Nutole Stereo Built-In

It's Stereo + High Fidelity + Intercom + am-fm Radio

Model Home Offer for Builders and Architects
NOW . . A BUILT-IN STEREO SYSTEM FOR YOUR MODEL HOME . . See Next Page

NUTONE BUILT-IN STEREO • INTERCOM • AM-FM RADIO • HIGH FIDELITY MUSIC

A 4-WAY STEREO SYSTEM throughout your entire house . . not just for a single room. It's completely BUILT-IN to standard walls to save space and avoid cabinet clutter.

You can install only two of the units now and the home owner can add remaining units at a later date. Ask your NuTone supplier for complete information.

1. AM-FM Radio Tuner to receive Stereo Radio programs.
2. Dual channel Stereo amplifier with room-to-room Intercom.
3. Fold-in-wall 4-speed Record Changer with automatic shut-off.
4. Wall Cabinet for cartridge tape player . . or for record storage.

DON'T MISS NUTONE'S SPECIAL STEREO OFFER ! See Next Page
LET US PROVE* NuTone's Built-In Stereo can add SALES APPEAL to YOUR HOMES.

YOUR MODEL HOME provides a perfect setting for NuTone's Built-In Stereo System . . . it's the "romance item" to help close sales for you!

OFFER EXPIRES SEPTEMBER 15, 1960
. . . WILL NOT BE REPEATED AGAIN!

MAIL THIS COUPON TODAY!

See Other Side

Model Home Offer

Send me more information about NuTone's Built-In Stereo for my MODEL HOME . . .

Firm __________________________ Title __________________________
My Name ______________________ Address ______________________
City __________________________ Zone ______ State ____________

Write NUTONE, Inc.
Dept. HH-7
Cincinnati 27, Ohio
When they come to buy... nothing has the initial impact of brass. Potential home buyers may not know a soffit from a sofa when it comes to construction... but they do know that solid brass is the hallmark of quality in depth. You’ll sell faster with a generous display of solid brass fixtures and hardware. And the finest brass products are always made from Western Brass—the “tailor-made” material that’s alloyed and rolled to your supplier’s individual needs.
From the wonderful new world of block

Fireplace Fashions

Concrete Masonry lets you create a fireside to match your mood and taste. The bright new faces of block available today can make your fireplace and adjacent walls a spectacular focal point in your home. With block you get the added plus of a building material at home inside, outside all around the house. See your local NCMA member for all that's new in block.
Sculptured Imperial Beauty

Like precious art objects Kwikset Imperial Line locksets were sculptured in clay before being selected to house the expertly crafted solid brass and steel cylindrical mechanism. The result is a harmony of superior styling and unsurpassed construction. This combination assures enduring beauty and security for finer residential and commercial buildings. Available in all popular functions and finishes and two distinctive knob designs – the fashionable Balboa and the handsome Catalina. Send for free, colorful, illustrated brochure.

Kwikset Sales and Service Company:
A subsidiary of The American Hardware Corporation, Anaheim, California
With P-B Components any house is—
...enclosed in one day
...completed in one to three weeks
—and the builder saves 15% of his building costs!

HERE’S HOW:
The components are BIG and custom-built to fit any plan

- Your wall components are 8’ high and usually 12’ to 14’ long—
- Your floor components are 6’ wide and up to 20’ long—
- Your ceiling components are 8’ wide and span the width of the room—
- Your roof components are 8’ wide and rafter length—
- Your gable components are generally the width of the building—

HERE’S WHY:
With large components you get savings not obtainable in any other way and—these savings are made possible because of the “Big Sheets” of Homasote that are tough enough to stand the handling of large sections and, at the same time, are not affected by the weather in case a storm stops the operation before the house is closed in.

It takes only 11 seconds longer, with four men, to put an 8’ x 14’ P-B Component into place than to put an 8’ x 4’ “baby” panel into place; but you have erected, in less than a minute, 3½ times as many square feet!

Once erected, the components are ready for the exterior finish and the interior decoration.

- The floor panels are covered with factory-finished 3/16” oak flooring which you cover immediately with Sisalkraft-type paper, leaving it on until the owner is ready to move in. When you finally take it up, he has bright, shiny new floors and you have eliminated a lot of extra cleaning expense.
- The ceiling panels are ready for decoration as soon as they are in place.
- The roof components have 9/16” Homasote sheathing already applied, with joints flashed to prevent leaks before the roofing is applied. This, too, saves a lot of field labor.
- And you can erect the average house in one day!

Your selling advantages:
Homasote’s 24 years’ experience with P-B Components here and abroad gives you a better house to sell than others know how to build.

- You get your customer in fast—3 to 4 weeks, or less.
- Your house is 7 times quieter than a plaster or gypsum board house.
- Your house is free from dampness and drafts.
- Your house heats economically in winter and is cooler in summer.
- You can sell it for less than an equivalent conventionally-built or prefabricated house.
- You can sell it at a greater profit, too!

Please write for our 8-page brochure containing complete details. Kindly mention Department G-6.

HOMASOTE COMPANY
TRENTON 3, NEW JERSEY
Homasote of Canada, Ltd. • 226 Merton Street • Toronto 7, Ontario

To save money in conventional building—send us your blueprints for a free Cost Reduction Analysis. They will be returned with an engineering report on the savings you can make with Homasote Materials. Homasote Board-and-Batten and Grooved Vertical Siding construction are lower in cost than anything else you can use currently for exterior walls.
Look at the extra value you get for a few extra minutes installation time with a Flintkote-Van-Packer Chimney

Rugged, durable

*Flintkote-Van-Packer Chimneys
do take a few more minutes to install

than other chimneys

with lightweight metal flues,

but look what you get in return—

**DURABILITY**—The fire-clay tile liner, heart of each Van-Packer Chimney section, will not corrode. The sections are built with a fire-clay tile liner ½” thick, a 3-inch vermiculite and cement insulating wall and an asbestos-cement jacket. Only the Van-Packer tile-lined chimney offers such rugged and durable construction.

**ATTRACTIVENESS**—Sturdy asbestos-cement housing panels are embossed with a brick pattern. Much more rigid than metal housings, they won’t rust, stain or streak the roof. Colored housings have Butyl finish to preserve their original beauty.

**SAFETY**—Van-Packer Chimneys are UL listed for all fuels and all home heating plants, including incinerators. The fire-clay tile-lined flue withstands 2100°F. Flue sections have high insulating value through the use of vermiculite in the 3-inch section wall. Approved by major building codes.

**GREATER BUYER ACCEPTANCE**—Van-Packer chimney housings come in red, buff, gray or white brick colors to blend with the home. Flue sections provide more draft than lightweight chimneys, resulting in more efficient furnace operation and cutting nuisance furnace service call-backs. Heavy flue construction won’t transmit furnace or fan noises.

**EASY ASSEMBLY**—One man can put up a Van-Packer in three hours or less, without special tools or skills. Two-foot flue sections are cemented atop one another with acid-proof joint cement that is provided. Sections are then secured with snap-lock draw-bands. Flue can be ceiling- or floor-suspended, permitting more freedom in floor-plan design and central location of furnace for balanced heat runs. No clearance is required at floor, ceiling or roof—chimney installs between joists on 16” centers without joist cutting. Can be installed even after house is completed.

**COMPLETELY PackAGED, IMMEDIATE DELIVERY**—Van-Packer Chimneys come in easy-to-handle, labeled cartons, with everything provided including flashing and joint cement. No inventory is required—you can get immediate delivery to your job site from your local jobber. Only two simple measurements needed to order.

See "Chimneys—Prefabricated" in the Yellow Pages.

Or write for Bulletin RS-19
The Pacific Lumber Company is proud to announce a significant advance in lumber manufacture:

**Palcote Mill-Primed Redwood**

Our famous Architectural Quality Redwood, now available factory-finished with high-grade exterior primer in neutral color, plus water-repellent back primer.
Wrapped in heavy plasticized paper for maximum protection, PALCOTE siding and pattern redwood means extra profits for you, offers your customers the ultimate in building materials; saves construction time and up to 40% in finishing costs. Get the full story on money-making, money-saving PALCOTE REDWOOD today...write, wire or phone:

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THE PACIFIC LUMBER COMPANY
Mills at Scotia, Eureka, and Elk, California
100 Bush St., San Francisco 4, Calif.
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2185 Huntington Dr., San Marino 9, Calif.

PALCO—over 90 years of leadership built by people, plant, product
Fasco's long experience in dealing with scientific movement of air proved invaluable in developing the new electric home heating line . . . enabled Fasco to offer an efficient, pre-determined "balance" between proper heating and ventilation.

Homes equipped with the "balanced" Fasco system are free from "over" or "under" ventilating or heating . . . offer highly efficient and truly scientific control of air freshness and warmth.

Add to Fasco's "balance" the ease of installation and the progressive styling, and you come up with the conclusion that here is heating and ventilating that makes real sense--to builders, contractors, and home-buyers alike! So look into the stability and performance of Fasco's "one-source" system for your installations.

Fasco... first with the finest Always!
ATTENTION! CONTRACTORS - Fasco's "researched" ventilating and heating units are trouble-free, easy to install.

BUILDERS - Fasco heat and ventilation units offer futuristic features requested by thousands of convenience-minded builders.

DISTRIBUTORS - Fasco is a progressively-styled, highly-saleable line for modern electric home heating and ventilation.

ATTENTION! CONTRACTORS - Fasco's "researched" ventilating and heating units are trouble-free, easy to install.

BUILDERS - Fasco heat and ventilation units offer futuristic features requested by thousands of convenience-minded builders.

DISTRIBUTORS - Fasco is a progressively-styled, highly-saleable line for modern electric home heating and ventilation.

FASCO INDUSTRIES, INC.
North Union at Augusta • Rochester 2, New York

Please send me additional information on FASCO ventilating and electric heat products.

Name
Address
City ______ Zone ______ State ______

HH-7-40
NEW LOW COST WAY TO

Span a hundred feet or more with lightweight beams in almost any shape your imagination suggests. Or enclose an entire building in just a few hours with insulated panels that serve as subfloor, walls and roof. These are only a few of the construction feats possible with Hines Plywood Components.

This modern way to build permits both esthetic effects and construction economies that can’t be achieved with conventional methods. Hines field engineers will be glad to give you free assistance in estimating and engineering for use of Hines Plywood Components.

Hines manufactures these components under conditions rigidly supervised by inspectors of the Plywood Fabricator Service, Inc., sponsored by the Douglas Fir Plywood Association. (In addition, Hines maintains its own fully equipped quality control laboratory.) And Hines provides reliable delivery.

BOX BEAMS—Structural members made by combining laminated lumber flanges and plywood provide high strength-to-weight ratio. Span up 120’. Can be manufactured in a variety of decorative shapes to precise specifications. Dimensionally stable. Basic efficiency of concept gives low in-place costs.

STRESSED SKIN PANELS—Most versatile plywood component is made of plywood laminated to seasoned lumber framing with hollow core that can be filled with insulation during fabrication. Panels are rigid and suitable for use as subfloors, roof decks or walls.

CURVED PANELS—The beauty of the arch combined with up-to-date efficiency. Hines Curved Panels are manufactured to exact radius, easily span up to 16’. Available filled with insulation. Strong, but light-weight and easy to assemble.
PLYWOOD COMPONENTS

In building at Rochelle, Illinois, Hines Box Beams span 35'. Stressed Skin Panels form roof deck. Architect: Gene C. Jackson.

GET DESIGN FREEDOM

GANG-NAIL® GUSSETS MAKE HINES TRUSSES EXTRA RIGID

Hines Trusses are built with patented Gang-Nail metal gussets and superior grades of kiln-dried Douglas Fir and Western Hemlock for the highest quality. Use Hines Trusses to speed building, save labor costs, reduce lumber waste, and eliminate interior bearing walls.

Send today for free technical data

Just call or write the man from HINES


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200 South Michigan Avenue, Chicago 4, Illinois

Please send me full technical data on Hines Plywood Components and Gang-Nail Trusses.

Name
Address
City Zone State
THE LOWEST COST ROOM YOU
Comfortable outdoor living room combines
BUILD YOUR HOUSES
BIGGER, BETTER LOOKING,
AT LITTLE EXTRA COST,
WITH OUTDOOR
LIVING ROOMS
LIKE THESE...

This is the room that can sell the house! This year make the most of the growing demand for indoor-outdoor living areas. Versatile, easy-to-erect Fiberglass materials let you add on this "extra" room at low cubic-foot cost. Fiberglas offers wide-span 84" screening, which allows wider spacing of uprights, provides an appealing "open look." What's more, Fiberglas Screening handles easily, resists weather, won't glare, dent, rust or stretch.

Call the Fiberglas Patio contractor nearest you

This is a COMFORT CONDITIONED Home
America's biggest home-selling program promotes your sales of patio-equipped homes.

THE LOWEST COST ROOM YOU
Comfortable outdoor living room combines
BUILD YOUR HOUSES
BIGGER, BETTER LOOKING,
AT LITTLE EXTRA COST,
WITH OUTDOOR
LIVING ROOMS
LIKE THESE...

This is the room that can sell the house! This year make the most of the growing demand for indoor-outdoor living areas. Versatile, easy-to-erect Fiberglass materials let you add on this "extra" room at low cubic-foot cost. Fiberglas offers wide-span 84" screening, which allows wider spacing of uprights, provides an appealing "open look." What's more, Fiberglas Screening handles easily, resists weather, won't glare, dent, rust or stretch.

Call the Fiberglas Patio contractor nearest you
Fiberglas Translucent Paneling is resistant to weather and damage, comes in a new range of decorator colors, and is easy to handle because it saws and nails like wood. For all sizes, types and styles of homes, choose from prefabricated or custom-designed aluminum or wood-framed units. For versatile new patio plans by architect Herman York, write to Owens-Corning Fiberglas Corporation, Dept. 67-G, National Bank Building, Toledo 1, Ohio.
Each board in this siding of saw-textured redwood was carefully selected to take full advantage of the decorative color variations. The rustic setting of this church was one of many reasons for the choice of redwood as the prime building material.
The warmth of redwood is felt throughout this handsome church

A major consideration of the church architect is to design a building that will be completely functional as well as one that conveys an atmosphere of warmth and simple dignity. Many architects of contemporary churches therefore specify redwood, inside and outside, because of its rich, natural beauty and exceptional durability.

CALIFORNIA REDWOOD ASSOCIATION • 576 SACRAMENTO STREET • SAN FRANCISCO • CERTIFIED KILN DRIED REDWOOD

All the wonderful warmth of wood is best expressed in redwood.

Left to right:
The saw-textured redwood paneling behind the altar was left unfinished to reveal the color variations and decorative grain patterns.

The unfinished redwood paneling used inside the church is in harmony with other materials... naturally relates the interior to the outdoors.

Note how the exterior redwood blends naturally and beautifully with nearby trees and planting.

This decorative redwood grille separates the organist from the choir without completely blocking his view.
"OW"

PUSHBUTTON
SPOTSTAPLER

• SAVES YOU $20
PER HOUSE
• LETS YOU SHINGLE
AT 10° BELOW ZERO
• DRIVES 1" WIDE STAPLES
THAT OUTHOLD NAILS

With a Spotstapler doing the work and your men just touching the button there is no fatigue. They get more done with less effort. They lose no days from cold weather either. A leading Chicago builder says: "With no nails to handle my men wear mittens and shingle at 10° below zero using a Spotstapler."

Wind tests by independent laboratories and shingle manufacturers prove your Spotstapled roof will hold better than a nailed shingle roof. Roofs in Pittsburgh applied with divergent-chisel Spotstaples held tight while nailed shingles were blown off homes next door. Test this new "OW" pushbutton roofer on one of your homes without cost. Over 100 field representatives stand ready to serve you.

Write for descriptive folder and a demonstration

Spotstaples meet F.H.A. Standards for subfloors • wall sheathing • roof sheathing • gypsum lath • floor underlayment • asphalt shingles
REMIXABILITY

MAKES THE BIG DIFFERENCE
IN WINDOWS

Watch your prospects as they inspect your homes. HE examines floor joists and scans the ceilings knowingly for tell-tale cracks. SHE gets that "far-away" expression as she squints her eyes to picture how her furniture would look in this living room. She's concerned, too with saving steps and time. He wants a home that's built to last. She wants a home that's planned for living. Satisfy them both by installing beautiful, trouble-free R-O-W Removable Wood Windows.

R-O-W and LIFT-LOX are the registered trademarks of the R-O-W Sales Company

R-O-W SALES CO. • 1365 ACADEMY AVE. Dept. HH-760 • FERNDALE 20, MICHIGAN

JULY 1960
It was a lovely little home, just right for a young couple. And a very young, newly-married couple was going through it with Mr. Johnson, the builder. After they had finished the inside tour, Mr. Johnson took them outside to see the landscaping, the patio and the driveway.

"Look, Jim," said the bride, "isn't this a nice patio? We could do a lot of entertaining outside next summer if we bought this place. Do you like it?"

"Yes, Ginny, I like a patio a lot. In fact, that was one of the things I especially liked about the house we saw in Pine Trees yesterday. Remember, the house that was just a little bit more money than we had planned to spend."

"I remember and I was so disappointed," she sighed. "But," brightening, "I like this place just as well and it's not so expensive."

The builder interrupted with, "Well, I try to give my customers as much home for their money as possible. I don't waste time, work and money on a lot of unimportant extras. I find that I can undersell many other builders."

"Glad to hear it," says Jim. "By the way, this concrete patio is pretty big. What about the danger of cracking from frost heave. Is it reinforced with welded wire fabric to guard against breaking?"

"Well," said Mr. Johnson, "that's a pretty heavy, well-laid piece of concrete. I don't think you need to worry about it breaking."

"But is it reinforced," persisted Jim.

"No it isn't," replied the builder. "I found that I could save a few dollars by not using welded wire fabric for concrete reinforcement. This is one of the ways I told you I saved you money—by eliminating unnecessary extras."

"I don't consider Welded Wire Fabric Reinforcement an unnecessary extra. It'll cost me a lot to replace the concrete later if it breaks. Maybe that builder over in Pine Trees had a good reason for asking a little more for his home. I think we'll go look at that house again. Its concrete was..."
was almost sold

reinforced with USS American Welded Wire Fabric. Thanks a lot for showing us your home, Mr. Johnson.

Like this young couple, more and more homeowners are asking if it reinforced and are deciding that maybe the little extra welded wire fabric cost is well worth it. The use of USS American Welded Wire Fabric will add 30% to the strength of concrete, and it gives you a strong selling point. Use USS American Welded Wire Fabric in the homes you build. Tell your prospects that it insures the protection and appearance of concrete for only about a penny a day on the mortgage life; and that it will add years of service to drives, walks, patios and basement slabs. Tell them that even after the mortgage is paid, the concrete areas will be in good condition.

USS American Welded Wire Fabric is made of cold drawn, extra strong steel wire, and it's prefabricated for quick, easy installation. American Welded Wire Fabric is available in a wide variety of styles and sizes. For more information, see your building supply dealer, or write American Steel & Wire, Dept.0288, 614 Superior Avenue, N. W., Cleveland 13, Ohio.

USS and American are registered trademarks

buyers will ask "is it reinforced"

American Steel & Wire
Division of
United States Steel

Scheduling: Georgia, Southern Steel, San Francisco, Pacific Coast Distributors
Tennessee Coal & Iron Division, Fairfield, Ala., Southern Distributors
United States Steel Export Company, Distributors Aboard

JULY 1960
"EVERYTHING HINGES ON HAGER!"

C. Hager & Sons Hinge Mfg. Co. • St. Louis 4, Mo.
In Canada, Hager Hinge Canada Limited • Kitchener, Ontario
Founded 1849 — Every Hager Hinge Swings on 100 Years of Experience
Tiny neon bulb behind red jewel in new G-E Pilot Push-Button Switch costs less than 1¢ a year to operate — lasts up to 20 years.

“Look! The lighted switch tells you when the basement light is on…”

Home buyers take a bright view of new G-E Pilot Push-Button Switches. And it costs you little to include them.

Your prospects are quick to appreciate the savings in electricity and effort that these new General Electric switches offer in your houses.

They have bright red pilot lights in their push buttons, that show instantly when lights on porches and in the yard, basement, garage and attic — lights that can’t be easily seen from the switch location — are ON.

Ask your electrical contractor to install new G-E Pilot Push-Button Switches for all “hidden” lights. These two-in-one devices cost less to buy and install than separate switches and pilots and are neater, too.

General Electric Company, Wiring Device Department, Providence 7, Rhode Island.

General Electric is your headquarters for new, low-cost wiring device ideas

New G-E 4-Plug Outlets take twice as many plugs, in same space.

New G-E Decorator Wall Plates beautify switches and outlets.

G-E Silent Mercury Switches have soft, luxurious action.

New G-E Lighted House Number and Doorbell Button

G-E Remote-Control Master Selector Switch controls 12 circuits.
What size of
READY-TO-APPLY soffits do you need?

Save hours of on-site cutting and fitting

Primed, Vented, Screened • Immediate delivery of Standard Sizes from Stock • 12" -16" -24" -32"
36"-48" widths • 8' and 12' lengths

Savings on hundreds of projects are running 25%. Upson soffits won't crack, split or check. Delivered to your job cut to size, with or without screened vents. Waterproofed, white prime coat finish. Clean, straight edges. Aluminum "H" moulding supplied for strong attractive joint treatment. Excellent painting qualities.

Our technical staff will gladly consult with you on your requirements. Phone, wire or write. The Upson Company, Upson Point, Lockport, New York.

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FREE

Please send me the FREE illustrated brochure about the time-saving, money-saving Upson SOFFIT SYSTEM and related Upson products.

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Primed Siding • Dubl-Bilt • Trim-Bilt • Soffits • All Weather • Strong-Bilt
Crane curbs price without cutting quality. Even low-cost Crane fixtures have the luxury look. The Westgate Lavatory is vitreous china, has beveled panel shelf back, front overflow, semi-oval basin... sturdy, gleaming metal legs, shown with towel bars. The Fairfax Recessed Bath is brand new. Just 5 feet long, with a safe and convenient low side and outer edge wide enough to sit on. Water Closet is the Drexel, a close-coupled combination in vitreous china, with siphon-jet, whirlpool action.
Quality in construction is hard to demonstrate to the average consumer.

You have to illustrate quality in terms he understands. And buyers think of brand. The plumbing brand they think best is Crane. Surveys prove it.

Not only do they think Crane plumbing represents highest quality, they think it costs more and is worth it. A quick check of the prices will show you Crane quality costs no more than other brands. And the others lack Crane's quality standing.

So without increasing your costs, you can make Crane your proof of quality. You can use the name ... the styling ... the mechanical features as important parts of your sales story. And you can make Crane your proof of quality in every home you build—from low price to high. Crane makes fixtures to fit your budget.

Get your Crane representative to talk cost. He'll prove you can add proof of quality at no extra cost. Get in touch with him now so your next homes will be easier to sell.

Crane's finest for your finest homes. Symbolize all that you put into your outstanding homes with luxurious Crane plumbing, like the Criterion Tiled-in Lavatory. Rectangular basin, vitreous china, with Dial-ese trim in brush-finished chrome plate. Clear Lucite handles. Bath is Crane Criterion Corner-type, with wide seat rim, Single-ese mixing valve with single lever control, Accesso Waste and flat bottom. Available in 60 inch length for right or left hand installation. Closet is Crane Walsan, a new and compact off-the-floor model to help conserve space.

proof of a quality home
where beauty must take care of itself
MELAMINE LAMINATED PLASTIC surfaces have gone vertical. Wall paneling, wainscoting, partitions, shower stalls, push and kick plates. In stores, hospitals, hotels, churches, banks. They require minimum care, never need painting or finishing. Clean with a damp cloth. Resist scratching, denting, chipping, cracking, burns and stains. There's a wide choice in colors and patterns, thicknesses and widths. Installation is easy, requires no special techniques. For A.I.A. files on melamine laminates, and other building products and materials made possible by Monsanto Plastics, please use coupon below. Monsanto Chemical Company, Plastics Division, Springfield 2, Mass.

MONSANTO ACTIVATOR IN PLASTICS

Monsanto Chemical Company
Plastics Division, Room 751, Springfield 2, Mass.

Please send me literature on MELAMINE LAMINATED plastic surface materials ( ) LAMINATED ARCHITECTURAL GLASS ( ) MOLED DRAWERS for built-ins ( )

Name:
Company:
Address:
City: State:
Using a wrench on a lock is exaggeration, of course. But tests show California Locks can stand the heaviest use by the strongest hand.

All possible troubles are tested out of California Locks. You save a big part of their cost in freedom from callbacks.

These interior locks are low in price... but built to stand up to day-to-day use in community development homes. Available in Tulip and Plymouth designs, in bright brass, dull bronze, brushed aluminum.

All California locks have zinc-dichromated steel parts, compression springs, and non-ferrous trim. They can be installed in a 2" or 2½" lock hole, are self-aligning, and are adjustable to varying door thicknesses with equal knob projection.

California Locks are ideal for low-cost homes when used in combination with the famous Schlage wafer key locks for exterior doors.

CALIFORNIA LOCKS are manufactured by the Schlage Lock Company. Competitively priced and built to last... they carry the same guarantee as famous Schlage cylindrical locks. Schlage Lock Company • San Francisco • Chicago • Los Angeles • New York
Alden Wagner is shown in the kitchen of one of the modern Mahaffey-Wagner homes. Note the convenient wall phone.

"We've always telephone-planned our homes. We consider it a fine investment"

SAYS ALDEN WAGNER, MAHAFFEY-WAGNER CONSTRUCTION COMPANY, DALLAS, TEXAS

John Mahaffey and Alden Wagner have built 940 development homes in the Dallas area since they formed the Mahaffey-Wagner Construction Company in 1953. The homes range in price from $9900 to $18,000 and reflect contemporary, modern and early-American stylings. One thing they have in common is concealed telephone wiring.

"People no longer think in terms of a one-telephone home," says John Mahaffey. "They want telephones where they need them—and they want them installed without exposing wires or drilling holes in the walls. We give them as many as five built-in outlets, each in a key area of the home."

Says partner Alden Wagner: "We've always telephone-planned our homes. We consider it a fine investment—a feature that tells people our homes are quality-built."

Your local Telephone Business Office will gladly help you telephone plan your homes. For details on home telephone installations, see Sweet's Light Construction File, 8i/Bc. For commercial installations, Sweet's Architectural File, 32i/Bc.

BELL TELEPHONE SYSTEM
SUN 'N SAND Unique, different... appealing! Shades are an arresting blend of imported Italian sand-tone reed, handwoven with glistening brass accents. Satin white, vacuum formed styrene diffuser. Sun 'N Sand — original... beautiful... modern!

V-5675 For hallways or tasteful accent lighting. Length 8½", diameter 6½". One 100-W.

V-1676 Designed for dramatic living room lighting. Three-light cluster. 48" white drop cords. Diameter 26½". Three 100-W.

V-1675 Single unit 48" drop cord. Diameter 10½". One 100-W.

V-1677 Wide decorative and functional uses in living, dining, bedroom areas. 60" drop cord. Diameter 12". One 100-W.

V-1673 Pulldown for living or dining rooms. Adjusts 20" to 56". Diameter 22". Three 60-W.

V-1672 Same but 17" diameter. Two 60-W.
new custom creations

FLORENTINE SERIES Exquisitely detailed scrolls cast in aluminum. Antique white color delicately toned with gold fleck. White opal globes. Matching white chain. Here is new richness for all homes — contemporary, transitional, traditional!

V-1713 Perfect in foyers, living rooms, dining areas. Spread 31" (6' chains and yolk). Three 100-W.
V-1712 Majestic! Diameter 12". Matching white 6' drop chain.
V-1710 diameter 10". One 150-W.

PLANTER SERIES Bright ideas! Lighting fixtures that double as planters. Perfect accents for fireplace, entranceways, in dinettes or family rooms . . . wherever you want a touch of eye-catching beauty!

V-1690 Polished Brass. Diameter 15¾". Length 36". Lights from top. Three 60-W.
V-1695 Planter for wall mounting. Diameter 9½" (top and bottom). Length 33". Lights from top. One 60-W.

These are just a few of the fresh, new custom creations available... fixtures so delightfully different and irresistibly styled... “to show is to sell.”

Free colored brochure describing the full line available. See your nearest Virden Lighting distributor or write direct using the coupon below.

VIRDEN LIGHTING DEPT. HW-7
DIVISION OF JOHN C. VIRDEN COMPANY
5209 EUCLID AVENUE
CLEVELAND 3, OHIO

Name______________
Address______________________________
City__________________ Zone____ State____

SUBSIDIARIES: LIGHTING DYNAMICS, INC., LOS ANGELES, CALIF. AND DALLAS, TEXAS; JOHN C. VIRDEN, LTD., TORONTO, ONTARIO.
Standardize on Surface Mounted Hardware for all Interior Bi-Folding Doors
Effect Big Savings in Installation and Service Costs!

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Rules for Determining Proper Size Hinge

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- **COLORS:** (as illustrated above, top to bottom) Beige, Brown, Sumac Red, Black, Gray, Green, White and Russet. (White and Beige not available in 6" height or 96-foot rolls.)
Roundup:

**Builders call a summit of their own**

NAHB last month invited some eight top executives of leading materials manufacturers to an off-the-record summit conference at the swank Lake Tahoe summer home of Henry J. Kaiser. The four-page agenda drawn up for the meeting by NAHB President Martin Bartling began with a full page of questions about how to make mortgages more marketable so as to tap more money sources. Other topics: land, building codes, construction methods. Among the NAHB delegation: Bartling, First Vice President E. J. "Jim" Burke, Past Presidents Nels Severin, Rodney Lockwood, Earl Smith, Alan Brockbank, Thomas Coogan, plus Builder E. W. "Ted" Pratt, and Prefabber Hamilton Crawford.

**When should you line up 1961's mortgage money?**

Pay your money and take your choice: the US Savings & Loan League says "no important or significant" drop in mortgage interest is in sight for the rest of the year. President Wallace O. DuVall insists this is so despite the cut in the Federal Reserve's discount rate from 4% to 31/2%. More experts (see p 51) are predicting a slow slide in interest levels throughout the economy, but most of them couple this with the qualification that the drop may be very slow indeed. "The peak of interest rates is past," says John K. Langum, president of Business Economics Inc of Chicago. But he adds that mortgage yields are unlikely to follow the plunge in yields on 90-day Treasury bills (down from a peak of 4.57% last December to 2.92% last month for new issues). On balance: you can probably chance waiting until September to make next year's firm commitments, but don't be surprised if prices aren't much better than they are right now.

**Battle over big lot zoning grows hotter**

Eventually, say speakers who appeared before the American Society of Planning Officials this year (see p 59), snob zoning will have to give way to population pressures. If true, this seems to foretell a major struggle in state legislatures. The US Supreme Court last month failed to find a "substantial federal question" in New Canaan, Conn's test case four-acre zoning ordinance. It thereby seems to have thrown the question back to the states, where many builders say so many courts have upheld snob zoning that new laws offer the only possible relief.

In the New Canaan case, upgrading of 4,400 acres of semi-rural land from two-acre minimums was attacked by John L. Senior Jr, who said that it cut the potential value of his 436 acres from $650,000 to only $400,000. Retorted the Connecticut Supreme Court: "Maximum enrichment of developers is not a controlling purpose of zoning." Senior thereupon appealed to the US Supreme Court on grounds his property rights under the 14th Amendment were violated. Its refusal to hear the arguments is seen as strengthening the power of zoning boards generally.

**Conditional zoning: flexible but safe?**

The idea of granting variations only on specific development proposals—to make sure developers who promise extra-high standards don't renege—seems to be gaining headway. Maryland counties around Washington, D. C. are beginning to use it to meet pressures of the capital's growth. In Fairfax County, developers must give indentes binding them to their original proposals. Montgomery County has the idea under study because of a recent sour experience: a developer who promised to screen his shopping center from nearby homes with trees later sold the land they were to occupy and the new owner built apartments.

**Why public housing is in trouble—as a friend sees it**

At the housing conference called by California's Gov. Edmund G. Brown in Los Angeles last month, Charles Abrams, former New York State rent control boss, lawyer and peperity advocate of public housing and racial integration, had some peppery thoughts on the nation's programs:

"The failures of federal efforts stand out more dramatically than its accomplishments," he said. The reason: failure to fit the housing programs to new facts, needs, conditions. Public housing, for example, is based on, among others, these fictions: 1) the poor live only in tenements, don't want individual homes; 2) the poor are all renters; 3) solution for low-income families' housing problems is to tear down the slums they live in; 4) all slums are decrepit (many are sound but overcrowded); 5) when their incomes rise, public housing tenants should be turned out (they just go back to the slums); 6) cities can solve planning and housing problems by themselves (they aren't)."

His view differs sharply from that of HHFA Administrator Norman Mason, who told NAHB directors in Washington (see p 45): "This nation never had it so good in housing."
HOUSING POLICY:

Congress readsie bland but costly omnibus bill

Veto threat for big spending measures
blacks out the Christmas trees this year

A little something for everyone, and not much for anyone, seems to be the ticket in housing legislation this year.

Nearing the end of a generally lack-luster session, the Congress has hurriedly shuffled together the record-breaking conglomeration of housing plans before it (some two dozen in the Senate alone), winnowed out the obvious veto candidates, and come up with a much reduced omnibus package.

One obvious reason: Democrats hope to win votes with charges the Administration is neglecting cities' housing needs, but hardly want to risk the blame if popular programs die in a veto. Another: the worries over what tight money might do to housing, which made an Emergency Home Owners' Act seem politically expedient in January, have dwindled away to polite murmurs. Their attitude, summed up by builders who gathered in Washington for NAHB's spring directors meeting defeated a proposal to support lower FHA down payments, and did not even debate the recurrent ideal of more special mortgage assistance from Fanny May. Their attitude, summed up by FHA Commissioner Julian Zimmerman: "Business is great, but sales are lousy."

With little to get their teeth into, the law-makers have nibbled around the edges, typically missed the real causes of housing's troubles: unstable financing, rising costs.

At month's end the housing package was still in two parts—one each for House and Senate. But what the industry could expect was reasonably clear: slight easing of FHA terms; sweetening of some less-popular rental, co-op, and rehab programs; more Treasury money for college housing, aged housing, and for urban renewal.

Is Santa Claus dead?

Less certain were two ideas with real, if watered-down, significance. One is Sen John Sparkman's proposal for an annual Presidential report on how many housing units should be built in the next two years and how to get it done—with collateral encouragement for research to provide data and techniques. Originally proposed as a mandatory measure, it drew fire as a forerunner of federal control of housing—possibly general economic controls—if the President is required not only to state a goal but also to seek laws to achieve it. As reported out by the Senate banking committee, the report is purely permissive. But if the President decides not to make the report, he must tell Congress why. Critics still wonder if this leaves the camel's nose in the tent.

Another idea, with broader support, would combine a liberalized Fanny May with a new secondary market for conventional mortgages in the Home Loan Bank Board as a way of approaching a central mortgage bank (see next page). As so often happens, these measures began in an attempt to avoid them. At the end, are not uniform in the House and Senate measures so adoption is doubtful.

Notable by their absence are some past favorites of the liberal spending faction: public housing; direct par purchase for low-price homes. Even so, the Senate version has a price tag, according to committee aides, of $1.5 billion; the House, $1.2 billion. These bracket the $1.3 billion housing bill vetoed by Ike the first time around, last year, on the ground it was foolishly costly. Both exceed considerably the $1.05 billion he vetoed the second time—and the third-try bill that was $50 million under that.

.. or just sleeping?

Two big spending items, proposed by Sen. Joseph Clark (D, Pa.) were: 100,000 units of public housing, beaten in the Senate subcommittee—6-3; $600 million for urban renewal; 25% of the $1 billion passed, 7-1. The biggest item—Rep. Albert Rains' $1 billion Fanny May par purchase proposal, part of his "emergency" act—was quietly and tactfully shelved in the Senate. Other measures that were set aside included Sen. Paul Douglas' (D, Ill) interest-labeling bill to require disclosure of the real costs of money charged to borrowers.

A controversial plan to finance middle-income housing with government credit, turned down by the Senate Housing subcommittee, was revived by the full banking committee—but safely insulated from the omnibus bill. It is Clark's proposal for a federal Limited-Profit Mortgage Corp. authorized to make and service loans to nonprofit or limited dividend housing corporations to build middle-income housing. Clark would have the Treasury buy $100 million capital stock, let the corporation issue tax-free, guaranteed debentures up to $500 million—extendable to $1.5 billion with Presidential approval. The whole idea is a sure bet for a veto, if by some unlikely chance Congress adopts it. Also reported out, but passed by the Senate Housing subcommittee, was Clark's bill to give housing cabinet status by shifting all HHFA functions to a new Dept of Housing and Urban Affairs. More and more elements of the much divided housing industry approve this idea, but so far it is opposed by the Administration.

Central mortgage bank idea gains

"It isn't everything we want, but at least it's a foot in the door."

So says NAHB 1st Vice President (and legislative chairman) E. J. (Jim) Burke of the central mortgage bank proposal that builders, along with NAREB and MBA, backed in Congress this year.

At midmonth, it was evident that Congress would buy only half the idea—if that. But it was equally evident that the central mortgage bank idea, long espoused by builders and others, is gaining momentum. It may not come to fulfillment this year or next, but that it will sometimes seem more and more likely.

Just how far is the foot in the door? As set down at House & Home Round Table nine years ago (Aug '51) and restated five years later at another Round Table (Hal, Nov '56), the objective of a central mortgage bank were to:

1. Smooth out the flow of mortgage money by selling long- and short-term debentures to the public, use proceeds to buy FHA and VA mortgages in tight money period.

2. Tap pension funds as a source of mortgage money by offering the far less leveraged debentures instead of mortgages to them.

3. Become in effect a central warehousing bank, lending money to mortgagees on the security of FHA and VA mortgages.

4. Regulate FHA-VA interest rates to keep them attractive to the private market, keep the CMB from becoming a dumping ground for them.

5. Have an independent board, removed from politics, much like the Federal Reserve Board.

6. Make firm advance commitments and

CONDOMINIUM: NEW IDEA FOR MULTI-UNIT OWNERS

A form of property ownership, rare in the continental US but common in Puerto Rico and Latin countries, would be eligible for FHA financing under provisions contained in both House and Senate versions of the 1960 housing bill.

It is condominium, or individual ownership of a single unit in a multi-unit structure, where common ownership of halls, stairs, elevators, lobbies, similar facilities. Units may be bought, sold, mortgaged and are taxed separately, much like private homes in subdivisions.

Proposed chiefly as an aid to housing in Puerto Rico, where condominium has been legal since 1955, FHA insurance would allow builders to offer a solution to urban sprawl and low-income home ownership.

Testified Brown Whatley, past president of MBA: because of separate ownership and unlike co-ops, "each owner's property is liable for only his own mortgage debt, and the owner does not take the chance that he will lose his property by reason of the default of other parties having ownership in the same building. It is the main trouble with a multiple-unit building where there is ownership rather than tenancy. The condominium concept promulgates that." Federal experience with condominium is limited to a few projects in Washington, D.C., New York City, and Stamford, Conn. But VA has guaranteed them since 1947. Enabling legislation would be needed in most states to permit it. But, said Whatley, once allowed, it "has the advantage of much greater simplicity than is found in the co-operative or association system."

FHA Commissioner Julian Zimmerman, surveying all the new ideas involved, differed. He urged further study before adoption "because of the many problems which must be considered." Sample: in case of foreclosure, FHA might find itself responsible for a large number of the units... if it was unable to dispose of them."

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perhaps even advance a line of credit so builders can get construction money more easily.

Last year, when the central mortgage bank became a major objective of NAHB policy Past President Tom Coogan added three more points in a monograph submitted to Congress:

7. Be required to buy mortgages at less than par, to insure continued participation by private investors, avoid a primary position.
8. Use the bank's controls to spur housing in recessions and brake it when money is easy and overbuilding a danger.
9. Advise FHA and VA on their operations that affect the mortgage market.

The so-called "industry" bill introduced this year is more modest. Like some earlier proposals, including NAHB's, it suggested building on FNMA's present structure, giving it greater dignity with a three-man governing board appointed by the President and Senate, with three new functions:

1. Make 12-month loans, renewable for another 12 months, for up to 90% of the unpaid principal balance of mortgages pledged as security, with borrowers required to buy FNMA stock equal to no more than ½% of the loan.
2. Increase borrowing authority from 10 to 15 times its capital.
3. Charter and supervise federal mortgage investment companies organized by at least five qualified persons, capitalized at no less than $1 million. FMIC's could originate, purchase, sell and service FHA-VA mortgages out of borrowings (up to 20 times capital) and capital, and do the same with conventional mortgages up to 75% of appraised value, but with capital only.

As reported out by the House committee, only the first two points are in line for enactment this session (the Senate subcommittee shelved the whole idea). But the House also reported a pet project of the savings and loan industry: a secondary market facility for conventional mortgages within the Home Loan Bank system.

**Charlie Wellman dissects 'easy outs' for housing**

Buried among reams of testimony before committees in both houses were some of the year's sharpest thoughts about housing's chief problems and prospects.

Best of the lot: Charles Wellman, legislative chairman of the National League of Insured Savings Assns—a California Democrat who earlier blasted Rains' $1 billion special-assistance idea as promising a windfall to builders, nothing to homebuyers.

*continued on p 44*
Discussing a stable, high level of housing production, Wellman said:

"Obviously, you cannot have a high level of production if there is not a market for the goods being produced. Second, the financial system must provide adequate funds to finance both producer and consumer in the production and the purchase of the product. Third, the needed credit must be in balance with the ability of producer and consumer to pay.

"In the period, with minor exceptions, there has been little evidence of a lack of effective demand for housing. The principal limiting factors have been price and availability of financing and the increasing cost of land, materials, and labor going into the production of residential housing. If we are to serve our objective successfully therefore, this legislation must be weighted in terms of its contribution to expanding these two presently limiting factors.

"It is obvious that to deal with the problem the other way around would not only fail, it would in fact compound the problem. By that I mean this—if we make no successful assault on the problem of the flow of funds into residential construction and the price for such funds; if we make no contribution to halt or slow down the increasing cost of housing to the homebuyer, it certainly will do no good to increase the level of effective demand for housing. We will be in the position of merely increasing the pressure on already limiting factors. It will raise the demand for the limited supply of funds, thereby increasing the price paid for the use of those funds. It will increase the demand on the limiting supply of materials and labor and land, thereby increasing the costs of those elements.

"The longer we travel the road of progressively lower down payments and progressively longer periods of amortization, the more we conceal from ourselves and—more importantly—from the homebuyer, the undeniable and unpleasant fact that the cost of building a house has risen more in the postwar period than almost any other essential commodity.

"Continued annual liberalization of government housing programs in the economic climate of the postwar years has been a perfect inducement to avoid facing the harder, more difficult problem of fighting the price-cost squeeze. We have achieved about all the mileage available to us from traveling this road, the results of which are about all the mileage available to us from traveling this road.

Big plans for GI loans shelved for this year

In the face of Administration hostility and industry apathy, Chairman Olin Teague (D, Tex.) of the House veterans' affairs committee has mothballed ideas to extend VA guarantees to peacetime vets, finance GI loans directly with debentures and NSLIC funds. But extension of the World War II GI program and of the present direct loan program, seems certain.

Bills to do both are moving in both House and Senate, differing only in term. In the Senate, it is 4½ years—to the Korean GI cutoff of Jan. 31, 1965. Direct loans are continued at their present $150 million per year volume; one year in the Senate; two in the House.

Builder Hal Hayes' Capehart binge brings on a $60 million hangover

So much smoke is beginning to pour out of the nation's Capehart housing program that Congress may yet be able to find a fire.

Densest clouds lately have been billowing from the $60 million Capehart empire of Los Angeles Builder Hal B. Hayes, which last month ignited in a blaze of lawsuits. A good many builders are watching to see whether the fire is purely local or symptomatic of a bigger blaze still smouldering.

Hayes, 49, and self-styled world's biggest individual builder, scored notable success during the past two years as low bidder on military housing contracts, snagged nine of them totaling 3,515 units. They include projects at Mather and Beale AFBs, California; Grand Forks and Ellsworth AFBs, North Dakota; Ft. Bliss, Texas; Camp LeJeune, North Carolina.

Now, says Hayes in a $4.1 million Los Angeles lawsuit, he has discovered the secret of this success: his bids were too low. Furthermore, he says, they are a fault of his bonding company, Continental Casualty Co of Chicago, which wrote $60 million in performance bonds (with the help of a dozen other firms) on the jobs. Hayes says company representatives persuaded him he could make millions on the deals, but were only interested in bonding fees, and assigned an inept estimator to prepare his bids. Continental, which denies the allegations, has in turn filed suit in federal court, asking appointment of a receiver for Hal B. Hayes Construction Co, and an audit.

