div., Buffalo, N. Y. 6 pp. 8½ x 11".

Layouts of perimeter warm air heating systems for single story slab-on-ground houses with not more than 60,000 Btu heat loss are contained in the condensed manual and work sheet. Presented in addition to typical heating system designs are charts for measuring heat loss, warm air register sizing, return air branch and intake sizing, floor edge loss factor, register delivery in Btu's, return air sizing for room grilles and connecting ductwork; and details on return air plenum construction, furnace installation, and slab construction. The suggested design procedure is based on data gathered by the National Warm Air Heating and Air Conditioning Assn. as well as by Mor-Sun engineers in the field.

HEATING. How to Modernize for Comfort. Minneapolis-Honeywell Regulator Co., Merchandise Div., Minneapolis 8, Minn. 8 pp. 8½ x 11".

Zone control and other recent trends in home heating are reviewed in this illustrated booklet. Electronic control systems which feature an outside thermostat to anticipate weather changes are explained in understandable terms and a question and answer section clears up some common misconceptions about home heating.

STRUCTURAL GLASS. Modernize Your Home with Decorative Glass. Mississippi Glass Co., Angelica St., St. Louis 7, Mo. 12 pp. 9 x 5½".

Photographs of 28 residential applications of translucent corrugated glass reveal how effectively this glamorous structural material may be used in contemporary home design. The brochure shows closeups of six popular glass patterns and lists 15 other finishes which are available.

WOOD SIDING. Olympic Home Planning Ideas. Olympic Stained Products Co., 1118 Leary Way, Seattle 7, Wash. 16 pp. 8½ x 11".

A number of small home floor plans and photographs illustrate suggestions made in this booklet for building, remodeling and redecorating with Olympic factory-stained cedar products. The pamphlet points out that the prestaining process assures the homeowner of uniform, penetrating, protective coloring. Two new products are introduced in the publication: Texterior, knotty red cedar sidewall material for exterior and interiors which is vertically striated and tongued and grooved for easy application; and Parquet Pack, 16" squares of striated red cedar for walls and ceilings. Included, too, is a description of handsplit shakes and siding.

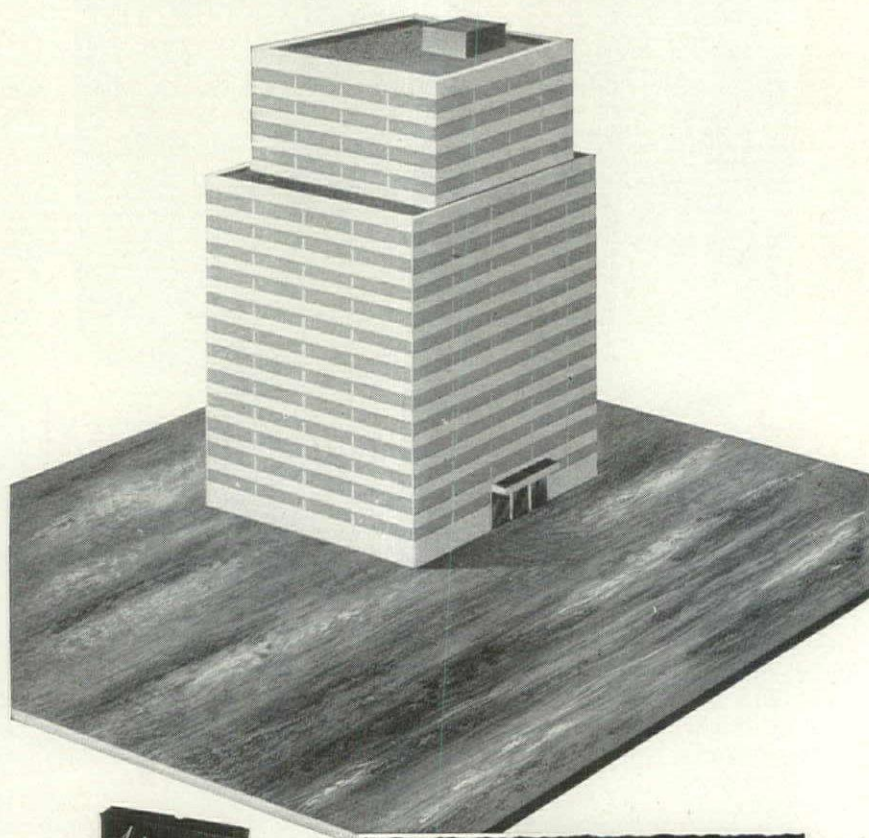
Another recent publication by the manufacturer, a four page folder, *New Color and Protection for Your Home with Olympic Stain*, features reproductions of the 16 new "Western" stain tones illustrated on a shake siding background.

LIGHTING FIXTURES. Steberlites, Bulletin 120-5. Steber Mfg. Co., Broadview, Ill. 4 pp. 8½ x 11".

This recent folder gives specification details of Steberlite cast aluminum lampholders for outdoor door illumination. Several new fittings added to the line are included in the bulletin.

(Continued on page 306)

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SAMPLES ON REQUEST

A free box of 4" x 4" samples of Amtico Flooring in standard ½" gauge and all 26 stock colors sent, with illustrated literature, on request. Dept. MB 5.

