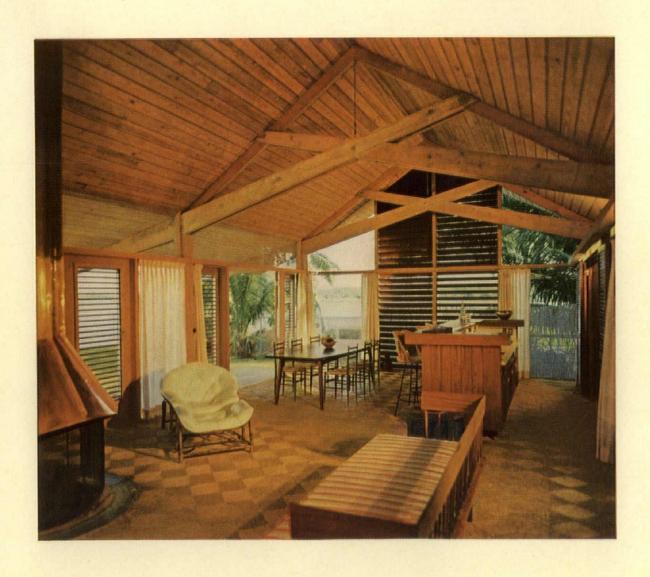
ARCHITECTURAL RECORD

Twenty of the year's finest architect-designed houses shown in 201 photographs, plans and drawings

RECORD HOUSES OF 1960



METALLIC CHIP IN SOLID VINYL TILE

another exclusive style in



FLOORS

Glistening gold, silver or copper metal chips in colorful, long-wearing solid vinyl add a distinctive touch where high style and glamour are paramount. For color selection, call your Kentile Representative or consult Sweet's File.

SPECIFICATIONS

Eight colors. Thickness: .080". Sizes: $9" \times 9"$ and $37" \times 37"$ untrimmed slabs. Special: $18" \times 18"$, and $36" \times 36"$.

Bright Gold, Bright Silver and Copper Feature Strip. Thicknesses: .080", 1/8". Sizes: 1/8", 1/4", 1", 11/2" and 2" x 36".



Because Architects Know NuTone Products Are Dependable...

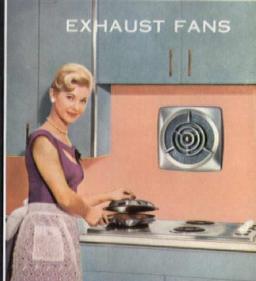
2 out of 3 NEW HOUSES INCLUDE NUTONE ELECTRICAL BUILT-INS!



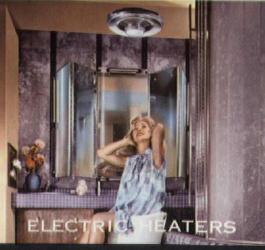




HOOD-FANS... FOR FRESH CLEAN AIR IN THE KITCHEN
EXHAUST FANS... TO GET RID OF GREASY COOKING ODORS
DOOR CHIMES... FOR A CHEERFUL EARFUL AT THE DOOR
INTERCOM-RADIO... A STEP-SAVER FOR BUSY HOMEMAKERS
BUILT-IN STEREO MUSIC... IN EVERY ROOM OF THE HOME
ELECTRIC HEATERS... FOR A "TOASTY-WARM" BATHROOM
BUILT-IN FOOD CENTER... FOR 6 BUILT-IN APPLIANCES







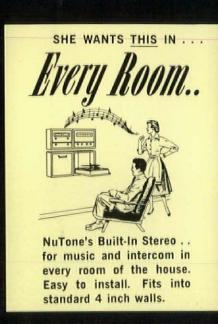


SPECIFY NuTone Built-Ins All Through Your House

3 NUTONE WAYS .. to please a woman









Housekeeping is easier with NuTone Built-Ins.. to save time and work. So luxurious.. and yet surprisingly low in cost.



HOOD-FANS
EXHAUST FANS
DOOR CHIMES
FOOD CENTER



A COMPLETE LINE of Electrical Built-Ins . . for Your Kitchens, Bathrooms . . and all through Your Homes!



INTERCOM-RADIO
BUILT-IN STEREO
ELECTRIC HEATERS
BATHROOM FANS



See Other Side



ARCHITECTURAL RECORD

PREFACE

MID-MAY 1960

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COVER:

RATNER HOUSE, Miami Beach, Fla. Robert B. Browne and Rufus Nims, Architects Joseph Molitor photo

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OF PARTICULAR ASSISTANCE TO THE EDITOR AND STAFF in preparation of this issue were: Herbert L. Smith, Jr., editor-in-charge; Grace M. Anderson, associate editor; Marjorie B. Noyes and Barbara L. Cash, cover and page design and drawings; Margaret F. Farmer, products and literature; Florence A. van Wyck, editorial production; Julia Lee,

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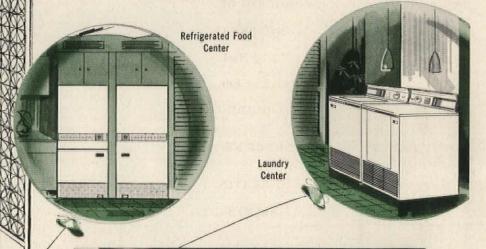
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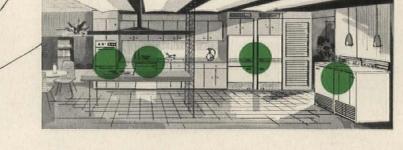
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How to "Holiday from Apron Strings" Kitchen

one light-hearted center at a time

Here, in handy, easy-to-use form, is your 1960 Frigidaire Planning Guide to more usable, salable kitchens. All information is organized to help you plan the way women think—in terms of time-saving, step-saving work centers: Food Preparation Center, Kitchen Clean-up Center, Refrigerated Food Center, Laundry Center, and even a Kitchen Comfort Center. A feature-packed consumer version of this Planning Guide appears in many leading home building annual and semi-annual magazines. Your best prospects are directed to bring their ideas, along with this Planning Guide, to you for a modern, built-in "Holiday from Apron Strings" kitchen.





Built-Ins and Free-Standing Appliances... Dimensions and Ideas! These 4 pages can help you...

Here's how—all the facts you need, including sizes, colors, models, and dimensions of Frigidaire Appliances to aid you and your architect. Advanced appliances designed to make women homehunters linger longingly in your model kitchen. No matter what price homes you build or remodel, new Frigidaire completeness of line gives you more flexibility, makes it possible for more families to enjoy modern living—Frigidaire-style!

Why choose Frigidaire?

- "Sculptured Sheer Look" styling that blends in beautifully with standard wood or steel cabinetry.
- Most models available in 5 lovely-tolive-with Kitchen Rainbow Colors: Sunny Yellow, Mayfair Pink, Turquoise, Charcoal Gray, and Aztec Copper—plus Snowcrest White and Satin Chrome.
- Products of General Motors, engineered and built to be a lasting improvement to your home.
- Factory-trained Service through Frigidaire dealers everywhere.

1960 FRIGIDAIRE Planning Guide

in your new home or remodeled kitchen!

She'll feel like a queen

Food Preparation

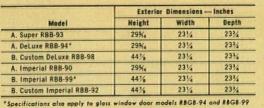
Kitchen Clean-up Center

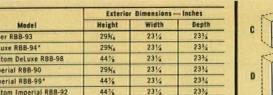
Good lookin', good cookin' and

Eight new wall ovens to fit any home, any budget!



Now easiest-ever oven cooking! Three beautiful new double-oven models! Controls are easy to read and reach. Automatic Cook-Master Control, simplest-to-set ever, turns oven on, cooks dinner, turns off when foods are done. Famous Frigidaire Spatter-Free Broiler Grill (standard on RBGB-99, RBB-99 and RBB-92, optional all others) for broiling time and again without cleaning the oven.











Frigidaire Wall Ovens are designed to end cleaning drudgery forever! Left - Imperial RBGB-99, (shown with Imperial Cooking Top RBB-101) and Custom DeLuxe RBB-98 Double Ovens offer two Drop-Leaf Doors that lower all the way down for easiest cleaning. Above left-DeLuxe RBB-94 (illustrated) and Super RBB-93 feature single Drop-Leaf Doors. Above center-Imperial RBB-90 has space-saving French Doors that take up to 10" less opening space. Above right -Custom Imperial RBB-92 has French Doors on top oven, Drop-Leaf Door on the lower oven. RBB-92, RBGB-99 and RBB-99 models offer exclusive easier to clean Pull 'N Clean lower oven.

Frigidaire Features for gracious living. Eight double and single oven models only 231/4" wide. Optional Automatic Rotisserie for all models except Super RBB-93. Meat Tender Roast Control and Broiler Grill Control included on Imperial RBGB-99 and RBB-99 and Custom Imperial RBB-92. Time Signals and Automatic Signal Lights on most models. Models RBGB-99 and RBGB-94 also have glass window doors. Simplified installation-RBB-90 and RBB-92 are mounted in minutes with new lever-action clamps, all others install in a jiffy with con-cealed screws. All models available in 5 Frigidaire Kitchen Rainbow Colors or Satin Chrome finish.



	Wall Opening Dimensions - Inche					
Model	Height	Width	Depth			
C. Super RBB-93	281/2	211/4	231/4			
C. DeLuxe RBB-94*	281/2	211/4	233/41			
D. Custom DeLuxe RBB-98	44	211/2	23%			
C. Imperial RBB-90	281/2	211/4	231/41			
D. Imperial RBB-99*	44	211/2	233/41			
D. Custom Imperial RBB-92	44	211/4	231/41			

*Specifications also apply to glass window door models RBG8-94 and RBG8-99 for optional Ratisserie, add 1/4" to depth.

Cooking Top Convenience, Finger-tip Controls



Frigidaire Built-In Cooking Tops are available in 5 Kitchen Rainbow Colors or Satin Chrome. (Super RBB-102, Satin Chrome only.) Super model installs with springclips. All others mount with two clamps. Optional Hudee Ring, except RBB-102.

Super RBB-102: 3 Standard 6" Units and 1 Standard 8" Unit. Aluminum Drip Bowls. DeLuxe RBB-100: 2 Standard 6" Units and 2 Standard 8" Units. Porcelain Enamel Drip Bowls. Imperial RBB-101: 1 Speed Heat Unit, 6". 1 Heat-Minder Unit, 8". 1 Standard 6" and 1 Standard 8" Unit, Porcelain Enamel Drip Bowls. Custom Imperial RBB-201: Same Units as RBB-101. Remote Controls. Time Signal. Porcelain Enamel Drip Bowls.

Cooking Top Dimensions -- inches



		1	Depth Below	Count	er Top ning
Model	Width	Depth	Counter	Width	Depth
Super RBB-102	23	21	31/4	221/4	20
DeLuxe RBB-100	321/4	201/4	31/4	31	19
Imperial RBB-101	321/4	201/4	31/4	31	19
Custom Imperial RBB-201	321/4	201/4	31/4	31	19

Fold-Back Surface Units for Extra Space





Frigidaire Fold-Back Surface Units install on the counter-top, fold back out of the way (even while hot). Smart Satin Chrome. Single 2-Unit (24"), or 4-Unit (48") Double Assemblies. 8" Heat-Minder and 6" Speed-Heat Units on RBB-82 and RBB-84.

DeLuxe RBB-81: 1 Standard 6" Unit. 1 Standard 8" Unit. Porcelain Enamel Drip Bowls. Left-Hand Control Panel. Imperial RBB-82: 1 Speed-Heat Unit, 6". 1 Heat-Minder Unit, 8". Porcelain Enamel Drip Bowls. Right-Hand Control Panel. Custom Imperial RBB-84: 1 Speed-Heat Unit, 6". 1 Heat-Minder Unit, 8". 1 Standard 6" Unit. 1 Standard 8" Unit. Porcelain Enamel Drip Bowls. Left and Right-Hand Control Panels.

Fold-Back Surface Unit Dimensions - inches



	de Chicago de la constante de		Width			eight	Depth		
	Model	Overall	Each Fold-Back Section	Control Panel	Overall	Units in Operating Position	Closed	Units in Operating Position	
	DeLuxe RBB-81	2315/4	201/4	31/2	14%	4	513/4	17%	
9	Imperial RBB-82	231%	201/4	31/2	14%	4	51%	17%	
1	Custom Imperial RBB-84	47%	201/4 (2)	31/2 (2)	14%	4	51%	17%	

1960 FRIGIDAIRE Planning Guide

such a joy to use and clean!

Eleven brand new Ranges...eight with Pull 'N Clean Ovens!



40" Model RCI-75-60 with Double Pull 'N Clean Ovens!



40" Model RD-20-60, the most range for the money!



30" Model RCI-39-60 with a Frigidaire only—French Doors!



30" Model RD-38-60, many top-line features for a budget kitchen!

If she prefers a free-standing range for her new or remodeled kitchen, 1960 Frigidaire Automatic Electric Ranges offer cooking with confidence and cleaning without slaving! All 30" and 40" models feature the new "Sculptured Sheer Look" to make them the most feminine ranges ever. Clean, simple design eliminates dirtcatching cracks and crevices, gives that built-in look without extra construction expense. All are available in gleaming Snowcrest White, and many in choice of five Kitchen Rainbow Colors.



Features to make any woman feel like a Queen!

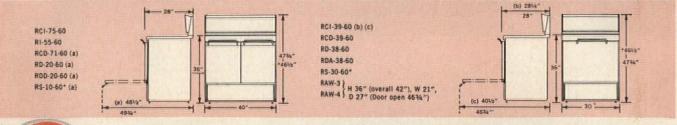
Pull 'N Clean Ovens slide out like a drawer for easiest cleaning. On all Custom Imperial (both ovens on RCI-75-60), Imperial, Custom DeLuxe (both ovens on RCD-71-60), and DeLuxe except RDA-38-60.

Cook-Master Automatic Oven Controls on most models.

Automatic Heat-Minder Units and extra-fast Speed-Heat Unit on RCI-75-60, RCI-39-60, RI-55-60 and RCD-39-60.

Infinite Heat Surface Unit Controls (except RAW-3, RAW-4). Lift-up, Stay-up Hinged Units and Removable Porcelain Enamel Drip Bowls on all models.

Built-In Electric Clock and Separate Electric Time Signall on all models except RS-10-60, RS-30-60, RAW-3, RAW-4. All Frigidaire Ranges are wired for 115/230—120/240 volt, 3-wire service. 120/208 volt models are available on special order. Models operating on other electrical frequencies are available for export.



Kitchen Clean-up Center

Frigidaire Dishwashers

Swirling Water Action scrubs and sanitizes every dish!

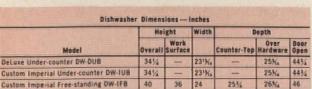


Custom Imperial Dishwasher-Sink DW-ISB

Here's real kitchen convenience! Front-loading Roll-to-You Racks glide out smoothly, load easily, hold a full day's dishes, pans and silver for average family of four. Swirling Water Action scrubs, rinses and sanitizes every dish from between the racks. No dish can hide!

Frigidaire Features for a "Holiday from Apron Strings"

Custom Imperial Models feature two fresh detergent washes, and three rinses (including final "Spots-Away" rinse) plus heated-air drying. DeLuxe Model has one wash. "Snap-on" lower panel speeds installation and service. New 1000-watt Radiantube Heating Unit for better washing and drying. New Drain-Guard and Strainer keeps food particles from being re-deposited on dishes. Under-counter models available in 5 Kitchen Rainbow Colors plus Snowcrest White and Satin Chrome. Free-standing in Snowcrest White only (colors optional). Custom Imperial Dishwasher-Sink Combination in Mayfair Pink, Turquoise, Sunny Yellow and Snowcrest White.





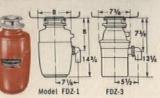








FRIGIDAIRE DISPOSERS 30% to 35% faster! Quiet—insulated jacket (FDZ-1) and rubber cushioned connections. Fits most 3½" drain-opening sinks.



1960 FRIGIDAIRE Planning Guide

Frost-Proof Refrigerators and Freezers

for the handlest, finest foodkeeping possible!



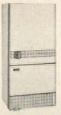
Guaranteed* Foodkeeping without Frost! "Sculptured Sheer Look" styling! Frost is stopped before it starts! No frost to defrost! So practical for recessed "built-in" installations. Many models in 5 colors or Snowcrest White.

Frost-Proof Freezer Section (FPI-15B-60, FPI-13B-60, FPI-13T-60, FPD-13T-60) Flowing-Cold Refrigerator Section (FPI-15-B-60, FPI-13B-60, FPI-13T-60, FPD-13T-60, FI-13T-60, FD-13T-60, FD-13-60)

Cycla-matic Defrosting in refrigerator section** Completely separate Zero Zone Food Freezer** Completely separate Zero Zero Food Freezer Flowing-Cold Méat Tender (FPI-15B-60, FPI-13B-60, FPI-13T-60, FI-13T-60) Flip-Quick Ice Ejector (FPI-15B-60, FPI-13B-60, FPI-13T-60—optional in all other models) Removable Full-Width Metal Shelves all models.

**FPI-15B-60, FPI-13B-60, FPI-13T-60, FPD-13T-60, FI-13T-60, FD-13T-60, FD-13-60, FD-11-60.

FRIGIDAIRE REFRIGERATORS



FPI-15B-60

FRIGIDAIRE UPRIGHT FOOD FREEZERS

4 Full-Width, Full-Depth Shelves. "See-Thru" Removable Grille Fronts tilt down to become loading shelves (UFPI-16-60 and UFI-15-60). Glide-out Basket Drawer(s) (except UFD-10-60 and UFD-12-60). 5 Full-Width Removable Door Shelves (4 in UFD-12-60). Adjustable Cold-Control.

*Frigidaire Frost-Proof Guarantee-Without any cost to owner or user, at any time within one year from date of delivery, Frigidaire will make all necessary adjustments to the Frost-Proof Refrigerator-Freezer or Food Freezer to prevent accumulation of frost!



- wo	Refrigerators	H	W	MD.	B	DD*
	Super SA-9-60 SS-9-60 S-9-60	571/4 571/4 571/4	24 24 24	26%	2811/4 2811/4 2811/4	473/4 473/4 473/4
	Deluxe DA-11-60 D-11-60 D-13-60 FD-11-60 FD-13-60 FD-131-60	64 64 64 64 64	28 28 32 28 32 32 32	31¼ 35¼ 31¼ 35¼	281% 281% 281% 281% 281% 281%	521/4 521/4 561/4 561/4 561/4

Refrigerators	H	W	MD.	D	Do.
Imperial FI-13T-60 ††	64	32	351/4	2811/4	561/4
Deluxe Frost-Proof FPD-13T-60	64	32	34%	2811/4	561/3
Imperial Frost-Proof FPI-13T-60 H FPI-13B-60 H FPI-15B-60 H	64	32 32 32 32	351/4 351/4 351/4	281% 291/6 291/6	561/2 57 57

Freezers	H	WT	WD'	D	DD.
DeLuxe UFD-10-60 UFD-12-60 UFD-15-60 UFD-21-60	64 64 6914 70	28 32 32 36	29¾ 33¾ 33¾ 43¾	291/4 291/4 301/4 321/4	53 57 581/2 651/4
DeLuxe Frost- UFPD-16-60	Proof 69%	32	331/4	30%	581/2
Imperial UFI-15-60	691/4	32	351/4	30%	581/2
Imperial Fros UFPI-16-60	t-Proof 6934	32	351/4	30%	581/2

[Upright Food | | |

Frigidaire Automatic Washers and Dryers

No matter what she'll wash and wear...she'll feel like a Queen!



Designed for satisfaction ... a "Three-Ring Agitator" Washer that bathes deep dirt out without beating! And a perfectly matched "Wrinkles-Away" Dryer. Equip your homes with the washer that's rated No. 1 for All-Around Performance by the U.S. Testing Co., Inc.!* Many models available in choice of 5 colors or Snowcrest White.



426V4"H

Washer and Dryer Dimensions

- x Overall Height varies as follows: Custom Imperial Washer and Dryer 45" Imperial Washer and Dryer 45" Custom DeLuxe Washer and Dryer 4334" DeLuxe and Super Washers and Dryers 42"
- The Frigidaire Washer proved best of 6 leading automatic washers in controlled laboratory tests. Report No. 63243, dated January 26, 1960.
- ††55" (width—Custom Imperial pair) †30" for Custom Imperial Dryer



FRIGIDAIRE STEREO-COOLING

a new dimension in room air conditioning that gently surrounds you with cool, dry, quiet comfort . . . now available in three smartly-styled Imperial models (AI-100, AI-100M and AIR-100). Attractive "thru-the-wall" application is easy with low-cost "pre-installation" kit.

Frigidaire reserves the right to change specifications and prices, or to discontinue models, without notice.

13 High-Capacity Mode Model	High-Capacity Models—3 Cabinet Sizes Model Width Depth Height				
Imperial Al-100, AIR-100*, Al-100M Custom Deluxe	26	181/4	16	8,000 to 10,000	
ACD-100L, ACD-100, ACDR-100*, ACD-120†	26	181/4	16	6,000 to 12,100	
DeLuxe AD-100L, AD-100M, AD-100	25	1534	201/8	6,000 to 9,500	
Super AS-100L	25	153/4	201/8	6,000	
Heavy Duty Imperial AI-150, AI-200	26	371/8	167/8	14,100 to 16,500	

* "All-Seasons" models with cooling and heating.
† "Lone Star" model provides continuous cooling and dehu-midification even when the weather is mild and humid.

* NEMA Standard CNI—1958

FRIGIDAIRE Advanced Appliances designed with you in mind

For more information, and detailed individual specification sheets ask your Frigidaire Builder Representative, Dealer or write FRIGIDAIRE Division, Dayton 1, Ohio.

PLANNING FOR HOME LIGHTING

BY NOEL S. FLORENCE, Chief Designer, Architectural and Lighting Division, Lightolier, Inc.

The image of a house grows in one's mind as the plans progress. As time goes on we begin to imagine ourselves within its walls. We unconsciously see the interior as a luminous environment. We must associate the mechanics of lighting with this image or we may be disappointed with the final result. There must be a plan for the lighting just as there is a plan for the spaces.

Make a plan, then choose the equipment carefully. Consider the lighting effectiveness of the equipment before you consider the appearance of it. Imagine the equipment in place and decide on switching or dimming arrangements. Be generous with the budget for lighting. We live by light and it effects our physical and spiritual well being. Light is as important as plumbing. It is an essential part of a building and can add a great deal to our pleasure in it.

Types of Light

To be specific about the total lighting effect, let us divide it into three basic "plays" of light. To visualize a light play we must not think about the equipment which produces it. We must concentrate our minds on the effect. Three light plays (adapted from Richard Kelly's terminology) are: Focal Glow (a concentrated pool of light), Ambient Luminescence (an overall shadowless spread of light), and Play of Brilliants (a jewel-like sparkle of pin points of light).

Focal Glow is the pool of light that commands attention and creates interest. It fixes the gaze and tells people what to look at. It is the campfire of all time, and we gravitate toward it because our eyes can see better within its glow. In the home, Focal Glow is created by a great variety of recessed or surface fixtures and by portable lamps.

Ambient Luminescence is the general shadowless light that minimizes the importance of all things. It creates a sense of freedom of space. It is usually reassuring and restful. It is a spread of light rather than a pool of light. It is created by washing light colored walls, ceilings or draperies with light and by using large area light sources.

Play of Brilliants is a myriad pin-

points of light that stimulate the spirit, charm the senses and sharpen the wits. It is the sparkle of silver or the shimmering of a chandelier.

Every lighting effect can be analyzed in these terms. It enables us to make a rough specification which can later be translated into actual equipment requirements. We can rough out the lighting with symbols marked in on the floor plan, such as "F" for Focal Glow, for Ambient Luminescence \triangle for Play of Brilliants.

Quality and Quantity of Light

The first rule is to avoid excessive contrasts and brightness: (a) Focal Glow should be cushioned with Ambient Luminescence, (b) the high intensity sources used for Focal Glow should be positioned, directed and shielded so that the actual source will be invisible or of low brightness in the normal field of view. For reading they should also be positioned so that reflected glare (as from a shining page) does not bounce back into the reader's eyes. Complete lack of glare is not always of prime importance when people are in an environment for a relatively short time.

A second rule for comfortable lighting is to have enough light. When the eyes are really working, as for studying or sewing, more light will ease their task. The illumination on a cloudy day outdoors ranges from 200 to 1000 foot-candles but we can see very well with much less than this, depending upon what we are looking at. The minimum by test and experience for a study desk is 70 footcandles, for prolonged sewing, 100 footcandles. For reading or writing, the minimum is 30 footcandles and for kitchen work surfaces, 50 footcandles. For general lighting in the kitchen or bathroom, the minimum is 30 footcandles whereas the minimum for general lighting in other areas of the house is 10 footcandles. The footcandle is a measure of the intensity of the light falling on the surface and approximate values can be inserted where Focal Glow areas are shown on the lighting plan.

Choice of Equipment

The chart on page 9 has been drawn up to simplify the choice and

although it cannot cover all possibilities, it does provide some guide posts. Numbers and letters in the text will refer to row and column on the chart.

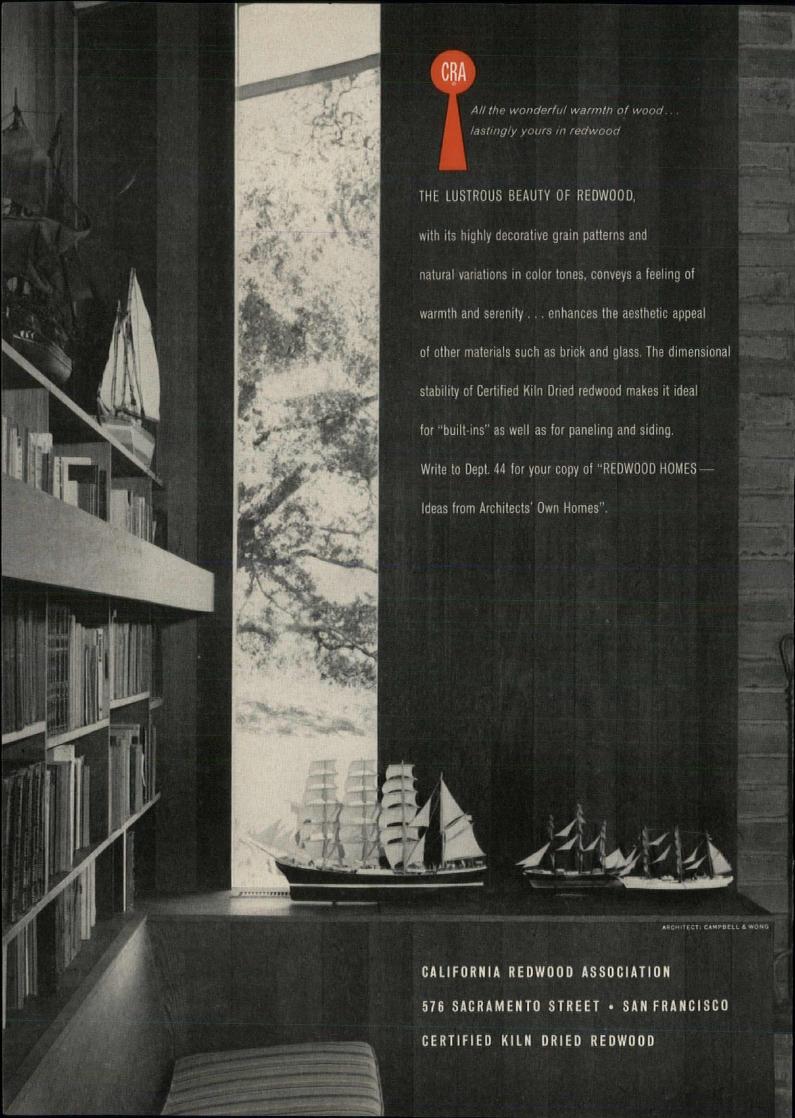
All lighting equipment controls light in one way or another. In the table, various kinds of lighting equipment are listed roughly in the order of their light distribution pattern. Those with the most concentrating distribution are at the top and those with the widest distribution at the bottom, as shown in column C. The angles shown give a rough indication of the spread of light from the equipment. The angle is the included angle at the apex of the cone of light when the intensity of light at the edge of the cone (on a horizontal plane) is half of the maximum intensity (on the same horizontal plane). To create Focal Glow, we must either use equipment for the concentrating or medium distribution (1,2,3) or we must bring the source quite close (2 to 4 ft) from the plane we are lighting (6,7,10). Otherwise the light will be spread over too great an area and the Focal Glow affect will be lost.

To achieve Ambient Luminescence, we can use bullet fixtures pointed upwards to the ceiling or towards the wall, we can use wall washing fluorescent fixtures or we can use strip lights or downlights behind a valance to wash draperies with light. The important thing about Ambient Luminescence is to create large areas of low intensity illumination. Any method that we can devise for throwing light fairly evenly over a light colored surface will do this.

A Play of Brilliants can usually only be achieved by buying a piece of equipment specially designed to do this. It should have a lot of small light sources and possibly crystals or other reflecting media to increase the apparent number of sources by reflecting them. Some of these units also have a strong sense of downlight for illumination.

Most naked light sources are too bright to look at for comfort. However, if we stand directly underneath a source, we will not see the brightness unless we look up. Our eyebrows behave like eye shields to protect us

continued on page 9



PLANNING FOR HOME LIGHTING

continued from page 7

from the overhead light. But as we back away the light source comes into our field of view and at about 55° from the vertical, the brightness will begin to be uncomfortable.

Lighting equipment controls the

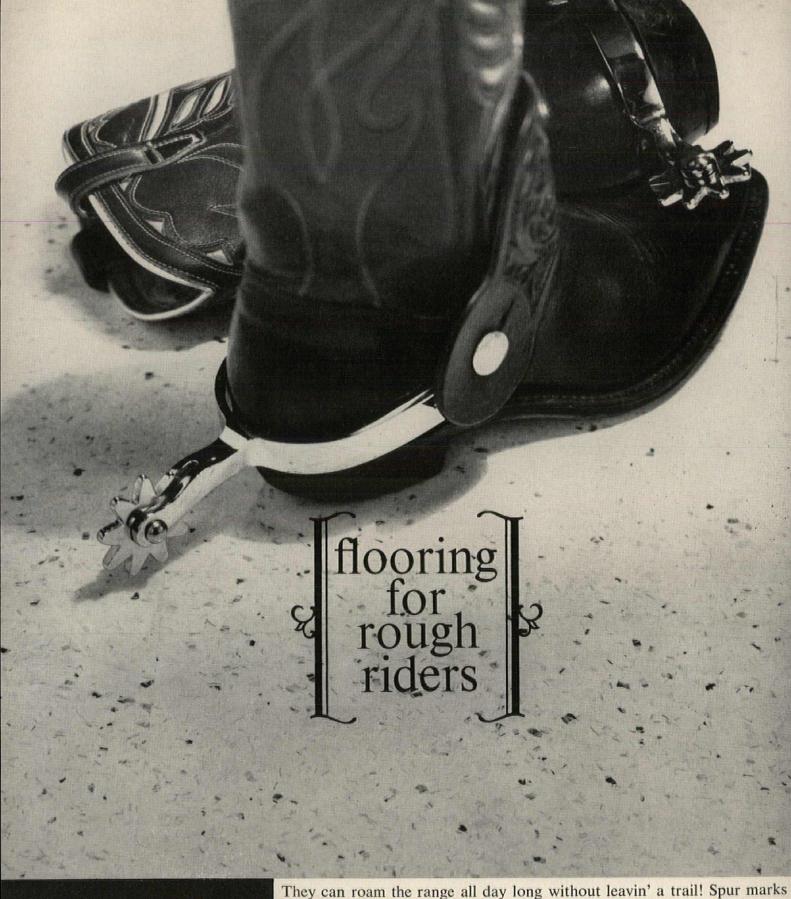
brightness in varying degrees by redirecting the light rays (with reflectors and lenses) by blocking them (with baffles or louvers) or by the diffusing over a comparatively large luminous area (with translucent

glass or plastic). When equipment is referred to as having low brightness, it does not mean that it gives off little light. Such equipment may or may not provide intense light down-

continued on page 28

"GUIDEPOST" CHART FOR SELECTION OF LIGHTING EQUIPMENT

A	В	C	D	E			E I	F			
DESCRIPTION	SKETCH	DISTRIBUTION	MAXIMUM ADJUSTMENT IN USE	W THE	B =	WATTAG	E (3/60 NESS A	T 55°	TIVE VALUES EE 60 WATT LAMPS) CTLY UNDER UNIT		
1	-A	CONCEN- TRATING			W	75	150	Mark.			
BAFFLE DOWN-LIGHT			NONE	RECESSED	В	LOW	LOW				
DOWN-LIOTT		200	NONE	SURFACE	FtC	130	260		AT 6 FEET		
2		CONCEN- TRATING			W	30	150				
MULTIPLIER DOWN-LIGHT			NONE	RECESSED	В	LOW	LOW				
DOWN-LIGHT		/30%			Ft-C	10	75		AT 6 FEET		
3		MEDIUM			w	100	150	200			
ELLIPSOIDAL DOWN-LIGHT	1205		NONE	RECESSED	В	Low	LOW	LOW			
BOWN-LIGHT	7	/ 50° \			FtC	30	45	60	AT 6 FEET		
4	\sim	MEDIUM			w	75	100	150	115 213 315		
LENS LIGHT	77	\wedge	NONE	RECESSED	В	HIGH	HIGH	HIGH			
		/ 60°/			Ft-C	9	18	30	AT 6 FEET		
5 FLUORESCENT		MEDIUM			w	2/40					
LENS WITH WARM WHITE	1000		NONE	RECESSED	В	LOW	Till to		10000000000000000000000000000000000000		
DELUX TUBES		\ e0.	NONE	SURFACE	FtC	30		5.84	AT 6 FEET		
6	一点	WIDE	NONE HOR, VERT.	SURFACE PENDENT	W	75	3/60				
SHADES WITH CLOSED TOPS,		700	SWI HOF		HOR, VERT. SWIVEL	PIN-UP POLE-LAMP	В	MEDIUM	MEDIUM		
DIFFUSER BOTTOMS				HOR. SWIVEL SWIVEL	FLOOR LAMP TABLE LAMP	FtC	50	70	B IS	AT 2 FEET	
7	0	WIDE	SWIVEL	SURFACE	w	60	75	100			
SWIVEL "BULLET"			SWIVEL VERT.SWIVEL	PIN-UP POLE-LAMP	В	HIGH	HIGH	HIGH	TO SERVICE STATE OF THE SERVIC		
BULLET	101	/ 70° \	SWIVEL HOR. SWIVEL	TABLE LAMP FLOOR LAMP	FtC	35	45	55	AT 2 FEET		
8		WIDE			w	100	3/60	4/60	Shark San Maria		
DIFFUSING		\wedge	NONE	RECESSED	В	HIGH	HIGH	HIGH			
INCANDESCENT	53	/ 70° \	NONE	SURFACE	FtC	6	10	14	AT 6 FEET		
9 FLUORESCENT		WIDE	TO BE STO		w	1/40	2/40	6/20			
DIFFUSING WITH WARM WHITE	2003		NONE	RECESSED	В	MEDIUM	MEDIUM	MEDIUM			
DELUX TUBES		/ 70°	NONE	SURFACE	FtC	8	16	24	AT 6 FEET		
10	(1-1)	WIDE	VERT. HOR.	PENDENT	w	100	3/40	150	LIGHT FROM TOP GIVES		
SHADES WITH				PIN-UP	В	MEDIUM	MEDIUM		AMBIENT LUMINESCENCE FROM BOTTOM, FOCAL GL		
OPEN TOP	11		HOR.	TABLE LAMP	FtC	35	65		AT 2 FEET		
11	1 0	WIDE		A CONTRACTOR OF THE PARTY OF TH	w	40					
FLUORESCENT WALL WASHER	6	X	NONE	SURFACE	В	LOW					
WITH WARM WHITE DELUX TUBE	N .	/			FtC	60		71721	AT 2 FEET		
12 FLUORESCENT		WIDE			w	40	WANTED STATES		ALSO USED FOR FOCAL		
REFLECTOR STRIP LIGHT		/	NONE	SURFACE	В	LOW		THE REAL PROPERTY.	GLOW UNDER CABINETS		
WITH WARM WHITE DELUX TUBE	0		NONE	PENDENT	-		S ON CO				



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FURNISHINGS, UNITY AND SPACE

BY EDWARD LARRABEE BARNES, A.I.A.

Adapted from a speech by Mr. Barnes for the New York Chapter of the National Home Fashions League

First, I want to say something about the word "fashion"-I have mixed feelings about the word as used in architecture and decoration. In so far as "fashion" signifies change, I do not object; in fact I am all for it. However, avoidance of boredom is hardly a proper motivation for change. Change and styles should be based on something more than novelty. For example, in painting we can recognize periods and styles and points of view which shift and evolve from time to time. The good artist does not change his style in an effort to "be different," or "be original," or to "achieve recognition." Rather, he changes his style from an inner conviction of some new direction that he wants to explore.