A sudden stop

Hayes troubles blew up in May when, with two of the projects completed, the rest ranging from 90% to 10% finished, all were halted by the Army Corps of Engineers. The reason: sub-subcontractors were filing mechanics' liens on nonpayment of their bills on all seven unfinished jobs. In El Paso alone, some two dozen suits were brought in state and federal courts asking payments on his $6.5 million Ft. Bliss project. The subcontractor on the job, said the suits, was merely a front for Hayes.

Next, Hayes himself was reported missing, his whereabouts unknown for two weeks. Almost at once he appeared, announced that he had been around the world by plane, stopped off at the Summit meeting in Paris to negotiate contracts for missile bases in far-flung overseas sites. His problems, he said, were the work of jealous competitors out to "get" him. Everyone, he said, would be paid. Then his doctor put him to bed, diagnosed his condition as "complete exhaustion."

A stern order

Meanwhile, FHA has halted closings on most of Hayes' completed houses, pending modification of the original bond to include Hal B. Hayes and Associates, and Hayes Cal Builders as principals, identification of all unpaid claimants and the amounts of their bills; and posting of cash to cover all of them. The Air Force has said it will move to cancel his contract for Beale AFB, and the Defense Dept has sternly told him to get back to work or face further legal action.

Hayes has long nurtured a reputation for diverse abilities and interests. In his lawsuit, he cites a 20-year construction career that brought him $5 million in assets. He generated headlines last year when he gave Glamour Girl Zsa Zsa Gabor a 22-carat diamond to cement an engagement that came unstuck after two months. Earlier this year, he announced development of a sprayed paper-and-plastic house that is fire-and-flood resistant, climate-proof and could sell for $5,000 in a two-bedroom model. "Give me enough paper and I'll house the world," he said then.

Bankers and mortgage men have mingled with screen stars at Hayes' lavish parties, at his six-level "house of tomorrow" in the Hollywood hills (main features: an indoor-outdoor swimming pool in the living room; a waterfall; a television set in a tree).

Whether Producer Hayes' troubles draw a congressional investigation or not (See Lyndon Johnson's preparedness subcommittee of the Armed Services Committee has been eyeing the case), there are indications he isn't the only contractor having trouble with Capeharts. Murmurs that the Pentagon's penchant for over-inspecting makes a profit almost impossible are growing. Perhaps the Hayes case will show how true—or false—they are.
Builders reject move to back no-down FHAs—up to $13,500

Should FHA down payments be cut even more?
No, says NAHB—at least not to nothing.
The issue came before NAHB directors when Legislative Committee Chairman E. J. (Jim) Burke read a resolution (approved by the committee, 26-16) urging NAHB to support Rep. Albert M. Rain's plan to drop FHA down payments to: nothing on houses up to $13,500; 10% on the value between $13,500 and $20,000; plus 25% of the value in excess of $20,000.

President Martin L. Bartling Jr told the directors the executive committee opposed the resolution, 8-7. Chicago's Martin Braun summed up the majority view: "We in the housing industry are a little gullible of always asking for things. We didn't ask for this. We're already in the hands of the politicians. If we get no-down up to $13,500 today, what do we ask for next? No-down up to $20,000, $25,000, $30,000? Next we'll want everybody who's 21 years old to have to buy a house every six years."

Braun said he was "not alarmed" by defaults so far (50,000 VA loans, 23,000 FHAs). "But costs are going up all the time," he warned.

* Present schedule, after the reduction in April: 1% of value up to $13,500; plus 10% of value between $13,500 and $20,000; plus 25% of the value in excess of $20,000.

1. Commissioner Julian Zimmerman has asked his aides to find the top six men on mortgage credit among the agency's 6,800 employees. They will be shifted to Washington, put through intensive briefing, and become FHA's first mortgage-credit supervisors. One will be assigned to each of the agency's six zones. Their role: monitors and educators to make sure local offices carry out FHA mortgage-credit directives. Some builders complain that field offices are still dragging their feet at putting into effect FHA's two-year-old directive (NAH, Jan '58) to loosen credit requirements on houses for higher-income families. The order spelled out in so many words that as a family's income increases, FHA should allow it more discretion, rather than less, about how to spend it; it suggested, as a "reasonable norm," that FHA should approve families' budgeting for housing expense "up to one-third of their first $3,000 of after-tax family income, plus one-fifth of their after-tax family income above $3,000."

Mortgage credit supervisors will report to the top command through zone commissioners and Asst Commissioner for Operations Graham Northrop. This is a small but highly significant shift aimed at trimming the independent authority of civil service underwriters, who, in years past, have sometimes seemed accountable only to themselves.

2. FHA is letting a few companies send top men around to field offices to explain how their products save more than they cost in new homes by yielding lower operating and maintenance expense. After their travels, the company experts come back to Washington and tell top FHA aides what kind of reception they got. The aim is to help make sure that the 75 field offices actually carry out Zimmerman's new directive (NAH, Mar) to require less income to buy a more expensive house if the price difference is due to quality construction and materials that make the more expensive house cost less instead of more.

Mortgage-credit supervisors will also be told to ride herd on this new rule—which could be a flop if local FHA offices pigeonhole it or ignore it.

Signs are beginning to turn up that materials manufacturers are getting busy developing products to take advantage of the bonus for quality. Some lumbermen had grinned. But Weaverhauser is working on a penetration aid to fit into the program. Paint manufacturers are talking about longer-lasting paints.

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Morgan Earnest pointed out that the directors had yet to hear the legislative committee's reason for wanting lowest down payments. Ruled Bartling: no discussion could be held until after the vote on the motion to table the resolution. The standing vote stood 82-75 to leave the resolution on the table. Said Bartling, announcing the vote: "I've learned my lesson."

There wasn't a sign of the rift between NAHB and FHA Commissioner Julian Zimmerman when he spoke at the opening session. "Nothing is more important to housing than to have a healthy, live-wire FHA," said Bartling politely. "It's a real privilege and pleasure for me to be invited to come over," responded Zimmerman, politely. He added: "Maybe you get tired of us sometimes—but, as I say, all of these things change." His impression of the housing industry, after talking to builders, he said, was "business is fine, but sales are lousy." FHA's data, he said, show "a significant strengthening over the country. We all share the hope that this proves to be true." He avoided mentioning mandatory FHA lumber grademarking, which had strained relations for a time.

At subsequent sessions, builders showed that while they are living with grademarking, they still don't like it.

Paul Bickford raised the issue with a resolution that since grademarking had been imposed on FHA through the efforts of lumber men continued on p 47

FHA moves to enforce quality rules

FHA is tinkering with its administrative machinery in an effort to get its two biggest policy changes in years put into practice throughout its sprawling empire.

1. Commissioner Julian Zimmerman has asked his aides to find the top six men on mortgage credit among the agency's 6,800 employees. They will be shifted to Washington, put through intensive briefing, and become FHA's first mortgage-credit supervisors. One will be assigned to each of the agency's six zones. Their role: monitors and educators to make sure local offices carry out FHA mortgage-credit directives. Some builders complain that field offices are still dragging their feet at putting into effect FHA's two-year-old directive (NAH, Jan '58) to loosen credit requirements on houses for higher-income families. The order spelled out in so many words that as a family's income increases, FHA should allow it more discretion, rather than less, about how to spend it; it suggested, as a "reasonable norm," that FHA should approve families' budgeting for housing expense "up to one-third of their first $3,000 of after-tax family income, plus one-fifth of their after-tax family income above $3,000."

Mortgage credit supervisors will report to the top command through zone commissioners and Asst Commissioner for Operations Graham Northrop. This is a small but highly significant shift aimed at trimming the independent authority of civil service underwriters, who, in years past, have sometimes seemed accountable only to themselves.

2. FHA is letting a few companies send top men around to field offices to explain how their products save more than they cost in new homes by yielding lower operating and maintenance expense. After their travels, the company experts come back to Washington and tell top FHA aides what kind of reception they got. The aim is to help make sure that the 75 field offices actually carry out Zimmerman's new directive (NAH, Mar) to require less income to buy a more expensive house if the price difference is due to quality construction and materials that make the more expensive house cost less instead of more.

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Clean, modern styling. 48" long, 42" wide, 14" high. Six pastel colors and snowy white.

Distinctive beauty—generous bathing area—integral corner seat and wide rim seat . . . these are just some of the preferred features found in the new Delray square recess bath by Eljer. Nationally advertised to help presell your customers, the new Delray is currently featured in full-page, four-color ads in House Beautiful and Living for Young Homemakers magazines.

Straight apron floor line minimizes tile cutting and installation costs—back and ends flanged for wall tiling.

Estate de luxe siphon jet toilet is styled and color-matched to complement other fine Eljer Fixtures.


**Housing Market:**

Sales stay slow but surveys of plans, easing money suggest bottom is past

Thanks to Census' new figures on starts (see p 96), housing is now headed for a 1.3 million-plus year. This is no more than the 1.2 million starts most experts originally expected. It merely adjusts for the units Census says we have been building all along but not counting.

Now there is solid agreement, among the men who watch housing's course closest, that the easing of money rates promises a steady rise in housing activity during the second half of 1960. This easing has been taking place steadily all spring. Congress, 29% (623,819 to 469,870) had been passed by the 1/2% drop from the Fed's rediscount rate.

The upturn does not rule out local disturbances, caused, say, by layoffs at the aircraft plant in Indianapolis. It also hinges on the general health of the economy.

Says HHFA Administrator Norman Mason: "If financing is available, and people are employed, then there is no problem in achieving a high level of starts. A man buys a house when he has a job, and when his neighbors have jobs, and when there is a feeling of confidence that goes along with a good economy. In a boom, housing gets in trouble because everybody is reaching for the money and the rates go up. In a sharp decline, nobody buys. For the rest of this year, I believe we will see a gradually ascending plane, in a good, moderate climate, for housing."

An NAHB survey comes up with the same outlook from builders themselves. Economist Nat Rogg's spring survey of his 700-member Builder's Economic Council (500 replies) showed most builders think the second-half starts trend will be up. More than half the builders "intend to increase their own starts this year," the survey finds.

Amid mounting reports of slow sales, the Economic Council's returns on unsold inventory are particularly good news for the housing industry. At the end of April, 45% of builders said the inventory was the same as a year earlier; 25% said it was lower.

FHA's March 15 survey uncovered a 4.8% vacancy rate in its rental units—highest since 1951's 5.8%. But the underlying US economy has probably been strengthened by the fact that it has 1) undergone a major recession in inventory this winter and 2) seen the stock market cool off. Both items should postpone any major downturn in business (and housing).

**Census shows suburbs gain, cities lose**

The much-predicted back-to-center-city movement by fedup suburbanites is still only a prophecy.

Population trends continue to run strongly the other way, the 1960 Census discloses.

In the last decade, the population in the suburbs of the nation's metropolitan areas appears to have jumped close to 50%, says Conrad Taeuber, assistant Census director.

That is 6% more than Census expected before the big count began. So far (the count is still preliminary) no suburban area has lost population. A decade earlier, from 1940 to 1950, suburbs gained 35%.

But—for the first time in their history—leading American cities are losing population. The overall gain for center cities 1950-60 was a meager 1/2%. And most of the cities that have lost most are the oldest, ugliest, most blighted. Some of them are among the worst governed.

New York's City's population fell 3% (7,891,957 to 7,650,000). But the suburbs shot up dramatically. Suffolk County at the outer end of Long Island gained 139% (276,129 to 659,837). Nassau County (between Brooklyn and Suffolk) doubled. Rockland County gained 52% and wealthy Westchester County 29% (650,800 to 852,178).

Chicago lost 4% of its population, dropping from 3,620,692 to 3,470,000. Two-thirds of the 150,000 loss was blamed on demolition for expressway construction.

Philadelphia, expecting a small gain, was shaken to find its population off 8% (2,071,605 to 1,923,940). The city's loss of 121,000 is offset by a gain of more than a half million in the suburbs. Except for the depression, it is the first time since 1790 that Philadelphia has lost population.

Five of the six biggest cities in New Jersey lost population. Milwaukee lost 7.8% of its population (from 521,718 to 482,804). St Paul gained 0.6%, but the surrounding areas outside the Twin Cities gained 11.5% Rochester, N. Y. dropped 5% while its suburbs in Monroe County grew 20%. Wilmington, Del. lost 15% but suburban Newcastle County showed a 94% gain.

Many of the cities that have lost population are also cities which have experienced a huge influx of Negro or other minority in-migrants. Is the US undergoing the unprecedented spectacle (as one Washington expert has suggested) of a majority in full flight from a minority for the first time in history? Census tabulations of population by race will not be compiled for several months. By then, the answer should be clearer.

Detroit's population dropped 9% (1,849,568 to 1,678,613), while its Negro population grew from an official figure of 300,506 to an estimated 450,000. The city is now over one-quarter Negro. Washington, D.C. lost 6.8% (802,178 to 747,932), despite a pre-continued on p 49
REVOLUTIONARY
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REMOTE
AIR
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A two-man crew can install FlexHermetic air conditioning in four or five homes in a single day. Because FlexHermetic is sealed and charged in the factory, costly accessories required for conventional installations are not required. The installed cost to home-builders is little more than that of a built-in kitchen appliance.

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NAME
FIRM
ADDRESS
(Town) (County) (State)
dicted growth of 68,000 persons. Its suburbs shot up 78% (700,000 to 1,248,000). This leaves the metropolitan area with a 35% growth. St. Louis showed a 100,000 loss to 700,000. Cleveland lost 4.7% but Cuyahoga County’s total population (including Cleveland) gained 18.2%.

To no one’s surprise, most big cities in the West, Southwest, and in Florida showed giant gains (San Francisco and Oakland showed a small loss). Los Angeles City

LOCAL MARKETS:

Best bet: $7,000-$8,999 family

Chicago: Biggest market for new homes is among families with annual incomes from $7,000 to $8,999, a survey of 1959 home purchases by the First Federal S&L shows. The overwhelming majority of families with incomes of under $5,000 bought used homes. Surprisingly, people with incomes of $12,000 or more were much more inclined to buy new homes, too. Here’s how the survey found home buyers by income:

<table>
<thead>
<tr>
<th>Annual income range (under $5,000)</th>
<th>% of new homes purchased</th>
</tr>
</thead>
<tbody>
<tr>
<td>$5,000-$5,999</td>
<td>8%</td>
</tr>
<tr>
<td>$6,000-$6,999</td>
<td>14%</td>
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<tr>
<td>$7,000-$7,999</td>
<td>20%</td>
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<td>25%</td>
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<tr>
<td>$9,000-$9,999</td>
<td>20%</td>
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<tr>
<td>$10,000-$10,999</td>
<td>13%</td>
</tr>
<tr>
<td>$12,000 and over</td>
<td>4%</td>
</tr>
</tbody>
</table>

And here’s how the survey pictured the average buyer: he made $8,500 a year, bought a $20,000 house with a 20-year, $16,000 mortgage at 5%. paid $110 a month on his mortgage, another $40 for taxes. Land accounted for 17% of his house cost. The typical used house cost $19,100, compared to $21,900 for a new one.

Cleveland: The continuing slowdown in new home sales has put big Builder Marvin Helf on an unusual tack: building 167 single-family homes for rent. The project (cost: $2.5 million) is 25 miles southeast of Cleveland in a workman’s neighborhood in Streetsboro. The houses—one-bedroom, 1½-bath, 1,170 sq ft—will be financed with individual 24-year conventional mortgages.

The deal could turn out to be more profitable than outright sale, claims Helf Sales Manager William T. Peters—if Helf is right in believing money will be plentiful enough in the next couple of years (when tenants take up their options to buy) so conventional mortgages won’t cost three points as they do now.

But the No. 1 reason for the rental venture is to build the 200 houses Helf must build to meet its overhead. Admits he: “If we press as was and should be, we wouldn’t think of this.”

The houses will rent for $115 a month. Tenants will sign three-year leases which allow cancellation after one year. The lease also will permit the renter to buy the house for $14,990 any time during the three years by paying $1,000 down. None of the rent will apply to the purchase price.

Tulsa: Demand—and starts—are picking up. Last December, a poll of Tulsa HBA (who do 97% of the area’s housing) indicated they looked for 2,016 starts this year (compared to 2,197 last year). But now, says HBA Executive Vice President Charles McKinney, 1960 starts may reach 3,000.

From January through May, sales in a competitive, buyer’s market followed closely behind starts: 920 to 954. There were 250 houses completed but unsold, down from last year’s overhang of 285.

Miami: The house market is down about 30% this year, but there seems to be a limited demand for $25,000 to $30,000 houses near new shopping centers. Buyers appear to be businessmen ready to put down roots.

The project market is slow in Miami, but there is lots of activity in neighboring Broward County where builders have cheaper land combined with nonunion labor, which gives them a $2,000 edge over Greater Miami. Sales in Broward are strong in the $9,990 to $11,000 bracket.

This month’s Kiplinger Florida Letter has plunging investment men into gloom. The stock market has been downrating the Florida companies in a big way for the last four months. Miami’s first FHA Sec 213 co-op highrise is still at the post after four weeks of selling.

Miami has lots of houses for rent, which is unusual. This is the result of buyers walking away from houses they got on resale—high with second mortgages and low equity.

Centex tears down models

“If the people in Florida don’t like what we gave them,” says Dallas Builder Tom Lively, “let’s give them what they want.” What they don’t want, Lively found after putting up six models on a 3,000-acre tract west of Boca Raton, is a small house. With sales lagging on all but the two larger three-bedroom two-bath models ($15,500-$16,570), Lively ripped up the four smaller two-bedroom, one-bath ($11,990 and up) models, will put up large ones. Says a Centex spokesman: “We underestimated the market. People want bigger, finer homes.” Probable prices: $14,000-$20,000.

COMMUNITY FACILITIES:

Illinois high court holds cash school levies void

Is the judicial tide beginning to turn against suburban subterfuges to make subdivision developers pay for community facilities?

A new decision by the Illinois Supreme Court hints that it may be. The court has just held that the Chicago suburb of Downers Grove exceeded its powers by levying a $325 per lot fee for schools as a prerequisite to plot approval by the local plan commission. The decision is hailed by Ralph Finizio, president of Chicago builders, as halting a statewide trend toward such cash levies. He says it opens the way to “a whole new approach” to financing school expansion. But he warns builders who have made such payments not to sue for their return. “It would bankrupt many school boards,” he contends.

Although the Downers Grove case is the first to reach the high court, it is not the first of its kind. In 1958, a similar ordinance in the northwest Chicago suburb of Park Ridge was ruled illegal in Cook County.

Growth, not gouges

In the Downers Grove case, the supreme court says: “Plan commission approval of a plat of subdivision was designed to assist the orderly growth of communities. But it does not follow that communities may use this point of control to solve all the problems which they can foresee.” It found that school districts 58 and 99 had arrived at the $325 figure “by taking into account factors totally unrelated to the proposed subdivisions, such as the time lag between the date when homes are occupied and the date when taxes are collected.”

The suit was brought by Builder Herman Rosen and Firestone Realty Inc of Chicago, the subdividers, who refused to acquire “certificates of compliance” from the school boards involved, for their house development.

“The economic pressure upon such a large-scale developer is obvious and we think the due process has been established in this case,” said the court.

... but gifts are okay

The opinion does not affect voluntary payments by subdividers for schools, nor does it affect towns’ power to require a “reasonable” reservation of land “for public purposes” by a subdivision.

Attorney Alan Hultman, for the school districts, said some $5,000 paid under the ordinance by the plaintiffs will have to be returned. But the balance of some $60,000 paid by other builders may be retained pending decisions as to whether it was paid voluntarily or not. All the funds have been in escrow since the suit was filed in 1958. Its prosecution was financed by the Northern Illinois HBA.

Builder Finizio, whose chapter covers the area surrounding Chicago—that is most affected by the decision, says there is a solution to school problems at hand. It is a $10 million revolving loan fund, set up by the Illinois legislature in 1959, to aid school boards that have reached their bonding limit buy new sites, buildings, and equipment. Expanded to $25 million, the fund could help boards bridge the two-year gap between completion of new homes and receipt of tax revenues, Finizio says.

NEWS continued on p 51
AN OPEN LETTER TO EVERY MANAGEMENT THAT CONtributes TO PENSION FUNDS:

Pension fund accumulations now exceed 30 billions of dollars, and are increasing at a rate of more than three billions each year.

Less than 1% of this mammoth investment pool has found its way directly into the residential mortgage market. Something like 99% of pension fund accumulations do not contribute to the growth of America's largest industry — housing.

Imagine what sales of your products might now be, if even 10% of these funds were being invested in mortgage financing of new construction and remodeling! When you consider, also, that risk-free FHA and VA mortgages earn for your people a steady 1% to 2% more than other conservative investments, it is obvious that pension fund growth has suffered by this oversight.

Investment thinking of pension fund trustees must be updated — and management should encourage it now, not next year or five years hence. All parties concerned should take note of four demonstrable facts regarding FHA and VA mortgages as desirable pension fund investments: (1) Newly-developed ease of investment; (2) High yield on investment; (3) Stability and safety through U.S. Government insurance or guarantees; (4) Continuous and known return of principal — a unique feature of special value to pension fund management.

Mortgage Associates has a practical and concrete plan of action. Write, wire or telephone for a copy of our study: Mortgage Investment Plan for Fund Managers. If you prefer, contact me personally.

W. W. Bunge, Chairman
Mortgage Associates, Inc.

125 East Wells Street, Milwaukee 2, Wisconsin, 6633
MORTGAGE MONEY:

Discounts still slide slightly; experts predict gradual easing lies ahead

The outlook for more and cheaper mortgage money keeps getting brighter.

Discounts on FHA and VA mortgages and conventional loan rates are still easing. Eleven Federal Reserve Banks have cut their rediscount rates from 4% to 3½%. A cut in the discount rate—the rate at which federal banks make loans to commercial banks—usually means a general decline in interest levels.

The 4th District Federal Home Loan Bank at Greensboro, N.C., slashed its interest rate from 5½% to 4½% on loans to member S&Ls. Two others (Chicago, Pittsburgh) among 11 banks had already cut their rate to 4½%.

Yield-conscious investors are scrambling for mortgages (particularly immediates), finding there aren’t enough to go around. Reason: house sales are slow (see p 47).

House & Home’s monthly survey—boosted to 17 cities this month with the addition of Honolulu—reveals price increases of 92½-97. Prices in Houston moved up from 96½-97 to 97, and in Washington, from 92 to 92½; in San Francisco, some S&Ls dropped from 7.2-7½ to 6½-7½%. In Chicago, from 6-6½% to 5%-6½%, and in Houston, from 6-6½% to 5%-6½%. Some banks and insurance companies shaved their rates in Chicago, from 6-6½% to 5%-6½%; in Houston, from 5½%-5½% to 5%-6½%, and in Newark, from 6 to 5½%.

What will happen to prices this summer? Predicts NAHB President Martin L. Bartling Jr.: “Discounts will shrink another half point to a point.” Many mortgage men agree that the trend to smaller discounts is not yet spent. Adds President Oscar R. Kreutz of the Nat’l League of Insured Savings Assns: “A precipitous decline in mortgage rates is not likely this year. But home buyers can expect a slight decrease in the cost of money, coupled with somewhat better terms.”

Does the Fed discount rate cut indicate the US is sliding toward a recession? No, assert economists in and out of government.

Traditionally, reducing the discount rate is a weapon used to pump more and easier credit into faltering economy. The last time it was used in the trough of the 1957-58 recession. This time, explain government officials, the situation is different: business, while sluggish in spots, is generally good. But inflationary pressures have let up so sharply that the discount reduction can be used to expand credit much earlier in the business cycle and give the economy “a little perking up,” thereby prolonging the cycle.

Actually, point out sophisticated observers, the Fed action was merely confirmation of an easier money policy already in effect. Explains top government economist: the discount rate was pushed up to 4½% (highest in 27 years) by the Treasury’s financing problems which drove it heavily into the short-term money market. This in turn boosted short-term rates to levels that the long-term situation did not justify. “If it was not quite a crisis, certainly it was a major problem,” he says. Now, the short-term Treasury problem is over and so the Fed adjustment.

The Treasury will put little if any pressure on the money market for the rest of this year.

Vice President Roy M. Reerson, chief economist for the Bankers Trust Co. of New York, says that the Federal government is expected to repay $3 billion in debt this year, contrasted with last year’s borrowing of $10.5 billion in new money. Result: the total demand for investment funds will be only $42.5 billion this year, a substantial reduction from last year’s $58 billion. He puts the total demand for long-term capital by business, consumers and state and local governments at $30 billion, somewhat below last year’s $31.5 billion. Based on an anticipated 13% drop in housing starts, investment in home mortgages will be down 11.8% this year from last (from $13.6 billion to $12 billion). Pension funds will be the only investors boosting their purchases over last year (from $500 million to $800 million).

MORTGAGE BRIEFS

S&L seizure brings probe

Seizure of the Long Beach (Calif.) Federal S&L (News, June) by the Home Loan Bank Board has set off a Congressional investigation. The probe, by a House government operations sub-committee, could 1) lead to laws curbing the board’s power, and 2) even lead to a demand for the resignation of Board Chairman Albert J. Robertson.

Warned Subcommittee Chairman John E. Moss (D, Calif.): “If there has been an abuse of the law—and I make no prejudgment—it is possible and probable that we will send forth a modification of existing law.”

Robertson has irked Moss by maintaining continued on p 53

News

FHA gets ready to OK selling mortgages to individual investors

Mortgage bankers figure they have carved out a new niche for their sometimes-questioned business future by persuading FHA to let individual investors buy its mortgages.

At mid-month, FHA Commissioner Julian Zimmerman’s office was flying-specking the last revisions on 1) the necessary changes in FHA regulations and 2) a purchasing-servicing contract with an individual investor.

“We’re getting close,” Zimmerman told NAHB directors, “and we hope we tap a great amount of new mortgage money by this action.

Mortgage men have long eyed individual investors, business organizations, and pension funds as the big untapped sources of money to fuel the anticipated housing boom of the ‘60s. And with mortgage companies more and more pressed by their traditional sources of money—notably mutual savings banks—tapping new areas looms as one of the ways to avoid extinction. Builders and realtors back the idea precisely because it promises to tap more money.

FHA’s big worry has been making sure that loan servicing remains in the hands of an approved FHA mortgagee, with a mortgagee’s minimum $100,000 capital and executive depth enough to assure prompt attention to delinquency and such tricky technicalities as fees, insurance premiums, and payment of charges. Under the proposed regulations, individual investors (to be known as participating-mortgagees) would come from FHA loans. But an approved mortgagee (to be known as sponsoring-mortgagee) would be directly responsible to FHA for carrying out its insurance requirements, including action on delinquencies and foreclosures. The individual investor and the seller-servicer would have an agency, not a trust, relationship.

The servicing fee would be the customary 1½%. If the mortgage goes into default, the individual investor would get the FHA debt-entures.

Nobody knows how much money the new setup may snag. But mortgage men are optimistic. Says MBA President Bus Bass: “For many people, getting their money—notably mutual savings banks—monthly installments will be an advantage, not a drawback. What about a man, say, who wants to set up a $30,000 fund for his family, giving them income but not principal. What could be nicer than a 30-year mortgage at a yield of 5½ or better with regular payments?”
This contractor is dejected because his concrete patio was rejected... he neglected to reinforce it with welded wire fabric... Clinton that is.

A builder's most important asset is his reputation which springs from the quality of his work. You build a good reputation when your patios, driveways, sidewalks and garage floors retain their smooth-surfaced good looks for many years.

That's why smart contractors reinforce concrete with Clinton Welded Wire Fabric. Tiny fissures may develop in concrete surfaces, but CF&I-Clinton Welded Wire Fabric throws up many defense lines that prevent the cracks from advancing.

CF&I-Clinton Welded Wire Fabric is a steel skeleton that reinforces and adds years of life to concrete. It comes in a complete range of gages and meshes for all concrete construction jobs.

You build customer satisfaction when you build with CF&I-Clinton Welded Wire Fabric. For full details and swift delivery, call the nearest CF&I sales office.
MORTGAGE MARKET QUOTATIONS

(Sale by originating mortgagees who retain servicing.) As reported to HOUSE & HOME the week ending June 20, ’76.

FHA 5 1/4 % (Sec 203) (b)

<table>
<thead>
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| Monthly's Month's% | FHA 5 1/4% spot loans (on homes of mortgagor age and condition) | VA 5 1/4% Immediate covers loans for delivery up to 3 months; future covers loans for delivery in 3 to 12 months.

| Immediate covers loans for delivery up to 3 months; future covers loans for delivery in 3 to 12 months. |
| Quotations refer to prices in metropolitan areas; discounts may run slightly higher in surrounding small towns or rural zones. |
| Quotations refer to houses of typical average local quality with respect to design, location, and construction. |

Footnote: a—no net; b—very limited activity; c—mercury banks do very little mortgage lending in Texas; d—S&Ls charging up to 4 point fees; e—S&Ls charging up to 4 point fees; f—commercial mortgage; g—bulk at 9%; h—for lower quality loans only, n—bulk at 9%; i—at 9%; j—at 9%; k—minimum construction loans unless otherwise noted. —FNMA pays 1 1/2 points for loans with 10% or more down. —FNMA net price after 1 1/2 point premium; m—nationwide, net price after 1 1/2 point premium. —FNMA net price after 1 1/2 point premium.


NEW YORK WHOLESALE MORTGAGE MARKET

FHA 5 1/4% Immediate: 94% Futures: 94-95b

VA 5 1/4% Immediate: 90% Futures: 90-91b

FNMA STOCK

FHA 5 1/4% spot loans (on homes of mortgagor age and condition) Immediate: 90-93

Note: prices are net or originating mortgage broker (not uncommon, set to builder) and usually include concessions made by servicing agencies.

JULY 1966
The complete hood line...by Trade-Wind

quality—style—efficiency in every price range

below
Under-hood ventilator frees cabinet space. Latest sheer custom design in genuine stainless steel or real hammered copper. Also Early American design in real antique copper. 4 lengths.

SPACER SAVER

VENTLESS

below
For use with Trade-Wind Nos. 3501, 2501 or 1501 Ventilator. Brilliant contemporary styling in stainless steel, brushed copper or antique coppertone. Also the colonial Salem in antique copper. 5 lengths.

PRE-WIRED

above
For use where outside venting is impractical. Filters greasy fumes and odors through 4 oversize filters. Plenum accessory for correct air recirculation. 3 lengths in satin chrome or coppertone.

above
Low cost quality “packaged” assembly with axial flow fan, enclosed lights, filter and switches. 5 lengths in satin chrome or antique coppertone.

PATRICIAN

above
Highly efficient ventilation for built-in electric and gas ovens. Contemporary or Early American hoods in stainless steel, brushed copper or antique copper. 3 lengths, also for double ovens.

OVEN

Trade-Wind DIVISION OF ROBBINS & MYERS, INC.
7755 Paramount Place, Pico Rivera, California DEPT. HH

HOUSE & HOME
to curb such investment companies. Items:

- financing of home purchases (NEWS, May),
- the lush days of unfettered trading in water and school issues. They note that at least 340,000 more veterans are eligible: "We are for the program. It isn't real important, but it does help sales some. It is another financing tool."

Opponents, including Paul Sheedy, executive vice president of the Property Owner's Tax Assn, do not fault Cal-Vet's top-notch administration nor do they contend that it costs taxpayers any more directly (the program has been sustained by $1.4 billion bond issues). They do contend that Cal-Vet bonds push up interest rates on all other state bonds and cut into the market for needed water and school issues. They note that at least 340,000 more veterans are eligible: if they took advantage of the program, it would create a tremendous bond—financing burden. But opponents are cheered by the drop in Cal-Vet support—from 4-1 majority in earlier elections to only 2-1 this time.

The Ten Percenters (cont'd)

For California's controversial Ten Percenters,1 the lush days of unfettered trading in second trust deeds may be drawing to a close. Spurred by spreading scandals in secondary financing of home purchases (NEWS, May), both federal and state authorities are moving to curb such investment companies. Items:

- A federal court put the $40-million Los Angeles Trust Deed & Mortgage Exchange (first and largest of the Ten Percenters) in receivership as insolvent. The receivership was requested by the Securities & Exchange Commission. SEC contends that LATD has been selling securities without a registration, advertising fraudulently, and lacks assets to cover its obligations to 8,000 investors. The SEC action against LATD, which began in 1958, is regarded primarily as a test case in a campaign to put all Ten Percenters under SEC regulation. But LATD has been a tough fish to net. The company maintains second TDs are not securities. A previous district court ruling in favor of the SEC was overruled by a US appellate court. So pending another appeal.

- State Corporation Commissioner John Sobieski popped up with a plan to clamp drastic controls on the $100-million-a-year second trust deed industry. He proposed these rules:

  Promoters of the mortgage pool would have
  
  - cont'd on p 73; NEWS cont'd on p 56

1 Actually, the Dept. of Veterans Affairs buys the home for the veteran, resells it to him on a contract, which precludes secondary financing. Maximum loan is now $15,000, or 95% of value, whichever is less. Current terms: 4%, 25 years.

1 So called because they promise investors a return of 30% on their money. The companies buy second trust deeds at steep (as high as 40%) discounts from builders, resell them to investors at enough less than face value to give, with interest, the advertised return. Ten Percenters make their profit in the difference between the high discount at which they buy and the lower one at which they resell.

FIRST—TAKE OUT THE "BUGS"

"Bugs" which develop during construction can usually be ironed out. It's after the building is erected and real honest-to-goodness bugs, such as termites and other wood destroying insects, show up that problems really start.

Primary factors which set up the conditions conducive to insect and decay attack may be moisture, high humidity, nearness to soil or masonry contact. Whatever they are, the damage is done and wooden members of the structure are susceptible to failure.

One sure way to build in protection against termites and rot is to specify Wolmanized® pressure-treated lumber. This chemically protected lumber is first choice of architects and builders throughout the country because it has proved itself through decades of trouble-free service. It has the added advantages of being clean, paintable, fiber-fixed and non-corrosive. Wolmanized lumber is economical protection, too—costs only pennies per board foot more than unprotected lumber and gives decades of safe, certain service under all conditions.

The full story of Wolmanized pressure-treated lumber, how it is produced, where to use it, how to specify it and where to get it, is detailed in a 16-page booklet, "Safeguard Building Dollars." Write for your copy to:

MATERIALS & PRICES:

Breakthrough for plastics: FHA approves them for sewer, drain pipe

For the first time, FHA has authorized use of plastic pipe in residential construction.

The decision—which the plastics industry considers a major breakthrough—involves only sewer and drain pipe produced under a national standard. But FHA officials in Washington say it is likely the agency will permit use of polyethylene plastic for outside cold water lines "in the near future."

FHA benediction (in Materials Bulletin No. 26) covers styrene rubber, solid plastic sewer pipe for house sewer connections and storm drain lines, as well as perforated pipe for foundation footing drains and septic tank absorption fields. The pipe must be manufactured and installed as detailed in commercial standard 228-60. But FHA requires a minimum crushing strength for solid pipe of 1,000 lb per linear foot or 600 lb per linear foot in the commercial standard. Explains an FHA technician: "We didn't think 800 lb was enough. If sewer pipe flattens and clogs, it may need to be replaced."

Or for 3" above it must go compacted fill, free from debris and rocks. FHA will permit no more than 8'-0" of cover above solid pipe. For perforated pipe, it will permit no more than 5'-0" of cover, but perforated pipe needs a minimum crush resistance of only 600 lb per linear foot.

Plastic sewer pipe to meet FHA standards must be at least 4" in diameter—and the commercial standard itself covers plastic pipe only up to 6" diameter. Footing and storm drains may be 3" minimum diameter.

Is plastic sewer pipe cheaper than fiber or clay pipe? "Prices are competitive," says Bert Montell, secretary of the thermoplastic pipe division of the Society of the Plastics Industries. But polyethylene pipe for cold-water lines—if and when FHA approves it—should be as cheap as galvanized iron and cheaper than copper, he says.

Use of plastic pipe for sewers or water lines still faces code barriers in most areas. But, says Montell, "the picture is improving."

Six states (Calif., Ill., Maine, Ky., Wis., Ark.) have approved plastic pipe for cold-water service lines and/or wells under stipulated conditions. Florida approves plastic pipe for private swimming pools, an abundant item there.

In Needham, Mass., the first plastic sewer main in the nation has been in service for a year, won approbation from town officials. The project involved 300'-0" of 8" main and 150'-0" of 4" house-connection pipe.

FHA requires a smooth foundation under plastic sewage laterals, including 2" of sand or dirt under the pipe if the trench has a rocky bottom. On the sides of the pipe and for 3' above it must go compacted fill, free from debris and rocks. FHA will permit no more than 8'-0" of cover above solid pipe.

MATERIALS BRIEFS

Flintkote buys Sealzit

Flintkote has made another move in its $50 million program to integrate building materials producing all the way from natural resources to finished goods. For $1 million, it has bought Sealzit Co, Riverside (Calif.) maker of tools to apply resins, binders, and plastics in making boats, trailers, and furniture. One of Sealzit's products is a gun designed for Flintkote's new monomorphic system for roofing—which asphalt (or other materials) and glass fibers are simultaneously laid down in a film. Flintkote says the process produces quicker and cheaper monolithic membranes, can also be used to apply side-walls, insulation, sound deadening, pipe coating, and corrosive protection.

Plywood prices go pffft

For disconsolate Northwest Fir plywood men, eyeing big inventories and dwindling orders, the picture was clear: the hoped-for spring spurt in homebuilding was not materializing. The one to buy into, The Roseburg (Ore.) Lumber Co posted a price of $80 per M sq ft for 16" sanded stock, $4 under the going price of $84 and the lowest since World War 2. "Standing there, we just meet competition."

He charged that other companies were cutting prices by giving extra discounts while piously posting a $64 price.

Some companies followed Roseburg's example, but most—including major concerns like Weyerhaeuser, Georgia-Pacific, and International—stuck to $64, maintaining it was the absolute minimum. Said one company official: "When we can't get $64, we'll quit making plywood."

Some companies did. In all, around 35 shut down or curtailed production.

By midmonth, $60 stock was hard to find and most companies were back at $64. But inventories—set up by a record first-quarter production of 2.1 billion sq ft—were still high. Moaned a wholesaler: "It's been a sick market all spring and it looks as if it's going to stay that way all summer."

Other lumber prices were softening too. Other lumber prices were softening too. Green fir dropped to $58.36, down $14.32 from a year ago. Dry fir was faring a little better at $90.96, down $5.40 from a year ago.

Mergers (cont'd)

Weyerhaeuser has taken another step to diversify its line, make more products sold to consumers.

The giant of US forest products ($458 million 59 sales) has just arranged a stock swap to buy Roddis plywood Corp ($61 million 59 sales). The move will put Weyerhaeuser into hardwood plywood for the first time, provides its first lumber and veneer plants in Eastern Canada. Meanwhile, Weyerhaeuser will pick up a chain of 78 warehouses across the US and in Toronto, plus an aggressive sales organization. Roddis' plant at Arcata, Calif., makes only 25% of the fir plywood Roddis sells, so Weyerhaeuser will get a sales outlet for its own plywood.

Plans call for the Roddis organization to remain intact as a separate division. But the merger should put more pressure on the forest industry to step up its trend toward diversity and integration. The deal is subject to the approval of Roddis stockholders.

LABOR:

Are building pay hikes getting more automatic?

Judging by the pattern of wage pacts set by construction labor so far this year, they are. Some signs:

- Wage hikes also seem to be running higher than last year. Few one-year packages run less than 10c/hr. Lowest reported so far by the Bureau of National Affairs is 7c/hr straight wage hike for carpenters in the Beaumont-Port Arthur, Tex. area. Average nationally is around 12c/hr for all trades, including fringes. Two-year packages range from 15c to 50c, with an average around 35c. Generally, these include a higher proportion for fringes than the one-year settlements (but carpenters and trowel trades in Orlando got the maximum amount as a straight wage boost in four bites). The three-year contracts are more often than not straight wage hikes. They range from 30c to the period for 60c, (for cement masons in Seattle) with an average around 40c. These amounts compare with an average annual hike computed by the Labor Dept. in 1959 of 15.6c.

- Settlements for more than a year continue to increase. Two-year settlements are now twice as common one-year pacts; there are many for three years as there are for one (but four-and-five year pacts are still rare).

- In disputes leading to strikes, the issue is almost never whether there should be an increase, but only how much. In a few cases, workers reported no issue at all: the dispute is over fringes. In Buffalo, for example, building trades and contractors had set a bargaining timetable aimed at avoiding strikes, but it broke down. Concretions unions rejected an employer offer of 55c for three years plus all fringe demands except payment of parking fees for carpenters. And in Chicago, plasterers remain one of three trades on strike because employers refuse to continue payments for health, welfare and promotion to the Chicago Plastering Institute, which they are contesting in court (News, Nov.).

Notable among liberalized health-welfare payments is a proposed settlement in Milwaukee, where nine of 11 trades have agreed to an all-union welfare plan offered by employers. The Allied Construction Employers' Assn found in a study that hospital and medical costs have made plans in the entire industry "outdated and running in the red." They offer to hike their present 7c/hr contribution to 10c if the eight-year-old group of local plans are consolidated.

Biggest settlement reported so far this year is a 7c/hr, three-year wage hike for some 50,000 carpenters, cement masons, operating engineers, metal lathers, excavating and paving laborers in New York City. It calls for 15c now, 10c in each of the next three years, and 20c at the end of the period. Affected are about a fifth of the city's building trades workers, in seven of 22 unions whose contracts expired last month.

NEWS continued on p 59

HOUSE & HOME
Harris BondWood Flooring — Par Oak

Many combinations of Oak, Maple, Walnut and Cherry are available.

ADDS HAND-CRAFTED RICHNESS AT NO EXTRA COST

and sometimes at less cost than ordinary parquet.

All the centuries — old tradition of expert parquet craftsmanship is exemplified by Harris BondWood in gleaming expanses of pleasing geometric patterns. Sturdy Oak . . . durable Maple . . . fashionable Walnut . . . and distinctive Cherry. Easily and permanently installed in adhesive on concrete or wood subfloor. And the beauty is deep — a lifetime of service — slats are 5/16" of solid hardwood, not tongued and grooved.

Write for color booklet illustrating the sales possibilities. HARRIS MANUFACTURING COMPANY Dept. HH70. Johnson City, Tenn. The Finest in Flooring since 1898. See our catalog in Sweet's.

WITH DIVIDER STRIPS CHECKERBOARD DESIGN INSETS

HARRIS® BondWood Hardwood Floors

A new concept of flooring beauty
Every Kelvinator Kitchen Has A Sales Plus
No Others Have!

It's not a gadget or gimmick. It's a basic product improvement that makes every Kelvinator Appliance do its job better. In refrigerators, it's Fabulous Foodarama, world's only foodkeeper that combines a deluxe refrigerator and upright freezer all in one cabinet (and it's only 41" wide). In washers, the Plus is an automatic pre-scrubbing cycle that ends hand pre-scrubbing, and Deep Turbulent washing action that's so gentle it won't tear a paper napkin. In ranges, it's throw-away aluminum oven linings that eliminate oven cleaning drudgery. That's why a Kelvinator Kitchen works harder to help you sell houses—whether you install only a built-in range or a complete kitchen. Send for full details today.

There's a Sales Plus for You in Every Appliance
Made by Kelvinator

Division of American Motors Corp., Detroit 32, Michigan

Refrigerators • Electric Ranges • Automatic Washers • Clothes Dryers • Home Freezers • Disposers
Room Air Conditioners • Dishwashers • Electric Water Heaters • Dehumidifiers
Is urban renewal rebuilding cities the wrong way?

'Terrible mistake,' father of new towns tells planners, to build high-rise for mid-income

At its annual conference in Miami Beach, the American Society of Planning Officials presented a visiting Briton, Sir Frederic J Osborn, with its highest award, then applauded enthusiastically as he lambasted the kind of planning many of them are doing: urban renewal.

For ASPO, such behavior is no paradox. Planners are men who love talk—their own and others’ (provided it comes laced with graceful epigrams). Sir Frederic, 75-year-old prophet and promoter of dispersal, greenbelts, and new towns, had this to say:

"It is a terrible mistake, in our city renewal policies, to attempt to copy on a meaner scale for large numbers of city workers the compact high-rise environment that suits the few super-urban types. In England we are increasingly doing this, along with more intelligent things, using enormous government housing subsidies in the process. We are deceived by the temporary willingness of the underprivileged to accept high-rise dwellings at subsidized rents as a way of escape from squalid slums or doubled-up family situations. With the widening distribution and rise of real income, these people will want to join the flock seeking their own homes in or beyond our precious city greenbelts. In the long run they could only be held in these compressed surroundings by wholesale frustration of common human desires, not in the long run practicable in a basically democratic society—whatever may be possible in other types of societies."

People love suburbs

Sir Frederic, the planner largely responsible for persuading Britain to try to cut the size of London and disperse part of its population to garden cities, maintained that man's desire for quiet and simple beauty is as much response to garden cities, maintained that man's desire of London and disperse part of its population long run practicable in a basically democratic distribution of common human desires, not in the compressed surroundings by wholesale frustration. He noted. "What is new is the explosion."