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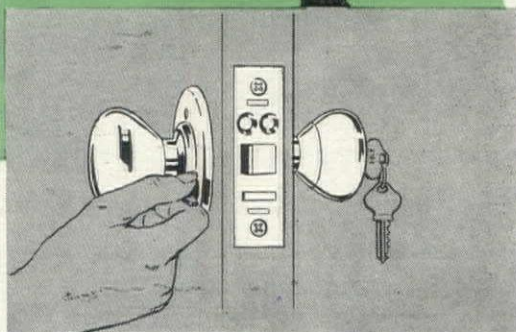
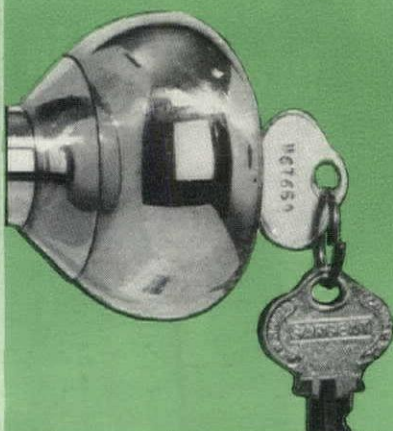
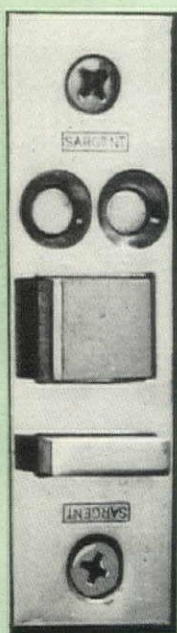
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the superior lock that is being specified by architects everywhere for schools and hospitals, hotels and office buildings.

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TECHNICAL LITERATURE

FLOORING. Vinyl Plastic Asbestos Floor Tile. Asphalt Tile Institute, 10 Park Ave., New York 17, N. Y. 9 pp. 8½ x 11".

The technical publication covers one of the newer types of flooring material which has become popular for home and industrial applications—vinyl plastic asbestos tile. Recommended specifications and a test method are given for the material for which no previous general specification has been available. The data indicates that this type

of resilient flooring has good dimensional stability and is highly resistant to oil, grease, alkali, and acid type solvents.

KITCHEN EQUIPMENT. Built-in Gas Cooking Units. Chambers Corp., Box HR 1, Shelbyville, Ind. 4 pp. 8½ x 11".

In answer to designers' and housewives' demands for functional cooking equipment in kitchen planning, Chambers recently introduced handsome sectionalized built-in gas cooking ranges and

ovens. This colorful specification brochure presents concise data on the units, pointing out that the new products are the first of their type to meet the safety requirements set up by the American Gas Association's laboratory for use with piped city gas or bottle or tank gas. Also provided are details on molding trim, bracing and other installation information of interest to the architect and contractor.

PAINTS. Synthetic Rubber Based Corrosion Control Coatings. Casey & Case Coating Co., Box 15, Maywood, Calif. 8 pp. 8½ x 11".

An authoritative presentation of the characteristics, properties, uses and methods of applying synthetic rubber resin based coatings is contained in this brochure. Described in detail are the manufacturer's damp-wall enamels, stucco masonry coatings, machinery enamels, and scuff-free floor finishes. These coatings, the book maintains, are formulated for maximum resistance to corrosion or erosion.

PLASTICS. Polyplastex Color Chart. Polyplastex United, Inc., 1385 Commerce Ave., Bronx 61, N. Y. 4 pp. 4¼ x 11".

When held to the light, this new color chart reveals the translucency of eight inserts of Polyplastex plastic and glass fiber material. The attractive textures, wide color range and moderate prices of the sheeting should make it effective for use as partition paneling and as diffusing device in lighting fixtures.

WINDOW SHADES. Guide for the Selection and Specification of Window Shades and Rollers. Stewart Hartshorn Co., 350 Fifth Ave., New York 1, N. Y. 16 pp. 8½ x 11".

Illustrated in two colors, this catalogue has been prepared to assist individuals who are considering window shade products for residential and commercial installations.

STEEL BARS. Ryerson Threaded Bar Service. Joseph T. Ryerson & Son, Inc. Box 8000-A, Chicago 80, Ill. 2 pp. 8½ x 11".

The bulletin offers data on size range, length, kinds of threads, bending, and types and finishes of the firm's steel bars.

CONSTRUCTION TOOLS. Thunderbolt Carbide Tipped Hammer Bit. New England Carbide Tool Co., Inc., Cambridge, Mass. 8 pp. 3½ x 6½".

Construction contractors are told how the firm's carbide tipped bits for pneumatic and electric hammers perform effectively when drilling holes under a variety of conditions, in hard concrete or granite.

FLOORING MAINTENANCE. Tennant Industrial Floor Machines. G. H. Tennant Co., 2530 N. Second St., Minneapolis, Minn. 4 pp. 8½ x 11".

How industrial floors (which receive the brunt of heavy foot and machinery traffic) can be cleaned, waxed and polished in a single operation is detailed in this illustrated bulletin.

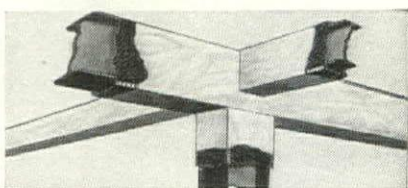


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The new, 48,000 sq. ft. Oakland Blue Cross office building was occupied only 195 days after ground-breaking! The plastering contractor on this high speed California job took over after another firm found the time limits too tough. Using Zonolite vermiculite Plaster Aggregate for the first time . . . he completed the job on time . . . kept costs below the estimate. In business 27 years, he had never seen such a large job go so smoothly . . . and Zonolite gets a good share of the credit.