It seems to me that when we talk of style and fashion and change, we must think of motivation. We want free invention, growth and development. We do not want change simply for the sake of novelty. To be more specific, it is the commercial side of "fashion" that makes me uneasy because I am continually attempting to separate the genuine from the phoney. There is real pressure on our product designers to be novel, to create fads, sometimes to plan the obsolescence of a product so that it will have a short life. Fortunately in the field of home furnishing the distortions resulting from sales pressures are far less acute. Nevertheless, they are present, and it would be naive to pursue our subject without facing the fact. The average consumer is flooded with advertisements and magazine articles on trends and home furnishing tips. And in the mass market the styles in furniture fluctuate from year to year to keep things moving. It is small wonder then, that a well furnished New York apartment is frequently a tentative hodge podge of various styles-Japanese, Italian and Swedish with some American modern. The ordinary citizen may think he is a world collector and a man of taste, but most often he is buying dilluted imitations. His apartment is eclectic, and in some way, peculiarly related to Victorian times when possessions were a sign of status.

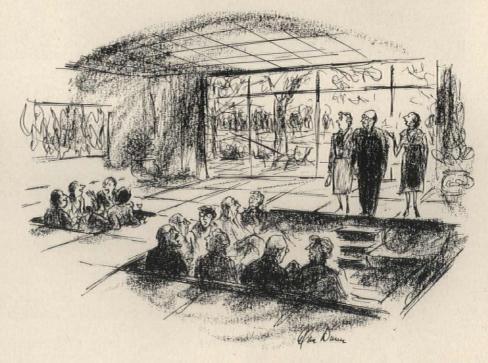
In architecture we have our pioneers and we have our followers. Who would have thought in 1940, 20 years ago, that Mies van der Rohe, an extremely austere and purist designer of elegant pavilions who had few actual buildings to his credit, would today have so marked an esthetic influence on students, on architects, on teachers, and-God save the mark-on the real estate men, in every city from New York to Los Angeles. In furniture one thinks of Breuer, Aalto, Le Corbusier, Saarinen, Eames and many other explorers, not all of whom are well known. It seems to me that if we are to talk seriously of unity between architecture and home fashions, we must look forward towards the most advanced point of view, regardless of its commercial acceptability at this mement.

Furniture Versus Space

It is a fact that almost all bonafide modern architects would say that the average contemporary interior is too cluttered. Only a few weeks ago George Nelson (who after all is both an architect and product designer) in a speech at the Chicago Merchandise Mart said that he had spent all

his designing life trying to eliminate extraneous furniture. He argued for built-ins and recalled his early efforts with storage walls. You will also recall the famous statement by Mies van der Rohe, "Less is more," a statement which precipitated a violent attack by one of the shelter magazines. Many years ago someone asked Frank Lloyd Wright about chair design-what were his ideas? Of course. Wright had designed many chairs, but on this occasion he gave a delightful reply-"the trouble," he said, "was with people-they should either lie down and rest, or stand up on their feet and work. The in-between posture was essentially ugly.'

Now, why do architects take this perverse attitude? Why do we always vote for simplicity and elimination of detail? What is it that we see in a space when we have taken everything out of it? The answer to this is simple—what we see is the space itself. Space is the single most important element in architecturenot walls, or columns, or ceilings or details. We architects think in terms invisible volumes—sometimes contained, sometimes loosely defined -and the objects that are in the space are of great concern to us. The placement of a line of flagpoles



"That one is for small talk."

-Drawn for the RECORD by Alan Dunn



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continued from page 11

in a public square and the height and size of a set of dining room chairs are one and the same problem. Whenever an object is placed in space, the space is for the better or the worse. What do we care if the chairs are carved imported Italian. To us it is more important that the height of the backs and the height of the ceiling are in harmony.

Now if all our ceilings were high, the height of the chairbacks would be relatively unimportant. And if all our rooms were spacious, the bulk of furniture would not loom as a problem. But this is not so. We are not building palaces with great halls 100 feet long. We are building bedrooms just big enough to sleep in, and dining rooms just big enough to eat in, and living rooms just big enough for a fireplace. Too often by the time we have put in the bare essentials, the lower 4 ft of the room has been lost in a sea of chair backs and lampshades. We have sacrificed space for possessions. We have lost the floor plane and the bottom of the room.

It is not just a matter of too much furniture. The furniture itself is too complicated. Next time you drop a needle or pin get down on your hands and knees and study the bottom 18 ins. of your living room. It is a strange world of assorted legs and twisted light cords that we accept only because we are used to it. A dining table with 8 chairs around it has a total of 36 separate legs, and if in addition to the legs, the furniture has stringers or braces, the complication is astonishing. The sideboard which could hung on the wall has six more legs. The marble coffee table has lovely chrome metal supports, but since it sits on a soft rug we have added the usual rubber cups under each leg to spread the load. The bottom of the sofa is just 4 ins. above the floor-too close for cleaning, and the wooden backs of the chairs are gouging the wall. This is the world of cats and dogs and dust balls where the architect and furniture designer are supposed to meet. In an old fashioned house with lots of space, these complications would be bad enough. In a confined modern space they are absolutely absurd. If you feel that I am being too architectural about my precious space-volume, at least you will agree on practical grounds—this bottom 18 ins. is impossible to dust and clean. And what about the wires!

Could anything be more primitive? How many times a week do you trip over a wire? The average kitchen has at least two plug-in appliances that must sit on the counter, each with a 4 ft cord. The average kitchen sink is placed so that you can put one hand in the water and the other on an electric appliance. Every year radios fall in bathtubs electrocuting innocents. With blankets, clocks, radios, hair dryers, shavers, toasters, heaters, beaters, blenders, mixers, TV sets and dozens of lamps, we have made our houses lethal.

However, I don't want to rest my case on practicalities, on safety and cleanliness. Practicalities get solved one way or another. I want to come back to my main thesis—that our furniture should not eat up space. You may wonder why this is necessary. In the Metropolitan Museum there is an 18th Century Adam dining room. The dining table is vast, perhaps 16 ft long, the Chippendale chairs are large enough to seat two people. Why do they look so wonderful? Because the room is also vast. "Well," you say, "Let's make our rooms big too. You architects are minimum minded. Why don't you think in maximums?" Nothing would please us more. However, only the corporations and the very rich can afford such a scale. The average client must have a modest space-8 ft not 18 ft ceilings, and room sizes not far above the FHA standards. This is the same average man for whom manufacturers design. We must work together on his problem. We must not oversell him, or overstuff his apartment. We must give him space and furnishings that work together, not to close in on him, but rather to give a sense of calm.

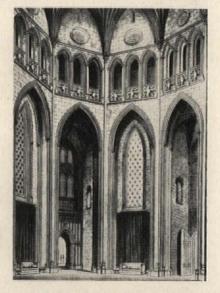
Pretentious vs. Modest Design

Too often our contemporary furniture is designed as free standing sculpture. We see a chair in a spacious studio or showroom-a chair with a voluptuous molded form standing all by itself. Perhaps the advertising agency has photographed it on a great scroll of white paper rolled down from the wall and out onto the floor so that it seems to float in space. Then we get it home as one of a set. What a little monster it suddenly becomes-at odds with its companions, pretentious, cluttering up the room. Dimensionally it fits, but its form demands great space. Sometimes these chairs have strong character—bat-like wings, or great wicker hooded backs or squirming bent wood arms and legs. Then they not only take up space, they also oppress us with their personality which is even worse.

There is a great need for impersonal modest design-for fairly stiff chairs with squarish lines that do not cry out for attention, for bolsters or floor mattresses in simple geometric shapes, for sofas with plain architectural surfaces. There is a school of thought that says furniture must be form fitting. I don't agree. As a sandal is good for your foot, so a slab-like sofa or a stiff chair is good for your back. I realize that such architectural furniture may not attract attention in a catalog or showroom, but by the same token, it will not cry out for attention in a small room.

The Elimination of Legs

If each piece of furniture in our house could stand on one leg, we would have reduced the forest of legs by 75 per cent. If each cabinet that



Scale is a relative thing

stands against a wall were hung on the wall, more legs would disappear. If some objects—such as lamps, were suspended, the complication at floor level would be further reduced. These things are now possible. The heaviest loads can be hung on brackets or even glued with epoxy glue to the wall. Metals and plastics are strong enough so that pedestal chairs and tables are stable. You may expect more designers to work in this area, where ragged details and

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continued from page 13

right angle joints disappear. Wood, as a basic material may give way to plastics. The effort will be to simplify and organize that bottom 18 ins. of the room.

The Elimination of Wires

Experiments are under way to develop walls that glow, battery-run lamps and radio telephones. Progress on this front is long overdue. And when it comes, it will sweep the market just as jet transportation is making propeller craft obsolete. We should comment in passing on the steady progress in the kitchen. The built-in mixer, which eliminates bulky machines on the counter top along with it's wires, will be followed by other built-ins.

Built-in Furniture

In the area of built-in furniture, I think we architects have an opportunity. It is true that a great deal of our furniture must be flexible and moveable to fit varied occasions and household arrangements. However, perhaps more than we realize, it is never moved and can perfectly well be built-in. Why, in a bedroom where the bed is never moved, should the mattress be on legs? In this case, why doesn't the floor simply step up to form a pedestal? Why, in a dining area, where the table can only be one size, shouldn't the top be floated on a single support cantilevered up from the floor? Why in a living room where a sofa is required against the wall shouldn't the wall serve as a support for bolsters, and the floor rise up again to make a mattress pedestal? Why are there not more sunken seating wells around fireplaces? Is it not possible that most of our furniture can be handled with pedestals and bolsters, and that our floor plane can actually dissolve into a series of steps and platforms depending on the function? I am not exactly arguing for the harem interior which is popularly supposed to be a great room, the floor of which is covered entirely with rugs and pillows, but I think we could take a few steps in that direction. If we are not able to sit on the floor, then the floor can rise up to meet us.

If the popular builder ever decided to provide such built-in elements, the furniture budget for the average buyer could be greatly reduced. In a minimum house or apartment, there



Decorative unity can be exuberant

is often only one ideal location and size for a piece of furniture. Even if the buyer owns furniture, frequently there is no room for it. Floor space is at a premium so that free standing chests and cabinets are in the way. It is time the architect, the mass builder and the mass furniture manufacturers get together on a coordinated program.

Modular Coordination

Obviously when we talk of closer collaboration between the architect and the furniture designer, we must think of modular coordination. Only in this way can the architect specify mass produced prefabricated items



Sculptural legs pose a problem

just as he now does for the kitchen. Here all manufacturers work to standard modular sizes. Details have been refined so that units are interchangeable, refrigerator doors have been designed so that they swing out without encroaching on the adjacent cabinet. Of all the rooms in the house, this one is the most technically advanced, and here there is the best collaboration between architect and manufacturer. The same collaboration should be possible elsewhere.

Working within a modular grid, the architect would detail his closets to receive standard drawers, his pedestals to receive standard mattresses, and his floors to receive standard carpets. As in Japanese architecture the grid could encompass walls, floors and ceilings so that curtains, ceiling, fixtures, and floor coverings could all be standardized. I believe if some of the bigger furniture companies invested some money in a moderately priced modular line, they would have a self-sustaining department in no time.

Where does this thinking leave us if we succeed in some or all these directions. It leaves us with absolutely wonderful space and rooms where the few objects we love stand out. The clutter of functional furniture recedes into a quiet architectural background, so that a painting, or our books or a single vase of flowers has special meaning. It is so easy to add, and so hard to subtract.

Such unity of purpose is essential. In the great interiors of the past, the building and the furniture are in harmony. Think for a moment of the Rococo. You may have seen Potsdam or perhaps the little Nymphenburg Shooting Lodge outside Munich? Walls run into ceilings, moldings break loose into sculptural garlands, the furniture is an extention of the ornament, murals and wall decoration intertwine. Everything is unified in one glorious exhuberant foaming expression. One simply cannot distinguish the slightest difference between the point of view of the architect, painter, furniture designer, craftsman, or client.

I think modern architects have a great deal to learn from the Rococo. Or look for a moment at Japan. Here the rooms are small, often for us too small. Yet what a sense of space and serenity! Obviously we are again looking at a complete collaboration between the artists and craftsmen, a collaboration that could only spring from a profound understanding.

The question is, what is *our* cultural expression? It seems a kind of theme is beginning to be discernible. The new architecture will be less rectangular and more plastic so that walls, columns, floor and ceiling may run together in continuous form. The furniture as I have indicated, will merge with it and unnecessary detail will be swept away. A sense of space and serenity will dominate.



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BUILDING WITH THE NEW FHA GUIDEBOOK

BY LEONARD G. HAEGER, A.I.A. Research Consultant

One of the most logical, interesting and yet unpracticed ways of reviewing new home plans and specifications relative to materials and construction is to spend a few evenings comparing them to the newly issued Minimum Property Standards For One And Two Living Units of the Federal Housing Administration.

While relatively few custom-designed-and-built houses are constructed under the FHA system, the book of MPS does provide a convenient and sound benchmark from which high quality may be built into a new house. The MPS may be used almost as a "Fielding, Travel Guide" through the intricacies of material selection and construction and, with the assistance of this article, will show where minimum standards can be followed-and where not.

This new book of 250 pages represents the considered technical judgment of a committee of seven housing experts (all outside the Federal government) and the 25 years' practical experience of the Federal Housing Administration. The book may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. for the sum of \$1.75.

After obtaining a copy of the book, a careful reading of the Purpose will show that the contents were intended to set forth minimum standards-exactly as the title states-but be assured that this is true only on the building planning requirements (such as room size, storage, etc.) and site planning (house on the lot). In general, the standards covering materials, construction, plumbing, heating and wiring are of a character to guarantee durability and sound practice in the use of building materials.

In using the document as a "tour guide" and check list against either preliminary or completed drawings and specification, the first four chapters may be passed over quickly in respect to many custom houses, since they contain material relevant only to houses built under the FHA system of financing.

Chapters V and VI are the "first stop" on the "tour." These chapters, covering Plot Planning and Building Planning are interesting only to give some idea of how minimum "minimum" planning standards can be. To a housing technician, the requirements for plot planning are a relic from the Dark Ages. On room sizes and storage requirements, the following table will provide some basis of comparison for a three-bedroom house:

	FHA	(AUTHOR'S)
	MINIMUM	REASONABLE
	SQ. FT.	MINIMUM
Living Room	170	196
Dining Room	95	132
Family Room	N.R.	220
Master Bedroom	120	185
2nd Bedroom	80	110
3rd Bedroom	80	110
Kitchen	70	110
Bathroom #1	N.R.	40
Bathroom #2	N.R.	40
Entry Hall	N.R.	64
Dining Room	85	132
Bedroom Hall	N.R.	60
Laundry Space	N.R.	50
Closets & Storage	*	140**

N.R .= No Requirement

N.R.:—NO Requirement
*FHA requires 3 ft of closets 2 ft deep for each
bedroom (obviously absurd) plus a 3-by-2-ft
coat closet for guests plus a 14-by-18-in. linen
closet plus 425 cu ft of general storage. For a three-bedroom house, this adds up to only 74

**Based upon 10 per cent of over-all area in storage

Building Materials Standards

In Chapter VII are found standard and specific building materials "standards," usually incorporated by reference to a standard of a wellknown professional, trade or government group. For example, on a brick house or a concrete block foundation, comparison with referenced standards will assure standard quality brick or concrete masonry units. The same is true of cement, concrete materials, concrete, or other conventional materials.

Next covered is framing lumber. Again, a material standard is established to which is added a maximum permissible moisture content for framing lumber of 19 per cent. This is an important requirement which, if followed, will preclude future cracking of interior walls and minimize shrinkage joints in exterior siding. Standard framing grades for the most generally used species are given; and it is easy to check these against specifications. For example, if the architect has specified West Coast Douglas Fir for framing, then we find that "Standard Grade" is the minimum; and for Southern Yellow Pine, "No. 2" is the minimum. Use of the grades given, in the proper sizes, accompanied by normal workmanship, will assure a sound and adequate house frame for a house in any price range.

In connection with a study of framing lumber grades, perhaps the next consideration is a review of actual sizes required. Appendix B contains tables of maximum allowable spans for wood floor joists, ceiling joists, roof joists and rafters. For example, if there is a living room 15 ft wide over a basement or crawl space, many architects will choose to span the distance without intermediate supports. If the lumber to be used is West Coast Douglas Fir, it is noted (on page 260) that 2-by-10-in. floor joists spaced 16 in. o.c. (on centers) will support a first floor live load of 40 lbs per sq ft for a maximum span of 16 ft 2 in. 2-by-8's, on the other hand, will be good for only 13 ft, so it is necessary that the drawings and specifications call for 2-by-10's.

Similar tables in the appendix may be used to check out ceiling and roof framing member sizes. If the reader is unfamiliar with terms such as joist, rafters, etc., Chapter III provides definitions of terms in common use in residential construction.

Non-Structural Materials

Returning to the review of Standard building materials, next are found minimum grades for such items as siding, wood shingles, wood flooring, millwork, gypsum products (plaster and wallboard) and cement asbestos products. Frequently an architect may advise using better than minimum quality for some of these, and he should be able to explain to his client the advantages of the better

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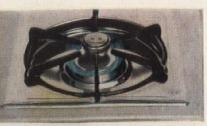
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Electronic ranges

The 'fabulous 400'

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continued from page 17

ones. These are important areas where the added expenditure of a few dollars initially may give long-time additional satisfaction.

The paragraphs dealing with minimum allowable thicknesses and gages for metals—galvanized sheet metal, aluminum and copper for flashing, gutters, downspouts, roofing, etc.—are particularly important. Since FHA-type financing is based upon a mortgage term of 20 years, sometimes longer, it can be logically expected that the performance of materials chosen would be such that they would last at least as long as the mortgage. Hence, the perfectly obvious safety of using these standards under any circumstances.

Next comes window glass, in which a choice of thickness and grade must be made. Since the size of the windowpane (area) will determine the thickness of the glass, tables are given relating standard glass thicknesses to area of window. Grade of glass such as "B", "A" has to do with clarity and lack of imperfections. With today's improved glass manufacturing methods, few waves or bubbles are found even in "B" glass, so that it may be safely recommended as minimum quality for small houses.

Bituminous products (roof shingles, roofing) are next described. These highly standardized products differ little among the well-known brands. The prospective homeowner would do well to insist, however, on 250 to 260 lb asphalt shingles (weight per 100 sq ft) rather than accept the minimum FHA 210 lb shingle. The heavier asphalt shingles can be expected to have a useful life at least five years longer than that of lighter grades. For a \$40,000 house of approximately 2500 sq ft livable area, the added cost of the better asphalt shingle might total \$50.00surely a small premium in terms of the \$40,000 investment!

Described next is thermal insulation. Efficient production-line methods have reduced the cost of insulation materials in the last few years, so that the new house, planned with an attempt to insure comfort for the occupants and the lowest possible heating and cooling bills, should use insulation considerably in excess of FHA's minima. This is important—and necessary—regardless of the type of fuel used. The author's personal recommendation would be as follows in the next column:

Ceilings: 6-in. mineral wool blanket*

Exterior sidewalls: full thick 3½-in. mineral wool blanket*

Floors over crawl spaces: 2-in. mineral wool blanket*

This recommendation should be followed in almost all areas of the country. (Certain local areas in California and Florida may be exceptions.) In houses with large glass areas (sliding window walls, etc.) double glazing will increase the comfort and reduce heating and cooling costs.

Finally, resilient flooring standards are given. Resilient flooring materials include asphalt, vinyl, vinyl asbestos, rubber, linoleum, cork—and here the owner is not usually confronted with choices involving quality among the same kind of products but with simple choices of color, pattern and texture.

Construction Requirements

Chapter VIII covers construction. Here, the objective is to describe methods which will assure adequate structural strength and rigidity to the house; protection from corrosion, decay and insect damage; resistance to the forces of the wind, rain and the elements generally; durability and economy of maintenance; and an acceptable minimum quality of workmanship. This chapter is an almost chronological guidebook for the house-building process and describes the use of the materials previously selected.

Under "Construction," excavation for the foundation, depth of foundation walls, the problems of crawl space construction, and how footings should be built are treated first. Next, the proper construction of masonry foundations is described, including thickness of walls, size of mortar joints, reinforcement of walls and anchorage of sill plates. Not only are conventional basement and crawl space foundations described and methods specified, but the less frequently seen slab and grade beam constructions are completely covered with illustrated text.

Basement floor slabs and the kinds of floor coverings acceptable on the slab under various conditions of outside grade are described. These may be regarded as good practice recommendations that will provide good

*or the equivalent in other insulating materials or combinations of materials.

performance for any kind of structure.

Next given are standard specifications for solid masonry and veneer masonry exterior walls, as well as specifications covering the materials, size, and construction of chimneys, vents and fireplaces.

Methods for protection against termites and decay are listed, including the newer methods of chemical treatment of the soil.

Wood floor framing, which was discussed briefly under lumber grades, is described in great detail in Chapter VIII, which covers sizing of girders, joists, and methods of framing at openings in the floor system. Types of sub-flooring and limitations on use of finish flooring over the subfloor are established.

Finally, the many ramifications of exterior and interior wall and partition framing, and ceiling and roof framing are described and illustrated. The prospective homeowner may be assured that the standard of construction specified is perfectly sound, and that there is little reason to exceed these standards even in the case of the highest cost house. Saying this another way, it is a waste of money to use 2-by-12-in. floor joists where 2-by-10's will do the job; 2-by-6-in. wall studs where 2-by-4's will suffice; No. 1 framing lumber where No. 2 will perform exactly the same. The additional money should be used to buy more space or better finish.

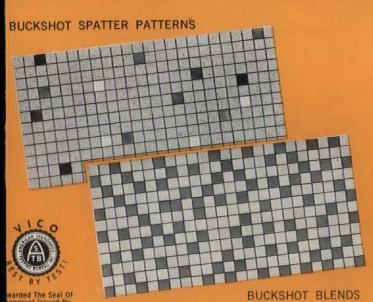
For Fine Finish

Chapter IX, covering exterior and interior finishes, describes minima which the prospective homeowner may, in many cases, wish to exceed. While little is to be gained by using flashing materials in thickness greater than the minimum, the selection of higher than minimum quality siding and wood shingles will obviously pay off in better appearance and longer life. The use of aluminum and stainless steel nails is to be recommended over corrosion resistant types (galvanized and cadmium plated, accepted by FHA) and threaded and annular grooved nails rather than plain steel finishing nails should be specified by the architect for all exterior finish.

The paragraphs on roof coverings provide useful tables covering minimum roof slopes and maximum exposures for the commonly used roof-

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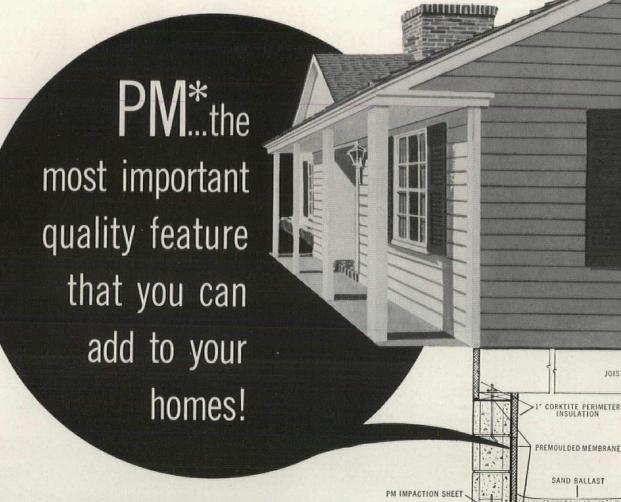
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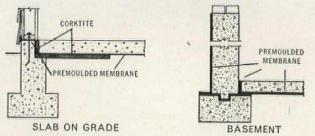
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BATHS AND KITCHENS: A REPORT OF NEW PROGRESS

BY LEIF OXAAL

Plumbing Fixture Manufacturers Association

Take a good last look at that stronghold of spartan austerity in American homes . . . the bathroom. Within 15 years what you see today will be as obsolete as the kitchens in our grandparents' homes are today.

To realize what's happening, it's necessary to understand that most of the basic flaws in today's bathrooms have been carried over from the birth of this room in the 1800's. Back then, the single indoor bathroom was a luxury.

But times changed. While conveniences of life increased, and as yesterday's luxury became today's basic utility, the white tile pearl of the 1800's remained the same. By contrast, the rest of the house moved forward. During the decade following World War II, the idea of progress through efficiency and comfort was foremost in the minds of architects, builders and home products manufacturers. They worked hand in hand. The result was a spate of new architectural concepts, techniques and materials which swept a better way of life into most parts of the home. Improvement fostered additional improvement.

A prime example of this is the kitchen. Here, the sink is no longer off by itself, serving its own special purpose. It has become completely integrated with other components such as cabinets, countertops, disposers, and



Portable "built-ins" are new

so forth. All these are being imaginatively fused to improve the efficiency of the room, as well as its appearance. And even with the tremendous progress made, the kitchen revolution has just begun.

About five years ago the embryo of a face-lifting evolution in bathrooms became evident. Increasing numbers of architects broke with prevailing planning clichés. New arrangements and designs evolved. More color fixtures helped to eliminate the bland, sterile look that had branded



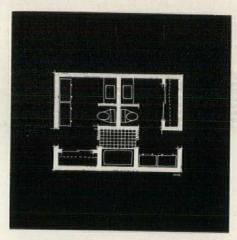
Bathrooms are losing their bleak look; by Ellen Lehman McClusky, A.I.D.

the room. While leading architects and home builders put new bathroom concepts on their drawing boards, manufacturers accelerated fixture restyling and overall product development. Each group inspired the other, until the prospect of a full scale bathroom revolution has taken form.

The far-reaching effect this can have on home-design is prophesied by a sudden wide acclaim for multibathroom homes in middle and low price ranges. An extra bath or powder room in such homes was just an experiment a few years ago. Then, almost overnight, it has become a minimum requirement. Even private bathing and grooming facilities for each member of the family are now often being sought. And other new concepts are being studied: the complete redesign of bathrooms, themselves; new locations for plumbing facilities in relation to other living areas; and even a re-evaluation of the many conveniences the ready availability of water in other rooms can offer in the home.

Recognizing the needs for more adequate bathroom facilities, progressive architects and builders now frequently provide individual lavatories and compartmented water closets. High capacity medicine cabinets have gained recognition as a basic necessity for safe storage of cosmetics and household drugs. Partitioned bathing facilities have been introduced.

The close relationship between washing, grooming and dressing—and the desire for privacy—has led to new plan arrangements. In many cases clothes storage facilities are moved from bedrooms and incorporated into separate dressing-washing areas. The sleeping area then can assume an additional role as playroom, study or private sitting room. Tubshower rooms can be isolated and equipped with efficient exhaust fans to keep moisture away from dressing areas.



A compartmental scheme for multi-use

Since 70 per cent of the family's laundry originates in upper levels of the house, a second floor laundry room has been introduced, or one close to bedroom areas.

More leisure time activities spark still further innovation, in plumbing installation. For example, a natural step is the installation of sinks in the recreation room, hobby rooms and outdoor areas, such as the barbecue pit.

Mud rooms at the rear entrance of a home have become popular. These provide a place where the family can clean up so as not to dirty up the house when entering from out-ofdoors.

continued on page 48



Full access to "his" and "hers," simultaneously... thanks to hardware by *Mational of Sterling*



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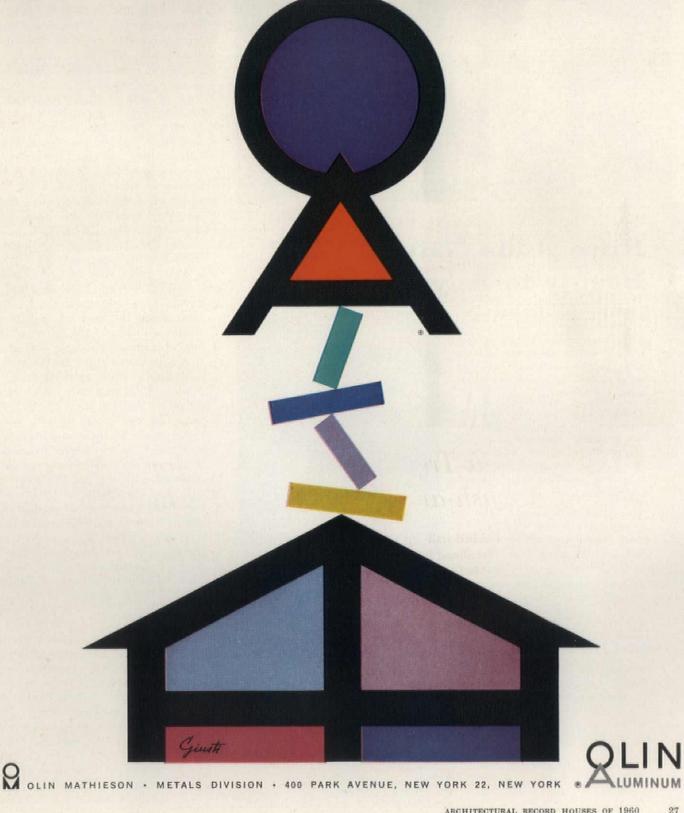
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HOME LIGHTING

continued from page 9

wards. But when viewed at an angle of 55° from the vertical or greater, the light from that equipment will appear to be of low brightness and hence will cause no discomfort.

In column F of the table, the brightness of representative equipment is classified as low (0-500 ft lamberts) medium (500-1000 ft lamberts) or high (above 1000 ft lamberts). Units with high brightness are acceptable in foyers, hallways, storerooms and utility rooms where human activities are of short duration. They have the advantage of providing a lot of general light from an economical, compact unit which may be either decorative (such as decorative bent glass) or functional in style. They may even be used in bedrooms for general lighting, providing there are enough Focal Glow sources provided for reading in bed, sewing, makeup, etc. But for dramatic yet comfortable lighting in the bedroom, consider the Focal Glow areas plus the Ambient Luminescence of wall washing fluorescent or incandescent units.

Some units, specifically the swivel bullet, which must be classified as having high brightness can be tilted away from the vertical so that the shade will block the view of the bright opening. They can also be adjusted to throw light on the wall or ceiling to provide Ambient Luminescence and are therefore excellent for a flexible lighting plan. In the living areas of the house where people spend most of their waking hours, equipment with high brightness should not be used unless it can be adjusted away from the eyes (as with the swivel bullet). A room with very light colored walls or draperies offers the best possibilities for good light play. These light colored surfaces can be used to reflect light for Ambient Luminescence and thus reduce the brightness contrast between lights and background.

Special Rooms

In the kitchen where activities range all over the room, Ambient Luminescence from ceiling mounted fluorescent fixtures (9) provide excellent light for work or casual eating. Focal Glow areas for countertops can be done with fluorescent reflector strips (12) mounted under the cabinets. Focal Glow for the table can be provided by a recessed unit (1, 2, or 3) or by a pendant shade



William Robertson residence, Longview, Wash. Glued laminated ridge beam is $7" \times 17\%"$ in section, $5\%" \times 8\%"$ rafter beams are spaced 8' o. c., add spaciousness and natural beauty to this home.

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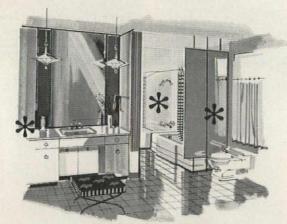
ENTRANCES



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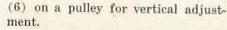
Styled with flair . . . designed with care to function for a lifetime! Russwin doorware not only speaks for itself, but for you . . . reflects your good taste . . . and your attention to details of planning. Let Russwin's doorware creations work their magic in homes you design. Send for colorful brochure showing Russwin's complete line of decorative escutcheons and rare wood, metal, and ceramic knob doorware. Write Russell & Erwin Division, The American Hardware Corporation, New Britain, Connecticut.



From top right to left: ELECTRA Escutcheon with COMET Knob in satin chrome. BELLA Escutcheon with TEMPO Knob in polished brass. DALLION Escutcheon (1 to 4 plates) with ERA Knob in polished brass. ALOHA Escutcheon with COSMIC Knob in satin bronze. LURA Escutcheon with TEMPO Knob in polished brass.

HOME LIGHTING

continued from page 28



In the bathroom a ceiling unit with high brightness (8) may be used although medium brightness is preferable (9). In any case, specialized bathroom lighting should be used for the mirror. A two-light 20, 30 or 40 watt fluorescent unit depending on room size, mounted over the mirror is capable of lighting the whole room so that a ceiling unit is not required. But this unit must be one specifically designed to do this. It should have a translucent front of reasonably low brightness, a clear top for maximum Ambient Luminescence on the ceiling, and a lens bottom for directing light down on to the wash basin. The longer the length, the better the side lighting on the face.

Column F, besides showing the brightness for representative units of various sizes, also indicates the intensity in footcandles that will result from each unit. The values are for the specified distance directly under the unit. They will vary inversely as the square of the distance for incandescent sources and roughly inversely as the distance for fluorescent fixtures. At the edge of a cone with the included angle shown in Column C, they will be approximately half the value shown in the chart. The values take no account of reflection from ceiling, walls and floors so that for equipment with a wide distribution where spill light will be reflected from ceilings and walls, the values may be greater, depending on the color of ceilings, walls and floors. Where more than one unit is used in a room, the footcandle contribution from each unit at any given point must be added for the total effect. It must be emphasized that these values are representative only and are included merely as guideposts for the selection of the right size unit. More specific information should be obtained by checking other light tests data supplied by the manufacturer.

Flexibility of Lighting

Columns D & E are concerned with flexibility. And it is a good idea to have a flexible lighting plan which will adapt itself to many different possibilities. Column D shows which equipment will swivel or travel vertically or horizontally. Because of its flexibility, one piece of this kind of equipment can often satisfy several



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LUXURY A.C. SWITCH...
operates with the lightest
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Available in single or double pole, 3-way or 4-way, in 15 or 20 amperes, for 120-277 volts A.C. Units available with brown or ivorine nylon button, also lighted ivorine button. Units fit standard wall boxes, accommodate standard wall plates, operate in any position, require no special wiring.

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... the only outlet that protects two ways: 1. provides grounding protection for users of power tools and equipment, 2. shunts current harmlessly away from objects inserted in slots by children or careless adults.

Rated 15 amperes, 125 volts. Available in brown bakelite or ivorine. Requires no special wiring. Fits standard boxes and accommodates standard wall plates.

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Provides finger-tip control combined with complete protection from the weather. Ideal for exposed passageways, breezeways, patios, etc.

Plate and switch combination supplied as a unit. Available in single or double pole, 3-way or 4-way, in 15 or 20 amperes, for 120-277 volts, A.C. Designed for FS or standard wall boxes. Plate is available in gray (No. 1751) or in "Chem Marine" yellow (No. 17CM51).

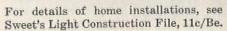
For complete information, refer to Hubbell insert in the Architectural File of Sweet's Catalog (Sweet's No. 31b/Hu).

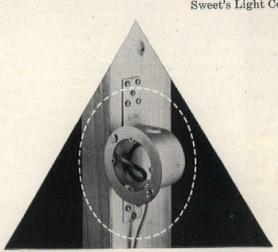
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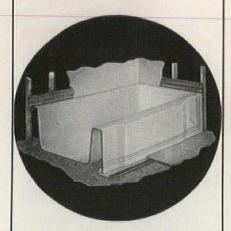
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continued from page 32

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Make certain that every bathtub installed in your projects is insured against settling and subsequent water seepage. Lucke tub hangers distribute the weight of the tub evenly on all joists and a special flange insures a perfect water seal when bonded with Lucke Leak Proof Filler. This mastic compound is guaranteed to maintain its elasticity during extreme temperatures.

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different requirements in our lighting plan (and sometimes even rescue a poor lighting plan!) The center of Focal Glow can be moved. Or the light source can be pulled over to another activity location. Or a light source can be pulled down from the ceiling for occasional close work.

Another kind of flexibility that should be considered is flexibility for change to meet major changes in furniture arrangements. Recessed equipment, though sometimes the neatest solution, is the least flexible for change because it is a major operation to relocate it. A unit which is surface mounted over an outlet box may be exchanged for another unit or simply removed and the outlet box on the ceiling or wall covered up. The so-called pin-up type of installation consists of a unit which may be fastened to the wall or the ceiling at any desired location and has a cord and plug long enough to reach a baseboard outlet. It is an easy matter to relocate such a piece of equipment although some may not care for the exposed cord. In some cases, the cord itself can be made a decorative element and for wall units a counter weight at the lower end will keep the cord straight.

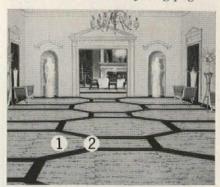
A Pole Lamp which extends from floor to ceiling may be moved almost as easily as a floor lamp. Some Pole lamps have a continuous electrical contact strip recessed in the pole so that a great variety of lighting units can be clipped on at any point. Floor and table lamps can be moved at will.