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The "simple and obvious corrective," Sir Frederic suggested, is to limit the size of great cities—a step US citizens seem to be taking on their own, judging from the surprising results of the 1960 Census (see p 45). He said new towns have cost far less than the alternative of high-rise rehousing downtown and are "socially far more satisfactory."

Zoning: twisted tool?

ASPO, whose 4,000 members make it the world's largest planning group, ranged over the gamut of planning problems during its four-day session at Miami Beach's Americana Hotel. Among the provocative topics:

- What's the matter with zoning? Planners do not seem to realize that "their zoning tool has been distorted into just one more legal device to protect narrow private property interests," charged Lawyer David Craig, chairman of the Pittsburgh plan commission. "One out of 100 communities," he added, seems to have adopted zoning "to provide a barrier which the politicians could let down when it became worth while . . . . But they are a tiny minority—especially when you deduct the two-dwelling householders who have an apartment downtown for part of the year and a country retreat for the other part."

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"My husband and I had been looking for a home in the $15,000 range around Columbus for a long time," says Mrs. Robert Hart. "But when we went through the Homestead model homes of Jewel Builders, we knew our search was over—almost instantly.

"These homes were air conditioned and were so cool and comfortable. Then we learned that the filtered air meant less pollen, healthier living and easier housekeeping. That’s important with three small children! We certainly liked the layout and modern kitchen of the homes—but air conditioning was the feature that really sold us!"

Jewel Builders reports over 50% of the buyers in their Homestead tract cited air conditioning as the key influence in their buying decision. All 300 homes in the tract had it. Mr. Julius Cohen, president of Jewel Builders, says: "All the nearly 1,600 homes we plan to build during 1960 in Columbus, Pittsburgh and Youngstown areas will have air conditioning. They’ll be priced from $13,750 to $17,000."

There’s proof that air conditioning can help sell homes in northern as well as southern tracts. Summer temperatures for the Columbus area average 85°F, and they range up to 100°F. Pollen count averages 75. These climatic conditions are very similar to those in other northern cities such as Pittsburgh, Chicago, Minneapolis and Detroit.

Top-quality air conditioning units are charged with dependable Du Pont Freon® refrigerants. Call your equipment manufacturer for details about the sales power of air conditioning.

DOES YOUR TRACT FALL IN A CLIMATE SIMILAR TO COLUMBUS, OHIO?

If so, air conditioning can help you sell, just as it did for Jewel Builders. Look at the shaded area on map to left. It includes Columbus and hundreds of communities across the country with the same climatic conditions. Is your tract in this area?

*Freon is Du Pont's registered trademark for its fluorocarbon refrigerants.
St. Louis blames crime for 9% vacancy rate

St. Louis is struggling with a 9% vacancy rate in its public housing projects.

The 9% rate—enough to put a private project into financial trouble—was first reported by the St. Louis Housing Authority last December. At the end of May, with an eighth project underway and several more on paper, vacancies still stood at 9% and showed no signs of dwindling.

A temporary situation, contends Deputy Director James T. Drought. He blames adverse publicity about crime in two projects (News, Mar.) for scaring prospective tenants away. Moreover, only 15% of the displaced families from the latest slum clearance area chose public housing—confounding official expectations.

Now, says Drought, crime has been cut 59% in the two troubled projects, which were and are almost entirely Negro-occupied. The authority hired private watchmen with dogs in January. And he reports that the authority is trying to teach tenants from rural areas how to cope better with urban life (eg how to shop, how to use gas stove, refrigerator).

Drought expresses surprise at how many displaced families have bought homes instead of moving into subsidized apartments. "With a 5% vacancy rate in rental property in the city, this type of housing wasn't hard for them to find," says he.

Last January, the public housing vacancy rate had sliced its operating reserves some $312,000 below the reserve standard set by PHA. The financial picture is "no better now," says authority officials.

Scattered sites appeal to PHA boss, he says

Public housing should step up its efforts to house the aged, says Public Housing Commissioner Bruce Savage.

In his first interview since taking office March 24, the former Indianapolis realtor also expressed these views:

- "There are many things wrong with the public housing program—and they should be changed." (But he shies away from citing a single specific.)
- Scattered-site projects of new public housing strike him as a good idea, but he is skeptical of rehabilitating old apartments, as New York City has begun to do to cut the cost.

Builder Joe Eichler buys first renewal site

Homebuilder Joseph L. Eichler has become San Francisco's biggest redevelopment customer.

He has just bought four blocks in the city's Western Addition redevelopment area for $1.4 million ($34,600 per acre). The site, on the fringe of the downtown area, is in the midst of the city's oldest and most decrepit housing, untouched by the 1906 fire and now largely Negro-occupied. Eichler, one of the few to bid for the parcel, plans to build some 500 apartments in high-rise and three-story frame buildings, may use FHA Sec 213 co-op financing for some.

Eichler made his maiden bow in renewal earlier this year when he became one of nine bidders for the city's big Golden Gateway renewal project, (News, Apr.) which is still unwarranted.

URBAN RENEWAL:

HANDSOME VARIATIONS on a row-house theme in Eastwick are these four-bedroom models with streetside carports. Some 600 are planned in the initial presentation, at around $15,900.

Reynolds Metals Co, newest entry in the national redevelopment sweepstakes (News, June), has won the nation's biggest redevelopment prize: Philadelphia's 2,500-acre Eastwick project.

The decision ends more than six months of bumbling by the city's redevelopment authority in trying to decide between Reynolds and a powerful group of local builders. In January, the authority threw out all bids in hopes of negotiating a combine of the top contenders. Now, with surprising abruptness and a split 4-1 vote, it has decided the task was impossible, picked Reynolds on the basis of its original bid.

First earmarked for renewal in 1950, Eastwick is a sprawling, largely vacant hodgepodge of marshes, dirt roads, open drainage ditches and housing that ranges from neat brick bungalows to ratty squatters' shacks. It lies only 1/2 miles southwest of downtown Philadelphia. Federal planning aid was granted in 1952, a capital grant in 1957. In '58 the city council approved the project and condemnation began. Total acquisition and site preparation cost (including $5 million in fill) is an estimated $96 million. The city hopes to recover $45 million through resale to the redevelopers.

The winning plan, drawn by Greek Planner Constantine Doxiadis, calls for 10,000 new homes at $11,000 to $14,000 on two-thirds of the site, industrial development on the other third. Sound housing on the site will be saved, some of it moved to fit the plan, which features a cul-de-sac street pattern split into sectors by main roads, thus separating auto and pedestrian traffic. Reynolds' redevelopment subsidiary, Reynolds Aluminum Service Corp, with its local partners, Builders Samuel and Henry Berger, figure the whole job should take ten years. Construction will begin in 1961. Estimated final investment: $360 million-plus.

Lone dissenter in the redevelopment authority is Mrs. Goldie Hoffman, who criticized Reynolds as a redevelopment novice, acting through a "thinely financed" subsidiary. "To me, the selection of Reynolds is scarcely better than an abdication of the Authority's responsibility to select a redeveloper," she said.

But if the choice (which still must be approved by the city council) stands, it will be the fifth—and biggest—contract won by RAS since former HHF Administrator Albert M. Cole took over its reins last year (News, Feb '59 et seq). Banking on a combination of local building talent, outstanding land plans, and Reynolds' money (an initial $750,000 is earmarked for Eastwick), the company has projects in Washington, D. C.; Kansas City, Kansas; Kansas City, Mo.; and Cincinnati.

Some builders feel it re-raises the question of how wise local homebuilders are to compete with national redevelopers. The reason: bulk of Eastwick housing will be row houses, an ideal kind for homebuilders to put up. Yet a $50,000 investment in planning and presentation did not win the job for the all-local syndicate.

State prosecutor enters New York City slum fight

Where can slum fighters turn when city officials consistently fumble the ball in enforcing health and safety laws?

One answer has just been given by New York State Attorney General Louis J. Lefkowitz. He has stepped in to crack down on a flagrantly decayed slum on Manhattan's Upper West Side that city inspectors have stalled over for two years. In doing so, he may have upbested the sharpest weapon against slums in a decade: court orders bidding slumlords to mend their buildings or face contempt proceedings.

The building was first spotlighted by cries from The Rev. James A. Gusweller, slumfighting West Side Episcopal clergyman whose parish is in the area. In 1958, he complained of dangerous and insanitary conditions in the tenement. But City Investigation Commissioner Louis I. Kaplan said his men could find no violations. He challenged Gusweller to "produce a single cockroach" in the building. Last November, Gusweller again complained of conditions there, charged that inspectors were purposely overlooking them. Newsmen who checked his charges found a continued on p 63
CLASSIC MARBLE BEAUTY AT 1/3 THE COST

The brilliant marbles used by the ancient Greeks are beyond most modern budgets. But, happily, modern builders can give home buyers the same rich effects with Matico's new Antiqua Vinyl-Asbestos Tile. Antiqua glows with marble-like pattern and tone variations that distinguish each tile from every other. And Antiqua is a homeowner's dream...cleans easily, resists stains, holds its beauty for years.

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clutch of violations, none of them shown on city records.

Investigators from Lefkowitz’ office had no trouble finding violations. They characterized the building, in affidavits in New York Supreme (county) Court, as “a slum tenement and a public hazard and threat to the entire area,” added they had seldom seen one “as filthy, unsanitary, dangerous, unsafe and in such disrepair.” On this basis, Justice Samuel M. Gold ordered the owners—a partnership of ten persons—to halt their “willful and continuous disregard” of the building and health codes.

**Foundation grant to aid renewal area**

Pittsburgh’s privately-supported Buhl Foundation, is investing $45,000 to help efforts to save an aging neighborhood threatened by the backwash of slum clearance elsewhere in the city.

The money will be used to hire a full-time renewal manager for the Homewood-Brushton neighborhood, an area of large, once-fashionable homes that has been in a decline since World War I. In 1956, when the city began clearing 95 acres of slums near downtown, Negro displacees found the area one of the few where they could go. Over-crowding, with collateral strains on houses and community facilities, followed.

Early this year, Pittsburgh’s Action-Housing Inc sparked a move to make the neighborhood the city’s first non-assisted (with federal funds) renewal areas. Since then, 60 block groups have been formed, business, civic and municipal forces mobilized to create and carry out a renewal plan. Action-Housing officials hope the entry of Buhl into the field will give other foundations similar ideas.

**Will unshackling technology let costs drop 30% for new housing tracts?**

New building methods that may cut costs as much as 30% have been offered to Pittsburgh’s unique demonstration of what technology can do to make middle-income housing feasible in big cities.

Carl Koch & Assoc, one of three architectural firms working on the 1,600-family project, has developed a new system of precast concrete panels, expects it to lower the cost of a five-room apartment from $11 to $7.62 a sq ft. This would mean savings between $3,000 and $4,000 per unit from what conventional methods now yield in Pittsburgh.

“None of these figures are firm yet,” says Leon Lipshutz, senior planner for Koch. “They’re based on a lot of assumptions, and we don’t have all our outside costs yet. But they shouldn’t be too far off.”

If they are not too far off, the East Hills project (News, Mar) will be well on its way towards fulfilling its purpose: to show what modern building methods can do if unfettered by local codes, zoning, make-work restrictions, and red tape.

Although East Hills’ 130 acres lies within the city limits, Action-Housing Inc, main sponsor of the project, has won assurances the city will waive its notorious plumbing and building codes. It may have trouble with union practices that might hamper the cost-cutting production system. Allegheny County’s largest homebuilders operate in the suburbs, with non-union labor. Already, building trades unions are objecting to city plans to have Sampson Bros, a suburban homebuilder, put up 160 homes in another redevelopment project.

If all the cost-cutters are used, figures Seymour Baskin, Pittsburgh lawyer and housing finance specialist, East Hills should be able to:

- • Offer five-room apartments for $14,124 per unit and $123 a month.
- • Use of building walls as retaining walls for the steep slopes.
- • Make work restrictions, and red tape.
- • Electrical, plumbing and heating components prebuilt into walls, ceilings and floors.
- • Eight-story apartment buildings with no elevators. The steep site makes it possible to reach any level with no more than one flight of stairs.
- • Use of building walls as retaining walls for the steep slopes.
- • Use of basement area as living space (a la Koch’s Techbuilt houses).
- • Back-to-back units with entrances on two different levels.

“Our most immediate problem,” says Lipshutz, “is to find a company that will set up to mass-produce the panels. They’re big—some of them weigh up to seven tons—so we need a plant not more than 100 miles from Pittsburgh.”

continued on p 65
Here's why Modernfolds look better... last a lifetime

- You can tell a Modernfold by its rich, smooth look. And so can a home buyer. That's because Modernfold vinyl fabrics stay fresh and new looking for a lifetime. And... the way Modernfold builds doors and dividers... an occasional washing is just about the only maintenance needed.

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- **Fabric Equalizer Springs.** Compression springs like the one you see here are hidden inside the bottom hinge plates to equalize fabric tension and keep folds neat and even... always.

- **Silent, Smooth Operation.** Sturdy nylon slides, slotted on both sides for perfect guidance on the track, send the Spacemaster gliding at a touch. Prelubricated, they never need care.

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HFFA slashes quotas on Sec 221: units don't go to displacees

Despite avowals of more liberal policies, FHA's handling of Sec 220 and 221 renewal and relocation financing continues to draw fire. And authorizations for Sec 221 housing are so embarrassingly in excess of use that HFFA has begun quietly cutting them back.

- Before Senate and House housing subcommittees, John A. Haas, executive secretary of the Metropolitan Assn of General Improvement Contractors, lambasted 220 and 221 as "near-flop" as far as rehabilitation is concerned. Rep tape, delays, arbitrary conservatism by FHA in approving, FNMA in buying, the loans are the trouble, he said. Despite Congress' intent to encourage borderline cases, "in spite of all promises and pronouncements, we are getting less rehabilitation done now than ever before. . . . FHA has chosen to completely reverse this intent . . . has instituted . . . prerequisites, conditions and underwriting principles which resulted in a portfolio of mortgage insurance as gilt-edged, economically sound and riskless as gold bullion in Ft Knox. . . . to obtain a Sec 221 commitment, not less than 19 signed documents have to be produced, most of them in duplicate or triplicate. . . . this does not include inspection reports, affidavits, title insurance . . . (plus) 45 to 60 days of processing time."

- In Chicago, FHA's new district commissioner (and former heating contractor) John Waner bluntly called Sec 220 a failure under high labor costs. Rents in a renewal area, he said, could not support—half those in a non-renewal area—a feasibility finding for the full 90% of value allowed by law.

- Just as a few scattered builders are beginning to catch onto its market potential, HFFA is quietly cutting back its lagging 221 program. The reason: too many of the too few houses produced are going to buyers who don't need them. First cuts are in five cities: Atlanta, Jersey City, Auburn, Ala.; Redlands and Sanger, Calif. They follow a months-long survey of 221 operations ordered by HFF Administrator Norman Mason.

In Atlanta, where some 2,000 Sec 221 houses have been built, a 5,000-unit current authorization was cut to 3,100 for 1960-61. Of those built, about half were Negro displaceses who would not move, drawn by 30% qualified White buyers. The rest went to non-displaceses after a 60-day waiting period (though 98% of the half built where Negroes would move drew qualified buyers). In Milwaukee, authorizations for 2,068 units have attracted only 177 applications. Where officials object, FHA points out that authorizations can be restored "within three hours" of establishing genuine need.

Planners tell what's wrong with selves continued from p 59

...write principles which resulted in a portfolio of mortgage insurance as gilt-edged, economically sound and riskless as gold bullion in Ft Knox. . . . to obtain a Sec 221 commitment, not less than 19 signed documents have to be produced, most of them in duplicate or triplicate. . . . this does not include inspection reports, affidavits, title insurance . . . (plus) 45 to 60 days of processing time."

- Are planners too much concerned with process of planning, not enough with what comes out in the end? Yes, complained Grady Clay, associate editor of Landscape Architecture quarterly and realty editor of the Louisville Courier-Journal. As a result, he charged, "planned environments" today is more often "the widespread uglification that goes under the name of progress." He cited suburbs and urban renewal projects as the foremost examples. "The 'planned suburb' is usually planned for maximum return on the contractor's investment. . . . A suburban area is one in which we substitute traffic jam for forest preserve. It is farmland held by speculators long enough to double their money; the place where city folks seek to pay off mortgages in genteel company; where five acres are made to do the work of one; where one husband does the work of five servants; where the straight furrow has been replaced by the wrinkled brow; asters by ulcers; where man and Nature can live in harmony only so long as the power mower keeps running."

* Sample: The 264-year-old town of East Norwich, L.I. is fighting to save its charm by preventing highway engineers from smashing a six-lane road through its tree-lined main crossroads. Last month, residents put up signs along Route 25A—painted black on yellow like official markers: "Notice. This town to be destroyed by plans of the N.Y. State Dept. of Public Works . . . Your Town May Be Next!"
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How and why the US changed methods
to get a better count of starts

Behind the disclosure that the government has been greatly under-
counting housing starts (see p 96) lies almost a year's work by the
Census Bureau to come with the new—and more accurate—figures.

This effort began when the Secretaries of Labor and Commerce,
ending several years of staff squabbling, agreed in 1959 on a new
division of statistical responsibilities for housing. Commerce's Census
took over from Labor's Bureau of Labor Statistics the responsibility for
housing starts, building permits, and residential construction expendi­
tures. BLS took from Census the analysis and publication of the
labor data accumulated by Census field work.

The roots of this swap go back to the National Housing Inventory
of 1956—$1 million intercensal house-count which disclosed that
24% more nonfarm units had been started between 1950 and 1956
than BLS had tallied in its month-by-month reports. Whatever the
shortcomings of its statistics, BLS had one unassailable alibi: Congress
had never voted it enough money to correct the shortcomings it
already knew about. Not until last year, when Census took over the
job, did Congress boost the appropriation enough (from $528,500 to
$1 million) to make a start at counting the nation's housing—3% of
the total national output—with accuracy.

With more money, Census has made these major changes in
statistical technique:

1. Census gets reports from 51% more permit-issuing localities than before
(10,000 vs 6,600). It does not get data from all of them every month, but
it does get a monthly report on permits from 3,500 localities which account
for over 90% of the new houses built with building permits (which is
almost 85% of all housing starts). From this it projects the probable
number in the other 6,500 small towns that account for only 10% of the
permits-issuing total.

2. Instead of using a rigid formula to adjust for lag and lapse of permits,
Census makes a huge sample survey of what actually happens. Under the
old system, BLS assumed about 58% of permits became starts the month
they were issued, 23% the next month, 7% the third month, and so on for
seven months. BLS had money enough to recheck these assumptions only
once every year or two. When Census dug into this, it discovered the
actual pattern of permit usage varied sharply from month to month. So
starting in January, it took a fresh monthly sample of permits issued for
some 6,000 to 8,500 units in 250 cities. It follows every permit up, month­
by-month, until the builder begins construction or says he won't.

It was this new technique which uncovered the drop in March starts
because of unseasonably bad weather (nonfarm starts showed up as
91,500 in the new count vs 97,800 under the old). And the recovery
in April (116,200 nonfarm starts in the new count vs. 110,400 under the
old) was largely the delayed use of March permits. The old lag & lapse
concept proved too mechanical to reflect unseasonable weather.

3. Census has completely revised the method of estimating how many
units are sneak-built without permits in permit-issuing areas. It calculates
that these total 4.7% of reported permits. This is based on a fresh field
survey from November to March of localities which started issuing permits
after 1954—the six-year-old basis of the BLS figures.

4. Census has refined the methods for counting starts in areas where no
building permit is required. In 56 areas, it asks local experts (tax assessors,
city officials, health and sanitary inspectors, builders, lenders, material
dealers, utilities) what is being built. Then it verifies their reports by field
visits. Finally, enumerators drive over every road in designated smaller
tracts become effective.

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control and shut-off on each chime, plus heavy-duty transformer.

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BOCA reports 400 adoptions

The 10-year-old Basic and Abridged Building Codes of the Building Officials Conference of America have now been adopted by 416 cities. So reported Executive Secretary Paul E. Baseler to BOCA's 45th annual conference at Miami Beach's swank Eden Roc Hotel. The last year brought 57 new adoptions, he said, mostly in Connecticut, Missouri, and New Jersey. A year earlier, BOCA reported 374 communities were using their codes; how 374 plus 57 equals 416 remains unexplained.

Such gradual gains are only normal for codes. Moreover, BOCA operates on an annual budget of only $65,000 and a full-time staff of Baseler, a technical aide, and three stenos. One big plus: two years ago, it moved its headquarters from New York to Chicago, where it is affiliated with the joint headquarters of most other local government groups like the Int'l Assn of City Managers, Governor's Conference, NAHRO, ASPO, ad infinitum.

As usual, most of the five-day meeting was devoted to proposed code changes. Eighty-eight were adopted, including one aimed at encouraging grade-marked lumber in housing. BOCA revised its codes to accept NLMA joist-design tables when grade-marked lumber is used. If it is not, much stiffer requirements are imposed.

BOCA President S. Logan McConnell, head of the division of regulatory inspection in New Orleans, plugged for code uniformity inside metropolitan areas. BOCA, he said, "recognizes the substantial advantages of uniformity of building regulations and format to the official, industry, and public ... The problems resulting from differences are most acute in metropolitan areas ... BOCA proposes that the same code should be used by all communities in any such area."

This stops a long way short of the regional uniformity that must be achieved before housing can take advantage of the economies of mass production technology which now promise to achieve a significant cut in the high cost of housing during this decade. But it would be a step forward from the waste and overdesign produced by today's chaos of conflicting rules. Industry groups, rebuffed two years ago in efforts to leap to a single national standard for one- and two-family house building, now are backing efforts of BOCA and other regional code groups to spread the use of model codes. Item: Both AIA and NAHB sent staffers to the meeting.

McConnell, 65, was routinely reelected president but delegates reverse a year-old upset by unseating Alfred H. Schroeder, city architect of St. Paul, as first vice president and presidential successor-apparent. In his place, by a 65 to 42 vote, they installed Ben Saltzman, peppery borough building superintendent of Brooklyn. Saltzman had been ousted from the officer stepladder by Schroeder at last year's convention.

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BOCA has worked out a model ordinance so localities can adopt its code by reference, thus sidestepping the big cost of printing a detailed ordinance. Baseler says it should be legal even in the 19 states which still lack specific legislation permitting adoption of codes by reference. This route cuts the cost to $3.75 each (for the abridged code for towns up to 25,000) or $5.75 (for the basic code—for bigger communities) for the few copies of the codes needed for local study. For more data: BOCA, 1525 East 53rd St, Chicago 15, Ill.

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Wisconsin's best-buy-for-the-money home was built with a Bird Wind Seal roof—"of course"

"Of course" are the words of Joseph D. Starck, secretary of the well known Wisconsin building firm... "The roof of this home is of course a Bird Wind Seal roof."

Topped by a Bird Wind Seal roof, this Model Home by Math Starck & Sons of Hales Corners, Wisconsin won two important magazine awards in '59.

"MY CUSTOMERS RESPECT THE QUALITY BEHIND THE BIRD NAME" is one of the reasons Mr. Starck gives for installing Bird Wind Seal shingles on the fine homes he builds.

He goes on to say, "As a builder I like the progress that Bird builds into its products" — a pat observation, because Bird & Son has been making good building products since 1795, and pioneering product improvements all along the line.

Mr. Starck further adds, "My customers know their purchase (of a home) is backed up by the experience of responsible manufacturers."

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Bird Wind Seal Shingles
The legacy of Gil Morris

Los Angeles' building code chief was do-it-yourself slum foe

"There is no permanent solution to our slum problems unless the local desire for self-improvement is generated and cultivated. The helping hand is desirable, but must be used to produce local strength, not create a dependent satellite..."

Emanciating that credo before a House subcommittee investigating housing in 1955, Gilbert E. Morris, now 60, square-jawed boss of Los Angeles' department of buildings and safety, could point to some impressive proof of it right at home. In just three years, a rehabilitation program led by his department and free of the "helping hand" of federal subsidy had produced 12,000 repaired homes.

Exclaiming the subcommittee chairman, Rep Albert Rains (D. Ala.), after a tour: "The best I've seen... one of the brightest spots in the country."

This month, winding up 35 years in city government, Morris stands as one of the most eloquent spokesmen for urban self-help in renewal, against subsidies that most cities beg for. His Los Angeles program, grounded on the principle that "the property owners must pay their own way," stands as an international model. And at home it is still the only one that has produced solid results.

While the city's $315 million Bunker Hill redevelopment project is still bogged down in legal problems, its Skid Row rehabilitation drive has brought demolition of a third of the buildings in it, expenditure of $4.45 million for new ones, and $3.5 million for repairs to the balance. Result: tax collections have soared by $1.14 million a year, with the project only 65% complete. In other areas, six residential slums have been rebuilt, or razed and converted to commercial use.

A registered civil and structural engineer, Morris entered city service shortly after he graduated from the University of California in 1924. In 1941, he became head of the building and safety department. Defeat of a public housing law in 1952 gave him a chance to put his ideas about fighting blight into practice. With other city officials, he began pushing bulldozers around with stiff inspections, rigid enforcement—and made them like it. Many found that razing their profitable slums enabled construction of even more profitable buildings in their place.

"We started urban renewal in Los Angeles before the pork-barrel politicians even thought up their schemes of spending the taxpayers' money," he says with salty vigor.

Morris has held top offices in his profession, is a past president (1953) of the International Conference of Building Officials, and the American Society of Building Officials, in 1956 received a resolution of appreciation from his city. Today, looking forward to "an extended vacation" with his wife, and consultant work in building, he sees the rehabilitation program as his second-best achievement. The first: raising building engineering and inspection to professional levels, establishment of strict standards to safeguard citizens in an earthquake-prone city. In his view, slum fighting is merely a logical extension of such work:

"The culprits... are the cities themselves. Through timidity, lack of moral fortitude, ignorance or lack of foresight, our city governments have failed in their duty to the citizen, namely the protection of his health and property from damage.

"There is only one cure—an alert, aggressive city administration which understands the problem of blight and has the courage to awaken the citizen to his danger. Without such an administration, no amount of federal spending, no amount of tearing down and rebuilding will ever make more than a superficial dent in the progressive disintegration of a city."
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HEATING • AIR CONDITIONING
WATER HEATING
Mortgage bankers pick Tharpe, Stallard, Thompson as heads

For its next president, the 2,100-member Mortgage Bankers Assn has nominated Robert H. (for Hollis) Tharpe, president of Tharpe & Brooks, Atlanta. He could succeed B. B. (Bus) Bass, president of American Mortgage & Investment Co, Oklahoma City at the MBA convention in Chicago Oct 3-6. Carlton S. (for Sherman) Stallard, president of the Jersey Mortgage Co, Elizabeth, N.J., has been picked to follow Tharpe as first vice president. Named for second vice president is Dale M. Thompson, president of City Bond & Mortgage Co, Kansas City.

Morgan lives in Evanson, with his wife, Vernelle, and 17-year-old daughter, Heather. He is president of the board of Roycemore School, from which his daughter has just graduated, and a trustee of the Chicago Theology Seminary. Knode's career with USG spanned nearly half a century. He joined the company as an assistant operating manager in 1902, retires after serving as president for 16 years.

OFFICIALS: Mrs. Helen Holt, widow of Sen Rush T. Holt (D. W.Va.), designated as assistant commissioner of public institutions for West Virginia to become special assistant to the commissioner for FHA's nursing homes program. She was previously West Virginia's secretary of state, a member of the legislature, and a college teacher.

Two international conferences drew five housing industry figures to Geneva last month. Deputy HHFAdministrator Walter Rosenberry and Past NAREB (and NAHB) President Robert P. Gerholz of Flint, Mich, were housing advisors to the United Nations' International Labor Organization meeting. In Rosenberry's absence, HHFAdministrator Norman Mason designated URA Commissioners David M. Walker and Ralph H. Hamady, as US delegate. His advisors included Harry P. Osgood, renewal staff man for Sears Roebuck, and Zachary Fisher, New York mortgage investment man.

California probes deals of 'ten percenters'

to have adequate capital, keep a specified amount available in cash.

Trust deeds placed in the pool would have to meet specified standards of quality, be paid off by the homebuyer on a monthly basis only and be diversified by area and time. The pooled deeds would be held by an acceptable custodian, such as a bank.

Thompson, now 62 and one of the top businessmen of Kansas City, was born there, son of a physician. He graduated Phi Beta Kappa from Michigan and went to work for City Natl Bank & Trust Co of Kansas City, rose to vice presidency. City Bond & Mortgage grew out of the commercial bank. Thompson has been president since 1948. He also heads Western City Mortgage, San Francisco and finds time to be a trustee of the philharmonic orchestra, art institute, and music conservatory.

Brown, starting as a bookkeeper, became vice president of Jersey Mortgage in 1937 when it was reorganized after a Depression checkup, executive vice president in 1948, and president in 1957. Last year, the company serviced $129 million, originated $24 million.

His views: "FHA did more for builders and the industry than anything else," says Stallard. He is a booster of minimum-down-payment FHA loans, blames conventional lenders' demands for big down payments for today's splurge of second mortgages.

A round-faced, chubby man ("I'm down to 186 since I've been on a diet") with a resonant speaking voice, Stallard makes a hobby of helping education. He organized and taught a real estate mortgage course at Upsala College and is a trustee of the New Jersey MBA educational foundation.

Mortgage men face a fight to stay in business Stallard predicts. "The boom days are over," says he. "We can't just mortgage brokers, any more. We'll have to take risks." His advice: mortgage men should improve their capital positions, diversify into land development and construction loans.

Kent Taylor, who now heads Commerce Savings, and Hardy are picked to follow Thompson as executive vice presidents.

"If the lender plays the game. Then the buyer is given a receipt saying he paid $2,000 to the seller. But this leaves him $2,000 short. So the price has to be increased by $2,000 for a down payment. He can get a second mortgage, so long as the price FHA loan, and he believes payments to get second trust deed placed in the pool. Trust deeds placed in pool will have to meet specified standards of quality, be paid off by the homebuyer on a monthly basis only and be diversified by area and time. The pooled deeds would be held by an acceptable custodian, such as a bank. Tharpe & Brooks, Atlanta. He could succeed B. B. (Bus) Bass, president of American Mortgage & Investment Co, Oklahoma City.
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Controls condensation in Winter
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A practical, attractive low-silhouette installation of Vent-A-Ridge is a more-to-show, more-to-sell feature. Thousands of homes have added the saleability of additional comfort and beauty with a Vent-A-Ridge installation...at no premium in cost.

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• AVAILABLE IN 8’, 9’ & 10’ LENGTHS
Vent-A-Ridge is available in 8’, 9’ and 10’ lengths and can be compounded to any length to provide the maximum amount of free ventilating area for any attic space.

[Image of Vent-A-Ridge product]

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Letters

May issue
The story [inhal, May] about realtor-builder cooperation is the finest material on this subject that I have seen. The examples you give can be emulated in every city—large and small—to the benefit of the homebuying public, if the realtor and the builder will realize their respective responsibilities as an efficient producing and marketing team.

EUGENE CONSER, executive vice president National Assoc of Real Estate Boards

We're just starting a new subdivision and I'm going to put up some of those "Trees are sacred" signs right away. I have marked at least 15 pages where there are ideas we can use. All our signs at the point of sale need beefing up and we're going to use the ideas you suggested. We're also going to use many of the exterior presentation ideas you showed.

TOM McCOYRENZ, builder San Antonio.

After reading what you said about the importance of salesmen we've put in new methods for keeping our good men, including a new hospitalization plan and profit sharing. We get 40 copies of House & Home for all our key people.

DALE BELLAMAH, builder Albuquerque.

There are dozens of ideas we can put to use right away. I've ordered ten extra copies for our salesmen.

CHARLES CHEEZEM, builder St Petersburg.

The wonderful presentation of salesmanship and merchandising impressed me so much that I am ordering six extra copies so we have one for each sales office and for our loan, insurance, and management departments. It is chock full of good ideas.

OLIVER M. WALKER, president Walker & Dunlop Inc mortgage bankers, realtors Washington, DC.

Electric living
The April issue is most outstanding with respect to Medallion Homes and electric living generally. Your readers will get a much clearer picture of the advantages of electric living. We have ordered extra copies for our sales promotion use.

ROBERT McMURRAY, vice president—sales Public Service Co of Indiana Inc.

Congratulations for your leadership in getting the insulation people, the electric heat manufacturing people, and the serving utilities together in this first step of a long-range program to improve electric home heating in the US.

V.F. MARTIN, residential sales planner Southern California Edison Co Los Angeles.

Seattle realtors
I brought my April issue to the office this morning to share with the men in regard to "How the realtor can help builders do a better job of merchandising housing." Your articles are so well written, so pertinent, and they give enough detail so that you thoroughly understand what is going on. All in all, we are deeply grateful to you.

PRESTON COOKE Preston Cooke & Co, real estate brokers Columbus, Ohio.
money on siding and sheathing? does both jobs in one step

Exterior plywood siding styles vary from Japanese panel-and-batten to traditional lapped

2 Panel-and-batten wall on Eugene, Ore. home was simply built with standard 3/8" Exterior fir plywood nailed to studs with battens at joints, and stained. With weathering, plywood checks and acquires a pleasantly textured surface. One-step wall method meant low cost: $8.75 psf. For the smoothest siding, use overlaid fir plywood, painted.


4 Lapped plywood siding makes a rigid wall without sheathing. On this Olympia, Wash. home, 16"-wide courses were nailed to studs, with wedges at joints. Plywood may be regular or, as used here by designer-builder Charles Sten, overlaid for a premium paint job. It may be ripped, or purchased precut (beveled or plain) in several widths.

5 Board-and-batten effect on this Portland, Ore. home is Exterior fir plywood doubling as sheathing. Builder Harold Stroberger applied panels directly to studs, with battens 16" o.c. Overlaid Exterior fir plywood gave an ultra-smooth paint job. With same method and unsanded Exterior, allowed to check with weathering, a rustic board effect results.

Look for the DFPA-quality trademark on all plywood you buy

(CONTINUED)
California builder's plywood roof decking makes attractive exposed-beam ceiling

A switch to fir plywood roof decking from car decking cut labor costs 15% for a volume builder in northern California. He uses tongue-and-groove 3/4" A-D Interior plywood with the "A" face down. Ceilings are given a planked effect by V-grooving the plywood 12" o.c. Instead of building soffits, he uses a starter strip of Exterior fir plywood at the beam overhangs, with furring strips to bring its level up to the insulated roof. The plywood roof system saves labor, takes less framing, practically eliminates scrap, and gives a tight, strong roof. There are no loose boards to open up, and plywood is uniform and lightweight, hence easy for workmen to handle. Two men can cut, install and nail the average roof in a day.

Exposed plywood-and-beam ceilings are popular with home buyers. For more information about fir plywood sheathing and subfloors, write Douglas Fir Plywood Association, Tacoma 2, Washington.

Fir plywood sheathing a quality house
and subflooring help you build at lower in-place cost

New tongue-and-groove 2·4·1" plywood cut labor 37% for Tacoma, Washington builder R. H. Wegner. The 1¾" subflooring-underlayment is now available with t&g edges to eliminate blocking. Two men can lay 1,000 square feet in four hours, handling 60%; fewer pieces than with conventional joist construction.

Fir plywood subfloors have cut floor installation costs in half for Andy Oddstad, big-volume builder in northern California. Using ¾-inch PlyScord®, one man can install the average floor in one day. It used to take two men the same time to do the job. Waste is negligible and DFPA-inspected PlyScord makes a solid base for finish flooring.

Tilt-up fir plywood walls mean savings of $525 per house for Smith & Kline Construction Co., Castro Valley, Calif. They fabricate entire 40-ft. second-story walls, then tilt them up into place. This eliminates the time and cost of erecting scaffolding, and plywood’s structural strength makes bracing and blocking unnecessary.

Mechanized handling of fir plywood roof sheathing helps cut roof construction costs. H. M. Gorelick of Long Island uses a mobile crane welded to a war surplus vehicle to lift sling loads of plywood, ceiling joists, and roof framing. Shapland Homes, Champaign, Ill., gets plywood to second-story roofs with a belt conveyor.

Look for the DFPA-quality trademark on all plywood you buy

(CONTINUED)
Plywood components build a better

This house was assembled with big plywood components, not built with thousands of small pieces.

Methods used on this Seattle custom house today will be standard practice on tract houses tomorrow. Floor, walls and roof were quickly erected with stressed skin fir plywood panels on simple post-and-beam supports.

Floor panels took only 7½ man-hours to install. All components were 4 x 8 fir plywood "sandwiches" containing insulation and with lumber framing and stiffeners. Plywood type and lumber dimensions varied with application. Panelbild Systems of Lynnwood, Wash, was fabricator and installer.

Wall components, also plywood panels, took 17 man-hours to install. Outer skins served as siding; inner skins, paneling. Plywood was of two types: vertically grooved Texture One-Eleven®, which was stained; or medium-density overlaid, smoothly painted.

Roof panels, too, cut labor because they covered 32 sq. ft. at a time, providing ceiling, roof decking in one component. Man-hours required for roof: 15. Total cost of the house was $13,000, or $12.50 psf. Contractor was G. A. N. Company; architect, Charles Metcalf.
cut on-site labor up to 80%, house with closer cost control

Stressed skin panels can be used for roofs of every design: folded, flat or curved

This unusual folded plate roof brought crowds to Wedgwood Homes' model house in Portland, Ore. Its quick erection was as remarkable as its looks. Five men put up posts, beams, and prefabricated roof panels in five hours. A comparable conventional roof would take 12 man-days. Roofs like this, made of big stressed skin fir plywood panels leaning against each other in a series of rigid corrugations, are strong, speedily built, and permit long clear spans. Needing fewer supports, they are actually stronger than flat roofs using the same amount of material.

Flat panels can also be used on roofs of more conventional design, like this slightly pitched one in Denver. Builder Robert Harlan used 2 x 8-foot sandwich-type fir plywood panels for a 2,560-sq. ft. roof. The double-duty panels were strong, yet light enough for workmen to handle easily. Top and bottom skins were 3/4" Exterior fir plywood; framing and stiffeners were 2x4's. Aluminum insulation was placed inside the panel. The "A" face of the bottom skin was left exposed and painted to serve as the finished ceiling.

Vaulted roofs like the one on the Redi-Gas building in Parkland, Wash. are being adopted by more and more builders for home construction. Components were four-foot-wide arched stressed skin panels of Exterior fir plywood with paper honeycomb core. Lightweight, easily handled, each spans 16 feet. Component construction helped keep total cost of the building to $8.10 psf.

For more information on fir plywood components, write Douglas Fir Plywood Association, Tacoma 2, Wash.
Case study house proves plywood beams "best and cheapest way to do the job"

This Altadena, Calif. house was sponsored by Arts & Architecture magazine to demonstrate new ways to build better. Fir plywood box beams as roof supports were key components. Made and installed by Berkeley Plywood Co., beams were amply strong, yet light enough for easy handling. Webs of medium density overlaid Exterior fir plywood provided a superior paint base. Since beams extend from inside to outside, durability as well as appearance of finish was important. In-place cost with this premium plywood was about what heavier lumber beams would have cost and far less than glue-lams. Architects were Buff, Straub & Hensman of Los Angeles.

Floor supports in custom houses of Robert Kronenberg, Hinsdale, Ill. builder, are fir plywood box beams. He finds them strong, stable, shrinkproof. He gets longer spans than with available lumber beams.

Door lintels of these small aircraft hangars in Tacoma, Wash., are peaked fir plywood box beams. Strong, economical beams span 40 ft. and support 375 lbs. per lin. ft. Other logical applications for similar beams: garages, marinas and warehouses.
are low in weight and cost, strength, looks and stability

Plywood box beams can be fabricated in any length or shape, for any load or span.

20 Plywood box beams for garage door openings are low-cost and good-looking. Because of plywood’s high strength-weight ratio, they are easy to handle, yet amply stiff for long spans.

21 Ridge beams and exposed ceiling beams of fir plywood are smooth and attractive. Long-span beams make sense in home building because they permit maximum design freedom.

22 This warehouse illustrates use of low-cost, strong plywood beams to create a 40’ x 80’ clear area free of supporting posts or walls. Four peaked beams, spaced 20 ft. o.c., span 40 ft.

INSIST ON DFPA GRADE-TRADEMARKED FIR PLYWOOD

In building, you stake your reputation on the quality of every one of your houses. You can’t afford to take chances with inferior materials. In plywood, you can make sure of quality by always insisting on DFPA grade-trademarked fir plywood.

DFPA grade-trademarked plywood is backed by an industry-wide quality control program. It’s guaranteed by the integrity of the producers of 90% of the country’s fir and Western softwood plywood. Continual factory inspection and rigid testing in DFPA’s laboratories work together constantly to insure quality. If a mill’s plywood doesn’t measure up, use of the grade-trademark is withdrawn until it does.

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DOUGLAS FIR PLYWOOD ASSOCIATION

TACOMA 2, WASHINGTON

—a non-profit association of over 125 manufacturers of fir and Western softwood plywood. Besides quality control, DFPA conducts product research and development to supply you with new ideas and building techniques. In addition, DFPA’s national advertising presents your customers on the advantages of plywood construction.

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BILT WOOD WORK

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5. Gold-tone hardware and screens
6. Angle and radial bays from stock parts
7. Harmonizing rigid vinyl storm panels
8. Single or double insulating glass
9. Dove-tailed frame joints
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Design and photograph by White Studio

COMING NEXT MONTH

How to get better land for less and how to use good land better
The US has been building more housing units than it has been counting.

Private nonfarm housing starts counted by the old and new systems are shown by this graph. The old system's total for 1959 is 1,342,800 units. The new system—more accurate because it is based on improved statistical techniques—boosts the '59 total to 1,494,500. For the first four months of 1960, the count by the old method is 352,800, the new count 369,900. The new system also raises the totals for public nonfarm starts (not charted) from 25,700 to 36,400 for 1959 and from 8,200 to 8,400 for the first four months of 1960. The new count of farm starts (also not charted) is 22,200 for 1959 and 7,900 for the first four months of 1960.
This important news was revealed by new housing-start figures released last month by the Census Bureau.

The new figures—compared in the chart with the old ones—result from a new counting system started by Census a year ago (see News).

The total undercount in the old figures will never be known. It may have been even greater than the 11.3% average error shown by the chart for private nonfarm starts in 1959. It probably was never less than the 4.6% average error shown for the first four months of 1960.

The new figures for 1960, unlike the old ones, reflect the building slowdown caused by bad weather late this winter. So there was less undercount in the old 1960 figures than in the old 1959 figures.

This year’s new figures—based on field observations of actual starts—are immediately sensitive to unpredictable influences like unseasonable weather and materials shortages. So they provide the first accurate month-by-month picture of housing starts.

Not so the new 1959 figures—although they, too, are based on improved statistical techniques. Says Housing Economist Miles L. Colean, chairman of the advisory committee that helped Census revamp the system: “The new ‘59 figures were necessarily derived after the fact. They give a generally accurate picture for the whole year, but are not reliable on a month-to-month basis. So any comparison by months between the ’59 and ’60 new figures is not valid. But whether the new figures are for ’59 or ’60, they are more accurate than the old ones.”

Comments NAHB Economist Nat Rogg, an advisory committee member: “The new statistics don’t change the situation, but they do revise our notion of what the situation is.”

Says Economist Colean: “The most immediate need now is for revised estimates of dollar volume.” His corrected estimate for 1960 nonfarm starts: about $19 1/2 billion, up $2 billion from his former forecast (H&H, Nov ’59).

Here, according to Colean, are other ways we need to correct our old ideas of the market:

1. Starts are more concentrated in metropolitan areas than previously thought. “Last year the old system overlooked 129,700 starts in metropolitan centers but relatively few in small towns,” says Colean. One reason: Recently designated metropolitan centers were not included in the old calculations of metropolitan-area starts. The new figures show that the proportion of starts in metropolitan areas rose from 70% in 1959 to 72.5% in the first four months of this year.”

2. Single-family starts make up a slightly larger share of all housing than previously thought. “For 1959, the vast majority of nonfarm starts not counted by the old system—133,800—were single-family homes. So the new figures increase the ratio of single-family starts to all nonfarm starts. And the proportion of 1959 multifamily starts is less in the new count (15.9%) than in the old (16.8%).”

3. FHA and VA financing account for a smaller share of starts than previously thought. “The combined total of FHA and VA starts—441,700 in 1959—was 32.9% of all starts reported under the old system, 29.6% of starts reported under the new one. In the first four months of 1960, FHA and VA starts accounted for 27.7% of the total. “Unlike other housing-start figures, FHA and VA totals are based on a unit-by-unit count—not a sampling. The government knows down to the last unit how many houses are started under the two programs.”

4. The home-improvement market is smaller than previously thought. “We can now be fairly sure that a smaller volume of output has been going into the improvement of old houses and a larger volume into new construction. More new light will be shed on this in the next month or two by another major advance in housing statistics—the publication of new estimates for improvement work.”
America's need for better housing is far too great to meet through new construction alone

More than a quarter of today's 46 million family-sized dwelling units are substandard. More than half of them are obsolete or obsolescent, built more than 30 years ago, before any of today's better materials, components, and equipment were available.

