Any home is a better home if it has Suntile in bathroom, kitchen, foyer, patio.

You assure two things for any home you design when you select Suntile:

Better Tile. Suntile's extra quality in form and finish is achieved through rigid manufacturing control. Suntile's color-balance—a distinctive feature which makes harmonious blends so easy to achieve—is the result of scientific color measurement and selection.

Better Installation. Authorized Suntile dealers, carefully selected and trained, see to it that every Suntile installation reflects the excellence of the product they represent and the wisdom of your own selection.

For better tile—better installation, let us send you the name of an Authorized Suntile Dealer. He can show you real clay Suntile in 16 wall colors. In addition, he can show you impervious unglazed ceramic mosaic Suntile in 15 colors—and Suntile Camargos in 10 colors—both in modular sizes.

See Sweet's Catalog for more complete information. The Cambridge Tile Manufacturing Company, Cincinnati 15, Ohio.
Hospitals demand the cleanliness, durability, low maintenance cost and beauty which Marble alone can give.

To keep it clean only the simplest attention is required. Marble is a hygienically perfect surface.

Information about Marble and Marble Service will be given promptly by the Marble Institute's Managing Director Romer Shawhan, R. A.

Marble Institute of America, Inc.

MIA
108 Forster Avenue, Mount Vernon, N.Y.
three things to remember about Sound Conditioning...

first: THAT NO NEW BUILDING IS MODERN WITHOUT IT...
Today it is known that noise and poor hearing conditions make people uncomfortable and lower their efficiency. This has made sound conditioning as important as good lighting in the specifications for modern buildings—commercial, school, hospital, or church. That is why the number of new building installations of Acousti-Celotex sound conditioning has more than doubled in the last two years.

second: THAT IT MAKES OFFICE SPACE EASIER TO RENT...
A building with Acousti-Celotex sound conditioning is easier to rent because it provides a better working environment—reducing employee fatigue, increasing accuracy and insuring a greater volume of work. This is one of the reasons why more buildings of all kinds have been sound conditioned with Acousti-Celotex* products than with any other material.

third: THAT SOUND CONDITIONING MATERIALS ARE NOT ALL ALIKE...
Two materials may have identical Noise Reduction Coefficients, yet differ widely in use and application. Celotex acoustical products include materials for every type of noise reduction or acoustical correction problem. That is where our quarter century experience in sound conditioning may be a real help to you...in selecting the right product for a particular specification.

YOU ARE INVITED to submit your acoustical problems to a trained sound technician—your nearest distributor of Acousti-Celotex products. He brings you a knowledge based on the proved performance of Acousti-Celotex in more than 200,000 installations. Look for him in your classified phone directory...or drop us a line saying when you would like to see him. In the meantime, you'll find Acousti-Celotex products listed in Sweet's File, Section 11-A3. Sound conditioning is a sound investment.

THE CELOTEX CORPORATION, CHICAGO 3, ILLINOIS

ACOUSTI-CELOTEX
Sound Conditioning
PRODUCTS FOR EVERY SOUND CONDITIONING PROBLEM
The Architectural FORUM
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APRIL 1948

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40 HOUSES


REVIEWS

Barroom Art in the Modern Manner . . . Art on the High Seas . . .
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BUILDING REPORTER

Aluminum garage door . . . reinforcing bars . . . building insulation . . prefabricated pipe units.

TECHNICAL LITERATURE

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**Fluorescent FIXTURES**

**MADE BY SYLVANIA FOI**

Here they are! The commercial fluorescent fixtures that save your clients money and time because they’re the easiest to install, easiest to maintain.

That means a big saving on labor costs. And with good, experienced labor hard to get, you want fixtures that go up to stay up for good.

All this stems from one basic fact: Sylvania Fluorescent fixtures are the tops in quality. The styling, the materials used, the ease of maintenance features are the result of advanced engineering.

---

**SIMPLIFIED**

The commercial units in Sylvania’s recently developed “design family” of fixtures are featured by a new and exclusive center mounting bracket which makes installation the simplest possible job. One man can do it alone in a jiffy.

For surface mounting—a large knockout in the bracket is removed and the bracket is fastened to the ceiling, with the hole in the bracket directly over the outlet box. Then the fixture is lifted onto the hinge of the bracket. Wires are spliced and tucked into the outlet box. The fixture...

---

**Easiest to Install!**

These complete packages of light may be surface or pendant mounted. Strategically placed knockouts make pendant stems easy to use. The secret of this marvelous ease of installation is in the careful simplicity of design incorporated in every fixture . . . coupled with overall rugged construction.

---

SYLVANIA

MAKERS OF FLUORESCENT LAMPS, FIXTURES, WIRING DEVICES; ELECTRIC
EVERY COMMERCIAL USE!

Research and production techniques. "Basic Design" construction makes them the most versatile fixtures on the market. It's a cinch to add louvers or glass panels to the same chassis depending on the effect or style desired. All fixtures may be surface or pendant mounted. All are manufactured with the AFL label.

Sylvania fixtures are described in Sweets' section 30a/17. For descriptive literature, write Sylvania Electric Products Inc., Fixture Division, Ipswich, Mass.

INSTALLATION

The fixture is swung up into place and made fast with four machine screws.

For pendant mounting, simply remove two small knockouts to admit the stems through the bracket. Fasten the bracket to the stems with two knuts and continue as in surface mounting. Mounting brackets may be spaced to permit installation of fixtures in continuous rows, with each fixture supplied with each joining assembly. That's simplified installation for you—found only in Sylvania Fluorescent Fixtures!

C-240 Complete with two 40-watt unshielded lamps. Along with the C-440, it is the "basic chassis" fixture to which louvers or glass panels may be easily added if desired. (See CL-440 and CG-440.)

C-440 Unshielded fixture complete with four 40-watt lamps. The end caps snap open and swing down for easy lamp or starter replacement. One of many applications: Service stations.

CG-440 Equipped with glass diffusing panels, this four 40-watt fluorescent fixture combines low fixture brightness with high light output and efficiency. One of many applications: Office buildings.

CL-440 The shielding assembly of this louvered version of C-440 hinges downward and may be completely removed for easy cleaning. One of many applications: Department stores.

Easiest to Maintain!

You can see from the descriptions that accompany each fixture what we mean when we say that these Sylvania Commercial Fixtures are the easiest to maintain. In addition, high temperature baked enamel reflectors (and louvers) wipe clean in a jiffy!
Why Hotpoint Kitchens Are The “Measure Of Value”

Confidence Goes Up, Prices Seem Lower, When Home-Buyers Look At The Kitchen

BUILDING COSTS are steep today, but buyers find that prices look more reasonable through the windows of a Hotpoint All-Electric Kitchen. That’s because thirty million people know Hotpoint is a reliable measure of value—the finest in electric kitchens.

Alert Builders and architects find that it pays to invest enough extra and make the kitchen a real showplace. For powerful advertising and merchandising have made Americans kitchen conscious. And they look to Hotpoint for the biggest values.

Today the Kitchen is the Measure of Value

Hotpoint All-Electric Kitchens create confidence in the quality of the whole house. The price seems better, too, for in many cases a “package mortgage” can be arranged to include cost of electric appliances.

See Your Sweet’s Catalog for details or consult your nearest Hotpoint Distributor. Hotpoint Inc., 5687 West Taylor Street, Chicago 44, Illinois.

Hotpoint has everything for the kitchen and laundry:
- RANGES • REFRIGERATORS • FREEZERS • DISHWASHERS • DISPOSALS
- CABINETS • SINKS • WATER HEATERS • FLATPLATE IRONERS
- ROTARY IRONERS • WRINGER-TYPE WASHERS • DRYERS

Everybody’s Pointing to Hotpoint

Hotpoint Inc. A General Electric Affiliate
PIioneer In THE ALL-ELECTRIC KITCHEN
HERE'S RADIANT HEATING
See those arrows coming from the Modine Convector Panel below the window? That's radiant heating — mild radiant heat in just enough quantity to offset heat loss from window area.

HERE'S CONVECTION HEATING
These arrows illustrate convection heating. Hot water or steam passes through copper heating unit which draws cooler, floor-line air into bottom of convector where it's warmed, rises and passes out through grille.

Modine Convector Radiation blends both for the greatest forward step in modern heating science!

Modern heating at its best — that's what engineers and architects are calling Modine Convector Radiation. This blended combination of radiant heating and convection heating is the dependable new hot water and steam heating system for moderate cost homes and apartments . . . as well as commercial and institutional buildings.

Right now Modine Convector Radiation costs less than any other form of radiation. Compare these outstanding features which it gives you: 1) individual room control. 2) instant response to automatic controls. 3) gentle air circulation without the use of moving parts that wear out. 4) distinctive room charm and cleanliness without unsightly radiators.

If you're planning to build or modernize, specify Modine Convector Radiation. Call Modine's Representative listed in the "Where-to-Buy-it" section of your phone book. Or send for new, free Convector Booklet! MODINE MFG. CO., 1507 Dekoven Ave., Racine, Wis.

Check these key Modine features!
- Close temperature control
- Adds to living space
- Modern beauty
- Priced for today's homes and apartments
- Easy to install
- Easy to clean

Modine
CONVECTOR RADIATION
The modern "proved by use" heating method.
NOW—EASY PLANNING FOR ARCHITECTS!

For Larger Kitchens...

5 KELVINATOR REFRIGERATORS
ALL ONE WIDTH—31½ INCHES!

4 KELVINATOR RANGES
ALL ONE WIDTH—39 INCHES!

Just pick your model by budget . . . Kelvinator Refrigerators and Ranges are built to a standard size!

For big kitchens, it's Kelvinator's new kind of refrigerator. Top-to-Bottom refrigeration for the first time ever. Inside, 8½ cu. ft. within the shelf area, plus approximately 2 cu. ft. used by the new refrigerated Fruit Freshener . . . but with no increase in floor space. A fitting companion is Kelvinator's "Automatic Cook" electric range, now with all controls on the new back panel . . . easy to see and to reach. "Up-Down" unit converts from deep well cooker to 4th surface unit . . . giant double unit oven . . . new electric-fast surface units . . . pressure cooker available for deep well!

... when kitchen plans call for the "New Look"

Kelvinator

For Smaller Kitchens...

"SPACE-SAVER" PACKAGE

Big Kitchen Advantages For Small Kitchens! "Space-Saver" refrigerator, 24" wide, is full 6 cu. ft.—holds 50% more food than the pre-war model of identical outside dimensions. Companion range is only 21" wide—new design permits installation flush against wall. Stars a full-size oven . . . three surface cookers—one 8", two 6". Kelvinator quality through and through!

For further information, write to Kelvinator Division, Nash-Kelvinator Corporation, Detroit 32, Michigan.
BUILDING MONTH. Last month, for the first time in seven years, the Building Industry was finally free of government war controls (save only rent control on existing dwellings.) But, even as Congress voted to end the last tag end of controls—the permit system for amusement and recreation structures, Building—and Building's customers—looked anxiously ahead to what military preparations might mean to the future of their industry and to the future of the U. S. It seemed clear beyond a doubt that the nation was embarked on a program that meant spending billions for defense. The question that would set the Building pattern over the next year could not yet be answered: how much will military spending cut into the national steel supply?

Projected ERP allocations were already allowed for in figuring the national steel budget: there would be enough steel for ERP needs and high-level domestic production, too. But if the destiny of the U. S. demands extensive armament production over the next year—either in our own plants or in Europe—steel allocation will become a necessity. Although nobody in the U. S. will like the prospect, steel allocation inevitably means government control of all industrial production. In Building, next to the automobile industry the biggest steel customer, steel allocation means a revival of the building permit system. The National Security Resources Board, an agency set up by the Army-Navy merger act, was already hard at work planning how the industrial and natural resources of the U. S. could best be mobilized for defense—or for war.

But immediate expenditure for the kind of armaments that can only be cast into steel was much less likely than certain and speedy expenditure for increased air power. Aircraft production on the scale now being discussed by Congressional and military leaders means virtually total use of the nation's aluminum supply—a probability not cheerful to the small rear-guard of those who hope to use aluminum for the factory-built house. Stepped up aircraft production would mean maximum use of the fractional horsepower motors used in electric home appliances. But it would not mean steel rationing.

Building could anticipate, as universal military training loomed, an increasing drain on its manpower, little improvement in apprentice training. There was already a slowdown in war plant disposal: last month twelve ordinance and five aircraft plants were quietly removed from the surplus list. Increased military budgets were certain to lead to more construction for troop training and housing. The U. S. would not yet build atomic cities like Henry Churchill's concrete honeycomb (see p. 11), but it would start on prototype plants in which industry will see how it can—if it has to—produce for atom war.

On the housing front, the political struggle of an election year effectively befogged the housing legislation before Congress. The T-E-W bill, as amended by Senator Flanders, seemed likely—with the help of Senator Taft's friends—to pass the Senate, unlikely to pass the House. While Congress fought this out, extension of FHA Title VI financing aid for private housebuilding hung in the balance, maintained only by a stop-gap 30-day extension.

WASHINGTON

NEW HOUSING BILL

Flanders persuades Committee that many kinds of action are needed

When Congress set up the Joint Committee on Housing seven months ago, many an opponent of public housing confidently expected that the Committee, sponsored by conservative Republicans, would shut the door tight to any more government-built low-rent housing. It was generally expected that the Committee would confine its eventual prescription to only the mildest doses of government aid to private industry.

These expectations had not made allowance for Senator Ralph Flanders, a Vermont Republican who approaches any legislative problem the way he starts to design a new machine tool. Senator Flanders, who "bounded out" to Vermont farmers as a boy and started his climb to eminence by planning machines that would do his weeding for him, believes that scrupulous and exhaustive examination of any problem is the only way to arrive at a solution. Moreover, Flanders (former president, Jones & Lamson Machine Co.) is about as susceptible to corporate considerations as a slab of Vermont granite. In these ways, he stood out in a Committee that had been set up principally for a political purpose.

The Committee had been initially sparkplugged by Senator Joseph R. McCarthy, the youngest (38) member of the Senate, a freshman who had displaced Bob LaFollette in the Republican primaries in Wisconsin.

Property-laden Senator Charles Tober (Rep., N. H.) had headed the list of Senate appointments to the Housing Committee and, by all normal rules of procedure, should have been elected chairman. But McCarthy thought that Tober was too friendly to public housing, and maneuvered to give the chairmanship to Representative Charles Gamble (Rep., N. Y.), ranking member of the House contingent. Then he got himself elected vice-chairman. After that, table-thumping Senator McCarthy acted as if he were running the whole show.

While McCarthy got the headlines, Republican big-wigs calculated just how far
the Committee would go. Housing-conscious Senator Taft, who has been sponsoring a comprehensive housing bill for the last three years, was not a member of the Joint Housing Committee. But he was mightily interested in what the Committee would recommend. If the Committee called for more government action on housing, it could hardly avoid echoing his own carefully studied and early-bird T-E-W bill. Such a recommendation would have the added advantage of forcing influential House Republicans (floor leader Hallock of Indiana is one of Dewey’s best friends) to go on record as to where they stand on housing. If they turned down the Committee proposal, the political gain would be housing-sponsor Taft’s. If they accepted it, Taft could argue that his leadership forced them to.

Against this background of discord and politics, Senator Flanders had quietly gone to work. He was extremely interested in housing, as he earlier had been in unemployment (NIRA Industrial Advisory Board) and in full postwar production (chairman, research division, Committee for Economic Development). He talked to builders, lenders, manufacturers, professional housing, and material dealers. Then he carefully wrote down what he thought our housing problems are and what should be done about them.

The Senator thought that FHA mortgage insurance should be extended to working capital loans to large-scale house-builders and to yield insurance for the rental housing investor. He thought that FHA’s ‘Title VI’ should be extended for another year with a stiffened appraisal base and that the government secondary market for V.A. and FHA mortgages should be reconstituted. He thought the government should make capital grants to start urban redevelopment, also help build 500,000 units of low-rent housing every year for the next five years. He wrote all this down in a report, which a majority of the Committee approved, and as amendments to the long-lived Taft-Ellender-Wagner housing bill, which the Senate Banking Committee planned to send to the Senate floor without hearings. Although Senator McCarthy objected to the public housing proposal and introduced a rival bill of his own, chances were good that the Flanders’ bill would pass the Senate in April. But it would meet stiff opposition in the House.

**NIGHTMARE**

**Veterans take some housing complaints to court and refuse to make payments**

Some veterans’ dream houses had already turned into nightmares, and some fly-by-nighters who had tried to move in on the housebuilding business were in heavy trouble in the courts. In Baltimore, 2,000 veterans served notice that they would make no more mortgage payments—until their jerry-built houses are brought up to specifications. In Pittsburgh, 44 veterans were suing housebuilders for alleged violations of priority and price ceiling regulations. In the New York area, the Office of the Housing Expediter had awarded $15,000 to veterans as repayment for such violations.

The federal government’s role as housebuilding boss until December 24, 1946 provided the legal base for the veterans’ actions. To qualify for housebuilding priorities during the control period, builders had been required to stick to established ceiling prices and to specifications filed with federal housing offices. Although many men had shown up in Baltimore to help check records on the veterans’ complaints, the federal government was trying to stay out—officially—of the snarl about mortgage payments (lenders are not liable for builders’ failure to meet buyers’ expectations). But V.A. and FHA, who are backstopping most of these mortgages, were unofficially pressing offending contractors to make good. Main pressure: the threat of future “rating down” or refusal of any more FHA commitments.

**ATOMIC CITY**

**Will a concrete honeycomb keep modern man from burrowing underground?**

In an atomic age, must man, to survive, go underground? Famed architect and planner Henry Churchill says no and, with engineer Fred Severud, has designed a city that he thinks could withstand the force of atomic explosion.

The Churchill-Severud atomic city, shown in diagram on the page opposite, is like a giant concrete honeycomb. The designers explain it this way:

“The structural concrete forms are designed for maximum resistance in vertical, longitudinal and horizontal section and are of adequate size to house basic productive machinery, utility lines and storage of vital materials. These protecting structures are placed in the honeycomb pattern to provide the maximum number of points of resistance to diagonal or horizontal thrusts and thus confine the force of the explosion to one cell area.

“The expendable elements of the city would be built in the hexagonal areas surrounded by the network of indestructible buildings. This provides an efficient division of space for human safety since no point would be more than a quarter-mile from a bombproof structure.”

Churchill thinks the concrete city would cost less than underground construction and could be built anywhere. So far, he has had no calls from clients.

**FACTS SHORTAGE**

**Congress may cut BLS budget**

Congresses was considering cutting the nation’s only voice of housing facts down to a mumble. The Bureau of Labor Statistics, which keeps both the lawmakers and the industry informed on building figures (housing and construction volume, labor trends, costs and expectations) had its requested $5,389,200 appropriation for fiscal year 1949 cut to $214 millions by the economy-bent House Appropriations Committee. In late March, the Bureau was still hoping that the Senate Appropriation Committee might restore all or part of the budget slash.

If the cut stands, housing and construction statistics, now budgeted within the department at $881,581, would probably face a $200,000 amputation. “A sharp drop in construction, the softening of labor trends, costs and expectations,” said Commissioner Ewan Clague pleaded last month before the Senate Appropriations Subcommittee. “We must not be ignorant of such developments. Economic knowledge is one of this country’s great sources of power. We cannot afford to throw it away.”

---

**The new rent control law—**

2. Decontrols amusement and recreation building.
3. Empowers local rent boards to make decisions on rent decontrol or on rent boosts, but permits the Housing Expediter, if he disagrees, to refer local board decisions to the Emergency Court of Appeals.
4. Permits the Housing Expediter to seek injunctions against landlords in eviction cases if he thinks the law is being violated. (Heretofore the Expediter’s injunctive powers have covered only rent overcharges.)
5. Permits landlords and tenants to enter into voluntary one-year leases calling for a 15 per cent increase, and extends such leases made under the 1947 law for another year.
6. Give high income tenants in public housing projects another year’s stay if housing is so tight in their areas that they have no other place to go.
Copper & Brass and advised by The on the low price market. show what could and should be presented spot­tions spotted throughout the country to building of eight model houses in local­ities for low-cost homes. First move: the building in preparation this moil­li.

Willoughby, Ohio: L. Morgan Yost, 
ture developments. A consumer magazine construct model homes as the seeds for fu­ture activities: "The program will be

A large move forward in small house building was in preparation this month. Its form: a nation-wide institute to set up standards in design and construction for low-cost homes. First move: the building of eight model homes in locations spotted throughout the country to show what could and should be presented on the low price market.

The Revere Quality Home Institute, headed by architect John H. Callender, backed at a discreet distance by Revere Copper & Brass and advised by The forum, had lined up eight teams of architects and operative builders to con­struct model homes as the seeds for fu­ture developments. A consumer magazine advertising program was about to break in double-page spreads (Saturday Evening Post, April 24) to direct the attention of the public to the Institute, the model homes, and a set of standards in design and construction which the Institute is formulating. Architects chosen are: Samuel Glaser of Boston; Kenneth Kassler, Princeton, N.J.; Ralph S. Twite­hell, Sarasota, Fla.; W. D. Riddle, Willoughby, Ohio; L. Morgan Yost, Kenilworth, Ill.; MacKie & Kamrath, Houston, Texas; Joseph Escherick, Jr., San Francisco, Calif.; Chiarelli & Kirk, Seattle, Wash. Builder Members of the Institute: Arnold Hartman, Newton Center, Mass.; Suburban Properties, Inc., Springfield, N. J.; Lajinolithic In­dustries, Sarasota, Fla.; Maurice J. Fishman, Parma Heights, Ohio; Place & Co., South Bend, Ind.; Frank W. Sharp, Houston, Texas; Williams & Burrows, Inc., Burlingame, Calif.; Albert Burch, Seattle, Wash.

Revere Copper shows what good design can do in the low-cost field. The Reynolds Metals Co., who already produce aluminum roofing, siding, insulation, etc., have im­ported a sample of the aluminum houses now being turned out by a British aircraft plant. Reynolds has erected the sectional house at Glendale, Long Island and intends to study it carefully. Five British en­gineers accompanied the aluminum house and will explain technical and production background to Reynolds engineers.