Zonolite Plaster cuts handling time, is more easily mixed and applied. Droppings are fewer, workers are less fatigued using Zonolite. Weighing only one-tenth as much as sand plaster, it has almost 3½ times greater insulating value.

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Zonolite Fireproofing Slashes Dead Weight, Cuts Costs
Zonolite plaster gives you low cost, lightweight fire protection for steel beams, columns, floors and ceilings. Zonolite fireproofing has been accorded 4-hour fire ratings for numerous applications. Wherever you need maximum fire resistance . . . with lightweight and low cost—specify Zonolite vermiculite plaster aggregate.

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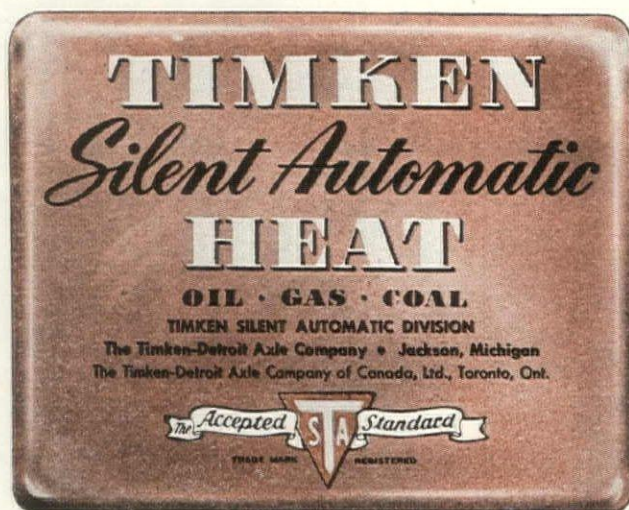
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93 models of conversion burners, furnace-burner units and boiler-burner units from which to select the *right* model for the homes you build. Water heaters, too!



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a kitchen of warmth
and friendly appeal



—OF COURSE IT'S OF WOOD
and by **KITCHEN MAID**

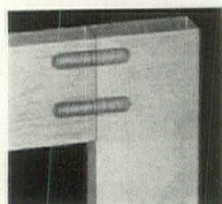
Featured by House and Garden in its April, 1951 issue, this kitchen captures much of the warmth and friendly appeal that are inherent in Kitchen Maid Cabinets of wood. It illustrates also, the beauty and flexibility of wood cabinets; how easily they may be adapted to the use of modern appliances such as the new built-in cooking units. Each year more and more architects and builders are specifying Kitchen Maid Cabinets in the homes they plan and build. The Flo-Line styling, fine furniture-type construction and many exclusive features of these cabinets make them first choice of millions of home buyers too. Specify Kitchen Maid for your next kitchen.

Your touch will tell you



Smooth, Flo-Line Kitchen Maid surfaces are warm and friendly to the touch. Rounded edges make cleaning easy.

Dowels are used to form sturdy joints at all important points.



Look for this sign in your dealer's window. It signifies his skill as a member of the nation's oldest kitchen planning organization.