Nowhere near enough manpower, nowhere near enough materials, and nowhere near enough money is available to replace all these substandard or obsolescent housing units in our generation. All we can hope to achieve is a great increase in home improvement and modernization to make these aging units more livable and more attractive.

Estimates of the cost of bringing this old housing up to today's standards of health and comfort go as high as $69 billion—and more houses are deteriorating every day to add to the size of the job.

However, our spending for modernization is also increasing. But at a modest rate. In 1956 the HHFA Administrator reported that the US was spending $10 billion a year on home improvement. By 1959 Housing Economist Miles Colean put the annual figure at $12 billion—a 20% increase—and the Saturday Evening Post noted that estimates "run as high as $14 billion." But the higher figures (reckonings by some "experts" go all the way to $20 billion) include expenditures for normal repainting and other maintenance and repair work that is not part of modernization, alterations, and additions. All figures on the volume of modernization—whether high or low—are at best only estimates, and all of them now need some reduction as a result of the Census Bureau's revelation that the US has been undercounting its new housing starts (see p 96).

Says Robert Lear, chairman of the Producers' Council distribution study committee: "The news that there has been more new housing built than the government previously reported means that
a vast amount of building products and equipment which we thought was being used in modernization work was, in fact, actually going into new construction. So we must cut down all our old estimates of the size of the modernization market."

But no matter how big—or how small—the experts estimate today's market to be, they all agree that tomorrow's market is potentially much bigger. Economist Colean, for example, believes there is "a growth potential of 40% to 50% in the next decade." Taking Colean's estimate of $12 billion as a base, this calculation sets up a modernization target of $18 billion per year.

Here are five goals to help the housing industry reach tomorrow's much bigger modernization market:

1. Better service to the homeowner public.
   Today a new kind of businessman, the one-stop modernizer, is offering homeowners modernization service that includes materials, installation, and financing all in a single package at a single firm price (see p 113 for details).

2. Better selling and promotion.
   Better selling can overcome the public's exaggerated idea of the cost of home improvement and better selling can help homeowners visualize what modernization can do for their homes. Today's new one-stop modernizers are adopting many of homebuilding's merchandising methods and the results are often as spectacular as in the new-house market (see p 121 for details).

3. Better control over the gyps.
   FHA vigilance and vigorous prosecution of violators have greatly reduced frauds in FHA Title I loans. Other areas of activity by suede-shoe boys are being policed by Better Business Bureaus, local newspapers, and industry groups. Principal weapon: publicize the gyp tricks and educate the public to do business only with reputable local firms. But much still needs doing to create more public confidence in home improvement.
   In 1959—as in every year since 1954—home improvement led all other subject classifications in the number of complaints and inquiries (219,470) received by Better Business Bureaus in cities from coast to coast. In most places complaints are increasing this year. Some involve fraud, but most are simply sharp practices—legal but unethical. The two most prevalent: 1) "bait" advertising that features low prices without the intent to sell at the advertised price; 2) deceptive advertising that creates the impression that the prices advertised apply to the illustrations when, in fact, they do not. Other complaints include misrepresentation, unreasonably high prices, undue work delays, failure to honor guarantees, misuse of completion figures, and failure to pay suppliers—leaving the homeowner with mechanics' liens on his property.

4. Better organization within the industry.
   Home improvement needs the support of a strong national association. A strong association offers: 1) the most effective means for curbing the unethical activities of the marginal operator, and 2) one of the best means for spreading much-needed management know-how. Home improvement has at least three starts on a strong national organization: NERSICA, which has been established for many years; Home Im-

5. Better appreciation of the opportunities in private urban renewal.
   As the example cited on p 126 show, some of the most profitable possibilities open to the housing industry today lie in buying and rehabilitating slum and near-slum housing. Only a limited amount of capital is required to start. Private urban renewal not only offers rewards to remodelers but holds out the promise of raising housing standards where they are lowest.

So this issue of HOUSE & HOME is researched, written, illustrated, and edited to give the architects, builders, dealers, contractors, mortgage lenders, appraisers, and realtors who make up the housing industry a better understanding of the needs and opportunities in today's home improvement market.
The new house sets the pace for modernizing the old

Model houses are a showcase for new ideas, products, and materials. To the 40 million people who visit them yearly, they are an education in what new-house living can be like.

And all the ideas and products that make a new house new also set standards for the modernization of old houses and old apartments. You can see this effect of the new house on the old by the way even apartment dwellers want the newest kitchens, with disposers and built-in ovens and ranges (for an example, see pages 127-129).

For a review of some of today's most popular new-house ideas and examples of how they can be used to make old homes and apartments like new, see the following pages.
These ideas make a new house different from an old house—and send many a model-house visitor home to modernize.
SCREENED OUTDOOR LIVING

AMPLE STORAGE

HIGH-COMFORT STANDARDS

MODERN KITCHENS

STUDY, DEN, OR EXTRA BEDROOM

SECOND OR THIRD BATH

continued
BUT

if you want to make an old house like a new one

DON’T

rip it apart and rebuild

DO

add the new on top of the old

In this example of the add-on principle, a whole new wing was built as an extension of the existing walls and roof, to give this small house a third bedroom, a second bath, and a lot more storage, as well as a covered terrace off the new bedroom (photo, right). The new floor framing is post-and-girder, with a fir plywood subfloor. The roof framing is 2x4s, 2' oc, with ½" plywood sheathing. The wall framing is conventional. Architect: Donald Burr; Builder: Winston McCall. In Tacoma.
Add a new entrance. Two gracefully curving stairs now lead up to the entrance porch of this New Orleans house; two new slim columns support the existing roof. Windows and doors were left in place, but neat louvered shutters, traditional in New Orleans, replace old sagging awnings for sun protection. New brick veneer wall below the porch gives new basement apartment a pleasant entrance. Other exterior additions: three-car carport, screened patio, complete repainting. This house, done under the Life Modernized Model House Program, was also modernized from basement to attic inside. Builder: Southern Hardware & Lumber Co.

You can easily add on to the outside

Add enclosed outdoor living. In this case, a plastic roof was added to cover the outdoor living area. New roof line extended the length of the house to remove the old roof line's jagged look and shade the large windows. Brick planter also extends the length of the house to soften the appearance of the stucco finish. New outdoor living room has sliding glass doors and (not in photo), barbecue fireplace.

Add on a garage, especially when it can be a two-car garage, like this. With the garage set away from the house, the space between is closed in, to become an up-north Florida room. This is part of a modernization program that refinished the entire house, inside and out, in the Life Modernized Model House Program. Cost of garage: $1,838; of the Florida room (with electric heat): $4,500. Builder: Mt Clemens Construction Co.
Add bedrooms in the attic. The attic shown here was turned into a bedroom and a den-sewing room, with plenty of storage between them. The attic was unfinished, but already insulated. The roof ridge was adopted as a lighting trough; plastic sheets cover the light bulbs and cut the glare. New wider window replaced the existing one. Battens to cover joints of painted plywood sheets give finished room a panelized look. Architect: Walter Widmeyer.

You can add new rooms in empty space

Add a playroom in the basement. In this basement, the ceiling was finished with acoustical tile, the floor with asphalt tile. The walls were furred out, and the end wall finished with perforated hardboard, the side wall with panels of plastic laminate (except for the center panel in the photo, which is a blackboard). The 13' length of cabinets and shelves contains plenty of storage space for toys and games and hobbies. This is an aboveground basement, so the existing window was filled in, and the aboveground side of the room (out of photo, left) was made into a window wall. The heating is now supplied by a baseboard radiator that runs the length of the window wall.
Add two small rooms one to another to get one big kitchen. The small, crowded kitchen and dining room in this case were combined to make a big living-kitchen. The wall between the two small rooms was nonstructural, so it could be removed. Slatted sliding doors were set across the far end of the new room; behind them is storage and a laundry area. There is plenty of space in the center of the room for an island cooking unit and family dining. The kitchen also got all new equipment and cabinets. Architect: Allan Liddle.

You can turn old kitchens into new rooms

Add new equipment. This old kitchen was modernized by replacing the old equipment with new. The vintage 1925 sink was replaced by a built-in sink and cabinet, complete with garbage disposer. The new sink has a single-lever faucet. The new equipment also includes a built-in dishwasher, undercounter cabinets, and low storage between the counter and the window sill.
Add a second bath. This second bath was added to a house in Philadelphia that was modernized in Life’s Modernized Model Home program. The bath was added at the end of an upstairs hall. It includes a new shower as well as a new lavatory and toilet. The shower was put in a former closet (see photo above), which had been refinished with ceramic tile. A new shower door was set into the existing door jamb. A new partition closed off the undereaves space. Modernizer: Walter Ford.

You can build in better baths

Add luxury to an existing bath. This bath, in a North Hollywood apartment, was turned into a glamorous room by some very simple changes. A new lavatory was installed in a vanity counter. The counter, faced with white unglazed ceramic tile, has a mirror its full length and storage cabinets below. The lighting soffit over the counter runs the length of the room. Architect: Lucille Raport.
Add an entrance closet. The large staircase in this Massachusetts house was closed in so a good-sized hall closet could be built in next to it and near to the entrance. Closing in the stair made a new handrail a necessity so it was made as simple as possible, in keeping with the rest of the modernization. Architect: Frederick Bruck.

Add a linen closet. The one in the photo, right, is part of an addition of an entire new wing (see page 104). Located off a bath, it combines linen storage with dressing room storage. Built-in drawers are fir plywood, covered with high-gloss enamel.

You can build in better amenities

Add a modern fireplace. In the case shown here, it was easy; the existing fireplace was left intact and painted to match the walls. A new mantel was added, at a lower height. The surrounding walls were furred, plastered, and then wallpapered in a light colored paper. Architect: Frederick Bruck.
**How to modernize continued**

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**Add a large dining room.** To turn this high-ceilinged second living room into a dining room, the mantel was stripped away. An opening was cut through the fireplace to make a passthrough to the kitchen. (The flue and its brick casing were left and covered.) Also added: dropped ceiling, new paneling over old walls. Modernizer: Walter Ford.

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**Add a large living room.** This one in Pennsylvania is big enough to have a dining area at one end (photo, right). To make the room big enough, a nonstructural archway was removed and a door closed up. With redecoration—new wallpaper, repainted trim, and refinished floors—the new living-dining room was complete.

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**You can make better use of old space**

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**Add a double-duty garage.** Overhead doors installed at both ends of the carport above turned it into a combined garage-playroom. With the streetside door closed, the rear terrace is completely private. With the door on the terrace side closed too, the garage can be used as a rainy-day playroom. The only changes required: lintels were added above each door, the walls were framed out top and sides to form the header and jambs for the doors, and new siding was applied to match the existing siding.

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Add more wiring. With all of today's new kitchen appliances, plus all of the other things like air-conditioning and television and home workshops (with their electric tools and small motors), there is no such thing as an old house with adequate wiring. The best of new houses have 100-amp service, with No. 12 conductors. This is a minimum standard for adding hidden values to old houses. Even more power will be needed if the house is to be all-electric.

Add air conditioning. One easy way to do this is with room air conditioners. The photos above show three steps in the simple process. Left: the interior drywall is cut out and a matching cut (not shown) is made on the exterior. Center: the new opening is framed with a steel casing. Right: the air conditioner is set in place and the surrounding joint sealed with a molding, inside and out. If the house has warm-air heat, cooling may be added at the furnace.

You can raise the comfort standard

Add adequate insulation. Almost no old houses have any insulation, and what they might have is far below today's comfort standards (see H&H, Apr). Insulation can be added to attics in batts, rolls, or as loose fill. But about the only way to cut heat loss through the walls is to make cuts between studs in the siding, and blow in loose fill.
BEFORE-AND-AFTER HALVES show dramatic change in house modernized by Wolf's Supply Co, York, Pa under Lura's Modernized Model Home program.
Modernizing houses is one of the fastest ways to go broke.

It is also one of the best ways to make money.

The difference is management.

Here, the country's top modernizers tell you

What you need to know to make money as a one-stop modernizer

A new kind of housing-industry professional—the one-stop modernizer—is now doing business from coast to coast.

New firms—set up to handle every step in modernizing a house—are offering homeowners a service unavailable only a few years ago, when the modernization field was monopolized by specialty contractors, odd-job men, and, unfortunately, the suede-shoe boys.

Today, the potential of one-stop modernizing is enormous. In six and a half years, Herbert Richheimer has built a business that last year grossed $4 million in four east coast markets. Charles Abrams, who started in New York's Westchester County only four years ago, last year grossed $1 million. Los Angeles' biggest ($1½ million gross), Modernizer Harold Hammerman predicts: "There may be no limit to how big a modernizer can get. Certainly there is no limit to the market."

And—since this part of the housing industry is so new—there is plenty of room for newcomers.

The logical candidates to enter the modernizing business are men who are already in the housing industry.

If you are a lumber dealer, you are already involved in modernization, if only because you supply the materials. As an established businessman, you have the community's confidence (important in a field loaded with fly-by-nights). With your capital assets, you are in a fine position to work with local lenders to get customer financing.

If you are a realtor, and especially if you handle trade-ins, you have a ready-made supply of work. So it may make great sense for you to set up a subsidiary to handle one-stop modernization.

If you are a sub-contractor—in carpentry, plumbing, heating, air conditioning or electrical work—you are probably already doing some modernization, and it should be reasonably easy for you to expand and offer one-stop service.

If you are a builder, and again particularly if you take trade-ins, one-stop modernization is a natural extension of your business. It can fit easily into your purchasing, subcontracting sales, and accounting pattern.

On the next ten pages you will find the basic trade secrets of managing a one-stop modernizing business—a dozen rules derived from the experience of the country's most successful modernizers.

By Richard O'Neill

For rule 1, turn the page
"Pricing is the key to success in modernizing"

Rule 1

Establish a price for every element on any possible job

"A price book with a detailed breakdown of prices is essential to any successful modernizing business," says highly successful Modernizer Charles Abrams of White Plains, N.Y.

"Every year," Abrams estimates, "well over half the firms in the home modernizing field go broke. Most of them fail because they don't know what their costs are so they don't know how much to charge for their work."

The highly successful firms like Abrams, Richheimer, and Zane Construction in Baltimore—who have figured their prices to the penny—report that their costs for new additions to houses average between $17 and $22 a sq ft, exclusive of plumbing. (These sq ft averages are not used to figure a job but serve as "rule of thumb" checks to be sure total job prices are within a reasonable range.)

Aside from eliminating the hazards of rough estimating, a complete price schedule has two other important functions:

1. It is a very effective sales tool. In a field loaded with "gyps" and, therefore, with wary prospects, the salesman who can show a prospect, on the spot, how the price is figured has a big advantage (for more details, see Rule 7, p 121.)

2. It provides a permanent and detailed cost record on every job. A salesman working from his price book can use form sheets that list every element involved. These records can then be used to spot changes in unit costs (see below), explain the job to lenders and handle any complaints from the homeowner.

The price schedule should include not just labor and materials, but profit, overhead, and commissions

The unit prices the top modernizers show their prospects are the total prices that will be charged to the customer—they include all commissions, overhead, and profit. (See box, far right.)

This makes it easier for the salesman to figure his price, and lets him do it in front of the customer without letting the customer know just how much is overhead, commission, and profit.

To make a normal 5% profit, top modernizers report their price must include a 30% gross profit (this means a 43% markup on labor and materials). The gross profit includes the salesmen's commission (8%), other sales costs (5%), overhead (12%) and net profit (5%).

Any prospective modernizer with enough building experience to know labor costs can develop a price schedule by working out his labor and materials costs and adding the mark-up. But you can also get the benefit of the leading modernizers' experience in pricing at an unusual new school (see box below).

The price schedule should be broken down in great detail so the salesman can figure any job

The price schedules of the top modernizers give prices in terms of small elements—per sq ft of partition, per linear foot of wall, per lighting fixture (see box, right). This means that the salesman can build up the total price, step by step, no matter what the job requires (and, in modernization, no two jobs are alike).

For example: a salesman establishing a price for converting a big closet into an extra bath might work with these cost elements:

1. Demolition (removal of shelves, moldings, old light fixtures);  
2. Per unit prices for opening the exterior wall for a window, and for the casement window, interior door, medicine cabinet, fluorescent lighting fixtures, tub and hardware, toilet and hardware, basins and hardware, holders for soap, toothbrushes, tumbler, and paper;  
3. Per sq ft prices for ceramic wall and floor tile and painting;

You can get help in setting up a price schedule from this unique new school

Starting this November, two of the country's top modernizers, Charles Abrams and Herbert Richheimer, will conduct a school to teach the pricing and operating methods they use.

Name of the school: Richheimer Modernizing Systems Inc.  
Tuition: $2,000.

Despite the high fee, 150 builders and lumber dealers have already signed up, Richheimer says. Another 250 dealers, builders and contractors are reported to be interested. (Abrams has, for some time, been selling a management manual for $500.)

For this fee, a subscriber gets three weeks intensive training in estimating, unit pricing, cost control, selling techniques, scheduling, purchasing, subcontracting, contracts, financing, and record keeping. Training will be both in-class and on the job (at Richheimer or Abrams projects).

Each person attending the school (to be held in New York City) will get a complete price schedule, plus management, promotion, financing, and advertising manuals. And "graduates" will be offered continuing advertising and merchandising surveys and consulting services.

In time, RMS plans to franchise trainees to sell manuals and set up other training schools.
4. Per lineal foot prices for a new partition; plus per lineal foot prices for new waste line, vent stack, and water supply lines.

The price schedule must be revised continuously to reflect changes in costs and methods

Your costs can vary for three reasons:

1. Labor rates change. Most labor on modernization jobs is subcontracted (see Rule 2), and when your subcontractor has to pay more for his labor he will pass this increase on to you.

2. Materials costs change. Some materials change in price continuously.—and to avoid the necessity of constantly changing your unit prices—you should allow some cushion in your prices to take up small increases. But even for more stable materials you will still have to revise your prices every few months.

3. Construction techniques improve. When you or your subcontractors find better ways to do jobs, the savings in labor cost should be passed on to you and to the customer through lower prices. A good job superintendent will always be able to tell you how many man-hours a sub took to do a particular job. This is your management control.

Most of the top modernizers use a relatively simple system to check on their unit prices; as mentioned above, their unit prices are set at a level which should give a 30% gross profit. When a salesman comes in with an order, the cost department figures actual material costs, gets a price for labor from the subcontractor. If the actual gross profit on the job comes out between 28% and 32%, the unit prices quoted the prospect are assumed to be in line. But if the actual gross profit is outside these limits, either the salesman made a mistake in quoting on the job or one or more unit prices are out of line. The cost department then finds out which unit prices are out of line and adjusts them.

(What happens to the contract with the customer when prices are out of line? Richheimer refunds to the customer any excess over a 32% gross profit. If the gross profit figures to less than 28%, the salesman must take a cut in commission or renegotiate the contract with the customer.)

And when you have a price schedule, stick with it—don’t try to match a competitor’s bid

Says Los Angeles Modernizer Harold Hammerman: “Bid a job on the basis of your price schedule—not your competitor’s bid. I’ve seen a lot of firms go broke because they cut their profit to beat a competitor’s bid. They take jobs below cost because they think it’s important to keep busy. You can’t stay in business long this way.”

Says Baltimore Modernizer Joel Zenitz: “You can’t bid against either the dishonest operator or the mechanic because their prices are impossibly low. The mechanic’s bid is low because he works for less than wages and often doesn’t know what his other costs are. The gyp’s price is almost always low because he doesn’t intend to finish the job.”

The consensus of the experts: Don’t worry if your prices seem high. As your reputation for reliability and good work grows, you will get the business. Abrams sums up: “Remember that the guy with too-low prices will not be in business in a year or so—and you will be. People don’t mind paying for a good modernizing job. They do mind paying for a bad job, even if they get it at a bargain price.”

Here are typical prices from schedules used by leading one-stop modernizers

This list of unit prices covers less than 5% of the items a complete schedule should include. Each price covers costs for material, labor, travel time, sales, commissions, overhead, profit, and insurance. Because costs vary from city to city and from time to time, these sample prices (obtained from a number of different sources) should not be interpreted as recommended prices.

Excavation under house: per cu yd. ..................................................... $ 8.00
Poured concrete footing: 12" thick x 30" deep; per lin ft ........................................ 4.20
8" block wall: stucco exterior; per sq ft ........................................ 1.35
4" concrete slab, no reinforcing; per sq ft ........................................ 85
New electric entry: 120/240v, 100-amp main switch, meter board ....................... 185.00
Convenience outlets; per outlet ......................................................... 8.50
New floor: 2"x8 joints, 1½" subfloor; per sq ft ........................................ 1.50
Exterior walls: frame, sheathing, wood siding, dry-wall; per sq ft ....................... 2.50
Exterior walls: frame, sheathing, asbestos siding; per sq ft ................................ 2.20
Brick work: 9" wall w/back up; per sq ft ........................................ 4.30
Partitions: 8', finished drywall 2 sides; per lin ft ........................................ 10.50
Ceiling: rock lath and plaster; per sq yd ........................................ 5.00
Partition (one side): rock lath and plaster; per sq yd ........................................ 4.00
Patching plaster: holes, cracks, calking; per room ........................................ 90.00
Brick up 3½" window opening, plaster interior ........................................ 90.00
Passage door in new partitions: w/jams, trim, hdwr ........................................ 54.00
Front entrance door: w/frame, trim, brass hdwr ........................................ 185.00
Single double-hung sash & frame: 2½"x4' opening, w/hdwr .................................... 75.00
Bathroom casement window, in existing opening ........................................ 42.00
French door: w/trim, hdwr, in existing opening ........................................ 58.00
Plywood underlay for tile floor; per sq ft ........................................ 4.00
½" asphalt tile; per sq ft ........................................ 5.00
½" vinyl tile; per sq ft ........................................ 1.45
Hardwood floors, finished; per sq ft ........................................ 1.05
Acoustical ceiling tile; per sq ft ........................................ .75
Colonial open string stairs: hardwood, complete, in existing well ................................ 580.00
Knotty pine paneling, unpainted; per sq ft ........................................ 1.30
Plywood paneling, unpainted; per sq ft ........................................ 1.40
Kitchen base cabinets, without counter; per lin ft ........................................ 38.00
Kitchen wall cabinets, 3 high; per lin ft ........................................ 22.00
Plastic-laminate counters: back splash, bullnose; per sq ft .................................... 6.80
Interioir paint (incl woodwork): 2 coats; per sq ft ........................................ 1.75
Exterior flat paint: 2 coats (no burning or wire brushing); per sq ft ....................... 60.00
New water service, main to house; per lin ft ........................................ 6.50
New waste & vent: 3" copper; per lin ft ........................................ 2.70
Water lines ½" copper; per lin ft per pair ........................................ 1.75
Medicine cabinet w/2 fluorescent tubes, recessed ........................................ 75.00
Lavatory: 17"x19", white, w/hdwr ........................................ 125.00
Bathtub: 5' recessed, white, w/hdwr ........................................ 260.00
Toilet: close-coupled, white, w/hdwr ........................................ 145.00
Oil furnace: 100,000 Btu w/5-ton air conditioner, no ducts .................................. 1,600.00
Gas furnace: 85,000 Btu forced warm air, no ducts ........................................ 580.00
Water heater: 60-gal electric, automatic, copper-lined ........................................ 280.00
Water heater: 40-gal, glass-lined, automatic ........................................ 215.00

For rule 2, turn the page
“Control of labor, materials, and scheduling is as

Here is the organization chart of America’s biggest modernizer

Here are some of the expert’s tips for handling subcontractors

CONSTANT CONTROL is essential: Modernizer Charles Abrams spends three hours a day checking jobs in progress.

SCHEDULE BOARD at Richheimer’s main office helps production manager move crews around on close timetable.

DAILY VISIT to every job is made by Richheimer salesman or supervisor to check progress and iron out any problems.

WORKMEN ON JOB are constantly in contact with the homeowner, must be polite and able to answer questions.
important in modernization as in new-house building"

Rule 2

Keep your payroll low by subcontracting all labor

There are two reasons for this, say the experts:
1. Unless you are very well capitalized, a large payroll can strip you of working capital in a few months of slow business. So your permanent payroll should be limited to salesmen, supervisors, an accountant, secretaries, and a draftsman.
2. "You get better work by subcontracting labor," says Charles Abrams. "We have a number of good subs in the mechanical trades and a few good crews in each of the other trades. We try to keep all of them working regularly, even though we contract with them for each job. We have established a good working basis because we schedule our jobs so carefully [see Rule 4] they can keep busy all day and all week, going from job to job.

If you pay your trades on an hourly basis, the experts point out, there is nothing to prevent them from stretching the job, since your job supervisor must cover several jobs a day and, typically, modernizing jobs are scattered across town. "With subcontractors and close scheduling the men work harder—but they make a lot more money than they could working for wages," says Abrams.

Finding good subcontractors is not easy. Several modernizers report that they have had to find good mechanics, then help them build a subcontracting business by providing training and buying tools.

When you select a subcontractor, remember that the cleanliness, courtesy, and character of his men can be as important as his prices and workmanship. On modernizing jobs (unlike new-house work) the customer is almost always on the site. And your subs' workmen are your representatives to the customer just as if they were your own employees.

Smart workmen can even work as salesmen for you. They have a good opportunity to sell because they are often invited into a house, are trained to spot modernization needs, and are looked on as experts by the homeowner. It is a good idea to offer a bonus or a premium for sales resulting from leads your subs' men produce.

How do you control the quality of your subcontractor's work? Herbert Richheimer holds part of the payment for each job in escrow until there is no possibility of customer complaints. The escrow may run as high as 25% of the total subcontract price. If a customer complains, the subcontractor must either make the repair at no charge, or Richheimer will do it and deduct the cost from the sub's final payment.

Rule 3

Buy your materials from your local lumberyard

This will save you all the headaches of setting up a separate business: 1) to maintain storage and warehouse facilities, 2) to handle materials to and from the job sites, and 3) to expedite delivery, servicing, inventory, and quality checks.

The experts' consensus: Leave all these problems to your lumber dealer, who is in the business of handling them.

Of course, a lumber dealer who expands into modernizing already has a materials business, so he can buy from himself. And similarly, a big-volume new-house builder often has his own channels of supply which he can use in his modernizing business.

But for all others, argue the experts, the service that a good lumber dealer can give you is worth more than any difference in price you might get by going into the materials business yourself.

As in new-house building, mechanical subcontractors usually supply their own fixtures, hardware, and materials, because the established distribution channels for this equipment are through these subs. If you want to cut costs in this area, you have to go into the plumbing, electrical, heating and air-conditioning business. And you should be big to do this. Herbert Richheimer, for example, has just decided he is big enough (at a $4-million-a-year volume) to go into the plumbing business—he is buying out a licensed plumbing contractor who controls supply channels. This move should, he figures, cut his costs for installed plumbing.

Rule 4

Set a tight timetable—and make subcontractors keep it

Without a good time schedule you will make an enemy of your customer and a mess of your job.

For example, in modernizing a kitchen as many as eleven trades may have to be coordinated. (The eleven trades: demolition, junk pick-up, carpentry, masonry, electrical, plumbing, flooring, plastering, tile setting, paperhanging, and painting.) Unless each trade is given a definite hour to be on and off the job (and unless your supervisors see that the schedule is kept), they will get in each other's way and boost costs out of line. And unless the job is done as quickly as possible, the homeowner—usually at home while the job is going on—will be unhappy.

Figuring just how long each subcontractor should take is a job that requires experience. Even so, Charles Abrams reports he sometimes spends as much as two hours in the office planning for every hour of work done on the job.

In order to assure subcontractors a fair profit, jobs must be scheduled so the various trades get a full day's work. It is always hard to get a subcontractor to give a reasonable price for a single, two-hour job. But if you can line up three or four jobs for him, in a sequence that will not interrupt other trades working on the same projects, you can limit his downtime and get a better price from him.

For rule 5, turn the page
Rule 5

Set up a fast financing service for your customers

"Too much of my business is cash," moans Modernizer Abrams, whose Westchester Modernization, Inc., does $1 million a year in the well heeled exurbs around New York City. His trouble: too many customers take up to six or eight months to pay "cash"—far longer than those who finance their jobs.

"The cash customer," says Abrams, "is the biggest gamble of all. He's good for the money, but he takes a long time to pay. Too many like that can break you." So one big reason you should offer—and push—financing for your customers is to turn your capital over faster, get your profit out quickly, avoid getting capital tied up in slow-pay jobs.

Another big reason is that financing makes sales with-fair-profit easier, minimizes comparison shopping. "Auto and appliance men learned long ago that the customer is interested only in the monthly payment, not the total cost," says Joseph Ekkers of Universal CIT Credit Corp. "The contractor who is a smart merchandiser quotes his total price with a break down of monthly payments." Here are eight ways to handle your customers' financing:

1. Use FHA insured improvement loans for small to middle-sized jobs

Of all the ways your customer can borrow, FHA's Title I repair-loan program is the simplest for you to handle. In 1959, it accounted for 56.8% of such loans reported to the Federal Reserve. As this is written, it was due to expire Sept 30 unless Congress acts to extend it, which seems likely.

Under it, FHA insures approved lenders against 90% of their loss on defaulted eligible loans. In return, it imposes a discount limit of 5% per year (effective interest of 9.72% per year) on loans up to $2,500, 4% on those up to the $3,500 limit for single-family homes. Repayment times may vary, but loans under $601 must be repaid in three years: none may run more than five. Multifamily dwellings are eligible for up to $2,500 per unit to a limit of $15,000 with a seven-year term, same discounts. Unlike FHA mortgages, FHA repair loans do not require the customer to pay the insurance premium. The lender does. So this extra cost—currently .55% of the loan—is not passed on to your customer.

You can use this program by going to the authorized lender nearest you, and establishing yourself as a qualified, reliable dealer or contractor. "Every community in the US has a lender qualified to lend FHA," says Roy Cooke, FHA's property improvement loan chief. "Some 13,600 are approved now."

Under his contract with FHA the lender is pledged to investigate and pass on your qualifications and reliability. Assuming you pass, you may:

1. Send or take your customer to the lender and arrange a loan direct to him. This way, the lender pays the money to the customer, who may then pay you anyway you agree—before, during, or after the job. Some remodelers, especially those with a large volume of work and a need for fast capital turnover, prefer this method.

2. Formally contract with the customer for the job, specifying materials and prices, and take his credit application to the lender. When the loan is approved, the lender notifies the customer, but withholds payment to you until the customer signs a completion certificate.

2. Use lenders' own finance plans for flexibility, broader terms

Lenders prefer their own plans because they can charge more for their money. The giant Bank of America, which started its plan in 1954, now does 93% of its fi-Xup loans this way, only 7% FHA.

One advantage of lender's own plans is their greater flexibility. Such jobs as swimming pools, barbecue pits, which are considered luxuries and hence ineligible for FHA insurance, can be financed this way. One big drawback is that banks limit the distance they will lend—in Ogden, Utah, for example, the limit is 25 miles—so contractors operating over a wide area may need to work with a half-dozen or so. Another is the very high interest rates concealed behind the discounts, which some mathematically minded customers may resist. In Philadelphia, for example, going rate currently is 8.5% discount—effective annual interest of 15.5%. In many areas, 8% (including 1% for credit life insurance) is not uncommon. But many lenders argue that if the customer can carry the monthly payments involved, this kind of financing is still cheaper than spreading the debts over a long term at lower interest—as in mortgage refinancing.

For you, using this kind of financing is virtually the same as FHA. You must satisfy the lender that you are reliable and competent and your customer's credit must meet his standards.

Finance companies are becoming more and more active in home-improvement lending. Contractors who have used them like their speedy answers, simple rules, and flexible policies. One of the biggest is Universal CIT, which makes loans up to five years at 7% discount—including credit life insurance—and imposes no dollar limit on loans. With 400 offices across the country, the New York City firm is soliciting contractors' business, lets them telephone customer credit information, okay loans by phone. Some other big companies making home-improvement loans: First Bankcredit of Minneapolis; Allied Building Credits of Los Angeles.

3. Use insurance loans if your customer has the right policy

If your customer has a life insurance policy with enough cash value to pay for his remodeling job, he can borrow the amount from his insurance company at much lower rates than he can borrow anywhere else. Current rates run around 5%, seldom more than 5.5% annual simple interest. There is no question of customer credit rating involved, since the loan is covered by the premium payments he has already made. And the only payment he must make is the interest—the principal can be simply deducted when the policy matures through death or as a fixed-date endowment. Insurance companies discourage such loans because they seldom are
repaid and families sometimes suffer from the reduced payment upon death. But they also consider it an obligation to make such loans where needed. Borrowing on insurance is getting more and more popular (new policy loans jumped 42% in the first quarter of 1960 over the first quarter of 1959—$360 million from $253 million). Arranging the loan may take as little as a week.

4. Use your own credit in a pinch, or to put excess capital to work

Where all else fails, you may want to devise your own credit program. Some remodelers offer a kind of extended cash plan that reduces the amount of capital tied up in the job. Typically it calls for 1/2 down when the job is sold, 1/3 on completion, and 1/3 in 30 to 90 days. Thus in effect they use their own credit with subcontractors and suppliers to carry the customer. And some complain that customers often hold up the final payment—where the profit lies—until some dissatisfaction is corrected.

If you have capital to invest, and your business grows big enough, you may want to organize a separate credit company to finance your remodeling and bring in other capital sources to help. "But you need at least $5 million to start," says Abrams.

5. Expand an open-end mortgage for big jobs—if the lender will allow it

Nearly everybody agrees that the ideal way to finance major remodeling is the mortgage, with its longer term, lower interest rate and payment schedule. Where a customer cannot carry the high payments of short-term personal loans, the higher dollar cost of his mortgage loan may well be offset by his need—and possibly by savings made with the improvement itself (like new insulation).

But nearly everyone also agrees that—especially in a high-interest period—mortgages are harder to use for financing. Best and easiest, for example, is the open-end mortgage, which lets homeowners borrow additional funds without the expense and bother of recasting the whole instrument. But FHA rules say any open-end borrowing must be at the same interest as the original loan, and VA rules let interest on the new amount rise only to VA's frozen-below-the-market rate.

If you find your customer has an open-end mortgage, your first step is to take him to the lender who holds it or the institution that services it, to learn if an additional advance can be arranged, how much, and under what terms (they may vary depending on how the mortgage is written). But, says Abrams: "Open-ends are involved. There's too much red tape, and it ties your capital up too long."

6. Refinance an existing mortgage if open-end won't work

Refinancing an existing mortgage is more complicated and costly than using an open-end mortgage. But it lets the mortgage be increased to include the new value of the improvement. So where the increase would exceed the limit of an open-end mortgage, refinancing may be preferable.

Refinancing may be done by the original lender or a new one. In either case a whole new mortgage is written, and the proceeds used to pay off the old balance, finance the improvement. "The process is nearly the same as originating a new mortgage," says William Kenny of Island Federal Savings & Loan, Syosset, Long Island. So are the costs. And in the case of FHA mortgages, there is an additional one point penalty for prepaying the old loan.

Obviously, such trouble and cost are worthwhile only for substantial improvement jobs. But "It can open up an immense new market for the remodeler—put him in a class with the builder," says Remodeler Herbert Richheimer, who has used it widely.

First rule for remodelers going into refinancing, says Richheimer, is "find a good mortgage broker who can deal with the lenders."

With conventional refinancing, the contractor is usually eligible to receive interim advances as the job progresses, just like a new-house builder. But under FHA Sec 203, payment is held up until the job is completed and approved. "Builders aren't too crazy about that," says Kenny.

Another hazard is the increased cost of the new mortgage in interest. New conventions will usually bear the market rate for the whole amount, and insured mortgages will usually have to carry the going discount rate—on the whole amount, not just the new money. The advent of discounts on Long Island, says Richheimer, "has cut my refinancing business 70%. We found before that refinancing costs on mortgages around $13,000 to $15,000 ran $550 to $600. With the points added on, it raised the cost of refinancing to over $1,000—and priced it out of our customers' means." In refinancing, unlike new-house financing, the customer may pay the discount points under FHA.

7. Use Sec 220 assisted loans in aging city neighborhoods

If your customers are in older, blight-threatened city neighborhoods where mortgage finance is hard to get (but where most authorities agree the biggest untapped modernization market lies) you may be able to make a special, extra-attractive kind of refinancing available to them. It is FHA Sec. 220 rehabilitation financing, which allows loans on existing houses of up to 97% of the first $13,500 of replacement costs, 85% of the next $2,500, and 70% of the balance up to a maximum of $22,500 for a single-family house.

Sec 220 loans are eligible for FNMA special assistance, for purchase at a current combined discount-and-service fee of 2 ½ points. Up to now, they have been little used because they are limited to areas certified for urban-renewal treatment. But a new, simplified procedure has just been established to help cities set up non-assisted (ie, where no federal renewal funds are involved) projects to make more neighborhoods eligible for Sec 220 financing. Instead of reams of documents, cities need now only submit a few pages outlining a general program of public improvements for such an area. Processing time has been cut to 30 days.

If you are in one of the 25 cities where FHA has just hired specialists to help push rehabilitation (News, May), you can find out more about how to use Sec 220 by talking to them. And in your regional Urban Renewal office, special rehabilitation staffs can tell you more about the program.

8. Refinance an unencumbered house with a new mortgage

Some 60% of the homes in the nation are unencumbered by any kind of debt. The bulk of them are older houses, ripe for remodeling. So there is a good chance that some of your customers will have no mortgage at all. If they and their houses offer satisfactory risks to lenders, there is nothing to prevent a new mortgage being written, either conventionally or under FHA.
"Your success can be no better than your selling techniques"

DISPLAYS of products and materials help salesman sell quality. This is Richheimer's display room in Levittown, N.Y.

CONSULTATION is prime selling tool: here, Richheimer salesman explains solutions to prospect's problem.

MODEL MODERNIZED HOUSE built by Wolff's Supply Co., York, Pa. with Lure's help, drew 5,900 families opening day. Corrie Vanderkaas

"BEFORE" PHOTO, set on easel in modernized model by Walter Ford of Philadelphia, dramatizes upgrading.

MODEL NEW HOUSE is used as showcase of modernizing ideas by Smith Lumber of Portland, Mich.

TELEVISION ADVERTISING is used by Community Builders in Chicago to show how dormers can be added to old house.
"Every prospect is a person with a problem"

Rule 6

Help your prospects make the right decision

Today only the gyps try to push prospects into a fast close.

"You must show your prospects that you can and want to be of real service to them, that you are thinking about their problems," says Modernizer Earl Robinson Jr of New Orleans.

The best way to show your prospects what they can do with their house is to show them a photo album of your past jobs. In fact, before-and-after pictures are the best way to sell any kind of improvement product—whether it be a toupee, a slenderizing program, or a Remodeled kitchen. Says Charles Abrams: "Pictures of one game-room job produced $100,000 worth of business in two months."

Your before-and-after pictures can be glossy photos, stereo color slides, or snapshots. (One idea: carry a Polaroid camera with you to all jobs, take pictures before, during, and after.) But to work best, the photos should show jobs your prospect can visit to see for himself.

Squires Construction Co, Cleveland, carries this idea a step farther: along with their stereo slides, the salesmen bring a mimeographed list of 15,000 jobs. The jobs are arranged by area so the prospect can easily find friends or neighbors who have had work done by Squires. This way the prospect sells himself.

Says Abrams, who does not close 70% of his sales till the second time round, "The man who pushes to close the job on the first visit invites the suspicion of the homeowner."

Rule 7

Let your prospects see how you figure the job

This is one reason your complete price schedule (with commissions, overhead, and profit included in unit prices—see Rule 1) is so important. As the salesman checks prices, the customer sees his job being totaled—item by item—with no rough estimating and no mysterious figures tacked on to cover profit, overhead, insurance, etc. This, says the experts, impresses the prospect.

The system has two other advantages:

1. The schedule serves as a careful checklist, assures that nothing is left out of the job. In going through the schedule the salesman will be reminded to include unit prices on items (eg, moving trees and bushes out of the way of new construction) that he might otherwise overlook.

2. The schedule helps the salesman upgrade the job because it includes unit prices for the various grades of products. Says Modernizer Walter Ford of Philadelphia: "People don't settle for the cheapest fixtures and materials when they see the quality of better fixtures in a salesman's schedule and can see the usually small price difference. Instead they buy near the top of the line."

The salesman should figure a job from a plan. He should make a rough sketch for this plan on his first visit. And on his second visit he should bring with him a finished plan drawn by a draftsman. (The leading modernizers always work with carefully drawn plans or renderings. Rough sketches, they say, suggest poor workmanship.)

Rule 8

Use a model house just as a new-house builder does

More and more modernizers are buying old houses, modernizing them, and then displaying them: 1) to whet homeowners' appetites to improve their houses, and 2) to demonstrate the quality of the firm's work. And they are finding it pays.

Item: Modernizer Paul Litvin of Mount Clements (Mich.) Lumber Co opened a modernized model in June of last year. In the next five months, the firm got $141,000 in modernization business—about four times the volume for the same period in 1958. Says Litvin: "We believe the model has been responsible for at least 75% of our new business."

Item: "7,000 people went through our modernized model during April," says Philadelphia Modernizer Walter Ford. "This did more to build up our name than all the advertising and promotion we have done during the 6½ years we've been in the business."

Item: Los Angeles Modernizer Harold Hammerman bought two identical houses side-by-side, modernized one of them and got more than 100,000 prospects to view the "before-and-after."

Here are the experts' rules for running a model:

1. Have at least three dry runs with your salesmen before you open. Be sure they know every detail of the house.
2. On opening day, and for as long as there are big crowds, use "before" pictures on easels to show people what you started with (see photo opposite).
3. Make it easy for prospects to ask about your services by including a lead card in your brochure.
4. Contact any leads immediately and arrange an appointment. Any lead that is not followed up within 48 hours may lose interest.
5. Use the basement of your model as an exhibit room to show various products used on the job and to offer literature from your suppliers. (Most big modernizers also have a permanent showroom where they exhibit products and materials.)

If you need help in setting up a model-house program, you may be able to tie in with LIFE's Modernized Model Home Program. (For details, see Rule 12, p 122.)

For rule 9, turn the page
“New-house merchandizing ideas can work for modernizers”

Rule 9

Use the same kind of advertising a new-house builder does

And like the new-house builder, you should advertise to build your standing in the community as well as to make a sale.

Most leading modernizers budget about 2% of gross for advertising. They don’t spend more, they say, because so much of their business comes from referrals by satisfied customers (see Rule 11, below). But, they point out, you cannot budget much less than 2% without risking the business that advertising does generate—about 40% of the total.

Modernizers use the same media as new-house builders: newspapers, radio, television, direct mail, billboards, and the telephone book.

San Francisco Modernizer Morris Leavitt offers this special piece of advice: “You should be a member of the local Home Improvement Council, and stress this fact in all your advertising so prospects know you aren’t a fly-by-night.”

Rule 10

Visit the job often to prove your active interest

Says San Francisco Modernizer L. J. McDermott: “This is essential for two reasons 1) it builds your reputation and good will with the homeowner, and 2) it keeps a tight check on subs and their work.

“But it is also one of the toughest parts of the business,” McDermott says, “because every homeowner becomes an architect and his wife becomes a superintendent. And you must handle them with kid gloves.”

Rule 11

Work hardest on the leads you get from your customers

“Over 60% of our work comes from referrals made by customers,” says Modernizer Willis Foster, Albany, Calif. “These leads sometimes are hard to handle because the prospect has been led to expect a lot of you, but they are the meat-and-potatoes of a modernizer’s continuing success. A referral lead is almost always a good lead.”

If you are just starting out and have no satisfied customers, you can create them as Philadelphia Realtor-Modernizer Robert Trump did. He bought two very rundown town houses near Independence Hall, completely refurbished them in authentic detail, and sold them. That job attracted so much attention that it started a whole chain of neighborhood improvement in the area, and Trump was called in frequently to modernize other old houses.

Rule 12

Tie in with promotions the way new-house builders do

New-house builders get a lot of promotional help from manufacturers, utilities, magazines, and trade associations (H&H, May). Modernizers can, too.

Modernizers can qualify for manufacturers’ promotional programs (like Owens-Corning Fiberglas’ Comfort Conditioned Home and Johns-Manville’s Seven-Star programs) which provide sales, promotion, and advertising help. For example, early this year Smith Lumber Co of Portland, Mich, tied in with Masonite to promote a model new house Smith built to sell its modernization service. Masonite designed the house, gave construction advice, helped plan advertising and promotion. The program worked so well that Smith drew as many as 4,000 visitors a week, sold 46 modernization jobs in three months.

Modernizers can also qualify for LIFE’s Modernized Model Home program. Says LIFE Building Products Merchandising Manager David Burns, “All the dealer needs to do is write to us. To qualify he must use in his model modernized house 12 basic building materials advertised in LIFE and he must satisfy us that he knows his business. After we check his credit rating and community standing, we go to work with him.”