QUALITY HOMES

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The first eight houses will be built in New York, Sarasota, Cleveland, Houston, San Francisco, South Bend, Seattle and Boston. In three years the Institute plans to extend the project to at least 30 hous­ing areas. Builders retain ownership and sales rights on the houses, which will be in the under $15,000 price range. Revere will use its large resources to keep the public informed and interested.

COUNTER-OFFENSIVE

Manufacturers chip in to give the public some housing facts.

Dismayed by the brickbats which have been hurling its way ever since vz day, the Building industry last month decided to stop dodging and pitch into the fight with a few well-placed missiles of its own. Operations headquarters for this counter-offensive is the newly formed Construction Industry Information Com­mittee in Washington, D.C. sparked-plugged by chairman Melvin H. Baker, National Gypsum Co. president.

This new organization will use care­fully collected facts and figures on house­building performance to "improve public attitudes toward the industry . . . damaged by unjust criticism." Building products manufacturers will foot the bill and cooperate in distributing information.

cnc explained the scope of its ambi­tious activities: "The program will be based on fact-finding and publicity . . . will be directed at the whole public through the daily and weekly press, radio, television, business publications, magazines, syndicates, press associations, speeches by industry leaders, etc. Pamphlets will be provided for manufacturers' stockholders, employees and dealers . . . to convince them that the building industry is doing a commendable job, that what helps the industry helps them personally, and that they should help convince their friends, neighbors, and fellow workers that the building industry is a good industry.

"The program will tell those who influence the public that the nation's building needs are being met quickly, that the industry is becoming more efficient, that it is working hard to reduce building costs, that it is working consistently in the public interest. In short, the program will be designed to build up public confidence, remove distrust, and silence loose talk detrimental to the industry."

First cnc effort in this direction is a detailed study (based on n.s raw figures), "Who Can Afford Our New Housing?" Reminding that 1947 saw a whacking 750,000 homes placed under construction, an all-time high for private building, cnc says that—contrary to popular opinion—these houses met the needs of all income groups.

"Twenty per cent were in the price range of families with income below $2,000 who constituted 28 per cent of total families; 25 per cent of the homes were in the price range of families with incomes between $2,000 and $3,000, who constituted 30 per cent of the total; 25 per cent were in the price range of fami­lies with incomes between $3,000 and $4,000 who constituted 18 per cent of the total; 18 per cent were in the price range of families with incomes between $4,000 and $5,000 who constituted 13 per cent of the total; and only 1 per cent were in the price range of families with incomes of $5,000 or more who constituted 21 per cent of the total. . . . The highest income group, instead of getting all, or even a disproportionately large share of the new housing, as frequently is charged, actu­ally was provided with less than its rea­sonable allotment."

cnc also points out that, according to the 2½ times yearly income long ac­cepted as the amount a family can afford to pay for a house, most people were actually paying less than they could af­ford. "According to the Economic Report of the President of January 14, 1948, the average income of all American families in 1946 was $3,806 . . . According to a
report of the Veterans' Administration, the average selling price of new houses bought by veterans with the aid of G.I. home loans was $8,200, or $1,215 less than the amount the average family could afford.

Of the 63 trade associations in the manufacturing end of the building industry, 57 have agreed to cooperate in the new project. Other trade groups in the distributive and professional fields such as the National Association of Home Builders, the National Retail Lumber Dealers Association, the National Electrical Contractors Association have also expressed enthusiastic support. They could hardly do less than agree with one's initial statement: "The volume of . . . criticism has been so great and has extended over so long a period that emergency efforts are required to undo the harm which has been done."

CITIES

GREEN SPACE

New Yorkers mobilize to save Washington Square environs as first building falls

New York's beloved Washington Square—the little patch of green space where Fifth Avenue begins—was threatened from three directions. In mid-March, wreckers ripped out partitions in the first building in the "Genius Row" block where owner Anthony Campagna plans to build a tall apartment building (residents of the three other buildings in this block were still fighting eviction). Residents of another block fought off eviction by New York University, which plans a $6 million "Neo-Georgian" law center. A third block is threatened by a luxury apartment project planned by Joseph Siegal (see FORUM, Sept., '44), who owns the 27-story No. 1 Fifth Avenue apartment hotel on the site opposite.

The Washington Square area posed many imperative questions in city planning. But while Square residents and neighbors organized a "Save Washington Square Committee" to fight off the proposed new building, New York's City Planning Commission took no part in the controversy. The Committee blasted the university for its failure to recognize "public responsibility" and expand its campus on blighted blocks to the south and east of its present buildings. Another group hoped to collect enough money to buy back Genius Row (which once housed Theodore Dreiser, Willa Cather, O. Henry, Eugene O'Neill, others) and remodel the existing buildings as a Living Art Center. Builder Campagna's reported asking price was a stiff $750,000; he was said to have acquired the block for about $350,000.

The whole of Greenwich Village, which

THREE TIMES BIGGER

New York City's giant Madison Square Garden was about to get still bigger. Last month Governor Dewey signed the bill that will authorize municipal bonds to finance a new $25 million Garden. In exchange, New York City will get a parking garage for 2,000 cars (under the whole Garden building) and $1 million annually in rent from John Reed Kilpatrick's Madison Square Garden Corp.

To design the new Garden, General Kilpatrick chose New York architects Lionel and Leon Levy, who are not relatives but met as classmates at Georgia Tech. Their plan (see cuts) provides both an amphitheater and what they believe will be the world's biggest convention hall. Said Lionel: "In designing this building our big problem was show business. It is a solution to the operating problems of the business, not a design produced in an atelier."

The new Garden will be three times as big as the old one, cover two city blocks (between 54th and 60th Street, at Columbus Circle). The amphitheater will seat 25,000.
takes its Sunday airings in the Square and sends its children to the little park’s swings and sand boxes, echoed City Planning Commissioner Robert Moses: “Something ought to be done about the type of speculator who dearly loves to run up large buildings on small parks, without a thought of the big black shadow they bring.” But the Planning Commission could not legally ban the proposed apartment towers—only scale down their height a little.

The fate of Washington Square showed one of the ways in which big cities steadily lose livability. It also dramatically pointed to the need for large-scale redevelopment of the whole Greenwich Village area. At the request of the Washington Square Association, architect Arthur Holden had already made a thorough study of how such redevelopment might take place. Holden proposed that the city create new traffic throughways (Washington Square is now open to through traffic and also used as a terminal for Fifth Avenue buses) and acquire large tracts of land to be resold to private builders under the Urban Development Companies’ law. He thought that existing high land values could be paid off by “enclosing old Greenwich Village by a circumferential belt of tall modern apartment houses and at the same time placing height and area restrictions on the blocks in the center.”

The degree to which urban disaster is compounded by failure to take bold steps toward urban rebuilding is clearly illustrated by the problem of Washington Square. If builders Siegal and Campagna are permitted to locate tall buildings on the rim of the Square, the new real estate values created will further forestall the kind of planned area-wide redevelopment proposed by Holden. Meanwhile, these new buildings will mean a heavy increase in the Square’s traffic hazard, already dangerous to the Village children who have no other place

PEOPLE

HONORS

But Stalin and a Baltimore Beauty decline

To Walter Adalbert Georg Gropius came high honors from Britain. The Royal Society of Arts (President, Princess Elizabeth) bestowed upon the present Professor of Design at Harvard, sometime master of the Bauhaus, and Great Man in architecture, an honorary degree—the title of Designer for Industry of the Royal Society of Arts “in consideration of . . . high eminence and efficiency in creative design for industry.”

Frank Lloyd Wright’s provocative design for the proposed Guggenheim Museum of non-objective painting in New York City was rumored about to step off the drawing board onto the site (Fifth Avenue and 89th St.). No denial or affirmation was forthcoming from Guggenheim Foundation officials, just a well-rounded statement: “We cannot definitely say that we will not break ground this spring.”

Pablo Picasso, Jo Davidson, and Douglas Chandor offered their services to Wallace Harrison’s U.S. Planning Committee to help finish the six block, $65 million headquarters project in New York City. Picasso, according to his New York representative, Samuel Kootz, would be happy to paint a large mural. (His largest and most famous thus far is “Guernica,” 11 ft. 6 in. x 25 ft. 8 in.) Chandor, with the backing of Mrs. Franklin D. Roosevelt, would portray Premier Josef Stalin, to complete the triumvirate portrait which already includes Roosevelt and Churchill. Stalin has so far refused to sit for Chandor, but Mrs. Roosevelt, in a letter to Secretary General Trygve Lie, thought that Stalin might pose if it were for the World Capitol. Decision on these matters has been shelved by the planning committee until construction is further along, but Harrison has recommended creation of an international committee to handle the specific suggestions flooding his headquarters, ranging from schemes such as “modest buildings for the common man” to a cornerstone “in the shape” of Warren R. Austin, U.S. delegate.

Nathaniel A. Owings was named chairman of the Chicago Plan Commission, the first architect ever to hold the post.

A partner in the many-armed firm of Skidmore, Owings & Merrill, Owings was born in 1905, graduated Cornell in 1927, is past president of the A.I.A. Chicago chapter.

A Baltimore Beauty insisted that she was just a plain Jane and so threatened to stymie a $1,400,000 building planned by Johns Hopkins University. This novel building blockade perplexed university officials, about to announce a competition for the new lecture hall’s design—to be run by Everett Meeks, James Kellum Smith and Gilmore D. Clarke. The building is to be paid for from funds willed to the University by a prominent Baltimorean who died in 1929. But he made his bequest contingent on the building’s use to house ten portraits of ten Baltimore beauties, whom he named. One of them, Mrs. DeCourcy Wright Thom, declined this “very pretty compliment.” Said she: “I am not a beauty, and I am not going to be painted.”

When pressed for a solution to its dilemma by the University, which badly needs a new lecture hall, Mrs. Thom thought of a possible way out. Perhaps, she suggested, they could put her image in the cornerstone.

Mr. Blandings built his dream house on movie screens throughout the nation as Eric Hodgins’ novel, made into a Selznick flick, starring Cary Grant, Myrna Loy and Melvin Douglas, was

Washington Square residents are fighting erection of New York University Law School building (r.)

Square residents also hope to forestall a proposed apartment building and remodel existing structures as shown in sketch (above).
released. In this now famous story of housebuilding trials, Reginald Denny plays Henry Sims, Architect, somewhat after the image of a tweed butler with ulcers. The picture takes nervous cracks at the building business, but usually is back kissing the hem of its work pants a few feet of celluloid later. Boldest charge, made by Grant (Blandings) after he had paid three times what he planned for a house in Connecticut: “It’s a conspiracy . . .” But when the picture ends, everyone seems happy, except possibly the architect, who does not appear in the final shot. The onlooker has the

**BRISE-SOLEIL CROSS BORDER TO CALIFORNIA**

The vertical sunshades extensively used in the exciting, tropical architecture of Brazil made their first major U. S. appearance in California. The new Los Angeles assembly plant of General Motors’ Chevrolet Division is equipped with rigid exterior brise-soleil. Designers figure that the sunshades lower interior temperature as much as 15 degrees on a sunny day. Stretching the length of the building facade, the sunshades are rigid.

**STORE MODERNIZATION CARAVAN**

Alert to the current boom market in store modernization, Pittsburgh Plate Glass has set up a traveling display of 12 store models, all designed by Pittsburgh staff under the direction of E. Reed Crick, Jr. Pittsburgh’s notion is that a grocery store can be as inviting as a Fifth Avenue jeweler’s—if enough glass is used in the right places. The models will tour 450 cities in two 40-ft. trailers. Executed by Gardner Display, the miniature stores cost from $3,84,000 apiece. Pittsburgh thinks several million persons will view them over the next three years.
other hotel building job—for the foreign tourist trade. The Board of Trade is making plans for 70 resort hotels to be built in the next 10 years.

**DESIGN**

**HOSPITAL COST HURDLE**

Private rooms are too costly

Must hospital building halt on present building costs! New York architect Ira-dore Rosenfield, a specialist in hospital design, says no. We could build all the hospitals we need, Rosenfield says, if we would give up our notions about private rooms. The per bed cost of a hospital rises in direct proportion to the number of private rooms it contains.

Most of our notions about private rooms are wrong anyway, Rosenfield thinks. Hospital administrators regard the private room as a big revenue producer. But in bad times the private rooms stand vacant. Moreover, whether private rooms will produce revenue depends on whether there are enough people in the community who can afford to pay for them. One of Rosenfield’s own clients, planning a 300-bed community general hospital, asked that beds be allotted to private, semi-private or ward accommodations according to the traditional “one-third-for-each” formula. Rosenfield pointed out that to support 33 private rooms the community would have to have at least 8,000 well-to-do families. But an income analysis showed that there was “hardly justification for one private room.”

Are private rooms necessary for proper care of patients? Not for most patients, Rosenfield says, citing a study of this question made by Dr. S. S. Goldwater. Examining 500 run-of-the-mill patients in a general hospital, Dr. Goldwater thought that only 14.4 per cent would be better off in a private room. Proper planning of ward and semi-private accommodations could meet more of the need for individual bed privacy.

Sorting out his thoughts on how to cut hospital building cost in *Modern Hospitals*, Rosenfield estimates that average current cost is about $1.70 per cu. ft., as compared with 79.1 cents in 1924. But, while this greatly increased cubic foot cost is roughly constant, the per bed cost of individual hospitals varies widely. Public hospitals with a majority of ward beds can be built for about $5,000 to $7,000 per bed. But small private hospitals with a large number of private rooms may cost as high as $13,000 to $14,000 per bed. Sometimes bids on small hospitals figure as high as $25,000 per bed. Rosenfield proved his point with a table summarizing costs for eight hospitals he has planned over the last year (below). But he also warned hospital administrators that clumsy planning will be expensive, too.

**MATERIAL**

**STANDARD PLUMBING CODE**

Many cities may want to adopt it

If a self-siphoning toilet trap is not a menace to public health in Springfield, Ill., it is reasonable to suppose that it would be equally healthy in Kalamazoo, Mich. But the trap installed in Springfield may be banned by Kalamazoo’s building code.

As any plumbing manufacturer will tell you, one of the biggest troubles with building codes is their complete lack of uniformity. Because plumbing requirements, among other code provisions, vary almost infinitely from city to city, manufacturers are forced to produce the same piece of equipment in dozens of shapes and sizes. This blocks the standardization that means building cost reduction.

Last month builders, plumbers and municipal building officials, were looking over a long first step toward uniform plumbing installations. This is a proposed uniform plumbing code for housing, drafted by a committee appointed by the Housing and Home Finance Agency. The code is based on a testing program set up by HHPA in 1946. (See cut.)

The code drafters included HHPA’s Vincent T. Manas; Henry S. Blank, National Association of Master Plumbers; Herbert L. Schaller, United Association of Plumbing Journeymen and Apprentices; Malcolm C. Hope, U.S. Public Health Service; George N. Thompson, National Bureau of Standards. Hope is that most r. s. cities will decide to adopt the model code.

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**CURRENT HOSPITAL COSTS**

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Beds</th>
<th>Cubic Feet</th>
<th>Cost Per Bed</th>
<th>Ward and Room Gradations</th>
<th>Beds in Typical Nursing Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Governmental Tuberculosis</em></td>
<td>800</td>
<td>3,171</td>
<td>5.589</td>
<td>288</td>
<td>336</td>
</tr>
<tr>
<td><em>Governmental Industrial</em></td>
<td>950</td>
<td>3,408</td>
<td>6.134</td>
<td>256</td>
<td>196</td>
</tr>
<tr>
<td><em>Voluntary Chronic</em></td>
<td>124</td>
<td>4,094</td>
<td>6.309</td>
<td>92</td>
<td>24</td>
</tr>
<tr>
<td><em>Governmental Psychiatric Med.-Surgp.</em></td>
<td>1,650</td>
<td>4,700</td>
<td>7.281</td>
<td>1,190</td>
<td>410</td>
</tr>
<tr>
<td><em>Voluntary Psychiatric</em></td>
<td>96</td>
<td>3,543</td>
<td>6.134</td>
<td>44</td>
<td>64</td>
</tr>
<tr>
<td><em>Voluntary General</em></td>
<td>125</td>
<td>8,315</td>
<td>13.304</td>
<td>120</td>
<td>30</td>
</tr>
<tr>
<td><em>Voluntary General</em></td>
<td>109</td>
<td>8,820</td>
<td>14.112</td>
<td>24</td>
<td>68</td>
</tr>
<tr>
<td><em>Governmental Med.-Surgp.</em></td>
<td>475</td>
<td>11,685</td>
<td>19.864</td>
<td>200</td>
<td>150</td>
</tr>
</tbody>
</table>

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16 The Architectural FORUM April 1948
The Famous

Bruce

Scratch Test

demonstrates the way to
Finer Hardwood Floors

The durability and beauty of a floor depend greatly on the finish. That is why Bruce has devoted years of research to improving floor finishing materials and methods. The Scratch Test, pictured above, shows convincingly the results of this research.

In this test, one half of an oak panel is finished by the Bruce penetrating seal method; the other with a commonly used surface finish. A coin scraped across the panel scratches and chips away the surface finish . . . but leaves the Bruce Finish unharmed, because it's "in the wood."

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Bureau of Standards report reveals moisture penetration of Kapco Board is practically nil—only 1/25 gram (0.04) per sq. meter per day with quarter-inch board. This is 69 1/2 times better protection than any other board on the market gives. Nothing finer for plaster base or dry wall construction. OK'd by F. H. A.

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1. PLASTER BASE—Manolith. Prevents vapor and moisture condensation inside of outer walls. 99.92% perfect vapor barrier. No more soggy, packed-down insulation—no more ice formations inside the walls. No chance of walls sweating—the cause of most plaster failures. Gives rigid support. Strong-armed workmen won't push through Kapco Board. Plaster clings better, is stronger—dries slower—from one side only. Comes in standard sizes. Cuts easily, or just score and break off. Priced competitively with ordinary sheet plaster base.

2. DRY WALL CONSTRUCTION—May be sealed and painted any color, or wallpapered. Filler or tape conceal joints perfectly. Use also as backerboard, as roofing base, as sheathing board, as flooring and linoleum underlayment, as a general utility construction board. Wonderful for basementless houses and concrete slab construction. Waterproof. Use on the farm for lining poultry houses, barns, silos, sheds. Stands all weathering. Easy to cut. Sizes to 4 x 8 ft. Costs less than ordinary building boards.

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Firm: ____________________________
Address: _________________________
City & Zone: _____________________ State: ____
LETTERS

Tugendhat Revisited ... Comment on Ketchum ... The Whitehouse Balcony ... Thumbs Down on Wright ... Stock Plan Solution ... A Pox on Lady Clients ... Rigid Frame Construction ... Pro and Con Beaux Arts Education.

OCEANIC AND GERMANIC
Forum:
Although myself a lover of cultures Oriental and Oceanic, I feel that perhaps the house on Oahu (FORUM, Feb. '48) is overly lush. Mr. Ives needs ... to assume some of the restraint shown by an architect like Mies.

Mervyn E. Parker

REMOTE CONTROL
Forum:
Re: Offices of Ketchum, Gina & Sharp (FORUM, Feb. '48) very good presentation on your part! (And a damn good architectural office.)

Are criticisms allowed?
1. Do Messrs. Ketchum, Gina & Sharp operate the drafting room by remote control? Or do they trudge back and forth from drafting room to their office with sketches, draftsmen, etc.? Seems like a long hike from control and drafting room to executive offices.
2. Realistically, the only place an architect needs complete privacy is when in conference with client, from my point of view. Yet it seems that the conference room (I wish I had one) is either in Mr. Ketchum's office or "plumb" in the "middle of everything" and practically open on all sides.

However this is all none too serious as the work of Ketchum, Gina & Sharp is anything but bad planning and it is always a pleasure for me to look at something they do.

INGRAN S. CARNER, Architect
Brooklyn, N. Y.

CRITIC FROM BRITAIN
Forum:
I paid my subscription to your journal in order to keep in touch with the finest architecture the U.S. is producing and to learn from it. Unfortunately, except for the Brazil number and the Frank Lloyd Wright issue, I have not felt my expenditure justified. I consider much of the domestic work you have published "crude modern," comparable in effect with early European modern even if the finest is more luxurious (owing to more money available) ... I feel that some of us in England if we had the same opportunity could do much better.

VICTOR C. LAUNDER
Wight, England

LOCKWELD HOMES
Forum:
The researcher and the writer who worked on the Smith & Hill story (FORUM, Feb. '48) deserve congratulations for their excellent handling of the entire yarn. You are to be congratulated on a swell job ... .

HAL BURNETT
Chicago, Ill.

Forum:
In the February issue you have an excellent article on the Lockweld homes in Chicago. We have been extremely interested in these homes, due to the fact that they are completely Frigidaire equipped including laundry equipment. Therefore, it was with some surprise that we noticed the credit for this laundry equipment had been supplied to Bendix Home Appliances, Inc. If you will notice the picture of the laundry equipment, I am sure you will recognize that they are distinctly Frigidaire. I know this was an editorial oversight, and I want to express our appreciation for the credit that you did give us on the kitchen equipment.

WADE ATKINSON
Frigidaire Div.
General Motors Corp.
Dayton, Ohio

HASTY STATEMENT
Forum:
With its imposing array of editors, associates, assistants, consultants and researchers, FORUM might do better with its news.

Contrary to your statement that the White House balcony was started "over protests from ... the A.I.A.", the Institute has expressed no opinion whatsoever upon this subject. If THE FORUM'S over-hasty statement was prompted by reading expressions of opinion in the Journal of The A.I.A., FORUM might have noticed that these sentiments were those of individual contributors and were so designated. The Institute rarely advances an official opinion upon a subject in which personal taste must guide its judgment.

HENRY H. SAYLOR, Editor
Journal of The American Institute of Architects
Washington, D. C.