Light Control

Variable intensity of light is an important consideration in living areas. The dramatic potential of a good lighting installation cannot be fully realized without it. Much can be achieved by the variable switching of 3-way lamps or multi-lamp units or by changing the direction of swivel units. However, dimmer control offers the greatest flexibility for subtle changes to match the changing mood. Dimmers are available for incandescent lighting and for use with dimmer control fluorescent units. There should be 2 or 3 dimmer circuits so that Focal Glow and Ambient Luminescence may be balanced individually. Dimmer control is particularly effective for a Play of Brilliants because when dimmed, the pinpoints of light, as in a candelabra, take on quality.

This fabulous Amtico Vinyl Floor puts patrician beauty on a practical basis

as illustrated on the facing page



The Flooring:

New Amtico Travertine Vinyl

The Colors:

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Travertine* Flooring Data:

Amtico Travertine Vinyl $\frac{1}{8}$ "...allvinyl, color throughout thickness • Standard tile sizes ... 9" x 9", 12" x 12" • Special tile sizes ... 36" x 36", 36" x 24", 36" x 18", 36" x 12", 36" x 9", 24" x 24", 24" x 18", 24" x 12", 18" x 9", 18" x 18", 18" x 12", 18" x 9", 12" x 6". Other sizes available by special order.

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Architects who think of flooring in creative and practical terms generally turn to Amtico Vinyl...for many good reasons. Beauty is one. The beauty, for example, of Amtico Travertine Vinyl, capturing the full glory of natural travertine. The translucent loveliness of Amtico Renaissance® and Amtico Celestial®. The smart freshness of budget-priced Amtico Care-Free® and Amtico Vinyl Plastex. The versatile beauty of Amtico's complete line.

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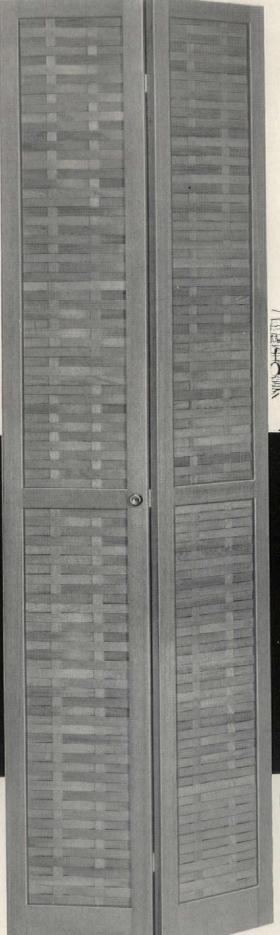
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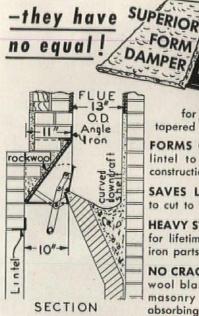
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continued from page 20

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ing materials. If asphalt shingles are specified, most owners may wish to specify the self-sealing (or adhering) type. For a nominal additional cost, protection against high wind damage is readily obtained.

For interior gypsum drywall finish, FHA will accept 3/8-in. sheetrock material over framing members 16 in. o.c. and 1/2-in. sheetrock over members 24 in. o.c. The author believes that 3/8-in. material should not be used, but a minimum thickness of 1/2-in. sheetrock should be used over studs and ceiling joists 16 in. o.c. and 5/8-in. gypsum drywall used over studs and ceiling joists 24 in. o.c. The thicker materials provide a more rigid job, better and smoother surfaces, and will help reduce the noise transmission between living spaces.

Finally, the owner will be well repaid to review the subject of all exterior and interior painting and decorating with the architect. The specifications contained in the FHA document, while adequate as minimum standards, are incomplete and inadequate for higher quality houses. For most exterior paint jobs over wood or metal, three coats of standard quality paint (rather than two) are necessary. In the case of some stains and bleaching oils, one coat over cedar or redwood will be adequate. Most exterior masonry will require two coats for a satisfactory job. Interior woodwork should have three coats, and interior plaster or gypsum drywall will require at least two coats. If wallpaper is planned, at least one sealer coat of paint is needed over interior wall.

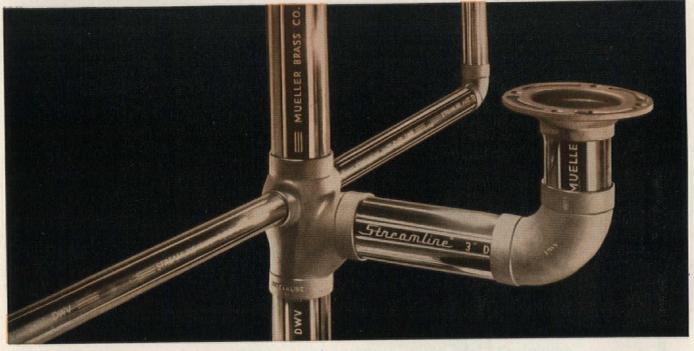
Mechanics of Health, Comfort

Chapter X covers mechanical ventilation, heating, cooling, plumbing and electrical wiring. This information may not be sufficient for the custom job, but can be counted on for an average job. Like tours in the travel guidebook, adherence to these standards will keep the tourist out of trouble and cover the high spots of interest, but neither will he "do" the Left Bank nor eat in the most exciting restaurants in France. The many new mechanical systems for the house give the best opportunity for a more than ordinarily comfortable interior environment. For example, kitchens may be exhausted to the outdoors or the odors and greases associated with cooking removed through the use of activated

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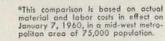
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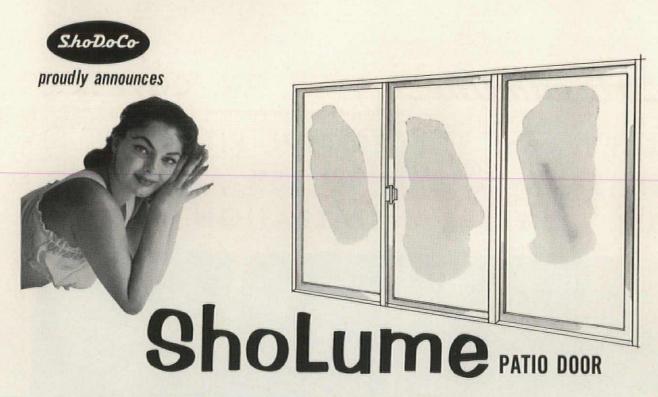
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DeVillerecognized as the ultimate answer when quality is the deciding consideration, Multislider in widths to 24'. Two standard heights.

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Tile creates an impressive entrance to a home . . . bringing rich texture and color interest to the exterior and striking a keynote of elegance in the inviting foyer. With American Olean ceramic tile, possibilities for such fresh and distinctive treatments are virtually unlimited. And of course wherever you use it, tile brings an assurance of permanence and ease of maintenance unmatched by other materials. For other examples of outstanding tile treatments, write for Booklets 451 and 550.

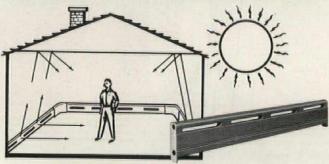


continued from page 40

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This client is demanding - downright difficult. The slightest This client is demanding — downright difficult. The stigutest cold draft along the floor and he practically sues you for a new heating system. The only way to please this fellow is to specify a BASE-RAY system and explain the six advantages below. He'll purr with contentment—and sell his friends on you and BASE-RAY!



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- 5. Looks like wood baseboard. Slim, modern BASE-RAY is 35% thinner than fabricated baseboard of equal capacity. It is entirely unobtrusive - gives complete decorative freedom.
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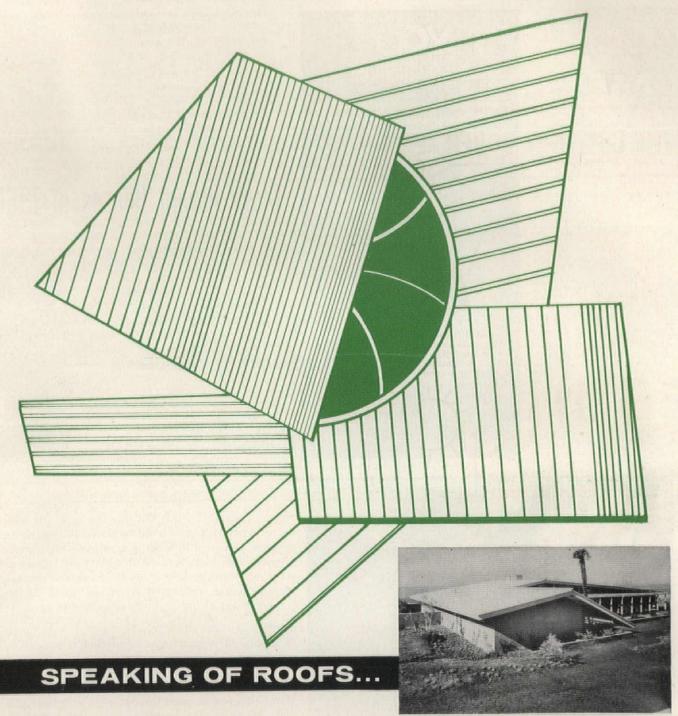
NEW FHA STANDARDS

While all the major manufacturers of heating and cooling equipment have technically trained engineers and sales people and have trained their installers in the design and installation of their heating and cooling equipment, the architect, recognizing the complexity of today's mechanical systems, may want to hire a professional mechanical engineer to design the heating, cooling, plumbing and electrical work. A few of the mechanical requirements for the better custom-designed house are:

- · A heating system to maintain 70 deg inside temperature in winter.
- · A cooling system to maintain 80 deg, 50 per cent relative humidity inside conditions in summer.
- · A plumbing system to meet minimum requirements of the National Plumbing Code; all waterclosets with elongated bowls; all lavatories at least 20 by 18 in.; all water supply in copper tubing; all drainage below ground in cast iron and above ground in copper.
- · An electrical system to comply with the National Electrical Code; service entrance to be sized according to computed demand, but not less than 100 amp capacity and probably (for a 2000 sq ft house) of 150 amp capacity.

Finally, FHA requirements for an individual water supply (your own well) and individual sewage disposal system (septic tank, cess pool) may be followed precisely for any size or value of home, since these are matters of public health and are not subject to minimum or maximum standards.

A few evenings spent in comparing plans and specifications with the FHA Minimum Property Standards could prove invaluable to the prospective homeowner, for they might well result in savings of several thousands of dollars initially and could conceivably save many more dollars later in avoiding corrective work. Taking a "tour" with MPS from foundation to ridgepole may not be as much fun as one with Fielding, but it might result in saving enough to make a trip with Fielding possible.



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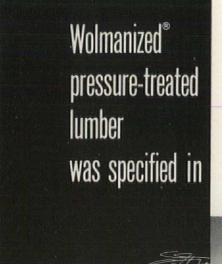
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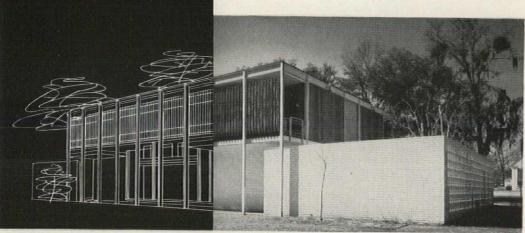
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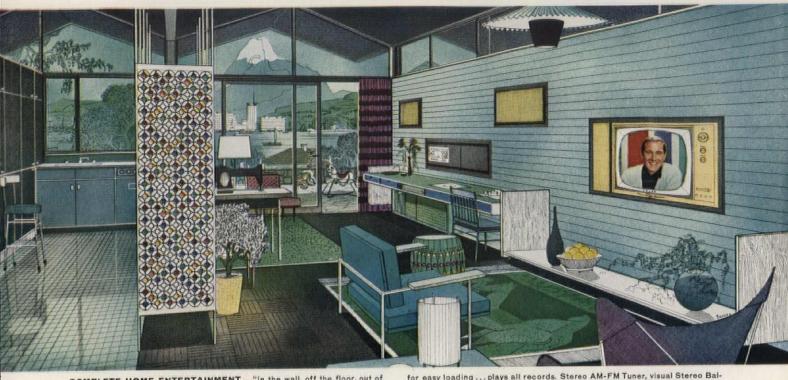




PRESSURE-TREATED LUMBER

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for easy loading ... plays all records. Stereo AM-FM Tuner, visual Stereo Balance Control, 2-in-1 supercharged chassis with 58 watts of power. Shown is Model BK-2 with DK-109 Panoramic Sound 3-speaker units.

(@RCA Trade Mark for Record Players



B&W "MURAL TV"... Front-ventilated Model DK-103. The custom TV look plus the convenience of "Wireless Wizard" remote control. Superb performance—25% brighter picture... 3-speaker Panoramic Sound. Rearventilated model available.



"LIVING COLOR" MURALTV... Like 2 sets in one, build in the magic of Color TV and get superb B &W reception too. Simplified color-quick tuning (new wireless remote control available), mirror-sharp picture, 3-speaker Panoramic Sound, adaptable for stereo. Above: The DK-107 Frame for rear ventilation. Front-ventilation design also available.

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BATHS AND KITCHENS

continued from page 24



Many forward looking builders—to cut future expense—also provide roughed-in piping to unused parts of the house such as the attic and unfinished basement which later might be turned into living areas.

While these changes in design have emerged in recognition of a need to have water readily available in all parts of the home, manufacturers now offer the public more glamorous fixtures with a fresh look.

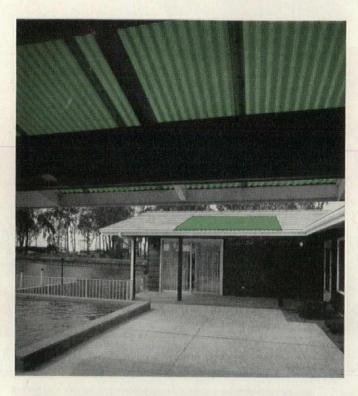


New fixtures are neatly styled

Examples of this are wall-hung and neatly-styled one-piece water closets; full-length tubs with a variety of sump designs and seat arrangements; lavatories with integral counter-tops, ample water capacity, and twin bowls; receptor tubs to make shower stalls useful for a variety of purposes, including the bathing of children and rinsing of garments.

All in all, the numerous possibilities for more convenience in modern home design has come into focus.

The new ideas being studied by architects, builders, interior designers and manufacturers carry the beginnings of far-reaching progress in the application of water facilities to home design in rooms as attractive as they are useful.



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in to this handsome contemporary home — contrast pleasantly with natural redwood construction. These shatterproof fiberglass panels are press-molded of acrylic polyester resin. Never need painting, outlast a hundred hailstorms. When you want light without breakage and beauty without maintenance, always specify Structoglas. Write for detailed literature and specs.

Sandusky Development Company, Sandusky, Ohio - Architect: William Gabriel



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SPECIAL REPORT FROM PITTSBURGH, PA.

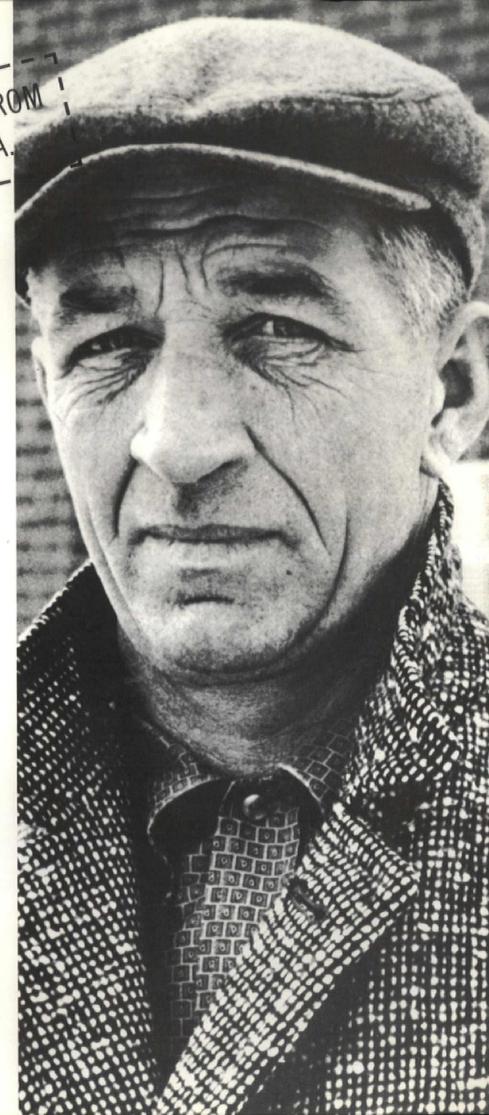
When I sell
new homes
I can demonstrate
the Big
Difference

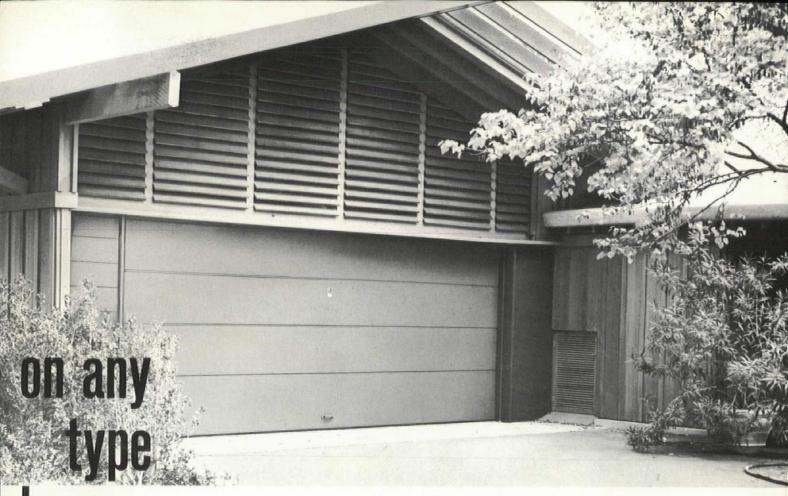
Yes, there is a big difference in garage doors. My customers are getting that big difference in Barber-Colman OVERdoors—and I can demonstrate it. We buy OVERdoors because they're good doors—consistently good doors—and help us build and sell consistently good houses.

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E. F. CASSIDY, INC.

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home ... the quality of Barber-Colman OVERdoor makes the BIG DIFFERENCE

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NEW FEATURES OF HYDRONIC HEATING

BY RAY SCHUMACK, Better Heating-Cooling Council

Most of us associated with the building industry are aware of the heating characteristics of hot water or hydronic baseboard systems—true perimeter heating which warms cold floors and walls, maintains steady temperatures from room to room and floor to ceiling, and sets up a gentle, draft-free circulation of air in each room of the house. But what are the other features that make hydronics so new and different?

The new benefits of hydronic heating can best be summed up by one word: FLEXIBILITY.

The use of pipes or tubing in sizes as small as $\frac{3}{8}$ in. and new engineering techniques make hydronic systems most flexible for today's homes. Here is a heating system that truly can be designed for the house, rather than a house for the system.

The hydronic system with baseboard panels provides complete perimeter distribution which is most effective in any house with large glass areas. Efficient yet simple and low-cost zoning is posible with hydronics for proper comfort-conditioning of large split-level and rambling ranch designs. The latest technique of hydronic zoning uses a single circulator, or pump, at the boiler with two or three small electricallyoperated zone valves installed in the piping system. One low voltage valve is used for each zone and is controlled by its own thermostat.

Another new technique that demonstrates this system's flexibility is the use of two or more types of heat distributors in one piping system. It is possible to combine baseboard panels, convectors and floor panels (in-the-floor coils of tubing) in one system. It is not uncommon, in split-levels, for instance, to use baseboard panels in the center and upper levels while tubing is installed in the slab of the lower level for floor panel heating. Both the baseboard and floor panel distributors are powered by the same home heating boiler. What about the unfinished basement that has no heat distributors? To keep costs at a minimum level, and at the same time maintain a damp-free basement, a single loop of 34-in, tubing can be installed at floor level around the perimeter of the basement. This loop of tubing

can be installed as part of the return line at very little cost. It has been found that the single loop will maintain a 69 F basement temperature. At a future time, radiation—baseboard panels or convectors—can be connected to the loop should one wish to finish off the basement.

A similar principle can be used in bathrooms to obtain a luxury feature at little cost. Architects have sought low-cost solutions to the problems of providing the extra heat that so many individuals require when bathing. Frequently, the bathroom vanity, bathtub and other fixtures in the bathroom leave very little available wall space for the installation of extra radiation. The answer is simple. The heating system main can be extended to a location under the tub and then "wrapped" in a loop around the tub within the space between the tub's inside and outside walls. The loop of tubing not only provides the extra heat required, but it also warms the tub. No cold feet when stepping into the tub!

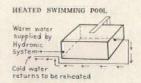
The hydronic boiler itself has become quite versatile. It may be the source of "power" for many new conveniences. A water heater, in the form of a tightly-wound copper coil, can be installed within the boiler. The boiler can "power" a snow melting system-piping or tubing embedded in the concrete of walks and driveway. The boiler may also heat a glassed-in solarium or greenhouse. It may heat the water of an outdoor swimming pool and-using watercarrying tubing-the decks surrounding the swimming pool as well. All of these functions can be handled by a single hydronic boiler, the same boiler that heats the house and provides year-round hot tap water.

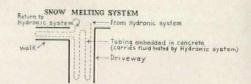
There is also flexibility of installation with hydronics. Small piping or tubing can be installed easily and concealed between stud and joist spaces. This feature makes hydronics especially suitable for modernization work. Complete hydronic baseboard heating systems may be installed in existing structures without tearing apart walls. Only small holes have to be drilled in several locations for installation of piping.

The series loop system, in which baseboard is run as part of the pip-

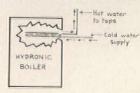
ing main, eliminates the need for most risers and returns. One riser and one return usually can be installed for each floor of the house. The baseboard is simply connected to the riser and return in a perimeter loop around the house. Thus small holes are drilled in wall partitions to run the piping from one room to another. There is no need to drop below the floor with piping. If a 15-ft wall requires only 10 ft of baseboard, the remaining 5 ft of wall space can be covered by a "dummy" baseboard enclosure. Piping which extends the system from the "live" 10-ft section of baseboard to the next room can be concealed within the "dummy" enclosure.

The series loop design and other new installation techniques used today by hydronic heating contractors make it possible in many cases to in-





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Some "extras" for hot water heating

stall a complete hydronic heating system in just one day. Packaged boilers (pre-wired, circulator and other controls assembled and connected at the factory) are one of the many new time-saving methods.

One of the underlying principles of the hydronic industry's research programs has been to make this quality heating system competitive with other forms of heating. Reduced cost has been achieved through the new installation techniques, smaller pipe sizes and other new developments mentioned here.

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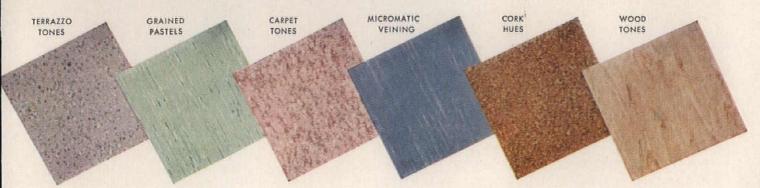
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TRENDS IN WARM AIR HEATING SYSTEMS

BY WILLIAM B. FOXHALL, Associate Editor, Air Conditioning, Heating and Ventilating

Trends in warm air heating today, as in the past, reflect the influences of cost, comfort, convenience, and convention; and in this fortuitous alliteration, fuel conservation and construction practices play important roles. While it is not practical to separate these influences as they bear on any given choice, it may be useful to keep them in perspective in reviewing developments.

Standards of Quality

Various organizations have set up standards and/or approval procedures for components of air heating systems (AGA for gas fired furnaces, U/L for oil, etc.), but their concern has been mainly for fire safety. There are some building codes stating that heating systems "shall maintain 70 degrees inside when the outside temperature is zero," a language non-specific to the point of ambiguity. (Where do you measure inside temperature? Is an average between 60 at the floor and 80 at the ceiling okay?)

Konzo, Carroll, and Bareither of the University of Illinois in Winter Air Conditioning (1959) point to the lack of effective performance standards and make some admittedly controversial (but, we might add, extremely well informed) suggestions for six basic measurements by which systems might be rated. These are: (1) fluctuation of temperature at the center of a room as the burner cycles on and off, (2) temperature variation from one room to another, (3) horizontal uniformity of temperature 30 inches above the floor at the center and four corners of the living room, (4) temperature differences from floor to ceiling, (5) temperature difference from floor to 30-inch level, and (6) floor surface temperature. Other surface temperatures might be included, but these authors feel that compliance with the numerical values they assign to these six criteria would result in a workable means of system performance rating. Approach to uniformity in temperature distribution and a floor temperature higher than 60 but lower than 80 are goals of "Class A" systems.

John Norris, president of Lennox Industries, in 1959 drew up a quality check list which, after review and revision by industry colleagues, has been submitted to Air-Conditioning and Refrigeration Institute and National Warm Air Heating and Air Conditioning Association as a proposed standard. The proposal is quite specific regarding system components and, to that degree, may be thought unduly restrictive.

For example, it recommends "perimeter floor duct air distribution with high level return inlets in each major area." Regardless of its commercial implications or engineering validity, this provision ignores the housewife's passion for putting rugs and hassocks over all such floor openings. It also negates the demonstrated workability of other distribution schemes which architects may legitimately choose to use. Hot air valence systems, ceiling diffuser outlets, and panel heating systems seem worthy of less summary dismissal. Nevertheless, we can look for some industry action on performance standards before long.

Meanwhile, NWAHACA is taking effective note of the fact that no system can be better than the skill and conscience of the installing contractor. Its Silver Shield program of training and awards is having salutary effect in this area.

Electric Resistance Heating

Two factors are at work which seem to indicate a rapid development of electric heating. First, utilities have increased their capacities to handle the burgeoning summer air conditioning load. Peak demand on generating facilities has shifted in recent years from winter to summer. Utilities are actively promoting electric heating as a means of evening summer and winter loads.

The second factor favoring a trend to electric heating is a long-term one based on the fact that conventional fossil fuels simply cannot last forever. Some estimates foresee the end of present known oil reserves in something over 25 years, gas in 50, and eventually coal.

For architects and owners, a big advantage of electric warm air heating is its flexibility. When resistance inserts can be installed at any point in a duct system and individually controlled by separate thermostats, the advantage of continuous air circulation, filtration, and humidity control can be enjoyed with almost unlimited architectural freedom. Also, resistance boosters may prove to be a practical means of reducing heat pump sizes in some latitudes.

But cost of operation is a giant disadvantage of electric resistance heating. However, there were 581,000 buildings completely heated by electrical resistance as of June 1959. Of these, 94% are homes.

Heat Pumps

Where summer cooling is a must (and where, in top grade housing, is it not?) the heat pump offers a wintertime advantage as an electrical heating device. It can deliver two or three or more Btu at the condenser for every Btu of electrical energy put into it at the compressor motor. It does this by transferring heat from a natural low temperature source outside the house. The source can be air, earth, or water. Because performance of the heat pump drops off as the source temperature decreases, heat pump development has been most rapid in regions having mild winters, hot summers, low electric rates, and high rates for other fuels. Most of the 61,000 heat pumps now at work are in southeastern states. but heat pump technology is advancing and the latitude of practicality is moving rapidly northward. With solar boosters, deep well storage, and other devices augmenting the increasing reliability of the machine itself, the number of installed heat pumps is expected to more than double in the next year or so. Many packaged models are available, and several concerns make a specialty of custom installations. The mass market, however, must await still more development work and data.

Continuous Blower Operation

There is considerable sponsorship of continuous blower operation for warm air systems. Continuous circulation does have real advantages, especially in multi-level homes where stratification may be a problem. By avoiding excessive temperatures at upper story ceilings, there



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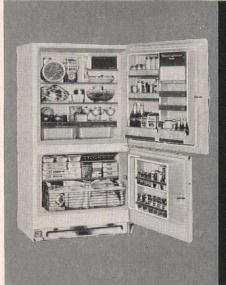
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Now, from Westinghouse, comes this exciting new 14 cu. ft. refrigerator with revolutionary pull-out Center Drawer, so easy to use . . . see into . . . reach into. Use it as a powerful demonstration in your model homes. Special compartments in the exclusive new Center Drawer keep meats and vegetables fresh for days . . . even hamburger stays fresh a full week without freezing. Moreover, this new Cold Injector Westinghouse is Frost-Free throughout. There's no defrosting in the refrigerator . . . the freezer . . . or the Center Drawer. Doors open 90 deg. within cabinet width, and there are no coils on the back. In addition to 5 Cabinet colors* and 8 Choose-N-Change Door Panels-40 combinations in all-there are doors in Coppertex and Brushed Chrome, enabling you to carry out any kitchen color scheme. *Mint Aqua (shown opposite with Westinghouse Heirloom Maple Wood Cabinets), Frosting Pink, Lemon Yellow, Sugar White, Coppertan.

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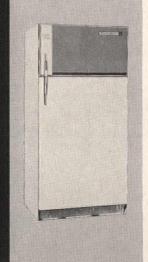


Westinghouse Refrigerators come in all sizes from 9 to 16 cu. ft., and may be installed freestanding, or built-in. Accessory Trim Kits are available for all except the 9 cu. ft. models, for which trim may be made locally. All units have doors that open 90 deg. within cabinet width.

(Left)

14 cu. ft. capacity, including 161 lb. bottommounted home freezer • Cold Injector System Meat Storage Pan
 Twin Porcelain Crispers. Dimensions: 33" w x 65%" h.

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continued from page 56

can be an actual but modest saving in operating cost over a season. There should be close thermostatic control so that the burner goes on and off at regular and frequent intervals. At 50 per cent of design load, on and off intervals should be about three minutes each, according to some authorities. Continuous operation also provides opportunities for constant filtration and humidity control. The objective is even room air temperature. In severe climates, controls should be set so that blower operation is continuous only when outside temperature is below about forty degrees and the burner cycles frequently. In milder climates and high, dry climates with large diurnal changes of temperature, special problems exist. These include continuous blower operation at low load, and are the subject of a new NWAHACA research program to be conducted in test houses in the southwest mountain states.

Multi-Furnace Zoning

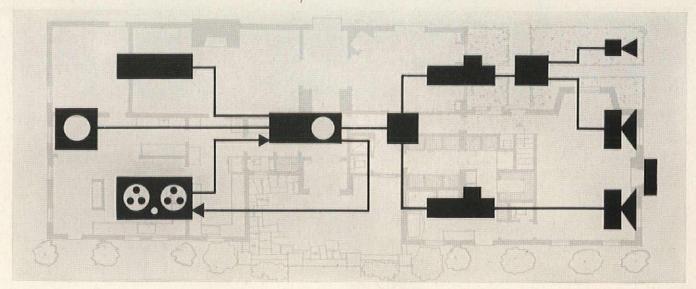
The advantages of zoning heating systems are well known. Zoning of forced warm air systems can be accomplished by separately controlled dampers in trunk ducts serving groups of rooms. This method, however, cuts off all circulation to those rooms except when heat is required. And control of motorized dampers can be expensive and temperamental. For large houses, it may be less expensive and almost certainly will be more satisfactory if two or more furnaces of smaller size are installed, one for each zone.

Heat Delivery Methods

Under pressure of competition, new methods of warm air heat delivery have been devised and many sacred old rules of thumb found to be less sacred than had been supposed. The perimeter loop system for slab-on-ground houses is a case in point. The use of a single duct system for both heating and cooling is another. The simple truth is that ingenuity and innovation are not intrinsically sinful. Good performance can be obtained in many novel ways so long as the elementary laws of physics are observed. For example, a certain house we know of approaches the ideal of

uniformity in both heating and cooling by the use of low cost ceiling diffusers for air supply and slotted window sills for return. On the heating cycle, air cooled at the glass surfaces simply disappears without a struggle into the window sills and is replaced by a gently descending curtain of warmer air from the room. In another house, basically a dome-shaped double shell, a central column provides a chimney through which warm air rises by gravity and cascades downward as it cools between the outer walls. The delightful result is to be totally enclosed in a low temperature warm panel. When the north wind blows, it simply cools the cascades on that side a little faster and accelerates the flow of replacement warm air; a silent, self adjusting system. Another house gets all its heat from a rockpile heated by the sun. This is no plea that we should fly in the face of established practice. It is only assurance that the challenge of new shapes and new fuels will be met by the same drive, imagination, and research that have shaped our present manuals of good practice.

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RECORD HOUSES OF 1960

The twenty award winners of this year's cross-country search for fine contemporary architect-designed houses reflect a singularly unified concern with bettering the life and outlook of their owners—even with the great diversity of cost, size, location and "style." They are not the most radical designs concocted during the year; they are sound, buildable and durable schemes. Nor are they "typical" or "average" houses. Functionally and esthetically, they rise high above the ordinary lot; however, it is our sincere belief that such carefully considered schemes will affect the typical house in years to come.

To introduce the twenty houses for this year, we have a candid-and-architectural-photograph study of a house-remodeling by Paul Rudolph. It is accompanied by an article by Edith Brazwell Evans, which emphasizes the architect's position in the mainstream of housing developments today. The remaining two sections of the book include a new series of articles on decorative and technical developments, and the latest products and informative booklets for house design. We hope that the consciousness of the contribution good architecture can make to good living will be extended through the issue's availability to the public by all major bookstores.

WHAT'S RIGHT WITH ARCHITECTURE





BY EDITH BRAZWELL EVANS
Editor-in-Chief, LIVING For Young Homemakers

The time has come when contemporary architecture can be assessed in terms of its own esthetics. The new materials, new structural concepts have, like the chords of Beethoven, won an acceptance that puts all of us on our mettle to find ultimate expression of function and beauty.

The bizarre shapes of the 'twenties and 'thirties whose raison d'être was to let the world know that something was happening in architecture, in retrospect seem to have protested too much.

The "something" has happened, and anyone who has been close to the change, often—like an old revolutionary growing conservative—finds it hard to remember what all of the fuss was about.

New forms and structural ideas that would have been jeered just before the Second World War are suddenly appearing even in mass-produced factory-built homes, and finally are mortgageable. And architects, who are forever at the mercy of a public with the unan-

PAUL RUDOLPH, ARCHITECT

House in Cambridge, Massachusetts Vappi, Symmes and Maini, Mechanical Engineers Stanley I. Phalen, Building Contractor

FAMILY PHOTOGRAPHS BY ELLIOT ERWITT-MAGNUM ARCHITECTURAL PHOTO-GRAPHS BY LOUIS REENS



REMODELING IN CAMBRIDGE: BIG SPACE PROVIDES AN ELEGANT SETTING FOR FAMILY POSSESSIONS

swerable "but it is my wall," are enjoying an artistic freedom that would give a Dadaist pause.

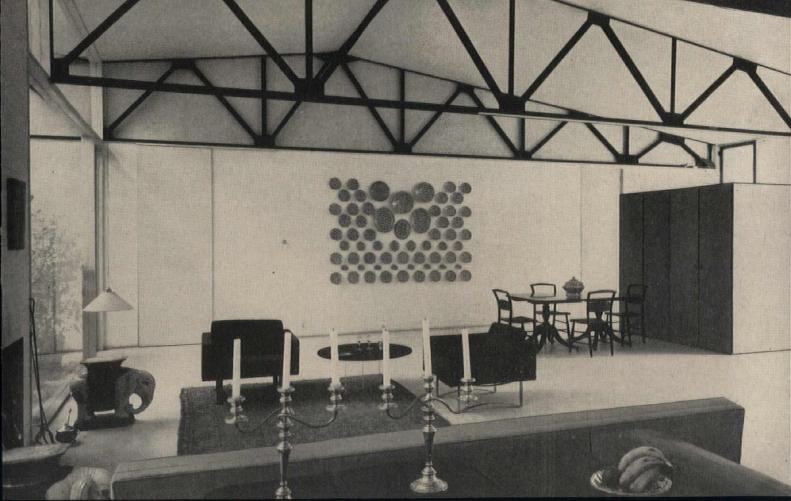
What architects will make of their new freedom and public trust still largely remains to be seen. We have found among them a professionalism, dedication and an intolerance of eccentricity, proving that we have not misplaced our trust.

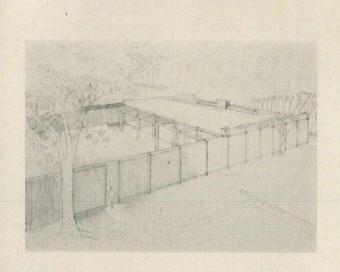
The new freedom has given architects an opportunity to find a personal expression and to evolve an architecture truly faithful to new materials and construction techniques, and to give new meaning to the architects' professional integrity.

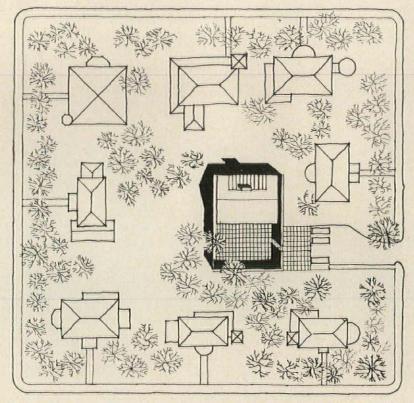
I can think of no better case in point to illustrate what's *right* with architecture today than the unusual remodeling project of Paul Rudolph's, pictured on these pages. Here is the best of modern architectural thinking, applied to a common problem to achieve an uncommon solution. Nothing else so perfectly proves the purity and essential "rightness" of Mr. Rudolph's design as its ability to make friends with his client's antique furniture. Good design, certainly, is a common denominator for all ages.