Since the program started two years ago, LIFE has worked with over a dozen modernizers, helped them plan their model houses, and arranged for tie-ins with LIFE building product advertisers (like American-Standard, Andersen, Armstrong Cork, Celotex, Edison Electric Institute, Flintkote, Frigidaire, General Electric, Johns-Manville, Kentile, Masonite, Owens-Corning Fiberglas, Sherwin-Williams, US Plywood, Wall-Tex, and Westinghouse.)

“The program,” says LIFE’s Burns, “has at least doubled sales for most participating modernizers. Some have almost tripled their volume.”

Modernizers can also work together to create special promotions. For example: in Oakland, Calif. and St Louis (where 25% of the builders do modernizing work), the local NAHB chapters formed Home Improvement Councils to promote the work of their members. In both cities, HIC advertising almost quadrupled members’ business.
New York Life's Fresh Meadows housing is a fine case in point. Built in 1948, Fresh Meadows is being completely modernized by just two basic changes: entirely new kitchens and complete rewiring of every apartment. The original planning was so good—and so far ahead of what was common practice at the time—that these are the only two improvements necessary to make Fresh Meadows competitive with the best of today's new rental units.

What set Fresh Meadows apart? It was designed as a complete community.

Common goal of architects and owners was to provide a community environment second to none. So Fresh Meadows offers a variety of housing to attract a variety of people. It provides shopping facilities, a community theater, and schools. And it has plenty of open space, with trees and grass—and no keep-off-the-grass signs.

Good planning is important because it includes all these things. But as the Fresh Meadows modernization program proves, good planning is important for another reason: it can create housing that is just as desirable after 12 years as it was when first built.
Complete rewiring and complete new kitchens will eventually go into every garden apartment.

The rewiring program will give each apartment from eight to 12 circuits—an increase from 30 to 60 amp for a 3½-room apartment, from 45 to 150 amp for a six-room apartment. Kitchens will be new from the vinyl flooring up. New equipment includes: built-in ovens, range tops and range hoods, refrigerators, wall and base cabinets, dishwashers, and plastic countertops and backsplashes.

Modernization is scheduled for each of the 2,400 apartments in the low-rise (two- and three-story) buildings in Fresh Meadows—about 80% of the apartments in the development (the remaining 20% are in high-rise buildings). So far, apartments are being modernized only as tenants move or as they request the change.

New York Life expects that the total modernization program will cost about $2 million. Rent increases will average $16 per month—an increase from $130 to $146 for a typical 3½-room apartment, from $160 to $176 for a 4½-room apartment.

Architects for the original planning of Fresh Meadows were Voorhees, Walker, Foley & Smith. Now practicing as Voorhees, Walker, Smith, Smith & Haines, they are in charge of the modernization program.
MODERNIZED ENTRANCE to kitchen gets louvered doors to fit new style trends, set tone for changes.

MODERNIZED STORAGE includes full run of wall and base cabinets on two walls. Kitchens will get all the storage there is room for.

MODERNIZED EQUIPMENT includes the newest of built-ins: an oven-broiler, range top, range hood, and undercounter dishwasher. /END
How you can take advantage of hidden market opportunities in urban renewal

If the goal of the 1949 Housing Act—"a decent home in a good living environment for every American family"—is ever to be achieved, a lot of housing modernizers are going to make a lot of money.

You may have written off urban renewal as a morass of red tape, but renewal is not just a federal program to subsidize removal or repair of blighted areas. It is also the natural economic process by which cities continuously slough off worn out parts and come up with new ones.

This is a growing market, and the record of successful pioneers shows it can be worked on a large scale. Moreover, it can be highly profitable for the entrepreneurs who get there first. What you need most is imagination and appraisal horse-sense. Many of the nation's showcase examples of urban renewal involve not a nickel of federal planning or subsidy for land seizure. They are the result of private enterprise exploiting a private market—the kind you can get into without red tape.

Start with the worst house, not the best in its neighborhood

If you are buying property to renovate and resell or rent, this is almost the No. 1 rule-of-thumb. The standing of the neighborhood will probably put a ceiling on how much you can get for the modernized house. If your acquisition-cost-plus-renovation punctures that ceiling, profits may vanish. But even the worst house in many neighborhoods can be made livable and salable. And it should be much cheaper to buy. When it is restored, the neighborhood itself will give it added value.
Use a system to find the right houses to work on

Rundown houses that can be bought at the right price do not just walk in on modernizers. You have to seek them out—aggressively. Some big-scale operators watch auction sales and probate courts. Some have snagged valuable property in tax delinquency sales (but these are growing rarer now).

Here is the system used by a successful Ohio remodeler (100 to 150 houses a year) to acquire 90% of his property for renovation and resale:

1. Hire two full-time salesmen to drive around town looking for buyable homes. On January 2, for instance, they drive down a given street, jot down the addresses of dilapidated houses they drive down a given street, jot down the addresses of dilapidated houses—they drive down a given street, jot down the addresses of dilapidated houses. “The worst ones we can find in good neighborhoods.” Then the salesmen go to the court house, to get the owners’ names. The boys writes the owner a letter offering to buy the house. Knowing that rundown property usually is tenant-occupied, the pitch is:

“You are probably not making much money on this property, with high taxes, maintenance costs, and the uncertainties of tenant turnover.” Returns from the first mailing are small. But the office made four carbon copies at the first typing, so on April 1, a carbon of the original letter goes to the owner, with a handwritten note telling him the offer stands. The second carbon goes out in July, the third in October, and the fourth the next January. By the following February, it is time to drive down the street again and start over. By such mechanized persistence, the modernizer is able to acquire about 35% of his property. The salesmen earn up to $18,000 a year on straight commissions, he says.

2. Hire a third man to keep in touch with probate courts and lawyers handling estates. Once a week, this man gets the names of the new deaths (usually ten to 15) recorded at the court house. These were not people we get the names of the new deaths (usually ten to 15) recorded at the court house. These were not people we can use to work on them in the neighborhood came out to watch and by the time we finished we had 25 applications for each house. These were not people we lured away from the suburbs. They were slum dwellers who yearned to live like a human being, a man will act like a human.”

3. Enlist other brokers to find property. How? By letting them know you will buy used homes for cash, and give them not only a full commission on the sale but also a 90-day exclusive to resell the same property after modernization.

Do a complete modernization job rather than a patch-up repair

A case in point is that of, Joseph Frame, 57, and Melvin Gerber, 41, who have bought some of the worst houses in northwest Baltimore’s Negro slums, stripped them to frame and brick, refurbished them, and turned them into properties yielding 18%.

“Most landlords don’t understand there is more profit in completely rehabilitating a house than in letting it sit and rot,” says Frame. The secret is the cost of service calls and the type of tenant the rehabilitated house attracts. Last week, for example, I got only four service calls from 800 tenants. If I hadn’t rehabilitated my houses I’d have had 800 service calls.”

Big Landlord Label Katz of New Orleans agrees. “In the vast majority of cases, you get more return on your capital after you renovate than you did before,” he says. Lawyer Katz should know. When his father died in 1951, he left Katz and two sisters some 3,000 units of slum dwellings—mostly Negro occupied. This made him one of the city’s largest rental property owners. He voluntarily began renovating his basket-case homes ten years ago—about the same time the city itself created a division of slum prevention to compel slumlords to fix property.

Katz says he spends from $2,500 to $3,000 per unit to renovate a decrepit one-story frame house like the ones shown on p 128. Typically, he installs a complete bathroom, kitchen, gas outlets in each room, removed broken-down fireplaces and chimneys, replaces worn steps and windows. Sometimes, the toilet must be moved indoors. But rents go up from $20 or $25 a month to $50 or $60—and occupancy rates remain high. Katz figures his outlays for modernization return him 15% to 18% a year gross. That means he gets his investment back in something between 6 and 7½ years.

Says a widely respected Midwest realtor who got his start in modernizing slum property and made so much money he has now branched out into land development and investment: “Our return was 15% to 16% net—and we were able to turn over our money about four times a year for a 60% gross profit. Modernizing has always been the most profitable item of our business for the dollar volume.”

Pointing to the tenant factor, Baltimore’s Joe Frame recalls: “We bought a block of eight houses in 1958 that were vacant, vandalized, and totally uninhabitable. When we went to work on them people in the neighborhood came out to watch and by the time we finished we had 25 applications for each house. These were not people we lured away from the suburbs. They were slum dwellers who yearned to get a decent deal for once in their lives. We rented the eight houses as soon as they were finished at $12 a week. We haven’t had a vacancy since and our service calls are nil. Giving people a chance to live like a human being, a man will act like a human.”

Develop your banker’s confidence—and get a full line of credit

“Too many people in this business have a limited amount of capital because they have a limited amount of brains,” says one remodeling expert who has netted as much as $75,000 a year in the field. “They forget that the real trick in making money is financing to multiply their own capital.”

How? First, show your banker that you are an honest man doing an honest job. Point to a growing financial statement. Show that you have always had enough cash on hand to pay current bills. Then convince your lender (local S&L’s are the No. 1 source of modernization credit almost everywhere) that the $6,000 house you want to buy is a real bargain. Why? Because with only $2,500 of modernization, you can resell it for $10,000.

It will probably be denied officially, but the fact is that some S&L’s find it good business to make a mortgage loan based on the prospective resale price of the renovated house. Such deals go like this: the modernizer buys a bargain house for $6,000, figures on $2,500 for fixup and a $10,000 resale. He negotiates a 65% loan from an S&L—$6,500. That’s more than he paid for the property. But he gets only $4,000 immediately. This leaves him with $2,000 invested on a deal that should net him $1,500 profit after three months. The remaining $2,500 of the loan is taken down in construction draws as the modernizing proceeds. Lenders like this setup because it gives them firm control, makes it hard for a financially strapped contractor to divert the money to pay other bills.

Be ready to act when you find the right opportunity

Nothing eats up profits like stalling around on a modernizing job, waiting...
New Orleans: a big showcase of modernization's extremes

After the Civil War, New Orleans' Vieux Carré—the old section where the Creoles built their homes before the Americans came—began to decline. By the 1920s it was almost wholly a slum, squarely in the center of the city. About ten years ago, it began to make a real comeback. Today, it is leaping from rockbottom to smart-set neighborhood.

A leader among its renovators is Clay Shaw, managing director of International Trade Mart. He began by buying a six-room house for $9,500. He spent $1,500 for improvements, sold it for $15,000. That was in 1950. This year, the same house was resold for $30,000. In another deal, Shaw picked up four houses on a rectangular site for $22,000, devised private gardens for each with a common patio and swimming pool, sold them for $122,000. He says he grosses 14% and nets 10% to 12% on such investments.

"The French Quarter is unique," he notes. "You can disregard most of the rules for realty investment. People spend up to $75,000 to restore mansions next door to Negro-occupied slums."

At the other extreme, Landlord Label Katz, in an ordinary blighted neighborhood, spent $6,300 to remodel a decrepit frame house on St Louis Street, but raised rents from $25 to $50 a month to keep his net at 10%. He has rehabilitated hundreds of similar units.
for title to clear, waiting for FHA to process papers, waiting until a bottleneck sub gets his work done. If there is any delay, it is often ten or twelve months. This is a problem that Philadelphia Realtor Earl R. James, it is: "A complete organization ready to go." James' company, Robert J. Nash Inc, specializes in houses in rundown but centrally located neighborhoods. Here's a sample of how speed pays off:

In Philadelphia one developer bought a $100,000 ten-family slum dwellings in a court off an alley. Putting a team of subcontractors to work as soon as title cleared, James rebuilt the interiors with tile baths, hardwood floors, gas heat, modern kitchens, and new millwork including windows and doors. He put $75,000 into modernization for a total investment of $86,000. But four months later he was moving new tenants in. And instead of $12 a month rents, he was getting $75. On the property James sold for $9,950. So far, he has sold half, had no trouble renting the rest.

One modernizer in the central states figures he can cut the turnover time of his capital down to ten weeks, like this: buy a house May 1, take title May 15, move in with renovating crews May 16, finish work June 15, allow four to six weeks to resell the house and pass title. If the profit on each job runs only 10%, a modernizer should gross 40% in a year at such speeds!

Study when to sell property when to keep it for rental

No. I question is: can you afford to tie up any capital. Most modernizers can not. A rule-of-thumb: if you want gross 40% in a year at such speeds, you need $100 a month to make only 12% on a 5% net, which means about 15% gross. It's hard to find a detached one-family house you can renovate and rent for such a yield (except for bypassed areas where rocketing land values accompany major upgrading).

Ordinarily, the problem looks like this: is it a good shell or not? He puts $6,500 spend $2,500 fixing it. If you can get $10,000 for it, sell it. Why? You would need $100 a month to make only 12% gross or 7½% to 8% net (figuring 35% of your gross to cover taxes, management, and pass title). After you take off 3% depreciation, you may buy on a 5% net, which is not a good investment. And you probably can not rent an old house for $100, anyway, in your city of 500,000 because the new family of tenancy lets families drive 15 minutes out of town to a low downpayment subdivision and pay only $85 a month.

It is much easier to make the arithmetic work for two-, three-, and four-family structures. Here, you may be able to produce modernized dwellings for $5,000 to $7,000 per unit—in neighborhoods of $10,000 single-family homes. Keep them.

Look for by-passed neighborhoods where rents can jump greatly

This is the easiest area in which to make rehabilitation lick. When the convenience of central location makes a dilapidated neighborhood of ancient houses ripe for renovation and a much higher rent level, rising land values normally make almost any buy a profitable one for the modernizer. The trick is to figure out which neighborhood will first appeal to upper bohemians and then—as it seems to be working out in cities like Washington, Philadelphia, New York, and San Francisco—to upper-bracket families of all types.

The trick is to figure out which neighborhood will first appeal to upper bohemians and then—as it seems to be working out in cities like Washington, Philadelphia, New York, and San Francisco—to upper-bracket families of all types. The first is to have an elegant-in-town-ghetto. The next trick is to get in early, before the rising status of a newly popular area drives property prices up too high. Washington, D.C.'s Georgetown is the classic example. But it has been followed by the same kind of no-subsidy natural renewal through modernization in Foggy Bottom and, most recently, on Capitol Hill, where some senators now live in remodeled 16' row houses that were Negro slums seven years ago.

Do not overlook the easy selling offered by FHA 221 financing

It has taken the housing industry almost six years to discover what a goldmine it has been neglecting in FHA's Sec 221. Under 221, you can sell a new or used house on something close to give-away terms: 40 years, 100% loans for new units; 30 year, 90% loans for used units.

These fabulously easy terms were conceived in the Housing Act of 1954 to provide urban renewal displaces with cheap housing. Generally, displaces either spurn what has been built or are not in the market at the precise minutes the housing is offered. So the law provides that 221 houses may be sold to anybody after they have been held 60 days for displaced families. Existing houses may be sold on some easy terms to non-displaces if the builder or realtor has spent 20% of the mortgage loan on rehabilitation.

Last year, because the program was little used north of the Ohio and east of the Mississippi (where construction costs are high), Congress boosted the mortgage limits 20% for Sec 221 in designated high-cost areas. The legal limits for one-family homes are now $9,000 in normal areas and up to $12,000 in high-cost areas. Instead of its traditional blanket designation, FHA has recently refined its high-cost area allowances to tie them to local construction costs. And 221 has also been extended to cover two-, three-, and four-family units and rental property (the latter is eligible for 90% loans if rehabilitated).

The trouble with this gravy-covered deal has been 1) red tape and 2) Fanny Mae's reluctance to buy 221 mortgages, even though Congress has directed that it do so under its special assistance program. This currently means FNMA buys 221s at a 2½ point discount—about half what other lenders charge if they are willing to take 221 loans at all (few are).

There two distinctly different markets fit 221, says John Haas, executive secretary of the Metropolitan Assn of General Improvement Contractors of Washington, D.C. One is high-efficiency rehabilitation, for the owner-occupant threatened with code enforcement eviction if he doesn't repair his house. The other is speculative relocation housing, Haas has rehabilitated a dozen 221s, insists the program is terrific future. Anything but a real slum will do as long as it isn't a commercial neighborhood," he counsels. His rule of thumb: if there is not more than one house condemned in the block, property values should be high enough to make 221 work for rehabilitation. In Washington, each deals typically involve a six-room-plus-bath brick row house, 60 to 100 years old, bought for about $3,000. Haas figures on $4,000 for repairs; $1,000 for loan fees, title, tax, and closing costs; $2,000 for overhead and profit. "All the house needs to have is a good shell and floors. The more you replace, the more the life expectancy of the property grows, and the better off you will be arranging the loan."

Look for possibilities next to subsidized urban renewal areas

Beauty can spread as wide as blight. Nowhere is this truer than on the fringe of slum clearance projects, where federal and local governments are pouring in big subsidies to reclaim bad neighborhoods. For years, housing on the west side of Manhattan, in the 40s and 50s, has been almost wholly tenements. Now, this area, with the cheapest midtown New York land, is bordered by major renewal projects: the $205 million Lincoln Square cultural center to the north, the controversial $57 million Coliseum development to the northeast, and the $54 million Penn Station South middle-income single-family housing to the south.

The result; pioneering modernizers have begun buying up vacant tenements in the west 40s, remodeling them into push town houses with courtyards. Rents go up to $500 a month for a four-room studio.
These 15 units are the world's most advanced, all-modular, all-component houses

They were built by the US Government in Austria with Marshall Plan counterpart funds. Less than $100,000 was spent to develop plans, details, and specifications; and another $100,000 to put up 15 pilot models on a site outside Vienna (opposite).

These 15 houses go far beyond the LuReCo system: their components include not only the structure, but also all partitions, storage units, plumbing, wiring, and heating.

And these 15 houses are almost the exact opposite of the usual prefabs bought from a single supplier: each modular component was designed to mesh easily with components bought from any number of other suppliers!

The designers of the Vienna system—William K. Wittausch (US) plus a team of Austrian architects including Carl Auböck—based all their plans on a one-meter module. Next, they broke down their houses into 17 "families" of components, each "family" having anywhere from two or three to two dozen members, and each component conforming, exactly, to the one-meter module. (Next time around, the designers say, they would cut the number of parts by almost two-thirds!) Finally, they got 108 different manufacturers to bid on these 17 component types and awarded contracts to six major and 25 minor suppliers.

They save 60% to 80% of on-site time

It took the designers a year to develop their system; it took workmen on the site only three days to catch on to the advantages of modular component building; and it took only four months to complete these—to Austrians—unfamiliar pilot houses. (Normal construction time in Austria: one to two years.) Some 800 similar houses were shipped, in components, to US airbases in North Africa, where they were put up by semiskilled, native labor.
All 15 pilot houses were built out of 17 “families” of modular components

Three of these “families” are shown in drawings at left. They are: roof trusses (three varieties), exterior wall panels (six) and interior partitions (six). In addition, the Vienna system employed seven kinds of roof panels, five ceiling panels, 14 storage units (see p 134), one plumbing core, one typical warm-air heating installation, one typical wiring system—plus a few, unavoidable, on-site operations.

Prime objective of the system was complete interchangeability of parts

This was achieved in three ways: 1) by agreement on a common module; 2) by agreement on a common set of components; and 3) by a system of bidding made possible only because of prior agreement on module and components.

This bidding system was designed to fit Austrian conditions, but the principle applies to US housing as well. Bidders were not given bulky working drawings or specifications; instead they were furnished with simple sets of plans and elevations, simple diagrams showing the different components required, and simple performance standards which these components had to meet. After that, each bidder was on his own: so long as he met the modular requirements and the performance standards of the system he could use any materials or methods of construction that best suited his particular operation. In short, each supplier was encouraged to use his own ingenuity to cut costs and, at the same time, improve performance. Instead of wasting his time thinking up ways of making his product “different” from every comparable product on the market, each bidder concentrated on making it better and cheaper. One result was that almost anybody could get in on the act—and did; and the competition among would-be suppliers (of all types and sizes) greatly benefited the final product.

In taking bids on unavoidable on-site operations (foundations, landscaping, etc) the Vienna designers used a system similar to one long in use in Britain: they asked bidders to figure on specific quantities, rather than the whole job. As a result, the builder was assured that all bids were based on identical assumptions.
PLUMBING CORE contains electric water heater (with storage tank), plumbing tree, electric heating unit and exhaust fan for bathroom, flush-tank for toilet. Fixtures are attached on site.

HEATING COMPONENT is an under-slab, warm-air duct system with a furnace unit attached (not shown here). This combination of warm-air and radiant heating system was a major innovation for Austria.

EXTERIOR WALL COMPONENTS, shown here during assembly include a blank wall panel, exterior door panel, two small window panels and two windowwall units. All window panels arrive on site ready glazed.

ROOF TRUSSES being erected here come in three sizes (7, 8, and 9 meter spans). In the pilot models, trusses were topped either with panels, or with "Fural" aluminum roofing on purlins (see below).

PARTITION COMPONENTS, in six varieties, fit into splines between floor slabs and roof trusses. Wiring is distributed through attic.

CEILING PANELS come in five modular sizes, some for application to roof overhangs, others finished to resist condensation in bathrooms.

ALUMINUM ROOF COMPONENT is a patented Swiss system called "Fural," requires only purlin support, "zippers" together.

For the significance of the Vienna experiment, turn the page.
The component system includes all furniture except tables and chairs

These storage units (shown in drawings at left and in photos opposite) all follow the one-meter module in width. However, they vary in depth from one meter for walk-in closets, to 40 centimeters for shelf units. But when dissimilar units are placed back-to-back, they do add up to the standard one-meter depth—thus maintaining the modular logic of the system (see plans on p 131).

The “family” of storage components includes just about all furniture except chairs and tables. So, with the storage components in place, the houses are complete and ready for occupancy.

This standardized dimension system is basic to the technology of all modern industry

Every other modern industry subcontracts for precisely dimensioned parts; every other industry specifies, exactly, what performance standards those parts must meet; and every other industry uses dozens of different suppliers to bid on and furnish the same parts to fit together with all the other parts that ultimately make up the finished product.

Only in housing is it still the custom to prepare drawings as complicated as the dress-patterns for an 18th century ballgown, and to confuse the issue still further by describing those drawings with specifications written in triple-talk—while saying virtually nothing about performance standards (which are, after all, the only characteristics anybody cares about in the long run).

Since this project was government-sponsored and government-run—outside the US—it was possible to impose modular standards from above, as it is not possible or desirable in the ordinary course of business in the US. Obviously, before completely modular component building can become a reality for the US housing industry, a way must be found to achieve voluntary agreement on a similar set of standards.
BEDROOM STORAGE consists of two, one-meter wide units, includes drawers, dresser, and hanging space. Doors were specified either hinged or sliding.

TYPICAL STORAGE WALL UNITS, all one-meter wide, were designed for use in many areas. Coat closet shown at center has sliding doors with recessed pulls.

WALK-IN CLOSET is square in plan, contains sliding trays, shelves, hanging space.

LIVING ROOM STORAGE consists largely of modular shelf units. Vertical reveals between prefabricated units are elegant as well as practical; they can take up dimensional “slack” that might show in assembly.

GARDEN SIDE of typical component house has trim, custom-tailored look. Panel joints disappear into the modular pattern.
THE PANEL:

FROM THE NATIONAL RETAIL LUMBER DEALERS ASSN
Paul DeVille, president
(President, Northern Indiana Coal & Lumber Co)
H. R. Northup, executive vice president
Paul Ely, past president
(President, El-Hoppe Lumber Co)
Watson Malone III, past president
(President, Watson Malone & Sons)
J. A. O’Malley, past president
(General Manager, O’Malley Lumber Co)

FROM THE LUMBER DEALERS RESEARCH COUNCIL
S. B. Slaughter Jr., first vice president
(President, V. R. Construction Co)

FROM THE LUMBER MANUFACTURERS ASSN
Thomot McHugh, president
(President, Atlantic Lumber Co)
Mortimer Doyle, executive vice president

FROM THE RESEARCH INSTITUTE OF NAHB
Alan Brockbank, chairman
Robert Schmitt, past chairman

FROM THE ARCHITECTS
Robert Anthen
San Francisco

FROM THE CALIFORNIA REDWOOD ASSN
Rutted Johnston, president
(President, Union Lumber Co)

FROM THE DOUGLAS FIR PLYWOOD ASSN
G. H. Bacon, president
(Vice President, Simpson Timber Co)

FROM THE HARDBOARD ASSN
F. M. Hughes, president
(Protein, Forest Fiber Products Co)

FROM THE NATIONAL AMERICAN WHOLESALE LUMBER ASSN
J. Philip Boyd, past president
(Protein, J. Philip Boyd Co)

FROM THE NATIONAL INSTITUTE OF WOOD KITCHEN CABINETS
Arthur M. King, president
(Vice President, The Mengel Co)

FROM THE NATIONAL OAK FLOORING ASSN
Walter Wood, president
(Director, E. L. Bruce Co)

FROM THE PONDEROSA PINE WOODWORK ASSN
George M. Curtis, president
(Chairman, Curtis Companies)

FROM THE RED CEDAR SHINGLE BUREAU
Frank S. Baker, director
(Protein, Shaletown Corp)

FROM THE SOUTHERN PINE LUMBER ASSN
T. L. Letoni Temple III, director
(Vice President, Southern Pine Lumber Co)

FROM THE WEST COAST LUMBERMAN’S ASSN
H. G. Gustine, past president
(President, Gustina Bros Lumber Co)

FROM OTHER MANUFACTURERS
Charles Grey, president
American Forest Products Co
H. M. Reed Jr, president
General Plywood Co
Robert E. Pangman, president
W. H. Hunt, vice president
Georgia Pacific Plywood Co
S. E. Homers, vice president
Edwar Hines Lumber Co
Stonwood A. Murphy, exec vice president
Pacific Lumber Co
Thomas Steel, president
Simpson Timber Co

A. Bristow Wood, vice president
Ralph Smith Lumber Co

P. R. Smalls, vice president
US Plywood Corp
George Wereckhoff, vice president
Weberbanker Co

FROM THE RESEARCH LABORATORIES
K. L. Leininger, ass't chief of chemistry
Battelle Memorial Institute
H. O. Fleischer, chief, Div of Physics & Engineering
J. H. Linko, chief, Div of Timber Processing
Ferrol Products Laboratories
R. B. Roach, ass’t general manager
Wood Preserving Div
Koppers Co

FROM THE RAILROADS
William Popples, vice president
Southern Pacific Railroad

MODERATOR
P. L. Prentice, editor & publisher
House & Home

To give the lumber and wood product industries a better understanding of their customers’ needs and problems in housing . . .
To give these customers a better understanding of the many new ways wood can now be processed to make it more economical and more usable . . .
To help the wood industries foresee and meet the fast-changing, fast-growing needs of the housing industry . . .
To help the housing industry make better use of wood to sell more houses . . .

HOUSE & HOME joined the National Retail Lumber Dealers Assn and the National Lumber Manufacturers Assn in sponsoring an industry-wide

Round Table on
the use of wood in tomorrow's house

To this Round Table came:

The president, the executive vice president, and three past presidents of the National Retail Lumber Dealers Assn, together with the upcoming president of the Lumber Dealers Research Council and a past president of the National American Wholesale Lumber Assn;

The president, the executive vice president, and the promotion committee chairman of the National Lumber Manufacturers Assn, together with the research vice president of its engineering affiliate;

The presidents or top vice presidents of 17 of the biggest and most progressive lumber and millwork manufacturers, including the president of the Douglas Fir Plywood Assn, the president of the National Oak Flooring Assn, the president of the Ponderosa Pine Woodwork Assn, the president of the Hardboard Assn, the president of the National Institute of Wood Kitchen Cabinets, the president of the California Redwood Assn, the past president of the West Coast Lumbermen's Assn, a director of the Southern Pine Lumber Assn, and a director of the Red Cedar Shingle Bureau;

The chairman and the immediate past chairman of the Home Builders Research Institute;

A top-flight housing architect;

The leaders in wood product and wood market research from the Forest Products Laboratory, from Battelle Institute, from Stanford Research Institute, and from some of the big manufacturers, and

The vice president in charge of freight traffic of the railroad which is doing most to cut the cost of shipping wood products by rail.

continued
The Round Table agreed that:

Wood is the best natural material for building houses, because . . .

Wood is the only natural material that meets almost every homebuilding need—framing, roofing, flooring, subflooring, sheathing, siding, surfacing, doors, windows, shelves, cabinets, insulation, even foundations if properly treated with preservatives.

Wood is a pleasing material. Homebuyers like wood. They like its looks and they like its feel. They like its texture and its warmth. They like the soft translucence of its unpainted surface. They like its grain, different for every species, and often beautiful.

Wood is a practical material. It is strong. It is light. It is easy to nail and easy to glue, easy to cut and easy to mill, easy to finish and easy to paint. It has good insulation values. It is a natural plastic.

Wood is a durable material. Rightly treated, it will last for hundreds of years and be just as good at the end of that time as it was at the beginning. Some of the finest new houses are framed with lumber taken from century-old houses and embellished with wood paneling taken from century-old houses.

Wood and housing are interdependent and need to know much more about each other’s progress

Before FHA the housing industry was largely dependent on the lumber manufacturers and particularly the lumber dealers for its financing. So in those days it could almost be said that housing was a part of the lumber industry.

Since FHA this relationship has been reversed. Today housing has more and better financing of its own than any other industry, and housing has grown up to be the biggest of all American industries, far bigger than the lumber industry of which it was once a part. So today it could almost be said that a large segment of the lumber industry is part of the housing industry which provides its principal market.

Thirty years ago the wood industry had a near-monopoly in housing; almost every dollar the housing industry paid for non-masonry building materials was spent for wood framing, wood shingles, wood flooring, wood doors, wood windows, wood sheathing, wood siding, and other wood products.

But today wood’s monopoly in the housing market is challenged at almost every point, and year after year wood has won a little bit smaller share of the housing dollar. Wood has lost much of the window market to metal; much of the subflooring market to concrete; much of the door and door-buck market to steel; much of the flooring market to asphalt and plastics; much of the roofing market to asphalt. Other industries are already challenging wood for siding, and soon wood will face a new and critical challenge from the new sandwich panel—a challenge to the basic market for lumber, the market for framing.

Some of wood’s loss may have been inevitable, but some could have been avoided and some of the lost markets might be regained . . . .

1. If the wood industry had kept better informed about the revolutionary changes that were taking place in the housing industry and in what and how the housing industry wants to buy, and . . .

2. If the housing industry had been kept informed on the revolutionary progress that was taking place in the wood industry and the many new and improved products the wood industry can now provide.

Much more wood could be sold into every new house if the wood industry would do a better job studying the housing industry’s fast-changing and fast-expanding needs and a better job telling the housing industry what the wood industry can offer to meet those needs.

For more about the twin revolutions in the wood industry and the housing industry, see pages 141-2.

Here are some ways more wood could well be used in tomorrow’s house

1. Building more space could use a lot more wood. More space is the cheapest thing a builder can add to a house, and more space is what every homeowner and every homebuyer wants. Lack of space is the No. 1 complaint against today's houses. Four out of five new houses have bedrooms smaller than the minimum the Metropolitan calls “acceptable” for its mortgages.

2. Providing adequate storage could use a lot more wood. Lack of adequate storage is the No. 2 complaint against today's houses. Storage experts say that: Every clothes closet should have one more shelf for dead storage. Every closet should have ceiling-high doors. Master bedroom closets should be twice as long. Every linen closet should have full-depth shelves instead of today's 12" shelves. Every kitchen cabinet should be extended ceiling-high. Every attic should be floored across its usable height to provide 500 sq ft or more of fine storage. Every attic should be made accessible by a folding stair. Every living room should have at least one built-in bookcase.

3. Providing an adequate overhang could use a lot more wood. And almost every house needs a bigger overhang to 1) integrate its design; 2) keep the sun and rain off the glass; 3) protect the wall finish so the walls will need less maintenance and repainting. Adding a 4" overhang to a 1,000 sq ft house would call for 58% more roofing, 58% more roof sheathing, and 58% more roof framing, plus 600 sq ft of soffit! Because big overhangs cut maintenance costs, FHA now requires less income to buy a house with an adequate overhang than it would require to buy the same house at a lower price without the overhang.
4. Closing the carport could use a lot more wood—and so would making the garage big enough for a second car.

5. Building a basement equivalent above ground could use a lot more wood. A basement is mostly masonry and concrete, but when a builder provides space above ground for the activities that used to be below ground, the chances are he will build it mostly with wood. The wood industry's bread is buttered on the side of the basement-less house—especially the

The dealers are likely to be tomorrow's fabricators.

Better understanding is the prerequisite for better team work.

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The high cost of painting and repainting threatens the future of wood for siding

Painting by today’s methods with today’s common paints is the most expensive, inefficient, and wasteful of all homebuilding operations. It is so inefficient that the average house takes as many painter man-
hours as carpenter man-hours. It is doubly and trip­ly expensive because the same wasteful operation has to be repeated every three to five years. It is so wasteful and expensive that it threatens not only to price paint itself out of the new-house market, but also to price out all the products that require frequent repainting, first among which would be wood siding and wood trim.

Already FHA is encouraging the use of substitute materials by requiring less income to buy a more expensive house with asbestos or aluminum siding than it requires to buy a cheaper house with wood siding because the finish is supposed to last two or three times as long.

Here is a problem in whose solution the wood industry has a bigger stake than the paint industry itself because more wood than paint is involved.

There are four ways to minimize this wasteful expense. The wood industry would be well advised to promote all four:

1. Good paints can be applied better and faster with a spray than with a brush. (One man with a spray gun can apply two coats to a 1,500 sq ft house in a little over half a day.) This would change painting overnight from the most inefficient to the most efficient of all on-site operations.

2. Doors, windows, millwork, and even siding can be prefinished in the factory. (This would permit a much better finish.) Alternatively, they could be given all but the finish coat before erection.

3. New alkyd and acrylic paints are now available that are said to last two or three times as long as any of today's common paints. So far, however, only one of the big paint companies has spent any money to promote their use in homebuilding.

4. Wood siding will need much less repaints if the builder provides a good vapor barrier on the warm side behind it, good drainage below it, a good overhang above it, and good wall ventilation through the top plate.

Building codes should be modernized to let wood be used more efficiently

When wood had a near-monopoly in homebuilding, the wood industry may have profited by codes that made builders use 30% to 50% more wood than made any sense for framing, sheathing, etc.

But in today's market, where wood is everywhere challenged by competing materials:

1. The wood industry can no longer afford the competitive disadvantage imposed by senselessly excessive code requirements. Where wood cannot be used efficiently and economically, it may cease to be used at all. It makes no sense to require by law trusses spaced closer than 24" oc. It makes no sense to require studs spaced closer than 24" oc in one-story construction. It makes no sense to require studs bigger than 2x3 in non-load bearing partitions. It makes no sense to make builders waste costly man-hours putting short studs (less than 24") under a continuous header over door and window openings, where they serve no useful purpose. It makes no sense to require plywood wall sheathing thicker than 5/16" where approved by FHA.

2. The wood industry can no longer afford the competitive disadvantage imposed by code conflicts that forbid the use of wood components in one community that are perfectly legal in the next. One of the biggest LuReCo dealers was forced to stop making panels for builders by the high cost of making a different wood panel for almost every town in his territory. As home-building industrializes, wood will lose more and more of the market if code conflicts block the broad use of standardized wood components.

The National Lumber Manufacturers Assn and the Douglas Fir Plywood Assn have two of the largest and best code staffs in the country. Up to now their efforts have been devoted primarily to commercial construction; ie, to getting codes changed to let wood compete in a market that takes less than a quarter of the wood that goes into building. We believe they should shift more of their efforts to the residential field, where most of the wood sold for building is used.

Best place to begin this work is to fight for a sensible and economical uniformity in the wood use requirements of the five "model" codes, one of which (International) actually requires 16" stud spacing in one-story dwellings unless the builder provides engineering data to show that his wider spaced members are designed as columns! Once the "model" code requirements have been streamlined and coordinated it should be much easier to bring deviating local codes into line.

The National Lumber Manufacturers Assn has started a systematic analysis of the wood use requirements of the model codes, which will be followed by a similar study of local codes. It is also working with the Forest Product Laboratory to develop and sponsor a uniform national standard for wood-frame construction. These two projects should speed the day when builders everywhere can make more economical use of wood and uniform wood components.

Wasteful codes can price wood out of thousands of good houses, and wasteful codes can price thousands of good houses out of the market. That explains why the National Association of Home Builders is making code reform and code coordination its No. 1 goal for 1960.
Where and by whom should the components be prefabricated and prefinished?

As homebuilding industrializes and as more and more big question will be: who should make the parts and houses are built with parts instead of pieces the next where?

Some wood components can and will be made by the lumber mills themselves. Significantly, two of the biggest have already started developing coordinated components while a third is setting up a prefabrication subsidiary.

More can and will be made and prefished by the millwork companies who have done such a fine job in the past twenty years developing complete door and window components.

But most of the parts will have to be made and finished not very far from the erection site, partly to save the high cost of shipping air, partly to minimize transit damage to the finishes. The biggest builders can set up their own shops to make and finish their own components, but most builders will turn to nearby lumber dealers for the most economical solution of this problem. One builder member of the panel is already buying his components from a lumber dealer forty miles away; one dealer panelist is shipping components made in his yard into five other states.

Components construction seems sure to increase the homebuilding role and importance of those dealers who elect to add component manufacture and component finishing to the services they offer builders (and cut down the sales of those dealers who elect not to). Today more than 80% of the new houses are built with supplies bought from less than 20% of the dealers and this concentration will be speeded by the shift to building with components.

The wood industry has been achieving revolutionary progress in recent years

Here are some of the biggest advances everyone in the housing industry should know about:

**The big change through better forestry:**

By investing many millions of dollars in scientific tree farming, tree planting, and tree thinning, the wood industry is putting timber on a sustained yield basis and making timber a permanent national resource, thereby realizing one of the most visionary American dreams. The tragic waste from forest fires is being minimized by faster firefighting over better roads and by getting the scorched trees cut and used before they can rot in place; and now the tree farmers are tapping the new science of genetics to develop new and more useful types of trees.

**The big change from mechanization:**

Today a small man with a power saw can cut down a big tree faster than Paul Bunyan could fell it with his mighty axe. A log loader and a big truck can get the wood out over paved roads many times faster than yesterday's horses. New and bigger conveyors and new and bigger saws and peelers in the mills are converting logs into lumber with far less labor man-hours than were needed just a few years back; so the wood industry has absorbed a 41% increase in wage rates since 1950 with only an 11% increase in its wholesale price index, compared with a 22.9% increase in the price of all building materials.

**The big advance in fiber utilization:**

Said one lumberman at the Round Table: "We have almost tripled our utilization of the fiber we cut. What we can't use for lumber we use for broom handles or for chips; what we can't use for chips we use for insulation board, or for paper, or for wood flour, or for acoustical tile; and the bark we can't use for any of these needs we use for mulch for soil-conditioning."

**The big advance in new products:**

New products like plywood (over seven billion board feet last year of a product almost unknown in 1929), fiberboard (for insulating sheathing), hardboard (strong and easy to work for use indoors and out), particle board (fastest-growing new use of wood), laminated lumber (stronger than the grade from which it was made), edge-and-end-glued board ("it lets us make what the dealer can sell instead of selling the dealer what we can make").

**The big advance through research:**

Already research has shown that—

1. Wood can be impregnated with preservatives to defy termites and decay and even to challenge the use of masonry for foundations;
2. Wood can be heat-treated to fuse the lignin in its fibers to form a beautiful low-cost natural plastic surface;

**continued**
The big change in market approach:

Thirty years ago the lumber mills and the lumber fabricators may have been sitting back waiting for orders; today they are all out hustling for business. Perhaps the best evidence of this all-important change is the national advertising many manufacturers are sponsoring individually or through their species associations and the big cooperative promotion they are all supporting through the National Lumber Manufacturers Assn.

The big change in whom the houses are built for

Thirty years ago most houses were built on order for the family who had them built. Today five houses out of six are built for sale to an unknown buyer. These unknown buyers can accept or reject what is offered them, but they play no direct part in product selection; and their choice is limited to what the architects design, the builders build, the lenders finance, the dealers stock, and the realtors sell.

This is the second biggest change in the market for wood products.

The big change in how construction is financed

Thirty years ago most houses were built on a line of credit extended or arranged by the lumber dealers who were supplying them. Today FHA advance commitments and their savings and loan counterpart)

But the lumber industry must open its eyes to the simultaneous revolution in housing

Too many lumbermen have been so preoccupied with their own revolution that they have failed to understand that the housing industry was changing and advancing just as fast, so they have been slow to adjust their production, their dimensioning, and their merchandising to the vastly different market in which wood products must now be sold. Among the most important changes and advances in the housing industry are these:

The big change in who builds the houses

Thirty years ago most houses were built by small builders, most of them self-employed carpenters. Today most houses are built by businessmen builders. One-third are built by about 1,000 builders of more-than-100 houses each; two-thirds are built by some 10,000 builders of ten-or-more-houses each.

Yesterday's carpenter builders were not too interested in labor saving. Much of the labor they saved would be their own, so they were often willing to waste labor in order to pay less for their materials. Today's businessmen builders know very well that on-site labor costs 10¢ a minute, so they are willing to pay more for materials if by so doing they can cut their labor costs and achieve a lower cost in place.

This is the biggest change in the housing market for wood products.

The big advance in prefinishing:

Many wood products (notably hardwood flooring, windows, and cedar shade panels) are now available at little or no extra cost with factory finishes far better than on-site labor is likely to apply.

The big change in millwork:

Thirty years ago most windows and window frames, most doors and door frames, most kitchen cabinets and most storage units were assembled on the job by on-site labor.

Today you can buy far better windows prefabricated in many new types and better types from window makers with national reputations. You can buy far better doors and door assemblies from door manufacturers with national reputations; you can buy far better cabinets and storage units factory-made and factory-finished than most local fabricators can match.

Most of these doors and windows are treated with water-repellent preservative that improve paint performance and minimize shrinkage, swelling, and decay.

Research may soon show how wood can be made dimensionally stable which would add much more than its added cost to the value of wood for windows, doors, drawers, etc.

What is most needed now is system research into the best and most economical way to build wood and wood components into houses. This system research is beyond the scope of any one company. It must be pushed on an industry-wide basis by such groups as the National Lumber Manufacturers, the Lumber Dealers Research Council, and the Research Institute of NAHB, which offers manufacturers a unique opportunity to pre-test their new products, their fabrication plans, and their marketing programs on some of the smartest builders in the country.

The best evidence of this all-important change is the national advertising many manufacturers are sponsoring individually or through their species associations and the big cooperative promotion they are all supporting through the National Lumber Manufacturers Assn.

Round Table continued

3. Wood can be made virtually non-combustible. This costs about twice as much f.o.b. mill ($90 mbf more) on today's small volume, but wider use could bring the added cost way down. Non-combustibility could lead to much more use of wood in apartments, which are now one-fifth of the entire housing market.
make it easier for builders to finance 20 houses on bank credit than it was to finance five houses on dealer credit in the old days. This change has led to a great change in customer relations between builder and dealer, giving the builder much more freedom of choice.

The big change in how house sales are financed

Thirty years ago most homes were sold with a 50% or 60% first mortgage and a short-term second mortgage that had to be paid off fast. Today most new houses are sold with high-percent age first mortgages (up to 100% of the house price) with 20- to 30-year terms. This makes it easy for homebuyers to commit for much more expensive homes and thus doubles the market for quality homes and quality construction.

The big change in where houses are built

Since the war, most of the new houses have been built in the 168 metropolitan areas where more than most of the US population growth is concentrated. Most of the building has been in the suburbs. The small towns and farm areas have been losing population, so the only homebuilding there has been for the trade-up market.

The big change in what buyers can afford

The whole net population increase from now to 1970 will be families who could qualify FHA to pay at least $17,500 for a good house, and 60% of this increase will be families who could afford to pay at least $23,500 for a better house. So the housing industry's No. 1 problem has ceased to be how to build a good house cheap enough to get down to the market. Today's problem is how to build a house good enough to make homebuyers pay what they can afford to pay for better living at home.

The big change in the Government's attitude

As late as eight years ago, the whole pressure of federal housing policy was exerted to make builders build for the low-income market. Today this pressure has been almost reversed. FHA now requires less cash to buy a $20,000 house than FHA required in 1952 to buy a $12,000 house; less cash to buy a $13,000 house than FHA required in 1952 to buy an $8,000 house. FHA requires less income to buy a $20,000 house than FHA required as late as 1957 to buy a $15,000 house; less income to buy a $15,000 house than FHA required in 1952 to buy an $8,000 house.

The big change in how houses are built

As late as ten years ago, most houses were built one-piece-at-a-time with on-site labor and fastened together on the job with an average of 65,000 nails. Today, more and more builders are cutting their labor costs by building with parts instead of pieces—factory-made or shop-made components built to standard dimensions to fit together at the site with a minimum of on-site labor. Some builders are assembling the components of their houses in less than 18 working days from slab to completion.