FORUM's editors, associates, assistants, consultants and researchers humbly beg the pardon of the ruggedly individualistic A.I.A. for jumping to a collective conclusion—Ed.

USONIAN NIGHTMARE
Forum:
Your January '48 issue reaches a new low in my opinion. I'm glad I don't have it delivered but only see it when I visit.

There ought to be a restriction on the use or location of these "Usonian" designs—and not have them imposed on an otherwise pretty countryside. I've specifically in mind one such being completed in Wellfleet on the Cape. Cape Cod is attractive now but won't be long if this continues.

FREDERICK THORNE WARNER
Teaneck, N. J.

Forum:
In your January issue there appears a reproduction of a proposed skyscraper hotel, the "Rogers Lacy" to be built in Dallas. Frank Lloyd Wright, the creator of this design, may be recognized as one of the most illustrious architects of all time, but in designing such a hotel monstrosity it appears to me he has sadly missed the boat. An inverted pyramid may be graceful and appro-

(Continued on page 22)
QUESTION: How strong is Double-duty INSULITE?

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Refer to Swell’s File, Architectural Section 101/9

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More shop fabrication can be done with this lighter metal because even large sections are easily moved. Consequently there is less clutter in the busy quarters of the construction site.

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REYNOLDS MADE ALUMINUM COMPETITIVE TAKE ADVANTAGE OF IT

As a former resident of Texas I earnestly hope that Dallas residents who have any regard for esthetics will unite in voicing their protest against the desecration of their city skyline by such a nightmare as the proposed Rogers Lacy Hotel.

Bremerton, Wash.

Forum:

We seem to have come into a field of so-called architecture in this jazz age, as we have in so-called music and other fields of endeavor, where there is no longer beauty in the things we create and do. We do not all believe in this modernistic style of design.

... Your January issue is perhaps a nice paper to have around the house as an instrument of entertainment to show our friends what is going on in the minds of certain creators of habitation for man.

Perhaps some day we will see the time when we will be again creating structures of beauty rather than this so-called functional idea, and until such time, this office will not subscribe to magazines with such works of idiosyncrasy.

NAME WITHHELD

Akron, Ohio

STOCK PLANS RIDE AGAIN
Forum:

I see in the letters to the editor some definite "pot shots" at your story about Home Planners, Inc. I suppose this is the usual case, and am sorry if it proves to be distasteful to THE FORUM.

On the other side of the ledger, I would like to report we have had inquiry from many architects and others who have since received some of our material and have found it refreshing and very much worthwhile. Their foreign response was interesting and good.

It seems a shame that the architectural group as a whole are not more open-minded about the subject. They are in a position to organize and promote the finest service of this kind possible. Properly handled, it is a good business proposition too.

Until the architects develop a solution themselves, Home Planners, Inc. and many others will continue to serve the demand for stock plans. As a matter of fact, the longer they wait, the better our services will become.

The model house at $1.50 is only the beginning of the ingenuity that can be introduced for ideas that can be mass produced.

DICK POLLMAN
Home Planners, Inc.

Detroit, Mich.

Forum:

Every so often, some architect sees a group of skyscrapers propose a design for all columns with a wall of windows and goes off into a long tirade condemning the practice of selling stock plans. Usually it is the same fellow or tailor condemn for buying ready made suits and the one that his shirt maker dislikes... because he won't wear custom made shirts.

I maintain professional offices, charge the usual fee for professional services, and never accept a reason for cutting the fee.

I also maintain a drafting department that efficiently turns out drawings requiring professional supervision and which are done for clients with their own name plates instead of our own. In addition to a mechanical and patent drafting department we also maintain a House Plan Department which, in proportion, nets us as much as our professional department.

It is surprising how many custom made plans we make from owner-marked plans purchased over the counter or by mail for the general arrangement. T plans we turn out for this class of client call "permit plans"—with just enough information on them to get their permits and begin their loans. This distinguishes them from our professional plans.

Many an owner is living in his architect designed house but assure you that every owner living in a home erected under our Permit Plan Service can truly say that he has never experienced a more personal service at any time. All this is possible. Properly handled, it is a good business proposition.

We have solved the over-the-counter plan bugaboos with our own Permit Plan Service.

(Continued on page 24)
There is a big difference between Webster Baseboard Heating and just any "radiant" baseboard.

McClatchy, Philadelphia's leading large scale operative builder, knows this difference—knows from experience.

McClatchy calls Webster Baseboard Heating "Perimeter Heating", and says "it's the finest, most modern type of home heating. Every outside wall is thoroughly heated from the baseboard up and that, as you know, is ideal heating. Complete, comfortable, economical" . . . And that is why Webster Baseboard Heating is featured in "Homes by McClatchy".

Webster Baseboard Heating is truly "Perimeter Heating". It provides a screen of warmth around all exposed walls; even temperatures everywhere, from floor to ceiling; all the advantages claimed for forced hot water plus radiant effect from warmed baseboards and walls, plus natural convected air movement so essential to comfort. There are no radiators. The heating element is concealed and the baseboard installation extends only 2½" beyond plaster line.

Webster Baseboard Heating is reliable hot water heating without radiators — proven by more than 1300 operating installations in residences scattered from Seattle to Miami.

Webster Baseboard Heating is also playing an important part in one and two-story garden-type apartment projects, currently under construction in Indianapolis, Washington, Norfolk, Atlanta, Buffalo, Chicago, Cleveland, and other cities. One project alone will require over 6 miles of Webster Baseboard Heating.

Want the whole story? Write us. A Webster Representative (average 21 years service) will make an individual study of your project.

WARREN WEBSTER & CO., Camden, N. J. Representatives in principal U.S. Cities: Est. 1888
In Canada: Darling Brothers, Limited, Montreal
that fulfills a real economic need. I hope that our explanation of how we have handled it may encourage others with this thorn in their side to obtain their healing.

A. T. Cassiere, C. E.
Fontana, Calif.

PRACTISING MISOGYNIST

Forum:
I've just received the new Roster of Architects' Offices, Members of the Washington State Chapter, A.I.A., and am amazed at the large percentage of members who, being presumably of sound mind, have indicated thereon that they are "interested in residential work." This means, by inference, that they are willing to hazard life, liberty and the vaguest chance for happiness by taking on women clients. For, as everyone knows, a house job means a lady client in 98.44 per cent of the cases.

Assuming that the above mentioned attitude of the profession is typical throughout the country, I am duty bound to speak to the younger architects: If you don't want your life expectancy reduced five years by every job, if you don't want to be a broken old man at 45, and end up in a phychopathic hospital, paint a "No Women Clients Allowed" sign on your office door immediately. If you can't make a living after that, go back to barbering, join the intellectual ranks of hospital orderly, drive a truck, be a piano mover. Sink even lower, as I did, and open a specialization office. Do anything. But give the female clients a wide berth, and you'll thank me on the Last Morn.

It is a scientific fact that whenever a normally charming and gracious lady chicken builds a nest, her temperature and blood pressure rises, she becomes irritable, more or less violently insane, neglects her housework and children, and won't let her husband touch her with a 10 ft. pole. These same things happen when the female human decides to build a house, but in far more virulent form. For she's been reading a lot of bunk in amateur building books and magazines which the hen wisely avoids. Furthermore, she demands that every trick and gadget she ever saw in these swindle sheets be incorporated into her one house—$24,000 worth for $8,000—with the architect's fee thrown in. This, obviously, is bunk doubled dammed.

What you young practitioners of today don't realize is that these are super-normal times. Architects are busy and independent, and the lady client is forced into a semblance of same behavior. But be sure she's just hiding her time. With the certain advent of normality or depression, she'll burst out again with the tears, the tantrums, the sudden and drastic changes and counter (Continued on page 20)
Here’s an attractive basement room combining design and construction features that would be welcome in any home, whether new or modernized. Best feature of all is the ARCOLINER Wet Base Oil Boiler, which furnishes carefree heating comfort for the whole house. With its handsome Canyon Two-Tone Red jacket, the Amerliner harmonizes with any modern color scheme or remodeling plans. And because of its water insulated base, the Amerliner can also be installed in first floor utility rooms.

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---

changes in plans which will take bread out of your kiddies' mouths, clothes off their little backs. Scientific medicine will some day hold her responsible for the alarmingly high death rate among architects. Then, when the diagnostican discovers that the ailing architect has done any considerable amount of residential work, he will turn grave, place his hand on the patient's shoulder, and say: "Sorry, old man, but there's absolutely no hope. Use the morphine and sleeping pills freely. We'll try to make you as comfortable as possible until the end."

So you think I'm an old meanie, a woman hater, perhaps even a homo-sexual? Listen to this. Bully: I love women. I'm nuts about them. They are by far my favorite skirts. I'm a fool for a pretty face, and for all the other things assembled beneath it. I've been infinitely saddened by the new longer skirts. I'm president of the "Just Below The Knee Club," but am laboring to raise its aims and ideals to a far loftier level. I've been in and out of love all my life, I've married and reproduced, even to the second generation. But for seven long years, I've never allowed a woman to enter my private office. (Oh, right, never to talk houses, anyway). Whenever we have lady guests at home and the conversation turns residential. I fold my tent like the Arabs and silently steal away. When we are the guests and the hostess, however lovely, quizzes me for more than ten minutes about house building. I rise from my uneasy seat, smash up the parlor furniture and leave, never to return. Before God and these witnesses, I now pronounce you a very foolish person unless you heed this solemn warning and follow my advice.

FRANK STANTON
Seattle, Wash.

RIGID FRAME TAXPAYERS

Forum:
Your February article on the rigid frame building should help to popularize what you properly describe as a handsome and efficient architectural form. Just as you say, the rigid frame is highly adaptable to single story buildings with large spans. However, when you remark that "there is no theoretical reason why simple rigid frames could not be used in multi-story construction," aren't you indulging in a bit of understatement, considering that multi-story rigid frames have been in common use for well over 40 years? Virtually all multi-story reinforced concrete buildings represent varieties of rigid frame construction. Their practicality is a matter of record.

The rigid frame is a 'natural' for two-story buildings having no interior columns on the first story. As an example, the taxpayer. The commonest way to avoid the use of
FUSES ELIMINATED—2-way circuit protection is provided by thermal-magnetic (coilless) trip elements which need not be replaced after operation...common trip disconnects all lines, preventing single phasing...anyone can quickly restore service after cause of tripping has been removed...no live parts are exposed...compact mechanism is built for frequent operation under heavy load.

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Albertus Magnus Hall, new science building on the St. Thomas College campus, was completed in September, 1947, at a cost of $1,250,000. This new building, of Mankato Stone, with Indiana Limestone trim, and Clay Tile roof, in Collegiate Gothic Style, forms an imposing, harmonizing unit with others on the campus of this liberal arts college.

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BRIXMENT Makes Good Workmanship EASIER!

The pictures below show an example of good workmanship — and of bad workmanship. They also explain why mortar such as Brixment makes it easier for the bricklayer to deliver good workmanship.

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When absorbent brick are used, especially in hot weather, mortar should be spread out over only a few brick at a time. The brick should be placed on this mortar immediately, before it can stiffen.

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BRIXMENT makes good workmanship easier because it holds its moisture longer than ordinary mortars, when spread out on the wall. This enables the bricklayer to properly bed the brick before the mortar has stiffened too much.

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LETTERS

New handbook on air diffusion

COOKING CABBAGE IS AN ARCHITECT'S PROBLEM

COOKING CABBAGE IS AN ARCHITECT'S PROBLEM

The problem of removing unpleasant cooking odors and greasy fumes definitely is on the architect's drawing board today. Women expect it to be solved in the plans.

THE BEST SOLUTION IS AUSTIN COMPANY

AUSTIN COMPANY used ladder type rigid frame to accommodate tracks and tram cars at second story level. (Forum, Feb. '45)

BEAUX ARTS INVIOLATE

In our enthusiasm for the rigid frame, let's not write the obituary of the steel frame building as we know it today. The old boy is going to be with us a long time. It is even questionable whether the multi-story rigid frame is altogether superior to the hinged frame.

To such items as design difficulties, supervision of welding, etc., two precautions in the use of the rigid frame should be added. First, a rigid frame is difficult to change once built. Second, if a rigid frame is not designed properly for yielding foundations, failure could result. Yielding foundations could set up strains several times the strains caused by dead and live loads, as has been demonstrated by analysis and test. The architect should check to see if in selecting a rigid frame in such cases he gets an economical design.

MILTON F. KIRCHMAN
New York, N. Y.

BEAUX ARTS INVIOLATE

Forum:
In reference to an article titled: "THE BEAUX ARTS INVIOLATE..." (Forum, Feb. '48) I write this letter...I happen to be a student in Architecture at the "Ecole des Beaux Arts de Montreal" (Canada). I would like to inform you what is written or said about the Ecole des "Beaux Arts de Paris" concerns us also because we (Continued on page 34)

COOKING CABBAGE

IS AN ARCHITECT'S PROBLEM

The problem of removing unpleasant cooking odors and greasy fumes definitely is on the architect's drawing board today. Women expect it to be solved in the plans.

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follow very much their schedule of training, considering of course a few differences.

Well my first objection is: why worry about the training of the Beaux Arts? Is it jealousy, prejudice, or what? The government of every country in the world seems quite satisfied with graduates from the B. A., and especially in America. Have we not much consideration for famed men like Le Corbusier, Greber, Cormier, etc? Yes, because they came from the old country and were very seriously trained and mentally formed to judge and practice real Architecture. The goal of all the schools in Architecture is of course to turn out qualified men to practice Architecture to the utmost of their knowledge, and the Beaux Arts is not different in that line.

It is the procedure of training that is different: it is . . . based on something well recognized throughout the ages as MASTER-PIECES OF ARCHITECTURE. Will that art fall all of a sudden just like that, because of reinforced concrete? No, we are better men in judging than that. In some schools the students are trained to be somewhat "modern" and to study a certain form of architecture, what form? Nothing like it has been done before and suppose it fails, and if it doesn't fail, will it last?

. . . The influence of man on a certain type of dwelling is certainly something we understand clearly after studying past Architecture. Then, once in practice, the client comes to us and tells us he wants this or that because he is a certain type of a man; then we solve his problem because we are trained to understand him that way . . .

So the Ecole des Beaux Arts is by far, I believe, the most up-to-date school of Architecture because, it puts up with one of the toughest problems of today: understanding the man of today . . . Again I emphasize the words repeated by Mr. Louard about the Ecole des Beaux Arts, that it is: "A LIVING BODY WHOSE AIM IS TO PRESERVE WHAT IS FUNDAMENTAL, AND ABSORBS FROM THE PRESENT DAY THAT WHICH ALLOWS ITS CONTINUOUS REJUVENATION . . ."

GUY PARENT
Architectural Student
Ecole Des Beaux Arts
Montreal, P. Q.

Forum is surprised to find Le Corbusier, violent opponent of anything Beaux Arts, cited as proof of Beaux Arts excellence. Forum also suggests that studying say, the Parthenon, while of historical value, would be of more help in understanding a Greek citizen of the Fifth Century, B.C. than machine-age man—Ed.

Forum:
Your article about the Beaux Arts School was of great interest to me. In June, when as one of the representatives of British architectural students I visited Milan, I had

* (Continued on page 38)
Pittsburgh Steeltex for Veneer provides sheathing and building paper all in one. But better than that it gives you strong walls of reinforced brick or stone construction with economy. Steeltex will make you proud of the permanent house you have built—make the owner sing your praises as an architect or builder.

Construction with Steeltex provides many advantages—a monolithic concrete slab completely around the structure—positive protection from moisture penetration—greater fire protection through elimination of dead air space and resulting flue action—all mortar joints completely filled—reduces upkeep. In addition it is easy to apply, requires no special tools or methods and takes the place of sheathing and building papers. Many architects and contractors have found it makes for better construction—they specify it on all their jobs.

Pittsburgh Steeltex for Veneer is a combination of cold drawn, galvanized steel wire, welded into two-inch square mesh, laced to a double-ply waterproof backing that is sealed with mastic. The absorbent face of the backing provides a suction bond with the mortar. The mesh provides reinforcing for the mortar which is slushed in behind the veneer. When dry, the wall is a strong unit of brick or stone and reinforced concrete slab, attached firmly to the frame as an integral part of the structure.

The better construction and savings with Pittsburgh Steeltex for Veneer will appeal to owners—you will like the ease with which it is applied. Specify it for all your jobs. For your copy of our catalog D. S. 132, write today to Pittsburgh Steel Products Company, 3232 Grant Building, Pittsburgh 30, Pennsylvania.

This background photo shows Steeltex—one-third actual size.
Why do these thousands of new Levitt homes all include New Bendix Washers?

America's biggest home builders insure their leadership by giving extra value in every home!

In the giant housing development at Levittown, Long Island, there are now 2,000 homes occupied by veterans. Each rents for $65 a month. When the community is completed at the end of this year, there will be 6,000 homes with a population of 20,000! And each home will be equipped with a Bendix automatic Washer!

Certainly there's a reason. A Bendix-equipped home provides more efficient living, better living, easier living from the prospect's point of view. And, from the builder's viewpoint, Bendix equipment already installed in the home means easier selling or renting—today, tomorrow, and the day after tomorrow!

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These are a few of the reasons why so many "Look-Ahead Builders" like Levitt & Sons are including Bendix Home Laundry facilities right in their blueprints! These men set the trend toward giving more for the housing dollar. They realize how important it is to establish a reputation for giving greater value today in order to keep selling after the housing boom is over.

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The Architectural FORUM April 1948

LETTERS

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the opportunity of seeing exhibits from both the Ecole des Beaux Arts and the Ecole Speciale d’Architecture.

The occasion was the Triennale Exhibition in Milan, and many European student delegations had been invited by their Italian colleagues to an architectural student congress, bringing exhibits with them.

The French Beaux Arts exhibit was similar to the one you described. Indeed it may have been the same one, but was the only one of its type among European student work. In discussions most of the French students could or would not see the lack of progressive thought in their school methods. While nearly all student delegations expressed dissatisfaction with certain aspects of their education, the French students seemed more apathetic toward proposed changes. No social problems seemed to be considered in their solutions, nor did their drawings hold forth any hope of a successful contribution toward European reconstruction.

Unfortunately the exhibit from the Ecole Speciale, was not much different in spirit from the Beaux Arts exhibit, except in showing a strong influence by Perret.

I should like to add that it seems a pity that no contact with American architectural students had been made. Exhibitions from American Schools could be sent to Great Britain and other European countries, while similar exhibits from Europe could tour the United States. Closer contacts would bring about the exchange of stimulating thoughts, and would be of mutual benefit.

I am sure that the Architectural Students Association of Great Britain, c/o School of Architecture, All Saints, Manchester 15, which has taken a leading hand in international cooperation, would only be too glad to hear from any American organization.

S. ANSELKIVIUS
Dip. Arch. (Leeds)

LETTER FROM ENGLAND

Forum:

A feature distinguishing architectural training in Great Britain from that of prominent continental schools is the variety and number of design problems set in each session. Continental students are usually given one or occasionally two design problems per session. This results in an extremely thorough detailing of the subject from all aspects, often only equaled in an architectural office. In Great Britain the student is faced in each session with about four planning problems which, naturally, are only carried to a limited stage of detailing. However, teaching in construction is integrally related to the teaching of design, and in the more advanced sessions students are required to develop carefully studied schemes with (Continued on page 32)
Q. WHAT IS THE MOST IMPORTANT PART OF AIR CONDITIONING?
A. THE COMPRESSOR

Q. WHAT COMPRESSOR GIVES THE LONGEST, TROUBLE-FREE SERVICE?
A. THE Westinghouse Life-Line Compressor-Motor Unit

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Westinghouse Air Conditioning
THE USE OF ASPHALT TILE IN MODERN SCHOOL DESIGN

By O. H. BREIDERT, Partner
Childs & Smith, Architects

In a senior high school, as illustrated above, we find that asphalt tile floor covering and base is most practical and economical throughout all rooms and corridors, with the exception of the gymnasium, shower, locker and toilet rooms and industrial arts department.

Postwar school model. Asphalt tile to be used here in all except general toilet areas. Where community activities require constant use of the combination gymnasium-auditorium, an asphalt tile floor is recommended.

Our plans for a junior high school call for asphalt tile in all rooms and areas except the gymnasium and general toilet and locker rooms where ceramic or terrazzo floors will be specified.

In elementary buildings (kindergarten through sixth grade) asphalt tile can be used throughout all rooms with the exception of general toilet rooms, where ceramic or terrazzo floors are recommended.

The architectural firm of Childs & Smith, Chicago, Illinois, has been in constant touch with problems of school design for 35 years. Its current school work consists, in part, of elementary, vocational, junior and senior high schools and junior colleges plus other special school buildings for these and other communities: Hinsdale, Ill., Shelbyville, Ill., Waukega, Ill., Wilmette, Ill., Kankakee, Ill., Flora, Ill., Cedar Rapids, Iowa, Clinton, Iowa and Wisconsin Rapids, Wis.

N A continuous practice of architecture over a period of 55 years, we have found that a floor and base of asphalt tile is the most practical and economical type of floor covering for new educational buildings both from the standpoint of initial and maintenance costs.

Asphalt tile floors, if properly cleaned, waxed and buffed after installation, require a minimum amount of maintenance throughout the year to keep them clean and bright in appearance. Thorough cleaning and waxing by an efficient janitorial staff several times a year along with regular daily sweeping, will keep an asphalt tile floor in excellent condition for many years.

With the proper handling of design and color combinations, the architect may use asphalt tile to design school floors to fit any decorative requirement. Asphalt tile can be obtained in a variety of colors and sizes. This makes it possible to use simple designs employing one marbled color throughout the classroom or more complex decorative design in entrance lobbies, foyers, corridors and special rooms.

Asphalt tile is the only type of resilient flooring which can be installed safely over concrete sub-floors in direct contact with the earth. Its performance is not affected by normal moisture and dampness.