Even the background story for the project suggests how completely we are liberated from

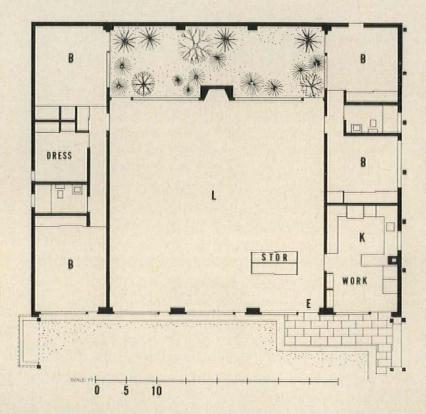












REMODELING IN CAMBRIDGE: A PRIVATE FAMILY DOMAIN IN THE HEART OF A CITY BLOCK

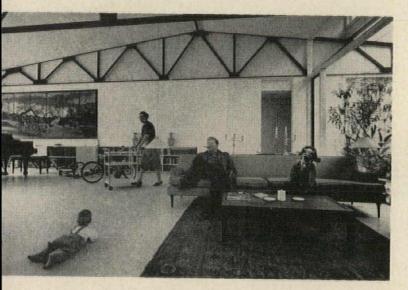
the "ivory tower" in our architectural thinking. The family came to Mr. Rudolph with the intention of buying one of the old Victorian houses which surround this structure. They thought that they would remodel that to suit their needs. But the awkward plan, the small rooms and twisting stairs made it an unlikely prospect for the kind of life this family desired.

During his tour of inspection, however, Mr. Rudolph spotted the structure from which this home has evolved. Built in the center of the block as a community garage, it was now abandoned and had fallen into disrepair. It was not a New England barn or carriage house. No one "fell in love" with its fading charms. What it offered was uncluttered space. In converting it to living space, Mr. Rudolph was exploring a frontier. In the changing scene of urban growth, the unrelated conversion of land use and building use is inevitable. What is the living potential of a commercial steel-framed building?

Mr. Rudolph has shown an understanding of the construction details of the original building. The steel trusses, the slab floors remain to become the design focus of the home. The only structural changes are logical ones in terms of the building's original design dictates.

The free flow of space is more often defined decoratively than structurally. The formal wall arrangement of antique plates defines the dining area. The fireplace "centers" a conversation grouping. Two grand pianos are the focal point of a music "room." Where space divisions were inevitable for bedrooms and work areas, Mr. Rudolph has used the "bay" divisions of the original structure. The large, central living area divides the master bedroom, dressing room and guestroom-study on one side of the house, from the children's rooms and kitchen on the other.





REMODELING IN CAMBRIDGE: ROOMS STRESS PRACTICAL CONVENIENCE

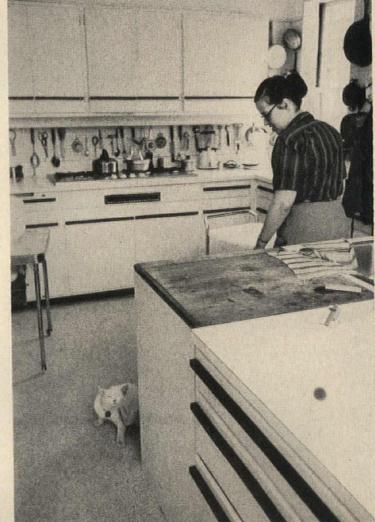
It is in solving the problem of light that Mr. Rudolph has shown most ingenuity. The original structure, of course, was lighted from one side only, and, because the house is situated in the middle of a block and surrounded by other homes, privacy requirements prevented Mr. Rudolph from simply "opening up" the rear wall. What he did instead was to create a conservatory with a translucent roof which provides light and a green horizon for both rear bedrooms and the central living area.

The conservatory serves another incidental purpose in arbitrarily reducing the depth of the central living area; thus giving it more definition. In fact, Mr. Rudolph has exploited the structural freedom of steel-framed structure in solving problems of scale and esthetics throughout the house. The glass panels and transoms which rise above the steel supporting trusses throughout the house are evidence of a remarkably refined approach to design.

But this is not a home to be appreciated for its architectural merits alone. Nothing else is so evident in its design as the character of the individual family who lives here. They are bookish; a family of college teachers. Their way of life is Boston-formal (they enjoy entertaining formally), and is concerned with the demands of three small children. Their budget was decidedly limited, not only for the cost of the original structure, but for the cost of maintaining it. They are a servantless family whose cultural interests leave them little time for housekeeping.

It seems to me that Mr. Rudolph has performed a near miracle in satisfying the family's formal—as well as their domestic—way of living. The large, central living area is definitely formal; yet can withstand the vigorous activity of young children. The small guestroom-study with its fold-away bed on the "adult side" of the house is a retreat for adult







REMODELING IN CAMBRIDGE: PLAY AND RELAXATION HAVE PLEASANT SPACES



pursuits which demand quiet. The white terrazzo floor which is used throughout the common area of the house not only forms a good conductive heating surface for the radiantheating system, but is elegant, nearly indestructible and practically carefree. And in this unusual instance, could be installed with unusual economy.

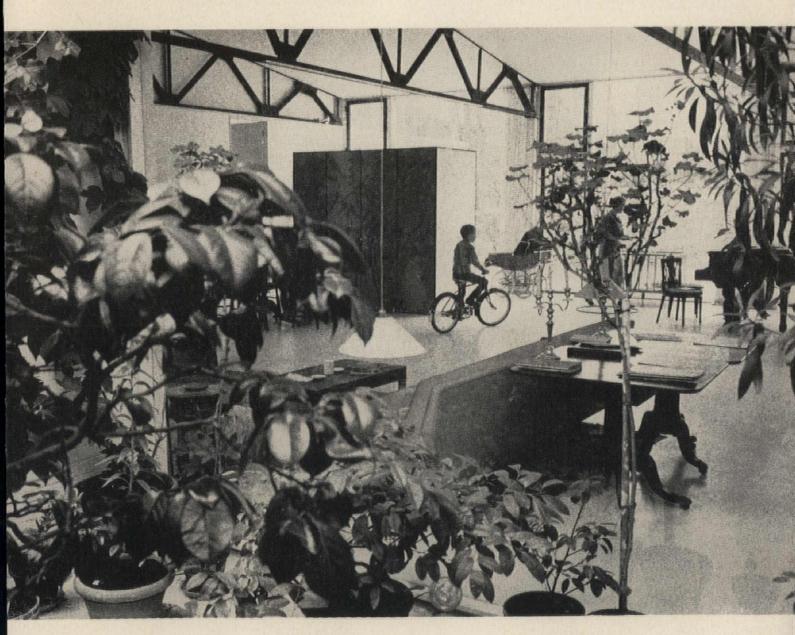
The absence of clutter throughout the house in both architectural detail and decoration, the built-in bookcases and large, freestanding storage unit combine to give the home a feeling of serenity and dignity. And, of course, over all there is the home's very genuine spaciousness. It encompasses over three thousand square feet, planned for maximum use by all members of the family.

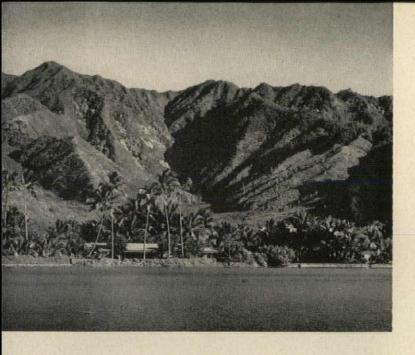
The success of this home lies in Paul Rudolph's ability to apply our most enlightened architectural thought to the conversion of an old garage for family living.

It seems to me that the architect who can adhere to the discipline imposed by an existing structure of inadvertent origin, and by his client's requirements with such outstanding results, has made a healthy contribution to the practice of architecture. An architectural vocabulary that is expressive only in terms of custom-built homes for wealthy avant-garde clients or monumental hotels and office buildings, becomes, after a while, like "church latin," uncommunicative.









HAWAIIAN HOUSE QUIETLY ECHOS A LUSH SETTING





VLADIMIR OSSIPOFF, ARCHITECT

Residence for Mr. and Mrs. Vladimir N. Ossipoff Honolulu, Hawaii S. Mivra, Contractor George Walters, Landscape Architect

The almost never-never-landish quality of the climate and landscape in our newest state has a very suitable counterfoil in this comfortable and casually relaxed house, by one of the Islands' best known architects for his own family. From the road, and from the sea, it gently suggests itself in the lush palm grove. Yet within, spacious, and skillfully detailed and patterned areas establish an equally pleasant atmosphere.

One of the most effective features of the house, and one which greatly adds to its sense of space, is its unusual ceiling, whose continuous plane extends through to the outdoor terrace roofs. Its striped effect is caused by application of wood plank over fiberboard, and was done with the idea of achieving warmth of wood, simultaneously with broken surface, and some exposure of the fiberboard for acoustic purposes. On the result, the architect states: "It has worked."

The long, informally disposed plan is arranged so that all major living areas have a view of the sea. Attractively planted courts at the entrance and at the center of the house provide more intimate views for bedroom, guest room, and living room. provide more intimate views for the master



AN ELONGATED PLAN AND LANAIS MAKE THE MOST OF THE PACIFIC VIEW

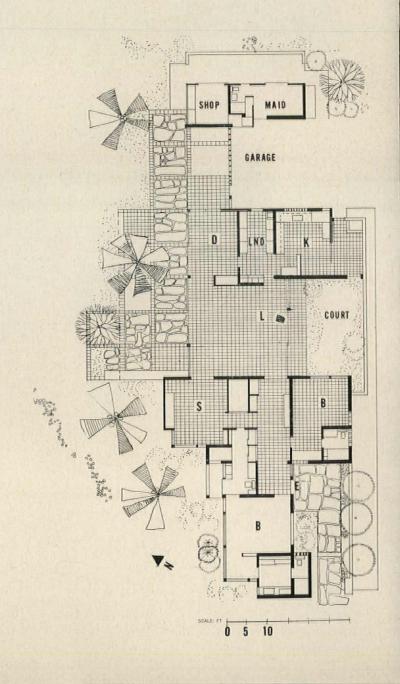
THE PLAN of the Ossipoff house includes an array of places for dining. A secondary lanai area (behind garage, off dining room) provides a place for outdoor cooking out of the wind, which comes from the northeast. The kitchen has a dining corner where the family eats on the maid's day off. The architect refers to the large undesignated space between the study and the entrance gallery as a "gloryhole sans ceiling"!

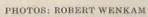
THE STRUCTURE permits the continuous plane of ceiling through use of open-web steel joists as ridge and door headers within 2-by-12 in. framework. The foundation is concrete, and exterior walls are hollow cement block, painted. The roof is corrugated cement-asbestos.

MATERIALS are, for the most part, given a natural finish. Living room ceilings are redwood, floors are clay tile. Kitchen floors are vinyl tile and clay tile; baths are vinyl or cork tile. Interior walls are glass, gypsum board or teak. Bathroom counters are marble.

EQUIPMENT includes built-in range, ovens, dishwasher. Electrical wiring is low voltage. An incinerator is provided.

THE COST (without lot, landscape, and furnishing) was about \$60,000.





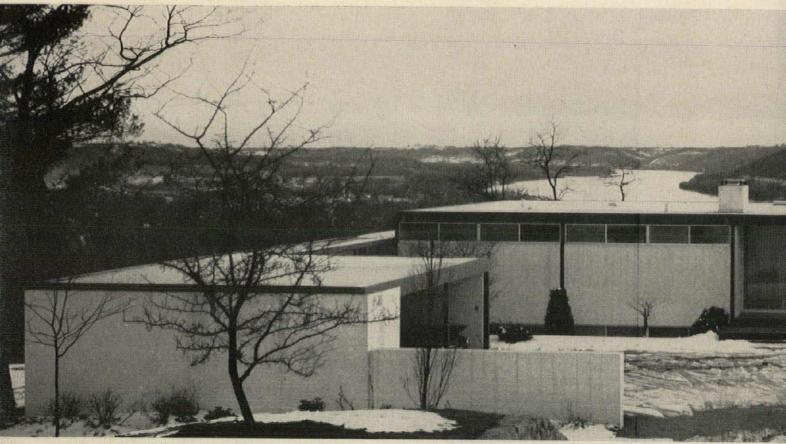








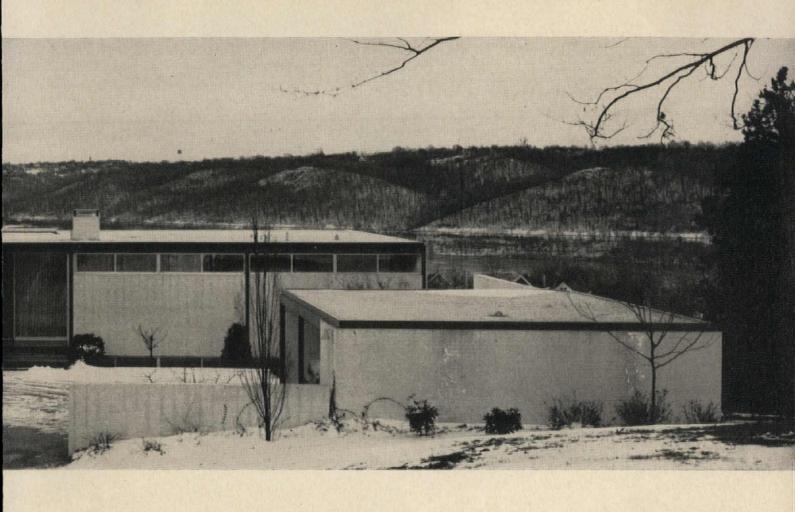
CRISP DIGNITY ON A DRAMATIC SITE



PHOTOS: GEORGE STILLE

This spacious, dignified house has been adroitly sited to take the fullest advantage of a spectacular view across Cincinnati, and the Ohio River and valley—to the Kentucky hills beyond. The view is further dramatized by the organization of the house, and by placing its two levels just over the "brink" of the hill—reached by a short bridge.

The house is approached from a higher elevation, so that the panorama can be seen above the roof profile of the house. As one descends gradually down the drive, flanked by large oaks and pines, the formal entrance courtyard becomes dominant. To enter the house, one crosses the little bridge over a formally planted, sunken garden extending across the entire front of the house. Inside, the view is brought back with impact: the foyer is a



balcony overlooking a two-story skylighted stairwell, glazed floor to ceiling—and with the view framed by plants of an indoor garden.

The major living areas are on the upper floor, which is divided into two functional units by the entrance hall. At one side is the living room, furnished in two groups: one, more intimate around the fireplace and bookshelves—the other more open to the view, with access to a covered deck and screened porch. A study opens off the living room; a bar, dressing room and bath extend the use of the study for entertaining or as a guest bedroom. The other side of the main level is devoted to dining, kitchen and maid's quarters. A covered, wood-slat deck spans the entire floor. On the lower level, family bedrooms flank a central play room; each bedroom has access to a paved terrace.

CARL A. STRAUSS, ARCHITECT RAY E. ROUSH, JR., ASSOCIATE ARCHITECT

House in Cincinnati, Ohio Jacob Boettcher, Contractor Henry Fletcher Kenney, Landscape Architect



A SPLIT LEVEL PLAN GIVES A BROAD VIEW AND ACCESS TO OUTDOORS FROM EACH FLOOR

THE STRUCTURE of the house uses a steel frame with 4-by-4-in. tubular steel columns, and with beams at floor and roof lines exposed. These members have been painted a charcoal gray in contrast to the white of the painted brick and stucco exterior walls. The upper floor and roof construction is wood; the lower floor is a concrete slab over sand, gravel and a vapor barrier. All exterior brick walls are of insulated cavity construction. The stairway has a steel frame and balusters, painted white, and treads formed by steel pans filled with terrazzo. The handrail is walnut. The roof is built-up, with marble chips.

INTERIOR FINISHES are kept muted on the upper level to form an appropriate background for paintings, sculpture and furniture. Walls are off-white, with earth colors and walnut as accents. On the lower floor more vivid colors and cork floors have been used in the children's area and playroom.

THE COST of the house (without lot, land-scape and furnishings) was about \$97,000.



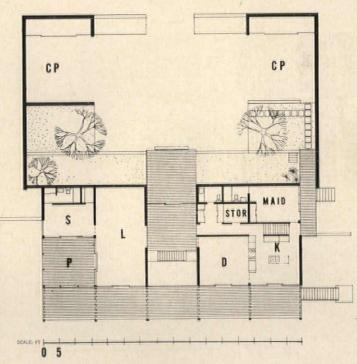


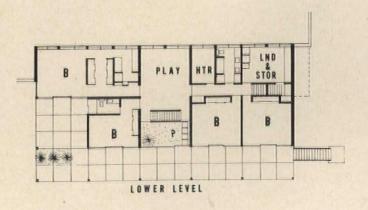
PHOTOS: GEORGE STILLE









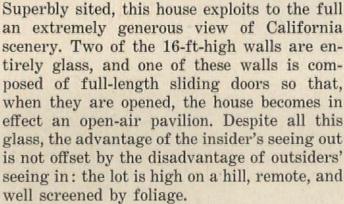




HIGH GLASS WALLS EXPLOIT VIEW FROM HILLSIDE HOUSE



PHOTOS: ERNEST BRAUN



Since the owner is a bachelor whose interests are chiefly intellectual, this house was designed to accommodate both the efficient and fairly simple housekeeping required by a single person, and the entertainment of discussion groups. Because it serves this latter activity, the conversation pit becomes more than a gimmick.

This house took an honor award in the 1959 Western Home Awards program sponsored jointly by the American Institute of Architects and *Sunset* magazine.

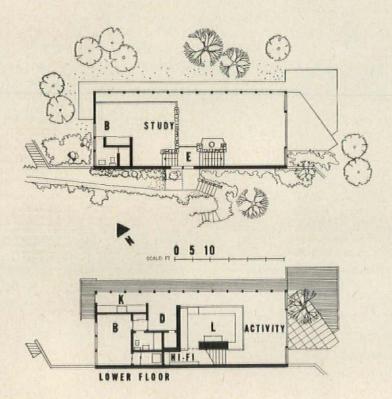


LEE STUART DARROW, ARCHITECT

Residence for Mr. Alyn B. Reid Mill Valley, California Constantine Chekene, Structural Engineer Ralph Briggs, Building Contractor

MANY LEVELS GIVE MANY VIEWS BOTH INSIDE AND OUTSIDE





STRUCTURE: The site of the Reid house was a 10-ft cut in the garden of an old estate; very little additional grading was needed. The wood-frame house is braced laterally by I-beam columns concealed in the south wall, and longitudinally by diagonal sheathing on the same wall. The roof, of stitch-nailed planking, adds further bracing. Because of the large volume of the living area, radiant heating set in the floor slabs is supplemented by two radiant ceiling panels.

PLANNING: Space allotment includes a generous living room for the entertainment of fairly large groups. The galley-type kitchen is easily maintained, but still large enough to prepare relatively large meals. Though privacy was not a necessity inside the house, having the study separated from the living room undoubtedly fosters concentration. Guest room and second bathroom are located on the lower level. Books and records are stored under the entry. The outdoor deck is carried along the long wall of the house as a catwalk for window washing. The house's many levels give a variety of viewpoints, from the crow's-nest of the master bedroom and study to the low level of the conversation pit.

MATERIALS: Exterior walls are redwood. Interior walls are finished with redwood and grasscloth, except in the kitchen, which uses mahogany plywood for both walls and ceiling. Flooring is cork tile throughout the house. Custom-built fixtures include the metal fireplace, designed by the architect, and the living room's ceramic light fixtures, designed by a local sculptor.







PHOTOS: ERNEST BRAUN



PHOTOS: HEDRICH-BLESSING



HARRY WEESE, ARCHITECT

Residence for Harry Weese Barrington, Illinois Rieke Construction, Contractors

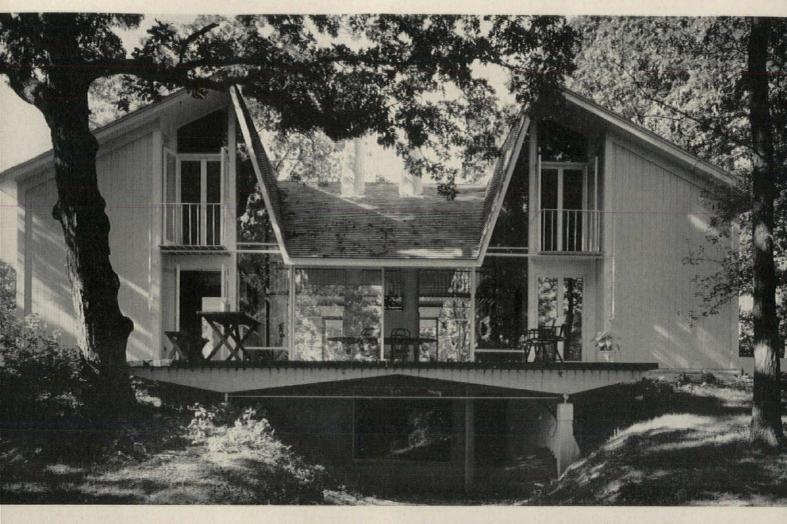
A HOUSE FULL OF PRACTICAL WHIMSEY

This frolicksome house should at least give pause to those who still cling to the belief that a modern house is typified by flat roofs and corner windows, or that contemporary as an architectural word implies any single style.

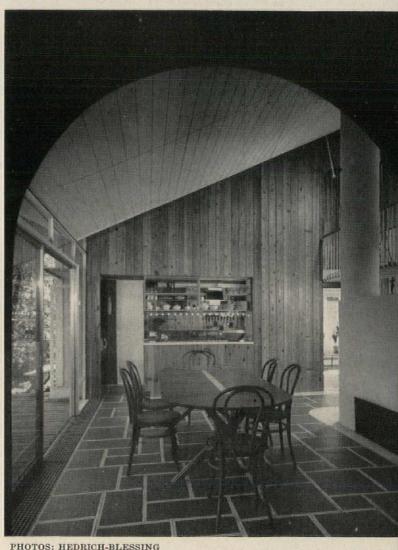
It is a house as comfortable as the ones our grandparents loved and built—and almost as full of the unexpected. Peaked roofs, sharply sloping ceilings, arched doorways, suspension bridges, catwalks, swings: all these and more are welded into a fresh, highly individual design. The architect planned it as a summer and winter weekend house for his family, but by and large, it would make an admirable year-round house. In its design, Mr. Weese states that "the opportunity was taken to prove several theories of a more or less exploratory nature."

The house is situated to take full advantage of the five-acre wooded site, which is surrounded by lakes, and is constructed to form a saddle in the hilltop. The first floor is $2\frac{1}{2}$ ft below grade at the flanks.









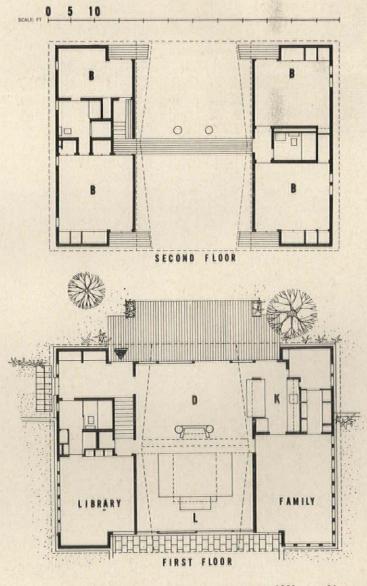
PHOTOS: HEDRICH-BLESSING

A GREAT HALL FOR LIVING AND DINING FORMS THE HUB OF THE HOUSE

THE MAIN LIVING AREA of the Weese house dominates the plan. It is big, with a pitched ceiling which rises the full two stories at its peak. It is divided visually into living and dining areas by a double fireplace (photos below right). An informal "sitting well" increases the comfortable atmosphere on the living area side. The two-story gabled wings are connected by a dramatic bridge suspended by cables across this room.

THE WINGS house secondary living rooms and service areas on the main level, bedrooms above. A basement houses the laundry room, and a working area with drawing boards and benches for various activities in handicrafts.

THE SITE is located in Barrington, Illinois, a small community about 60 miles northwest of Chicago. In planning the 2700-sq-ft house, all existing oak trees and most natural approaches were preserved. The land falls away on the swimming pool at the southwest (the living room side) to a lake below. Wood block paving continues outside the house on this side to surround the pool and help increase awareness of the natural setting. Sliding sash allow uninterrupted views and give easy access to the outdoors.



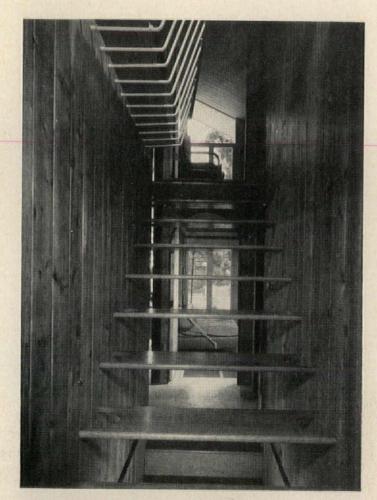
EXAMINATION OF THE DETAILS REVEALS SOME INTRIGUING SURPRISES

THE STRUCTURE of the Weese house is basically a twin gabled one with the pitched ceiling of the main living area suspended between—not framed into them in the conventional way. Construction is of 4-in. double tongue and groove western red cedar plank—structure, insulation and finish being provided in the one material. The roof is of shingles.

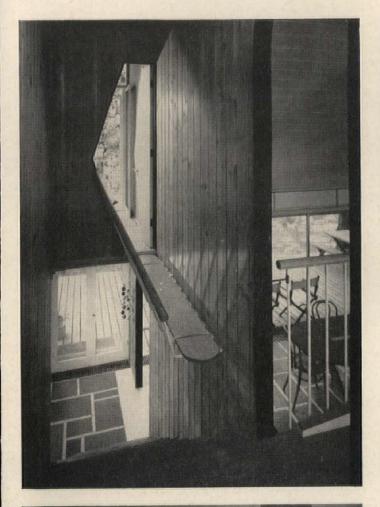
MATERIALS were all selected for ease of maintenance, necessary in a household with young children.

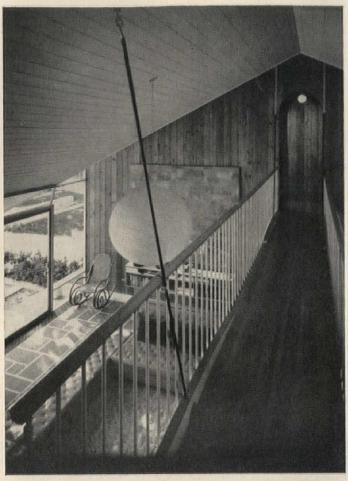
A DIMMER PANEL is located in the "sitting well" for the control of varying combinations of lighting to accentuate both interior and exterior features of the house.

A CATWALK gives access to one child's bedroom (photo top center). Each bedroom has a balcony reached from outside by a ladder—an idea prompted by a summer life involving swimming and sailing, and wet clothes.









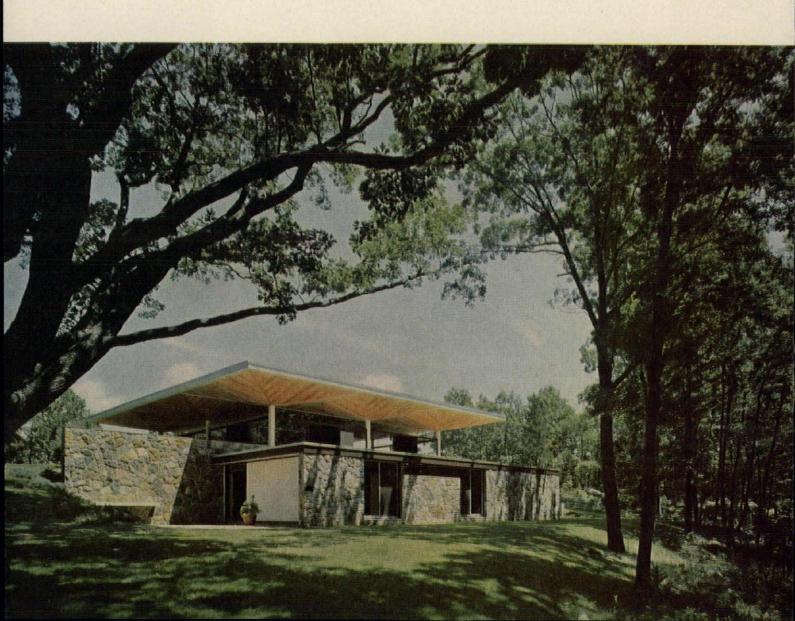




ULRICH FRANZEN, ARCHITECT

House Near Essex, Connecticut Wilfred Sevigny, Contractor Ulrich Franzen, Landscape Architect Ulrich Franzen, Interior Designer







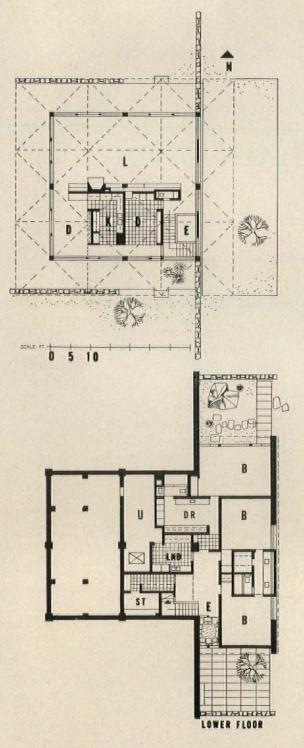
AN UMBRELLAED PAVILION ON A HILL

In this remarkable house, Architect Franzen develops to a greater degree some of the design hallmarks, for a pavilion house under great soaring roofs, that he started with his own house (see Record Houses of 1956). In this example, dramatic use was made of a hilltop site to vivify the impression made by the glass pavilion roofed by nine inverted umbrellas, and to exploit to the fullest the surprise of a spectacular view.

The site is a mountain top with panoramic vistas of the Essex River and its yacht basin, Plum Island, and Long Island Sound—with occasional glimpses of Montauk light. The vistas are not apparent as one drives up to the mountaintop through a mile of woods.

To heighten the effect, the house was developed with a lower level set into the hillside, retained by walls of granite found on the site. This level contains sleeping and service rooms, as well as the entrance hall; it is a quiet area with closed vistas into the woods and toward a pond. The active areas—living room, dining room and kitchen—are placed in the open glass pavilion set above the stone podium. As one enters the house, the experience of walking up into the pavilion and the view is one of increasing surprise and excitement.

FOR ALL ITS DRAMA, THE HOUSE IS DESIGNED FOR CONVENIENCE AND EASY UPKEEP



THE PLAN of the house was devised by Franzen to simplify living for a family with only part-time commuting help. The house is replete with up-to-date equipment, and an abundance of built-in storage cabinets. Head-high storage units, finished in walnut or painted white, form the only separation of spaces in the upper living areas; thus the sense of space is increased, and the full impact of the roof structure is felt throughout the area.

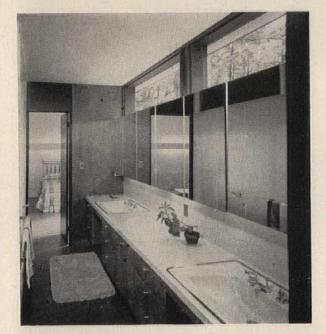
THE LOWER LEVEL contains bedrooms for the children, flanking a compartmented bath; a master bedroom suite with a little court; and laundry, storage and utility rooms.

THE UPPER LEVEL is surrounded by broad decks, and contains a breakfast or hobby area in addition to the living, dining and kitchen areas.

THE MASTER BEDROOM SUITE is designed with provision for a kitchenette, so that it may be used as a self-contained apartment. One of the children's rooms doubles as a guest room; each room has a sliding door for ventilation, and to serve as its own entrance from the outside.

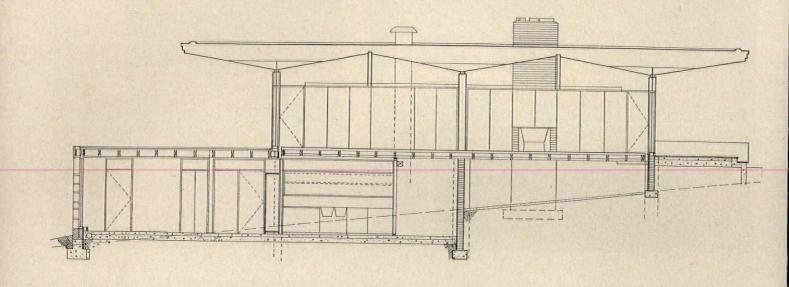












THE STRUCTURE IS A CAREFULLY ENGINEERED STEEL FRAME

THE ROOF STRUCTURE is entirely free standing and self bracing. It is composed of nine inverted steel-frame umbrellas, which are linked together as three hinged arches. The steel frame is clad in wood, and the ceiling is of treated natural cypress.

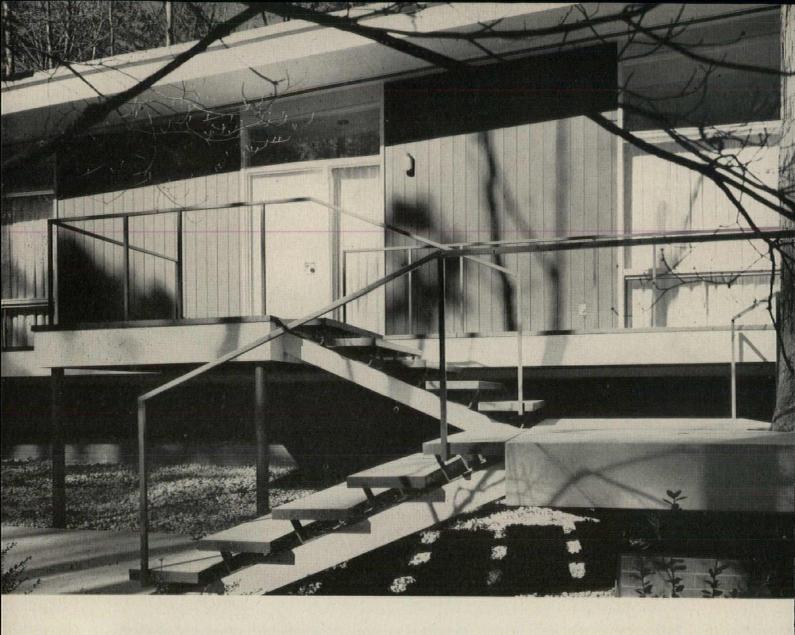
THE FLOORS of the pavilion are oak blocks, while those of the kitchen and breakfast room are surfaced with vinyl tile. On the lower level, the floor is a concrete slab on grade with carpeting in the entrance hall and master bedroom suite. The children's suite has cork floors throughout.

THE EXTERIOR DECK which surrounds the pavilion on three sides is of spruce 2 by 4's, stained the color of cathedral oak. All trim inside and out is painted a dark plum-brown. Walls on the lower level are plaster or wood paneling. Cost of the house was about \$20 per square foot.









The simple, open plan of this house renders possible the combination of the rather informal life which the owners enjoy and the rather formal—or, at least, clean-lined and "stylized"—appearance which they wanted of their home.

The architect organized the house into three main sections: a master suite at one end, another sleeping area at the other, and in the middle an unpartitioned living space. Within this open space there are two areas—the living room and the dining room—which achieve some formality through the judicious arrangement of furniture. Taken as a whole, however, the living area is both large enough and loosely enough planned to accommodate frequent and impromptu entertaining.

The resulting rectangular plan allows the exterior expression to take a simple, bold form, almost symmetrical, and forcefully carried out by the strong horizontal lines of the roof and deck and by the well-detailed, recessed and recessive siding.