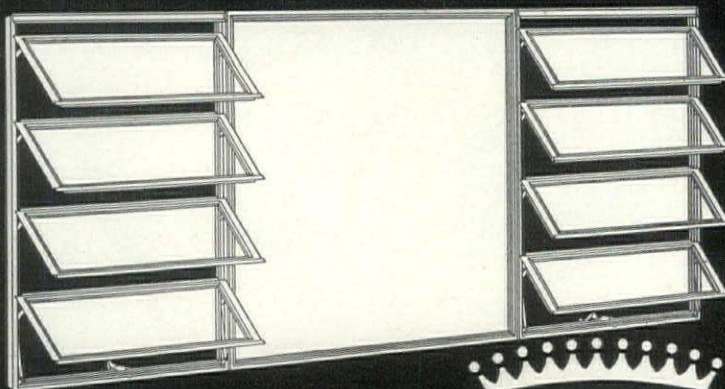
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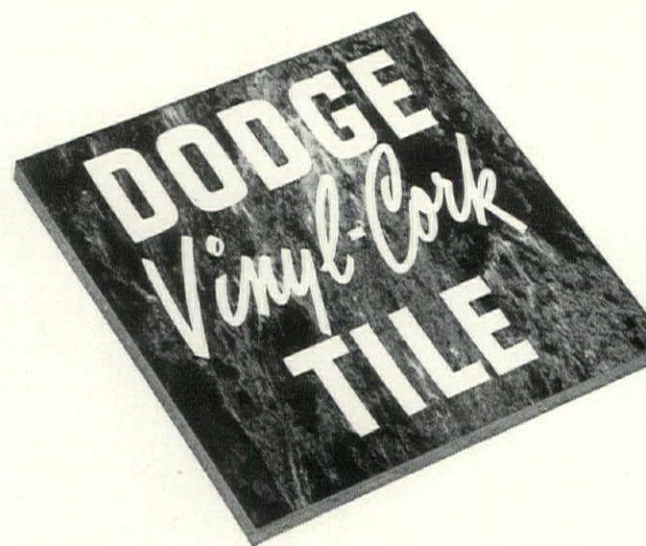
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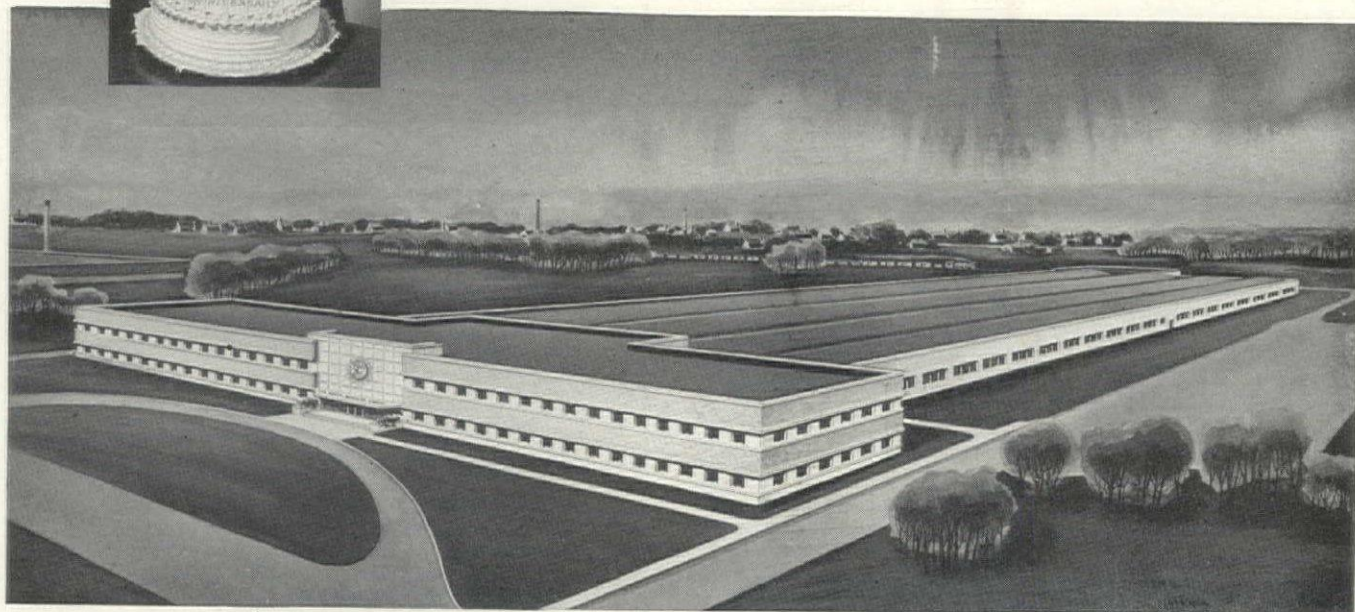
For detailed information and test data, see Sweet's File, Architectural 13g—or write for Do catalog.

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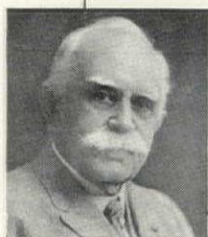
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... with his invention of the first all pneumatic system of temperature control and gradual acting vapor disc thermostat made an invaluable contribution to the modern science of heating, air conditioning and industrial process control.