From now on, the wood industry should figure that more and more of its products will go into components. Specifically, more and more houses will be built with trusses and more and more houses will be built with panels. The trusses will be built almost entirely with 2x4s and 2x6s, minimizing the need of 2x10s and 2x12s for joists. The 2x4s and the 2x3s used in the panels will be shorter than the framing members used in conventional construction.

The big change to dimensional standards

Already most merchant-built houses have standardized on a wall height of 8' plus a small tolerance; and already most horizontal dimensions are standardizing on 2' and 4' increments.

This standardization will be speeded by the change to component construction so the lumber mills should restudy all their standard lengths. Almost nobody uses an 8' stud (studs lengths under an 8' ceiling range from 7'6" to 7'8", depending on the method of construction). And 12' and 14' joists create odd-width rooms (11'4" or 13'4") that do not conform to the wall modules.

The big change in how houses are sold

More than half of all the homes built for sale last year were sold from model houses. These model houses were visited and shopped by some 39 million different adults, according to a Politz survey. They are the finest showcase for housing products, and the wood industry would be well advised to cooperate with the 3,000-odd builders who undertake the heavy expense of operating these model houses and getting out the crowds, and well advised to help them make a more effective selling feature of the wood products they use.

The big change to the complete house

Thirty years ago most built-for-sale houses were stripped-down models; the only equipment items they included were the toilet fixtures, the sink, the furnace, the wash tubs, and perhaps the stove.

Today, more and more houses are being sold fully equipped with all the labor-saving appliances the housewife would want, and an increasing amount of built-in-furniture. The package mortgage lets the builder include all these features for a minimum added down payment, with 20 to 30 years to pay off the balance. FHA requires no more income to buy the house fully equipped than FHA requires to buy a stripped-down model of the same house. The complete kitchen has become the most successful selling feature of the new house. It is selling many thousands of homes that could not otherwise be sold. This is another way of saying it is selling millions of board feet of lumber and other wood products for the wood industry.

END.
When your houses have enough exciting features, today’s buyers will queue up for them.

That’s the report coming in from builders’ 1960 openings, from early Parades of Homes, and from a spot survey of industry leaders in 25 major markets.

While many builders are having their toughest selling job in years, there are builders in every market who are selling better than ever before. One big reason for this is quickly apparent:

Houses that are selling best are loaded with exciting new features — features that spell convenience, luxury, livability, and just plain fun to today’s selective buyers. By contrast, houses that are selling slowly have nothing that distinguishes them from houses built two, three, or even five years ago.

Not all the best-selling houses have all the same features. Not all the same features are seen in every part of the country. And not all the features appear in all price classes. But enough of the same features are repeated in enough of the best-selling houses — in the $15,000-and-up price range — to show a clearly discernible pattern.

Taken alone, these features do not make a slow seller a best seller or make a bad house a good house. Architect Hank York makes the point: “A good house must be more than a collection of features. You must start with a sound plan and a good design and integrate the wanted features into the whole house.”

To meet the 25 industry leaders surveyed in this market report, and to see the features they report are “today’s best sellers,” turn the page.
Illinois Builder Neil Medema who is selling faster than any competing builder.

Jacksonville Builder Paul Lazeau, who has sold 100 houses since January.

Buffalo Architect John Highland, who has builder clients in five cities.

Salt Lake City Builder Alan Brockbank who is a past president of NAHB.

Florida Builder Gene Fisher, who has best sellers in Miami and Orlando.

Rochester Builder Jerry Cook, whose sales are "a little ahead of last year."

Peoria Builder Clarin Howe, who is having "the best year ever."

Charlotte Builder Charles Ervin, who sold 85 new houses during May.

Seattle Realtor Murdock MacPherson, whose firm sold 130 new houses in May.

Dayton Builder Charles Huber, who is selling ahead of construction.

N. Y. Realtor Irving Kern, who represents 20 builders four states.

N. J. Builder Jake Lefferts: "Sales are running 50% ahead of last year."

N. J. Realtor Jake Lefferts, who is president of the national appraisers group.

S. L. Executive Gerald Reid, whose sales are up 20% over last year.

St Louis Builder Burton Dueck, whose sales are up 50% ahead of last year.

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H&H asked these 25 industry leaders:

What features are helping sales the most?

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H&H asked these 25 industry leaders:

What features are helping sales the most?
The leaders report houses that are selling best have:

1. An attractive entryway

“A pleasant entry is most important because it makes a good first impression,” says Architect John Highland of Buffalo. Adds Chicago Builder Neil Medema: “Buyers want a foyer that doesn’t pop visitors right into the living room.”

The experts sum up: In every price class, it pays to offer as much “walk-in” appeal as you can. An entry hall provides an inviting look into the rest of the house, gives a sense of anticipation. You can hide a direct view into the living room with a grille or screen. Often, a central hall is not only attractive, but improves circulation and helps zone living and sleeping areas.

SINGLE DOOR ENTRY opens through block-floored area to living room. This entry way is a Brown & Kauffmann trademark.

To see ten other “best-seller” features, turn the page.
Houses that are selling best have

2. A kitchen to entertain in

"Visitors always gravitate to the kitchen," says Builder-Realtor Alan Brockbank of Salt Lake City. "So our buyers want the kitchen to be big enough for a party and have cabinets finished like fine furniture." Adds St Louis Builder Burton Duenke: "Women want a glamour spot to work in and entertain their friends in."

The experts sum up: First, a kitchen must be efficiently planned and well equipped. Then, to make it pleasant for entertaining, it should have color, attractive lighting, lots of counter space, handsome cabinets, some paneling or wallpaper, perhaps even a barbeque or fireplace. And it must have space enough for visitors.

Houses that are selling best have

3. Baths that look luxurious

"We know that people want luxurious bathrooms," says Banker Robert Morgan of Boston. "And the extra bath is now more important in all price ranges." Says Builder Frank Robino of Wilmington: "We're giving the luxury look: dramatic vanity, more lights, more mirrors."

The experts sum up: Most fast-selling houses have bathroom features once found only in expensive houses. These include plenty of space (even though it is not necessary), luminous ceilings, plenty of tile, good lighting for make-up or shaving, a long counter with built-in basins, lots of storage space in enclosed cabinets, big mirrors, splashes of color, fancier hardware, a tub or shower enclosure instead of a shower curtain. And more and more baths are compartmented to hide the toilet.
4. A separate dining room

"There is an overwhelming trend to a separate dining room," report Builders Meyers & Lazeau of Jacksonville. Herman Greenberg of Community Builders, Washington, agrees: "Every woman wants one." In Peoria, says Builder Clarin Howe: "If you don't have a separate dining room, you don't sell."

The experts sum up: The dining room sells houses because, to most families, it is the symbol of gracious living. To a family moving up to a better house, the separate dining room is a chance to take the dining table out of the living room or the kitchen area. It is so important to some families that when Fisher & Rosen of Miami offered a choice of a family room or a dining room, 70% of buyers took the dining room.

This separate, relatively formal, dining area is almost always supplemented by a pleasant informal dining space, either in the kitchen or in an adjacent family room. And here's another idea to watch: some of the houses in the Houston Parade had a breakfast nook built between the kitchen and family room but separate from both (photo, upper left).

FORMAL DINING ROOM is partly open to a step-down living room in Builder Maggie Plumb's Houston Parade house. The pilasters framing the archway and mural above wainscot carry out colonial feeling.
Houses that are selling best have

5. A second living area

“A good second living room is the room that sells the house,” says Seattle Realtor Murdock MacPherson.

The experts sum up: In every area of the country, fast selling houses have one or another version of the family room. In California, the family room is next to the kitchen and usually open to it. In Texas, the “den” is always at the back of the house, is often larger than the formal living room. In the Northeast, buyers want a small, private den; in Florida, a big screened porch.

Houses that are selling best have

6. Spacious rooms

“Everyone wants more space and roomier rooms,” says Ed Northway of Hutchinson Homes, Denver. Adds Banker Gare Reid of Detroit, “Everyone is after space these days. If a builder can advertise he’s got more space, he’ll sell his houses.”

The experts sum up: While space is a luxury that all American families want, they do not want just big unplanned space. They want it where it counts—usually in the living areas. Women want space that helps make a house look gracious—so smaller rooms that give an illusion of space can sometimes be as effective as larger rooms.

LONG (52') LIVING AREA in Houston model by Bob Pine is divided into living and family rooms. See-through screen separates formal and informal activities while giving visitors full impact of overall area.
Houses that are selling best have

7. A master bedroom suite

"Master bedroom suites are coming in strong," reports Builder Bernie Young, Scottsdale. Adds Dayton Builder Charles Huber: "The master bedroom in our newest model is the largest we've ever built, has a dressing room, a walk-in closet, and a private bath."

The experts sum up: This is a selling idea borrowed from expensive houses to help sell less expensive houses. An owner's suite "must have a dressing room area, a dressing table, a lot of closet space (preferably separate for the man and woman), and a handsome bath."

M A S T E R  B E D R O O M  S U I T E  in Houston Parade house by Craft & Sons has dressing alcove between master bath and walk-in closet. Bedroom also opens to private terrace at left. Plan of suite is below.

L A V A T O R Y - D R E S S I N G  R O O M  in fast-selling model by Brown & Kauffmann, Palo Alto, is directly accessible to master bedroom, is compartmented, has large closet behind louvered doors.

D R E S S I N G  T A B L E, built into storage wall, is simple, effective convenience in master bedroom designed by Architects Milhun, Ridenour & Cochran for Raymond Construction Co, Lake Sammanish, Wash.

continued
Houses that are selling best have

8. Plenty of storage in every room

“Third- and fourth-time buyers want more storage because they didn’t get it in their earlier houses,” says Builder Ralph Shirmeyer of Ft Wayne. Says Prudential’s John Jewett: “Lots of storage is more important than ever.”

The experts sum up: It is not enough to give bulk storage in garage or basement. Today buyers want organized storage for particular things and they want it in every part of the house. In the kitchen they want more cabinets for china, glasses, silver, barbecue equipment, and picnic articles. They want pantry space for cases of canned foods and bottles of soft drinks, over-sized broom closets and cabinets near the washer-dryer for soups, etc.

They want an extra linen closet, lots of storage in each bath, far more bedroom storage, and—if they can afford it—walk-in closets. (Adds Jewett: “More builders should follow Bill Levitt’s idea of putting in double shelves plus racks for hats and shoes.”) In the family room, buyers want storage for games, records, card tables, odds and ends.
Houses that are selling best have

9. A big fireplace

"A fireplace is a must," says Builder Tom McGovern, "not just because it is pleasant but because it is a symbol of home." Says Builder Burton Duenke: "We put a fireplace in every house and two in a lot of houses."

"Even in Florida, fireplaces are a big sales feature," says Builder Paul Lazeau. "We usually make them an optional extra, yet one-third of our buyers want one."

The experts sum up: The major trend is to put the fireplace in the room most used for living—often the family room. In Texas, where the formal living room is considered a parlor, the fireplace is usually in the den.

ARCHED BRICK FIREPLACE with a raised hearth is center of interest in paneled library-den in Houston Parade house built by John Daly. Used brick is one of the most popular fireplace materials.

Houses that are selling best have

10. A garage that is screened from the street

"We always try to avoid garage doors that open right into the street," says Builder Charles Ervin of Charlotte, "because the doors are never closed." Says Bernie Young: "Ninety-five percent of our garages have a side entrance."

The experts sum up: Buyers prefer a garage hidden from the street because, "everybody collects junk, but they don't want the neighbors to see it."

In most best-selling houses the garage is located so that the passerby can't look in. The garage may be in an L, at a right angle to the street. It may be in the side, or in back of the house with a rear turnaround.

In Houston, the newest trend is to detached garages. Almost all large houses have separate garages at the rear. The style is so popular there that it is hard to sell houses over $25,000 with front-facing garages.

continued
Houses that are selling best have

11. Private outdoor living areas

“Buyers love a patio with a privacy fence around it,” says Builder-Realtor Alan Brockbank of Salt Lake City. Says Banker Elwood Knapp of Pittsburgh: “We like to see patios that are more than just a concrete dot.”

The experts sum up: Three things are happening to outdoor living areas:

1. They are getting bigger.
2. There are more of them per house. More and more houses are being built with patios outside the main living area plus a separate dining patio and a patio opening to the master bedroom.
3. They are more private—for no one wants outdoor living in a goldfish bowl. One way to give a patio privacy is with landscaping. But more builders are including in the price a fence of wood, plastic, brick, solid or decorative block, or screening.
This chart tells you "the best-seller features" in 25 cities

It tabulates the opinions of experts (see p 146) in 25 market areas. Check marks indicate that leaders in that city reported that the listed feature is a significant help in selling new houses today.

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JULY 1960
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There's no other wood window line so right for so many situations as the Qualitybilt 4-Way line! The photographs above vividly demonstrate the unique ability of these windows to fit in anywhere...and almost magically enhance the appearance of each and every building, residential or commercial. Hundreds of pleasing combinations derive from only two basic series — TWO-SASH and SINGLE SASH — to make Awning, Hopper, Outswinging Casements, or Fixed Units. And, the finest of hardware and glazing are available to suit any building requirement. Each window is completely weather-stripped and toxic-treated. You'll be pleased at the price, too!

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Be sure to see

NEW WAYS TO BUILD BETTER

A monthly report on home building ideas, products, and techniques

Starting here

Technology

How some future designers see the house of the future

The house of 1980 may look like this scale model, say Pratt Institute students who designed it. The house would be shipped in a mobile-home-size package—one rectangular shell within another.

At the site, the inner shell would be pivoted at right angles to the outer shell. Wall panels would fold out from both shells and arched roof sections span the corner rooms.

Here is a new roof component for spans up to 50'

This trough-deck component (designed by Plywood Fabricators Service, Chicago) supports 100 times its own weight. Plywood webs with lumber flanges and stiffeners form troughs 16" oc. Trough depth (6" to 16") and plywood thickness (3/16" to 5/8") depend on span length. A 100 sq ft panel with 6" deep troughs can be handled by two men.

And on the following pages

More Technology

Faster way to build hyperbolic paraboloids. . . . New vinyl works for hot-water pipe. . . . Warm-air systems move into the electric-heat market.

What the leaders are doing

Temporary school turns into apartments. . . . New way to market-test a model. . . . Crane saves $50 a house. . . . Smash-hit Parade of Homes.

New Products


Publications

another growing AllianceWare market!

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says Howard R. Byers

Howard Byers is copartner in Byers & Stein—a firm with a solid reputation around Fort Wayne, Indiana. TWINDOW helped them build that reputation. Byers & Stein use it in every window of every home they build. They feel no home is well insulated without it. “TWINDOW is just as important as wall and roof insulation, if a builder really wants to build a quality house.”

TWINDOW is two panes of glass with a layer of air sealed between. It insulates; keeps a home warmer in winter, cooler in summer . . . cuts heating and cooling bills to the bone. TWINDOW minimizes window frosting, steaming and condensation. And there’s no need for storm windows. TWINDOW is a permanent storm window.

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...the window pane with insulation built in
TWINDOW Insulating Glass in every window,"

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TWINDOW keeps the kitchen comfortable—makes it a bright, cheerful place to work.

TWINDOW panes form an arresting frame for the fireplace by bringing the outside view inside.

Pittsburgh Plate Glass Company

Paints • Glass • Chemicals • Fiber Glass In Canada: Canadian Pittsburgh Industries Limited
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save stacking, lifting, clutter and clutter!

K-V fixtures make kitchen living more carefree, more comfortable, so much more convenient. Low-cost, easily-installed, they turn hard-to-reach, unhandy spaces into neat storage areas—and ball-bearing, easy-glide K-V kitchen fixtures save stacking, lifting, clutter and clutter. Women love the remarkable efficiency of K-V kitchen fixtures. When they try one—they want them all. Write for complete information.

KNAPE & VOGT MANUFACTURING COMPANY
Grand Rapids, Michigan

Manufacturers of adjustable shelf hardware, sliding and folding door hardware, closet fixtures, sliding drawer hardware, Tite-Joint Fasteners and Handy Hooks for perforated board.

162 HOUSE & HOME
When poles and palms don’t mix...

No poles or overhead wires will mar the beauty of Arvida's Royal Palm Yacht & Country Club residential community! With 742 homesites, this distinguished Boca Raton, Florida community is putting all utilities underground. For the job Arvida selected Orangeburg Fibre Conduit—the best known, best-selling Brand in America. And for good reasons: Orangeburg Conduit is lightweight, easy to install. Its self-sealing joints and impermeable walls keep water out for good. Its 100% smooth fibre raceway adds years to cable life. Get all the facts on Orangeburg Fibre Conduit. Write Dept. HH-70 for Catalog 52.

More buyers qualify for your to “Comfort-Conditioned”

When full Fiberglas* Insulation is used, the homeowner saves on monthly heating costs. This reduces total monthly housing expense and means that a prospect who has lower effective monthly income can qualify for FHA insured mortgages. This means more prospects for your houses.

Take these two simple steps to qualify more buyers for your Comfort-Conditioned Homes:

1. When you make out FHA Form 2005, “Description of Materials,” clearly point out on Page 4, Item 26, that you have used more insulation than FHA minimum requirements.

2. Prominently show the total calculated heat loss of the dwelling on the heating system layout.

In line with its announced policy of encouraging the use of money-saving quality products,

**FHA will then:**

1. Give full recognition for the added insulation. The added insulation will contribute toward a higher rating of physical security as reflected in Item 41 on Form 2017 (Architectural Report).

2. Estimate the annual cost of heating (Item 15 on Form 2017) to reflect fuel savings resulting from extra insulation which will reduce the estimate of monthly housing expense.

3. Determine the reduction in net income requirements from a Housing Expense Chart (sample below) which shows how savings in monthly housing expense reduce net income requirements.

---

**PROSPECTIVE MONTHLY HOUSING EXPENSE RELATED TO MORTGAGOR'S EFFECTIVE* MONTHLY INCOME**

**NATIONAL AVERAGE - ALL JURISDICTIONS**

1955, 1956 and 1957 Experience Averaged

1. **Mortgagor's Effective Monthly Income:** The estimate of the amount of dependable income (after deduction of Federal Income Tax) that is likely to prevail through the first one-third of the mortgage terms."

2. **Prospective Monthly Housing Expense:** This includes... monthly payments to principal and interest... FHA's estimated cost of maintenance and repair, heating, air conditioning, and other utility costs."—from FHA 136821-P, "The Housing Expense Chart."

---

*Based on Mortgages Insured Under Section 203 on Owner-Occupied Single-Family Homes*

*$150 $200 $250 $300 $350 $400 $450 $500 $550 $600 $650 $700 $750 $800 $850 $900 $950 $1000

--*

PROSPECTIVE MONTHLY HOUSING EXPENSE RELATED TO MORTGAGOR'S EFFECTIVE* MONTHLY INCOME

1955, 1956 AND 1957 EXPERIENCE AVERAGED

BASED ON MORTGAGES INSURED UNDER SECTION 203 ON OWNER-OCUPIED SINGLE-FAMILY HOMES

$150 $200 $250 $300 $350 $400 $450 $500 $550 $600 $650 $700 $750 $800 $850 $900 $950 $1000

$150 $200 $250 $300 $350 $400 $450 $500 $550 $600 $650 $700 $750 $800 $850 $900 $950 $1000

PROSPECTIVE MONTHLY HOUSING EXPENSE RELATED TO MORTGAGOR'S EFFECTIVE* MONTHLY INCOME

$150 $200 $250 $300 $350 $400 $450 $500 $550 $600 $650 $700 $750 $800 $850 $900 $950 $1000

---

*After Income Tax Deduction*  
**Effective** Monthly Income of Mortgagors

1955, 1956 AND 1957 EXPERIENCE AVERAGED

BASED ON MORTGAGES INSURED UNDER SECTION 203 ON OWNER-OCUPIED SINGLE-FAMILY HOMES

$150 $200 $250 $300 $350 $400 $450 $500 $550 $600 $650 $700 $750 $800 $850 $900 $950 $1000

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*Effective** Monthly Income of Mortgagors

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$150 $200 $250 $300 $350 $400 $450 $500 $550 $600 $650 $700 $750 $800 $850 $900 $950 $1000

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1668

HOUSE & HOME
FHA homes when you insulate standards—here’s how:

A letter dated January 1960 to all FHA Field Office Directors from Deputy Commissioner C. R. Sweet, will assist in their properly estimating operating expense. This is important because over-estimating can exclude a significant number of prospects. He states:

“It is particularly important to recognize the effect which . . . insulation . . . and other construction features may have on annual heating and cooling costs. “Builders should be encouraged to take advantage of this to reduce total monthly housing expense.

“The addition of insulation alone over and above the FHA minimum can produce (these) results . . .”

Typical savings and lower income requirements for a selection of cities are shown at the right —

### EXAMPLES OF APPROXIMATE SAVINGS AND LOWER INCOME REQUIREMENTS BY CITIES

<table>
<thead>
<tr>
<th>City</th>
<th>Estimated Annual Heating Operating Savings in $</th>
<th>Estimated Amount ($) by which Annual Gross Income can be reduced to qualify</th>
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<tbody>
<tr>
<td>Albany</td>
<td>63</td>
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<td>Baltimore</td>
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<td>240</td>
</tr>
<tr>
<td>Washington, D. C.</td>
<td>48</td>
<td>320</td>
</tr>
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</table>

Note: Figures in table are based on these Conditions:
1. 30' x 40' ranch house over vented crawl space.
2. Windows and doors 20% of gross wall area.
3. Comparison made between 40 Btu/h/sq. ft heat loss in +20°F and warmer winter design temperature areas; 50 Btu/h/sq. ft in colder areas and 6" Fiberglas in ceilings, 3" in walls and floors.
4. Reduction in required income estimated from Median Housing Expense line on appropriate chart for each city.
5. Mortgagor's effective monthly income taken as $450.
6. The added cost of the extra insulation at 5.5% interest on a 20-year mortgage was taken into account in computing the above figures.

Now in its third successful year, the Comfort-Conditioned Home Program includes over 1100 builders and 90,000 homes. For complete details on the Comfort-Conditioned Home, and how its advertising and merchandising program can help you, call your nearest Fiberglas representative. Or write, Owens-Corning Fiberglas Corporation, Dept. 67-C, Toledo 1, Ohio.
A.G.A* Sells Year 'Round Gas Air Conditioning to the House Beautiful Pace-Setter Market

A massive quality market...over four million pace-setters...see the American Gas Association's year 'round campaign for year 'round gas air conditioning in the pages of House Beautiful. These perfect prospects (average income: $15,714) for quality homes are alert, active, responsive to new ideas. And they demand the best in products from you because House Beautiful shows them how to better their homes, better their living. If you'd like to learn more about the gas industry's builder merchandising program, write to Dept. HB, American Gas Association, 420 Lexington Avenue, New York 17. And for a special reduced rate trade subscription to House Beautiful, write on your letterhead to House Beautiful Magazine, 572 Madison Ave. New York 22, New York.
Oak Floors give buyers freedom in decorating

The freedom to choose their own colors in fabrics and furnishings can be a big factor in prospective buyers' acceptance of your homes. You give this choice when you install Oak Floors, because Oak is harmonious with any color scheme, any style of furniture. The warm, rich wood-tone is universally admired and adds distinction to all homes. You give decorating freedom, you get buyer acceptance...when you use Oak Floors.

You know you're right when you specify OAK FLOORS

National Oak Flooring Manufacturers' Association, 814 Sterick Building, Memphis 3, Tenn.
Vary your Oak Floors for distinctive homes

Vary the floor style and attract more home buyers. This practical merchandising idea is easy and inexpensive with Oak Floors. It works like this:

Lay economical, popular Strip Oak through most of the house. But in a special “feature” room use one of the patterned Oak Floors shown here.

For the living-dining area of a traditional home, or any den or family room, Random-Width Plank is always appealing. It has the authentic warmth and charm of Colonial times with its boards of varying widths, walnut pegs and beveled edges.

Parquetry, with its smart geometric design, is appropriate in every contemporary home. Available in cut-to-size strips or pre-assembled blocks, it can be laid in mastic over concrete or nailed to a wood subfloor.

With the overwhelming public acceptance for Oak Floors, you can be sure these style variations will get favorable reaction from prospective home buyers . . . and give you an “edge” on your competition.

NATIONAL OAK FLOORING MANUFACTURERS’ ASSOCIATION
814 Sterick Building, Memphis 3, Tenn.

OAK FLOORS
The most popular, most practical of all floors
Put the warmth of "woman appeal" into every room with decorative lighting styles by MOE Light—and watch your home sales rise! Decorative lighting is your easiest way to flatter a new home—your most effective way to add allure to modernized or remodeled homes. For the latest fashions in lighting—and full-color photos showing you how to use them in every room, get your free copy of the revolutionary new MOE Light decorative lighting guide and catalog. Just off the press, it's packed with lighting ideas to help you make sales!

Send for FREE Lighting "Idea Book" Today

- 66 full-color pages!
- hundreds of decorator fixtures!
- room-by-room lighting ideas!

THOMAS INDUSTRIES INC.
Lighting Fixture Division
Executive Offices: 207 E. Broadway, Louisville 2, Ky.

The World's Largest Single Source of Lighting for Home, Commerce and Industry
The Golden Value Line of the 60's...

GENERAL ELECTRIC'S PPP THROUGH A COMPLETE

"Profit" is PPP's middle name—and the name belongs to General Electric

PPP stands for Planned Profit Package—A program you get only from General Electric Major Appliances (The Golden Value Line of the 60's).

The package is made up of profit-adding extras, such as Planning and Styling Help, Savings on Labor and Installation, General Electric Product Availability and Service, and more.

One of PPP's most important parts is a Complete Merchandising Program built around the Golden Value Home Promotion. It offers:

- Suggested ads and press releases for newspapers and radio
- Personalized brochures and literature
- Outdoor poster advertising help
- Attention-getting display pieces
- Colorful "tell-sell" appliance stick-ons
- Salesmen's cue booklets
- Guides to the Golden Value Model Home "Feature" Displays

With General Electric's extensive home promotion program working for you, it all adds up to more sales and more profit!

Save money through General Electric. Send for the "PLANNED PROFIT PACKAGE" kit. Just clip the coupon and mail it today.
The Golden Value Line of the 60's

SPELLS MORE PROFIT
MERCHANDISING PROGRAM

As an authorized builder of MEDALLION HOMES, you get prestige and many promotional advantages. Ask your General Electric Distributor about this program.

For information, mail coupon to:
General Electric Co., Home Bureau,
Appliance Park, Louisville 1, Ky.

Have local General Electric builder sales representative contact me.

NAME
ADDRESS
CITY
STATE

Progress Is Our Most Important Product

GENERAL ELECTRIC

JULY 1960
Concealed Toilet Paper Holder—revolving hood protects, covers paper.

Handsome lucite and chrome Towel Ring.

Coronado Extendo-bar for drying nylons, lingerie.

Shower Recess Unit—handy, safe spot for shampoo bottles, etc.

Relaxation Unit is luxuriously practical—recessed for toilet paper, cigarettes, ashtray, magazines, papers.

with HALL-MACK® bathroom accessories in Sparkling Chrome!

A lady never tells her age—and neither do Hall-Mack Bathroom Accessories. Styled for a lifetime of gleaming beauty, these quality accessories provide practical convenience and comfort—plus blending harmoniously with either modern design or period architecture to enrich the beauty of any bath. Pioneered by Hall-Mack, these quality accessories are tailored to meet the needs of every budget. Building, buying, or remodeling—always specify and install Hall-Mack Bathroom Accessories for the touch that means so much.

Sold by leading plumbing, tile and hardware dealers everywhere.
Versatile CreZon Overlaid Plywood

SAVES YOU MONEY ALL AROUND THE HOUSE!
You'll save money every time you discover a new way to use Crezon Overlaid Plywood. Reduce construction and finishing costs on everything from accent panels to box beams. Crezon Overlaid Plywood installs quickly, easily, cuts cleanly. Two coats of paint do the job of three. Checking and grain rise are eliminated. Weathering characteristics are unsurpassed.

THE HOUSE THAT CREZON BUILT
This handsome home features Crezon Overlaid Plywood in all siding, soffits, entrance door, box beams, garage door, fence, cut-out.

MORE WAYS TO USE CREZON OVERLAI D PLYWOOD...
THE PLYWOOD WITH A PLUS!
Partitions-Walls  Counter Tops
Windbreaks  Car Ports
Gable Ends  Singlewall Units
Built-ins  Play Boxes
Shelving  Tool Sheds

CROWN ZELLERBACH
CREASE SALES
ONE BUSH STREET • SAN FRANCISCO 19, CALIF.
LENNOX SELLS
QUALITY TO MAKE
YOUR CUSTOMERS
QUALITY CONSCIOUS

Your prospects see Lennox ads like this, in 4 colors, all year 'round in Post, Reader's Digest, Life and Good Housekeeping.

This series lets the home buyer know he can afford quality heating and air conditioning—marks you as a quality builder when you feature Lennox in your model homes.

Lennox also helps you with the finest model home promotion ever created—personalized to your individual needs. It contains brochures, display cards, suggested advertising and publicity, plus TV and radio scripts.

Your local Lennox Comfort Craftsman, listed in the Yellow Pages, or a special Lennox representative, will be happy to tell you about this program and the many other advantages of dealing with Lennox, the leader in air conditioning and heating.

65,000,000 people will see this ad in 4 colors

June 11, 1960
30,000,000 readers

June, 1960
35,000,000 readers

WORLD LEADER IN INDOOR COMFORT
FOR HOMES, BUSINESS, SCHOOLS

is wonderful!
Their marriage day is a Golden wedding day because their new home welcomes them with the treasure of Lennox air conditioning and heating.

As their family grows, the "rare as a day in June" indoor comfort will prevail through blizzards and heat waves—through the years—because Lennox is engineered to last. Many couples now celebrating their Golden Anniversary enjoyed Lennox quality equipment in their "honeymoon" homes, for Lennox has been a "golden" name in comfort since '95.

Call your factory-trained Lennox Comfort Craftsman for a free survey and learn how little it costs for Lennox year-round air conditioning—especially if you now have forced air heating. Your local Comfort Craftsman is listed in the Yellow Pages.

Lennox, world leader in indoor comfort for homes, business, schools.

FREE booklet on Air Conditioning and Heating. Write Lennox Industries Inc., 344 South 12th Ave., Marshalltown, la.

AIR CONDITIONING AND HEATING
New nation-wide program helps

Today, your prospects know: ONLY GAS does so

John Jones HIGHLAND TERRACE MODEL HOME

SOLD

BLUE STAR HOME

GO MODERN—GO GAS

GEORGE SMITH ARCHITECT

*A.G.A. Mark © Am. Gas Assoc., Inc.
builders Build Better...Sell Sooner!

There's Big Money for YOU in the Big
"BLUE STAR HOME" Promotion

You make your own selling easier when you get in on the nation-wide “Blue Star” home-building program. The “Blue Star” is the American Gas Association’s award to quality new homes that feature the advantages of modern Gas. The coast-to-coast “Blue Star” promotion helps you put over a real sales campaign in your community.

The A.G.A. “Blue Star” home program includes: hard-hitting ads to put in your local papers; scripts for local radio and TV broadcasts or spots; plus all the “extras” to make your promotion successful! Everything from signs and banners, truck & bus cards, balloons, pennants, aprons and matches to bracelets, key rings, lighters and money-clips—all designed especially for “Blue Star” home-builders, to tie your program to the national one, so the national program pays off for you.

So build your sales by building with Gas. Let us help you sell your “Blue Star” homes with “Blue Star” advertising, publicity and promotion.

Check these “Blue Star” features and build in all you can!

BURNER-WITH-A-BRAIN
When the lady-to-be of the house sees the amazing Gas Burner-with-a-Brain* turn itself up and down automatically, she’ll never settle for less. Clinch it by telling her the truth—9 out of 10 restaurants use Gas for cooking, and wouldn’t use anything else!

ICE CUBE MAKER
All home-buyers are thrilled by the magic ice-maker, featured in this modern Gas refrigerator. No trays to fill or spill—it’s completely automatic. And it can really help you make the sale.

FASTER. MORE ECONOMICAL. MORE ABUNDANT HOT WATER
She’ll appreciate the constant, quick hot water supply...He’ll be pleased by the money that’s saved when you heat water with fast, economical Gas.

more...for so much less!

JULY 1960
"Pease Homes build my reputation today... and sales tomorrow!"

RALPH STOPP
Wilmington, Ohio
The qualified home buyer of 1960, goal of every builder, investigates not only the homes you are selling, but also those you have built in the past. An excellent builder reputation often closes sales faster than all the “extras” you can offer.

RALPH STOPP of Wilmington, Ohio, is one of the successful builders who have discovered the way to assure sales today... and tomorrow.

“A fine reputation is essential to continued home sales in my area,” Stopp emphasizes. “Although I have built many homes in my new subdivision, land remains for my production for several years. With every home, I am building my reputation today... and sales tomorrow.”

“That is why I chose Pease Homes. Their excellence in materials and workmanship first brings me sound, solid families... then maintains satisfaction year after year. I’m staking my reputation and future on Pease quality.”

Act now to assure your own success for many years to come. Discover the many advantages of the complete Pease program for converting F.I.A. approved land to profits with quality homes.

Write or phone William Stricker, General Sales Manager, and arrange for a sales representative to call. Pease Woodwork Company, 906 Forest Avenue, Hamilton, Ohio

PEASE HOMES
and Building Materials
When she can see herself in your kitchen she can see herself in your home.

New Frigidaire Wall Ovens

let your kitchen help sell her with Pull ’N Clean Ovens, Drop-Leaf or French Doors, colors, automatic cooking!

Build-in a Frigidaire “Holiday from Apron Strings” and you have the woman house-hunter on your team! Build-in the promise of more time for family and other household duties. Point out that Frigidaire Wall Ovens in Sheer Look styled double or single oven models, cook whole meals automatically! With either Drop-Leaf or French Doors—and with new-for-'60 Pull 'N Clean Lower Ovens—cleaning is quick, standing up, with no tiresome stretching! Use Frigidaire quality features and workmanship to point up other quality features built into your home. Get product data from your Frigidaire representative or write Frigidaire Division, Dayton 1, Ohio.

Wall Ovens, Cooking Tops and Under-counter Dishwashers available in Mayfair Pink, Sunny Yellow, Turquoise, Charcoal Gray, Aztec Copper and Satin Chrome.

She’ll feel like a Queen!

Install any model in minutes! Drop-Leaf Door or French Door models, all are designed for fast installation in standard 24” width cabinets or wall sections. With carpentry rough wiring completed, simply: (1) Connect junction and BX cable supplied, (2) Slide in unit (leveling screws included, if needed), (3) Mount with concealed screws. (French Door models, tighten only two clamps (no screws.)

FRIGIDAIRE
PRODUCT OF GENERAL MOTORS

Advanced Appliances designed with you in mind
Here is a faster, cheaper way to build an h-p roof

The roof system shown above may halve the cost of hyperbolic paraboloids and other concrete thin shells.

Reason: It needs no formwork or falsework. Instead, a network of wires shapes the surface of Styrofoam boards. The Styrofoam becomes a permanent part of the structure as insulation and vapor barrier.

(Ordinary h-p roofs—the kind used on gas stations, for example—require lots of lumber and carpentry for forms, plus the application of insulation after the forms are stripped.)

Result: With practice, skilled mechanics should be able to build an h-p roof in a third of the normal time—three to four days instead of nine to 12.

Here is how an h-p roof is built with the new system:

1. Four z-shaped steel edge members are set up. Their high ends rest on two temporary lally columns. Their low ends rest on two foundation piers—the only final roof support.
2. A network of wires is strung between the beams—not parallel to the beams, but slightly askew—so the wires lie in a parabola curve.
3. Styrofoam is laid on the wire network.
4. A second wire network—skewed in the other direction—is strung on top of the Styrofoam.
5. Both sets of wires are stretched taut with a tensioning wrench to force the Styrofoam boards into their double curvature. To keep edge beams from bending when wires are tightened, Styrofoam wedges are placed between the beams and the Styrofoam boards.
6. The top surface is finished with 2” of Gunite on reinforcing mesh (6x6, 10-10), the bottom with plaster.

The new h-p system was developed by structural engineers at Purdue University under a research grant from the Dow Chemical Co.
TWO BASIC SYSTEMS for electric warm-air heat—central furnace or room heaters in ducts—can be used with ducts either in slab (or crawl space) or overhead.
Now ducted electric heat is making a strong new bid in the residential market

A year ago there were only three manufacturers of electric warm-air heating systems. Today there are 13 (box below).

Why the sudden increase? Because the makers of warm-air furnaces want a share of the healthy electric-heat market—dominated until recently by radiant heating systems. Though still small, the market is growing fast because of the convenience of electricity and the sales appeal of the all-electric house. Right now, there are two basic ducted electric systems (diagram, left)—one with a central furnace, one with heaters in the ducts.

Spelled out below are the answers to six key questions about warm-air electric heat.

1. **How does it compare with radiant electric heat?**

Pretty much the way other ducted systems compare with other radiant systems.

**Ducted heat's advantages:** better balancing of temperatures throughout the house; easier addition of air conditioning, humidification, dehumidification, and air cleaning.

Says W. E. Blake, sales manager of Stewart-Warner's heating division: "With a ducted system, temperatures can be controlled for heating, cooling, and in-between periods when only air circulation is needed. Humidity can be controlled in both summer and winter, and pollen and household dust can be removed easily with electrostatic filters."

Says Kenneth Behr, Lennox Industries' chief application engineer: "The big control advantage is balanced temperature throughout the house. You can take air from a sun-warmed south room, pull it back to the central blower, clean it, treat it, mix it, and send it back to each room at an even temperature."

**Radiant heat's advantages:** less drafts, less infiltration of outside air, easier zone control. But ducted systems with coils in the register boot (see diagram) have the same zone-control advantages as radiant systems.

Says L. C. Cotts, vice president of Gerwin Industries: "Because we have two or three units per room our system costs half again as much as a system with one big central coil. But our complete zone control may reduce fuel consumption 20% to 30%.

2. **What does it cost to install and operate?**

Installed costs of an electric furnace are the same as those of a gas furnace (but less than an oil-fired unit). Installed costs of ducts—for either a central unit or a boot-coil system—are the same as duct costs for any warm-air system. Says Don Winegardner, Majestic Co vice president: "A good electric warm-air system in a 1,200 sq ft house can cost as little as $600."

"Operating costs for electric warm-air run about the same as for electric baseboard," says Gurdon Munger, products supervisor for Owens-Corning Fiberglas, "and are higher than for gas- or oil-fired systems unless the electrical rate is under 1¢ per kwhr and the house is very well insulated."

3. **How should a house be designed for it?**

The same as for radiant electric heat. You need good insulation (U factors of .05 in ceilings, .07 in walls), double glazing, weatherstripping, and minimum window areas on the north walls (see design manual for electrically heated houses, H&H, April).

4. **In what areas can it be used?**

In sections of the country where degree days are less than 6,500 and electrical rates are less than 13¢ per kwhr. Generally speaking, electric warm-air systems should be used only in areas where other forms of electric heat are economically feasible. Electric heat is usually ruled out by a combination of cold climate and high electrical rates.

5. **What is its biggest potential market?**

"Our furnaces are installed mostly in $18,000 to $30,000 houses," says Majestic's Don Winegardner. "People love electricity as a prestige fuel. If they can afford a quality job, they like to go all the way and put in a year-round heating and cooling system."

"Electricity is a glamorous fuel to Mrs Homeowner," says Stewart-Warner's Blake. "She wants it if she can afford it. At TVA and REA rates, electric warm-air heating makes as much sense as anything else—even in low-cost housing."

6. **Who sells and installs it?**

Usually a warm-air heating contractor who also handles the manufacturer's gas and oil furnaces. But some electrical contractors are showing interest in handling ducted electric heat along with the electric baseboard and ceiling-cable systems they now install.

Says Winegardner: "Unless the warm-air contractors now in business wake up to the advantages of electric heat, they are going to find themselves in competition with a bunch of new heating contractors who prefer electricity."

<table>
<thead>
<tr>
<th>13 COMPANIES MAKE ELECTRIC DUCTED UNITS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Standard</td>
</tr>
<tr>
<td>Air Conditioning Div</td>
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<tr>
<td>New York City</td>
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<tr>
<td>Electric Heating Products Co</td>
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Technology continued on p 188
Jim Ryan stands before three of the 150 homes in Edward M. Ryan’s “Highland Terrace,” Mt. Lebanon, Pa.

“ALCOA SIDING adds brand-name quality at no extra cost”
—says Jim Ryan, Sales Manager, E. M. Ryan, Inc.

The VALLEYVIEW is an efficient, three-bedroom ranch-style home designed to provide maximum living area at minimum cost ($15,500 to $16,500 range).

The CHARLOTTE, a four-bedroom, two-story colonial-type home, offers the larger family luxury features. (Priced from $29,000 to $30,000.)
“More prospects become customers . . . and our investment comes back to us faster . . . when we offer a home with Alcoa Aluminum Siding!” says Jim Ryan, sales manager for the well-known Pittsburgh building firm, Edward M. Ryan, Inc. “Because they know they get ‘more for the money’ with Alcoa Siding, prospects quickly become buyers.”

Ryan-built homes, both custom and tract, range from $15,000 to $40,000. Popular in the Greater Pittsburgh area, 537 such homes were sold in 1959 and an estimated 700 will be sold and erected in 1960, Mr. Ryan predicts.

“Homeowners have learned repainting is eliminated—for as long as 10 or 15 years—with aluminum siding,” according to Mr. Ryan. “The same properties, like long-lasting corrosion resistance, that make other Alcoa Aluminum products so popular have created a built-in customer acceptance of this fine new Alcoa product.”

Ryan homes reflect a distinct pattern of customer-requested features . . . a brand awareness that’s sweeping the country, especially in the residential building market. Alcoa® Gutters, Downspouts, Aluminum Soffits, Siding—“all the aluminum they want! And we can give it to them at no extra cost!” Mr. Ryan points out.

Easily installed, easily sold, aluminum siding made by Alcoa notably enhances property values. Aluminum siding enables builders to reduce monthly house expense . . . enables buyers to carry larger mortgages (on bigger homes) because maintenance bills are lower! Write for more information on Alcoa Siding today: Aluminum Company of America, 2194-G Alcoa Building, Pittsburgh 19, Pa.
Tests like this show new vinyl can work for hot-water piping

In the photo at right, weighted samples of B. F. Goodrich Chemical Co's new Hi-temp Geon and three competitive plastics are suspended in a 180°F water bath. The three older materials (light colored) have sagged, the Geon remains rigid.

The new material (a modified polyvinyl dichloride) seems to remove the chief block to plastic plumbing—its low strength at high temperatures. Hi-temp Geon will stand temperatures as high as 200°F—60° higher than previous rigid vinyls. At 185°F, it will handle pressures up to 125 psi (household pressures rarely run over 60 psi) in schedule 60 pipe.

In addition, it will take rough handling in transit or installation, needs no more support in long runs than other water piping materials. ASTM standards rate it as self-extinguishing.

Geon is light weight (one-sixth the weight of copper) and easy to fabricate: It can be extruded, molded, and formed with conventional equipment and techniques; pipe made from it can be cut with a handsaw, joined with a solvent weld, and bent by applying heat. It has low thermal conductivity: little heat will be lost from hot water supplies; cold water pipes will not sweat in humid weather. When the plastic is in full production, materials handling and installation costs could be less than those of competing materials.

HEAT TRANSFER through metal, left, melts test alloy, which stays solid on Geon, right.

PIPE ASSEMBLY is simple: brush on solvent, slip pipe into fitting, let joint set.

LIGHTWEIGHT WALL of NAHB research house has two-story Geon plumbing rig.

Technology continued on p 192
SELL THESE BASICS AND YOU SELL MORE HOMES!

People want comfort—winter and summer. They want low heating and air-conditioning costs. They want barriers against air infiltration and chilling drafts. You can supply all these features—in full measure—with Balsam-Wool sealed blanket insulations. Today there’s a type of Balsam-Wool for every climate...every heating and insulation need. And remember, Balsam-Wool combines all these advantages: positive vapor barrier...completely sealed insulation mat...double-bonded liner...special spacer flanges for easy application and to provide needed air spaces!

Basic to quality

Balsam-Wool® Sealed Insulation

Reflective Balsam-Wool
Aluminum reflective liners. Standard (1” thick): 16”, 20” and 24” widths. Double-thick (2”): 16” and 24” widths.

Regular Balsam-Wool
Asphalt-impregnated liners. Standard (1” thick) and Double-thick (2”): 12”, 16”, 20” and 24” widths.

Type E Balsam-Wool
For masonry construction—3½” thick. Available in 12” and 16” widths.

Balsam-Wool Panel Insulation
3½” thickness; reflective liner-vapor barrier. Cut to size: 49” x 8’, and rolls 8’ x 41’8”—for use in component or modular construction.