Recommended uses of Asphalt Tile in specific areas

Corridors • Asphalt tile is a most practical flooring for corridor and stair hall use because of its long wearing qualities. Attractive pattern and pleasing color combinations may be devised to add color and interest to these areas. Where corridors must necessarily be narrow, asphalt tile floors can be laid out to give the effect of greater width. Recommended, too, is the use of directional lines to indicate student traffic.

Classrooms • An asphalt tile floor laid over concrete and with a set-on base is ideal for all classrooms in elementary through junior college buildings. In the classroom sketched at right, light colored marbled tile in ⅜ inch thickness in standard 9 x 9 or 12 x 12 inch sizes is indicated. Light colored asphalt tile provides needed light reflection and conforms to the modern trend in classroom color schemes, namely, natural colored furniture and light wall and ceiling decoration.
A marbled floor in one color is recommended because it doesn’t distract pupils and is easiest to maintain.

**Lunchroom, Cafeteria and Kitchen**

- A greaseproof 3/16 inch asphalt tile is advised for all food serving or dining areas. An interesting floor pattern is important because these, like all rooms under the modern school plan, should be designed for a dual function. The cafeteria dining area shown at right below can be converted quickly into a room for school parties and dancing. A properly treated asphalt tile floor is an excellent surface for dancing.

**Kindergarten or Play Rooms**

- Asphalt tile floors have many advantages in elementary (kindergarten through sixth grade) schools, especially in play room areas where game and court lines are required. These lines can be set in a plain, light colored asphalt tile in a field of medium colored marbled tile, thus eliminating constant repairing and repainting of the lines. Attractive floor designs are particularly important in modern educational programs for younger children.

**Toilets and Lavatories**

- Asphalt tile is an excellent floor covering for small toilet rooms and lavatories in connection with kindergarten and lower grade rooms, toilets in administration and health departments and teachers’ rest rooms. For large general toilet rooms, showers and locker rooms, ceramic tile, terrazzo, art marble or marble are more practical materials.

**Renovating and Rehabilitation**

- In addition to new educational structures asphalt tile is being used in the rehabilitation of existing schools to reduce floor maintenance costs—to solve the problem of floor repair economically—to provide a more comfortable floor—and to change the purpose and character of specific rooms.

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ARTHUR T. BROWN settled in Tucson, Ariz. twelve years ago after six years with David Adler and one at the Century of Progress. He believes that the fundamentals of good architecture are “simple form, exciting proportion and correct scale without concern for style.”

MORTON H. CAINE is a partner in the firm of Dagan, Heins & Caine of Portland, Ore. which specializes in commercial work. He received his B. A. and M. A. at Carnegie Institute of Technology, settled on the west coast in 1936 after various architectural jobs in the East.

CARL DANIELS is a general manager of Stolle, Inc., a west coast building firm. In house design, he believes in “giving people what they want regardless of style,” but prefers materials such as redwood and adobe, which are native to his home base of Monterey, Calif.

J. R. DAVIDSON was born in Europe, trained in Germany, France and England. He came to America in 1923, opened his present Los Angeles office three years later. For over 25 years he has pioneered straightforward, modern design.

ROBERT E. FAXON is a 1940 graduate of the University of Southern California now practising in Los Angeles. He has done mainly residential work, believes that adding warmth and interest to plain surfaces is the biggest problem contemporary designers must solve.

ARTHUR FEHR got his B.A. from the University of Texas in 1925, took graduate work at Columbia and the Beaux Arts Institute. Now practising in Austin, Texas with partner Charles Granger, he served as civilian architect for the U. S. Engineers during World War II.

VINCENT FURNO, who studied at Columbia and the University of Pennsylvania, has been practising architecture for 22 years, now has a New York partnership with Bernard J. Harrison. He has worked with the N. Y. City Housing Authority, Shreve Lamb & Harmon, Raymond Loewy.

MELVILLE GARTON avows the ambition to impose contemporary design on fellow Pasadenaans, who are mainly transplanted New England traditionalists. He practised up for this difficult job at U. S. C., the Ecole des Beaux Arts and with Richard Neutra.

LOUIS GELDERs, a 1928 Yale graduate, worked for Eric Gagler in New York before taking to the Connecticut countryside in 1938. He has practised in Wilton, Conn. ever since except for three war years spent in and out of shipyards on the Gulf and West Coasts.
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WILLIAM LESCAZE whose Swiss purism has raised U. S. design standards of commercial buildings, applies the same rationale to houses whenever he gets a chance. He came to this country 28 years ago, had a rough time before Americans took to his stringent esthetic.

CLIFF MAY, creator of Los Angeles' lush modern ranch houses, functions as both designer and builder, believes every architect should do the same to avoid going broke. His specialty is the large subdivision which he restricts to his pet ranch house style.

JAMES W. MINICK has enjoyed 20 years of private practice in Harrisburg, Pa., is a member of numerous societies including the A.I.A., Pennsylvania Association of Architects, the American Society of Military Engineers. He is a graduate of Carnegie Institute of Technology.

JASON MOORE, 1939 graduate of the University of Texas, started his career with Ford & Swank of Dallas, rejoined the firm in 1946 after five years of Naval work in Trinidad, the D-Day invasion of Normandy and a final lap in Okinawa. He now teaches at Texas A. & M.

RICHARD NEUTRA, world-famed Vienna-born modern architect, came to the U. S. in 1925, worked for a year with Holabird & Roche in Chicago, has since maintained an office in Los Angeles. His particular interest, first stimulated by Adolf Loos in Vienna, is mass housing.

ROBERT A. NOLAN is a partner with his father and brother in the firm of Thomas J. Nolan & Sons, Louisville, Ky. He was graduated from Notre Dame in 1940 and worked in various architects' offices before a wartime sojourn with a destroyer in the Pacific.

TIMOTHY L. PFLUEGER died in 1946, just as his fame was spreading from California to bring him nation-wide recognition. He is perhaps best remembered for his dramatic "Top of the Mark" overlooking the Golden Gate in San Francisco's Mark Hopkins Hotel.

IGOR B. POLEVITSKY visited Florida while studying at the University of Pennsylvania, was so impressed with the climate and the country that he opened a Miami Beach office immediately after graduation in 1934. He has never worked for any architect but himself.

GRISWOLD RAEZTE left for California to work with Richard Neutra the day after receiving his M.F.A. degree from Princeton in 1935. He opened his own Los Angeles office in 1946, at present also manufactures modern furniture under the firm name "Ingram of California."
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Whether to enhance a fine painting with quiet flattery or to infuse a subtle aura of modernity into your newest interior, we believe Kencork deserves your most earnest consideration. Those architects who know Kencork consider it supreme among interior building materials for its aesthetic values as well as its practical advantages.

You will admire the leafy tans and golden browns on walls and floors—the exquisite, subtle patterns—perfect backgrounds for modern furniture and fabrics. Cork is also well known as a truly practical building medium. And Kencork is all cork—with all of cork's unique properties—baked into square and rectangular tiles of tans and browns. As a natural insulator against heat and cold, as a quiet, shock absorbing floor covering, Kencork is building an ever widening reputation among architects throughout the nation.

To many architects and builders the word Kencork is almost a synonym for luxury. Yet, often, interested customers are pleasantly surprised to learn how moderate in price a Kencork can be. See your flooring dealer for full details—or ask us for a descriptive color folder. David E. Kennedy, Inc., 00 Second Ave., Brooklyn 15, N. Y. - 350 Fifth Ave., New York 1, N. Y. - Ring Building, 1200 18th St. N. W., Washington 6, D. C. - 1211 N. B. C. Building, Cleveland 14, Ohio—Bona Allen Building, Atlanta 5, Ga.—Merchandise Mart, 222 West North Bank Drive, Chicago 54, Ill.—Kansas City Merchandise Mart Inc., 2201-5 Grand Ave., Kansas City 2, Mo.—Western Merchandise Mart, 1355 Market St., San Francisco 3, Calif.
IN THE FORUM

A Fiat Precast Receptor in a built up shower is assurance of a water tight leakproof job at a considerable saving in cost over a hand fabricated floor using the old lead pan method. Walls are easier to handle with a solid one-piece foundation provided by a Fiat Precast Receptor.

A brass drain for 2" waste and the galvanized steel side wall flange is cast integral with the terrazzo forming a one-piece floor that is not affected by shrinkage or movement of supporting wood members.

Section through Fiat Precast Receptor showing cast-in drain connection and typical wall and threshold construction.

Fiat glass doors make showers more attractive in appearance and have a definite practical value to the user. Three types available: Dolphin, the finest in door construction, solid brass chromium plated frame. Zephyr, a satin finished aluminum frame door in the medium price class. Neptune, a low cost aluminum frame door. All Fiat doors are made for opening 24 inches wide.

In Canada—Fiat showers are made by the Porcelain and Metal Products, Ltd., Orléans, Ontario

Metal Manufacturing Company
1203 Roscoe St., Chicago 13, Illinois
Los Angeles 33, Calif.

PRECAST SHOWER RECEPTOR

STANDARD SIZES
32" x 32"
36" x 36"
40" x 40"

...for built up showers with Tile, Plaster or Structural Glass Walls

JAN RUHTENBERG was imported from Sweden in 1933 to assist in the Museum of Modern Art's "Machine Art Show." He came again the next year to teach at Columbia University, remained to set up an office in Colorado Springs. He has specialized in furniture design.

LEE POTTER SMITH is designer in his father's Paducah, Ky., firm of C. Tandy Smith, has worked there since 1936 except for one year at the University of Cincinnati, and four as an Air Force pilot during the war. He passed his Kentucky registration in January of this year.

SEWALL SMITH, Cornell '29, left his "comfortable rut" in hometown Niagara Falls four years ago to settle in Lafayette, Calif. The change, he says, "had a salutary effect on his thinking, led to an output entirely different than before—more modern!"

EDGAR A. TAFEL followed up two years at N.Y.U. with nine at Taliesin. During the war he branched out into large-scale housing and Army Engineers' work, has recently completed plans for a $1 1/2 million Museum of History and Industry near Lake Washington.

PAUL THIRI is one of the outstanding residential architects of Seattle, Wash. During the war he worked in large-scale housing and Army Engineers' work, has recently completed plans for a $1 1/2 million Museum of History and Industry near Lake Washington.

RALPH S. TWITCHELL studied both architecture and engineering, worked for Carrere & Hastings and Raymond Hood. After World War I he practiced summers in New England, winters in Florida, recently made a year-round choice of Sarasota with associate Paul Rudolph.

KARL O. VAN LEUVEN, JR., an associate in the Hollywood firm of Gruen & Krammek, has been with this office since 1941. Before that he was in the movies—as set designer with Universal, Republic and Walt Disney. He is 1937 graduate of the University of California.

ROBERT LAW WEED has headed his own office in Miami, Fla., since 1922, is currently planning a new campus for the University of Miami. Mr. Weed served in World Wars I and II—in the latter with the Air Transport Command in India, China, Burma and South America.

JOSEPH DOUGLAS WEISS took degrees in architecture and engineering at the University of Budapest, postgraduate study in Amsterdam and at Columbia University. His New York practice, established in 1923, has been mainly industrial plants—tobacco, textile, etc.

JAMES R. WILKINSON of Stevens & Wilkinson, Atlanta, Ga., joined the firm in 1936 when it was Burge & Stevens, became a partner after the death of Mr. Burge two years ago. During World War II Wilkinson was a construction engineer with the Marines.
HERE'S Better Air Conditioning for your clients in a single convenient package—
the G-E Central Plant Air Conditioner.

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pre-engineered, pre-fabricated, pre-matched. "Jig-saw puzzle" assembly of uncoordinated
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of attractive appearance...quiet, smooth operation...dependable, consistent performance. It
is extremely flexible and can be assembled in 12 different combinations to meet any space
requirements. Coil connections can be made at either side.

These units have been designed specifically to make inspection and maintenance extremely
easy. Your local General Electric Air Conditioning expert will be glad to work with you in
planning the installation of these G-E Central Plant Air Conditioners.

General Electric Company, Air Conditioning
Department, Section A8134, Bloomfield, N. J.
You offer clients more with this new material!
(and at no extra cost)

MORE BEAUTY! Here is a better, more beautiful kind of exterior building material—luxurious, precision-produced Kaiser Aluminum clapboard Siding and Roofing. It is flawlessly uniform in beauty and quality, forever free of splits, knots and rough sawing scars. It comes from the mill prime-coated, ready to receive smooth paint finishes that won't flake or peel. And it can be painted any color, any shade.

MORE ECONOMY! This new siding and roofing costs no more than other fine building materials. But better yet, it will never need the usual kind of maintenance, for it can't crack, rot, warp or rust. And it's easier to erect than any other material, so it cuts on-the-job labor expense. Requires fewer nails, less paint (because it absorbs none) and needs no underlying wood sheathing. You can cut and work it with wood tools.

MORE PROTECTION! Only Kaiser Aluminum clapboard Siding and Roofing has a curved surface. When each piece is nailed down by the lower edge, the pre-formed curve produces a tension which results in an absolutely tight, weather-proof joint. Concavity also eliminates wrinkles and sheen, produces attractive shadow lines that are 3/4" deep, and increases rigidity. Notice how nails are completely hidden!

MORE DURABILITY! No other material can match the long life of Kaiser Aluminum clapboard Siding and Roofing. It will last for generations. It can't absorb moisture, can't be damaged by vermin or rodents, can't be ignited by sparks. It is supplied in standard lengths of 10, 12, 14 and 16 feet. Siding is 6 1/4" wide, .030" thick. Roofing has an exposed width of 8 1/2", is .025" thick. 1143 base feet of the Siding weighs 580 pounds, will give 1000 sq. ft. of wall coverage.

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To make a dream come true...

Home is every man's dream! Yet, today, Americans are approaching the thought of home with doubt. First, of course, a place to live in is hard to find. But when you do find one, how can you know whether it is worth the price? Will it stay staunch and secure through the years? Will it bring that quality and character to living which are so essential to happy family life?

How can you be sure of quality and value?

To many people, that is the biggest question in housing today. Though most builders are honest and efficient, their day-by-day straightforwardness does not win the headlines that result from the unmasking of the unscrupulous few. Hence there is growing public doubt about the operations of the merchant builders though they are the best equipped, in knowledge, experience, labor and machinery, to put up the economical homes we dream of.

In order to help solve this problem, and also to offset over-publicized housing "scandals," Revere announces the organization of the Revere Quality House Institute. This Institute is composed of architects and builders who, teaming up together, are going to find out, in the actual building of homes, how much real quality and happy living can be put into moderately priced homes.

These houses will be located in all parts of the country so that every housing need can be studied. Whatever useful development can be worked out in one area will be applied wherever else it can be used. Always the purpose will be to determine what is the maximum quality and comfort that can be provided for every single dollar spent.

In order to avoid any possibility of bias, Revere asked the Architectural Forum, because of its established desire to further the interest of the entire building industry, to act as co-sponsors and assume the responsibility of inviting the architects and builders who would form the Institute. Now that it is organized, Revere wishes to make clear that while it is sponsoring this effort, it will not control it.

It is hoped that in time this Institute will take its place beside other organizations whose purpose is to safeguard the health of the people and the value given for the people's money. It will not be too long, we trust, before the Institute will be nationally recognized as the creator and guardian of quality housing standards.

12 Principles of Quality Housing

Here are the basic principles which the Revere Quality House Institute has agreed upon as essential in a home:

1. Good site planning: Design streets which discourage through traffic; design homes to face them on plots, and landscape them to take advantage of natural features and the best orientation, and to provide privacy for outdoor living; the resulting variety will avoid monotony.

2. Efficient use of space: Eliminate all waste space; reduce corridors and halls to the minimum; install compact mechanical equipment; plan most rooms for more than one use so that there will be no rooms which are used only an hour or two out of the day; design all rooms to accommodate standard furniture.

3. Plan the house for health: Make sure that all rooms have plenty of natural light, air, and sunlight, and that adequate artificial light and heat are available whenever and wherever needed; provide an adequate and dependable water supply and sanitary waste disposal; make sure that the house is tight and dry and that it will be warm in winter and cool in the summer; design carefully to reduce common home accidents.

4. Plan the house for convenience: Reduce housework and footsteps to a minimum by efficient planning, automatic equipment, and durable, easy-to-clean materials; provide adequate, carefully designed, and easily accessible storage space for all of the family's possessions, giving special attention to seasonal storage, children's toys, garden tools, bicycles and prams.

5. Plan the house for livability: Provide for all of the frequently conflicting activities of family life: a place for listening to the radio and a quiet place for reading or studying, a place for parties where the noise will not wake the children, indoor and outdoor play spaces where children will be under eye but not under foot, indoor and outdoor spaces for drying clothes; a place for sewing and a place for the home repair shop; make the small house seem large by a free flow of space in the living areas, indoor and outdoor.

6. Plan for privacy: Windows should not open opposite the neighbor's windows; outdoor living spaces should be screened with planting or fences from the neighbors and from the street; privacy within the house is also important, and it should be possible to go from the bedrooms to the bathroom without passing through the living room.

7. Plan for outdoor living: Even in the north, outdoor living can be enjoyable for six months of the year; provide a place near the kitchen for eating, shady places for reading, open spaces for sun bathing, and play spaces for the children, — all planned as carefully as the corresponding indoor areas.

8. Plan the orientation for year-round comfort; the least sun and the most breeze in the summer, the most sun and the least wind in the winter; open large glass areas on the best oriented side of the house and reduce or eliminate openings on the worst side; use overhangs, trellises, or planting to supplement orientation.

9. Plan for the future: Since families grow and change, provide for the possibility of adding to the house or changing its internal arrangements, to fit changed family needs; piping and wiring should be adequately sized to allow for greatly increased future use.

10. Quality materials: Select materials which are durable, do their job well, require a minimum of maintenance, and are pleasing in appearance; consider first cost, length of life, and cost of maintenance in selecting materials; it is no economy to save money on materials; since labor costs are the same or may even be less on quality metals.
The advertisement reproduced in these two pages appears April 24th in the Saturday Evening Post. Thus is announced to the public the formation of the Revere Quality House Institute, which we believe will result in better housing at lower costs, and more creative opportunities for architects. For further details, see news article on page 12 of this issue of The Architectural Forum.

WHY REVERE FOSTERS THE INSTITUTE

Revere believes that it is by creating a constantly improving life for Americans, that industry finds its best opportunity and its greatest rewards. That is why, though we want it made clear that Revere will neither build nor sell houses, we have founded the Revere Quality House Institute.

But also, we believe the Institute will stimulate the markets for our products. For if Americans build for quality, the market for copper and brass products will be vastly increased.

To build lastingly, to preserve, to maintain, all require the use of copper and its many marvelous alloys.

Revere produces for the building industry such materials as sheet copper for flashing, roofing, gutters, downspouts, cornices and the like; copper water tube for plumbing and heating lines including radiant panel heating; Red Brass pipe for water lines; Revere Home Flashing, a packaged flashing system for small homes.

All these are quality materials, permanent, trouble-free. Yet, including hardware, they add only about 1% to the cost of the average $10,000 house, when installed instead of short-lived, rustable troublesome materials. But, since enduring, non-rustable metals of some sort must be a part of quality specifications, Revere (and indeed, the entire copper and brass industry) can expect to benefit through the years as a result of better building standards.

1. Quality construction begins with a well-drained site and foundations placed on solid bearing; the structure must be soundly engineered, with shrinkage minimized and equalized; the house must be weather-tight and windproof; it must conserve heat in the winter and keep it out in the summer; it must continue to do all of these things for many years with a minimum of maintenance; finally, quality construction is impossible without skillful, honest workmanship.

2. Quality equipment: Mechanical equipment should be adequate in capacity to allow for increased future needs; ruggedly constructed of durable materials, it should be dependable in performance, non-hazardous in operation, and require a minimum of attention for operation and repair.
LOOK INSIDE AND SEE HOW
Salter Feather-Touch
VALVE CONSTRUCTION ACHIEVES
FEATHER SOFT CLOSING

1. Precision machined, polished and plated stem.
2. One piece retainer barrel and cap.
3. Patented "O" rings of special synthetic rubber, which seal with Feather-Touch softness at any position of the polished stem. Rings are impervious to heat and cold, neither are they affected by the chemical action of any liquid, thus they will last for years.

In this new Feather-Touch valve, Salter engineers have perfected an amazingly simple valve. It's a removable barrel type with no complicated working parts...just a stem and outer barrel or bushing which also serves as the cap. Conventional metal valve seats and washers have been entirely eliminated. Its finger tip Feather-Touch opening and closing action is achieved by the hydraulic piston action of the stem sliding through two precision "O" rings. Working surfaces of these parts are precision finished to 3 thousandths of an inch tolerance and the stem is polished and plated to achieve the ultimate in smoothness. The above features make a valve which has operated on laboratory tests equal to over twenty years of drip proof service. Write today for a catalog and start specifying Salter Prestige Feather-Touch fixtures. Your clients will appreciate their finger-tip, no-drip operation.

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PRESTIGE FEATHER-TOUCH FIXTURES
50 Ninth Street, Marysville, Ohio

ANNOUNCEMENTS

COLUMBIA UNIVERSITY announces the establishment of an Institute for Urban Land Use and Housing Studies. Under the directionship of Dr. Ernest Fisher, professor of Urban Land Economics, this new group will apply the vast amount of technical material already available in many fields to studying problems of housing and the development of urban communities. Many branches of study at the University will cooperate in the work of this new department—Law, Architecture, Business Economics, Sociology, Public Law as well as Housing and Planning. A Rockefeller grant of $100,000 has been awarded for the work of the new Institute. Results, which will include studies of the New York territory as well as of other large cities, will be published as soon as they are completed. Work has begun under the supervision of an Administrative Board, whose members include: Arthur Burns, Miles Colan, R. Parkes Eastwood, Robert Merton, J. Marshall Miller, John Milee, Frederick Mills, Richard Powell, Raymond Saulnier and Philip Young.