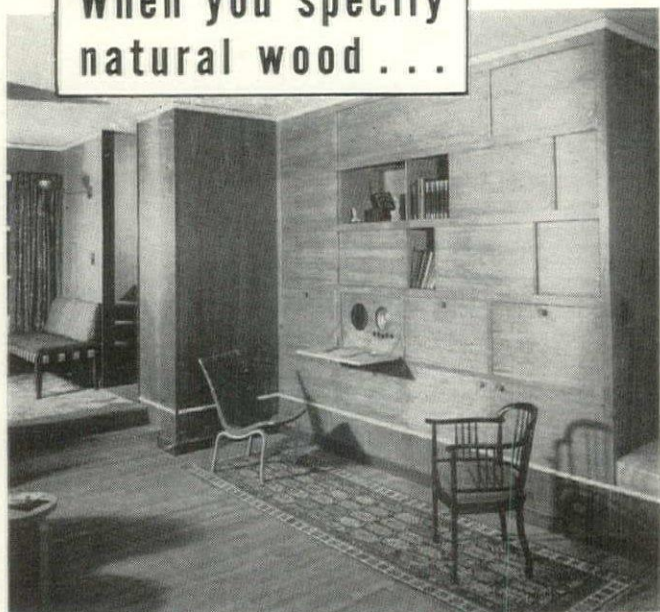


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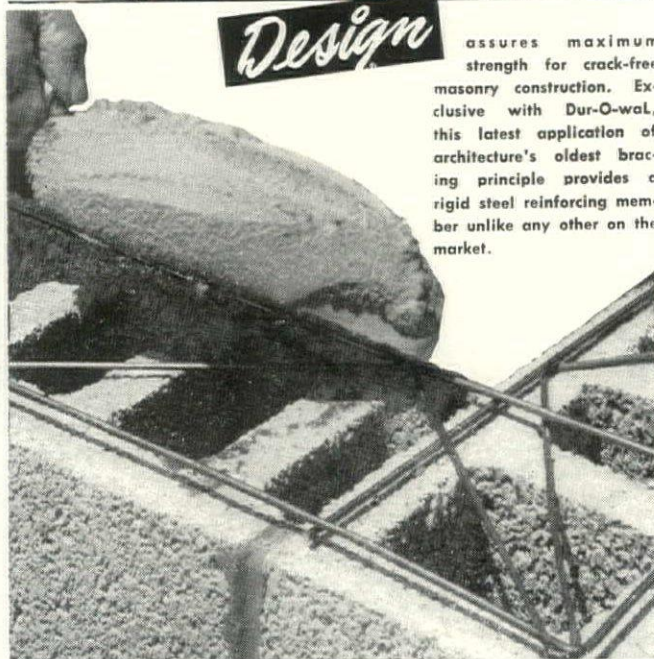
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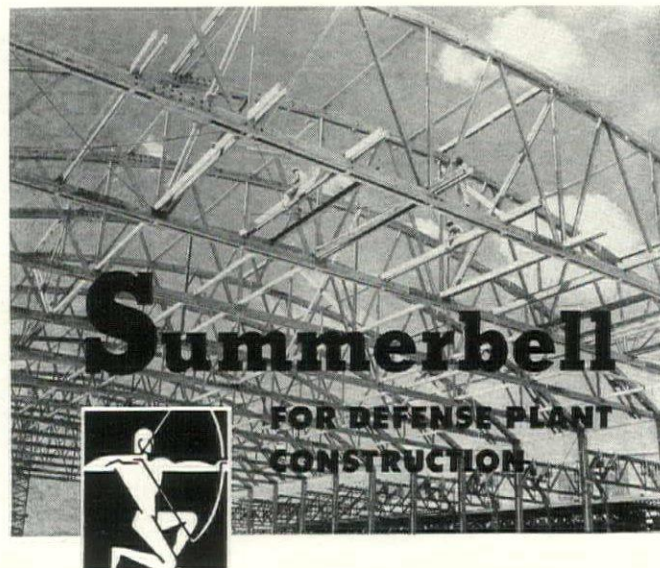
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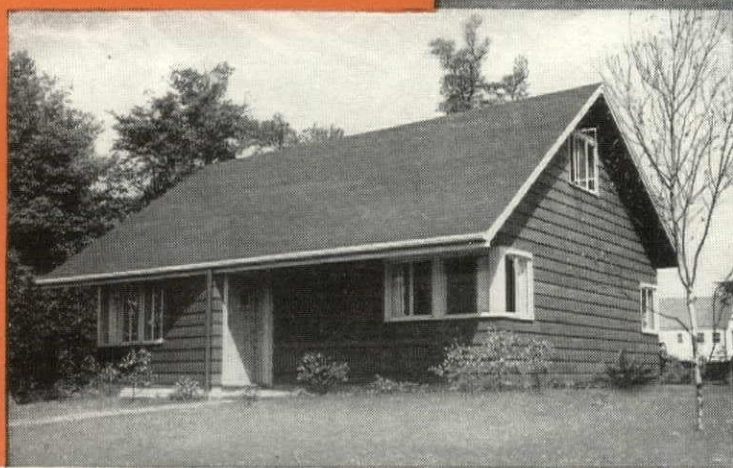
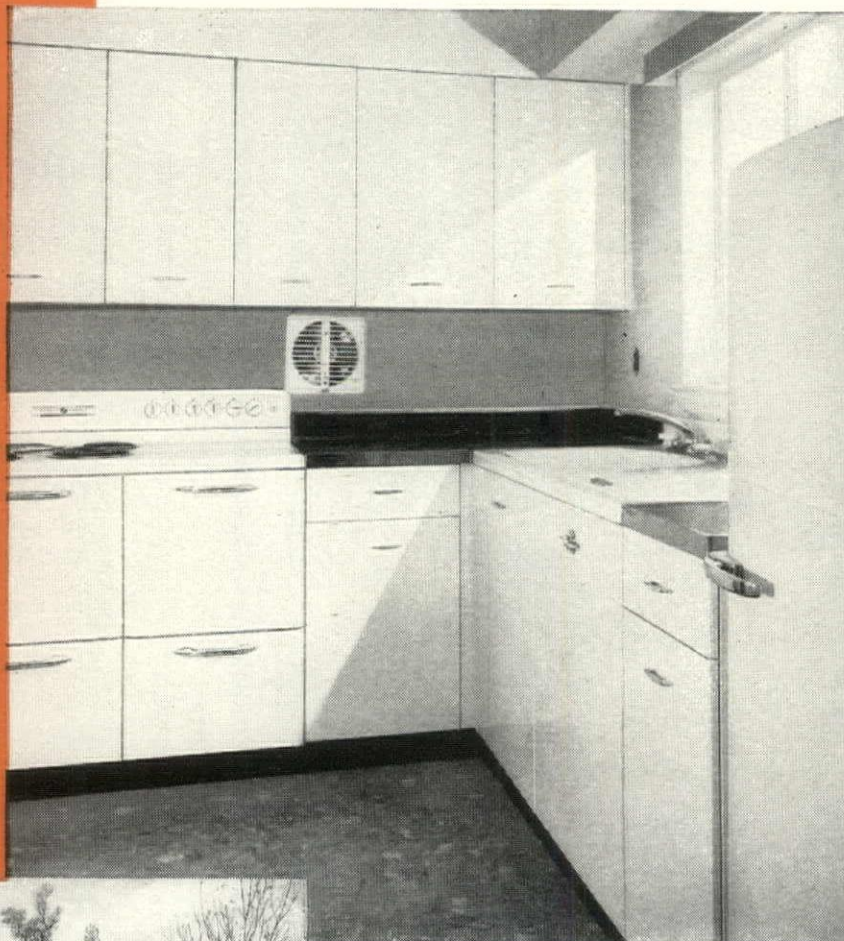
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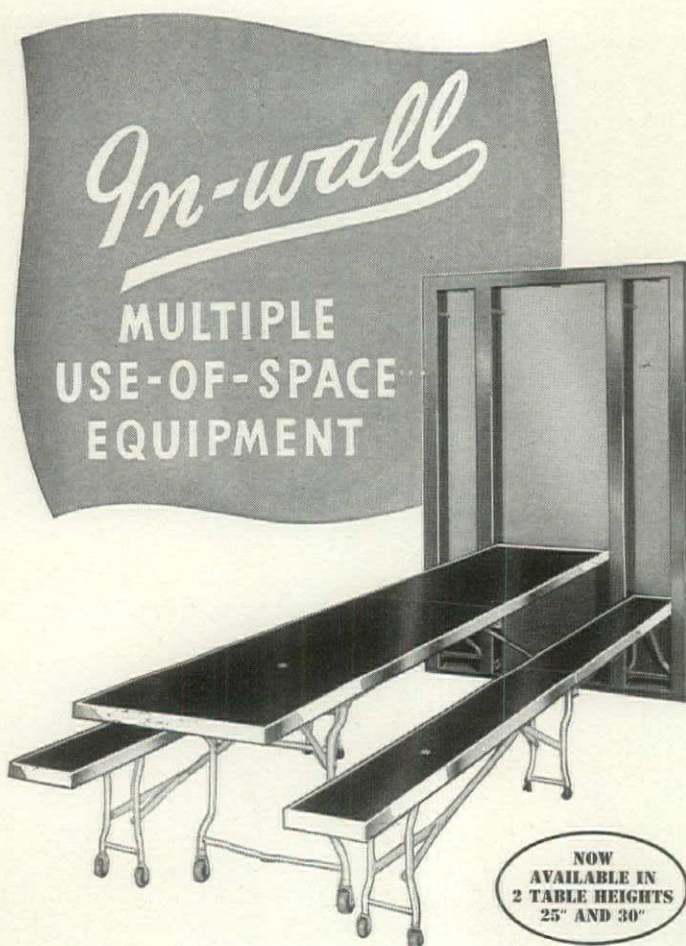