OPEN PLAN, STRONG LINES IN GRACEFUL COMBINATION

SMALL & BOAZ, ARCHITECTS

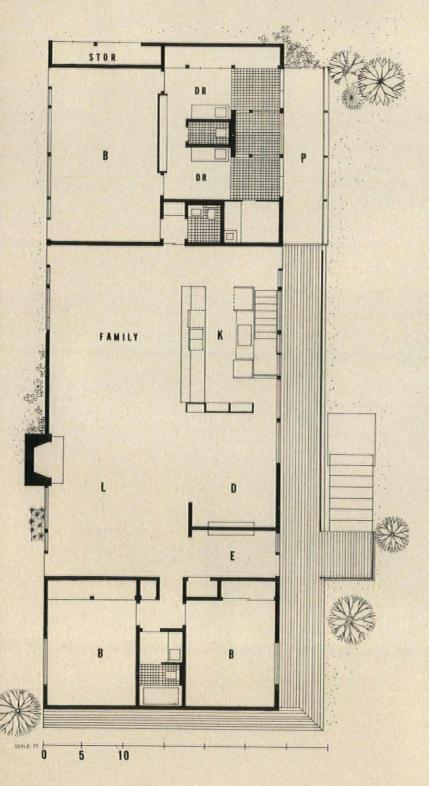
G. MILTON SMALL, DESIGNER AND PARTNER-IN-CHARGE

Residence for Mr. and Mrs. Philip L. Rothstein Raleigh, North Carolina Charles D. Williams, Mechanical Engineer Frank Walser, Contractor



PHOTOS: JOSEPH W. MOLITOR

DESIGN CLARIFIED BY CLEAN SURFACES, STRONG COLOR



PLANNING: The neighborhood in which the Rothstein house is set is one of large wooded lots, and nearby houses are all built with generous setbacks; these factors assure a certain amount of built-in privacy. Privacy becomes doubly assured, in any case, since the house is equipped with year-round air conditioning; although there is an outdoor terrace, it was not designed for intensive use. The sharply sloping terrain did present a difficulty, resolved by raising the house and setting it on short columns. Raising the house on a platform also contributed to the desired simplicity of the overall form. A carport is to be added to the west end of the house, next to the guest room and the son's bedroom; the roof line will be carried out to cover it.

MATERIALS: The wood frame house rests on a brick masonry foundation. Siding is tongue-and-groove vertical pine boards. Interior finish includes acoustical-tiled ceilings in all areas except the bathrooms, which are plastered; walls are plastered throughout; flooring is white vinyl tile except, again, in the bathrooms, which are floored with ceramic tile. Cabinet work is of walnut, finished with a dull varnish.

Colors: Colors were chosen to accentuate the cleanness of the design. Exterior is painted charcoal gray with white trim. The perimeter of the house is bordered by a bed of washed white gravel, both to add to the house's well-tailored look and to obviate the dank grasslessness common in open crawl spaces. In the interior, all major surfaces are white—ceilings, walls and floors—again, to preserve the clean look. Accent colors are black and red (the largest red accents being the living room rugs and the living room wall hung in red silk). The walnut cabinetwork takes on added warmth and brilliance against this pristine background.







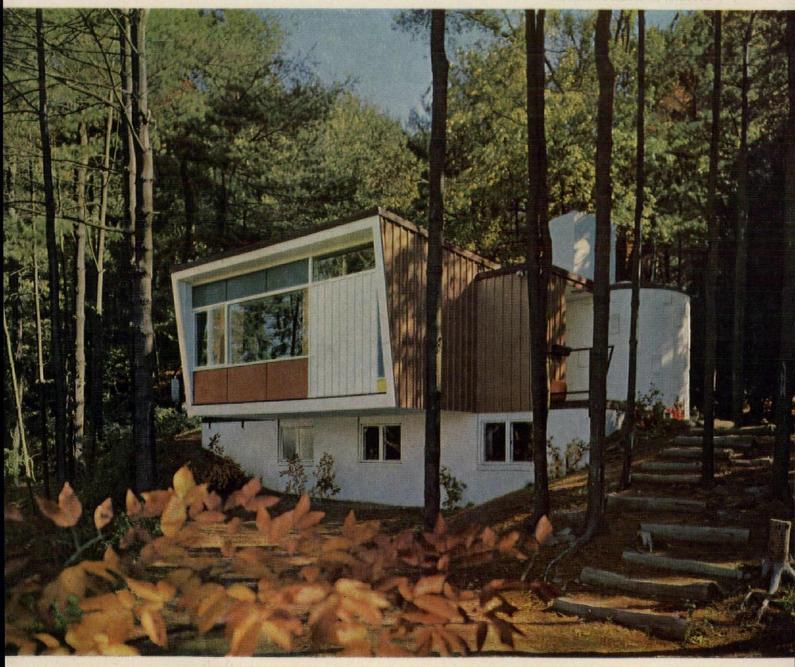


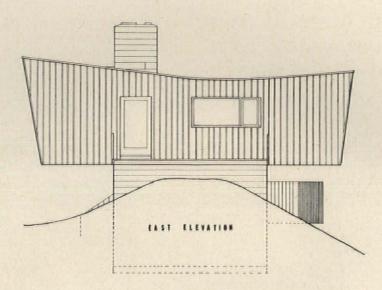
PHOTOS: JOSEPH W. MOLITOR

E. H. AND M. K. HUNTER, ARCHITECTS

Residence for Mr. and Mrs. Richard Wagner Hanover, New Hampshire Edward E. Bebeau, Building Contractor

PHOTOS: JOSEPH W. MOLITOR



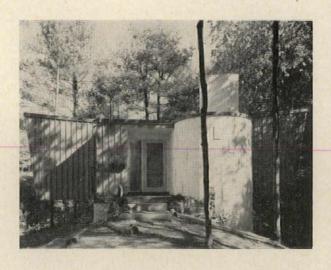


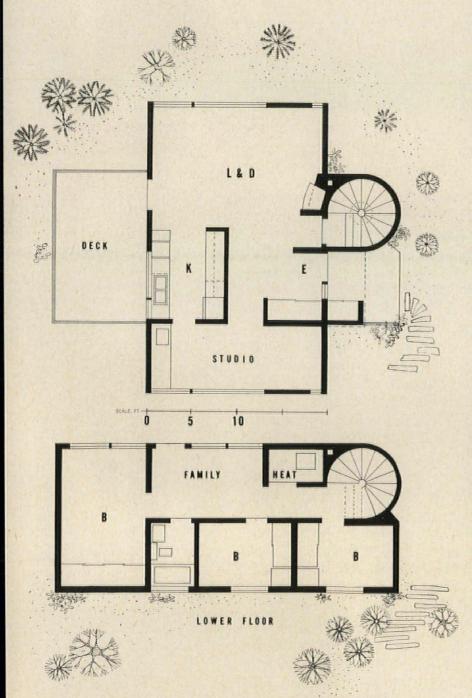
SMALL HOUSE FOR AN ARTIST'S FAMILY

This small house in the New Hampshire countryside lends itself comfortably and naturally to the informal and gregarious life of the family who lives here. Mr. Wagner, besides being chairman of Dartmouth's art department, is an active painter; studio space therefore became one of the first requirements of the house. Privacy, however, was not a requirement of the studio, since the artist can work without it, and since the entire familyparents and two young children—takes, and is encouraged to take, an interest in art projects. For these reasons, the upper, and main, floor of the house was designed on an extremely open plan, with each room visible from the others. This openness also visually enlarges a space which might have seemed cramped had it been divided by a number of full partitions.

Bedrooms and a family room are located on the lower floor. This reversal of the usual position of living and bedroom floors was called for by the site; to take advantage of the views of New Hampshire foliage, the main floor, with large windows, was lifted above the hill on which the house sits. The lower floor, being built into the hillside, has views from two sides.

NATURAL FINISH, WARM COLORS MAKE FOR A SNUG PORT IN A NEW HAMPSHIRE WINTER





SITE PLANNING: Some cutting and filling was needed to fit the site for building the Wagner house. The steep, narrow shoulder on which the house sits was cut to accommodate the lower story. This earth was used as fill for the driveway, a causeway built over one of the brooks which flow on either side of the hill. The causeway does double duty as a carrier for utility connections.

STRUCTURE AND MATERIALS: The foundation and the walls of the lower level are concrete block, as are the exterior walls of the stairwell tower. The upper floor has a wood stud frame, with exterior walls of painted wood. Interior finishes include painted scored pine sheathing on walls in the living area, and plastic-surfaced hardboard panels in the kitchen and bathroom. Flooring is rift-sawn fir on the upper level, painted concrete downstairs, except in the kitchen and bathroom, which are finished with asphalt tile. Little was required in the way of special equipment, except in the studio, where a stainless steel sink was installed, and where lighting fixtures providing both diffused light and bright spots were installed to augment the natural illumination transmitted by a large window.

DECORATION: The decoration of an artist's house comes, in a way, as a matter of course. In this case, the owner not only hung some of his own paintings, but also chose the interior colors, which were mixed by him from artists' colors.







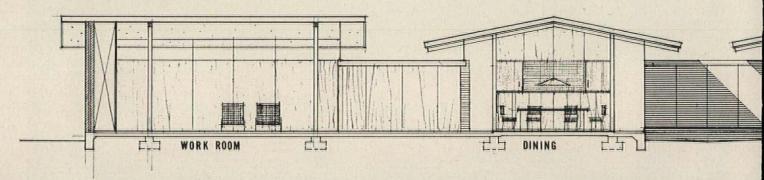


ARCHITECTURAL RECORD HOUSES OF 1960

A VILLAGE OF PAVILIONS FOR A HOME

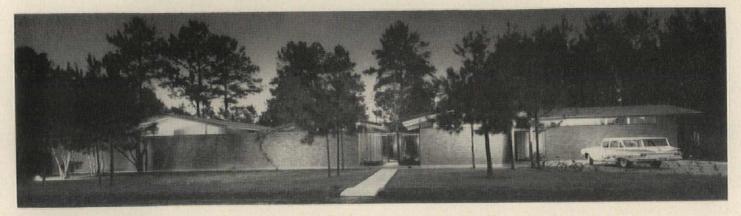
JOHN DESMOND, ARCHITECT

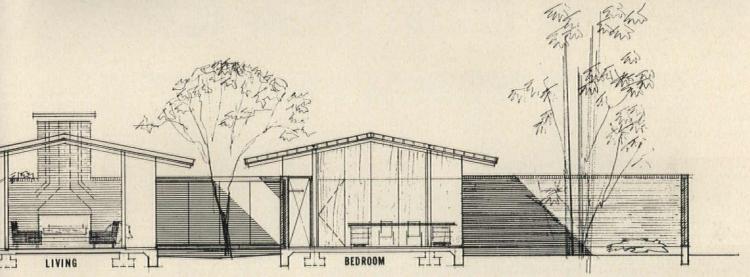
Residence for Mr. and Mrs. John Desmond Hammond, Louisiana Ragusa Brothers, Contractors



PHOTOS: FRANK LOTZ MILLER







This unusual house, designed by the architect for his own family, advances a kind of planning seldom carried out to such a degree in this country. Each major activity area is housed in its own separate "house." All are linked by corridors and gardened areas (note section above, and the photo left).

It is a concept that has been highly developed through the ages in various sections of the Orient. And of course, there are slight echoes of Southern Colonial planning, which often had detached kitchens and "garçonierres." The compound houses of the Orient, in particular, have intrigued architects and public alike for some time now, and perhaps this concept is of more fundamental value than some of the stylistic surface treatments we have seen. It is not a big house, but seems vast. Glass walls and sliding doors permit full use of the grounds most of the year. Privacy is assured by a brick screening wall at the front, a bamboo thicket around the lot, and draperies for each pavilion. Use of a simple, repetitive structural scheme kept the cost to \$32,000.







PHOTOS: FRANK LOTZ MILLER



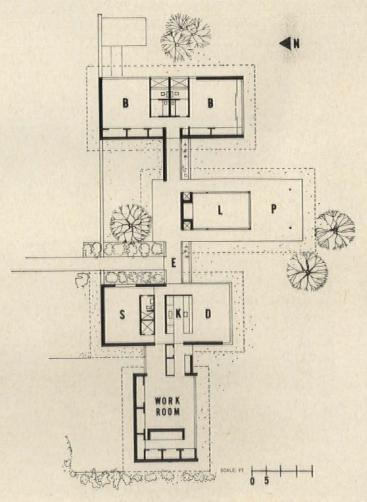
THE PLAN of the Desmond house was designed for a family of four, parents and two boys. The study is a multi-use room, serving for the architect's professional work at night, and also for a guest room when needed. The room has a hide-a-way sleeping mezzanine over the bath and storage area for guests' children. The area labeled Work Room is located near the kitchen, as it mainly accommodates the avocations of the lady of the house, as well as indoor play space for the children.

THE SITE measures 140 by 150 ft, and has a large number of pine trees and some oaks. The property will eventually be completely screened with bamboo.

THE STRUCTURES of the various units of the house are independent, with light roof canopies held free of the walls by light steel rigid frames using 4-in. WF sections. These are exposed throughout and placed to suggest a definition between seating, dining, or other areas. These units are connected by 7-fthigh hallways with flat roofs, which emphasize the pitched roofed units, and give a welcome change of scale inside. Foundations are concrete; exterior walls are 10-in. brick cavity wall or glass. Interior walls are brick or plywood, high ceilings are acoustical plaster, and low ceilings are wood. The sash is aluminum awning type; sliding doors have steel frames.

Central heating units and hot water heaters are located over the dressing areas and bathrooms, and a heating unit adjoins the fireplace stack.

COMPARTMENTALIZATION
AND THOUGHTFUL DETAILS
GIVE A PLACE FOR
EVERYTHING AND EVERYBODY

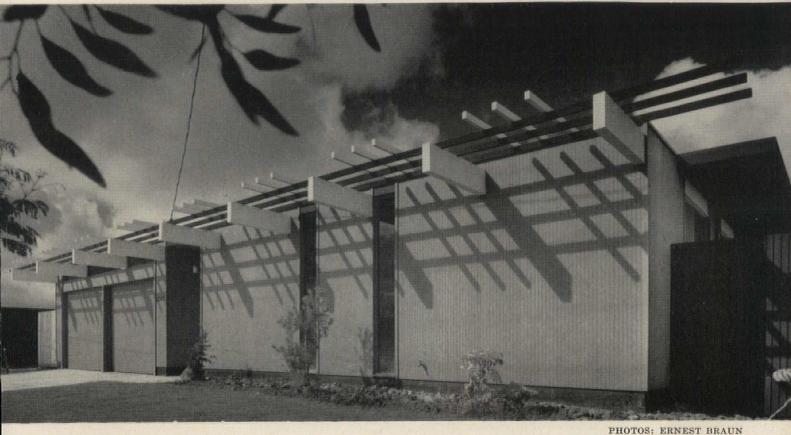


ANSHEN AND ALLEN, ARCHITECTS

Residence for Mr. Thomas W. Smith Sunnyvale, California Eichler Homes, Contractors

COURTYARDS FOR A BUILDER'S HOUSE





An inward-looking, courtyard scheme has been developed for this builder's house to give extremely good space and privacy at a budget cost. An overall simplicity, bold structural elements, also produce a very handsome house.

The scheme was developed for Eichler Homes to be built not only in Sunnyvale, but in Palo Alto, "The Highlands" in San Mateo County, Marin County and Walnut Creek. The size of the properties on which they are placed varies a bit, from 70 by 75 ft to 100 by 120 ft.

The entire property is enclosed with a 6ft-high fence, and the house is placed to leave a private garden at the rear. Living room, kitchen, multi-purpose room and master bedroom all face this garden. An open court in the center of the plan provides protection from the wind for outdoor living all during the year, and serves as a highly attractive entrance to the house (note photo right).

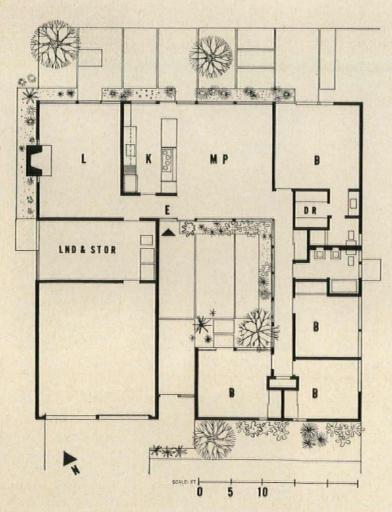
Besides living and multi-purpose rooms, the house has a large laundry and storage room designed to do double duty as a television room, play room or shop.





THE PLAN of this house by Anshen and Allen centers the multi-purpose family space, where the housewife can work at the openplan kitchen and still keep visual control of children's activities over the house. The living room, at the end, is set apart as a place of quiet—and well removed from the children's bedrooms for evening entertaining. One bath has an outside door to double as a mud room.

UNUSUAL LIGHT, AIR, QUIET AND PRIVACY FOR A SPACIOUS SMALL HOUSE

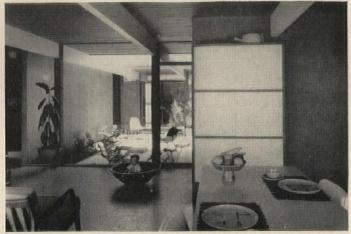


THE STRUCTURE of the house is wood post and beam, with 2-by-4 stud walls. Floors are concrete slab on grade, with continuous reinforced footings. Exterior walls are surfaced with stained striated plywood. Roofing is 3-ply built-up.

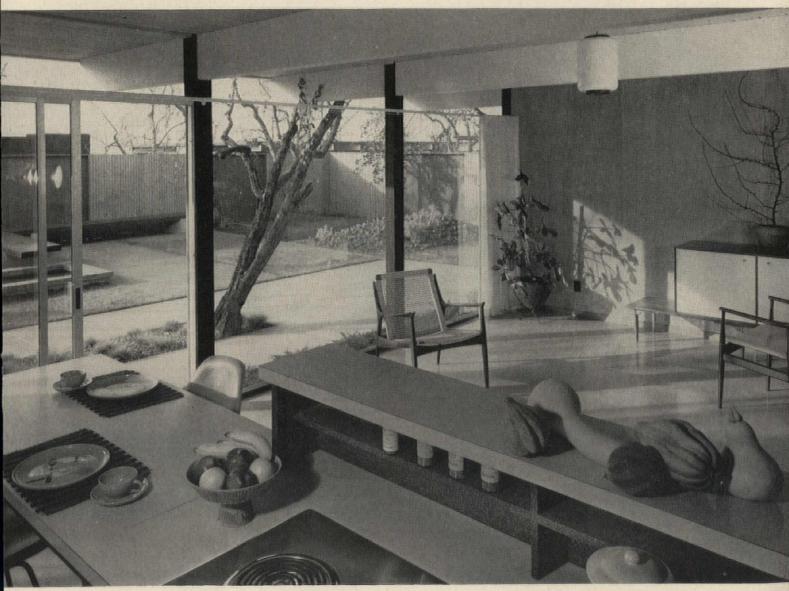
INTERIOR FINISHES include vinyl asbestos for the floors, stained redwood for the ceilings. Living room and kitchen walls are finished with mahogany plywood; the baths combine the plywood with ceramic tile. The fireplace is brick. A special feature of the family room is a pivoted, extendable built-in dining table with a plastic top. Heating is by radiant coils in the floor slab.

THE COST of the house, excluding lot, landscaping and furnishings, was about \$19,500.





PHOTOS: ERNEST BRAUN



ARCHITECTURAL RECORD HOUSES OF 1960



PHOTOS: ART HUPY

A DESIGN FOR FLOOD TIDES AND A ROMANTIC SITE





MITHUN, RIDENOUR AND COCHRAN, ARCHITECTS

Residence for Mr. and Mrs. Joe A. Chandler Issaquah, Washington Jerry Terrence, Structural Engineer Stern and Town, Mechanical Engineers Raymond Construction Company, Contractors Mary Taylor, Del-Teet's, Interior Designer

This festive little house, which looks much bigger than it actually is, is a good example of site influencing design. The site was a beautiful one, but presented some severe problems, as well as some very romantic associations for the owners. Mrs. Chandler's family had originally homesteaded a hundred acre farm here, which was later bisected by a highway. This building site was one of two left between the highway and the south shore of Lake Sammamish. The Chandlers had a summer cabin and a garage on the site for a number of years (both were eventually moved to the rear of the new house).

The problem: the maximum flood level in winter was two feet above grade, and the substructure of the soil was saturated blue clay for at least sixty feet under five feet of sand fill. It was obvious that the site would not permit conventional construction techniques. The architects' answer to this was to design a "floating" foundation formed with a grid of 12- by 12-in. reinforced concrete grade beams, with the structure symmetrically loaded on the grade beam intersections by columns supporting the floor and roof loads. The bottoms of the floor beams were raised to maximum high water level, and the septic tank and drain field are in a raised terrace which the house straddles.











PHOTOS: ART HUPY

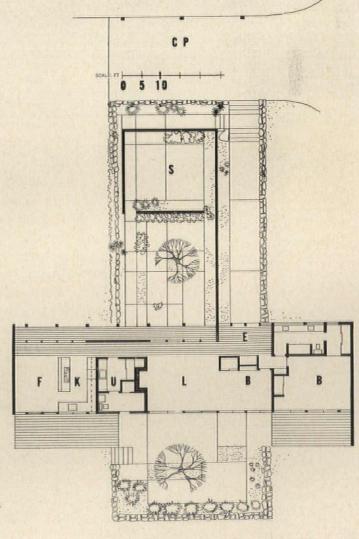
THE PLAN of the Chandler house makes a lot of moderate space, built at moderate cost. One bedroom (photo at bottom) has a shoji wall which slides back to add the space to the living area; there is a separate door for access to the bath, Family room and kitchen (photos top left) are open; location at the end of a short hall permits use of the family room for extra guest sleeping. A bath is close by (off the utility room) and also serves the terrace and lakeside.

OPEN PLANNING AND FLEXIBILITY ENHANCE HOUSE FOR LAKESIDE LIFE

THE STRUCTURE of the house is of job-laminated Douglas fir. Exterior walls are western red cedar. Roofing is three-ply built-up. The only exception to the foundation grade beam grid system noted on the preceding page, is at the living room fireplace, which rests on a large reinforced concrete pad tied into the grade beams.

FINISHES were selected with an eye to avoiding cracks due to possible settlement of the house. Interior walls were surfaced with cedar siding and walnut paneling wherever possible, and with some plasterboard. Ceilings are 2 by 6 hemlock. Partitions are mainly custom-built cabinets. Sliding ward-robe doors are covered with grass cloth backed up by gold foil paper. Gold splashed glazed ceramic mosaic tile was used on the kitchen and bath counters, and on the living room fireplace and hearth. The living and bedroom areas are carpeted; most other floors are cork tile.

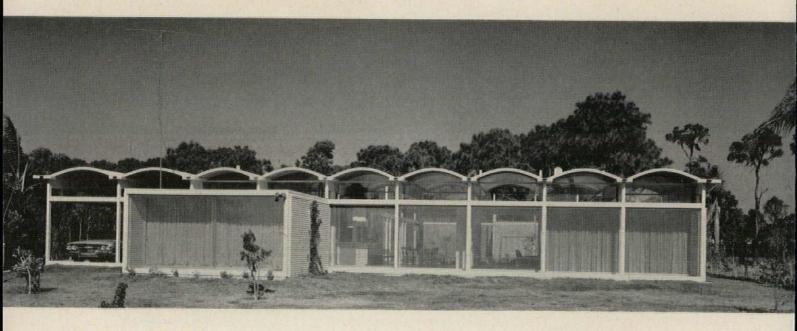
EQUIPMENT in the kitchen is electric, including built-in cook tops, oven, and mixer, a wall-hung refrigerator. The hot water heater is also electric. Elevation of the septic tank and drain field in the terrace permits plumbing to function when the site is flooded. Heating is by a forced warm air system.



WILLIAM RUPP, ARCHITECT

Residence for Dr. and Mrs. William Swazey Hatt Sarasota, Florida Bay City Construction Co., Contractor Phill Hall, Interior Designer

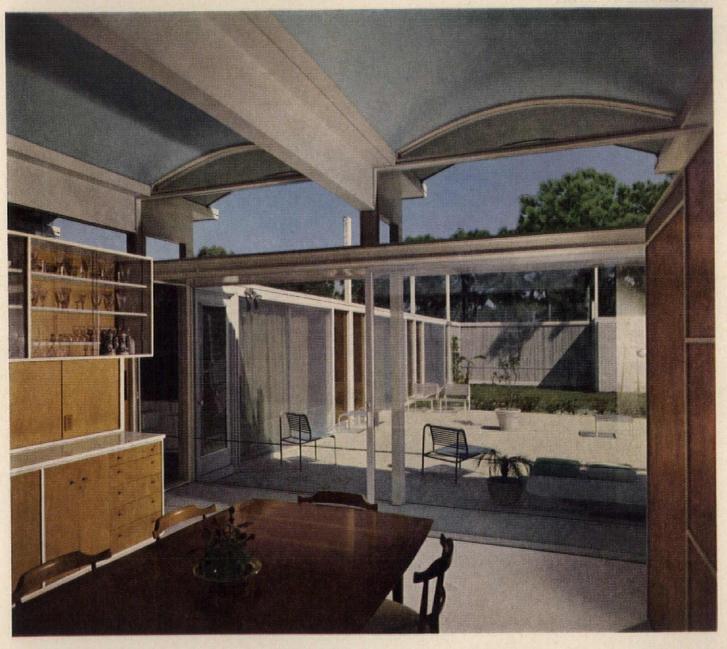
PLYWOOD VAULTS MARK LIVING AREAS

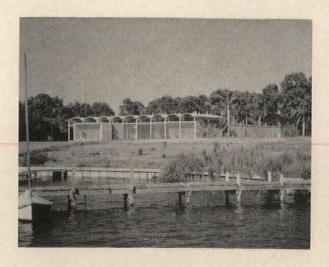


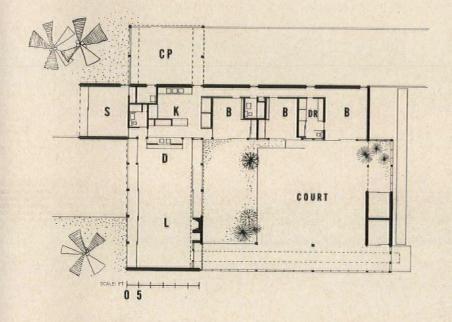
This pleasant and rather carefree house musters quite a note of insouciant distinction by the use of nine plywood vaults to emphasize the living—or entertainment—wing. These areas are treated with maximum openness as a pavilion overlooking the water. By contrast, the private—or bedroom—wing at right angles to the other is relatively closed, has low, flat ceilings. The point of intersection is the kitchen, for convenience to both sections.

The living areas are oriented southwest, and raked with sunlight during the winter months, but well protected during the summer when the sun sets more to the west. Although the wing is very open, privacy is added by blank walls at the sides, and a large fenced enclosure to the east. At present, this court serves as a play yard for the three children; later, it will be converted to a screened pool and terrace.

PHOTOS: JOSEPH W. MOLITOR







ALL ACTIVITIES, from routine necessities to leisure pleasantries and entertaining are amply provided for in the plan. Dr. Hatt, an electronic enthusiast, has his retreat in the shop on the far side of the courtyard; it is jammed full of equipment pieced together from war surplus. Mrs. Hatt has developed a keen interest in the living room tokonoma; it has stimulated all kinds of interest in creating arrangements.

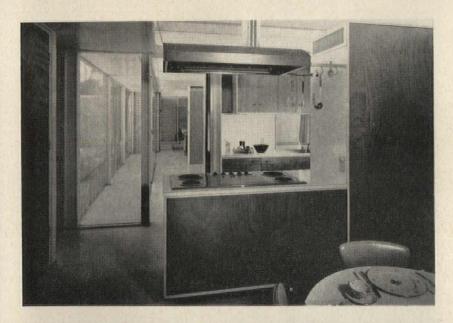
THE STRUCTURE of the vaulted roofs is made by the lamination of two sheets of ½-in. plywood, which spring from 24-ft span plywood girders. The roofs are insulated with 1-in. plastic foam. The flat room section has a usual wood joist system for easy installation of mechanical equipment. Exterior walls are of cement brick, laid with a 2½-in. cavity filled with granulated insulation. All interior partitions are double studded, and have batt insulation for sound control.

HEATING is by a separate furnace for each wing. The one for the living areas is in a vault under the slab in the courtyard. The flue for this is piped over to the fireplace. Provision has been made for air conditioning, but at present, the Hatts feel that the house is so cool and breezy it is not required.

THE COST of the house, excluding lot, land-scaping and furnishings, was about \$51,000.



THE HOUSE REFLECTS INTEREST IN MAKING SPIRITED USE OF LEISURE







PHOTOS: JOSEPH W. MOLITOR

JAPANESE HOUSE ON MICHIGAN LAKE



NORMAN F. CARVER JR., DESIGNER

House on Gull Lake Kalamazoo, Michigan Norman F. Carver Jr., Landscaping and Interiors John Meninga, Building Contractor



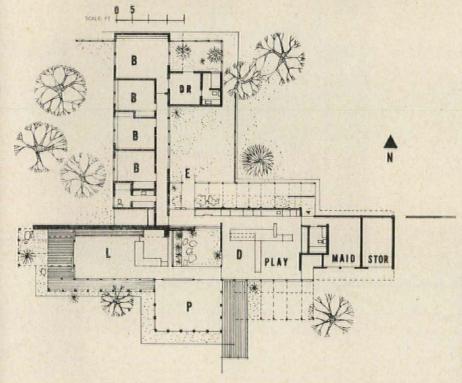


PHOTOS: NORMAN F. CARVER JR.

Applying Japanese architectural principles with "logic" rather than with "sentimentality," this summer house in Michigan succeeds in adapting itself handily to the requirements of an American family with three children. The designer, who has spent some time in Japan and who has become familiar enough with its architecture to write a book about it (Form and Space in Japanese Architecture, 1956), has this to say about the design of the house: "A source of inspiration to me was the temple complex, with its rooms and passages interspersed with small courts and gardens. I felt this valid in terms of modern materials and methods, and certainly valid from an esthetic viewpoint-the modern, psychological need for variety with tranquility."

Specifically, the Japanese quality of the house is fostered by a number of specific details: the visual predominance of wood in the structure; the low crawl space beneath, the result of a soggy site; the regular structure; and the thoughtful landscaping of the oak grove in which the house is sited.

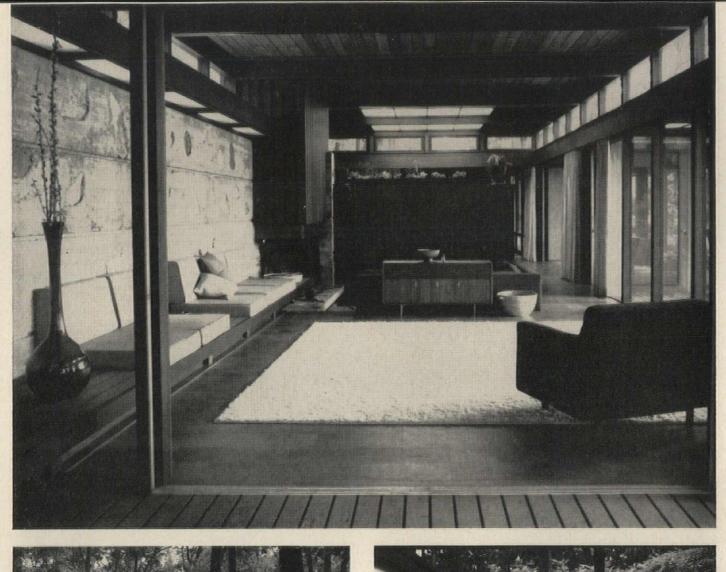
SPACE IS DOUBLY MODULATED: ORDERED BY A REGULAR STRUCTURE, VARIED BY CHANGING VIEWPOINTS



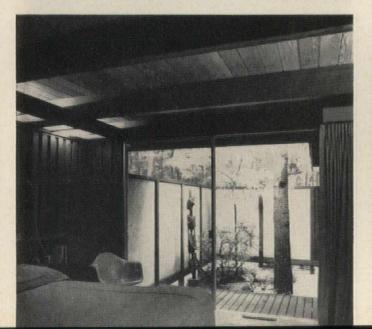
PLANNING: A long series of discussions led to the conclusion that the house should be planned for summer use, but that it should also be livable on winter weekends, and should provide for eventual conversion for year-round occupancy. The family to be housed includes the husband, the wife and three young children; space was also to be supplied for a maid or a couple. Considerable informal entertainment was planned for both large and small numbers of guests.

STRUCTURE: The framing is redwood, and is based on a 4-ft module. The foundation is concrete block. Because of the high water level on the site, the entire house is raised on short stilts; soil conditions demanded the one-story plan.

MATERIALS: The exterior is of stained redwood, with glass and asbestos cement walls. Some interior walls are also asbestos cement, and others are plaster or redwood plywood. Ceilings in living areas are Douglas fir decking, except in the bathrooms, which are plastered. Floors are of plywood construction, finished with vinyl cork in the kitchen and bathrooms, cork in other areas. Heating is supplied by a warm-air, oil-fired system.











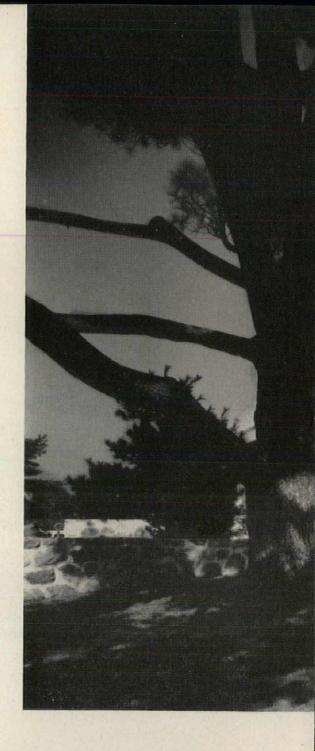
BOLD MASONRY ACCENTS YANKEE HOUSE

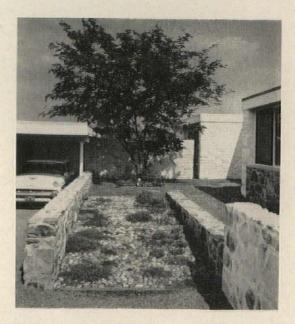
Walled courts and masonry give a warm Mediterranean spirit to this trim Yankee house. It sits low and tidily on a hilltop in grounds of several acres of meadows and woods. There are good views all around, but particularly to the southeast from the living areas.

The bold stonework, which can overwhelm a house—giving the atmosphere of some of the more unfortunate forest lodges—is handled here with great sensitivity and skill. Studied variations in texture and color in the stone panels (and some are painted as well), add a highly sculptural quality to the interplay of walls and voids. There is a succession of little views of them close at hand to supplement the natural countryside seen from the hilltop site. The place has an overall air of cheerfulness, simple elegance and permanence.

The house is entered via a little courtyard, and the plan is centered on the living and entertaining areas. These, including living, dining and kitchen spaces, form one large room. The entry is screened by bookshelves. The kitchen, though open, presents well finished counters and cabinets to the living area. Wall baffles shield the laundry space.

The master bedroom suite and the children's wing are placed at opposite ends of the house for quiet and privacy. The master bedroom looks onto a secluded little court with a pool.





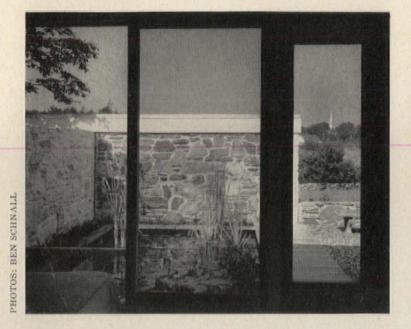


PHOTOS: BEN SCHNALL



MARCEL BREUER, ARCHITECT HERBERT BECKHARD, ASSOCIATE ARCHITECT

Residence for Mr. George Laaff Andover, Massachusetts Fichera Construction Company, Contractors Dan Kiley, Landscape Architect





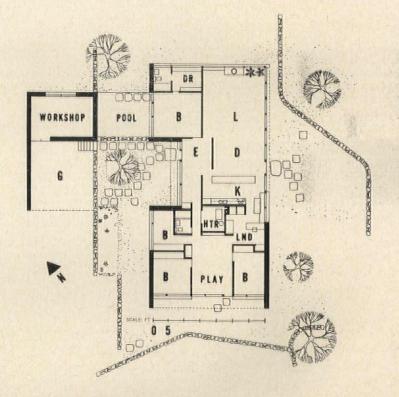




THE STURDY SIMPLICITY OF A
LITTLE COUNTRY MANOR
PERVADES THE ROOMS AND
COURTS OF THIS CONTEMPORARY
HOUSE

THE STRUCTURE of the Laaff house is of wood frame and enclosed steel lally columns. The foundations are concrete block. Exterior walls are panels of native stone and glass. The roof is surfaced with tar and gravel. There is no basement; floors are concrete slab on grade, surfaced with red quarry tile throughout. Interior partitions are wood stud, surfaced with wall board and painted white. Most ceilings are cedar boarding, with acoustic tile in baths and playroom.

EQUIPMENT in the kitchen is built into oiled walnut counters, and cabinets with sliding plastic panel fronts. Lighting in the kitchen is fluorescent; the living area has incandescent spots; the baths have downlights. Heating is by a radiant hot water system, with steel piping in the floor slab. Thermal insulation is of the blanket type. Playroom lighting is supplemented by a plastic dome skylight. The windows are screened, with the frames painted black for accent. The house contains a good amount of built-in furniture; with the exception of a few made of natural teak, all are painted white to merge unobtrusively with the white painted walls.



THE COST of the house, excluding lot, land-scaping and furnishings, was about \$60,000.





In a large family, privacy for its members is precious and, too often, rare. To provide privacy means not only to provide enough spaces for individual activities like reading and studying, but also to provide spaces for some separate entertaining, and for activities involving some or all of the family.

This house succeeds in providing these things for two adults and seven children. As the children range in age from two to 18 years, planning had also to take into account the various requirements of a number of age groups.