The Construction Industry Information Committee, a newly formed industry-relations bureau, will conduct research activities under the direction of Miles Colan, and will make its findings available to all industrial associations and related business groups. Studies will be made on building costs, labor supply, labor-saving methods, building code revisions, etc.

Further information about the Committee's work may be obtained from their office at Room 706, 815 Fifteenth St. N.W., Washington, D. C.

The New York Chapter of the A.L.A announces publication of a complete yearbook and register of all its practicing members. Information on background, experience and special field of each architect is included.

The Home Buyer's Guide, a portfolio designed for the small home-builder's convenience, provides a compact way of assembling building data for clients. It is distributed by Rheem Manufacturing Co., 570 Lexington Ave., New York 22, N. Y.

The partnership of JAMES BENNETT HUGHES, A.L.A. and HARRY DENYES, JR., A.I.A. has been dissolved. Mr. Hughes will continue practice at 187 S. Woodward Ave., Birmingham, Mich.

C. RALPH FLETCHER, architect, announces that he has terminated his associateship with Lester Tichy, New York architect and industrial designer.

BUILDING PREVIEWS

The Largest Television Studio Plant in America is being equipped in the Grand Central Building, New York City, Columbia Broadcasting Studios. Two main studios with working areas of 55 x 85 ft. and

(Continued on page 7)
HYDRAULIC EXPANSION means better contact!

McQuay AIR CONDITIONING COILS

Superior contact fin to tube—assured turbulence of the heating or cooling medium—two reasons for top performance in McQuay air conditioning coils. Exclusive Ripple-Fin coils are formed by a process in which copper tubes are hydraulically expanded into plate type aluminum fins under pressures up to 4500 PSI, assuring maximum heat transfer between primary and secondary surfaces. Rippled inside tube surfaces, created in the expansion process, add necessary turbulence to the liquid or gas medium for greater heat transfer.

Practically limitless in range of sizes and capacities, McQuay coils for water, steam, direct expansion or combination uses are engineered to meet your requirements. See your McQuay representative or write McQuay, Inc. Representatives in Principal Cities.

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BOILER

Spencer—known since 1888 for manufacturing only quality boilers—now brings you this splendid new all purpose cast iron sectional boiler. New in design... design proven under actual conditions in our testing laboratories. New heights in performance from Spencer's long experience gained in manufacturing quality heating equipment... Write today—get complete details.

Just look at these added features—

Designed to burn any type fuel—easily and quickly converted. Year round domestic service hot water. Easily installed—a sectional boiler designed for iron to iron air tight fit. Attractive, colorful jacket combined with modern design door assembly that features pyrex observation ports. Adds a note of beauty to that extra room in the basement.

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DIVISION—AVCO MANUFACTURING CORPORATION
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WILLIAMSPORT, PA.

ANOTHER AVCO PRODUCT!
Whenever you want beauty plus convenience and durability, use this modern surfacing material. But be sure to specify Decorative Micarta*. That way you'll get all 10 of these important advantages.

- Won't scratch or mar under ordinary service conditions. Finished surface is hard and durable.
- Strong, dense material. Guaranteed not to warp, chip or crack under ordinary service conditions.
- Genuine wood veneers available. Truwood Micarta combines the beauty of such woods as primavera, mahogany and walnut with all the practical features of Decorative Micarta.
- Quickly and easily cleaned, because of its permanently smooth surface.
- Will not spot or stain from spilled food, grease, alcohol, etc. Highly resistant to heat, moisture, mild acids and alkalies.
- Color-fast, permanent finish. Unusually clear, lustrous colors and patterns won't fade or darken.
- Exclusive "Beauty Mask" of tough Kraft paper protects surface during shipping, machining and installation. Strips off easily when ready for use.
- Optional finishes. Brilliant high-gloss or lustrous satin.
- Large 4 ft. by 8 ft. sheets of Decorative Micarta are available for covering large surfaces quickly, and with a minimum of joints. Smaller sizes also available for table tops and similar applications.

Sounds like almost an ideal surfacing material, doesn't it. Well, it is!

Don't fail to get complete information on Decorative Micarta now. Available in a variety of desirable colors and patterns. For samples and installation data, write:

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Flexible

Weldwood* Hardwood Plywood
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You'll have 108,900* noise traps to give you quiet, when you buy a Johns-Manville Fibretone Ceiling

- Every 12" unit of a Johns-Manville Fibretone Ceiling has hundreds of scientifically designed "noise traps" . . . small cylindrical holes drilled in the sound-absorbing panels.

Here the noise waves are trapped and dissipated within the holes.

Once you experience the benefits that noise-quelling Fibretone gives . . . greater comfort, less nerve strain, increased efficiency . . . you'll never again be satisfied to have an ordinary ceiling in any busy area. You'll be surprised, too, at Fibretone's low cost.

Send for Free, Fascinating Booklet: Whether you're interested in quieting an office, restaurant, bank, school or factory, let us tell you more about Fibretone. Write for our brochure "Sound Control." Johns-Manville, Dept. A.F.4., Box 290, New York 16, N.Y.

*Based on room size 15' x 15'

a ceiling potential of 45 ft. will permit maximum flexibility in shifting scenes from one camera to another. Elevated catwalks allow for the frequent adjustments necessary in the complicated lighting and sound equipment. Adjoining this central area are individual control rooms, scenery and construction rooms, film facilities, maintenance, wardrobe and property storage space, master control room and staff offices. Architect Vincent Furno with the CBS design staff planned the studio whose first unit will be in operation this month.

Two Recreation Projects, now being built at opposite ends of the country, will expand next summer's outdoor sports facilities. The $200,000 playground above (Kelly & Gruzen, architects and engineers) will be the first built in direct connection with a private housing project (Brunetti, Hackensack, N. J.). In addition to a 40 x 80 ft. swimming pool of reinforced concrete with flagstone aprons, it will provide tennis and badminton courts and a clubhouse with recreation room, lunch bar, lockers and shower rooms.

The Texas swimming pool below illustrates an original idea in pool design. Architect George Harrell provides 20 per cent more shallow water by abandoning the conventional rectangular pool for a fan-shaped one. Included in this project, which is for the Northwood Club of Dallas are bathhouses, a clover-shaped wading pool for very small children and play areas equipped with plastic covered sand. This new type of sand cuts down glare (an important advantage during Texas summers) without interfering with its aptitude for sand-castle construction.

Tyler Gardens, a rental housing development now under construction near Washington, D. C. will provide 478 dwelling units of 3½, 4½ and 6 rooms each. The two-story house groups (architects and site planners, Churchill-Fulmer Associates; consulting site development engineer, Ralph Eberlin) are laid out on a loop street arrangement with safe play areas adjacent to each group of units and parking courts at the rear entrance of each apartment. Exteriors are of masonry construction up to the second story window sill; above that, of asbestos siding. All doors and frames, as well as window sashes, are of metal. Radiant heating (through pipes set in the ceiling plaster) is distributed from a central oil plant; individual controls are located in each unit. The project is FHA guaranteed, with Prudential Insurance Co. as mortgagee. (Continued on page 76)
Another example of the wide application of Lupton Metal Windows is shown in this physician's office and home. Here, Lupton Metal Casements provide all the benefits of modern window construction. With Lupton Casements, air flow is easily controlled by attractive Roto-operators located at the sill. Extended hinges permit cleaning all glass from inside the room. Neat, metal frame screens or glass insulating panels can be easily attached on the inside of the window. There is a Lupton Metal Window for every type building—industrial, commercial, residential. Write for our catalog or see it in Sweet's.

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Remember These?

THE NEW
RHEEM PROMOTION PLAN
for Small-Home Builders!

Nor long ago we visited some model homes. We talked to people inspecting them. We found out what prospective home buyers want to know.

They want to know a lot...much more than any busy builder has time to tell them personally.

What kind of pipes? What type of insulation? What kind of cooking range? What make of furnace? What brand of water heater?

You put into the houses you build, the best materials, the best brands of appliances you can find. How can you tell each prospect what your house offers?

We have a way.

We have constructed a large, beautiful portfolio in full color, called the "Home Buyer's Guide." It is dignified, impressive, wholly in keeping with the importance of the subject.

The inside pages of this handsome piece are divided into pockets into which we will insert attractive literature which describes in detail the Rheem equipment installed in your houses. From your other suppliers you can obtain and insert literature on building material, insulation, paint, plumbing fixtures and kitchen appliances.

You can include financing plans—your own, the local bank terms or F.H.A. plan. You can include all the facts about your new homes!

No Rheem advertising appears on this portfolio. But your name and address will be handsomely imprinted (at no cost if you are a Rheem customer). The portfolios are shipped to you in the quantity you need. You simply insert the literature, put a supply of the "Home Buyer's Guide" on display in each of your model homes and sales offices and invite every prospect to take one free.

Thus, the whole story of your new homes is presented in a single package—a striking portfolio that your prospect takes along with him. It's a new way to merchandise your new homes. It's an entirely new kind of service to builders from Rheem, world's largest maker of water heaters and one of the foremost manufacturers of Home Comfort Appliances.

Fill in your name and address on the coupon below and mail it today. Our representative will call to show you a sample of the "Home Buyer's Guide" and take your order. NO obligation, of course. Do it now.

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Please have your representative call to show me a sample of the Home Buyer's Guide. I understand there is no obligation.

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LIFETIME SMARTNESS—the keynote of Wright Rubber Tile advertising in leading magazines to home owners—expresses the fast mounting trend in home floors, and explains the increasing preference for Wright Rubber Tile in the home, among architects and builders.

WRIGHTTEX is the recommended Wright Rubber Tile for home floors. Its complete adaptability to present day trends and home-floor requirements is notable. Its wide choice of rich, enduring colors and sizes assures the much-wanted variety of individual designs, that fit your decorative plans.

From the practical side—the resilient texture of WRIGHTTEX cushions every step...an important addition to kitchen floors especially. It is noiseless. Furthermore, it is the easiest of all floors to keep clean, glowing and lustrous.

Where radiant heat is planned—WRIGHTTEX is the outstanding preference. Exhaustive tests demonstrate that it is not affected by high temperatures...reduces heat loss to a minimum...odorless.

In the home market, as well as for churches and hospitals, WRIGHTTEX sets the top-quality pace, as does WRIGHTFLOR for commercial and business installations exposed to heavy traffic.

For complete information on Wright Rubber Tile, write—Taylor Manufacturing Company, 3062 W. Meinecke Ave., Milwaukee 10, Wis.—America's oldest maker of rubber floor tile.

EXHIBITS

FURNITURE OF TODAY, a cross-section of modern furniture now on the market, will be shown in the Museum of Art at Rhode Island School of Design, Providence, April 7-May 27. In addition to furniture from 15 companies, examples of well-designed modern rugs, lighting fixtures, textiles and pottery will be on view. Individual pieces are arranged in a series of living areas which will allow them to be seen in their proper setting. The corner of the exhibit below shows an Eames chair and a George Nelson cabinet and table. A handbook "How To Look at Modern Furniture" containing pictures and detailed information on each piece in the show is being prepared by the committee and will be distributed at a small fee.

MODERN LIVING, an exposition at the New York Museum of Science and Industry, Rockefeller Center, New York City (April 11-May 9) will show a two-bedroom house designed to cost $7,500 complete with plumbing, heating, electricity and lighting fixtures. The house has been planned and engineered by Walter Dorwin Teague and manufactured by Adirondack Homes. Full-sized models of this house will also be shown in 15 cities throughout the country in the near future.

COMPETITIONS

An INTERNATIONAL COMPETITION is announced for planning a new main traffic artery for Stockholm, Sweden. All registrants for the contest will be sent photographs, large scale maps of the area and diagrams showing required capacities and approaches. The jury is composed of: Helge Berglund, commissioner for the town planning department, Professor Sir Patrick Abercrombie, Architect Hakan Ahlberg, Civil Engineer Anders Ahlen, Civil Engineer David Anger, Professor Anker Engelund, Harbour Department Commissioner Harald Gormsson, Assistant City Treasurer Hans von Heland, City Planning Director Sven Markelius, Civil Engineer Ernst Sundstrom and City Architect Gunnar Wetterling. Seventeen thousand dollars (approximately) will be awarded in prizes, of which $13,000 will be given in four award prizes; the rest as purchasing prizes. No award prize shall be less than $1,700 and no purchasing prize less than $100; the first prize is $5,700. All entries must reach Stockholm by May 1, 1949 or a Swedish Embassy abroad by April 1, 1949. Further information may be obtained from the Town Planning Board, Stockholm, Sweden.

A WOVEN TEXTILE DESIGN CONTEST for students in U. S. textile or industrial schools is being sponsored by the Moss Rose Manufacturing Co., Allegheny Ave., & Hancock St., Philadelphia, Pa. Awards of $500, $300 and three of $100 will be made for the best designs. Entries may be forwarded to the Competition Director at Moss Rose Manufacturing Co. between May 15th and 30th.
Fromes and mullions of wide windows in the new Chicago ticket office of Santa Fe are handsome Stainless Steel. Inset shows a detail of the Stainless channels. Architects of this distinctive job were Shaw, Naess and Murphy, Chicago.

Stainless Steel moves out front

Strength and beauty team up in Stainless Steel to create this distinctive storefront.

It’s the new ticket office of the Santa Fe Railroad in Chicago. Sills, mullions, angles and channels that support the high, wide windows are gleaming ARMCO Stainless Steel. The great strength of this rustless metal permits the use of narrow members—keeping obstruction of the window area to a minimum. The hard, dense surface of easy-to-clean Stainless Steel resists denting, scratching and corrosive attack ... stays bright and handsome for years.

ARMCO Stainless is the natural choice for any architectural use when the goal is beauty, strength and durability. Stainless trim brightens exteriors as well as interiors, serves longer at lower cost in long-life roof drainage systems. It ends rust-jamming in window frames, keeps kick and push plates and elevator doors looking better longer. Stainless Steel sinks and other equipment assure spotless kitchens in restaurants, hotels and other institutions.

More than 60 grades of Stainless—in many forms and finishes—are produced by Armco. Stainless sheets, strip, bars and wire are ready for immediate delivery to contractors and manufacturers. Write for specific data. The American Rolling Mill Company, 56 Curtis Street, Middletown, Ohio. Export: The Armco International Corporation.

SEE SWEET’S CATALOG for uses, advantages and specifications of these other Armco special-purpose sheets:
- Galvanized ARMCO Ingot Iron
- ARMCO Galvanized PAINTGRIP (also available with ARMCO Ingot Iron or Copper Steel base)
- ARMCO Enameling Iron (for porcelain enamel)

THE AMERICAN ROLLING MILL COMPANY
- SPECIAL-PURPOSE SHEET STEELS
- STAINLESS STEEL SHEETS, STRIP, BARS AND WIRE
still 1st choice among designers, ...

MULTI-FAMILY and

since 1937!

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GREAT BOSTON APARTMENT BUILDING

- Bryant Personalized Heating has been proved with spectacular success the country over, in hundreds of large and small apartment buildings, garden-type apartments, row houses, duplexes ... and in individual home projects that were planned for heating by a central system.

Leaders in the housing field have found that with this improved system, original equipment and operation-maintenance costs are lower ... complaints and equipment failures are fewer ... buyer and tenant comfort and satisfaction is greater! Personalized Heating, with Bryant proved automatic heating equipment, means a new high in comfort and convenience ... a new high in operating efficiency ... a revolutionary simplification in design, construction and management. It's the new success factor in mass and multi-family housing!
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MASS HOUSING DEVELOPMENTS

in 1948!

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North, east, south, west... you'll find Bryant Personalized Heating installations in new multi-family projects all over the country, among them the Tremont Apartments, Allentown, Pa.; Pine Tree Village, Winnetka, Ill.; Allenhurst Gardens, Amherst, N. Y.; and more than a dozen projects in and around Houston, Texas. In many of these new developments you'll find Bryant Modernaires, newest vertical winter air conditioners, paired with gleaming white Bryant water heaters, installed in the same small utility closet. With this system, residents will have complete control of all space and water heating equipment serving their homes.

These installations will save owners and operators many thousands of dollars in space, building, installation and maintenance costs. How do we know? Because we've proved it hundreds of times in housing all over the country. And we can prove it in your project! Ask the Bryant representative nearest you to show you the proof in facts and figures with the illustrated presentation, Bryant Personalized Heating.

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One of the Dresser Industries
ANNOUNCEMENTS

WASHINGTON STATE CAPITOL, OLYMPIA, is holding a competition for sketches of mural designs. Regional, historical subjects are favored. Three hundred and fifty dollars is offered for acceptance of sketches; if funds are awarded for the completion of the project, artists will be selected from those competing. For details, write Otto Case, Secretary, State Capitol Committee, P. O. Box 13, Olympia, Wash.

APPOINTMENTS

NATHANIEL OWINGS of the architectural firm of Skidmore, Owings & Merrill has been appointed Chairman of the Chicago Plan Commission for the next four-year term.

ARCHITECT RAPHAEL HUME will serve as consultant in the rebuilding of the University of Nymegen in Holland which will serve as a permanent memorial to the European dead of the American 82nd Airborne Division.

HARRIE LINDERBERG A.I.A. and JAMES KELLMAN SMITH F.A.I.A. have been elected to the National Institute of Arts and Letters.

HANS PETER NELSON, designer, is now Director of Architecture and Design at The Midwestern Technical Institute, 431 S. Wabash Ave., Chicago, Ill.

JAMES COLTON is now associated with the firm, Adelson & Colton, architects and engineers, at 116-55 Queens Blvd, Forest Hills, N. Y.

THOMAS BRADEN has been elected Secretary of the Museum of Modern Art, New York City. Mr. Braden was formerly in the English Department of Dartmouth University.

WILLIAM FERRARI, architect, has been named a member of the faculty of the newly-formed California School of Design, Los Angeles. Other members of the

(Continued on page 8)

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Leading architects and builders specifically recommend KOVEN WATERFILM BOILERS for quick heat, even room temperature and an abundant supply of domestic hot water at all times.

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WASHINGTON State Capitol, Olympia, is holding a competition for sketches of mural designs. Regional, historical subjects are favored. Three hundred and fifty dollars is offered for acceptance of sketches; if funds are awarded for the completion of the project, artists will be selected from those competing. For details, write Otto Case, Secretary, State Capitol Committee, P. O. Box 13, Olympia, Wash.

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(Continued on page 8)
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People who appreciate your best ideas about houses. People whose big interest lies in a home, and who are ready to put a good bit of money into it. People who have the money to spend. That happens to be a picture of the people for whom Better Homes & Gardens is written, cover—*«artisers have I

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COMFORTABLE TEMPERATURES!
JUST-RIGHT HUMIDITY!
FREEDOM FROM DUST!

KANSAS—Edwin G. Bradley of Wichita enjoys a perfect indoor climate every season of the year—thanks to his Servel All-Year Gas Air Conditioner.

CALIFORNIA—Mrs. Gordon R. Hovard of 225 South Valley St., Burbank, says, "Our Servel has created ideally comfortable and healthful living conditions for our two small children and ourselves."
Give your new homes twelve-month comfort with Servel All-Year Gas Air Conditioning

TEXAS—The home of builder John W. Taylor, 4329 McFarlin Boulevard, Dallas, is kept comfortably cool all summer, cozily warm all winter by Servel All-Year Gas Air Conditioning system.

OKLAHOMA—"Our entire family praises our Servel All-Year Gas Air Conditioner, and we are always proud to have visitors come in," writes Mr. G. W. Athey, of 1106 W. York Street, Enid.

YOU GIVE your clients a real plus in modern home construction when you plan your new homes around Servel All-Year Gas Air Conditioning. For this wonderfully efficient year-round conditioner offers the peak in indoor climate control... every season of the year.

In summer, the Servel All-Year Gas Air Conditioner refrigerates the air, removes sticky, wilting humidity. In winter, this same unit floods the home with warmth, adds just the right amount of moisture for comfort. In between seasons, Servel circulates air without drafts or "layers" of hot and cold air. Year round, Servel filters out dust, dirt, and irritating pollen. A flick of the finger controls all operations, through every season.

Owners everywhere praise Servel air conditioning. Many say it's the finest feature a new home can offer. Shown on these two pages are a few of the many hundreds of installations now operating successfully from coast to coast. So you can be sure you're on safe ground when you recommend Servel All-Year Gas Air Conditioning.

Ask your local Gas Company for detailed information about specific types of applications. Or write direct to Servel, Inc., 2804 Morton Avenue, Evansville 20, Indiana.
Crittall radiant heating provides gentle, spring-like warmth for the tenants... plus low operating cost for the owners... in another New York apartment building. Real radiant heating, from concealed, embedded coils that are properly located, dimensioned, operated, and controlled, warms rooms, contents, and occupants without creating stuffy, overheated air at any point. It takes the highest technical skill and experience to design and install a radiant heating system for maximum comfort and healthfulness at lowest initial and operating cost.

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You are invited to consult with Crittall about heating problems. Our full cooperation and long experience are yours for the asking.

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**ANNOUNCEMENTS**

Staff include: Max Band, Edgardo Simone, Leslie Thomas, Arthur Millier, Bernard Rosenthal and Florence Salzman.

**NEW OFFICES**

Conrad Arnold A.I.A. has opened an office of general practice at 15 Cayuga St., Seneca Falls, N. Y. while still retaining an office for consultation at 101 Park Ave., New York City.

Joseph Stein announces the opening of his architectural office at 110 Grand St., Waterbury, Conn.

T. Raymond Turner and Allen Northington have formed an association to practice architecture at 317 Medical Arts Bldg., Florence, Ala.

John Hirsch R.A. has opened an architectural studio at 415 VanNest Ave., Trenton, N. J.

**Karl Bloemberg A.I.A.** is now in private practice at 16 Court St., Brooklyn 2, N. Y.

Uel Ramey, Harold Himes and Robert Buchner have formed a partnership for the practice of architecture with offices at 519 S. Broadway, Wichita, Kan.

Grigsboll Raeze and Frederick Kline, architects, announce the opening of offices at 10621 Santa Monica Blvd., Los Angeles 25, Calif.