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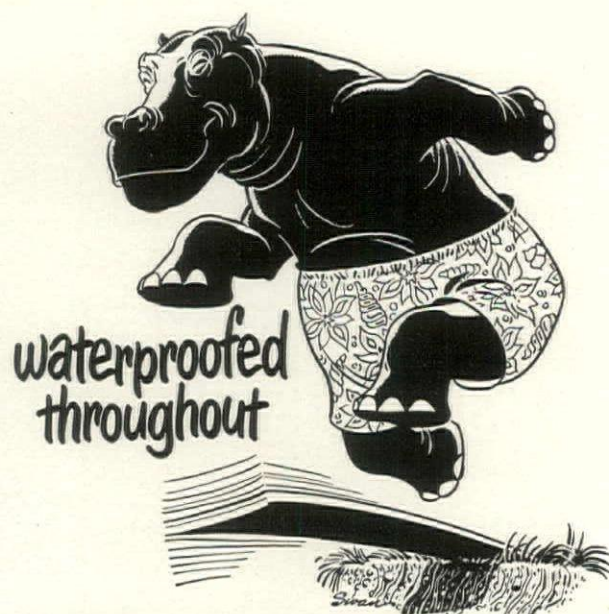
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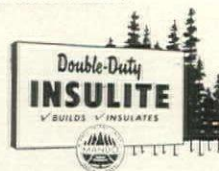
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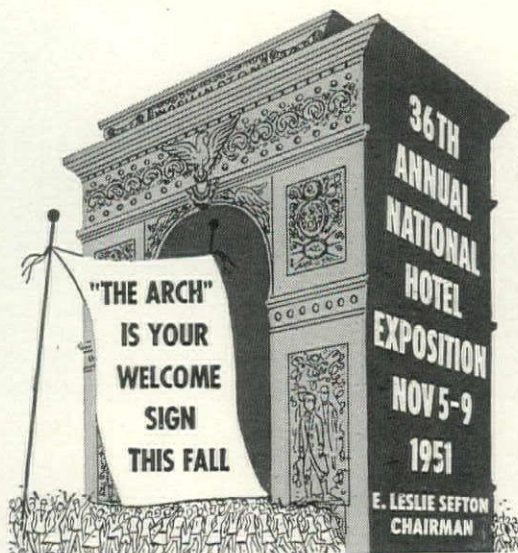