For individual privacy, most of the children were given separate rooms, although the older children share theirs. The partitions of the smaller rooms are designed for eventual removal as the younger children grow. Each of these rooms has a built-in desk and book shelves. The adults have private work space in a den situated close enough to their bedroom and to the bedroom's own garden to form a master suite.

For group activity, the smaller children have their playroom well away from the rest of the house; since the nurse supervises their play, this area does not have to be easily controlled from major adult areas. The living room, a "special" room, is suitable for the family's occasional large-scale formal entertaining.

The necessity of regularly feeding a household of eleven people makes the old-fashioned serving pantry a clear advantage.

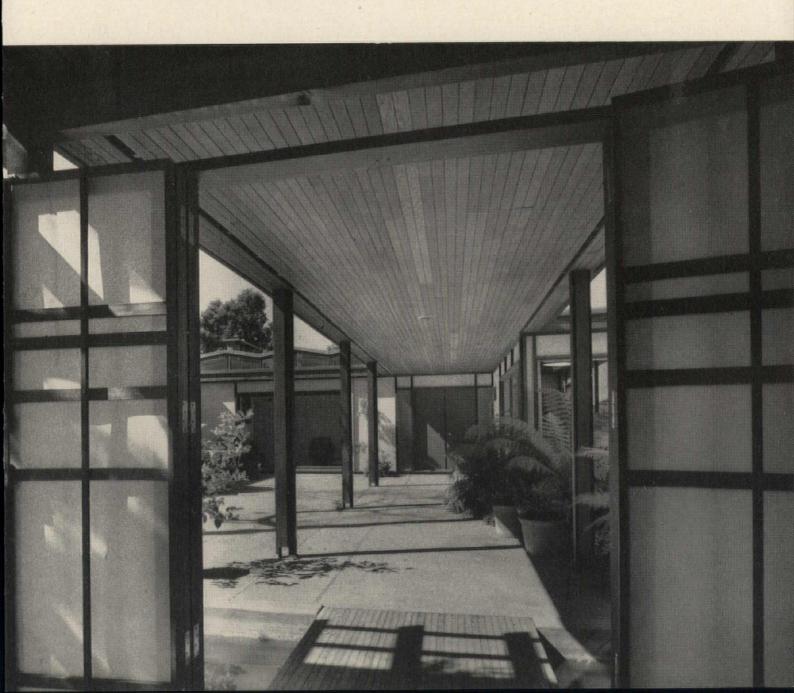


PHOTOS: ERNEST BRAUN

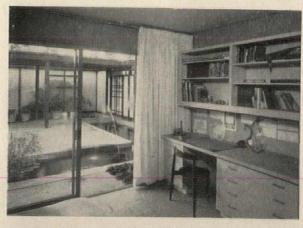
PLANNED FOR INTRAMURAL PRIVACY

GEORGE T. ROCKRISE, ARCHITECT ROBERT MOUNTJOY AND MATTHEW MEYERS, ASSOCIATES

Residence for Mr. and Mrs. William T. Riley Atherton, California William B. Gilbert & Associates, Engineers Royston, Hannamoto & Mayes, Landscape Architects Mary Norris, Interior Designer Delano Large, Building Contractor



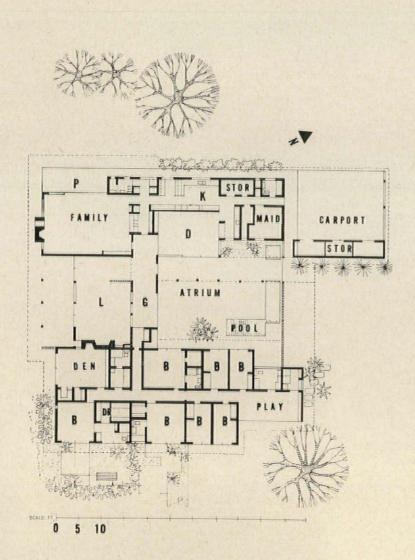
VARIETY OF SPACES ADMITS SOCIETY AS WELL AS SOLITUDE





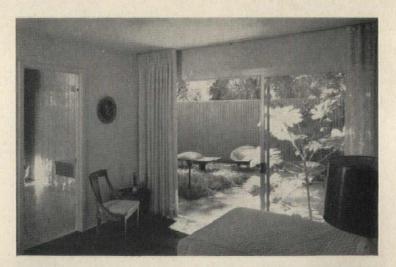
SITE PLANNING: The site for the Riley house, about an acre, is flat. The house has an area of 4994 sq ft. A combination of factors suggested the consolidated plan which focuses inward on itself: a desire to save the numerous existing oak trees, and zoning ordinances demanding deep set-backs from all property lines. Because there is no view, aside from the trees, to be taken advantage of, and because the house is located at a street intersection, the atrium, which acts as the entrance way, gives the family privacy from passers-by and views from most of the main rooms. As the least desirable frontage was on the north, this side was used for a motor court; a fence shields the atrium from a view of parking space. The covered entrance walk crosses a small bridge over the pool.

STRUCTURE AND EQUIPMENT: Floors are concrete slab on grade, surfaced in major rooms with colored pebble aggregate polished to a terazzo finish; in the kitchen, flooring is rubber tile and in the bathroom, it is ceramic tile. Exterior walls on the wood framing are stucco, with a sand finish; the panels are divided by dark-stained redwood strips, the same material used for other exterior trim. Interior walls are plywood and sheetrock. Ceilings are gypsum board, except in the living room. Here the ceiling is of exposed laminated 2-by-4's; the undulating surface, stained a light color, seems to float above the room's clerestory. Special equipment includes a walk-in refrigerator to handle quantity buying and storage.





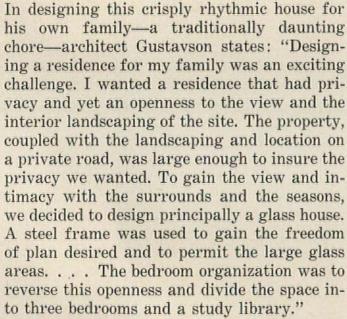
PHOTOS: ERNEST BRAUN





DEAN L. GUSTAVSON ASSOCIATES, ARCHITECTS

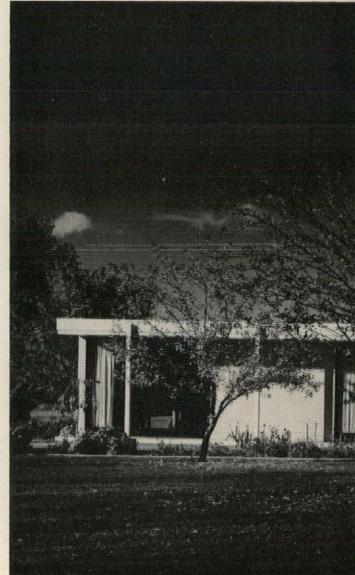
Residence for Mr. and Mrs. Dean L. Gustavson Salt Lake City, Utah Tagy Nyman, Contractor



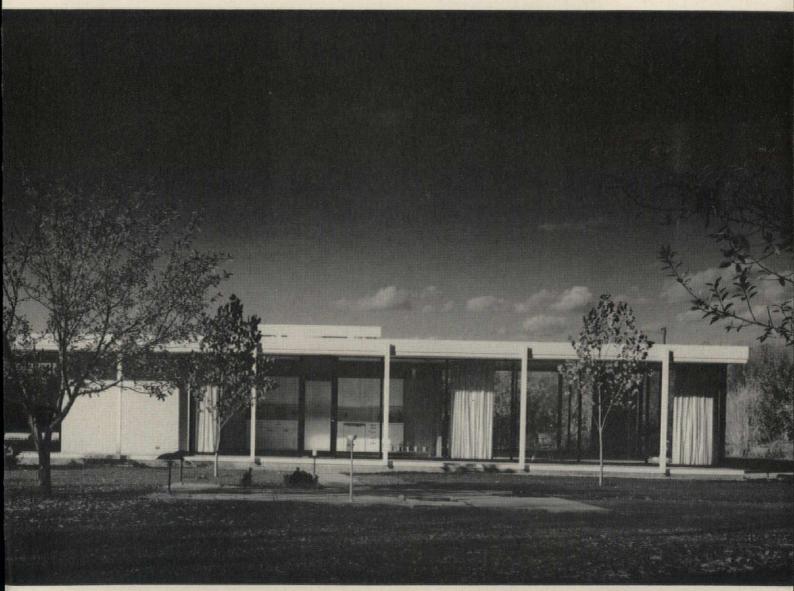
His success in suiting his own program is very evident in the unforced elegance of the house, in the extremely workable plan, and in the not exorbitant cost of \$40,000 for 2200 sq ft of well-detailed enclosed space under 2700 sq ft of roof, and a separate carport, also of steel frame.

Of the house, Gustavson now says: "The plan has worked very well. My wife and children have not had any suggestions on how to do it better, and I consider this a real accomplishment."



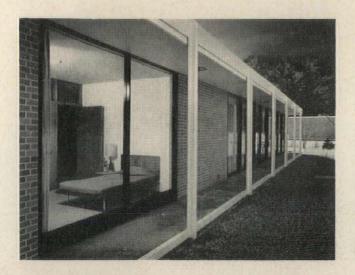


ELEGANCE IN GLASS, BRICK AND STEEL



PHOTOS: WILLIAM BEAL

PHOTOS: WILLIAM BEAL









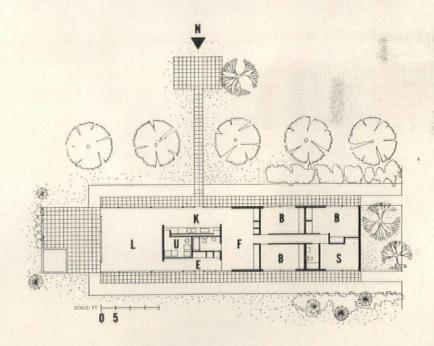


THE PLAN centers on the use of a compact kitchen-utility-bathroom-closet core. The element is treated as a piece of furniture, with walnut panel surfaces. The space of four areas flows around the core: entrance, living area, kitchen-dining area, and family multi-use room. There is space, yet some separation.

MATERIALS used in the structure are generally exposed throughout: the white-painted steel frame; the face brick laid in a flemish bond; the oak window fenestration, stained black and varnished. Interior woodwork is lacquered walnut. Other wall areas are ceramic tile in bathrooms and plaster-board on some bedroom walls. The ceiling is suspended plaster. Draperies are a light beige-gold color; floor coverings are white vinyl and gold colored carpeting.

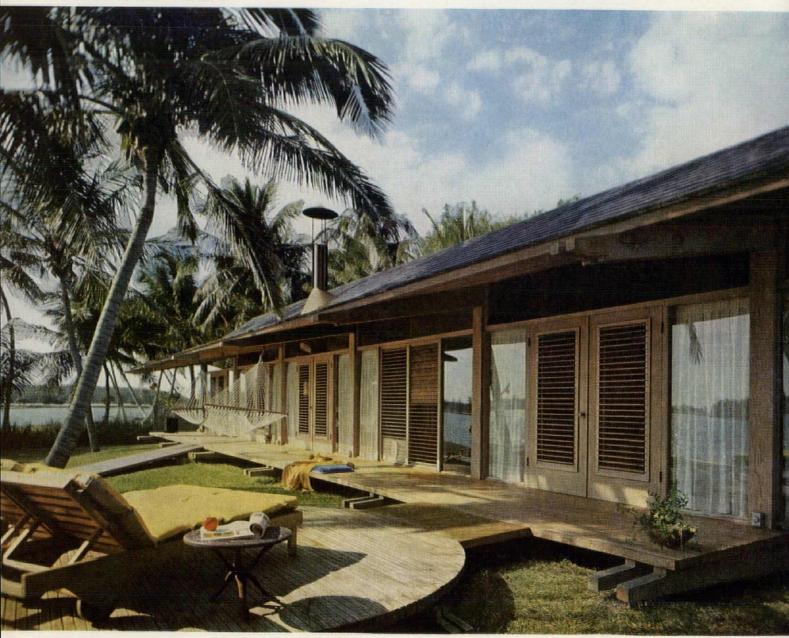
THE UTILITY SYSTEMS are largely incorporated in the floor slab. Heating is by two reverse-flow forced-air furnaces feeding to a perimeter under-floor duct system. It was designed for a quick air change and heat delivery. Electrical and phone service is by underground conduit.

THE UTILITY CORE IS
TREATED AS A PIECE OF
FURNITURE IN AN OPEN-PLAN
LIVING AREA



TROPICAL INFORMALITY FOR FLORIDA

PHOTOS: JOSEPH W. MOLITOR





The great shingle roof and shuttered openness of this little Miami Beach house give it a carefree, easy aspect well suited to life in the area. The client in this case was a young bachelor, but the house would be equally suitable as a retirement house for an elderly couple. All is planned and arranged for minimum upkeep and comfort. The enclosed house is simple, and in scale with every day functions. For entertaining, large but private outdoor spaces are provided on both of the long sides of the house. The car shelter and cabana building at the front of the house are smaller reflections of the main house, and serve, with some fencing, to enclose the swimming pool patio. On the bay side, the house and terraces take full advantage of the view and breeze.

As the owner intends to use the same lot later for a large family house, the structure was designed to be easily moved from its present spot. The lot is a choice one facing Biscayne Bay to the south east. The approximate cost, excluding lot, landscaping and furnishings was \$29,000.



ROBERT B. BROWNE AND RUFUS NIMS, ARCHITECTS

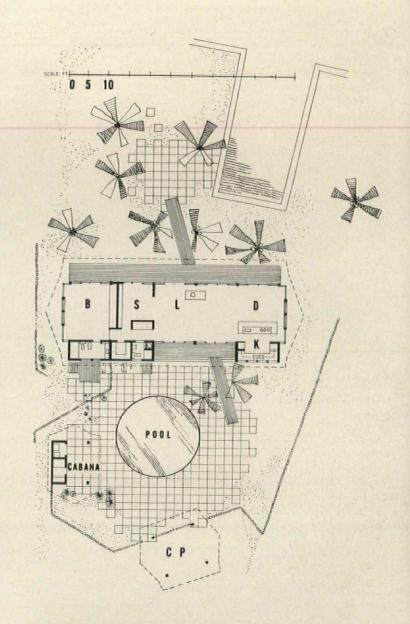
Residence for Mr. Nat Ratner Miami Beach, Florida Edward M. Fearney, Jens Koch, Consultants John L. Avant, Contractor

A SIMPLE EXPOSED TRUSS STRUCTURE PROVIDES A SPACIOUS INTERIOR AND MAXIMUM OPENNESS

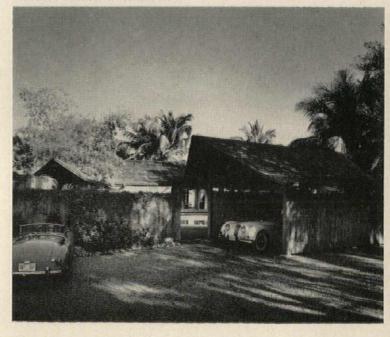
THE STRUCTURE of the Ratner house permits open, partition-free living areas well suited to the informality of the house. A study-guest room at one end of the living room has a folding wall to allow its use with the general areas. The structural system consists of five truss-frames, spaced 12 ft apart and spanned between with 3-in. and 4-in. decking for roof and floor respectively. Lateral rigidity is obtained by the connections of the members, and by stiffening partitions on the pool side. All utilities are located on this same side, which frees the other rooms to the view of the bay.

MATERIALS AND FINISHES are almost entirely natural woods: red cypress, mahogany and fir. Finish is generally bleaching oil applied to assist the normal weathering process. Wood jalousies are used throughout. Floors are fir in the living areas, vinyl tile in kitchen and baths.

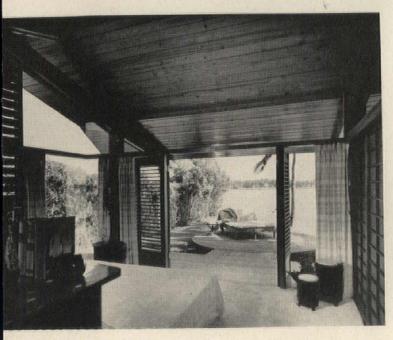
THE KITCHEN has an interesting arrangement for an informal house. A freestanding snack-counter (doubling as buffet and bar) in the dining area, is backed by a shuttered work alcove fitted with built-in kitchen equipment, including dishwasher and garbage disposer. Counters are teak and plastic, and cabinets have mahogany or louvered-door fronts to blend with other room finishes.



PHOTOS: JOSEPH W. MOLITOR



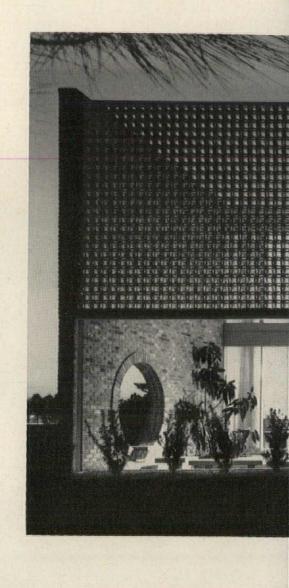


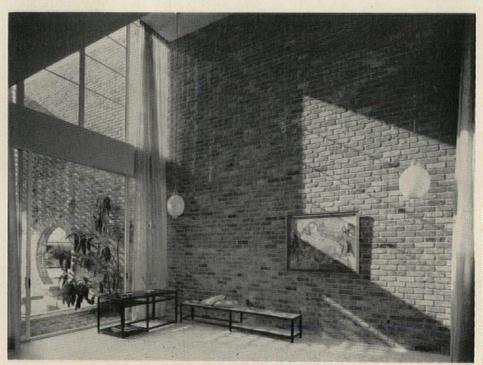


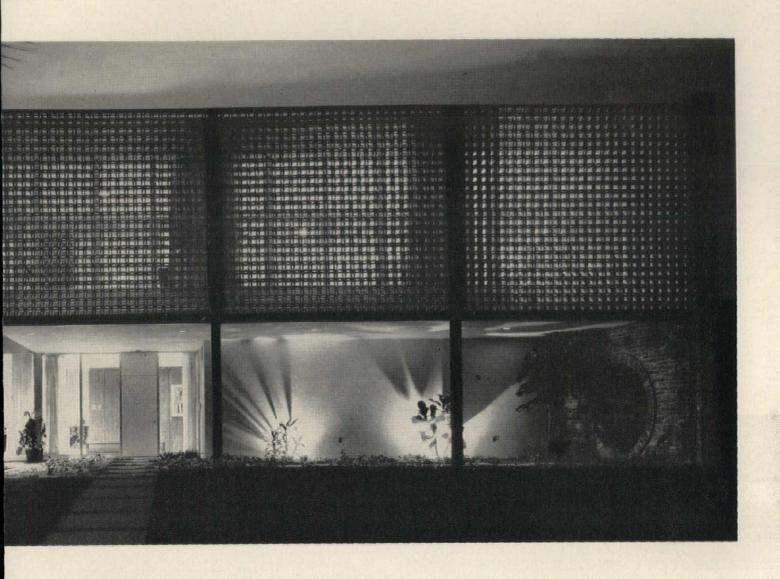


ARCHITECTURAL RECORD HOUSES OF 1960

NEW ORLEANS HOUSE DESIGNED FOR EASY EXPANSION





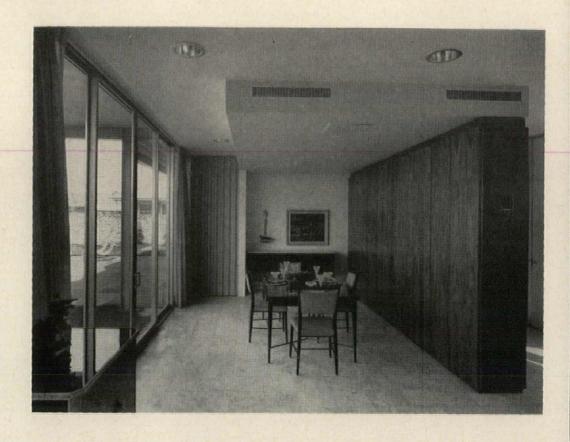


A number of typical problems affecting city house design are worked out in an extremely interesting fashion in this house. The big problems are, of course: privacy, limited lot area, outlook. Others are equally challenging: how to provide space for outdoor living, and how to add to the house at a later date without giving up this outdoor space.

In this case, the owners wanted to build a large, expandable house on a relatively small lot (78 by 110 ft), in a rapidly developing new subdivision near Lake Pontchartrain in New Orleans. Adjoining houses are mainly 1½ or 2 stories, and zoning restrictions required a front yard set back of 25 ft, and reduced the buildable width to 57 ft. A two-floor house, with first-floor expansion space was the answer. More rooms can be added by adding a floor slab and enclosing walls.

CURTIS & DAVIS AND ASSOCIATED ARCHITECTS AND ENGINEERS, ARCHITECTS

Residence for Mr. and Mrs. Alvin K. Halpern New Orleans, Louisiana Guillot, Sullivan & Vogt, Electrical Engineers Millman Construction Company, Contractor Halpern Fabrics, Inc., Interiors George Rickey, Sculptor



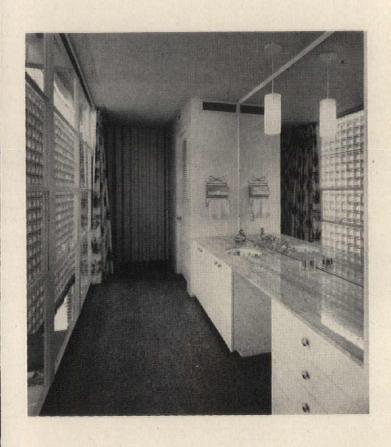
FINE FINISHES AND DETAILS ADD QUIET LUXURY TO SIMPLE INTERIORS

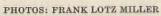
THE SITE fronts on a street, with the rear of the property facing north toward the lake. One row of lots separates the site from a public park area between the subdivision and the lakeshore. The two-story scheme gives a view of the lake.

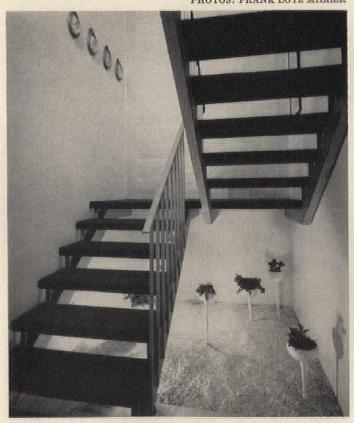
THE PLAN places almost completely blank walls at the sides adjoining the neighboring houses. Front and rear walls are almost entirely glass; sliding glass doors on the first floor and glass in metal sash on the second floor. The upper level is sheltered by an off-white masonry sun screen. First floor privacy is added by masonry garden walls at the rear; the front yard is to be screened by the use of plants and shrubs.

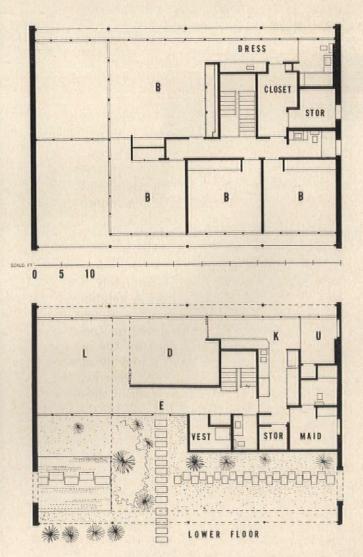
INTERIOR FINISHES include wall surfaces of plastic wall covering, brick, painted plaster, wallpaper. Floors are marble, carpet or vinyl tile.









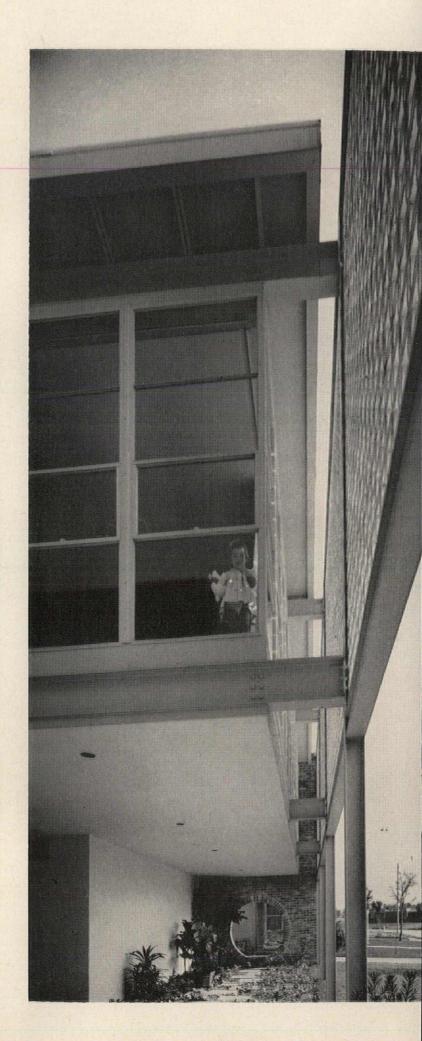


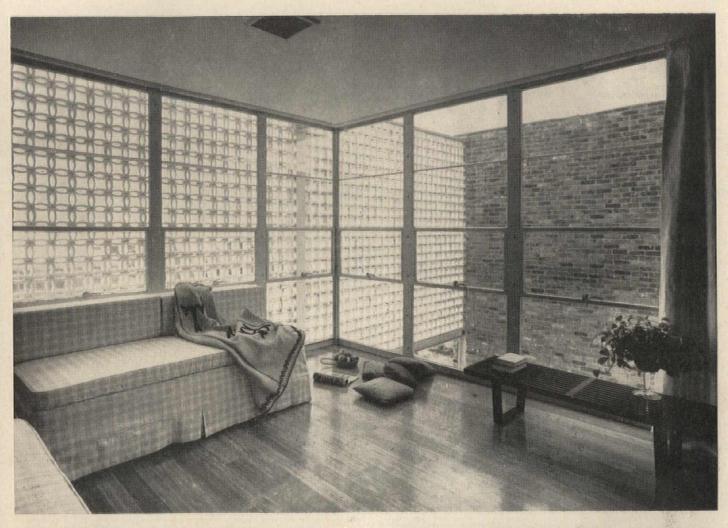
THE STRUCTURE AND PLAN
ARE DEVISED TO
ALLOW EXPANSION WITHIN
THE ORIGINAL HOUSE FRAME

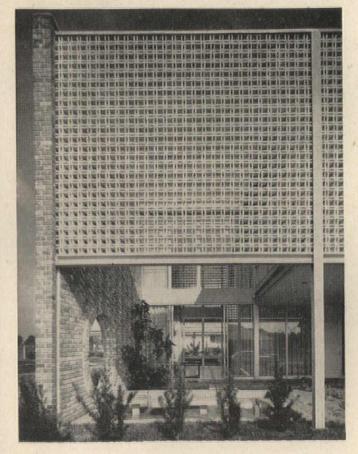
THE STRUCTURE is lightweight steel (beams, columns, and open web joists) with plywood sub-floors for the second floor. The first floor is a concrete slab on grade. All is supported on pile foundations, as is the custom in the marshy New Orleans terrain.

EXPANSION is easily provided within the original massing of the house. The lower floor at present uses only about half of the area within the structural frame; the rest is devoted to patio areas. Extra rooms can be added here at a minimum of cost and no disturbance of the original building.

EQUIPMENT in the house includes year-round air conditioning by two thermostatically controlled, 5-ton air handling units; there is a remote air-cooled condensing unit. Thermal insulation is by glass fiber batts. There is an intercom system, and lighting has dimmers. In place of gutters, the house has interior roof drains caulked with a special compound.





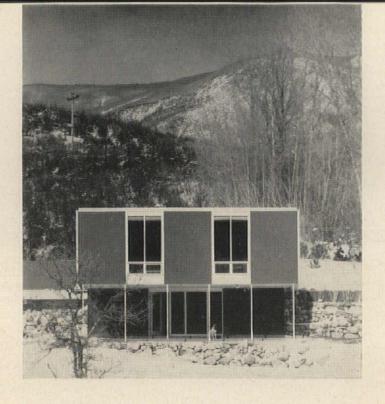




PHOTOS: FRANK LOTZ MILLER

PHOTOS: FERENC BERKO





LANGDON MORRIS, ARCHITECT

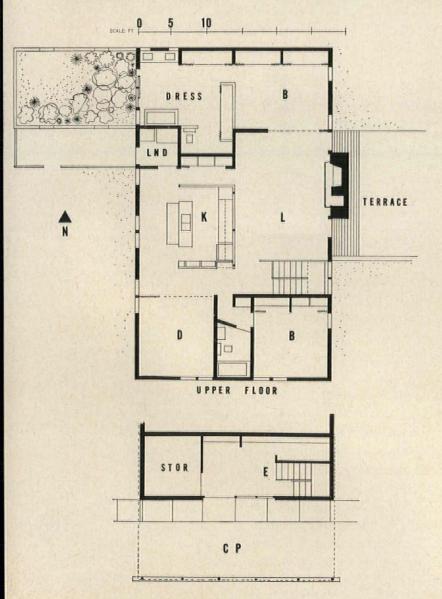
Residence for Mrs. Jean Holton Aspen, Colorado Richard Wright, Contractor

STYLE AND SPACE IN A BUDGET HOUSE

This sophisticated little blue house, picturesquely sited at the foot of Red Mountain, offers a crisp relief from the "shaggy cabin" approach used for so many houses in such an area. Though simple, and built on a fairly limited budget, the house provides convenient and somewhat luxurious quarters for the owner, and easily adapts for entertaining large groups of people.

The site is narrow and long (about 150 by 600 ft), with the back half a part of the mountain slope. Where the slope begins is a grove of cottonwood trees, and a pond nearer the road. The owner wanted the house placed near the grove, high enough to give a good view of the town of Aspen and the ski slopes. At the same time, winter ice conditions indicated a level driveway access. To achieve this, the entry was placed at the foot of the rise, with the main house raised above.

FOLDING WALLS ADD EXTRA SPACE TO LIVING AREA FOR ENTERTAINING



THE PLAN provides a pleasant downstairs entrance foyer off a covered drive. Upstairs, the center of the house is devoted to an open living-dining area, which is divided by a center kitchen enclosed with mahogany paneling. The master bedroom, and the denguest room, each have folding walls which permits their space to be added to the living area for large scale entertaining. Adjoining outdoor terraces also add to this space in summer. The master bedroom suite also includes an unusually large bath-dressing room, which has a private outdoor courtyard for sunbathing. In spite of its small size, the house has a great air of space, and very ample space allotted to storage.

THE COLOR of the exterior—a soft blue—pervades the house: blue carpeting is used throughout, except for entry, baths and kitchen where vinyl tile in shades of blue is used. The kitchen, stair well, walls and interior doors are Philippine mahogany. Hardboard walls and spruce plank ceilings are painted white. All trim and hardware is stainless steel or satin chrome. Foundation walls are concrete block, painted charcoal brown-gray. Terraces are paved with irregular black slate set on a sand and gravel bed.

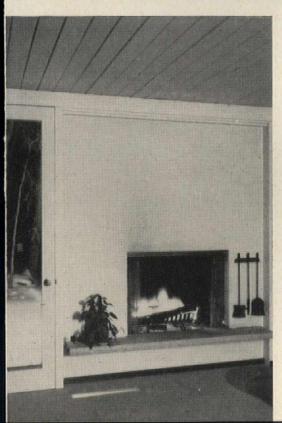
THE BUDGET was about \$24,000—including terraces, but not lot, landscape, furnishings.

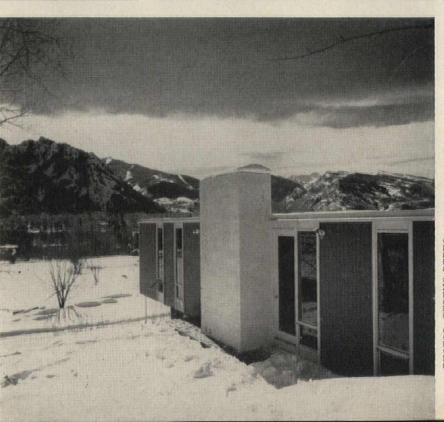












PHOTOS: FERENC BERKO

PHOTOS: JOSEPH MOLITOR

MARK HAMPTON, ARCHITECT THOMAS & HUTTON, SUPERVISING ARCHITECTS

Residence for Mr. and Mrs. Albert Weis Savannah, Ga. Joseph Russello & Associates, Structural Engineers Ebaugh & Goethe, Mechanical Engineers Clermont H. Lee, Landscape Architect DeWitt, Furnell & Spicer, Inc., Building Contractors

DESIGNED FOR SOUTHERN HOSPITALITY

The striking quality of this house is its formality, striking particularly in view of the fact that the owners are a young couple with a two-year-old son. Because they do entertain often, they wanted a large living room, and it was they who suggested placing it on the second floor, where advantage could be taken of the view over woods and near-by golf course.

The floor of this room is dropped two steps below the level of the rest of the second story, making this room a free-standing element when seen from the lower level. Its ceiling is heightened by this device, increasing the room's spaciousness and feeling of formality. At the same time, the ceiling of the family room below it is lowered, adding to it a sense of shelter and informality.

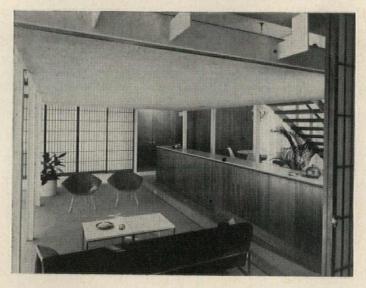
The resulting plan is one of unforced symmetry, which places all adult activities on the second floor—the master suite, a study, a guest room and the living room. The lower floor comprises space for the child (and hoped-for children) and for family activities. The main rooms can be expanded when necessary by sliding back the shoji—the family room can be enlarged by the child's playroom, and the living room can be joined to the study.







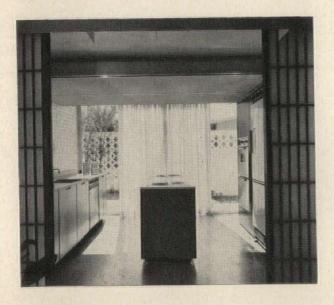




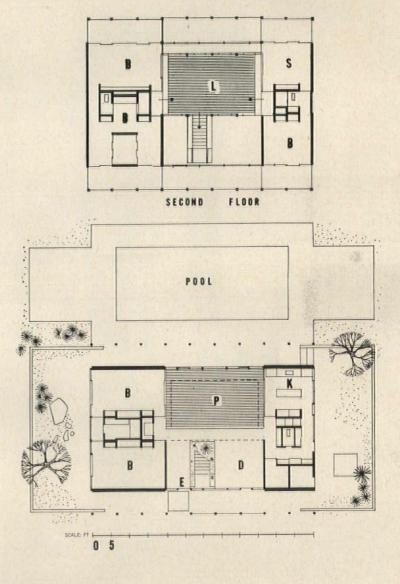


SOPHISTICATED INTERIOR ACHIEVED BY FINE FINISH, METICULOUS DETAIL

PLANNING: The adult area on the upper level includes the master suite, with its dressing rooms and with screened balconies at both the front and back of the house; the study, which can be set off from the rest of the house when the shoji are closed, can function as a bar serving the living room when the shoji are open. The child's area, which includes a bedroom, an adjacent play garden, and an extra room now used as play space, eventually to be used as a bedroom, as shown here; meanwhile, this extra room also acts as auxiliary space to the family playroom.



DECOR: The colors throughout the house are neutral—the carpeting is light and dark beige, the curtains also light beige, and the furniture in the living room is upholstered in beige silk and natural leather. Color accents are provided by yellow chairs in the study, red chairs in the family room, mustard seat pads in the dining room (the dining table is cream-colored marble), and dark blue spread and light blue chair in the master bedroom. Background finishes are also neutral, with white ceilings and shoji, and walnut paneling and cabinets.





WOOD GRILLES AND TREES HELP SECURE PRIVACY WHILE ACTING AS SUNSHADES

STRUCTURE: The structural steel framing is of 4-in. H-columns; on the front and rear of the house, these are placed six feet from the glass, and support weathered redwood sunshades. The foundation is reinforced concrete. The exterior enclosure is of fixed and sliding glass, stucco, and white brick (under the second floor balconies); siding on the end elevations is of redwood paneling. White brick walls enclose the play yard at one end of the house, a utility and drying yard at the other end. The stairway has a steel frame with wood treads, with glass panels set below the second floor railing. All wood used was pressure-treated for termite protection.

MATERIALS AND EQUIPMENT: Interior walls are finished with walnut paneling, except in the kitchen and child's area, where white brick was also used, and in the master suite, where the walls are covered with white silk. Floors are carpeted on the upper level and in the family room, and in the rest of the house are finished with vinyl cork. Flooring and finish in the second floor bathrooms is travertine marble, while the child's bath is finished with glass mosaic. Ceilings are all plaster—acoustical plaster in the living room. Special equipment includes a heat pump, a low-voltage electrical system, and an intercom system. The swimming pool will be built in the future.