Balsam-Wool for Electric Heat
Full-thick (3½”) and Super-thick (5”) in 16” and 24” widths, in reflective liners.
a basic
for structural
strength

Nu-Wood® Sheathing

NEW—NU-WOOD NAIL-BOND INSULATING SHEATHING
eliminates the need for nailing strips...permits direct application of wood or asbestos siding shingles...meets F.H.A. requirements—asphalt-coated on all sides and edges for moisture-resistance. Available in big 4' x 8' and 4' x 9' panels.

A COMPLETE SHEATHING LINE
Nu-Wood sheathing costs less to apply because it comes in big sections that cover up to 36 sq. ft. in one operation. Here are additional plus features of the Nu-Wood sheathing line:
• Variety of sizes—2' x 8', 4' x 8' or 4' x 9' panels.
• Big-sheet time-and-material-saving advantages—
  • Rugged strength eliminates costly corner bracing
  • Little waste or messy cleanup with larger panels
  • Marked sheets speed nailing application
  • Cuts easily and cleanly
• Extra insulation—for greater comfort, lower heating and air conditioning costs over ordinary sheathing.
• Sheds water...weather-resistant—danger from moisture damage during construction minimized. Requires no building paper (except with stucco finish).

190

Now with 4' lengths of Nu-Wood shingle backer, three stud spaces can be covered at once to provide desired deep shadow lines of siding or shingles. Easy to apply. Saves money, adds extra insulation.
basic
to quality

The Quiet of Nu-Wood® Tile

With the complete Nu-Wood acoustical tile line, you can add the powerful basic quality appeal of quiet while you provide new style interest for every room. High in noise-quieting efficiency, Nu-Wood acoustical tile now comes in a wide range of beautiful decorator-designed patterns with light-reflective, flame-resistant and cleanable finishes. Tiny acoustical perforations do not mar beauty, yet control sound.

NEW
Star pattern Nu-Wood acoustical tile.

NEW
Cube pattern Nu-Wood acoustical tile.

NEW
Bamboo pattern Nu-Wood acoustical tile.

NEW
Fissure pattern Nu-Wood acoustical tile in gold accent.

Plus
Nu-Wood Constellation® acoustical tile—exclusive Micro-Perf® perforations.

Random drilled Nu-Wood acoustical tile.

Regular pattern Nu-Wood acoustical tile.

Nu-Wood Pre-Decorated Tile
Nu-Wood Decorator tile imparts a high-fashion look for ceilings...has a simulated fissure design in gray, beige or gold tones.

Nu-Wood Sta-Lite® plain surface tile has a non-glare white surface.

Wood Conversion Company,
First National Bank Bldg., St. Paul 1, Minn.
Will there be a breakthrough by plastic building products in the early '60s?

"Yes—conditionally," says MIT's Albert G. H. Dietz.

"The increased cost of steel and the increased cost of the labor to make things out of steel... contrast with a steadily decreasing cost of plastics and the labor to make an item out of plastic," says Applianceman R. W. Finholt of GE.

"There will soon be a change in the standard operating procedures of the building industry so great as to lead to a different situation in kind from that with which we have been dealing," says City Planner Burnham Kelly.

This tentative encouragement was given the plastics makers at two meetings in May: a meeting of the Society for the Plastics Industry in Miami and a meeting of the Chemical Market Research Assn in New York City.

Speaking for the housing industry, these experts, and others quoted below, told the chemical industry what it must do to share in the building market.

The experts first pointed out six conditions new building products must meet:

1. They must have satisfactory endurance. Said Al Dietz: "The acrylcs and phenolics have exposure histories of more than 20 years; some vinyl chloride compositions have been exposed almost that long; reinforced polyesters go back ten or more years... but they are the exceptions. . . . If the building industry is to be convinced that plastics materials are durable and reliable over the life of buildings, the plastics industry must find ways of demonstrating it."

2. They must hold to an accepted set of standards. Said Dietz: "FHIA is under continual pressure to approve plastics products but for most uses cannot find industry-wide standards upon which to base an intelligent decision."

3. They must comply with established regulations. Prof Dietz summed it up: "If it can be shown that plastics do not constitute a hazard in construction, the building code problem will be largely solved... Most code authorities are not averse to approving new materials and products if it can be proven that they are safe and reliable."

4. They must allow adequate design freedom. Or as Len Haeger put it, they must "do the problems of fabricating the material and of making the material into a structural element; of packaging; of size limitations in transport; of storing at the site; of erection, of fastening, of mass production."

... And here C. Theodore Larson of the University of Michigan saw big opportunities for plastics: "One easily applied synthetic can take the place of a dozen traditional items and make the component more versatile... There is emerging a new architecture based on the use of new materials, new concepts of environmental control, and new production techniques—a delightful architecture, gay, colorful, flexible, strong, light, always changing in appearance, and offering performance capabilities never before dreamed possible."

5. They must be available when the builder wants them. Said Dietz: "Considering the vast and diffuse nature of the building industry, thousands of outlets throughout the country must be supplied and distribution channels kept filled... Contact must be maintained with the architects, engineers, builders who determined whether the product will be specified."

6. They must be priced to meet the market. In Len Haeger's words: "To succeed a new structural element must 1) perform like traditional materials at a lower cost; 2) perform better at no greater cost; or 3) offer new performance at greater cost."

Said GE's Finholt: "In the past plastics have made their way, not because of lower cost, but because of their properties and because they could be formed easily and with lower-cost tools. At the present rate, it may be more economical to use plastic than steel in only eight years... All the mechanical parts of a house—water pipes, electrical conduits, air channels—could be made better and at a lower cost with plastics."

... and then they offered a glimpse of the blue sky ahead

Said Bill Scheick: "Many facets of building should fire the imagination of any industry not restricted by traditional concepts. Take the idea of a house that serves a useful life of 25 years, then can be dismantled and sold for second-hand use."

Suggested Ted Larson: "We might have a single plastic sheet that could be unrolled like a rug to cover the entire roof deck."

Added Willard Worth: "A considerable market for the chemical industry might develop in the reclamation of marginal land... The absorption quality of soil might be chemically altered to improve and control drainage... Land unable to support foundations may be stabilized. Chemical flocculation of sewage may be worthy of investigation... The single-family home may have to be freed from its umbilical cord of services by the chemical generation of power, conservation of water, and disposal of sewage."

Concluded Burnham Kelly: "Our attitude toward the potentials of technology should not be the old Madison Ave phrase, 'Let's follow it down the street and see what it eats,' but a new responsible realization that we can lead it up the street and show it the best places to start eating."

END
YES! I am interested in making $14.97 extra profit on every closet I build. Rush me all your facts and figures on the Float-Away closet door profit story at once!

Name_________________________City__________Zone____State__________

FLOAT-AWAY DOOR COMPANY
1173 Zonolite Road, N.E.
Atlanta 6, Georgia

Float-Away metal closet doors are made to fit all standard modular openings—available in Flush Panel, Louver, Colonial, prime coated—also prefinished Lauan and Birch. Five-year guarantee.
"BUILT-IN BEAUTY" without the cost!

New Roper "Style-Line Design" eliminates costly installation...pleases every prospect

Beautiful! — and so easy to install! Slides neatly into pre-planned alcove between built-in cabinets to create a fresh, unbroken line of kitchen symmetry. Occupies only 30 inches of space!

Profitable! — Gives the "built-in look" without the expense. No costly cut-out work. Minimum crew time. One simple gas connection. Plan for bigger profits — plan around the smart new Roper Style-Line "30" and be first with the newest!

Sleek, streamlined styling in fashionable coppertone finish

Here's sales magic for your showroom display...stunningly beautiful in rich coppertone finish that harmonizes with any decor. Here's kitchen-planning flexibility that lets you create strikingly original kitchens at low cost. Here's the name all America knows and identifies with the finest in gas cooking. Big 25-inch Bake-Master oven, 4 Simmer-Speed top burners, automatic oven heat control, oven light and window. Famous Roper lifetime construction. Send for details today!

Write Dept. HH for full details

GEO. D. ROPER SALES CORP.
A Subsidiary of Geo. D. Roper Corporation
KANKAKEE, ILLINOIS
What the leaders are doing

TEMPORARY SCHOOL was built in one month to fill need for classrooms when homes outpaced schools in New Richmond, Wis.

It was built to meet a shortage of school rooms . . .

APARTMENT HOUSE was converted from school, has six rental units. Only exterior changes were new stairways to second floor.

Now it is meeting a shortage of rental housing

This school-turned-apartment is one builder's solution to the classroom-shortage faced by fast growing communities.

Designed by Builder Sam Slaughter Jr, the temporary school was built for $38,000 and later converted into an apartment house for an additional $12,000.

To meet an emergency need for more classrooms in New Richmond, Wis, Slaughter built the five-room school in one month and leased it to the school board. He held down costs and speeded the job by using concrete-block walls on the first floor, Lu-Re-Co panels on the second, and roof trusses.

After permanent schools were completed, Slaughter turned the building into a six-unit apartment for new teachers. He added bathrooms, kitchens and kitchen equipment, partitions, new outside stairways to the second floor, and two communal laundry rooms. He rents the apartment units for $50 to $95 a month.

Slaughter, who ships 3,000 to 5,000 Lu-Re-Co homes a year in the Midwest, (and is first vice chairman of Lumber Dealers Research Council), expects to build more schools like this in several states this year.
Houston Parade of Homes draws 190,000 in 15 days

And they paid $50 a head to get in.  
"I've never seen any Parade anywhere that matched this one," said NAHB President Martin Bartling.  
"We've had more calls about houses than at any time since I've been in business," said Parade Chairman Paul McConnell.  
"In the next six weeks, we'll probably sell 25 houses averaging $37,000," said Builder E. R. Cantrell.  

Here are Houston's ten rules for making a Parade a smash hit:  

1. Start planning 12 months ahead.  
Even before one Houston Parade is finished, the Houston Homebuilders Assn starts on the next one. For an April or May Parade, the location is chosen the previous June, lots are sold to builders soon after, and houses are designed by December.  

2. Build in one area and in a narrow price range. Houston builders claim they create more excitement and get bigger crowds by having one big Parade of 30 houses instead of scattering their shots with three or four small Parades. (Major consideration: the Houston new products "home show" is combined with the Parade.)  

3. Get other businesses to work for you. One secret of Houston's success has been the help given by three newspapers, local TV and radio stations, three utility companies, a dozen department and furniture stores, and, this year, by American Home magazine. The builders have convinced local groups that the city's economic growth is tied to homebuilding.  

4. Keep tight control over everyone. Many Parades have only middling success because the Parade committee lets each builder go his own way. Houston's Parade committee insists on approving house designs and prices, signs and landscaping. Builders are required to meet deadlines on starting, finishing, and furnishing their models. Houses must be cleaned daily and opened on schedule. The committee also spells out regulations for products exhibitors, the subdividers, and other Parade participants.  

5. Spend freely on ads and promotions. Houston's Parade was promoted by about $500,000 worth of paid and free newspaper space and radio and TV time, estimates Gordon Neilson, HBA executive vice president. And 136 billboards carried Parade ads. The bulk of the advertising was by individual builders, utilities, stores, and the subdivider. The parade committee spent $25,000.  

6. Build a big parking area. Houston builders have learned that people will not turn out for a Parade if they cannot park easily. So this year they built three lots to hold 8,000 cars. Surrounding streets were paved and curbed, ground was leveled, compacted, drained, and filled. In addition, $4,000 was spent to hire traffic and security policemen.  

7. Give the crowds a show to talk about. A Parade can fail the first Sunday if word gets around that it is not worth seeing. People drove 15 miles (from downtown) to see the Houston show and many came back a second or third time. Women enjoyed the house furnishings (see p. 144) as much as they did the houses. Thousands came on Ladies' Day to see cooking demonstrations by the two local gas companies.  

8. Make your visitors comfortable. Houston's builders provided soft drink stands, a refreshment tent where people could sit at tables, well planned toilet facilities. Planned for next year's Parade: street-side benches in front of houses.  

9. Combine your Parade with a home show. Most builders associations have a spring home show and a fall Parade. Houston builders combined the two, rented 70 exhibit spaces at $350 each. (A tax-paying subsidiary, the Home Builders Research Corp., runs the Parade, spends most of its profits for research.) Parade visitors entered and left through a 360° exhibit tent.  

10. Be your own toughest critic. While this year's Parade, Houston's 11th, was still going on, Executive Vice President Neilson began writing a detailed and tough critique. He pinpointed faults and weaknesses, suggested ways to improve such things as parking, security, landscaping, lighting, signs and traffic control. Says Neilson: "If you keep harping on details, you keep doing better from year to year." Says up NAHB President Bartling: "I'll hold this Parade up as a goal for other associations to follow."
6,000 all-electric houses planned in New Jersey

By far the biggest all-electric housing tract in the US has been announced for fall opening in northern New Jersey, 35 miles south of New York City.

Six thousand houses priced at $12,990 to $24,990 are planned by Builder Walter J. Happle Jr on a 2,500-acre site near Spotswood, N.J. The houses and 5,000 rental units will all measure up to the electric industry's Gold Medallion standard (H&E, April). They will have electric heat, hot water, ranges, ovens, and dishwashers, plus adequate wiring and lighting—all equipment supplied by General Electric.

Happle, 34, has built a number of large and small developments in northern New Jersey in the past ten years. He hopes to complete his new community—called Electric City, USA—within five years. With shopping centers, an industrial park, and other facilities, construction costs will come to about $190 million.

Jersey Central Power & Light Co will offer a residential electricity rate of 1.8¢ per kwhr at the outset, but may be able to reduce the rate after volume increases. The utility’s officials also say the electric load may make it practical to put wiring underground after the first 300 houses have been completed at Electric City.

Put your water valves in the curb—not in the street

So says Youngstown Builder Nils Johnson who has devised the method diagrammed above for the latest tract developed by Cook & Johnson.

Explains Johnson: “When we put our main water valves in the street intersections, trucks would often break them before the streets were black-topped. So we spent a lot of money on repairs. And when we placed the valves back of the curb in the tree lawn, they were covered with topsoil. So the water company often had to dig up lawns to find them. Now we form the valve well right in the 18” wide curb-and-gutter. So the valves are both protected and easy to find.”

Cook & Johnson’s new method puts one restriction on street layout. Curbs must have a radius no less than 25’. Otherwise the valves would have to be set too close to the “T” or cross.

This corner-lot plan plays down the garage and drive

In the L-shaped Sacramento house at left, Western Enterprises put the garage and driveway in the unusual position shown at right for two reasons:

1. To give the house a more attractive setting by freeing the front yard for grass and shrubs.

2. To keep an open garage door from spoiling the looks of the facade.

If you plan a community center, build it before you start to build houses

That is what Builder Matt Jetton did when he spent $9,900 to build the open-air community center and bath-house (left in photo) at one of his riverside developments in Tampa. Says Jetton: “By building these facilities first, we gained twice their cost in publicity. As a result, we were able to sell our houses a lot faster.”
TRUSCON'S New Full Line of Aluminum HORIZONTAL SLIDING WINDOWS SERIES 700

... in types to meet every consumer demand

SINGLE SLIDE—one ventilator operates
FIXED PICTURE WINDOWS
SEE-BREEZE—slide ventilating picture windows
CENTER VENT PICTURE SLIDE WINDOW
SIDE VENT PICTURE SLIDE WINDOW
FOR CONCRETE BLOCK CONSTRUCTION
COMBINATION STORM SASH AND SCREENS AVAILABLE

No other manufacturer supplies all these types to meet every consumer demand. Available in standard types and "Pacific Coast" types. Majority of types and sizes are stocked, completely glazed, for prompt shipment from warehouse.

Manufactured to meet FHA and VA requirements. Full perimeter weatherstripped. Stainless steel vent slide channel assures smooth, easy operation. Interlock at meeting rail assures weathertightness, easy operation.

Call your Truscon representative and get the facts direct. Or, send coupon.
YOUR REPUBLIC ROOF DRAINAGE PRODUCTS DISTRIBUTOR carries a complete line of everything you need—in galvanized steel, ENDURO® Stainless Steel, iron, or copper, with perfectly matched accessories to assure fast, low cost installations. They go up easy, go up fast, go up to stay—with more profit on every job. Ask for Republic Roof Drainage Products by name. Send coupon for more information.

TRUSCON TRU-DIAMOND METAL LATH trimmed square . . . no flare! It's a pleasure to work with this precision-made, distortion free metal lath. Sheets are perfectly square and true—selvage edges are neatly finished. These Truscon Tru-Diamond features insure a good fit on the toughest job. Full line of Truscon Tru-Mesh Metal Lath Accessories. Contact your Truscon Dealer and get the complete story, or send coupon below.

Standard Unit of Republic Steel Kitchens are available in a wide range of sizes in base and wall cabinets, sinks, drop-ins, and accessories to meet every kitchen need and size. Easy to install.

NEW TRADITIONAL FINISH—grain texture, vinyl on steel. Traditional is the homebuilder's answer to any kitchen preference. A vinyl of beautiful, natural grain inseparably bonded to Republic Steel Kitchen door and drawer fronts. In apartment or multiple home developments, you can vary the kitchen plan without altering the floor area. Every kitchen is a custom kitchen with a choice of Traditional Finish, or crisp, clean, popular colors. Republic Steel Kitchens are easy to install, dimensionally accurate. Call your Republic Steel Kitchens distributor, or send coupon for information and color sample.

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Please send more information on the following products:
- Truscon Aluminum Horizontal Sliding Windows, Series 700
- Republic Roof Drainage Products and Accessories
- Truscon Metal Lath and Accessories
- Republic Steel Kitchens Traditional Finish—Color Sample

Name:_________________________ Title:_________________________
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Address:_________________________
City:_________ Zone:_________ State:_________
Market test your models before you introduce them

That is the advice of Indianapolis Builder Tom Perine, who never introduces a new model without first building and market testing a prototype.

Perine furnishes the experimental model and holds special showings for selected people—former buyers, lenders, subcontractors, suppliers, and others. This brings out a wide variety of likes, dislikes, and specific suggestions for major and minor improvements. Then Perine’s product development committee (key men from each department in his organization) goes over the new ideas and decides which to include in the model to be built for sale.

Perine’s market-testing method pays off in four ways:

1. It pinpoints sales appeals. Says Perine: “Most important of all, we find out what buyers like and dislike and can set realistic prices.”

2. It cuts costs. “Subs often show how we can trim wiring or plumbing costs. A construction man may show how to save time or materials.”

3. It makes financing easier. “We get better loans and appraisals because lenders can understand much more about values when they see the model than when they just look at plans.”

4. It speeds construction. “With the bugs worked out in advance, we can build the final model much faster, with less worry about opening dates.”

“And,” adds Perine, “if we don’t change the exterior too much, we can use photos of the experimental model to advertise the final model before it is even built.”

EXPERIMENTAL PLAN was 33’x71’, had 12’x11’4” family room, large laundry between kitchen and dining room, and oversized garage.

REVISED PLAN is 1’ deeper so that family room and other areas are much larger. Relocation of laundry provides more dining space.
PUT CONVENIENCE and QUALITY IN YOUR KITCHENS WITH

Leigh KITCHEN ACCESSORIES

THE LOOK OF STAINLESS STEEL AT A FRACTION OF THE COST

This exciting new "Brushed Chrome-tone" finish is available exclusively on Leigh 5400 series "Economy" Range Hoods. Lowest cost quality hoods on the market. 4 popular sizes. Also in luxurious coppertone finish.

ROLLER DRAWER GUIDES
Nylon rollers carry the load smoothly and silently. Heavy-gauge steel, die-formed for accurate fit. Extra length on back bends. No notching, cutting or fitting necessary.

TWO NEW LOW COST VENTILATING FANS
Wall and ceiling types. Both at a remarkably low cost, but with all the beauty, installation and construction features of the most expensive units—plus Leigh's exclusive High Impact Polystyrene Grille... with an 80% free area. A gleaming, chrome-like finish.

SLIDING SHELF GUIDES
Unsurpassed for low-cost sliding shelf installations. Excellent for kitchen cabinets, etc. Heavy-gauge steel construction. Easy to install without cutting or fitting.

SLIDING TOWEL RACK
Moves easily on 4 nylon guides, with the lightest touch. Keeps towels out of the way, yet instantly accessible. Heavy-gauge steel, brightly chrome-plated. Suitable for top or side mounting.

MILK AND PACKAGE RECEIVERS
Delivers received inside safely. Insulated doors, heavy-duty hardware, painted aluminum prime-coat finish. Models available for frame or brick construction.

SLIDING SHELF GUIDES
Unsurpassed for low-cost sliding shelf installations. Excellent for kitchen cabinets, etc. Heavy-gauge steel construction. Easy to install without cutting or fitting.

HIDE-AWAY GARBAGE CONTAINER
Easily installed inside cabinet door. White, baked enamel finish. Heavy galvanized steel pail with convenient handle. Easy to empty. Right or left-hand models.

CHOP-N-TOP BUILT-IN WOOD CHOPPING BLOCK
Protects new or existing counter tops from knife marks, burns, blisters. Made of dense, heavy, close-grained Rock Maple strips, laminated for greater strength. Prevents warping.

OTHER POPULAR LEIGH PRODUCTS FOR THE KITCHEN
ACCESS DOORS... provide easy access to piping, electrical connections, storage space, etc. Sizes from 8" x 8" to 22" x 24"
CLOTHES CHUTE DOORS... easy to install. Bright chrome or white baked enamel finish.

LEIGH BUILDING PRODUCTS, Coopersville, Mich., Division of Air Control Products, Inc., 2560 Lee Street
With this crane, four men can do the work of seven

Builder Bob Schleicher of Gary, Ind. says the trailer-mounted crane saves him the cost of three men on the day he puts a new house under cover.

Schleicher uses the crane to load and unload factory-built components, erect walls and roof framing, and place smaller materials at the point of use. Three men and a crane operator (the trailer-truck driver) unload and erect big wall panels, trusses, and other components in 2½ hours, close in a 1,200 sq ft house in one day. Without the crane, says Schleicher, six men and a driver would be needed.

Schleicher, who builds about 200 houses a year, figures the crane saves him about $50 a house after he allows for its initial cost ($5,000), maintenance, and operation.

Schleicher’s 42’ trailer carries the crane and all materials for a house measuring up to 42’x42’. Items: panels, trusses, gable ends, roof sheathing, plumbing tree, furnace, interior materials—everything except paint and wiring. The crane can lift 42’ long wall panels and 2,500-lb packages of wallboard and set them down 25’ from the trailer.

With this crane, four men can do the work of seven

Builder Bob Schleicher of Gary, Ind. says the trailer-mounted crane saves him the cost of three men on the day he puts a new house under cover.

Schleicher uses the crane to load and unload factory-built components, erect walls and roof framing, and place smaller materials at the point of use. Three men and a crane operator (the trailer-truck driver) unload and erect big wall panels, trusses, and other components in 2½ hours, close in a 1,200 sq ft house in one day. Without the crane, says Schleicher, six men and a driver would be needed.

Schleicher, who builds about 200 houses a year, figures the crane saves him about $50 a house after he allows for its initial cost ($5,000), maintenance, and operation.

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DALE BELLAMAH, Albuquerque, New Mexico:
"The first impression a prospect receives of a new home is most important. For this reason exterior design and materials are critical. We have been specifying RUBEROID roofing and siding on the last twenty sections we have put up. The colors are right, and we know the product will be of the highest quality. In many cases RUBEROID's unique product features have cut our costs tremendously. RUBEROID certainly helped us to build 1,521 houses in 1959."
NOW YOU CAN
AIR CONDITION
AND HEAT YOUR HOMES
FOR AS LITTLE AS $875

with the amazing Carrier Thermo-Center!

Here's a way to sell your new homes fully air conditioned at little more than the price of a heating system alone. It's the exclusive Carrier Thermo-Center—a unique method of combining a forced warm air heating unit with a self-contained summer air conditioner to provide low-cost, twelve-month central air conditioning. It can be used with substantial savings in ranch, split level or multi-story homes.

Study the diagrams on the opposite page. Notice that the key to this system is the prefabricated Thermo-Center wall sleeve and transition assembly which provides a simple, through-the-wall mounting for the air conditioner and controls the airflow between the heating and cooling units. The result is a cost-cutting installation technique for you and superior air conditioning your prospects want and can afford.

You can't afford to overlook this big sales plus in your new homes. Get the full facts about the Thermo-Center from your Carrier Dealer. He's listed in the Yellow Pages. Or write Carrier Corporation, Syracuse 1, New York.

Any type of home can be a Carrier Thermo-Center home
The A B C's of the Carrier Thermo-Center Concept

1 The first step is to put aside outdated notions of where a heating unit can be located. Planting the furnace in the middle of the basement was good enough years ago when people were satisfied simply with heating their homes.

2 In the Thermo-Center, the unit is moved to an outside wall. There's no change in the amount of ductwork required, nor is the system operation affected in any way. Heating units can be upflow, downflow or horizontal; gas or oil.

3 Next, the prefabricated sleeve and transition assembly is built into the wall and joined to the furnace plenum and ductwork. The sleeve and transition assembly can be applied to any type of wall construction—frame, brick or concrete.

4 The cooling unit is inserted into the sleeve, anchor brackets attached, seams caulked and electrical connections made. There are no refrigerant lines, no plumbing, no specialized on-the-job construction, no installation delays.

5 The Thermo-Center can be applied to any type of home—ranch, split level or multi-story. In a house with a basement, for example, the cooling unit is connected to a plenum set on top of an upflow Carrier Winter Weathermaker.

6 In a house built on a slab, the transition is joined to a Thermo-Center downflow plenum which supports the Winter Weathermaker. The plenum directs air from the heating and cooling units into the duct system.

You save hundreds of dollars per home

1 No water supply or drain piping is required
2 No refrigerant lines are needed
3 Ductwork and wiring are simplified
4 No specialized on-the-job construction is necessary
5 Installation time and labor are greatly reduced
6 Less than 5 square feet of floor area is required

MORE PROOF OF BETTER AIR CONDITIONING FOR EVERYBODY EVERYWHERE
How to heat up profits from the basement

There's a big profit potential down under most homes. Basement remodeling! You can build playrooms, laundries, install new heating systems—and more. All can be financed on the Universal C.I.T. Property Improvement Plan. In fact, you can use this plan to upgrade the sale, sell a more extensive job.

Make the C.I.T. Plan a part of your remodeling package. All you need do is estimate the job, and close the sale by quoting low monthly payments. There's no down payment—customers can take as long as 60 months to repay. In addition, your customers are protected by Credit Life Insurance on the unpaid balance.

C.I.T.—the nation's largest independent finance company—backs you with fifty years of experience serving more than seventeen million families. 400 offices, coast-to-coast, assure you of fast, reliable service. See how the C.I.T. Property Improvement Plan can help you build profits. Call your local Universal C.I.T. representative, today. Or write: Universal C.I.T. Credit Corporation, 650 Madison Avenue, New York 22, N. Y.
**New panels promise quick-and-easy interior finish**

Latest component from Simpson Logging is this coordinated partition and panel system. The 2'x8' Easy Wall panels have prefinished woodgrain hardboard faces, insulation board cores. Partitions are 1 3/4" thick, offer good sound and heat insulation. Panels are 5/8" thick, have hardwood face laminated to 1/2" insulation board.

Partitions slide in place over 5/8"x1 3/4" plates, are joined by 5/8"x1 3/4"x8' splines. (Plates and splines are included in package). Panels are stapled to furring strips applied across the studs; staples are concealed by joint flange. Both paneling and partitions are finished off at floor and ceiling with prefinished molding.

Expected costs to builders: 95¢ a sq ft for partitions; 35¢ for paneling.

Simpson Logging Co, Seattle.

For details, check No. 1 on coupon, p 244
NOW!

MAXIMUM HOUSEPOWER
FOR ALL-ELECTRIC HOMES

with BullDog’s 200-Amp
distribution service center

Provide better electrical living with BullDog’s PL12A Pushmatic Electri-Center®! This residential distribution service system supplies 34 circuits to feed electric heating, air conditioning, range, oven, water heater, dryer, plus lighting and general purpose circuits... all from a single compact 200-Amp 12-circuit panel! (See diagram at right.) For further information contact:

BullDog Electric Products Division, I-T-E Circuit Breaker Company, Box 177, Detroit, Michigan.
In Canada: 80 Clayson Rd., Toronto, Ont. Export Division: 13 East 40th St., New York 16, N.Y.

BULLDOG ELECTRIC PRODUCTS DIVISION
I-T-E CIRCUIT BREAKER COMPANY
Sub-panel with 10-2 pole circuits for electric heat and air conditioning...or a separate feeder for electric heat pump.

Sub-panel for 20 general purpose and lighting circuits.
NEW...
low cost sewage plant furnished ready-to-run, on a "single responsibility" basis

Here at last—"Suburbia," a sewage treatment plant installed in your new sub-division and ready-to-run within 120 days! What's more, you deal with just one company from start to completion—one source of responsibility for furnishing and installation.

Individually planned and installed under the direction of your consulting engineer, "Suburbia" serves communities of 200 to more than 10,000 homes. Units conform to requirements of your State Department of Health; can be used permanently or as an interim measure (and then be re-erected elsewhere).

"Suburbia" is so simple that unskilled help can operate it; yet, with minimum maintenance, units produce no objectionable odor or bacteria-laden foam. Best of all, "Suburbia" involves less initial and operating capital than any other type of sewage treatment plant.

Let us show you how to buy community sewage treatment at sensible cost—and have it installed quickly, efficiently, without adding the confusion of multiple contracts. "Suburbia" is furnished and installed on a turnkey basis only, by...

MUNICIPAL SERVICE COMPANY
Your sewage service—our full responsibility
4623 Roanoke Parkway • Kansas City 12, Missouri

TYPICAL SOUTHERN-STATES INSTALLATION can go above-ground. Costs drop when tanks need not be buried, true of most of the South. This installation serves 300 homes (105,000 gallons per day) in the Corrime Terrace Development, Orange County, Florida.

TYPICAL NORTHERN INSTALLATION goes below-grade to take advantage of residual ground-warmth during colder winters. This one serves 700 homes (245,000 gallons per day) in the Gracemor Subdivision, Kansas City North, Missouri. Other installations range as far north as Michigan.
NEW HORIZONS IN MASONRY

If you’re not in the mood for monotony, build of Amerok—the supreme achievement in masonry.

For Amerok is refreshingly different. There’s newness in its striated texture... tomorrow’s touch in the wide color range... thought of contemporary styling in its clean-lined symmetry.

And it’s easy to build with Amerok. It is strictly in modular conformation. Precisely dimensioned. Generous voids to entrain air and lighten the load on footings and foundations. Ample structural strength. Two lengths—16” and 12”; two thicknesses—8” and 4”. Two heights—21/4” and 33/8”. Half units for each size. Striated or plain face.

Price? Beauty considered, 8-inch-thick Amerok is easily the lowest cost masonry available. Material for material, usually costs less than lumber. And there’s the 4-inch-thick for cavity walls, or veneer over frame. Write for brochure “New Horizons in Masonry” and name of nearest manufacturer.

OPPORTUNITIES ARE OPEN FOR LOCAL MANUFACTURING

Amerok is relatively low in price because it is produced in local plants, from local aggregates, for local or regional consumption, practically eliminating the terrific costs of freight and distribution, and permitting a generous mark-up on basic costs. For these reasons, the manufacture of Amerok can be a very profitable operation, either for your own building projects or for sale to others in the area.

The Amerok machine is compact, self-contained and fully automatic. Plants operate under franchise, with exclusive rights in protected territories. Equipment investment is nominal with extended payments to responsible parties. Write for “The Story of Amerok.”


EVERY kitchen can now include a Ductless Hood and all the benefits that magic name implies: Fresh kitchen air—odors, smoke and grease banished! Ductless Hood purifies air by the time-proved method of recirculation through Activated Charcoal. No costly ducts or outside vents needed.

Model BD-10 Ductless Hood is designed to meet builders’ demands for a low-priced unit. You have the prestige of the Ductless Hood brand name as a selling tool for your homes. At the same time, Model BD-10 does a satisfying job of air purification for the home buyer.

Write for information: DUCTLESS HOOD CO., INC. 601 Plamorome Road Manhasset 2, N. Y.
Dramatize quality air

WATCH HOMEBUYERS GO FOR THESE OTHER NEW THERMOSTATS, TOO

New Honeywell Round Thermostat—with picture-window dial, eye-saving numerals, comfort-zone indicator, diamond-lustre finish.

New Heating-Cooling Thermostat—controls both heating and cooling. Changes from one system to the other automatically.

New Electric Clock Thermostat—automatically turns heating or cooling up or down at the desired time daily for extra comfort, economy.
conditioning with this new Master Control Panel

Honeywell Weather Station puts visual evidence of year 'round air conditioning at your prospect's fingertips

Now you can point to and demonstrate dramatic evidence of quality air conditioning in the living area of your homes. And, you can offer your prospects complete, fingertip control over their indoor comfort.

Simply point out how the Honeywell Weather Station lets them check indoor humidity and both indoor and outdoor temperatures at a glance. Show them how they can pre-set day and nighttime temperatures to change whenever they wish. Mention the barometer that helps them forecast weather changes well in advance. And explain that there are special lights to warn them of a clogged filter and similar minor disorders they can correct themselves.

See how this dramatic Weather Station Control Panel can help you sell homes. Plan to install them in the homes you build. And get free promotional materials from your local Honeywell office to help you attract prospects. For additional information, call your nearby Honeywell office; or write: Minneapolis-Honeywell, Department HH-7-156, Minneapolis 8, Minnesota.

Honeywell
First in Control

NEW HONEYWELL COMFORT-ZONING
Impress quality-home buyers with comfort that's zoned to match their way of living. Show how zone control divides their home into comfort zones. Point out the thermostat in each zone that provides heating or cooling to that zone according to its own individual comfort needs. And explain that it can be comfortably warm in the living area and pleasantly cool in the sleeping area both at the same time. Only zone control assures maximum comfort per square foot.

NEW INDOOR-OUTDOOR SYSTEM
House-hunters will be fascinated with the way this low-cost control system actually anticipates their comfort needs. Here's how it does it! An outdoor thermostat senses a change in wind, sun and temperature and signals this information to an indoor thermostat. The indoor thermostat then lowers or raises room temperature accordingly. Your home buyers won't notice changes in the weather because the system compensates for it.

With this new Indoor-Outdoor System, you have your choice of many of Honeywell's complete line of thermostats—including the new Diamond Jubilee model of the famous Honeywell Round.
Three ways to light a ceiling

Sta-Brite's Modernlite is an economical modular ceiling unit made in 4'x4' and 4'x6' grilles. Each unit includes the translucent plastic grille in a natural or gold anodized aluminum frame. Grille is lightweight, easy to remove. Dust does not accumulate. Translucent plastic evens out light.

For details, check No. 3 on coupon, p 244

Island of light is supplied by suspended plastic grilles of Diffusa-Lite's unit luminous ceilings. Vinylux plastic panels have concave and convex surfaces that eliminate glare and contrasts. Diffusa-Lite panels come in eight sizes: from 3'x4 to 6'x9'. Vinylux plastic comes in 18", 24", and 36" wide rolls. Two-light fluorescent fixtures are available to match diffusers.

For details, check No. 4 on coupon, p 244

Plastic louvers give a high-intensity but well diffused light from overall ceiling fixtures. Mystic Gratelite comes in two panel sizes: 11"x48", 16"x48". Cubes are 3/8" on a side, but polystyrene is translucent so panel looks solid. Gratelite hides tubes but allows free interchange of air. It can be easily cleaned and destaticized by a dip in detergent.

For details, check No. 5 on coupon, p 244
That's right! Rimco Slide Wood Window Units give more quality, yet, help cut your building costs. Reduced installation time: all parts are pre-assembled . . . fitted with beautiful hardware . . . ready to install. That's why we go further than saying just "window" . . . we say "window unit." Look at these features and you'll agree Rimco Slide is your best buy: both sash removable for ease of painting and storage while plastering; Selected Ponderosa Pine protected with deep-penetrating Woodlife preservative applied by the Dri-Vac controlled process; fully weatherstripped with anodized aluminum; wood slides over satin-finish aluminum for smooth, quiet operation.

Yes, for more features at less cost, more and more progressive builders are choosing Rimco.

Ask your Lumber Dealer for more information on the complete Rimco line of quality Wood Window Units or write Department "B."
HOME ENTERTAINMENT... "In the wall, off the floor, out of the way." Here the magic of Color TV is combined with the finest pushbutton Radio-Victrola® High Fidelity Stereo. 4-speed record changer slides out 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.

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. Rear-ventilated model available.

Years' best new idea for selling homes...

"MURAL TV" and STEREO BUILT-INS BY RCA VICTOR

Many successful tract developers are now selling from model homes with RCA Victor "Mural TV" and Stereo Built-ins. The same is true with smaller builders of custom homes.

It is significant that most of these builders are installing Color TV, alone or in combination with stereo. Why? Most home buyers feel that Color TV is the coming thing, yet many hesitate to buy right now. But when you show it built into a home they can afford, the bars are down and they "have to have it." It's the extra value that wins over competition.

RCA Victor Built-in units are engineered for the top performance and dependability that the public expects from RCA Victor. They are available in a complete line of fashion-leading styles... expressly designed for simple installation into walls, permanent room dividers, or in cabinets and closets.

Experienced RCA Victor sales engineers are ready to discuss plans, models and costs with you. Send coupon today!

RCA Sales Corporation
Box 1226—A15
Philadelphia 5, Pa.

Please send full information on RCA Victor Built-in "Mural TV" and Stereo.

Name ____________________________ Title ____________________________

Company ____________________________

Street ____________________________

City & State ____________________________

The Most Trusted Name in Electronics

RADIO CORPORATION OF AMERICA

Please fill out the coupon and send it to RCA Sales Corporation, Box 1226—A15, Philadelphia 5, Pa.
Cedar makes a roof important. It lets you combine prominent textures with protective overhangs... broad expanses with dramatic pitches... natural good looks with genuine durability. Cedar says quality. Top off your next design with three thick layers of genuine red cedar shingles. And watch how quickly it sells!

For complete application details, see your Sweet's File, or write...

**RED CEDAR SHINGLE BUREAU**

5510 White Building, Seattle 1, Washington
550 Burrard Street, Vancouver 1, B.C.
Now...the finest aluminum siding designed for new home building!

**NU-HOME ALUMINUM SIDING**

- Here, for the first time, a siding developed specifically to help you build better new homes for less money. You save on both materials and labor, with no lost time due to weather. Nu-Home Aluminum Siding goes on quickly, even with unskilled workers, and completely eliminates painting time. And, you'll sell homes faster, too, when you offer Nu-Home beauty with its many years of freedom from maintenance and painting costs.

Mail the coupon below and get the complete story on how Nu-Home can help you build better homes for less. There's no cost, no obligation, so mail the coupon today.

- Panels bonderized and vinyl-coated front and back.
- 10-year factory warranty on finish.
- Meets FHA Standards.
- Easy, fast lock-up installation.
- Sold only to builders through building supply firms.

**HASTINGS ALUMINUM PRODUCTS, INC.**
Hastings, Michigan

Complete details for the cost of a stamp! Get the whole Nu-Home product and profit story. Mail this coupon today and we'll rush complete information to you.

Hastings Aluminum Products, Inc., Dept. 96, Hastings, Michigan

Please rush me additional information on Nu-Home Aluminum Siding

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New products start on p 207

Contemporary look in new line of appliances

New single Compact oven fits a standard 24" cabinet. Oven is 17" wide, has sup- speed broiler, lift-off door, glass control panel. Three models — 310, 318, 320 — vary in trim and degree of automaticity. For details, check No. 6 on p 118.

Wall-hung Contempo range is the top of O'Keefe & Merritt's 1960 line, introduced in consumer advertising late May. Complete cooking center has hide-away burner top, two glassed-oven doors, one 21½" x 11½" x 15½". Contempo has automatic controls, is available optionally with optional cabinet. O'Keefe & Merritt, Angeles. For details, check No. 7 on p 119.

Whirlpool shows two new kitchen appliances

This new automatic ice maker from Whirlpool is only 30" wide, is designed for small kitchens. Unit will produce up to 35 lb of ice a day. Cubes are frozen in solid sheet from running ter, than cut in 1½" cubes by radiant wires. Storage holds 16 lb. Free-standing or built-in models carry a one-year guarantee. For details, check No. 8 on p 120.

Also new from Whirlpool a 13½ cu ft frost-free refrigerator-freezer. New insulation makes these models smaller overall than year's 11 cu ft models. Luxe model, GA-1400, automatic ice maker, jet-cold chiller shelf. Gas absorption will work for less than a month even in high areas like Chicago. Sealed refrigeration system is guaranteed for ten years. Priced at $570 to $700. For details, check No. 9 on p 121.

New Products continued on p 219.
Specify Smith & Loveless Factory-Built Quality and Dependability in Your Sewage Projects...and Save!

PUMP STATIONS
Smith & Loveless pump stations are available in standard sizes for capacities from 100 GPM to 4500 GPM per pump with two or three pumps per station. Even larger capacity stations may be built to order. Proven in municipal and suburban sewer systems in more than 1200 installations all over the United States, including Alaska and Canada.

PNEUMATIC EJECTORS
Smith & Loveless' complete line of factory-built pneumatic ejectors, like the "Mon-O-Ject", offers a universal selection of lift stations to meet your requirements for lower capacities. Available in sizes ranging from small, single-dwelling sewage ejectors for the home to large duplex "Du-O-Ject" units for stand-by dependability and extra capacity to handle peak loads.

TREATMENT PLANTS
Smith & Loveless factory-built "Oxi-Gest" sewage treatment plants provide low-cost, dependable treatment facilities for motels, factories, schools or subdivisions. Available in single units to serve 10 to 100 homes—or may be installed in parallel, as needed, to serve a growing subdivision. Requires only minimum annual maintenance.

WRITE TODAY FOR OUR FREE ENGINEERING DATA MANUAL ON SEWAGE LIFT STATIONS AND SEWAGE TREATMENT PLANTS
ADDRESS: DEPARTMENT 70

NEW RUGGED Campbell-Hausfeld
HIGH PRESSURE TANK UNITS
...ideal for paint and building contractors, rental, maintenance, or other hi-volume air power requirements!

- Rugged twin cylinder air compressor (2¾" bore x 2" stroke)... delivers 5.4 CFM at 45 psi.
- Up to 100 psi continuous, 150 psi intermittent.
- 1 HP electric motor with automatic pressure switch, or 3 HP gasoline motor with constant speed unloader.
- 20 gallon tank. Stationary, or mobile with 10" rubber tired wheels.

Offers years of trouble-free high volume air delivery for fast sales, satisfied customers. Write for Bulletin HP 100 today!

"Whatever your paint spray needs... Campbell-Hausfeld has the unit for you."

The Campbell-Hausfeld Co., 305-5 Railroad Ave., Harrison, Ohio

INSTALLLED IN SECONDS!
NO Hanging!
NO Painting!
NO Hardware!

New, unique patented design enables the builder to use construction short-cuts, labor-saving installation procedures never before enjoyed. Available in heights to 8', widths to 4'. Can be installed in pairs. 16 lovely, washable, fire-resistant vinyl colors available.

THE COLUMBIA MILLS, INC.
368 S. WARREN STREET
SYRACUSE 1, NEW YORK

CAMPBELL-HAUSFELD

JULY 1960
"In 1960 American families will spend an estimated $4.6 billion on home remodeling. According to market analysts, the biggest share of these dollars will be used to add family rooms."

Building Family Rooms with DeVAC GlassWalls

...a unique opportunity to make extra profits on the home remodeling boom using DeVAC modular units.

MODULAR UNITS permit fast, economical construction. Two men can easily enclose the average porch or breezeway in one working day. Result: less cost.

BONUS SALES are an added plus for the building supply dealer. Lumber, conduit, hardware, and sometimes floor covering and roofing, are included in sales of DeVAC GlassWalls.

BEFORE: Summer porch, wide open to cold, wind, rain and snow. Porch furniture must be moved in and out according to the weather. The porch is usable only a few days a year. The rest of the time it's just so much wasted space.

AFTER: A year-'round room created through the use of DeVAC GlassWalls. Whether you enclose a porch or breezeway or build from the ground up, you can add a room with DeVAC GlassWalls at lower cost per square foot than by any other method.

DeVAC does extensive national consumer advertising "creating" prospects for porch enclosures and has a complete program of sales aids, including literature, ad mats, and displays.

SEND COUPON TODAY:

DeVAC, Inc.
5900 Wayzata Boulevard • Minneapolis 16, Minnesota
Please send me complete information on DeVAC GlassWalls.

NAME ____________________________
COMPANY _________________________
ADDRESS _________________________
CITY ___________________ STATE ______

Flat-back sink is a new shape in Jensen's Contour self-rimmed stainless line. New sink was designed as answer to the complaint that ledge back of countertop sinks collects dirt and is hard to keep clean. Curved lines avoid institutional look. Single-bowl and double-bowl types are $29 and $43.60.

Jensen-Thorsen, Addison, III.
For details, check No. II on coupon, p 244

Cluster drop-in from Roper has top-mounted controls protected by a raised bezel. Top controls permit simple, one-cutout installation. New unit comes with four high-speed burners or three high-speed burners and an automatically controlled burner. It is available in chrome or colors to match Roper's built-in ovens.