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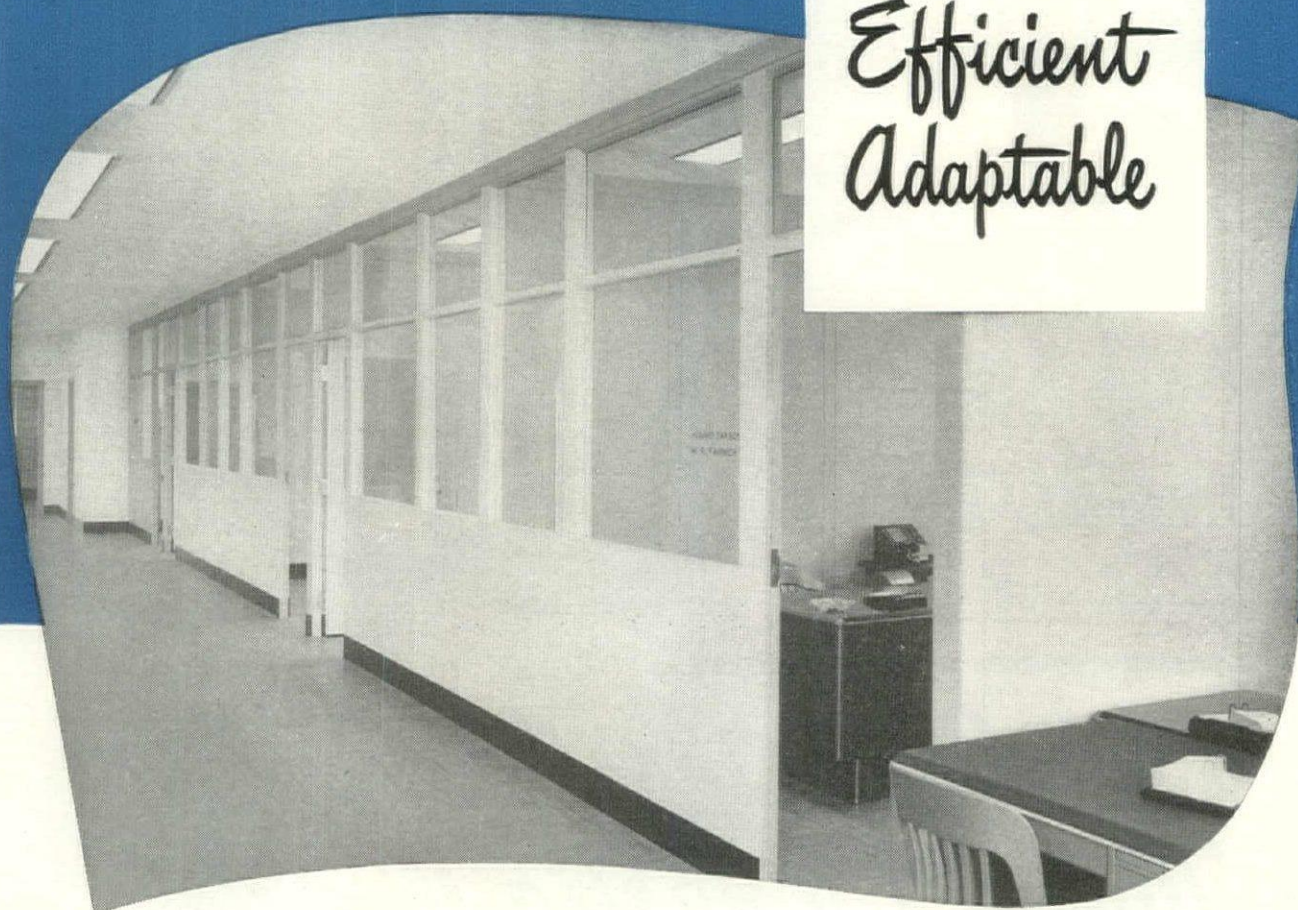
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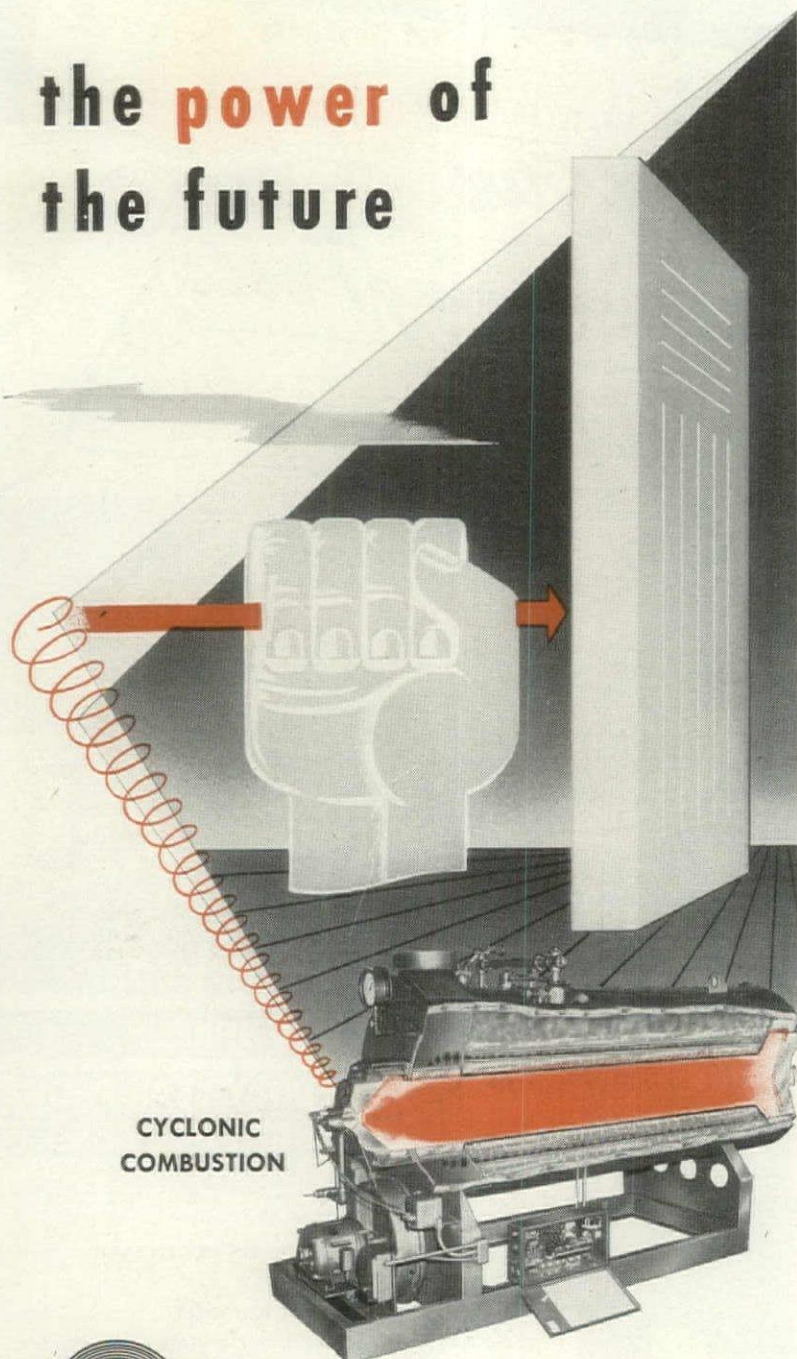