Robert Dickerson R.A. is now in independent practice at 2063 E. Fourth St., Cleveland 15, Ohio.

William Green and Bernard Friedman have opened architectural offices at 204 N. Meyer St., Tucson, Ariz.

Jack Levy, consulting engineer, has opened an office for the design of air conditioning and other mechanical building equipment at 151 Lexington Ave., New York 16, N. Y.

George Shewan, industrial designer, announces the opening of his office at Ajax, Ontario, Canada.

Norman Keller A.I.A. is now in private practice at 925-24th St., Moline, Ill. (Continued on page 98)
IN this house, HOPE'S STEEL WINDOWS help accomplish the purpose of merging indoor and outdoor living in summer . . . and by their trustworthy weather-tightness, giving full protection in winter.

The versatility of Hope's Windows helps the architect reach the best solution of the problem of fenestration in any type of building. Their practical advantages, structural strength and rigidity, durability and dependable operation, give the greatest assurance of success in the use of large glass areas.

HOPE'S WINDOWS, INC., Jamestown, N. Y.

THE FINEST BUILDINGS THROUGHOUT THE WORLD ARE FITTED WITH HOPE'S WINDOWS
Rising to house a nation in Brick and Tile

As you help fill the nation's need for housing, your preference for brick and structural clay facing tile will be rewarded. Your professional reputation and your clients' investment are protected by reasonable first cost . . . lower maintenance and repair charges . . . higher resale value . . . permanent good looks . . . great structural strength . . . maximum fire safety . . . and the ability to resist abuse.

To aid your application of the economies and efficiencies of modular coordination, we offer two new basic handbooks: "Brick Engineering", and "Tile Engineering" at $2.50 each, postpaid. Send your order to Desk AF-4, Structural Clay Products Institute, 1756 K Street, N. W., Washington 6, D. C.
Here's an unbeatable combination—

1. A modern automatic hard coal stoker

2. Stoker sizes of smokeless hard coal. An automatic stoker uses the smaller, cheaper sizes of anthracite... gives home owners convenience at far less cost than any other fuel.

Those houses that use the unbeatable combination of an automatic stoker and the plentiful cheaper sizes of smokeless hard coal don't have to worry about the threat of turning down their thermostats to chilly levels.

Stoker heating is the lowest cost automatic heat with savings up to 50% over other fuels. It's convenient because it feeds from the bin, controls temperature and ash removal automatically. Then too, a full winter's supply of hard coal can be stored in the summer which eliminates the necessity of depending on weather hindered winter deliveries.

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Dunham Baseboard Connectors are easily installed, take no more space than the baseboard. The piping is on the inside of the baseboard spreading the heat along the inside of the outside wall. Every room, every corner; even the floors in houses built without basements, are assured of comfortable temperatures. Fitted radiation concealed behind the attractive baseboard with concealed楼上 is engineered to keep walls clean and decorating costs to a minimum. The Dunham Baseboard method of heating provides a blanket of warmth for the home using either hot water or steam. Bulletin 6511 with complete details will be sent on request—C. A. Dunham Co., 400 W. Madison St., Chicago 6, Ill.

The Dunham Differential Vacuum Heating System has the important advantage of instantaneous and automatic control of room temperature under all weather conditions including sudden and extreme changes. This system, circulating sub-atmospheric steam, has established both tenant satisfaction and reduced heating and maintenance costs in hospitals, hotels, large apartment projects, office and industrial buildings. Fuel savings from 50% and more are commonplace. Write for Bulletin 6511 and get the complete story on satisfactory, trouble-free Differential Heating—C. A. Dunham Company, 400 W. Madison Street, Chicago 6, Ill.

**ANNOUNCEMENTS**

Elmer Manson, architect, has opened an office for general practice at 410 W. Saginaw, Lansing 15, Mich.

Ben Rose, store and interior designer, announces the opening of Ben Rose Associates at 1674 Broadway, New York 19, N. Y.

**CHANGES OF ADDRESS**

A. Stewart Walker and Alfred Easton Poor announce the removal of their offices to 542 Fifth Ave., New York 19, N. Y., while still retaining a branch office at 665 Fifth Ave.

F. Wallace Dixon A. I. A. has moved to 1200 18th St., NW, Washington 6, D. C.

Lathrop Douglas, architect, is now located at 518 Fifth Ave., New York, N. Y.

Wilson, Moore & C Bain, A. I. A. announce that their new address is 3330 Grant St., Houston 6, Texas.

Diana and Carleton Cranberry have moved their architectural offices to 110 Whitney Ave., New Haven, Conn.

Gilbert Swim and Philip Golden, Food Service Consultants, are now located in offices at 901 NE Second Ave., Miami, Fla.

B. T. Harris Corp., real estate firm, is now at 159 Main St., Stamford, Conn.

The Ballinger Co., architects and engineers, have moved their offices to 121 N. Broad St., Philadelphia 19, Pa.

Kelly Finch & Staff, industrial and interior designers, are now located at 951 N. La Cienega Blvd., Los Angeles 36, Calif.

**OMISSION**

Credit was not given to Vermilya-Brown, New York City contractors, for construction of the Macy Jamaica store, published in the February issue of The Forum (page 100.)

**SECURITY for Ward A**

...security for the patients in knowing that the mere pressing of a button will call the nurse when they need her...security for the nurse in knowing that a Couch signaling system is on the job.

Regardless of your hospital's size and requirements, there's a Couch signaling system designed for your needs and engineered for round-the-clock service with minimum maintenance...Nurses' Call...Doctors' Paging...Doctors' In and Out...Fire Alarm...Private Telephone...Return Call Systems.

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S. H. COUCH COMPANY, INC.
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PRIVATE TELEPHONES FOR HOME AND OFFICE...HOSPITAL SIGNALING SYSTEMS...APARTMENT HOUSE TELEPHONES AND MAILBOXXES...FIRE ALARM SYSTEMS FOR INDUSTRIAL PLANTS AND PUBLIC WROKSHOP.
Like all Ponderosa Pine windows, the double hung types shown above are precision manufactured. Modern mass production methods assure accuracy of fit—smooth operation—enduring satisfaction. See "Today's Idea House" for illustrations of the many Ponderosa Pine window styles and designs.

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In "Today's Idea House"—our 82-page booklet—you'll find page after page of photographs showing how Ponderosa Pine windows and doors can make today's houses truly modern—with economy. A copy is yours for the asking—just mail the coupon.

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89
It is my pleasure to announce America’s first truly volume-produced home will be exhibited throughout the country this spring, and we will be prepared to deliver these homes starting in July.

The Lustron Home is built in a factory by the same mass-production, unit-assembly and precision methods that have made the motor car the greatest industrial achievement and economic benefit of the century.

It is assembled on the site by a local builder-dealer with local labor.

It will bring American families what we call “a new standard for living.” I also like to call it “a home of cheerful convenience” because it is so much easier to live in, to keep clean.

Plant Being Equipped

As with television, there was a lot of talk about low-cost, mass-produced homes before they became a reality, but now, in the Lustron Home, they are really on their way.

The production lines are now shaping up in our plant at Columbus, Ohio, which we acquired on November 1 of last year.

The plant has more than a million square feet of floor space and will permit the production of 40,000 homes annually, when we get rolling.

Our organization of skilled engineers and technicians is rapidly being completed, and after three years of experimentation and struggle, we are now really “a going concern.”

We have started our Lustron School where all factory supervisors and builder-dealers will receive thorough training in the special techniques required.

Arrangements have been completed for the negotiation of mortgage loans by individual buyers with a minimum of confusion, paper work and red tape.

Basic Principles

Two things especially I want to make clear:

1. The Lustron Home is not to be confused in any way with pre-fabricated houses as they have been known in the past. It offers basic advantages, modern conveniences and permanence not to be found in any other house at any price.

2. While we will help relieve the housing situation, this is not an “emergency” or “stopgap” project but is planned on the long-range basis of complete customer pride and satisfaction and as a new contribution to the art of living.

As soon as the Lustron Home is put on display I hope you will visit it and really get the feel of it.

For more information about the Lustron Home and the new ideas in construction and structural materials which it pioneers, just write us. We will gladly send you full details.

CARL G. STRANGLUND
President
LUSTRON CORPORATION
4200 EAST FIFTH AVE., COLUMBUS, OHIO
has been waiting for

THE LUSTRON HOME — A NEW STANDARD FOR LIVING

Size — 5 commodious rooms, plus large utility room — total of more than 1,000 square feet.

Design — Follows growing trend toward conservatively modern, ranch-type architecture. Choice of colors for exterior and interior, all in non-glossy, semi-matte finish, porcelain enameled steel.

Permanence — Fireproof, decay-proof, rustproof, termite-proof, verminproof, ratproof. Sunlight, salt water or chemical fumes cannot stain or fade finish.

Maintenance — Can be kept clean with damp cloth. Never needs repainting, redecorating or reroofing.

Heating — Most modern type of radiant heating from ceiling. Automatic oil burner in utility room. Eliminates air currents that carry dust through house. Proved in two years of severe Chicago winters.

Erection — The Lustron Home will be shipped f.o.b. Columbus to builder-dealer. It can be erected on the site in three days, from completion of concrete foundation to putting key in front door.

Price — To be announced. Estimated to be $3,000 to $5,000 less than cost of building conventional house of same size, but has features that cannot be obtained in any other house at any price.

Write for free illustrated booklet. It shows details of the built-in features and equipment, closet space, lighting, and the many other fascinating features.
Cut Spring Homebuilding Costs 3 Ways!

Springtime is building time and for the budget-minded builder Ceco offers 3 ways to cut costs of new or remodeled homes. Consider the money-saving building suggestions below and call on Ceco for full details.

STEEL CASEMENTS
- Cut installation costs 80% because there are no hidden costs to overlook such as hardware, prime coat, accessories, planning or fitting. No need for repair.

METAL SCREENS
- Factory finished, on-the-job painting unnecessary. Precision made, ready to install without fitting or trimming. Standard types for every purpose.

BASEMENT WINDOWS
- Standard sizes ready to install and easy to do, too. No fitting, trimming or painting necessary. Cannot rot and need no repair.

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- Here is your guarantee of Engineering Excellence in Ceco products. Call on Ceco’s 23 offices for help in reducing building costs.

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Offices, Branches and Fabricating Plants from Coast to Coast

In construction products CECO ENGINEERING makes the big difference
There have been 12 other special house issues of The FORUM, which—any hotel architect knows—makes this one number 14. The numerical gap has further significance in that this collection is amazingly different from the last group The FORUM printed, in April, 1941. The time since then has been comparatively short, only long enough for a war, but somehow during these seven years the suburban house has changed immensely. Our collections of houses up through number twelve were always occasion for hopeful, pleased editorial observation, which each time could point out that the houses showed consistent improvement, in a gradual evolution toward a modern home. But in each group a majority still fell within the limits of the French-Dutch-English-Spanish-Puritan-Confederate-Swiss-Chalet American Home. An increasing number of good modern houses were being built and immediately published, but they were always exceptional in the eyes of Americans—nice houses to motor out and look at on a Sunday afternoon, but hardly places to live in. But in this collection, we have something different. The limits are gone. These 40 houses are not isolated examples, but are a representative section of the good houses being built today, a documentation of the fact that house architecture is not only changing—(the hopeful wording of other House Issue introductions)—but has changed.

These houses are smaller, not only because of present inflated building costs, but because of the nation's continuing change in social character. What is sought in even the most minimal is not mere practicality, but smallness with a new servantless luxury, and planning is the first method toward this. Space is shared between functions; furniture is cagily built into dead areas; above all, even larger areas of glass are used to extend rooms onto courts and gardens, in all climates. Cellars are eliminated (31 of these homes have none; only one is fully excavated). Partitions are used lightly, as shields rather than breaks in the flow of space. Design devices that facilitate housekeeping have a new higher value. For the first time in a group of this size advanced ideas are really frankly expressed, not hidden behind half-timber.

We think this is very important, this mass progress and acceptance of modern design—this quantitative as well as qualitative progress. People must be realizing that modern design in houses is not some oddly stimulating drug, but a valuable tonic.

For detailed information on the 40 houses, we refer you to the table on the following page, whose listings document the distance in design the American House has come with such recent speed. And for an indication of where the house is going from here, we refer you back to the September 1947 issue, Seven Postwar Houses, a prophecy of the direction we expect our next house issue to be traveling.
Two bedrooms, bath, a living room, a garage-and-services area, and richness

LOCATION: GROTON, CONN.
RAYMOND VINEH HALL, Architect
KERR BROTHERS, Builders

This small house is typical of the work of the architect, whose designs are spotted in many sections of the Northeast long miles from his center of operations in a small Pennsylvania town. The plan is as simple as it should be, but small areas of the rooms are not subordinated into stiff simplicity. Large planes of fixed plate glass are used, framed as lightly as practical; long overhangs reach from the building; interiors are plywood; a clerestory gives the living room interest and added dimension. And overall there is a feeling of intended richness, of use of warm materials not only in large unbroken surfaces for effects to be gained by heroic contrast, but deliberate alternation of planes on a smaller scale, and patterning. The fireplace room is not intended to be merely a handsome background for the right kind of furniture. It would be difficult for any tenant to vary its individual character with tenants' varying ways.

LEFT TO RIGHT ARE THE LIVING ROOM, STUDY, THREE BEDROOMS—EACH WITH ITS OWN DOOR.

The Architectural FORUM April 1948

VIEW WEST PAST THE OPEN DOUBLE CARPORT

THE LARGE PANES ARE FIXED: TRANSOMS OPEN
2. A new house, well-glassed, shares the plain with some sturdy old trees

Built on a bare Texas site broken only by a few dry trees whose knarled branches provide much character but little shade, this is a house of brick, glass, and many doors. Double batts of insulation nest under the roofs, and the brick is laid in cavity walls, and used bare for interior finish. In the winter the glass will exploit any sun warmth available during the cold northers which strike eastern Texas; in summer, curtains blank the glare. The large panes are not ventilating windows—glass transoms above the frames slide open behind screens, and below the fixed glass plywood vents are hinged to tilt in from the floor. The immediate monotony of the land is broken somewhat by the variation in design of the ends of the house: the porch end is canted, perhaps to save a tree; the brick end of the carport at the other extreme curves to follow the circle of the driveway. All the rooms, except the two baths, have outside doors. 17,600 cu. ft. Cost, $18,000 in 1947.

LOCATION: DENTON, TEXAS
JASON P. MOORE, Architect


3. Brick cavity walls here help balance the heat loss of large windows

A primary concern of the designer of this house was the heating and insulating mechanics—not a bad starting point for any house design in Wisconsin. Brick cavity walls and a wood frame were used, with a hot air system which returns air to the furnace through channels in the concrete slab floor. Another great effort of the designer was his setting back of sections of the building’s irregular, complicated perimeter in order to have glass corners in each bedroom and the living room.

LOCATION: MADISON, WIS.
WILLIAM V. KAESER, Architect
EDWIN NELSON, Builder
Two-bedroom mountain cabin is designed for comfortable year-round use

This contemporary version of the mountain cabin is located on the eastern slope of the Rocky Mountains and commands a magnificent view of the great plains and Denver 25 miles to the east. Although part of a summer colony it is designed for year-round occupancy. Hence it is planned very much like any suburban house—with a completely equipped kitchen, adequate storage space, etc. The only concession to the rigorous mountain winters is the roof. With its wide, gutterless eaves and shallow pitch, it is framed of 2 x 8's carried by central 4 x 10 in. timber girder. Sheathed with shiplap siding, and insulated, the roof surface proper is a 3-ply built-up tar and gravel membrane. Floor is asphalt tile laid on a concrete slab. Walls are brick up to the sill line, wood sheathed and insulated above. Floor area, 871 sq. ft. Cost $11,600 in 1947.

LOCATION: NEAR GOLDEN, COLO.
VICTOR HORNBEIN, Architect
MELLWIN CONSTRUCTION CO., General Contractors


CANTILEVERED BALCONY, SHELTERED BY WIDE EAVES, COMMANDS FINE VIEW OF DENVER

ALL SASH ARE FIXED, WITH FIXED FLY SCREEN AND TRANSOM-TYPE WOOD VENTILATORS BELOW (RIGHT)

REGION'S HEAVY SNOW LOAD DETERMINED ROOF'S LOW PITCH, WIDE, GUTTERLESS EAVES
5. Split-level wing on flat lot yields two bedrooms, big sunny basement

Seeming much larger than it actually is, this pleasantly organized house is placed close to the northern edge of a flat 100 ft. lot. This enables the designer to arrange his living and dining areas along the south and east, with floor-to-ceiling glass areas protected by wide eaves. Several simple yet effective devices add interest and value to the project: the connected garage makes the house seem larger and protects it from the north; the clerestory along the west wall of the living room improves both light and ventilation. And by raising the bedroom wing half a flight above the main floor level, a large sunny basement room is created. The house is very economically framed—except for foundations and chimney, it is entirely of drywall construction. Externally, it is surfaced in oiled red-cedar; inside the same wood is used on walls except those of kitchen and bath, which are surfaced with linoleum on plasterboard. All ceilings are painted plasterboard.

LOCATION: DENVER, COLO.
EDWARD B. HAWKINS, Designer
E. B. HAWKINS CO., General Contractor

BRICK WING WALL SCREENS DINING TERRACE FROM HOT WESTERN SUN, COLD WINTER WINDS AND SERVICE YARD

BRICK WING WALLS ALSO DELIMIT THE ENTRANCE COURT.
This crisp new house uses inverted gable and wing walls to express its plan

A straightforward “solar” design with an inverted gable roof, this Long Island house has a clean, well-articulated plan which is admirably expressed in its elevations. The various elements of the house—living, service, sleeping—are rather sharply divided in the plan; and externally this is directly expressed in the brick wing walls which project to protect the dining and bedroom terraces from wind and sun and to separate the entry from the service yard. The architects have sited the house so that the entrance front and service areas face north, toward the road. This in turn opens the whole southern facade to a pleasant rustic view across its own and neighboring fields. Floor area, 1,992 sq. ft. Cost $30,000 in 1947.

LOCATION: BROOKVILLE, N.Y.
VINCENT FURNO & BERNARD J. HARRISON, Architects
B. W. HALL CONSTRUCTION CO., General Contractors

THE HEATED FLOORS ARE SURFACED IN WOOD BLOCK


FLOOR COVERINGS: Linoleum, Congoleum-Nairn, Inc.


THE LIVING ROOM PLASTER CEILING BEGINS IN AXIAL CORRIDOR AT CURTAIN WALL BEHIND IT. FIREPLACE AND DINING ROOM WALL (RIGHT) IS FINISHED IN STRIATED PLYWOOD
Trim house featuring view windows and native materials is typically California

Simple materials and unpretentious design characterize this house which grew from a 

Simple materials and unpretentious design characterize this house which grew from a 

Simple materials and unpretentious design characterize this house which grew from a 

Simple materials and unpretentious design characterize this house which grew from a 

before the war... we needed a main room which would not neglect the view, a kitchen and 

before the war... we needed a main room which would not neglect the view, a kitchen and 

before the war... we needed a main room which would not neglect the view, a kitchen and 

before the war... we needed a main room which would not neglect the view, a kitchen and 

bath for essentials only and a small bar to further entice our guests. When we finally 

bath for essentials only and a small bar to further entice our guests. When we finally 

bath for essentials only and a small bar to further entice our guests. When we finally 

bath for essentials only and a small bar to further entice our guests. When we finally 

tired of sleeping and living in the same room, we added the small bedroom at the 
tired of sleeping and living in the same room, we added the small bedroom at the 
tired of sleeping and living in the same room, we added the small bedroom at the 
tired of sleeping and living in the same room, we added the small bedroom at the 

the lower end of the house. A tool shed fitted in nicely behind the loggia. The fact that 
the lower end of the house. A tool shed fitted in nicely behind the loggia. The fact that 
the lower end of the house. A tool shed fitted in nicely behind the loggia. The fact that 
the lower end of the house. A tool shed fitted in nicely behind the loggia. The fact that 

no inside hall connected the bedroom and main room caused us no trouble as 

no inside hall connected the bedroom and main room caused us no trouble as 

no inside hall connected the bedroom and main room caused us no trouble as 

no inside hall connected the bedroom and main room caused us no trouble as 

the weather was always moderate and we were outside most of the time anyway.

the weather was always moderate and we were outside most of the time anyway.

the weather was always moderate and we were outside most of the time anyway.

the weather was always moderate and we were outside most of the time anyway.

"After the war we decided to live permanently in the country and that meant some 

"After the war we decided to live permanently in the country and that meant some 

"After the war we decided to live permanently in the country and that meant some 

"After the war we decided to live permanently in the country and that meant some 

major changes. This time the upper end of the house was developed with two bedrooms 

major changes. This time the upper end of the house was developed with two bedrooms 

major changes. This time the upper end of the house was developed with two bedrooms 

major changes. This time the upper end of the house was developed with two bedrooms 

and enlarged kitchen and dining areas. The lower bedroom became permanent guest 

and enlarged kitchen and dining areas. The lower bedroom became permanent guest 

and enlarged kitchen and dining areas. The lower bedroom became permanent guest 

and enlarged kitchen and dining areas. The lower bedroom became permanent guest 

quarters. Last year we purchased a car and had to add a garage and store room. 

quarters. Last year we purchased a car and had to add a garage and store room. 

quarters. Last year we purchased a car and had to add a garage and store room. 

quarters. Last year we purchased a car and had to add a garage and store room. 

The livable place we now have certainly makes us appreciate simple materials and tech-

The livable place we now have certainly makes us appreciate simple materials and tech-

The livable place we now have certainly makes us appreciate simple materials and tech-

The livable place we now have certainly makes us appreciate simple materials and tech-

iques. These two elements made it possible to expand the house while we enjoyed it.

iques. These two elements made it possible to expand the house while we enjoyed it.

iques. These two elements made it possible to expand the house while we enjoyed it.

iques. These two elements made it possible to expand the house while we enjoyed it.

LOCATION: CARMEL VALLEY, CALIF.