PHOTOS: JOSEPH MOLITOR



Designers of the Record Houses of 1960

Houses designed by the following firms and individuals appear on pages noted

ANSHEN AND ALLEN

112 104 E. H. AND M. K. HUNTER

461 Bush Street San Francisco 8, California Robert Anshen, A.I.A. William S. Allen, Jr., A.I.A.





Musgrove Building Hanover, New Hampshire Edgar H. Hunter, Jr., A.I.A. Margaret K. Hunter, A.I.A.

MARCEL BREUER AND ASSOCIATES

128

2 West 13th Street New York 11, New York Marcel Breuer, A.I.A.



116 MITHUN, RIDENOUR AND COCHRAN





34-104th Avenue, N.E. Bellevue, Washington Omer Mithun, A.I.A. William C. Ridenour Donald C. Cochran

ROBERT B. BROWNE AND RUFUS NIMS

140

2966 Coral Way Miami, Florida Robert B. Browne Rufus Nims



150 LANGDON MORRIS

2360 East 3rd Avenue Denver 6, Colorado Langdon Morris, A.I.A.

NORMAN F. CARVER, JR.

124

3201 Lorraine Avenue Kalamazoo, Michigan Norman F. Carver, Jr.



VLADIMIR OSSIPOFF AND ASSOCIATES 76

Penthouse Hawaiian Life Building Honolulu 14, Hawaii Vladimir Ossipoff, F.A.I.A.

CURTIS AND DAVIS

144

2475 Canal Street New Orleans 19, Louisiana Nathiel C. Curtis, A.J.A. Arthur Q. Davis, A.I.A.



GEORGE T. ROCKRISE 132

524 Sacramento Street San Francisco 11, California George T. Rockrise, A.I.A.

LEE STUART DARROW

3798 Grand Avenue Oakland, California Lee Stuart Darrow, A.I.A.

Guaranty Bank Building

John J. Desmond, A.I.A.

Hammond, Louisiana



PAUL RUDOLPH

31 High Street New Haven, Connecticut Paul Rudolph, A.I.A.

JOHN J. DESMOND

108

100

120 WILLIAM RUPP

251 South Orange Avenue Sarasota, Florida William Rupp, A.I.A.

ULRICH FRANZEN

94

G. MILTON SMALL of Small and Boaz

124 East 40th Street New York 16, New York Ulrich Franzen, A.I.A.



611 Tucker Street Raleigh, North Carolina G. Milton Small, A.I.A.

DEAN L. GUSTAVSON, ASSOCIATES

15 North West Temple, Suite C Salt Lake City 16, Utah Dean L. Gustavson, A.I.A.



CARL A. STRAUSS



88

Rookwood Place Cincinnati 2, Ohio Carl A. Strauss, A.I.A. Ray E. Roush, Jr., Associate

MARK HAMPTON

HARRY WEESE AND ASSOCIATES

Stovall Professional Building Tampa 2, Florida Mark Hampton, A.I.A.





104 South Michigan Avenue Chicago 3, Illinois Harry Weese, A.I.A.



The handsomely panelled Jubelirer livingroom, finished with P&L Oil Stain and "38" Pale Trim Varnish, form an ideal frame for the beautiful Allegheny mountains in the background, P&L Calibrated Colors® in Lytall Flowing Flat and Vitralite Enamel help enhance the contemporary decoration.

The Laher residence is on the adjoining estate. All interior surfaces have been color styled with P&L paints and varnishes. They are light in value to encourage reflectance of light from the windows, to help accentuate the interior beauty.



The Laher and Jubelirer residences in Altoona, Pennsylvania are fine examples of contemporary architectural design. Their interior decoration reflects imagination and good taste. They combine antique and contemporary furnishings with outstanding results. Pratt & Lambert paints and varnishes used exclusively in the color styling contribute to the warm, friendly atmosphere.

WILLIAM H. CALDWELL DESIGNS LAHER AND JUBELIRER RESIDENCES

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Jubelirer residence (left)
Laher residence (below)
Owners: James H. Laher Samuel Jubelirer
Architect: William H. Caldwell

General Contractor: J. Kenneth Fleck Painting Contractor: Stoltinberg Bros.

Lyt-all Flowing Flat, Vitralite Enamel,

P&L Products Used:

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"YOU CAN DESIGN CREATIVELY WITH EASY·TO·GET STANDARD SIZES"

Stanley James Goldstein, A. I. A.



GREENE RESIDENCE, Short Hills, N. J. All exterior window walls were constructed of prefabricated modular load-bearing

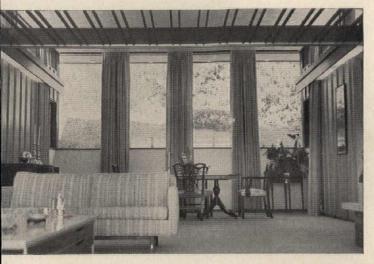
window and door frames dimensioned around standard *Thermo*pane sizes. The window frames served as the sole exterior wall supports for the conventional roof structure of wood joists.

*STANLEY JAMES GOLDSTEIN, A. I. A., a practicing architect for 10 years, holds three degrees in architecture and engineering from the Massachusetts Institute of Technology. Served two periods of engineering duty with U. S. Navy. In spite of a brisk practice, takes time to teach related subjects at the Graduate School of Architecture of Princeton University

... says Architect Goldstein*

"I always design with one eye on a glass catalog," says Architect Stanley James Goldstein. "In fact, most of my houses are designed around standard-size insulating glass units and standard sash. It helps keep costs down, assures prompt delivery, speeds construction... resulting in savings I can pass on to my clients.

"You can design creatively with standard-size units. There are over 100 sizes with metal-to-glass edges, and about 90 all-glass units. It's only a matter



of balancing sizes and shapes to room requirements. The only justification, that I can see, for using nonstandard sizes is in rare situations where nonrectan-

gular or odd sizes are required.

"You can see by the photographs that I like scenic sites. So do my clients. The large glass areas let them enjoy the changing face of nature, hour by hour, day by day, season by season. So I specify 1/4" polished plate glass in large insulating units to provide greatest freedom from distortion. For less critical areas, as in clerestory windows, I specify DSA insulating units.

"New Jersey climates justify using insulating glass throughout the homes. Some of my window walls are up to 80 ft. long, yet these houses have small heating plants. Summer comfort is assured by proper orientation, careful siting, tree shading and roof overhangs.

Thermopane STANDARD SIZES

"One of my homes qualified the owner for a V. A. loan because insulating glass made the house acceptable as far as heat loss was concerned."

Whether you're an architect or a builder, it pays to think first in terms of standard-size Thermopane units. For literature listing sizes write to L.O.F, 4150 Libbey · Owens · Ford Building, Toledo 3, Ohio.

VOLK RESIDENCE, Smoke Rise, N. J. All exterior window walls were constructed of shop-built, prefabricated modular frames, all dimensioned around standard Thermopane sizes. These same panel types, which were fitted into the modular wood framing system, together forming the structural wall and exterior and interior finish, accommodate standard steel sash, blank opaque walls, French doors and regularly hinged doors.





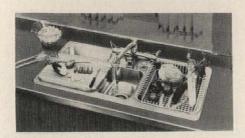


LIBBEY · OWENS · FORD - TOLEDO 3, OHIO



PRODUCTS FOR THE HOUSE

Each year manufacturers translate their latest advances in engineering and styling into new materials and equipment designed to make the modern home more comfortable, more convenient—and more beautiful. A cross section of this year's new products, now available for your selection in most parts of the country, is presented here and on the following pages



Kitchen Sinks Go Glamorous

Were they not themselves kitchen sinks, the Raymond Loewy-designed stainless steel sinks that make up Elkay's new Cuisine Centré line would fall into the category of products that include everything but. They can be had, for example, with integral power-operated NuTone food mixers and blenders, graceful non-splash faucets, remote drain control, fit-in chopping boards and vegetable baskets-and flat-bottom bowls big enough for large platters. The larger two- and three-bowl models are intended to stay prosaically in the kitchen; smaller models like the one-bowl plus blender shown below would be a boon to any bar. Elkay Mfg. Co., 1874 S. 54th St., Chicago 50, Ill.



Electric Duct Heating System

A new all-electric heating system consists of duct heating units installed directly in the air distribution system of a self-contained or remote air conditioner so that the same air moving equipment is used for the distribution of heated as well as chilled air. Individual duct heaters are located just inside the outlet diffuser in each room, an arrangement that minimizes duct loss and permits control by individual room thermo-

stats. The system also features a tempering heater located in the main duct at the fan outlet. (An interlocking relay prevents its operating while the cooling unit is on.) York Div., Borg-Warner Corp., York, Pa.



Built-In Home Television

The familiar decorating problem of "where to put the television?" is being answered by a line of built-in equipment which includes phonographs, AM-FM radios and matching speaker systems, as well as especially-designed color and black-andwhite television receivers in 17- and 21-in. (over-all diagonal) tube models. The Mural TV receivers, which have front tuning, are housed in metal cabinets and are designed to permit either front or rear ventilation. Two models are available with remote controls. Radio Corp. of America, 30 Rockefeller Plaza, New York 20, N. Y.



Wood and Aluminum Window
The insulating qualities of wood and
the maintenance-free features of

aluminum are combined in the new Wood-A-Lume window, which has a decorative, condensation-free wood interior surface bonded to a durable aluminum outer frame. The window can be installed without framing or trim by simply mounting it into position and nailing it through the prepunched aluminum outer jacket and the interior wood frame directly into the studs. (The same simplicity and speed also applies to masonry construction.) It comes in casement, awning and picture window types in a full range of sizes. Jervis Corp., Grandville, Mich.



Fold-Away Countertop Burners

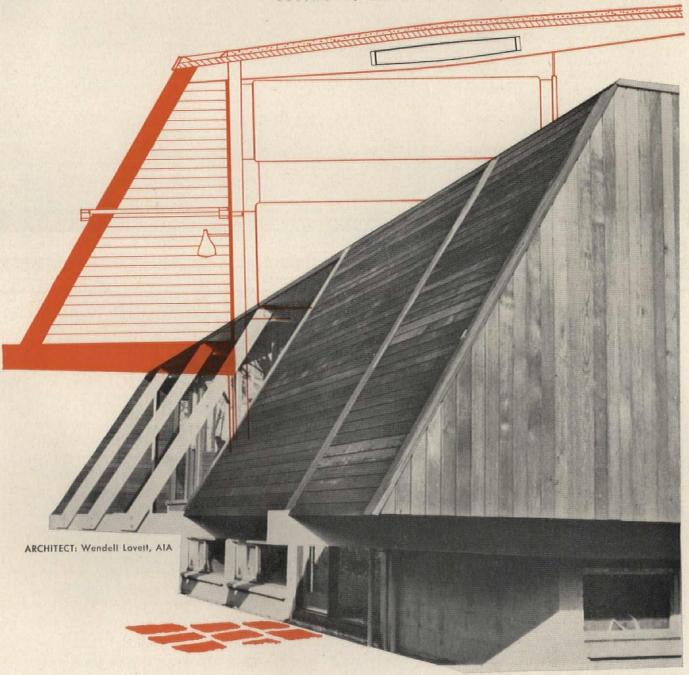
The Dixie Gas Foldaway, a "builtin" countertop cooking unit with two gas burners, folds up into a slim, square-cornered cabinet when not in use, leaving the countertop free. (Folded away, it takes less than a square foot of counter space.) It does not interfere at all with undercounter drawer space, since the units are not recessed into the countertop and require only two 3/8-in. cutouts for gas and electrical connections. The Foldaways also make possible more flexible kitchen planning: they can be installed singly, back-to-back or side-by-side in a variety of arrangements. Special features include thermostatic burners, automatic lighting, automatic gas shut-off when the unit is closed, and a convenience outlet for small electrical appliances. Dixie Products, Inc., Cleveland, Tenn.

more products on page 168

This modern home of West Coast lumber is the answer to a family's desire for a dwelling that would be "interesting both spatially and structurally." Many of the economies of the cube are retained, yet prominence of design is achieved through the use of unique roof planes, free modulation of interior space, and highly defined roof beams and exterior diagonal bracing members. Though glass was used extensively, the design retains the strong protective and sheltering characteristics of West Coast lumber.

MODERN DESIGN USES EST COAST LUMBER

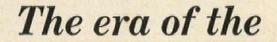
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WEST COAST LUMBERMEN'S ASSOCIATION

1410 S. W. Morrison St., Portland 5, Oregon







Frank Lloyd Wright employed

in a dramatic and utilitarian manner on the roof of the I. N. HAGAN residence, Uniontown, Pa.

In residential building today architects are using the roof to do more than keep out the weather. They are designing the roof big... with 3' and 4' overhangs. This makes houses look bigger, gives them more sweeping lines, keeps down heat and cooling loads, reduces maintenance and affords better protection of window and door areas from rain and snow.

To aid the architect in producing the "big roof" effect there is no material quite like copper. Its ease of workability and fabrication, its flexibility in design, make it the ideal tool in the hands of the master designer. And its qualities of endurance have been unmatched for centuries.

A most striking example of what can be done with copper is illustrated by Frank Lloyd Wright's dramatic

use of copper on the roof of the HAGAN residence. The bold scale of the unique stepped design stretches

this house out to huge proportions, making it hug the terrain as though it were part of the countryside.

Construction details and application techniques used to apply the roof were discussed jointly with owner, architect, sheet metal contractor and Revere. In fact, Revere's Research Department and Technical Advisory Service made up models of the recommended details in order to make sure their recommendations were practical. These details were then discussed and accepted by the owner, architect and contractor, and working drawings prepared.

Why not call on Revere's Technical Advisory Service to assist in your specifications and planning?



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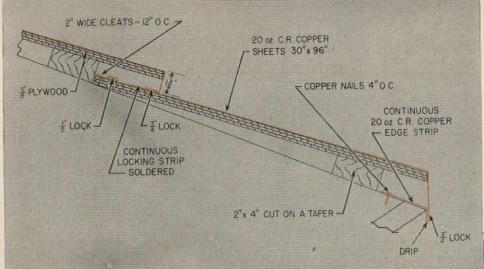
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Roof" points to a new era for the

ALL-COPPER ROOF

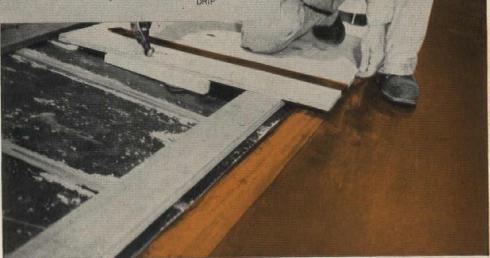
9,000 LBS. OF 20 OZ. REVERE COLD ROLLED COPPER used on the roof were supplied to the Sheet Metal Contractor, HENRY J. COOPER COMPANY, Uniontown, Pa., by the Revere Distributor, WILLIAMS AND COMPANY, INC., Pittsburgh, Pa.





DETAIL SHOWING stepped design and how continuous edge strip was applied. Distance between seams was 23" to the weather using Revere 20 oz. 30" x 96" copper sheets.

CLOSE-UP SHOWING full support between horizontal battens, as suggested by Revere's Technical Advisory Service after careful study. Expansion joints were made 24' apart. General Contractor was HERMAN H. KEYS, "Master Builder," Uniontown, Pa.



Products for the House



Wall Oven Pulls Out for Cleaning

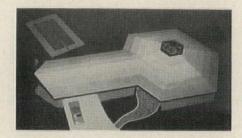
The "Pull N' Clean" feature previously available only in free-standing electric ranges has now been incorporated in Frigidaire's built-in wall ovens as well. In the model shown above, the large oven at the top has French doors for easy loading and unloading; the bottom oven, which is ordinarily difficult to reach for cleaning, pulls out like a drawer so that it can be easily wiped clean through the open top. Frigidaire Div., General Motors Corp., Dayton 1, Ohio



Remote Control Room Conditioner

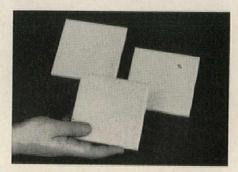
A new room cooler that is operated entirely by remote control makes it possible for the user to adjust cooling or heating temperatures, air direction and volume, and exhaust from a control panel conveniently placed on end table or night stand. Since the remote control makes it unnecessary to go to the unit except for periodic filter changes, the conditioner can be installed at the top of the window as well as in the bottom. It is also said to provide better temperature control, since the thermostat is located in the control panel where the user is rather than in the air conditioner itself. The new Custom unit comes in one hp, 115v and 230v sizes. Whirlpool Corp., St. Joseph, Mich.

Through-Color Vinyl Asbestos Tile A new manufacturing process has made it possible to offer, for the first time in a vinyl asbestos tile, color-chip styling that extends throughout the full thickness of the tile. Designed for heavy-traffic areas, the Vina-Lux 800 series comes in 1/8, 3/2, and 1/16-in. thicknesses and standard 9-in. squares, and in six color combinations. The tiles can be installed over concrete (on, above or below grade), or on felt over wood subfloors. Azrock Floor Products Div., Uvalde Rock Asphalt Co., P. O. Box 531, San Antonio 6, Tex.



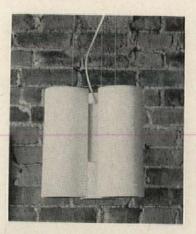
Color-Shaded Terne Roofing

Taking advantage of terne's color adaptability and receptivity to paint, the new Terne Tonalities color theme idea uses a sequence of tones within one color-range to emphasize the lines and shadows created by the new Bermuda horizontal seam construction. Suggested color ranges are "Bahamas," terra cotta through sand to off-white at the peak; "Riviera," blue-gray through turquoise; and "Palm Beach," a series of soft green tones. Follansbee Steel Corp., Follansbee, W. Va.



"Speckled" Glazed Ceramic Tile

The new Stardust line of glazed ceramic wall tile colors—shell pink, corallin, ice green, ivory and yellow—feature a delicate speckled overglaze similar to that used for the "Pepper White" tile previously introduced. They come only in 4½-in. square tiles. Stylon Corp., Milford, Mass.



Tri-Cylinder Pendant Fixture

A trio of $4\frac{1}{2}$ - by-11-in. cylinders, held together by an inner cylinder 2 in. in diameter and 6 in. long, forms a three-lamp fixture that is suspended from a ceiling canopy by near-invisible wires. The illusion of non-support is strengthened by the slackness of the cord which supplies current to the lamp housings. The fixture provides downlight only from three 75-watt R30 lamps. Harry Gitlin, 917 Third Ave., New York 22, N. Y.



Prefab "Masonry" Fireplace

The Igloo heater, a kind of latterday Franklin stove designed by Susan Norton-Taylor of the Strawberry Bank Craftsmen, Portsmouth. N. H., is molded of refractory fireclays capable of withstanding temperatures of 2000F or more. It is installed with an 8-in. stack to existing flue or with a prefabricated suspended stack, and comes complete with an iron fire screen and round base. Dimensions are 30 by 26 in. around by 331/2 in. high; available colors are green, white, red, blue and gray. Distributed by Mills-Denmark, 227 East 56th St., New York 22, N. Y.

more products on page 172

ARCADIA SLIDING GLASS DOORS

The touch of quality to look for ...







featured in

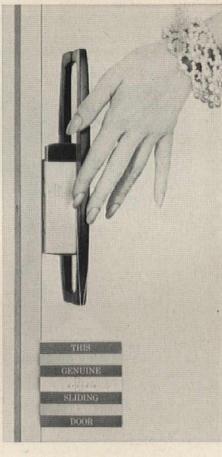
RECORD HOUSES/1960

EICHLER HOMES Palo Alto, California
Anshen and Allen, AIA
WILLIAM T. RILEY RESIDENCE Atherton, California
George T. Rockrise, AIA
CINCINNATI RESIDENCE Cincinnati, Ohio
Carl A. Strauss, AIA



You sense Arcadia quality at a finger's touch. An Arcadia door moves silently, solidly...on nylon rollers and nylon tracks. You see Arcadia quality in simply-stated hardware...in clean sight lines and the satin Alumilite finish. Year after year you appreciate Arcadia quality even more, because the finish endures...because your sliding doors are completely and permanently weathersealed against rain and wind...because the *inside screens* stay new looking and easy to clean. You discover that all sliding glass doors are not the same. Arcadia adds the touch of quality. Don't settle for less.





Send for Arcadia's free Planning Guide to home planning and remodeling with sliding glass doors. For catalog information consult your Yellow Pages for name of your Arcadia distributor, or write to: Arcadia Metal Products, Fullerton, California

NEW! EXCLUSIVE! BARRETT BAR-FIRE† ASPHALT SHINGLES

Here's
Barret
Here's

• 300%
protect
long as

• Giar
distinct

• 18" thomes

• Multiworthir

• Han
Gray, S

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of the B

The only 300# asphalt shingle with

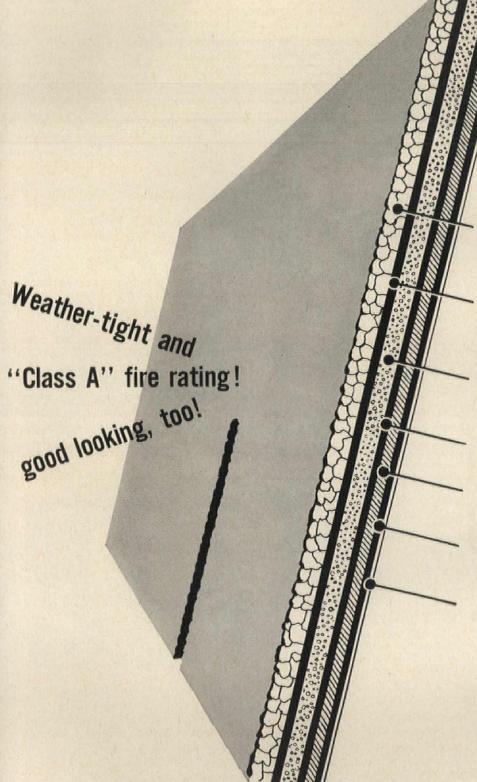
Here's the quality shingle you've been waiting for! The new Barrett Bar-Fire†. Specify it "when nothing but the best will do." Here's why it's the finest ever made:

- 300# shingle carrying Underwriters' "Class A" label. Top fire protection through fire-barrier layer of granules and vermiculite; long asbestos fibers stop flame spreading.
- Giant mineral granules produce an appearance that's genuinely distinctive. Rich, massive, lustrous.
- 18" tabs, instead of the conventional 12", give "Bar-Fire" roofed homes that long, low appearance—fewer vertical lines!
- Multi-layer construction, plus extra weight, spell super weatherworthiness, long life, extra fire protection!
- Handsome and popular colors: Snow White, Pastel Green, Pastel Gray, Slate Tone!
- The prestige of this superb new shingle is backed by the prestige of the Barrett name—the greatest in roofing.

BARRETT IS OUT TO HELP YOU! With a line of dependable, quality building materials that America's leading architects always specify when they build for the future.

- STORM-KING® SELF-SEALING AND OTHER ASPHALT SHINGLES PITCH & ASPHALT BUILT-UP ROOFINGS ROLL ROOFINGS FIBERBOARD AND GYPSUM PRODUCTS
- · INSULATION · PROTECTIVE COATINGS AND CEMENTS.
- † Trademark Allied Chemical Corporation





CROSS-SECTION OF "BAR-FIRE" SHINGLE

Surface layer of giant mineral granules, three times usual size.

Secondary coating of asphalt and asbestos fibre.

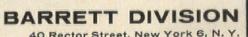
Layer of granules and fire-blocking vermiculite.

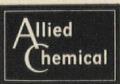
Primary coating of asphalt and asbestos fibre.

Top quality asphalt-saturated felt.

Back coating of asphalt and asbestos fibre.

Fine talc surfacing.





Fireproof Asphalt Shingle

Bar-Fire, a fireproof asphalt shingle that is also good-looking and weather-tight, is constructed of asphaltsaturated felt covered first with a layer of asphalt coating and asbestos fiber; then with a layer of granules and vermiculite, and another layer of asbestos fiber; and finally with a wearing surface of giant granules that are said to give the shingle unusual "sparkle." It carries the U/L Class A label. Made with two 18-in. tabs for long-line styling, the heavy shingles come in white, pastel green, pastel gray, and slate. Barrett Div., Allied Chemical Corp., 40 Rector St., New York 6, N. Y.



Double-Bowl Corner Sink

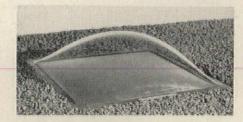
To permit greater flexibility in kitchen layout, a double-bowl stainless steel sink has been introduced that fits neatly into the counter top in any corner. Two 16½-by-15-in. bowls are combined in a right-angled unit with overall dimensions of 43¼ in. from corner to corner, and 22 in. from front to back. The 21-in. back ledge has three faucet openings. Jensen-Thorsen Corp., Addison, Ill.



Colored Door Knobs

A new line of door knobs made of DuPont's *Delrin*, a glass-smooth plastic that resists impact, abrasion and wear, come in muted decorator colors with matching or contrasting replaceable inserts. (Further combinations are made possible by a wide selection of roses in brass, bronze or aluminum finishes.) They fit all Chal-

lenger 900 Series locksets. Challenger Lock Co., 2349 West La Palma Ave., Anaheim, Calif.



Self-Flashing Skylight

A new self-flashing Skydome made up of an acrylic dome chemically welded to a reinforced plastic base features a 4-in. base flange which is nailed directly to the roof, eliminating the need for metal curbing and wood framing. The roofing is simply built up over the flange to produce a sealed air cavity that provides heat insulation and eliminates condensation. The Skydomes range in size from 20 by 20 in. to 64 by 96 in., and can be had with clear, white translucent, or reflective outer domes. Wasco Products, Inc., 5 Bay State Rd., Cambridge 38, Mass.



Push Button Plumbing

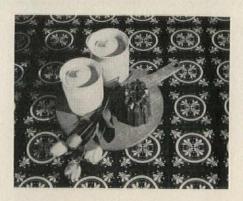
The new Ultraflo system of water control replaces faucets at sink, lavatory, tub and shower with colorful push buttons that may be located wherever convenient-on the ledge as shown above, or on an adjacent wall. Through a low-voltage electric system, the buttons control solenoid valves which supply hot, cold or warm water. Buttons are also available for extra-warm water, soft or hard, at full flow or gentle flow. Since warm water is mixed at the water heater, one supply line replaces the hot and cold water lines. And because the line serves only one fixture, it need not be as large as the pipe normally used. The solenoid valves themselves are housed in a compact case which should be

mounted as close as possible to the water heater. *Ultraflo Div.*, *American Sanitary Mfg. Co.*, *Abingdon*, *Ill.*



Built-In Neoprene-Nylon Hose

With the new Hide-A-Hose mechanism, the household hose can be stored out of sight on a reel located in the basement while remaining quickly available for outside garden service or inside emergency fire protection. The complete kit includes a 150-ft neoprene-nylon hose with nozzle, a reel and remote rewind mechanism, an aluminum box for access to nozzle and water valve through the outer wall of the house, and a small aluminum trap door to be set in the floor above the reel for access from within the house in case of fire. Flinchbaugh/Murray Corp., 66 N. Murray Pl., York, Pa.



Delft-Patterned Vinyl Tile

Delft Designs are traditionally-sized 6-in. squares of vinyl tile patterned with four motifs—geometrics, flower sprays and rococo scrolls in classic shaded blues on white, and a pomegranate design in lemon yellow, bright blue and bitter green. Each pattern will be offered in beveled and unbeveled versions for use alone as shown above or in combination with other tile colors and patterns. Amtico Vinyl and Rubber Flooring Div., American Biltrite Rubber Co., Trenton, N. J.

more products on page 176



Genuine Walnut . . . the warmth and rich natural beauty of the real wood. Also available in genuine oak and cherry . . . or, if your client prefers, fine birch in Tawny or Fruitwood finish.

Only St. Charles
gives you the freedom
you need to design a
truly <u>custom</u> kitchen.



Platinum . . . a new St. Charles custom color on steel . . . combined here with genuine walnut to harmonize style and texture. One example of the wide range of color-texture combinations available to you and your clients in Custom Kitchens by St. Charles. Even your own *special* colors can be reproduced by St. Charles.

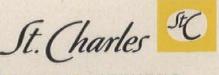


Classic . . . elegant in its simplicity . . . one of several St. Charles custom styles . . . available plain, or with decorative panels. There is the right style to fit your design.

These are just a few of the almost limitless possibilities at your command when you specify St. Charles Custom Kitchens. Full freedom in layout, style, color, materials, features... because a St. Charles Kitchen is custom built after you plan it...not before!



Write for the award-winning St. Charles kitchen planning booklet featuring new custom kitchen ideas, and detailed information and specs on St. Charles' units.



CUSTOM KITCHENS

St. Charles Manufacturing Company Dept. ARK-14 St. Charles, Illinois

A leading name in electric heat for 25 years ELECTRIC HEAT in design, and "perfect



Extra-heavy, continuous "floating" fins heat more efficiently. Rod-type element guaranteed 5 years.

LEURANA

Compact thermostat baseboard sections available. Saves wiring-in wall thermostat.



Flow of primary and secondary air controlled for maximum circulation.



Here is the slimmest and trimmest of all baseboard heat units. Because of its dramatically reduced dimensions, the new Arvin Invisa-Line "disappears" from conscious view, once installed. Now, at last, the concept of electric baseboard heat becomes a reality, literally replacing the modern, low room-baseboard with a heating unit that's equally unnoticed. Yet, with all its slimness, Arvin's low-wattage baseboard provides a world of warmth. And it's safe . . . every section contains safety thermal cutouts . . . 140 watt capacity per lineal foot assures ample heating performance without "hot spots" in the room. No other baseboard unit gives more real meaning to the modern advantages of electric heat than new Arvin Invisa-Line: all you notice is the warmth.

Also available is Arvin's high wattage Invisa-Line baseboard, with 300 watts per foot. It too contains safety thermal cutouts. Only 2" thin and 6" low, it obsoletes in appearance all other units of comparable wattage.

Exclusive!

GOES WHERE NO OTHER UNIT CAN! Invisa-Panel Ceiling Heat



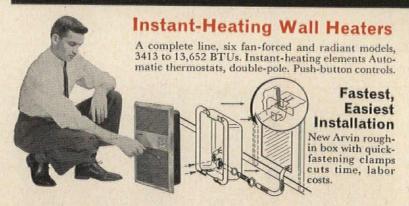
Fits perfectly into areas of

8 ceiling tiles

Flush-mounts perfectly within any type of ½" ceiling material.

ever to provide modern electric heating without the normal restrictions of floor and wall design. Practically

New Arvin ceiling panels give you the greatest freedom the entire ceiling becomes available for Arvin Invisa-Panel placement. And when installed it almost "van-ishes." Flush-mounted within the ceiling surface, it can be painted to match the ceiling color. But above all, your Arvin Invisa-Panel installation produces comforting, radiant warmth without drafts; troublefree, too, because there are no moving parts. This is the only unit of its kind in the electric heating field, with limitless applications.





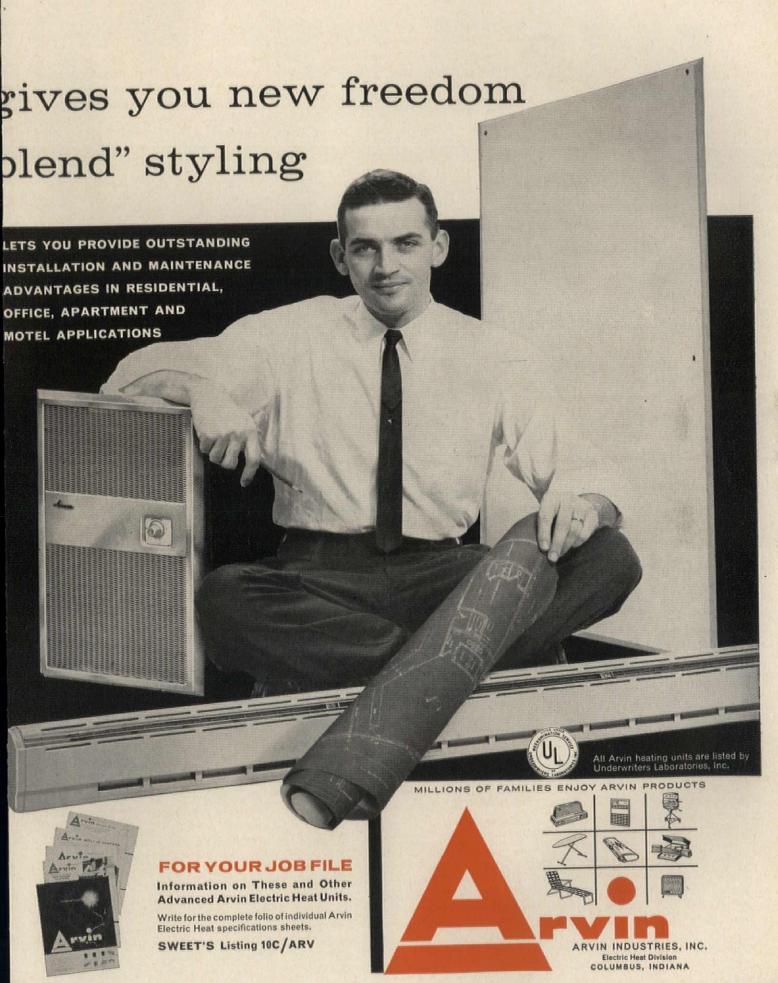
Radiant Heating Cable

New! No braid or loom needed-cold leads have heavy, UF-type insulation, can be installed with new-design staples. Nickel-chrome elements.



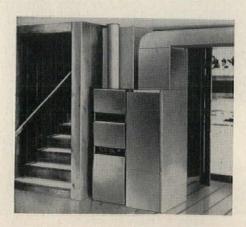
Wall Thermostats

Single, double-pole models. Fast reacting. Flush-mounting, wires from front.





Intra-Home Phone Communications A new home communications system that enables you to answer the front door or mind the baby by telephone also provides such services as hands-free talking and voice-broadcasting throughout the house. Called Home Interphone, it uses special telephone units consisting of a telephone and a small separate speaker for the telephone, broadcasting, and intercommunications services. Door answering is carried out through an outside microphone-speaker combination. The system is powered by a transistorized control unit and transformer which can be installed in the basement or other out-of-sight location. This spring, Home Interphones will be introduced in four areas; they will be made available in other areas later in the year. Bell Telephone Systems, American Telephone and Telegraph Co., 195 Broadway, New York 7, N. Y.



Automatic Air Purifier

Carrier's new automatic air purifier is said to provide the first practical residential device for effective odor removal, winter humidification, and constant-efficiency air cleaning. Designed for installation with new central air conditioning systems, it features a self-cleaning filtering element consisting of many layers of aluminum mesh screen. The screen is bathed every twenty seconds from

top to bottom by a liquid composed of water and a fluid called *Carrex*, which picks up a wide range of odors, including tobacco smoke—often the most tenacious of smells. The successive waves of fluid also flush off the dirt that collects on the filter element. Humidity control is effected by regulating the amount of water in the liquid mixture that passes over the filter. An electrically-operated humidistat opens and closes a water valve to maintain the necessary rate of evaporation. *Carrier Corp.*, Syracuse 1, N. Y.

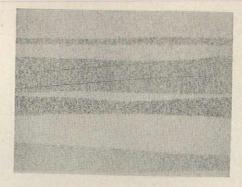


Cabinet Mounted Electric

Electric ranges that can be cabinetmounted (or wall-hung) at any desired height are now available in a variety of models-from economy to deluxe-in 30- or 40-in. sizes. All of the "Fabulous 400's" feature top ovens, a twin fan system that makes it possible to use them built-in as well as free-standing, and four-burner, hide-away cooking tops that slide back into the unit when not in use. The 40-in. Model 441 shown above also has a built-in chopping board that remains ready for use when the in-line burners have been pushed back, and can be folded down if desired when the burners are being used. The Tappan Company, Mansfield, Ohio

Latex Exterior Paint

Spred House Paint, a new latex formulation, has been specially developed for exterior application on wood, masonry, stucco, cement and metal, and on asbestos and asphalt shingles. According to the manufacturer, it offers extreme durability, can be applied over damp wood, touch-dries in 20 minutes, resists mildew, and has a fibrous molecular structure that prevents blistering by permitting passage of internal household moisture. It comes in white and a range of 20 pastel and deep-toned colors. The Glidden Co., 11001 Madison Ave., Cleveland, Ohio



Ribbon-Striped Plastic Surfacing

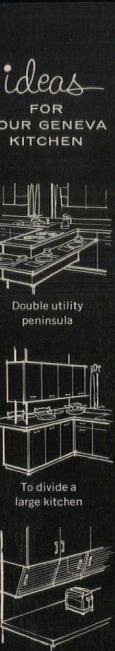
A new decorative surfacing plastic featuring informal, random stripes of yellow, cocoa, white, pumpkin and turquoise has been added to GE's line of *Textolite* "Mist" patterns. Called Ruban Mist, it was designed to accent the "soft solids," (subdued mottled patterns in green, white, yellow, beige, gray and cocoa) in the Mist line, and can be had in the new textured *Textolite* finish as well as with conventional gloss and satin surfaces. *General Electric Co.*, Laminated Products Dept., Coshocton, Ohio.