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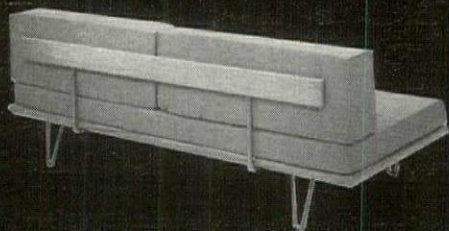
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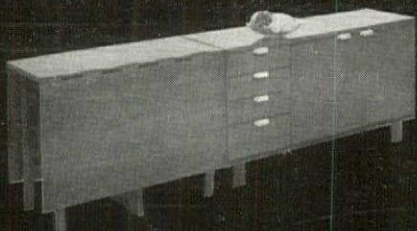


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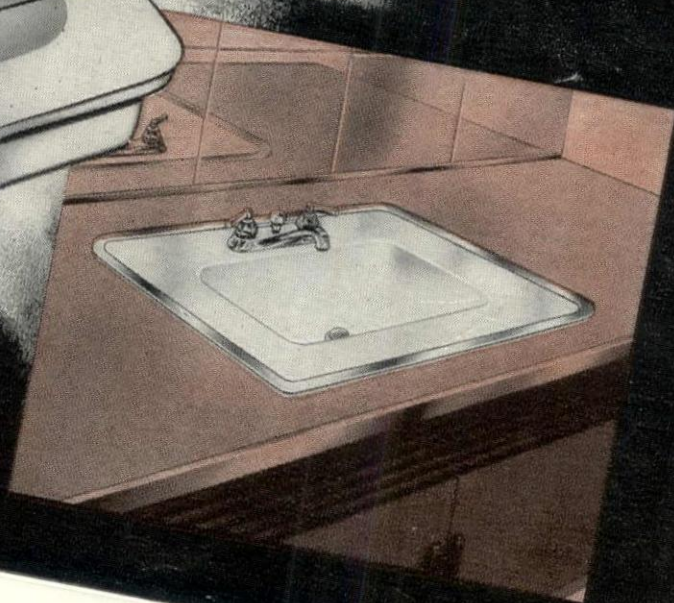
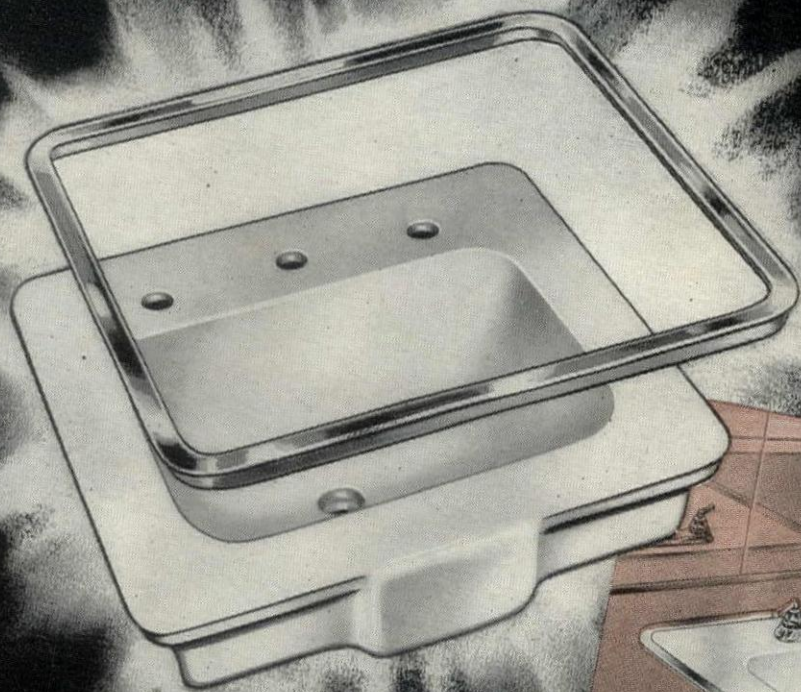
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