ROBERT R. JONES, Architect

H. C. GEYER, General Contractor

CONSTRUCTION OUTLINE: Structure: Exterior walls—

CONSTRUCTION OUTLINE: Structure: Exterior walls—

CONSTRUCTION OUTLINE: Structure: Exterior walls—

CONSTRUCTION OUTLINE: Structure: Exterior walls—

T. & G. boards, Brownkin building paper, Angier Corp. 

T. & G. boards, Brownkin building paper, Angier Corp. 

T. & G. boards, Brownkin building paper, Angier Corp. 

T. & G. boards, Brownkin building paper, Angier Corp. 

adobe veneer. Floors—oak. Ceiling—exposed rafters and 

adobe veneer. Floors—oak. Ceiling—exposed rafters and 

adobe veneer. Floors—oak. Ceiling—exposed rafters and 

adobe veneer. Floors—oak. Ceiling—exposed rafters and 

sheathing. FIREPLACE: Damper—Superior Fireplace 

sheathing. FIREPLACE: Damper—Superior Fireplace 

sheathing. FIREPLACE: Damper—Superior Fireplace 

sheathing. FIREPLACE: Damper—Superior Fireplace 

Co. SHEET METAL WORK—Armco, American Rolling Mill Co.

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Co. SHEET METAL WORK—Armco, American Rolling Mill Co.

WINDOWS: Sash—wood. Weatherstripping—Chamber 

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WINDOWS: Sash—wood. Weatherstripping—Chamber 

WINDOWS: Sash—wood. Weatherstripping—Chamber 


FLOOR COVERINGS: Kitchen and bathrooms—linoleum 

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Armstrong Cork Co. WALL COVERINGS: Mainrooms—plywood, 

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Armstrong Cork Co. WALL COVERINGS: Mainrooms—plywood, 


WARE—Yale & Towne Mfg. Co. ELECTRICAL SWITCHES 

WARE—Yale & Towne Mfg. Co. ELECTRICAL SWITCHES 

WARE—Yale & Towne Mfg. Co. ELECTRICAL SWITCHES 

WARE—Yale & Towne Mfg. Co. ELECTRICAL SWITCHES 

Trumbull Electric Mfg. Co. BATHROOM EQUIPMENT 

Trumbull Electric Mfg. Co. BATHROOM EQUIPMENT 

Trumbull Electric Mfg. Co. BATHROOM EQUIPMENT 

Trumbull Electric Mfg. Co. BATHROOM EQUIPMENT 

Crane Co. HEATING—warm air, Payne Furnace & Supply Co.
An expansive house for country living

LOCATION: CHAPPAQUA, N. Y.
JAMES F. EPPENSTEIN, Architect (Design)
JOSEPH DOUGLAS WEISS, Architect (Construction)

A beautiful view and a knoll-shaped site determined the plan of this house—a gentle curve which allows excellent vision from all portions of a long narrow area. The living room extends at the front and side in a sweeping wing-like projection to form part of the curve. The service area is behind this section, bedrooms are isolated at opposite end. The main floor of the house is kept at one level and the extra ground at either end, where the site slopes sharply downward, is utilized for a cellar. Cost: $60,000 in 1947. Floor area, 3,160 sq. ft.


SIDE VIEW OF THE GLASSED-IN LIVING ROOM WING

Lionel Freedman

FLOOR PLAN:
- Living Room: 27' x 17' to 20'
- Dining Room: 14' x 15'
- Kitchen: 14' x 15'
- Pantry: 5' x 6'
- Screened Porch: 10' x 10'
- Maid's Room: 10' x 12'
- Entry: 12' x 14'
- Guest Room: 10' x 12'
- Dressing Room: 10' x 12'
- Master Bedroom: 16' x 15'
- Master Bath: 14' x 15'

SIDE VIEW OF THE CURVED FACADE. SETBACK SERVICE WING PLAN CREATES A REPETITIVE SERIES OF ROOF PROJECTIONS AT LEFT END OF HOUSE
GUESTS OR CLIENTS ARRIVING AT UPPER LEVEL OF THIS DEMURE COTTAGE WOULD SCARCELY GUESS THAT IT HAS A LARGE, COMPLEX PLAN, SKILLFULLY FITTED TO A NATURAL DECLIVITY THAT FACES SOUTH.
A dwelling are skillfully integrated in this two-level house for a sloping lot

Larger and more complex than it must at first appear to an arriving guest, this suburban house was designed by the architect to house both his family and his practice. To this end a skillful, two-level plan has been devised and fitted to a sharply-sloping bank. The plan has three elements—office, family bedrooms and the general living area—which are neatly organized for maximum privacy. The office occupies the north end of the entrance level. By providing a separate entrance, coat closet and access to one of the baths, this suite becomes an independent unit. To handle clients’ cars during office hours, the architect has provided a long flagged walk for parking and a large court for turning. The bedrooms are also on this level; but they are grouped around the central stair in such a way as to make the most of the good exposure and view on the opposite side of the house. Downstairs—completely shielded against office, driveway, western sun and cold north winds—is a spacious living area. At this level, the house sits snugly on a charming little meadow and this entire floor, including a semi-enclosed porch, is designed to make the most of it. Floor area, 3,123 sq. ft. Cost $32,266 in 1946.

LOCATION: WILTON, CONN.
LOUIS GELDERS, Architect
PAUL BORGLOM, General Contractor

Conservatory and steam bath are featured in a roomy house for northwest

Although it is technically a "five room house," this residence in rural Oregon is actually much larger by today's standards—boasting a 35 ft. living room, billiard room, steam bath and conservatory. Like most attenuated plans, it has certain virtues and certain weaknesses. Thus the whole house is on one level, the main rooms achieve good exposure and the service wing (well-organized in itself) is isolated from the main body of the house. But by the same token, the living room is bisected by a main traffic artery and quite a bit of area is lost in corridor space. The living room itself faces southeast, its glass wall protected against winter rains and summer sun by a long shallow porch. A curved screen at one end creates an entrance lobby on one side and a dining area on the other. One of the owner's favorite features—a small conservatory—opens off this end of the living room; another feature—the steam room—has proved to be quite a luxury because it must be heated well in advance of use to prevent condensation of steam on the cold tiles. Cost $16,000 in 1941.

Leonard Delano
Two-bedroom house wrapped around two courts makes most of balmy climate

California's genial climate permits a loose, informal type of planning which—in small uses—is rarely feasible in other sections of the country. In this house, for example, one of the four main rooms constitutes wings of their own, each with three exposures. Build this much perimeter wall for so small a cubage, to make it cold-proof and then heat it, would rapidly out run the budget of the average family elsewhere. Nevertheless, California designers have developed certain principles from which all houses have benefited and this small house is no exception. Turning its back on the street, it creates two patios—one off the dining alcove for outdoor meals, a larger one off the living room. In addition to being screened from the street, these outdoor areas are protected by the mass of the house from the late afternoon sun.

LOCATION: WEST LOS ANGELES, CALIF.
GRISWOLD RAETZE, Architect
ROBERT RAETZE, Associate

EXPANSE OF LIVING ROOM IS BROKEN BY SLANTED BLACK CYPRESS FRAMING. CONCRETE BLOCK IS SET WITH VERTICAL JOINTS IN LINE FOR TRIM EFFECT.

DINING AREA ENJOYS OCEAN VIEW THROUGH CORNER WINDOW.
12. Delicacy and openness are the hallmarks of Florida's new regional architecture

This trim, open house placed smack on the white sand beach bordering Sarasota Bay is one of the first examples of a truly indigenous Florida architecture—a house as well-suited to its locale as the famed "California style" is to that balmy climate. It contradicts the overly-rich, overly-ornate homes which have come to be associated with the Florida tourist trade and which, despite their price tag, have not exploited the possibilities of tropical living. The feeling for materials and structure which characterize the California house is found in this design, and the same atmosphere of relaxation and informality.

The problems encountered in America's two tropical states are not exactly alike, however. Brilliant sunlight is even more of an architectural headache in Florida than it is in California and when far-southern houses follow the lead of temperate zone design (as many have in Florida), their large glass areas cause disagreeable glare. Here, the architect has tempered the light with extremely wide eaves while opening up both sides of the living room to catch the breeze. Also of importance is the living room "hall." The structural frame of the house is set back into the living room, leaving an open passage between kitchen and bedroom wings at its outer edge. This keeps the living area farther from the sunlight without sacrificing spaciousness and openness.

The entire organization of the house is excellent. The service wing is tucked away from living quarters for privacy, but the garage has convenient separate connections with the main entrance, the maid's room and kitchen. The slanted bedroom wing on the other side of the living room breaks the monotony of a box-like design and, with the garage, defines the entrance patio. The cost in 1941 was $20,500. Floor area of the house is 3,005 sq. ft.

LOCATION: SIESTA KEY, SARASOTA, FLA.
RALPH S. TWITCHELL, Architect
PAUL RUDOLPH, Associate
ASSOCIATED BUILDERS INC., General Contractor


ORIENTATION IS SOUTHEAST TO THE PATIO AND ROAD, NORTHWEST TO THE GULF
On these two pages the house designs of two architects for their own families

An architect's most effective sample is often his own home. Here, in theory at least, he is able to use the design notions his education and practice have taught him, unrestricted by a client whose architectural feelings may well still be idealized by the insurance ad house. This California architect, in his own home, has a real argument for any client to trust him to design a rational, contemporary house, and above that a good argument to help convince the client that what he wants is a rational, contemporary house. His house is made of precast concrete panels Gunited together with reinforcing on the job, plus redwood and masonry. There are several sun decks and terraces—including one that makes a very luxurious affair of the master bedroom. Other features are an in-line bath on the second floor, and what is called a garden room on the entrance floor, for use as a maid's room, den, breakfast room, or isolation room for sickness.

LOCATION: PASADENA, CALIF.
MELVILLE GARTON, JR., Architect


LIVING ROOM VIEW FROM DINING AREA SHOWS EXPOSED CONCRETE BEAMS; LEFT: OPPOSITE VIEW, BELOW, MASTER BEDROOM

HOUSE IS BUILT ON HILL CLOSE TO THE ROAD
Both on the West Coast, built on hillside sites, and both highly satisfactory

LOCATION: PORTLAND, ORE.
MORTON H. CAINE, Architect

The exact point of balance between architect and client, where the client stops listing requirements and the architect starts telling him what he needs, is the point of failure in the design of many houses. In doing his own house an architect may be his own most demanding client in many ways, but at least this one dangerous foundering point is eliminated. Obvious in this thoughtful design are many details which usually are not explored so thoroughly—architectural projections of detailed family knowledge, demonstrating again the importance of an architect's draining extensive personal information from all his clients, and his being able to justify to the clients in the sketch stage his design applications of the knowledge. Details like this arrangement of bathroom facilities among two bedrooms and a dressing room call for more decisioned knowledge than is generally obvious in most house designs. But it is obvious that here it increases the satisfaction in the house for its residents.


LOWERING VIEW OF THE HOUSE, WITH BALCONY

CANVAS-DECKED BALCONY OVERLOOKS LONG VIEW

MAHOGANY VENEER IS USED IN LIVING ROOM WALLS

BELOW IS ENTRANCE, AT RIGHT: DINING ROOM

Leonard Delano
This compact house for a young couple with one child demonstrates once more Richard Neutra's skillful handling of residential design. The plan is a masterpiece of coherence and economy. Placed close to the street on a lot sloping sharply down to the southeast, the house commands a fine view of the chaparral-clad Santa Monica Mountains. The living room opens through a wide sliding door onto an outdoor sitting space confronting this fine panorama. One end of the main room serves as a dining recess, the other as writing room with two desk spaces and a library. The fireplace is at the center, opposite the main view, and has a comfortable sitting corner. The kitchen, more spacious than is common in moderate sized houses, is strategically placed between the living quarters, service yard and car shelter. A master bedroom and a child's room with extensive fenestration under an overhang complete the layout. The house is framed of wood and surfaced inside and out with plaster and redwood in Neutra's familiar idiom. The owner is building his own fitted and movable furniture, using details by the architect, who also outlined planting and landscaping. Floor area, 1,163 sq. ft.; cost $11,500 in 1943.
MAIN ENTRANCE. NOW ON UPPER LEVEL. WILL BE UNDER PORCH WHEN ROAD IMPROVEMENT IS COMPLETED

LIVING ROOM OPENS ON BALCONY WHICH OVERHANGS THE TERRACE AND OVERLOOKS A SLOPING LAWN. OPEN BEDROOM EXTENDS LIVING ROOM.

A VIEW FROM LIVING ROOM SHOWING THE GLASS ENDED DINING AREA.

WHEN NOT IN USE, BED IS STORED UNDER STAIRS.
uilt on wall of old stable, is an example of alert site planning

LOCATION: LOUISVILLE, KY.
ROBERT A. NOLAN, Architect
A. J. SCHNEIDER & CO., General Contractor

According to the owner-architect, this house "is known by the natives as the only house in these parts to have the garage on the third floor, the living room on the second floor, and the mailbox on the roof." Though literally true, this weird juxtaposition of facilities has a very good basis in sense. The plan was determined chiefly by three factors: the view south down the hillside and across into a valley; the hilly plot; and the immediate difficulty of deciding which side of the house would ultimately present the main entrance—due to the fact that at the time of building, the road at the low side was too narrow for parking but is to be widened in the future. The designer's deep personal knowledge of his family's needs characterizes the details of this house. Area, 2,323 sq. ft. Cost $20,800 in 1947.


O NE FUNCTION OF ROOF OVERHANG IN THIS CASE IS KEEPING THE LARGE EXPANSE OF FIXED GLASS THAT FRONTS THE LIVING ROOM CLEAN
A big sprawling house in "ranch style" is built on a four-prong plan

LOCATION: WEST LOS ANGELES, CALIF.
CLIFF MAY, Designer and Builder

A sample of what the West means by "ranch style" house, this one was designed and built by one of its most successful protagonists. While the plan—on paper, at least—seems wickedly complicated, it certainly provides commodious areas for all the family's activities, each of which enjoys its own private wing. Stylistically, the house is reminiscent of traditional building in the southwest. However Mr. May was one of the first to discard all the hackneyed "Spanish" cliches so disastrously popular in the region during the Twenties and Thirties. Here there is very little detail—all surfaces are simple, woodwork held to a minimum and window sizes greatly increased. Together with its highly developed outdoor areas, usable the year round, the house provides a pleasant, expansive atmosphere. It was built in 1941 for the now incredible sum of only $25,000. Floor area is 4,097 sq. ft.


ARBOR AND OLIVE TREE SHADE WALLED AND PAVED BEDROOM PATIO

LARGE MASTER BEDROOM HAS FIREPLACE, BATH, A DRESSING ROOM
LOGGIA FACES SOUTH, ACROSS PATIO. BEDROOM WING LIES AHEAD, LIVING ROOM AT LEFT. CURVED OPEN PASSAGE LEADS TO THE DINING ROOM.

BEDROOM
16'-9" x 19'-0"

GUEST ROOM
17'-0" x 20'-0"

DINING ROOM
16'-0" x 16'-0"

MAID
9'-0" x 10'-0"

LAUNDRY
9'-0" x 10'-0"

STUDY
16'-0" x 18'-0"

LIVING ROOM
24'-0" x 15'-0"

KITCHEN

MOTOR PASS

GARAGE

STORAGE

THE STUDY BOASTS BUILT-IN SHELVES, SEATING.

SERVICE COURT IS WELL LANDSCAPED.
HERE EVERY MAJOR ROOM IN THE HOUSE OPENS ONTO A BIG SCREENED PORCH, ENJOYS SOUTH EXPOSURE, PRIVATE GARDEN AND A VIEW OF MOUNTAINS

Roger Slurlevnnt

CONTINUOUS CUPBOARDS LINE THE BEDROOM HALL

ORIGINALLY ROOFLESS, SCREENED PORCH WAS ROOFED BECAUSE OF HEAT, GLARE, RAIN. DINING ROOM HAS MAHOGANY WALLS, ANTIQUE FURNITURE
19. Single story house uses big porch to make most of level interior lot

LOCATION: MENLO PARK, CALIF.
TIMOTHY L. PFLUEGER (deceased). Architect

This handsome house in a suburban town south of San Francisco is placed on a level interior lot whose assets—aside from the climate—included some well-established fruit trees, a southern exposure at the rear and a fine view of the Coastal Range some two miles away. The house was designed to make the most of these advantages, and does so with the easy grace which is a hallmark of the best houses of the region. Placed across the front of the plot, with its garage, circulation and services concentrated along the street front, the house thus turns all its main living areas toward the garden. A huge screened porch (bottom, facing page) serves both for living and for sleeping on hot nights. The interiors have been deliberately kept quite simple as a background for the owners' collection of old Dutch furniture and paintings. Incredible as it now seems, this house, with a floor area of 2,445 sq. ft., cost only $11,600 in 1941.

20. Tropical house with aluminum screened porch for outdoor living

LOCATION: MIAMI, FLA. IGOR POLEVITZKY, Architect

In this house the familiar "screened porch" has been extended to its logical conclusion—an airy, large (19 x 30 ft.) cage, framed of aluminum, screened in stainless steel mesh and "roofed" with a sliding aluminum awning which is parked under the eaves when not in use. Placed at the rear of a small masonry house, where it gets the full impact of the cool southeast summer breezes, this outdoor living room makes a year round house of what might otherwise be only a winter vacation cottage. Floor area, 1,230 sq. ft.; cost $16,000 in 1947.
In the state of California, lemon groves and houses like this are equally at home

The California climate, as has been said before, has much to recommend it. And so, seemingly, does the California client, as indicated in this and many other examples of his choice of houses. The brand of architecture can't be the result of just the weather, because in many other parts of the world with climates which are almost as equable, there are still little more than the beginnings of such as appropriate background for living within and without walls. This airy house has a large, extroverted living-room whose glass side is only a slight barrier between the room and the terrace, which in turn gives way to a lawn and a nicely scaled grove of lemon trees. A fairly big house, though not quite of swimming pool stature, it is planned without penury, with a good sized, service area and a well defined bedroom wing in balance on the other side of the big living room. Much sunlight; much air; much simple use of light materials. Size 30,000 cu. ft. Cost, $36,000 in 1947.

LOCATION: PACIFIC PALISADES, CALIF.
J. R. DAVIDSON, Designer
S. S. KAPLAN, General Contractor


SLIDING GLASS WALL OPENS PART OF LIVING ROOM
FINE USE OF WOOD DIGNIFIES ENTRANCE APPROACH

Julius Schulman
ABOVE, REAR VIEW OF THE HOUSE; TO RIGHT, PHOTOS OF LIVING AND DINING SPACE

VISTA FROM INSIDE CORNER SHOWS THE LUXURIOUS AND LIMITLESS CHARACTER OF THE BIG LIVING ROOM
DRAMATIC ENTRANCE WAY IS AT CENTER

BEDROOM WINDOWS ARE CANTILEVERED

LARGE WINDOWS ARE PLACED AT THE FRONT OF THE HOUSE FOR SOUTHERN ORIENTATION. SIDE WALL OF DINING AREA IS ALSO GLAZED (ABOVE)

VIEW OF LIVING ROOM THROUGH THE PATIO
The California patio comes to Long Island in a one-story house for a city lot.

What can be accomplished within the rigid limits of the building code is here excellently illustrated. A corner lot in a built-up residential section had been so strictly zoned that the building area was a mere 35 x 65 ft. rectangle. However, the clients, having lived for 17 years in a center-hall Colonial house, demanded a one-story layout without stairs. In a minimum ground area the architect has managed to provide a three bedroom house with an interior patio assuring outdoor privacy in spite of near neighbors. The organization of the house works to perfection. A central entranceway provides direct access to every room. The core of entrance and patio acts as a buffer between sleeping and living areas. To create the illusion of a larger house several tricks were employed: cantilevering the bedroom window wall into the restricted area, thus adding 2 ft. to the upper room dimension; extending garden walls from the house at window height; using a wide, continuous roof overhang to Harmonize the entire composition. Cost $30,000 in 1947. Floor area 1,937 sq. ft.
23. This house for a young family is zoned for amicable parent-child relations

Designed by the architect for his own family, this house is one of several which he is building in a small subdivision. (Also designed and developed by the architect, this subdivision is restricted to families with small children.) Like the others, Mr. Smith's house is fitted to an eastern slope: this provides morning sunshine, minimizes hot afternoon sun and a sharp winter wind from the southwest. The long (92 ft.) plan is "zoned" for various activities. Thus a workshop, darkroom and toilet occupies an isolated spot at the north end; living, dining and study areas are placed in the center; and the southern end is largely given over to the children. Here is a layout which most young mothers would envy; a big sunny playroom opening onto a big enclosed terrace—both areas controlled from the kitchen; bedrooms (including closets) for each child; storage space for toys; and a children's bath. Floor area, 2,314 sq. ft.

LOCATION: LAFAYETTE, CALIF.
SEWALL SMITH, Architect


HEATING—radiant system, copper coils, Revere Copper 

Philip Fein
25. Living rooms and bedrooms arranged in line, insulated from the road by services

LOCATION: PADUCAH, KY.
G. TANDY SMITH &  
LEE POTTER SMITH, Architects
H. WALLACE TANNER, General Contractor

This house presents an aloof facade to the road, broken only by a bank of kitchen windows and an entrance porch. The opposite side, oriented southeast, is all glass, opening the quiet, wooded rear of the lot to all the rest of the rooms of the in-line plan—dining room, living room, bedroom, bath, bedroom, bath, bedroom. A long, shallow terrace follows the bank of glass, split by an extension of the bulky masonry chimney, which juts up and out, insulating the sleeping rooms from the other end of the house. Most of the south glass is immovable; air is brought in through grilled ventilators under the windows. Grills are covered in cold weather. Size 15,000 cu. ft. Cost $16,000 in 1946.

CONSTRUCTION OUTLINE: Exterior Walls—local sandstone veneer.  