Geo. D. Roper Sales, Kankakee, Ill.
For details, check No. 12 on coupon, p 244

Fold-away hood projects to catch cooking odors when oven is on, forms flush front when no cooking is being done. Opening and closing hood turns fan on and off. Hood is made in stainless steel and copper enamel to match built-in gas or electric ovens in 24", 27", and 32" widths. Price of hood, $17.45; of power unit, $34.50.

Nutone, Cincinnati.
For details, check No. 10 on coupon, p 244
Water retention is the ability of a mortar to retain its moisture longer, and hence its plasticity, when spread out on porous brick or block.

Because of its inherent physical characteristics, plus the air-entraining agent intermixed into Brixment during manufacture, Brixment mortar has very high water-retaining capacity. It resists the sucking action of the brick. It gives the bricklayer more time to bed the brick properly before the mortar stiffens, thus helping to secure a good bond.

But greater water retention is only one of the characteristics in mortar necessary to produce top-quality masonry at lowest cost. Several others are listed below—and no other mortar combines ALL these characteristics to such a high degree as Brixment mortar.

It is this combination of advantages that makes Brixment superior to any mixture of portland cement and lime—and which also accounts for the fact that Brixment has been the leading masonry cement for over 40 years.

Louisville Cement Company, Louisville 2, Ky.
how to rid yourself of "NUISANCE TIME" with modern Electromode heat

When you recommend Electromode electric heat for a building modernization job, you can forget it once it's installed. There will be no "nuisance time" to revamp, revise or redo your work.

- Installation is quicker and offers you more flexibility in floor planning than a fuel-fed system.
- Maintenance problems and breakdowns are non-existent because of the very few moving parts and the elimination of a central unit with pipes and ducts.
- Costs—both initial and operating—are comparable to other types of heating.
- Customer satisfaction is assured because Electromode is the cleanest type of heat ... safest, too. Gives more comfort with thermostats in every room.

**Electromode**

Dept. HH-70, Division of Commercial Controls Corp., Rochester 3, N. Y.

Please send me full details on:

- [ ] Bathroom Heater
- [ ] Baseboard Heater
- [ ] All of your many residential and commercial heaters

**NAME** ____________________________

**COMPANY** ____________________________

**STREET** ____________________________

**CITY** ____________________________ **STATE** ____________________________

---

**Cherry paneling** has been added to US Plywood's new Charter series of pre-finished, V-plank wall panels. Charter series uses veneers with more burls, birds' eyes, knots, and other grain markings to get a more distinctive panel at a cost somewhat lower than clear boards. Other Charter panels: oak, walnut, birch.

US Plywood, New York City.

For details, check No. 13 on coupon, p 244

**Gold-flecked tileboard** is a new plastic-finished hardboard from Panelboard. The new panel is designed to complement the many new metallic-flecked countertop and floor materials. Sheets come 4'x4' and 4'x8' with a 41/4"x41/4" tile-like scoring or 4'x8' smooth surfaced. Base board is 3/4" tempered hardboard; finish is baked melamine. White and colors.

Panelboard Mfg Co, Newark.

For details, check No. 14 on coupon, p 244

**Ceramic floor tile** in new patterns, textures, and colors is now being imported from Sweden by Scandinavian Marketing Assoc. Ifo tiles are made by Sweden's biggest tilemaker, come in a wide range of solid colors, textures, and sizes suitable for indoor or outdoor use.

Scandinavian Marketing, New York City.

For details, check No. 15 on coupon, p 244

continued on p 224
SPECIFY
WARE
ALUMINUM
WINDOWS

PROVEN PERFORMANCE • Millions of Ware Aluminum Windows, in installations all over America—residential, institutional, industrial—have been demonstrating their quality for more than a decade.

NEW DESIGNS • Forward looking management will introduce a number of new designs in the next few months that will add to the attractiveness of this great window line. Write now for details.

WARE ALUMINUM WINDOWS, INC. • 3700 N.W. 25th ST. • MIAMI • FLORIDA

Main Factory at Miami
Distribution Centers at Atlanta, Houston, Chicago, Newark, N. J. and Connellsville, Pa.
Here’s THE COMPLETE ANSWER TO YOUR SHELVING PROBLEMS

**All-Steel Shelves**
- Maintenance Free
- Completely fabricated and packaged
- All sizes have 13" length adjustment
- Cuts labor costs 85%
- Choice of two beautiful finishes—linen or greytone

**Improve Ventilation**

**hc Vent-a-Ridge**
A new prefabricated aluminum ridge vent that is economical, attractive and efficient. FHA accepted.

**Here’s a NEW Idea in Home Ventilation**

**Trademark of Home Comfort Mfg. Co.**

**hc products co.**
Princeton, Illinois

Please rush me literature on X-PANDA Shelves

**High-style vinyl asbestos** catches the look of Italian marble at a moderate cost in a practical, long-lasting material. Mastic Tile’s Antiqua series combines swirls of gold and white with base colors—gray, yellow, onyx, green, pink, beige. Antiqua series is made in standard gauge in 9"x9" tiles.

Mastic Tile Co, Vails Gate, N.Y.
For details, check No. 16 on coupon, p 244

**Solid vinyl tile** in a variety of patterns has been added to Johns-Manville’s flooring line. Patterns in the new line are Phoenician (a translucent), Marbleized, and Terrazzo. Wide range of colors is available in all types. Marbleized also comes with gold striations.

Johns-Manville, New York City.
For details, check No. 17 on coupon, p 244

**Textura vinyl** is the latest flooring style from Antico. Patterns and colors are derived from Spanish mosaics. Material is available in sheet form. Also new from Antico: Moiré, a vinyl flooring with the look of watered silk. Both new patterns have been cited by the American Institute of Decorators.

American Biltrite Rubber, Trenton.
For details, check No. 18 on coupon, p 244

continued on p 226
This five-pointed star of specialties is only part of PFI’s profit story for wholesalers, dealers and builders.

From one integrated source you get: (1) 100% kiln-dried quality lumber, (2) seven species to choose from, (3) selected quality Idaho White Pine from the world’s largest source of this fine species, (4) and everything PFI supplies is available in mixed carload lots.

POTLATCH FORESTS, INC.
LUMBER DIVISION GENERAL OFFICES, LEWISTON, IDAHO

JULY 1960
A dramatic entrance for your model home: A smartly-styled

**CANVAS CANOPY**

The simple addition of canvas sunshades or canopies can work wonders in giving look-alike houses a look of luxury. Yet here's a product that soon pays for itself in the comfort and savings it provides.

Used as a protective covering for walkways or entrances, canvas costs substantially less than other building materials. As a shading device to keep hot sun rays off window glass, canvas makes homes easier to cool without air conditioning; cheaper to cool with air conditioning.

What's more, with the remarkable new finishes for this sturdy fabric, you can expect years and years of rugged service and rich, colorful beauty. Ask your local canvas products manufacturer about the acrylic paints, vinyl-plastic coatings, and improved dyes that now make canvas sunshades and canopies a better-than-ever feature to attract prospective home-buyers.

See our catalog 19e/Ca in Sweet's Architectural Catalog or write for a free copy. It contains original and practical ideas plus helpful information for specifying canvas.

Air cooling by gas uses natural or Lp fuel to power a Continental engine. In this system by Gas-cool, models of 5-ton and 7½-ton capacities are claimed to operate up to 60% cheaper than all-electric models. Fuel consumption is only 20 cu ft of 1,000 Btu natural gas per ton-hour. Five-ton model rates at 60,000 Btuh, bigger model at 90,000 Btuh.

Vector Engr Contractors, Dallas. For details, check No. 19 on coupon, p 244

Portable bender is a handy tool for forming light metals on the job. Round and V anvils will shape cold-rolled steel up to ⅜" thick, ⅜" wide to form straps or hangers. Tool is made of heat-treated steel, case hardened to take pressures up to 2,000 psi, zinc plated to last a lifetime. Price: $4.95.

The Hahn Co., Los Angeles. For details, check No. 20 on coupon, p 244

Non-sweat tank is now optional on most Universal-Rundle Uni-Closets. The tank is insulated with a foamed polyethylene liner to keep the water from chilling the shell, causing condensation. Tank comes in white and all U-R colors, needs no special fittings for installation. Ever-Dry was field-tested for five years.

Universal-Rundle, New Castle, Pa. For details, check No. 21 on coupon, p 244
We believe "You Only Get What You Pay For" — and that "cheap" air conditioning is never a bargain. That's why all BAR-BROOK units are engineered for a job and not for a price. You will find more expensive units than BAR-BROOK — but none better. There are no senseless, eye-catching and costly gadgets. No "juke-box" trim. Just clean, modern, functional engineering, with nothing overlooked that will make a BAR-BROOK more efficient, more reliable, and more economical to install, to buy and operate. That's why we think you should investigate BAR-BROOK Heating-Cooling Equipment — NOW! A call, card or letter brings you a catalog and all details.

BAR-BROOK MFG. CO., INC.
6135 Linwood Avenue
Shreveport, Louisiana

Send me complete information on KEYSTONE Aluminum:
- Fascia and Ventilated Soffit System
- Aluminum Siding
- Rollings and Porch Columns
- Storm Windows and Doors

Name
Company
Address
City __________________________________________ Zone ______ State ______

Please ship the following Steel Stakes:

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<th>Quantity</th>
<th>Size</th>
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FREE! Stake Puller with order of 100

Sizes can be mixed

Prices and items shown are net F.O.B. Chicago, Illinois factory and subject to change without notice.

TERMS: (Check one) Check enclosed ______ if satisfactory mercantile rating or reference is furnished, net 30 days ______ C.O.D. ______

SYMONS Steel Stake

Can Be Reused Indefinitely

Drives easily into hard earth. Can be used for practically any type of stake work. This popular and profitable item is available in 12", 18", 24", 30", 36" and 42" sizes.

Pullout hole for easy removal

Easily secured to lumber. Can be nailed every 1" O.C.

"I" beam design drives easier. Holds best

Hi-Carbon Alloy Steel tough to bend

Rugged point with minimum deflection

FREE! Stake Puller with order of 100

Sizes can be mixed

Prices and items shown are net F.O.B. Chicago, Illinois factory and subject to change without notice.

TERMS: (Check one) Check enclosed ______ if satisfactory mercantile rating or reference is furnished, net 30 days ______ C.O.D. ______

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</table>

PLEASE PRINT

Firm Name

Address:

City __________________________ Zone ______ State ______

By ____________________________

SIGNATURE

JULY 1960
You're certain of customer satisfaction with Certain-teed Sealdon Shingles. They offer the attractiveness and ruggedness of Certain-teed Tuftab shingles plus a factory-applied sealing compound on the underside.

When heated by the sun, this adhesive bonds each tab to the roof and, once sealed, Sealdons stay down. Hurricane winds or driving rain can't pry them loose. They seal weather out, seal protection in. Yet wind-blown moisture can escape through small spaces left in the sealing strip.

Designed in the popular square-butt pattern in a wide choice of colors, Sealdons are being featured in Certain-teed's "Our Wonderful World of Color and Comfort" builder program. This includes three exclusive, sales-producing features designed to help you sell more homes. Get full details from your Certain-teed representative.
New products

start on p 207

"Frame locators" eliminate guesswork in nailing Celotex's Celo-Rok or Fi-Rok gypsum wallboard. Each sheet is printed with small letters spaced 1" apart in lines 16" oc. When drywall is nailed vertically, the lines locate studs; horizontally, letters are the key. Lettering fades when exposed to natural light.

Celotex Corp, Chicago.
For details, check No. 22 on coupon, p 244

Prefabbed awnings in two styles and in sizes from 10'x10' to 10'x40' are now being made by Jensen-Lewis. Each package includes galvanized steel framing, removable painted-canvas cover, detailed instructions. List prices start at $74.95.

Jensen-Lewis Co, New York City.
For details, check No. 23 on coupon, p 244

Lightweight door—the Raylon—combines aluminum frame with translucent fiberglass-reinforced panels. Door is claimed to be immune to corrosion, warping, shrinking, splintering. It comes in green, tan, and white, in standard sizes, 8'x6'-6" to 16'-6". Normal headroom is 12", reducible to 3" with Raynor Converti-Kit. One-year guarantee.

Raynor Manufacturing, Dixon Ill.
For details, check No. 24 on coupon, p 244

continued on p 232

ONLY Slide-View GIVES YOU
a complete choice of sliding glass doors

Slide-View's complete line of steel and aluminum sliding glass doors means there is always a right Slide-View door for each job.

The Slide-View Model AL-1a deluxe aluminum door is shown in this country club installation, which includes transoms with vertical muntins above sliding doors. This model is often used in motels, schools, churches, showrooms, apartments and quality homes. It is available as multi-slide doors with 2, 3 or more tracks and also with a "recessed" track for interior use—all for either single glazing or insulating glass.

The Slide-View Model 300 economy aluminum door (as shown here in a project home) gives positive weather protection at a new, low price. Completely Alumilited for lifetime wear in attractive satin finish. Step-down track and "outside slide" feature keeps water and air out, while the quiet, nylon rollers with stainless steel bearings allow easy sliding. Inside screen stays cleaner, longer, will not rattle in the wind. Can be glazed with 3/8", 3/16" or 1/2" glass. Model T-300 is glazed with 3/8" insulating glass.

One of the original products of the sliding door industry, Slide-View steel doors have been specified and installed in all types of construction for many years. Strong and sturdy, they can be fabricated up to 50 feet wide and 12 feet high. Completely double weatherstripped with stainless steel track and rust resistant chemical prime coat, Slide-View steel doors are superior in use and construction. Available for every kind of glazing in 19 types from the regular 2 panel door to multi-panel, pocket types and outside sliders.

Our 12th Year fabricating sliding glass doors exclusively.

Write for brochure
and prices

Slide-View
DOOR AND WINDOW CO
P.O. Box 409, El Monte, California
"BRINGS THE OUTSIDE INSIDE"

Member

JULY 1960

229
NEW! EXCLUSIVE!
BARRETT
BAR-FIRE
ASPHALT SHINGLES

Here's the quality shingle you've been waiting for. The new Barrett Bar-Fire. The finest ever made—worthy in every way of the quality structures you build. Here's why:

• 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 the new "Bar-Fire" shingles is backed by the prestige of the Barrett name—the greatest in roofing with an unequalled reputation for quality. For samples and full information, call your Barrett representative or contact us direct.

BARRETT IS OUT TO HELP YOU! Whatever your building material needs, Barrett can fill them with a full line of dependable, quality products—all manufactured to the highest standards.

• STORM-KING® SELF-SEALING AND OTHER ASPHALT SHINGLES • PITCH & ASPHALT BUILT-UP ROOFING • ROLL ROOFINGS • FIBERBOARD AND GYPSUM PRODUCTS

• INSULATION • PROTECTIVE COATINGS AND CEMENTS.

† Trade Mark Allied Chemical Corporation
Weather-tight and
"Class A" fire rating!
good looking, too!

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.

BARRETT DIVISION
40 Rector Street, New York 6, N. Y.

Allied Chemical

JULY 1960
New products

Prefabricated, all-metal
FIREPLACE & CHIMNEY

Fireplace Costs
in Housing Developments and
Custom Homes Alike

Majestic

★ ATTRACTIVE CHIMNEY TOPS
Simulated brick-patterned tops
in a choice of sizes. Red, tan or off-white.

★ NO MASONRY OR MORTAR NEEDED!
Aluminum construction from
hearth to chimney top. Made
of corrosion-resistant alloys
and stainless steel.

★ EASY TO INSTALL
Cuts builder’s time and cost.
One workman can erect several
chimneys or fireplaces a day.

Perfectly safe,
even butted against wood.
Use any style mantel. 30” or
36” opening width. Floor-
level or raised hearth. Unit is
complete with built-in, sliding,
firescreen.

★ DESIGNED FOR MAXIMUM DRAFT
and complete with handy
cleanout and anti-condensation
feature

★ MODELS FOR ALL HOUSE STYLES —
one, one-and-half and
two full stories

★ CLASS A CHIMNEYS
for oil furnaces, incinerators,
other appliances. Class B
Vents available for gas furnaces,
other gas appliances.

Build attractive, quality fireplaces
and chimneys at less cost. Write for full details.

The Majestic Co., Inc.
416 Erie Street, Huntington, Ind.

Decorative tile for acoustical ceilings
has a sculptured, three-dimensional surface
in a design derived from the US
Pavilion at Brussels. Tiles are 9/16” thick,
12”x12”, 16”x16”, finished in a high-reflectance
white and a warm tone. Sound absorption
is aided by needle perforations in sculpted areas.

National Gypsum, Buffalo.
For details, check No. 25 on coupon, p 244

Plastic filigree in openwork panels
36”x12”, ½” thick, can be clamped to
decorator poles to form screens and room
dividers. Panels are white with black or
gold trim. They are ready to install but
can be easily worked with woodworking
tools for custom use. Poles are brass-
plated or black enamel. Prices for two
panels, two poles start at $12.98.

Bernard Edward Co., Chicago.
For details, check No. 26 on coupon, p 244

Plastic panels for tub and shower en-
closures are framed in extruded anodized
aluminum in gold or silver. Reinforced,
shatterproof Panelon sheets are .150
gauge, come in a wide variety of fabric or
foliage imbedments created by Beatrice
West.

Panelmode Corp., Edison, N.J.
For details, check No. 27 on coupon, p 244

This fabulous
Amtico Vinyl Floor
wins prospect interest
as illustrated on the facing page

The Flooring:
New Amtico Travertine Vinyl

The Colors:
1. VA-1 Beige
2. VP-22 Black

Travertine® Flooring Data:
Amtico Travertine Vinyl ½” . . . all-vinyl,
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”, 24” x 9”, 18” x 18”, 18” x 12”,
18” x 9”, 12” x 6” • Other sizes available by
special order.

Amtico Flooring Facts:
Builders who think of flooring in terms of
attracting prospects usually 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.

Home buyers think of the years ahead, so
you can sell them on Amtico’s quality that
stands up to hardest wear. They’ll like the
underfoot comfort Amtico’s resilience as-
sures. There’s big appeal in maintenance
that’s almost effortless, even with lightest
colors.

Install an Amtico Vinyl Floor easily any-
where . . . over wood subfloors, concrete
under floors, suspended concrete, on-grade
concrete, below-grade concrete.

*Produced by an exclusive process. Pat. Pend.
Regal as the splendor of imperial Rome...

Amtico

TRAVERTINE

Vinyl

Classic as a Roman column ... yet new as the decade it will grace so distinctively. Amtico Travertine Vinyl captures the full drama of travertine marble, its stately look, muted tone, its very texture. In a room of any period, Amtico Travertine Vinyl adds magnificent significance with subtle sophistication ... on floors, walls, stairs, decorative devices, furniture surfaces.

Amtico Travertine Vinyl performs patrician magic so practically ... with infinitely more economy, more resilience underfoot than natural travertine. Much lighter in weight, yet wears far longer. Amtico Travertine is so much easier to install and so effortless to maintain... should never be waxed.

Delight in the plans you can devise with Amtico Travertine Vinyl Flooring ... and Amtico’s complete line of fine floorings including renowned Renaissance®.

*Produced by an exclusive process. Pat. Pend.
Gives Your Kitchens individuality

As a builder, or contractor, Preway Bilt-Ins set you apart from the crowd . . . give you special identity . . . help your kitchen gain the "Look of Luxury" with Preway's customized styling in both gas and electric appliances.

And when it comes to installation, you'll find that Preway also gives you the lowest in-place cost. In fact it takes only 60 seconds to "lock-in" a Preway oven, gas or electric, and a screwdriver is the only tool required.

Preway is the pioneer full line manufacturer of built-ins; offers you the most complete selection in the country. Bring women your way with Preway — as hundreds already do. Call or write for the facts, in full color; and the figures, in black and white.

The Look of Luxury

PREWAY
2715 Second St., North, Wisconsin Rapids, Wis.
SINCE 1917 — Pioneer manufacturer of built-in appliances . . . refrigeration-freezer combinations, gas and electric ovens and surface units, ventilating range hoods, dishwasher. Member of Brand Names Foundation.
to custom-built or mass produced homes, **B&G Hydro-Flo** HEATING ADDS EXTRA VALUE

Designed and owned by Mr. Harry Weese, Chicago architect, this home was selected for "Record Houses of 1960".

300 Hydro-Flo heated homes in this development were sold over one weekend.

To homes built without regard to cost, B&G Hydro-Flo Forced Hot Water Heating brings comfort which matches the highest standards of design and construction. Where homes are built to sell competitively, B&G Hydro-Flo Heating adds distinction which gives them a strong selling edge over less adequately heated homes.

A builder who is installing B&G Hydro-Flo Heating in thousands of homes says this—

"In deciding on this type of heating, we were guided by the need in this highly competitive market for a feature of outstanding sales power. Radiant heating, with its sun-like warmth can't be equalled for genuine comfort and cleaner, quieter operation. Its warm, draftless floors guard against usual winter ills."

"**Hydronic Homes**" Sales Promotion for Builders

Every builder should see this presentation! There's no obligation in getting the facts on this comprehensive program of ideas and sales helps for utilizing the outstanding and exclusive advantages of hydronic heating.

Write, phone or wire today.

*B&G Booster*

The key unit of a B&G Hydro-Flo System—a quiet automatically controlled electric pump which circulates hot water through the heating system. Hydro-Flo equipment can be installed on any hot water heating boiler.

*B&G Booster*

B&G BOOSTER

The key unit of a B&G Hydro-Flo System—a quiet automatically controlled electric pump which circulates hot water through the heating system. Hydro-Flo equipment can be installed on any hot water heating boiler.

**BELL & GOSSETT COMPANY**

Dept. GG-10, Morton Grove, Illinois

*Modern hot water heating.*
Publications

How to design a bathroom
This new booklet contains 36 pages of bathroom ideas and planning helps. One 16-page section shows all colors and styles of Briggs fixtures in four-color photographs of room settings. Other pages (like those above) show all versions of each fixture type. Others show how extra baths may be fitted into a house plan in remodeling or new construction. Color wheel incorporated in the back cover gives various schemes to match Briggs's fixture colors.

For copy, check No. 34 on coupon, p 244

Here are 36 pages of recessed-lighting ideas
Moe Light's latest catalog covers a whole new line of fixtures for recessed installations. Featured is the frame-within-a-frame design shown above which can be used vertically or horizontally, eliminates light leaks, smudge marks, paint cracks. New catalog offers installation instructions, light curves, coefficient table, detailed drawings of all units. Fixture types include square, rectangular, round, adjustable beam, opal glass, shower, and aisle lights.

Thomas Industries, Louisville.
For copy, check No. 35 on coupon, p 244

How to choose and use resilient flooring
Know how to keep concentrated loads from breaking asphalt or vinyl asbestos tile? Imbed a ball bearing in the tile under the leg of the heavy furnishing (above). This is only one of the many installation details included in Kentile's new manual. The 48-page booklet also details where and how to use each flooring type, how to layout any installation (including basketball and shuffleboard courts), how to specify, how to install, and how to maintain.

Kentile, Brooklyn.
For copy, check No. 36 on coupon, p 244

How to apply plastic laminates
Panelyte division of St Regis Paper has a new technical manual on high-pressure decorative laminates. The 24-page brochure is in two sections: 1) Designing with Panelyte; 2) Specifications. Full product information—grades, colors, patterns, finishes, sizes, costs, etc—is in part one, as are details of applications for countertops, walls, baths.

St Regis Paper, New York City.
For copy, check No. 28 on coupon, p 244

New lighting control booklet
A new 24-page four-color brochure tells how to use Luxtrol controls for perimeter, area, task, and accent lighting. Applications cover ceiling and wall fixtures, portable lamps, cornices, valances, coves, luminous ceilings, downlights, spotlights, soffits. Full product information is included.

Superior Electric, Bristol, Conn.
For copy, check No. 29 on coupon, p 244

New uses for aluminum
Aluminium Ltd, has a new 36-page booklet of home ideas in aluminum, many of which might be adopted by builders. Among the areas covered: vacation homes, carports, greenhouses, roofs, walls, screen porches, fences, trellises, etc.

Aluminium Ltd, New York City.
For copy, check No. 30 on coupon, p 244

Decorate with glass
New 20-page booklet of ideas for using patterned glass in quality homes has just been issued by Mississippi Glass. The uses photographed in actual house installations include roof lights, structural walls, indoor and outdoor screens, entryways, garden rooms, bath enclosures. Back cover shows nine of the many different textures offered.

Mississippi Glass Co, St Louis.
For copy, check No. 31 on coupon, p 244

New patterns in mosaic tile
New catalog of Vico tile, a ceramic imported by Amsterdam Corp. shows patterns unlike those of any US maker. New styles include pebble forms, crazes, miniatures, polka dots, interlocking rings, etc. Also shown: variety of buckshot, random, and spiral patterns.

Amsterdam Corp, New York City.
For copy, check No. 32 on coupon, p 244

Painting color guide
DuPont has a new 48-page booklet on home painting. About 30 pages show interior and exterior color schemes in color photographs and renderings. Other pages show the palette for various types of DuPont paint. Eight pages tell how to prepare and paint almost every type of surface. Price: 10c.

E. I. du Pont de Nemours & Co, Wilmington, Del.
For copy, write direct to manufacturer.

Publications continued on p 238
COLOR PIGMENTED SEALER-FINISHES FOR EXTERIOR AND INTERIOR WOOD

Homes finished in Color-Toned REZ have a distinctive richness and warmth. REZ hard-wearing sealer-finishes enhance with color the intricate patterns of natural wood siding. The wood is sealed and protected from the effects of sunlight and weather. There's no crack, chip, peel or blister because REZ Color-Toned sealer-finishes penetrate below the surface of the wood, carrying the color pigments deep into the pores...your assurance of long lasting customer satisfaction.

For smart, harmonizing interiors, use REZ Color-Tones on wall paneling, doors, cabinets and room dividers.

* REZ COLOR-TONED SEALER-FINISHES ARE AVAILABLE IN 13 DISTINCTIVE COLORS

They range from soft, muted greens and greys, through warm, natural tones to rich, deep Redwood and Mahogany. Easy to apply...No primer coat is required for exterior use because REZ Color-Tones seal as they finish.

SEND FOR FREE 32-PAGE BOOKLET...

Here you'll find comprehensive information about the many uses of REZ Wood-Tone finishes. Also includes 13 color swatches of REZ Color-Tones.

REZ WOOD-TONES, INC.
Dept. 66, P. O. Box 142, Springdale, Pa.

JULY 1960
SELECTED FOR QUALITY

3000 GENEVA KITCHENS

FRESH MEADOWS
...the family community of 3000 apartments in Queens, Long Island, owned and operated by New York Life Insurance Co.

GREATER DURABILITY, EASE OF INSTALLATION, WIDER CABINET SELECTION ... these are the reasons GENEVA cabinets were selected to provide the ultimate in practical and gracious kitchen living in Fresh Meadows. In a two year modernization program for two and three story buildings, 3000 GENEVA KITCHENS will be installed in this famed project.

From architect to installation crew, to tenant, GENEVA steel cabinets are found easier to work with, more fully satisfying, permanently more charming.

GENEVA KITCHENS

ask about all-new Impasto®
GENEVA'S exclusive textured cabinet finish of etch-line patterned steel. It has the strength of Gibraltar ... new warmth in appearance ... superior stain and mar resistance.

GENEVA MODERN KITCHENS
Division of Acme Steel Company
Dept. HH-7-60 Geneva, Illinois

Send Complete Information on the Geneva cabinet line.

[ ] Architect [ ] Builder [ ] Other

Name ____________________________

Address ____________________________

City __________ County __________ Zone _______ State _______

 begun on p 236

"Perfect fireplace at less cost"

Bennett-Ireland has a new manual showing how a mason can save up to a ton of laid masonry on an average fireplace. The booklet gives specifications, diagrams, and photographs of the Benefire form; tells how to guarantee smoke-free installation, extra heat, draft-free floors without affecting the looks of the fireplace.

Bennett-Ireland Inc, Norwich, N.Y.

For copy, check No. 37 on coupon, p 244

Technical data on Sheet-Board

Basic information on glue-bonded lumber panels is the subject of Western Pine Assn's latest technical publication. Data covers strength, weatherability, economy, workability, and quality of product for roof, wall, and floor sheathing.

Western Pine Assn, Portland, Ore.

For copy, check No. 38 on coupon, p 244

Decorative plastics catalog

Wasco has a new four-color brochure covering Acrylite panels. These panels have smooth or textured surfaces and a wide range of natural, fabric, and metallic embedments. The catalog shows patterns in color, shows typical installations in color and in black and white.

Wasco Products, Cambridge, Mass.

For copy, check No. 39 on coupon, p 244

Facts on plastic sewer mains

Evanite Plastics has just issued a four-page brochure stating the case for plastic sewer piping. Among the virtues claimed: no exfiltration, no infiltration, no root problems; lightweight, easy to handle in long lengths; rapid joining; high impact and crushing strength; good flow characteristics with no joint turbulence.

Evanite Plastic, Ulrichsville, Ohio.

For copy, check No. 40 on coupon, p 244

Adhesives for construction

A 12-page account of how adhesives can be used in light construction is 3M's latest brochure. Contents cover products for adhering ceramic tile, insulation, wallboard, floor tile, carpets, sheet materials, as well as primers and sealers for construction use. Twenty products in all are charted.

Minnesota Mining & Mfg, St Paul.

For copy, check No. 41 on coupon, p 244

Door and window manufacturers

Schlegel Mfg Co has just published two lists of manufacturers using its product. Bulletin D covers foreign and domestic makers of sliding glass doors, storefront and entrance doors, monumental and commercial doors, storm doors, jalousie doors, and all types of screen doors. Bulletin also includes application data for woven pile weatherstripping.

Schlegel Mfg Co, Rochester, N.Y.

For copy, check No. 42 on coupon, p 244

Bulletin W covers window and screen manufacturers, both foreign and domestic, of residential, commercial, and monumental prime and storm windows and curtain wall units.

Schlegel Mfg Co, Rochester, N.Y.

For copy, check No. 43 on coupon, p 244

continued on p 243
At least twice a day,

Berry’s easy-open features

protect your reputation as a quality builder

No wonder Berry has the easiest going doors a garage can boast! They have floating nylon rollers . . . factory-lubricated bearings and hinges . . . oil-tempered steel wire springs . . . Paintlok-steel that won't swell or shrink . . . tapered track and full width unlatching mechanism on sectional models . . . factory-furnished steel stops.

Additional features such as complete climate-proof weatherseal and rigidized face panels mean maximum customer satisfaction. Berry’s full five-year guarantee protects you from costly call-backs. The price is right, installation is quick and economical. New Sundrift primer needs only one coat of paint—even white! One-piece or sectional, single or double, standard or special sizes. See your distributor or write: Berry Door Corporation, 2400 E. Lincoln, Birmingham, Mich. In Canada: Berry Door Co., Limited, Wingham, Ont.
wood-grained panels...what an

Easy on the eyes...
Factory-finished on genuine Masonite hardboard, these exciting new Royalcote cherry panels look like authentic wood grains. The three cherry tones easily maintain their rich beauty for years with just a coat of clear sealer, lacquer or wax.

Easy to apply...
You will marvel at the ease with which these handy 16"-wide by 8'-long panels install. An entirely new clip-on system makes paneling so simple that you are bound to save application time—and time saved is money in your pocketbook!
easy way to dress up homes!

Versatility is the keynote to these beautiful Masonite wood grains: as an accent wall in any room; above fireplaces, behind basement bars, alongside bookshelves—wherever you use them, these walls bring a new dimension of warmth and beauty.

You're in for a real surprise when you see how Masonite Royalcote wood grains please prospects and create extra sales appeal in your homes. And your biggest surprise will come when you discover the refreshing low cost!

See your building materials dealer or write Masonite Corporation, Dept.HH-7, Box 777, Chicago 90, Ill.

MASONITE CORPORATION
©Masonite Corporation—manufacturer of quality panel products for building and industry. Masonite and Royalcote are registered trade-marks of Masonite Corporation.
Port Charlotte, 94,000 acre homesite community on Florida’s southwest coast, is under construction by The Mackle Company for General Development Corporation, which handles everything from the land title to the financing, and offers homeowners outstanding values in a seacoast community. L-M Permaline Bituminous Fibre Pipe was selected for the house-to-street sewers because of its economy, long life, and resistance to corrosion. Using L-M Permaline Pipe, three men installed eight sewers a day.

Mackle Company Chooses L-M Permaline Pipe For Homes in Huge Florida Community

L-M Permaline house-to-street sewers at this Mackle Company Development were installed by Ray’s Plumbing, Incorporated, with L-M Permaline Pipe supplied by Morehouse Supply Company, Miami. Raymond A. Webb, President of the contracting firm, says that a three-man team dug trenches, installed the L-M Permaline sewer pipe, and backfilled more than 8 sewers a day. According to Mr. Webb, this couldn’t have been done with any other type of pipe.

No Corrosion, Leaks, or Root Trouble
At Port Charlotte, south-west Florida seaside community, Mackle Company engineers again selected L-M Permaline Fibre Pipe for house-to-street sewers. This outstanding product eliminates all problems of corrosion; it more than meets the problems of low installed cost; and provides lifetime root-proof and leak-proof service.

Get Information on Permaline Pipe
Ask your wholesaler or the nearest L-M office; or mail the coupon.

L-M PERMALINE FIBRE PIPE

MAIL THIS COUPON

L-M PERMALINE FIBRE PIPE

Send me details on L-M Guaranteed Permaline Fibre Pipe and name of nearest L-M Permaline Wholesaler.

Ask Mackle Company to send me literature on homes in Port Charlotte.

Name

Address

City State
INCREDIBLE BUT TRUE!

BATHROOMS TILED PER MAN PER DAY

MIRACLE CERAMIC TILE ADHESIVE
BEST FOR PRODUCTION WORK!

Right now in Levittown, as well as in developments all over the nation, one mechanic is installing tile in four bathrooms in just one day. Certainly it takes a special material to do the job. That's Miracle Ceramic Tile Adhesive. Truly the mechanic's mastic. Made by Miracle Adhesives Corporation, who introduced the 'thin-set' adhesive method of setting clay tile more than 20 years ago, and has been the pacemaker to progress in setting tile ever since. And, Miracle has engineered its Ceramic Tile Adhesive in accordance with the mechanic's own specifications. All over the country tile mechanics have told us what they wanted. In economy, in coverage, in long open time and in real waterproofness. All are combined in Miracle's Ceramic Tile Adhesive, finest and most economical tile adhesive in Miracle's entire 20 year history. Really long lasting, too! Try it. You'll be delighted with the way it speeds installations to achieve important savings. Send for latest edition of valuable, authoritative handbook "Adhesive Products for 'Thin-Set' Genuine Clay Tile." No obligation.

MIRACLE ADHESIVES CORPORATION
250 Pettit Avenue, Bellmore, L. I., N. Y.
Building product catalog
Rubberoid has just brought out a full-line catalog of its current products including the products of the Mastic Tile Corp acquired last year. Separate sections cover the various types of asphalt shingles, asbestos-cement siding, asbestos building board, roof insulation, built-up roofing, gypsum wallboard, roof coatings, plastic cements, asphalt and vinyl asbestos tile.
Rubberoid Co, New York City.
For copy, check No. 50 on coupon below

New load-center equipment
Walker’s Speedfax devices are shown in a new 49-page catalog in four categories: fusible load centers, small fusible devices, circuit-breaker load centers, special application devices. Sizes, loads, wiring diagrams, and prices of all devices are given.
LT-E Circuit Breaker, Philadelphia.
For copy, check No. 51 on coupon below

Want more information?
The numbers below are keyed to the items described on the New Products and Publications pages. Check the ones that interest you and mail the coupon to:

House & Home Room 1960, Time & Life Building Rockefeller Center, New York 20, N.Y.

NEW PRODUCTS • July
1. Simpson Easy Wall panels
2. Iron Fireman horizontal furnace
3. Stro-Brite ceiling
4. Diffuse-Lite ceiling
5. Slush ceiling hangers
6. O’Keefe & Merritt range
7. O’Keefe & Merritt oven
8. Jensen-Lewis oven
9. O’Keefe & Merritt ice maker
10. Whitepool ice maker
11. Whirlpool ice maker
12. Whirlpool ice refrigerators
13. Otis ice maker
14. Otis ice refrigerators
15. Otis ice machines
16. Jensen Courtesy sinks
17. U.S. Plywood Charter Cherry
18. Panelboard tileboard
19. Home ceramic tile
20. Mastic Tile Antigus
21. Johns-Manville vinyl tiles
22. Austico Textures vinyl
23. Vector Gas-evol conditioner
24. Hahn portable bender
25. Universal-Rundle non-sweat tank
26. Celotex frame locater drywall
27. Jensen-Leventhal prefabs
28. Baynor Fiberglass door
29. National Gypsum acoustic tile
30. Bernard Edward plastic panels
31. Panelmode enclosure panels

PUBLICATIONS
26. St Regis Panelyte manual
27. Lutron design brochure
28. Alabama Life booklet
29. Mississippi glass brochure
30. Vista tile catalog
31. Bruges bathroom planning
32. Moe Light’s recessed lighting
33. Kentile flooring manual
34. Bennett-Ireland fireplace guide
35. Sheet-Board data
36. Waco decorative plastics
37. Evantine plastic sewers
38. 2M construction adhesives
39. Schlegel door info list
40. Schlegel window info list
41. Simpson door catalog
42. Modern metal catalog
43. Universal curtain rods
44. AWI wood preservation
45. Clay Fire Lining booklet
46. Helen Co sales aids
47. Nibo steel fittings catalog
48. Rubberoid product catalog
49. E.F. Hort, ironwork guide
50. Paddock pool guide
51. Redwood uses in architect’s homes

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House & Home’s servicing of this coupon expires Oct, 1960. In addressing direct inquiries please mention House & Home and the issue in which you saw the product or publication.

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244 HOUSE & HOME
LONGER LENGTHS OF COPPER TUBE MEAN FEWER JOINTS! Anaconda Copper Tube for sanitary drainage systems comes in standard 20-foot lengths. You can install long runs with fewer joints and fittings—save installation time and cost. Work is easier, too, particularly overhead, because a 20-foot length of 3" Type DWV copper drainage tube weighs only 34 lb. And you save space. A 3" copper tube stack with fittings will fit inside a 4" partition. Solder-joint fittings make installation in tight quarters easy—for compact, space-saving assemblies. For more information on copper tube, write: The American Brass Company, Waterbury 20, Conn. In Canada: Anaconda American Brass Ltd., New Toronto, Ont.

ANAconda R COPPER TUBE AND FITTINGS for soil, waste, and vent lines
Available through plumbing wholesalers. Products of The American Brass Company
Now!.. Trane brings complete air conditioning

1. Heat, cool entire home with a new TRANE air-to-air Heat Pump! Here's big building quality air conditioning, engineered to meet residential needs. This new TRANE Heat Pump operates electrically; uses no water, requires no fuel, provides heating in winter, cooling in summer. On cooling cycle, it operates as a conventional air conditioner, extracting heat from the home. On heating cycle, the action is reversed: heat from outside air is picked up by the refrigeration system. This, plus heat from the compressor is delivered into the residence. For colder climates, electric auxiliary heating units are available.

An outside unit is usually located on the ground, with the indoor unit in the attic, crawl space or basement. No chimney or flue is needed. A ductwork system delivers both cool and warm air throughout the dwelling. The new TRANE air-to-air Heat Pump is available in 2, 3, 5 and 7½ hp capacities to heat and cool any size or type of home.

2. Year-around air conditioning for homes, stores, offices with this TRANE water-to-air Heat Pump. Easy to install, completely factory-wired, the TRANE water-to-air Heat Pump provides year-around comfort for homes, stores, offices. The modern, compact cabinet takes little floor space, may be installed within or outside of the conditioned area. Quiet, efficient, vibration-free, this unit meets every requirement in areas where water supply and disposal is adequate. It's available in 5 sizes: 3, 5, 7½, 10 and 15 tons.
you 4 ways to provide—at competitive prices

A new, compact Heat Pump—plus heating-cooling systems for any home, in any climate—add salability to your homes, while holding building costs down!

Here are four practical ways you can offer complete, year-around air conditioning in the homes you build—and still keep your prices competitive. New Trane Climate Changer units give you an almost unlimited choice of system for heating, cooling—or both. And this is quality air conditioning—manufactured by a leader in big building systems. It's matched equipment, produced in a new, modern factory designed exclusively for the manufacture of "package" heating, cooling units that are built together to work together.

Latest addition to the Trane residential Climate Changers is the industry's newest line of heat pumps, air-to-air or water types. Compact, efficient, they're easy to install...provide year-around comfort. Best of all, these new Trane Heat Pumps (air-to-air type) tuck away in attic, crawl space, basement or garage; take no usable floor space. Outside unit is neat, inconspicuous, with upward air discharge for quiet operation, location flexibility.

The name Trane on your heating-cooling system means full capacity, trouble-free operation. Each system is carefully installed by a selected air conditioning contractor. A Trane system marks yours as a quality home! For complete facts on the Trane Climate Changer line, just call your nearby Trane Sales Office...it's listed under "Air Conditioning" in the Yellow Pages. Or write Trane, La Crosse, Wisconsin.

For any air condition, turn to

TRANE
MANUFACTURING ENGINEERS OF AIR CONDITIONING,
HEATING, VENTILATING AND HEAT TRANSFER EQUIPMENT
THE TRANE COMPANY, LA CROSSE, WIS. • SCRANTON MFG. DIV., SCRANTON, PA. • CLARKSVILLE MFG. DIV., CLARKSVILLE, TENN. • TRANE COMPANY OF CANADA, LIMITED, TORONTO • 100 U. S. AND 19 CANADIAN OFFICES

3. Combination furnace and air conditioner heats and cools any type of home! This Trane Climate Changer may be oil or gas-fired warm air type (upflow or downflow). Matched cooling unit fits on the furnace, may be installed with the furnace or added later—so you may offer optional cooling! Heating, cooling use same duct-work, cutting installation costs.

4. Independent cooling, for use with hot water heat or where there is no central heating, is provided by this Trane Climate Changer Fan-coil unit. Fits into just 5 square feet in attic, basement, utility room or garage. Ideal for use with Trane Baseboard and other wet heat systems in homes or small commercial buildings. Comes in 2, 3, 5, and 7½-ton models.

Needs no water: Outside compressor unit for Trane Climate Changer systems (1), (3) and (4) is air-cooled. Eliminates water supply and disposal problems frequently encountered in residential areas. Features upward discharge for quiet operation, freedom of location. Unit is compact, neat in appearance. 2, 3, 4, 5 and 7½-ton models—all with quiet centrifugal fans.
HOWARD MILLER

HOWARD MILLER BUILT-IN CLOCKS tell much more than just the time; they bespeak excellent taste and discernment!

Model 6737—New...polished brass or black finish, 9" to 12" diameter. $17.95

Model 6721—Satin Brass, Copper, Chrome or Black Finish, 9" to 12" diameter. $15.95

Model 6735—Polished brass hour markers mounted on mat finished white or black polystyrene panel. Brass hands. 11" overall. $15.95

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Easy installation according to template and complete instructions furnished. Write for complete, illustrated literature. Other models dial diameters to 24" and custom clocks to your specifications.

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**Giant CAPACITY OVENS**

EITHER GAS OR ELECTRIC

**by Vernois**

Removable oven doors
Full 18" wide inside
Fits Standard 24" cabinet
Lift-out racks

**GAS Broilmaster Oven**

Automatic as a gas oven can be — featuring Robertshaw "FLAME MASTER" oven control with Lo-Temp setting and minimum-flame broiler control. Porcelain or polished chrome interiors.

New 3-burner Shadow-Slim gas surface units with top controls — only 3" deep, installs in 24" cabinet.

**ELECTRIC Broilmaster Double Oven**

Top oven has automatic clock controls for pre-set oven cooking or broiling. Temperature controlled broiling or baking in bottom oven. Use top or bottom oven simultaneously or independently.

2 Perma-View windows; 2 electric oven lights; electric clock. Available: with porcelain or polished chrome interior.

3-burner Shadow-Slim electric surface units have top controls — are only 3" deep, installs in 24" cabinet.

Boost YOUR profits for '60! Show and sell the rapidly expanding Vernois line! Ideal for economical remodeling, or multiple installations by builders who need a competitive advantage!

**TERRITORIES OPEN:** write for information

**MT. VERNON FURNACE & MFG. CO.**

Mt. Vernon • Illinois

(Builders of Fine Stoves Since 1920)

JULY 1960

249
NEW GEORGIAN DESIGN by SCHLAGE

Knob diameter: 2-1/8"
Rosa diameter: 2-9/16"
Projection: 2"

Schlage: for locks that match the mode

This new Georgian design complements the traditional mode of architecture. Wrought in brass, bronze, or aluminum, it's the very thing for entranceways and for use throughout the home.

This design brings the builder a traditional lock at a cost comparable to that of other residential designs. See your Schlage representative or write Box 3324, San Francisco.