Lavatory Faucet With Spray

The Lava-Spray, a new lavatory fixture, has a single handle faucet that controls both temperature and volume of water, plus an integral spray for such chores as washing hair. It can be easily installed in standard sinks, and is said to be useful for the bar, the laundry room and the garden corner as well as for the cleanup lavatory and bathroom basin. Delta Faucet Corp., 12825 Ford Rd., Dearborn, Mich.

more products on page 180





Planning desk



Sewing machine cabinet

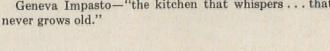


Geneva kitchen in the country home of Governor and Mrs. William G. Stratton near Springfield, III.

The warmth and elegance of a GENEVA kitchen starts with the NEW MDado finish!

There are many wonderful reasons why Geneva Impasto cabinets bring a carefree dignity to kitchen living. The natural, superbly fashioned texture is etched into the cabinet itself...providing a non-gloss and sound deadened surface. Impasto will not show finger prints...is stain resistant, will not chip or warp. Add to this Geneva's self closing drawers...plastisol protected and adjustable shelves ...wide standard cabinet selection, plus special cabinets to order. It all adds up to the personalized, efficient kitchen you have always wanted. See the warmth and charm of a Geneva Impasto kitchen before you decide (you'll be happy you did).

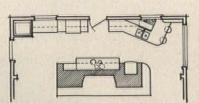
Geneva Impasto-"the kitchen that whispers . . . that





GENEVA MODERN KITCHENS

Division of Acme Steel Company, Geneva, Illinois



Geneva Modern Kitchens Dept. RH 5-60 Geneva, Illinois

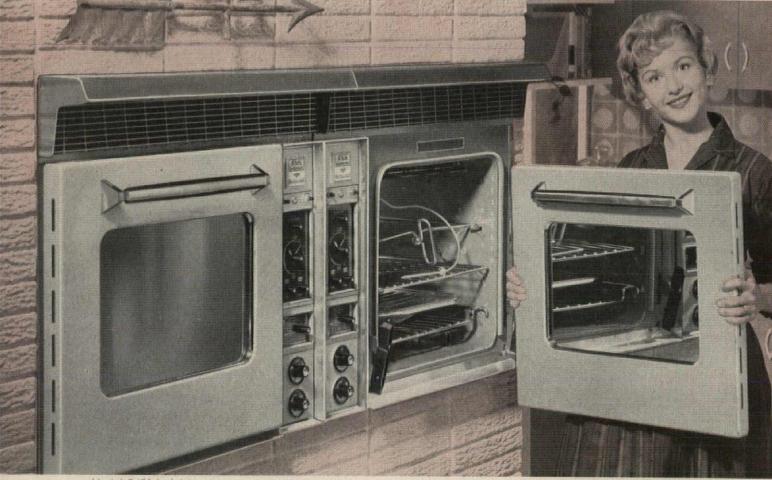
Yllul send cabinet specifications and attractive 20-page full-color brochure on Geneva Impasto Kitchens.

NAME

ADDRESS

CITY STATE

DESIGN · FUNCTION



Model RJ76-A right-hand control panel

Model RJ77-A left-hand control panel

Only Hotpoint CAEREST Ovens give you all of 1960's newest, most exciting features

NEW hood-fan automatically removes cooking odors during broiling and barbecuing.

NEW control panel comes mounted on side that fits your kitchen plan best.

NEW ventilation system circulates more even heat over every inch of each shelf for better baking.

NEW mirrored window gives a clear view inside when oven lights are on, but with them off the window acts as a mirror, hiding the oven interior.

NEW full-width door lifts off; new chrome floor liner, oven units and broiler spatter guards remove for faster, easier oven cleaning.

PLUS-Rota-Grill for recipe-perfect barbecues, Roast-Right Meat thermometer for just-right roasts.



New Hotpoint Cook Book Controls and Calrod® Recipe Heat Units

Now you can offer your clients an end to cooking guesswork and an aid to recipe-perfect meals every time. One glance at Hotpoint's simple Cook Book instructions on the control panel shows how to enjoy the easiest cooking ever. One touch of a button brings heat as accurately measured as the ingredients of any recipe. And with the temperature-controlled Super-matic unit any pot becomes an automatic cooking utensil—foods won't scorch, burn or boil over.

QUALITY

Only Hotpoint gives you so much more of all 3!

When you specify Hotpoint you specify better living and lasting satisfaction. The reason is Hotpoint's unmatched quality. Quality of engineering, materials, and craftsmanship that integrates design and function into balanced superiority. That's why Hotpoint built-ins are found in so many homes that reflect true quality in every detail.

Hotpoint offers a wide variety of models – priced so you can specify famous Hotpoint quality for even your moderately priced homes. Hotpoint's simplicity of design and wide choice of finishes grace any decor. Specify Hotpoint today for lasting satisfaction.



New Hotpoint Automatic Dishwasher with exclusive Double-Deck Washing Action

Only Hotpoint offers your clients a separate spray for each rack to wash dishes spotlessly clean. Top spray (1) washes glasses, dishes in upper rack, lower spray (2) scrubs away dirt from plates, utensils in bottom rack. Big front-loading Roll-R-Racks hold complete dinner service for 12. And Hotpoint's up-front connections mean faster, easier installation for you.



New Hotpoint Disposall® is easier to install because plumbers helped design it

Model MB65-A

The Hotpoint Disposall food waste disposer installs fast—and it pulverizes and disposes of food waste quickly because of its super-hard cutting teeth and "jam-free" design.

When you build in Hotpoint you build in Public Preference

Hotpoint

LOOK FOR THAT

Model DE-1

DIFFERENCE!

A Division of General Electric Company, Chicago 44, Illinois



LECTRIC RANGES + REFRIGERATORS + AUTOMATIC WASHERS + CLOTHES DRYERS + CUSTOMLINE® + DISHWASHERS
ISPOSALLS® + WATER HEATERS + FOOD FREEZERS + AIR CONDITIONERS + ELECTRIC BASEBOARD HEATING



Built-in Stereo-Intercom System

A new home entertainment and communications system uses the built-in room speakers and controls of an intercom system to distribute stereophonic music throughout the house. It includes, in addition to high-fidelity intercom components, a record changer, an AM/FM radio tuner, two amplifiers (in a single chassis), as many speakers as desired, and a built-in record storage cabinet or tape deck. All components are built into standard 4-in. stud walls, including the record player, which is mounted on a vertical door that becomes a shelf when the changer is in use. Because of the dual channels, each room has selective listening:

AM and FM radio programs can be on at the same time, or records on one channel and radio on the other. However, the intercom is always available since records or radio are automatically silenced when the intercom is operated. Remote controls are available for inside and outside use. NuTone, Inc., Madison and Redbank Roads, Cincinnati, 27, Ohio

Horizontal Air Conditioner

The Chrysler Model 1104, a horizontal air-cooled package unit for installation in attic or crawl space, or on an outside slab, makes use of two blowers and spring mounting for quieter operation. A new compressor with fewer internal parts than most existing compressors also adds quietness as well as lighter weight and less power consumption. Other features of the 1104 include a reset switch at the thermostat; duct connections which permit flexible use of indoor or outdoor duct arrangements; and provision for separating the blower section and the refrigeration section into manageable, easily reassembled "packages". Its capacity is 35,000 Btuh. Chrysler Airtemp Div., Chrysler Corp., Dayton 1, Ohio

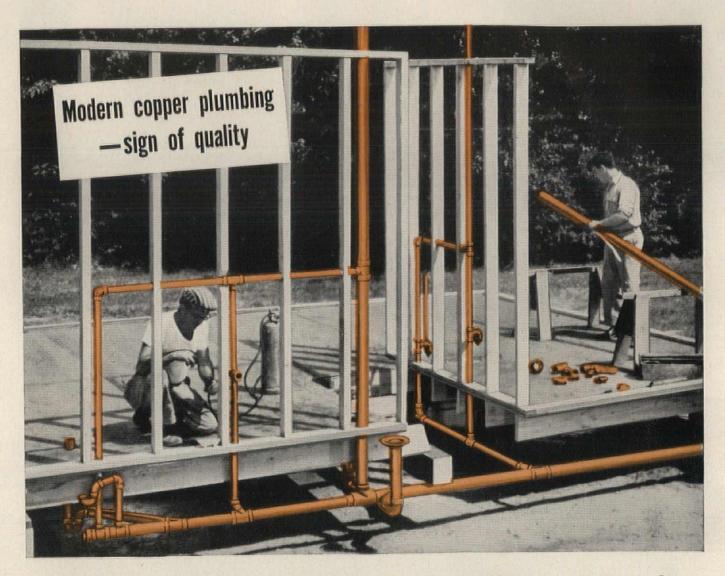


Printed Circuit TV Antenna

Outdoor antennas go indoors with the new Magic Carpet Antenna, a flat, flexible printed circuit that duplicates the reception characteristics of an outdoor antenna in signal areas up to 45 miles from the station, but can be stapled to the attic floor or joists of a home. The 6-by-2½-ft printed sheet is part of the Jerrold built-in antenna system, which also includes a TV-FM amplifier and plug-in antenna outlets for various locations in the home. Jerrold Electronics Corp., 15th and Lehigh Ave., Philadelphia 32, Pa.

more products on page 184





Sanitary drainage systems of nonrusting copper tube simplify construction and reduce maintenance

Copper tubes for hot and cold water lines have been the mark of a quality house for many years. Today, copper is meeting our complete plumbing needs better than any other metal. More and more is being used for sanitary drainage lines. And here's why.

SLIM AND TRIM. With modern copper drainage tube, you can put plumbing where you want it and need it. Copper won't rust and its smooth surface resists clogging. Thus, copper tube for household drainage can be slim and trim—fitting easily inside standard-width wall partitions.

EASY TO INSTALL. Work goes faster, too, because copper tubes are rel-

atively light, easy to handle and cut. Old-type threaded or caulked joints are eliminated. A copper drainage system can be assembled quickly and easily with compact, durable solder-joint fittings—even in tight quarters. And there are fewer joints to make because copper tube comes in 20-foot lengths.

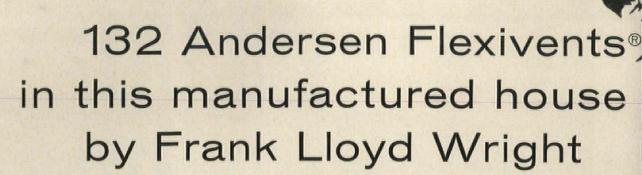
costs no more — often considerably less. Despite all its advantages, modern all-copper plumbing with Anaconda Tube and Fittings normally costs no more than conventional ferrous plumbing. And many contractors find that the installation savings make it possible to do the job for less. So,

if you're building a new home, talk to your architect and builder about all-copper plumbing with Anaconda Tube and Fittings. It's worth a lot more in low maintenance, peace of mind, and greater resale value. Yet it may even cost you less than ordinary plumbing. For more information on ALL-COPPER PLUMBING, write: The American Brass Company, Waterbury 20, Conn. In Canada: Anaconda American Brass Ltd., New Toronto, Ont.

ANACONDA

COPPER TUBE FOR MODERN PLUMBING Made by

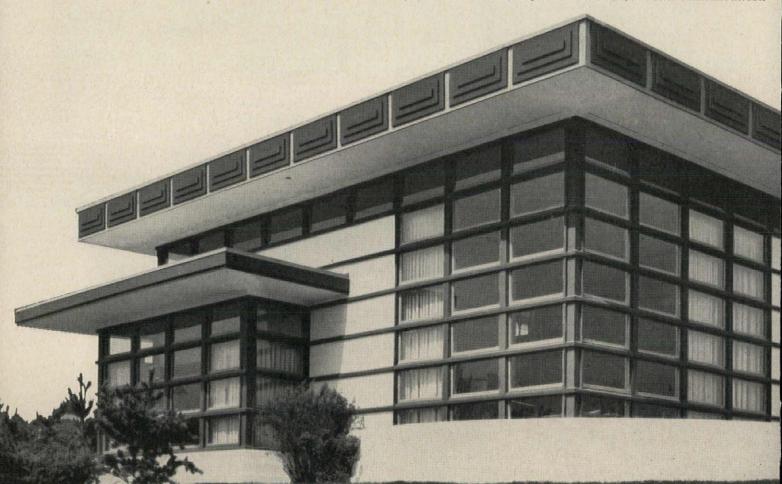
THE AMERICAN BRASS COMPANY



This second of three houses designed by Frank Lloyd Wright for prefabricated construction is manufactured by Marshall Erdman and Associates, Inc., in Madison, Wis. The 2-story house, on a 2' by 4' module, makes liberal use of Andersen's versatile Flexivent Windows with fixed and operating sash.

Builder Erdman reports: "I get a lot of satisfaction, as a designer, engineer and manufacturer of quality homes, out of using a top quality window unit. Out of more than 500 homes with Flexivents, we've adjusted windows on only two complaints."

For all the facts on all seven of Andersen's complete window units, see your Sweet's File, or write Andersen direct.



Window Bay provides space added by Mr. Wright after original plans (on facing page) were drawn. Exterior color is cream ocher on pressed hardboard siding. Horizontal battens and ornamental facia stained redwood. Window trim Chinese red.







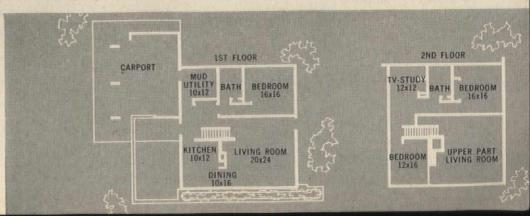
designed

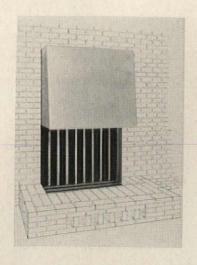




(Above), **Corner WINDOWALLS** in 2-story living room give feeling of immense spaciousness. Operating sash of Flexivents are installed in awning position. Upstairs rooms form "gallery" overlooking living room.

FLOOR PLAN shows house is almost square. 2,912 sq. ft. of space. Walls of upstairs "gallery" are waist high; folding doors give privacy. \$28,000 to \$35,000 depending on inclusion of basement and built-ins.





Heat Circulating Fireplace

With the new *Heatform* fireplace, cool room air, drawn in through inlets in the raised hearth, is warmed in heating chambers below, behind and above the firebox, and discharged back into the room via a long grille located in the top of the hood. The unit, which comes complete with damper and hood, provides extra heat, and also eliminates fireplace construction errors plus much of the labor and material usually required. Superior Fireplace Co., 4325 Artesia Ave., Fullerton, Calif.

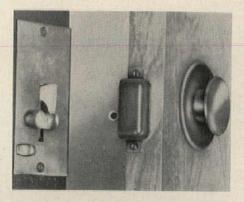
Variable Input Water Heater

Development of a burner that can efficiently use a varying amount of gas has made possible a water heater with a capacity that can be adjusted from 30 gallons to 50 gallons at the turn of a dial. (Capacity is defined by the number of gallons of hot water produced per hour, rather than by the storage capacity of the tank.) The 30-Plus thus regulates fuel consumption according to output demand, and makes it unnecessary to oversize the home water heater in order to meet peak loads. Rheem Mfg. Co., 7600 S. Kedzie Ave., Chicago 52, Ill.

Problem-Proof Flush Valve

Tank Trim, a new water closet flush valve with no complicated linkages, promises to end the perennial bathroom problems of running toilets, lever jiggling and costly repairs. Pushing down the handle actuates the trip lever which acts directly on the flush valve, lifting it off the seat. The flush valve remains in this position while the tank empties; then closes, allowing the tank to fill. The improved tank fitting can be adapted to most existing

fixtures, and will be incorporated in all water closets made by American-Standard, Plumbing & Heating Div., 40 West 40th St., New York 18, N. Y.



Surface Mounted Door Hardware

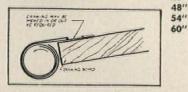
By making it possible for interior doors to be hung over openings rather than in them, Surfaset door hardware eliminates the need for planing and fitting doors as well as for wood jambs, stops or face trim. The assembly consists of hinges, strike and pull mounted on the door surface; and a simple latch mounted in the wall adjacent to the opening. The Stanley Works, 195 Lake St., New Britain, Conn.

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Non-corrosive sheet steel, gray enamel finish.

Note: actual lengths are 11/2" less than nominal lengths shown.

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Dramatic New Orleans home planned to

Dining room is separated from entrance hall by a walnut-panelled storage wall. Even with large glass areas, comfort is maintained with Lennox all-season comfort system.

OWNER: Mr. and Mrs.
Alvin Halpern

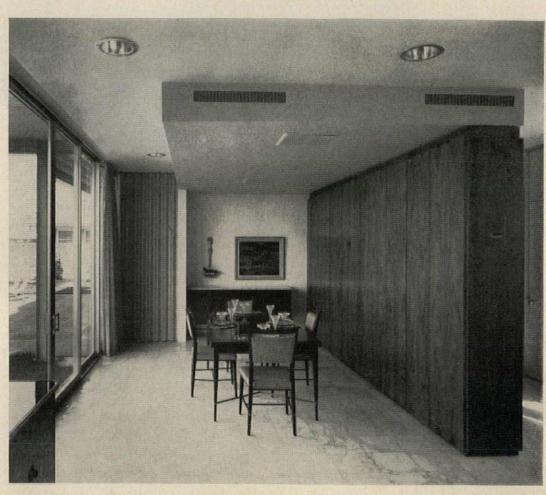
ARCHITECT: Curtis & Davis

MECHANICAL ENGINEER:
Walter L. Ashton, Jr.

CONSULTING ELECTRICAL
ENGINEER: Guillot,
Sullivan & Vogt

GENERAL CONTRACTOR: Millman Construction Co.

LENNOX DEALER:
Fischer Sheet Metal &
Air Conditioning Co.



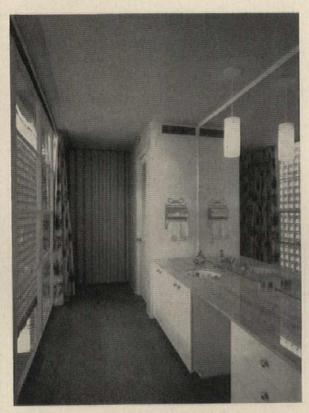
The architect was required to design a large single family residence capable of future expansion within the main mass rather than by means of appendages. This was accomplished in the two-story design illustrated here, with expansion planned for the first floor level. To assure year round indoor comfort on both levels, a 2-zone Lennox Landmark heating/cooling system was provided.

The owner desired maximum openness, looking out from the inside, but privacy from exterior view. Therefore, front and rear walls are almost entirely glass. Plantings will assure first-floor privacy. Solar gain through glass on the second floor is sheltered by a light, delicately patterned off-white masonry sun screen. But the calculated heat gain inherent in such large glass areas still required the refrigeration of two Lennox Landmark 5-ton units.



Two circular openings in the solid brick side walls provide access to side yard areas from the front patios.

expand within main mass relies on Lennox



This generous dressing area opens into the Master bathroom. Its counter-tops of Italian rose marble match that of the built-in tub and bathroom floor.

Lennox Landmark "modular design" assures ideal cooling, heating, humidity control!

Although New Orleans summers are hot and humid, winters are mild. In meeting this situation, the Architect/Engineer team profited by the Lennox Landmark "blocks of comfort" principle. Lennox modular-designed heating sections and cooling sections permit "custom" selection of exactly the right heating capacity and exactly the right cooling capacity for any climate. In this case, only 102,000 Btuh is needed for winter heating.

Lennox manufactures the world's most complete line of heating/cooling equipment—gas, oil, electricity and heat pump. For full details and name of your local Lennox Technical Representative, write: Lennox Industries Inc., 422 So. 12th Ave., Marshalltown, Iowa.



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JOSEPH W. MOLITOR P. O. Box 549 112 Pine Avenue Ossining, New York	100, 104, 120, 140, 154
LOUIS REENS 27 West 96th Street New York 25, New York	66
BEN SCHNALL 1370 West Boxwood Drive Hewlett Harbor, New York	128
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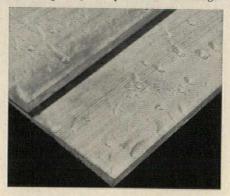
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The achievement of these goals might easily be cited in three instances where Weyerhaeuser's qualitative motivation brought to the building industry top-quality products.

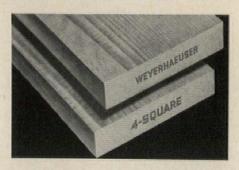
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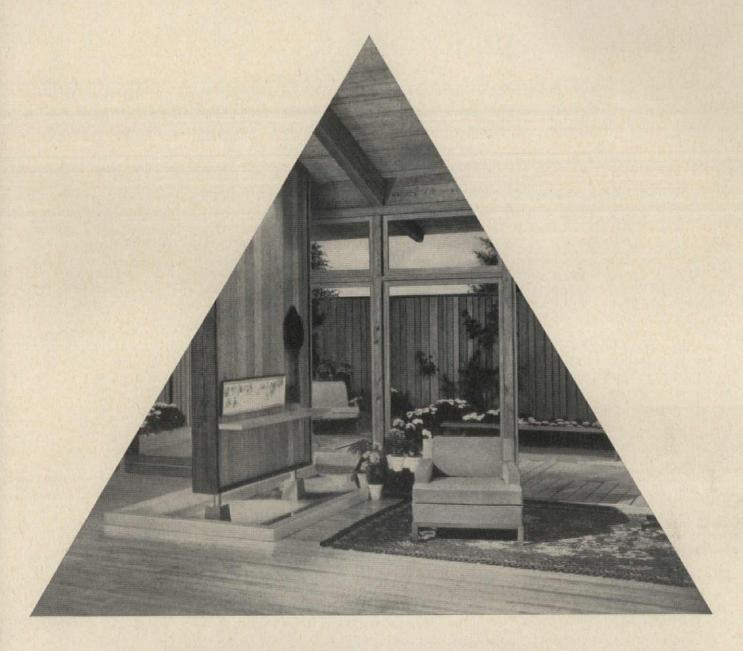


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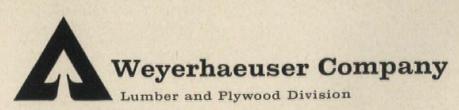
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REFERENCE READING

To inform architects and their clients of the new products and techniques available to them, there annually appears a great wealth of literature describing the latest developments in the home-building field. Samples of this "reference reading" are reviewed below and on the following pages—and similar literature can be obtained from the manufacturers of most of the Products for the House described in the section beginning on page 164

Understanding High Fidelity: Stereo Edition

Detailed guide for selecting high fidelity and stereo home music systems discusses the nature of musical sounds; the elements of high fidelity systems—record players, tape recorders, television receivers, radio tuners and receivers, amplifiers, loudspeakers and enclosures; and recommended installation procedures. Appendices cover suggested systems to fit various budgets and space requirements, and a glossary of hi-fi terms. 64 pp., 25¢. Bogen-Presto Div., Siegler Corp., P.O. Box 500, Paramus, N. J.

Oak Floors for Your Home

Covers requirements for fine residential floors; the various styles, sizes and grades in which oak flooring is available; installation of oak floors; approved procedures for sanding, staining and finishing; and recommendations for proper care of oak floors. 32 pp. Oak Flooring Information Service, Dept. AR, 75 E. Wacker Dr., Chicago 11, Ill.

Certi-Split Manual of Handsplit Red Cedar Shakes

(A.I.A. 19-D-1) Discusses advantages, history and manufacture of handsplit cedar shakes; gives recommended methods and materials for applying them to roofs and walls; shows such novelty effects as graduated exposures and staggered courses; and outlines details of construction and care. 28 pp. Red Cedar Shingle Bureau, 55 White Bldg., Seattle 1, Wash.

Make Your Home Distinctive With Decorative Glass

Illustrates attractive, functional residential installations of decorative glass in a wide variety of patterns and surface finishes. 20 pp. Mississippi Glass Co., 88 Angelica St., St. Louis 7, Mo.

Building? Buying? Remodeling?

. . . Your Guide to Modern Housepower discusses the characteristics and advantages of the new Safetybreaker circuit protective device for residential electrical systems. 16 pp. Cutler-Hammer, Milwaukee 1, Wis.

Light Bulbs and Fluorescent Tubes

... A Reference Guide for the Home contains comprehensive information on practically all types of light bulbs—incandescent, fluorescent, and such special-purpose bulbs as reflector and projector lamps, insect-repellent lamps, colored lamps and even sun lamps. 15 pp. Lamp Div., Westinghouse Electric Corp., Box 388, Bloomfield, N.J.

Kitchen Planning

Contains full color illustrations of "idea" kitchens plus typical floor plans, brief hints on storage, wiring and plumbing. 24 pp., 50¢. Thermador Electrical Mfg. Co., 5119 District Blvd., Los Angeles 22, Calif.

For Modern Interiors . . . Choose Modern Materials (A.I.A. 23-L) Features descriptions and full-color in

(A.I.A. 23-L) Features descriptions and full-color installation photographs of the *Panelok* "working wall" system, simulated wood panels, peg-board, and other types of hardboard panels for interior use. 8 pp. A similar eight-page catalog covers Masonite's exterior products, including a wide range of vertical and horizontal siding materials. Service Bureau, Masonite Corp., Suite 2037, 111 W. Washington St., Chicago 2, Ill.

The Perfect Material for Modern, Carefree Patios

Structoglas Case History 6002 shows a variety of actual installations in which translucent Structoglas fiberglass-reinforced plastic panels have been used to roof home patios. 4 pp. Structoglas Inc., 4387 West 35th St., Cleveland 9, Ohio

Ideas from Architects' own Redwood Homes

Sixteen-page booklet describes and illustrates interior and exterior uses of redwood products, including the new "saw-textured" finish for paneling and siding. California Redwood Assn., 576 Sacramento St., San Francisco 11, Calif.

Alsynite Fiberglass Panels

Features specification charts, color samples, installation details, and other information on the *Alsynite* line of translucent reinforced fiberglass building panels. Brochure GC-260, 8 pp. *Alsynite Company of America*, 4654 De Soto St., San Diego 9, Calif.

A Floor Is Moonlight . . .

(A.I.A. 23-G) Offers full-color illustrations of each pattern in the *Amtico* line of vinyl and rubber floorings plus material data, suggested specifications, and installation and maintenance data. 8 pp. *American Biltrite Rubber Co.*, P. O. Box 1071, Boston 3, Mass.

Color Planning With Ceramic Tile

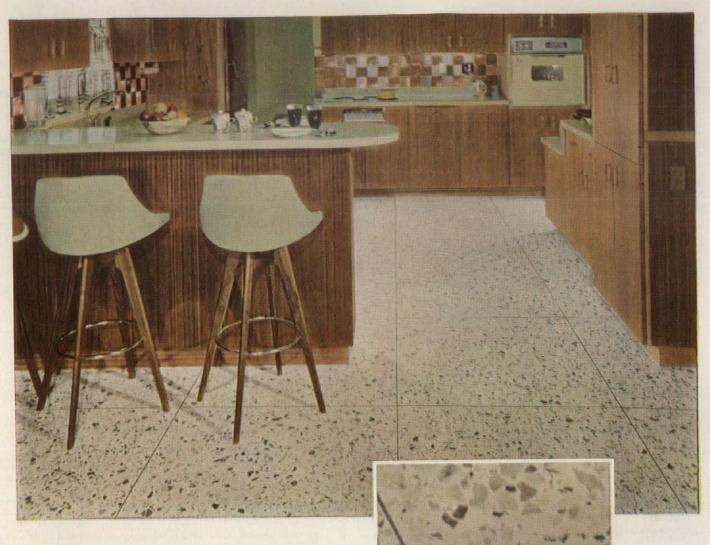
Presents color illustrations of a wide variety of ceramic tile installations, with descriptions of the tile types, sizes and colors used in each. 16 pp. American Olean Tile Co., Lansdale, Pa.

A World of Warmth... Arvin Electric Automatic Heat Describes full line of radiant, fan-forced, baseboard and cable electric heating systems, with product photos, specifications, and installation data. Arvin Industries, Inc., Columbus, Ind.

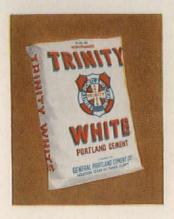
Bruce Hardwood Floors for a Lifetime of Beauty

Illustrates and describes Bruce line of prefinished hardwood floors, including all-oak laminated block flooring for use directly over concrete slabs or plywood subfloors. 12 pp. E. L. Bruce Co., Memphis 1, Tenn.

more literature on page 196



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Reference Reading

Vina-Lux Floor Styling Handbook

Gives color charts on five types of Vina-Lux vinyl asbestos tile, and shows over 40 possible floor patterns. 16 pp. Azrock Floor Products, Box 531, San Antonio 6, Tex.

Weather-King Door Control

Discusses operation, features and advantages of the new Weather-King remote control for operating garage doors and lights from the automobile. 4 pp. Barber-Colman Co., Dept. 1012, Rockford, Ill.

Home Insulation Manual

(A.I.A. 37-C) Covers design and application standards for insulation, ventilation, condensation control, and sun heat control plus product selection information and other essential design data for insulating air conditioned and electrically and conventionally heated homes. 24 pp. Dept. 1-BL-1230, Owens-Corning Fiberglas Corp., Toledo 1, Ohio

The Story of Floors

Describes the various types of resilient floors available today, their characteristics, and where they are used. Full-color illustrations are included. 18 pp. Armstrong Cork Co., Lancaster, Pa.

Pool Owner's Handbook

Offers a practical guide to pool care facts on filtration, chlorination, pH and algae control, water requirements, filter operation, and the care and cleaning of pool and filter equipment. 16 pp., 25¢. Lomart Industries, Inc., 199 Bleecker St., Brooklyn 37, N. Y.

Practical Answers to Common Questions

. . . About Central Air Conditioning discusses the advantages of central air conditioning, the factors that determine the size system needed, approximate installation and operating costs, the major types of central systems and how they are installed, and necessary preliminary planning data. A glossary of air conditioning terms is also included. 24 pp. Minneapolis-Honeywell Regulator Co., 2747 Fourth Ave. South, Minneapolis 8, Minn.

Magnificent Marble in Thin Tiles

Shows in full color the various types of marble available in Markwa ½-in. thick marble tiles, and settings in which they are used. 12 pp. $Vermont\ Marble\ Co.$, Proctor, Vt.

Russwin Doorware

Describes, and illustrates in full-color, the Russwin line of door knobs and ornamental escutcheons. 12 pp. Russell & Erwin Div., The American Hardware Corp., New Britain, Conn.

Figure on Fasco

(A.I.A. 30-D-1) Catalogs, with dimension and installation drawings, specifications, and recommended accessories, the Fasco line of power range hoods, bath and utility ventilators, and kitchen ventilators. 16 pp. Fasco Industries, Inc., Rochester 2, N. Y.

more literature on page 200



Archt: Mithun, Ridenour, & Cochran Bellevue, Washington Cabot's Stains

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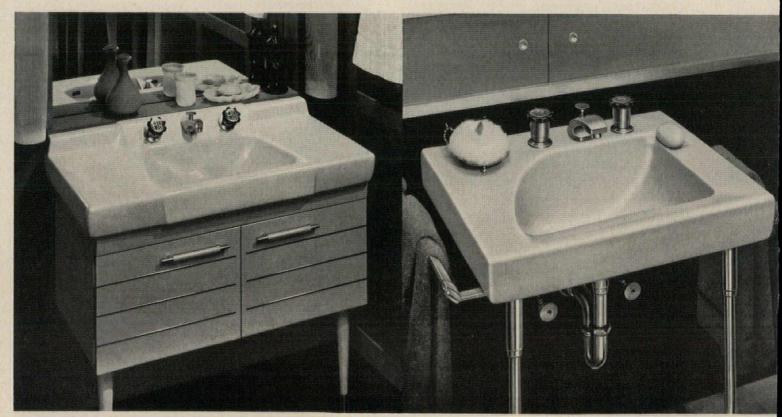
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HOMES

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Reference Reading

Ten Most Frequently Asked Questions

. . . About Fine Cabinet Woods answers questions on the advantages of hardwoods, their cost, the common cabinet finishes, the characteristics of veneered and solid furniture, and the care of fine hardwoods. 24 pp. Fine Hardwoods Assn., 666 Lake Shore Dr., Chicago 11, Ill.

The Wood Kitchen Handbook

Discusses the advantages of wood kitchen cabinets, describes available standard and special purpose cabinets; and gives tips on kitchen planning and styling, with sample floor plans. 32 pp. National Institute of Wood Kitchen Cabinets, 75 East Wacker Dr., Chicago 1, Ill.

The New Way to Insulate Homes

. . . to Get the Full Benefits of Electric Heating gives the advantages of a correctly insulated, electrically heated home, along with a description of six commonly used types of electric heating methods, and the factors to be considered in selecting the right one for each home. Insulation specifications and installation details are also included. 6 pp. Baldwin-Ehret-Hill, Inc., 500 Breunig Ave., Trenton, N. J.

Your Guide to Quality Plumbing Fixtures

Features ideas for bathroom planning, with floor plans and full color photos of sample bathroom schemes, plus information on plumbing fixture models, designs and colors. 20 pp. Kohler Co., Kohler, Wis.

All-Nailed King-Post Trussed Rafters

Illustrates over 40 new ideas for cost-saving construction using all-nailed trussed rafters. 24 pp. Independent Nail & Packing Co., Bridgewater, Mass.

Homeowner's Guide to Humidification

Discusses the causes and effects of relative humidity that is too high or too low, recommends the use of a humidifier to maintain humidity at optimum comfort level; and defines the amount of humidity permissible for various home constructions. 16 pp. Research Div., Armstrong Machine Works, Three Rivers, Mich.

Masonite Construction Manual

(A.I.A. 19-D-2, 23-L) Describes the various Masonite products for interior and exterior use; and gives complete application instructions and details, plus guide specifications. 28 pp. Service Bureau, Masonite Corp., 111 West Washington St., Chicago 2, Ill.

My Maid Built-In Home Cleaner

Gives complete details on the installation and operation of the new My Maid central vacuum system for wet and dry cleaning. 4 pp. My Maid Corp., Dept. A, Fort Atkinson. Wis.

What Goes With What

Shows (by accessory groupings) various furnishing styles, and appropriate Lees carpet textures and colors for each. 16 pp. James Lees and Sons Co., Bridgeport, Pa. more literature on page 204



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Reference Reading

How to Judge a House

Home buyer's guide presents fundamental facts about house design, including rules for judging overall floor plan and individual room layout, with emphasis on kitchen and storage areas. Separate sections cover outside design and appearance; lot and site selection; orientation; major causes of upkeep expenses and how to guard against them; and pointers on good construction practice. 36 pp. \$1. All About Houses, Inc., 25 Ritie St., Piermont, N. Y.

Plank-and-Beam Framing for Residential Buildings (A.I.A. 19-B) Discusses the advantages and limitations of plank-and-beam framing; and gives construction details, structural requirements, and design data for planks and beams. More than 20 detail drawings and extensive design tables are included. Wood Construction Data No. 4, 32 pp. Also available: WCD No. 1, "Manual for House Framing"; WCD No. 2, "Random Length Wood Decking"; and WCD No. 3, "Wood Formwork for Concrete Structures." Technical Services Div., National Lumber Manufacturers Assn., 1319 Eighteenth St., N.W., Washington 6, D. C.

Distinctive Beauty

Outlines uses of glued laminated wood beams in residential construction. 4 pp. Rilco Laminated Products, Inc., W-891 First National Bank Bldg., St. Paul 1, Minn.

Perimaheat Baseboard Convectors by Young

(A.I.A. 30-C-4) Describes *Perimaheat* baseboard hydronic heating systems, and gives capacity data, selection procedure, installation instructions, roughing-in dimensions, and architectural specifications. Catalog 4360, 12 pp. *Young Radiator Co., Racine, Wis.*

Marlite Plastic-Finished Wall and Ceiling Paneling Describes and illustrates Marlite line of plastic-surfaced hardboard paneling, including 4-ft panels, woodgrained Random Plank, solid-colored plank and block, and Peg-Board. 8 pp. Marsh Wall Products, Inc., Dover, Ohio

What You Should Know About Lumber

Gives basic information on lumber classifications (hardwood or softwood, manufacture, use, size, and grade), plus information on the physical characteristics and common uses of the principal species of hardwoods and softwoods. 24 pp. National Lumber Manufacturers Assn., 1319 Eighteenth St., N. W., Washington 6, D. C.

Homasote Precision-Built House Components

Describes uses and advantages of *Precision-Built* factory-made custom house components—floors, walls, ceilings, roofs and gables. 8 pp. *Homasote Co.*, *Trenton 3*, *N. J.*

Quiet Please

Discusses noise problems in the home and how they can be solved through the use of modern sound-conditioning materials and techniques. Topics covered include types of sound-conditioning materials available, their inherent decorative possibilities, and where and how to install them. 16 pp. Armstrong Cork Co., Lancaster, Pa.

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