26. Ranch house style, in ranch house country, designed with the modern approach

LOCATION: TUCSON, ARIZ.
ARTHUR T. BROWN, Architect
JOYNT CONSTRUCTION Co. Contractors

This house would probably be the most popular, desired, and admired house in most residential neighborhoods in this country these days. It is the ideal, commodious, comfortable ranch house, with lots of closets. But lest this have the ring of faint praise, remember quickly that this is ranch country, that the blue line of mountains in the distance is authentic. And so is the house. The local building tradition is followed well in a simplified style on the exterior, with a certain amount of variation introduced without strain, like the large paned sun porch. The exterior wall of the center section facing the street is painted deep red with white doors arranged symmetrically, for sweetness. But the back wall is glass, for light. 20,060 cu. ft. Cost $27,795 in 1947.
Florida house in new aviation subdivision has built-in hangar for family plane

27. Though you would never guess it from the street, this house has a built-in airplane hangar. And for all its novelty, the hangar causes surprisingly little deformation of the plan—the tail of the plane fitting quite snugly between kitchen and laundry. Naturally, such houses have to be near an airport and this one is located at the edge of a private field with excellent facilities (below). Aside from the fact that insurance regulations require a masonry fire wall and fire resistant ceiling, a hangar in the house occasions no special problems. In this case, its roof has been partially used as a sun-deck; and together with laundry and carport, the hangar protects the house against north and west. Like all Florida houses, this one is opened up to south and east—the direction of prevailing summer breezes. A two-story screened balcony permits folding glass doors across the entire east facade.

LOCATION: NORTH MIAMI, FLA.
ROBERT LAW WEED & ASSOCIATES, Architects
FRANK E. WATSON, Designer; GEORGE FARKAS, Interiors
WILLIAM WEED, INC., General Contractor


Edward Clare

OVERHEAD DOORS IN SERIES YIELD HANGAR OPENING 40 FT. WIDE (LEFT). ALL ROOMS OPEN ONTO EAST BALCONY (CENTER) FOR PREVAILING BREEZE

SHORT TAXI STRIP CONNECTS HANGAR AT REAR OF HOUSE TO FLYING FIELD
Compact plan for interior lot places living area at rear, service in front

This northern house demonstrates that even the best rule must sometimes be broken. The street front is to the south; but the owners valued year-round privacy more than winter sunshine and hence agreed with the designer that the living areas be arranged around a big terrace at the rear. They are delighted with their decision. "We live in complete privacy and quietness. The clerestory windows give us sufficient sunlight and ventilation from the south . . . the broad expanse of windows in the north and west gives us a beautiful view and the illusion of living outdoors." They find the plan compact, easy to care for and adequately supplied with storage space, and especially like the way the ceiling lines follow the roof framing. Their only reservations: the basement under the kitchen may be too small, winters may be too severe for a carport. Heated by forced air, with under-floor cavities serving as return ducts the house has exterior walls of cavity brick, with the cavity filled with vermiculite—and the inner brick surface washed and waxed.

LOCATION: RACINE, WIS.
EDGAR A. TAFEL, Designer
ROBERT C. ALBERT, General Contractor

Build a small house on the property to live in now, and after the big house is built, use the small one as a guest house. This is another solution not unfamiliar in today's building situation, and here the interim house was assayed as carefully as the main house eventually will be. The back of the house was turned to prevailing winds, with a glass-fronted living room opening on a terrace on the other side. A long overhang, for summer sun shade, is roofed to shield only the large windows on the south side, not the wall. A projecting end wall lends the terrace added privacy, though the visitor may be somewhat puzzled on opening the door in this wall-continuation to find he is not yet really inside. Flat-nailed horizontal oiled redwood clothes the frame, enclosing 5,100 cu. ft.

PARTLY ROOFED OVERHANG SHIELDS GLASS ONLY

THE TERRACE FACES DIRECTLY AWAY FROM PROPERTY LINE, TO FUTURE FLOWER GARDEN

TWO LIVING ROOM VIEWS SHOW ENLARGING EFFECT OF THE GLASS WALL FACING SOUTH
A narrow plot is enclosed by wood walls for intimate landscaping and privacy.

With no great view to lose, but a lot of privacy at stake, the architect turned the outlook of this house inward on its long, narrow plot. The road which runs perpendicular to one end of the 200 x 50 ft. property could be screened, and was, with handsome trees—three olive trees, two avocado, a peach and a persimmon. But no backing off was possible from the side street, if the house was to be even two rooms deep. The first element of the solution was a solid fence, and only small windows facing out on the street side of the house; then the designer held careful consultation with a landscape architect to plan the garden in units inside the fence, for maximum enjoyment even from within the walls of the house. The 7 ft. 6 in. oiled redwood walls—selected for minimum maintenance—not only preclude the inclusion of passing motorists in the family group, but are a good windbreak, allowing sun bathing in the south patio even on cold windy days. Cubage 15,500 cu. ft.; cost $8,200 in 1941.

LOCATION: LOS ANGELES, CALIF.
FREDERICK T. KLINE, Architect
HAMMOND SADLER, Landscape Architect

AFTER TWO ADDITIONS, LIVING ROOM IS NOW LARGE AND AIRY. CHANGE IN FLOOR LEVEL IS EMPHASIZED BY TREACHEROUS-LOOKING DEEP-PILE RUG.

1939. A young couple with one child built this 850 sq. ft. minimum house for $2,660. They planned to sell it later, build a dream house in another part of town.

1940. Twins arrived. Decision was made to buy adjacent lot, expand basic house. Kitchen was enlarged, dining room added, porch enclosed, garage converted to studio.

1947. Arrival of fourth child led to present stage. Here living area is further extended, chimney built, two children's rooms, bath and garage added.

1950. Ultimate development (facing page) calls for self-contained wing for adolescent children. Original bedrooms will be thrown into one large one for parents.

INGENIOUS LIGHTING, SIMPLE TEXTURES MARK LIVING AND DINING AREAS. CHILDREN ARE FED AT KITCHEN BAR (BELOW).
31. To house a growing family, this unit grew in three stages and has one more to go

The pleasant quality of this house is probably due in some measure to its haphazard development (see facing page). In any event, it represents some interesting theories on the part of its architect-owner. As a father of four, he wants "to separate the living facilities for the parents from those for the children so that, when the adolescent stage is reached, the two fairly unsympathetic camps can live in a state of semi-siege, separated by a common living area." The ultimate plan, with its separate entrances, should accomplish this quite nicely. Although built of simple materials (some of it by the architect himself) the house belies its modest origins, having achieved in its various stages an air of spacious opulence. Cost to date $16,000.

A straight-forward answer to a limited budget, this house is so neatly planned that four of its seven rooms enjoy both a southeast exposure and a pleasant view down a wooded hillside. Its exterior is so simple and direct that the neighbors tried to stop construction of the house. (Given the plan, one wonders just what changes in facade they demanded. Columns "a la "Gone with the Wind" perhaps?) The mild winters make the carport practical and hot summers make the screened porch mandatory. Doors and fenestration are well handled, with respect to both circulation and cross ventilation. Only apparent weaknesses: the living room is a bit narrow, the "maid's room" a farce. Floor area 1,872 sq. ft.; cost $7,900 in 1942.

LOCATION: ATLANTA, GA.
BURGE & STEVENS, Architects
J. R. WILKINSON, Associate
J. M. KIDD, General Contractor

CONSTRUCTION OUTLINE: Foundation—concrete and brick.
STRUCTURE: Exterior walls—clapboard wood sheathing,
Easy maintenance, inside and out, was a controlling factor when Architect Harris built this house for himself. Of frame construction, its exterior materials are all long-lived and paint-free stone-cypress shingles and siding, copper guttering and flashing. Indoors, woodwork has been reduced to a minimum. Sub-floors are concrete throughout—finished with asphalt tile in living area, flagstone in gallery, linoleum in kitchen and cork tile in bath. (Although not heated, the floors are said to be comfortable throughout the year, due to insulation around the edges). The plan is direct and clear, and oriented so that "every room in the house gets sun sometime during the day," according to the architect. Floor area 1,667 sq. ft.; cost $21,400 in 1946.

LOCATION: GLENVIEW, ILL.
RALPH C. HARRIS, Architect
KINNARE CORP., General Contractors

Colorado country house is opened to mountain view and sun by two window walls

This small house for year-round residence is built on a wooded site offering a view of the Colorado mountains in the distance. The designer has placed it on the crest of a knoll and opened the northern wall of the living room with large windows to take full advantage of the magnificent view. The plan fronts on the south, and its ample southern exposure with terrace has been protected from the road by a right-angular wall. An extremely simple and straightforward arrangement groups service facilities on the west side, where the service entrance is convenient to the driveway and road. The partially excavated basement provides a garage under the service wing; a large recreation room, workroom and cold storage area under the living and bedroom portions of the house. The plan is noteworthy for such details as direct access from the master bedroom to the view terrace off the living room. Built of stucco and fieldstone for suburban living, it cost $27,500 in 1947. Area 3,328 sq. ft.

LOCATION: COLORADO SPRINGS, COLO.
JAN RUHTENBERG, Designer
E. L. McKay, General Contractor

**BED ROOM**
80'-3" X 18'-5"

**DRESSING**

**DECK**

**LIVING ROOM**
28'-8" X 16'-9"

**KITCHEN**
17'-0" X 10'

**MAID'S RM**
11'-9" X 10'-0"

**BASEMENT**

**SUN ROOM**

**VEGETABLE STORE**

**PLAY RM**

**GARAGE**

**FLOOR**

**KITCHEN BREAKFAST BAR**

**FRONT ROOM IS AT LEFT, RECREATION ROOM DOWN STAIRS**

**TWO GLASS WALLS GIVE THE LIVING ROOM BOTH SUN AND A MOUNTAIN VIEW**

**BED ROOM**
20'-3" X 12'-3"

**WORK**

**KITCHEN**
Built ten years ago for a professor at the University of Texas, within walking distance of the campus, this house was designed to be self-sustaining financially, with a separate apartment on the lower floor and two student rooms on the top, bedroom floor. It was put up at a cost painful to contemplate now, less than $15,000, complete with air conditioning against the distinctive Texas summers. One of the early buildings in the bright Texas capital to be designed in contemporary idiom, it now has considerable company. Austin, the seat of both the State legislature and Texas University, has some fame as a pleasant, progressive place to live. Simply planned, the house opposes planes of brick and vertical wood siding in the elevation, whose most outstanding features are the broad sun shades angled out over windows to aid the air conditioning apparatus. Land slope is utilized to permit windows in two walls of the basement floor. Floor area 3,481 sq. ft.

LOCATION: AUSTIN, TEXAS
ARTHUR FEHR & CHARLES GRANGER, Architects
C. H. TOUNGATE, General Contractor

A small vertical house fitted nicely among the trees on a wooded western hill

This small house is an apt contradiction to the custom of going upstairs to bed. Here you go downstairs to bed. The living and dining rooms and kitchen occupy the entrance floor, with a garage-storage wing curving off to meet the driveway on the uphill side. On the floor below, which is granted exposure by the sharp break of the slope, are the two bedrooms, a utility room, and the bath. Architect Thiry was careful to place the house on the steep property to full advantage, and he also showed skill in wedging it nicely within existing tree groups. A handsome clump stands just outside the large glass front wall between the house and the driveway. Another large tree beside the end porch yields pleasant shade. Added reason for the vertical design of this house was the lot size, which was small; coverage was kept to a minimum. Future expansion would be a continuation of the long dimension of the house, with another bedroom and bath, or library added on the north end. Floor area is 1,410 sq. ft.

LOCATION: SEATTLE, WASH.
PAUL THIRY, Architect
RAY McCOY, General Contractor

37. Only a one-story house, from the road, this home has basement rooms with a view.

The basic style of this house is that of the ranchhouse, which may or may not be appropriate perched on the side of a hill. But that is almost an academic question, at least so far as the housewives of the nation are concerned, and often enough to the FHA too. At any rate, the designer here produced a very pleasant house, the most pleasing feature of which is, according to the owners, the bend in the plan which narrows the entry way and widens the usable living area, allows enjoyment of the good view downhill in two directions, and gives southern exposure to the sun deck off the living room and bedrooms. The sharply sloped site makes the downstairs rooms eminently livable, with a terrace outside roofed by the floor of the bedroom porch. A usable garden on the back slope was achieved by building a 5 ft. wall across half the property, close to the house and lower patio, and sloping the lawn from the patio level around the corner of the wall to the lower level. House floor area 2,212 sq. ft. Cost, approximately $8,000 in 1941.

LOCATION: SEATTLE, WASH.
JOHN T. JACOBSEN, Architect
FRANK A. MARTIN, General Contractor


SLOPE OF LAWN STARTS FROM EDGE OF ENTRANCE PATIO

DOWNHILL, BASEMENT ROOMS HAVE NEARLY ALL THE Advantages OF MAIN LIVING FLOOR

LIVING ROOM IS FINISH IN FIR PLYWOOD, PLASTER, AND GLASS
When designer-contractor Konigshofer rolled home from the wars, he had difficulty finding a rentable home, so—backed by a GI loan—he built this. It has turned out to be a good investment, not only economically (the cost to him was $7,500; he has standing offers as high as $15,000) but also in the kind of living he likes. Set on a 40 x 100 ft. lot in a middle class residential area, it gains privacy from the heavily wooded hillside and from its concentration of exposures at the lofty downhill side. The finish is horizontal Ponderosa pine planks, interior and exterior. Etched glass shields are placed for further privacy, and plant stands and boxes abound in the plan. Although this is a small house, it is doubtful that there is a larger living room in the neighborhood, when the porch over the carport is included. With the glass doors slid back, and the inside hooded fireplace and porch barbecue both going, facilities are present for spacious living and entertaining. Floor area of house is 990 sq. ft.
Three bedrooms plus large living area organized for privacy, sun and view

LOCATION: CANDLEWOOD LAKE, CONN.
WILLIAM LESCAZE, Architect
KERN HINES, Interior Decorator
ARTHUR E. McCOLLAM, General Contractor

This summer and week-end house uses traditional summer colony materials—fieldstone and unpainted wood—in a contemporary manner to provide the occupants with maximum privacy from street and neighbors. Located on a lot which slopes gently to the south, with a lake and fine view beyond, the plan exploits these natural advantages in a sensible and uncomplicated way. Except for the kitchen and dining alcove, every room gets southern exposure and view. The carport, kitchen and service elements protect the house from the north, while the big fieldstone chimney-wall blocks most of the hot western sun. A pleasant feature in a house designed primarily for summer use is the big, stone-paved loggia facing the entrance. Its glass doors fold back onto a flagged terrace to form a modern variant of the old southern “dog-trot,” creating an area which should be pleasant on the hottest day. Of frame construction, with forced warm air heating, the house cost $22,000 in 1947. Floor area 2,380 sq. ft.
LIKE MOST AWNINGS, THIS ONE MARS APPEARANCE OF THE HOUSE, SEEMS TO INDICATE NEED FOR PERMANENT TRELLIAGE AND WIDER ROOF OVERHANGS

Ben Schnall

PLASTER, RUST COLORED BOULDERS AND CHERRY FLOORS SET COLOR SCHEME FOR LIVING ROOM

THE STRIP KITCHEN, WITH DINING ROOM BEYOND

CHILD'S ROOM HAS TOY CASES UNDER WINDOWS
40. Restraint in partitioning yields a first floor that is nearly all living room

A central fireplace is the core for planning in the main portion of this neatly arranged house. On the first floor, partitions radiating from the masonry stack divide the space into living room, dining room, and kitchen; upstairs the brick line is extended to divide the space into two bedrooms, each with bath; in the basement the area from stairway to chimney is used as recreation room—beyond the chimney is heater space and back-bar. Another feature of the house, and the one which most pleases the owners, is a porch which is fitted into the area enclosed by a first floor wing containing a study and a garage. The porch has only one open side, and is roofed over, but the one exposure does look out over the garden. Large sliding doors open it to the living room. Floor area 2,634 sq. ft.; cost $15,500 in 1941.

LOCATION: CAMP HILL, PA.
JAMES W. MINICK, Architect

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The Architectural FORUM April 1948
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BARROOM ART IN THE MODERN MANNER

Last month Manhattan art fanciers gazed at a new mural by Joan Miro which covered 272 prominent sq. ft. in the Museum of Modern Art's showcase lobby. In June, customers of the Gourmet Restaurant atop Cincinnati's lush, soon-to-be-opened Terrace Plaza Hotel (Forum, Dec. '46) will get their first look at the same colorful mural.

Responsible for this new marriage of culture and commerce is John J. Emery, President of the Cincinnati Art Museum and also of Thomas Emery's Sons, Inc., owners and operators of the Terrace Plaza. The old refrain, "I brought Culture to Buffalo in the Nineties!" might be paraphrased by Mr. Emery who is bringing modern art to Cincinnati in the Forties. In addition to the Miro, he has commissioned a huge (1,080 sq. ft.) mural by Saul Steinberg for the Skyline Room, the hotel's main dining room, and a mobile by Alexander Calder for the eighth floor lobby.

Emery first showed his artistic acumen when he hired Skidmore, Owings & Merrill, a firm of unusual architectural finesse, to design the Terrace Plaza. His subsequent choice of artists could hardly have been happier. The hotel interior with its sleek, uncluttered planes is an excellent foil for the delicate yet arresting traceries of these particular artists.

(Continued on page 150)
NOW

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All three have been saluted by solemn critics throughout Europe and America. But their creations actually represent modern art at its most frivolous (and therefore in this case most apt). For these designs are perfectly suited to their job of putting cafe customers in a mood of lighthearted and sophisticated gaiety. James Thrall Soby, of the Museum of Modern Art's Department of Painting and Sculpture, says of the Miro mural:

"Of the work of painters belonging to the generation following Picasso, none seems so well suited to large-scale decoration as Joan Miro's. His easel pictures have long been notable for freshness of subject, lively and provocative color, remarkable spatial intuition, a rich linear fantasy tending toward humor. All of these qualities may be seen in the huge panel that Miro has painted for the Terrace Plaza Hotel in Cincinnati. But the artist has not merely inflated one of his easel works. He has thought out anew the special problems imposed by this panel's size and purpose... We do not need to know precisely what the panel's subject is or means. It is designed to beguile and stimulate, not to puzzle or tax; it is meant to be absorbed pleasurably rather than studied, like music heard through a summer window."

Steinberg, who first gained fame for his satirical line drawings in the New Yorker magazine and in 1946 was jumped into the serious art category with an exhibit at the Museum of Modern Art, is equally delightful as a muralist. His drawings, executed in black, white and sepia, have always been a parody of the public he entertains. To this mural he brings, unchanged, the minute detail and comic observation which have already made his reputation. But this is the first time Steinberg has applied his talent for microscopic examination to a work of such scale. The conception, which one might have expected to be dwarfed by its new size, retains its entertainment value, perhaps even gains in decorative quality.

Calder, whose mobiles are a contemporary substitute for the pompous cut glass chandelier, is as expert at creating gay abstractions as he has been for the past 20 years. It is this reviewer's opinion that much of modern art is treated with a reverence that keeps it hidden away in museums, approached with trepidation, if at all, by the general public. In the Terrace Plaza everybody—artist, owner, customer—seems to be having a first-name good time with it. M.M.

**ART ON THE HIGH SEAS**

The supercargo of modern art decorating the public rooms of the recently converted Moore-McCormack passenger ship, Argentina, created something of a stir at its unveiling. The shock to a public accustomed to gold leaf and rococo carving could hardly have been more unnerving. For the Argentina is one of the first ships to espouse modern informality—from Eames chairs to abstract murals. Now that the first violent attacks on this breaker of icons have subsided, we can see more clearly the implication of the event: at last, a ship has dropped the effort to overpower its passengers with extravagant surroundings, offering instead a handsome, but comfortable and cheerful background for ocean cruising. At the same time, abstract artists got one of their few chances at important commercial jobs.

This is not the first time that the designers of this ship, interior, Donald Deskey Associates, have started a near riot with their disregard for convention. When Rockefeller Center opened over a decade ago, a sculpture and a mural by modernists whom Deskey had helped to select, were similarly stormed against. Both decorations were removed, although the sculpture was eventually put back in place, quietly.

No such stripping is contemplated for the Argentina, and its boost to the employment of top-ranking modernists may be considerable. Most important achievement is the fact that no rigid scheme was set up for the art work. Instead artists were given a rare chance to cooperate closely with designers on a major job. In spite of this opportunity, the integration of the artists' work with over-all room design is questionable. But at least the results are individual and extremely refreshing after years of murky salon realism.

Seven artists were commissioned to execute the murals and wall sculptures. Perhaps most exciting (and most baffling to the conventional passenger) was Isamu Noguchi's "Lunar" light (Continued on page 152)
sculpture above the entrance stairway to the promenade deck (see cut). An uneasy ship's official, showing prospective passengers their way about, remarked apologetically of this piece: "We call it Schnozzola."

Attilio Salemme's mural in the cabin class lounge (see cut) proved less of a trial.

Jose de Rivera, whose stainless steel sculpture dominates the first class dining room, tells of some of the problems involved in work of this kind: "When artists cooperate with designers, it is so complicated there is no point in being too critical. I was not bothered on this job. When I was called in, they were tearing the ship apart for reconversion. I went on board and looked over the space and saw the dining room. I thought the wall there was the best space. The choice of size and relationship to the room was my own. If my sculpture had been out of scale, it would have been my fault... The sculpture is placed where people can touch it, which is OK with me..."

Murals by Loren MacIver, Eric Mose, Theodos Stamos and Fred and Dorothy Farr also occupy prominent positions on board. All in all, the Argentina is a big step forward. When

designers and artists become more familiar with the problems in a job of this size, the results will undoubtedly be better integrated. Rivera, who recognizes present pitfalls remarks: "...on any job, the more collaboration and the more exchange of ideas and efforts there are, the better."—E.B.

TRAIL BY ACTION

As recently as ten years ago auctions of modern paintings were dismal affairs, attended only by a few staunch believers who came to console with each other and to pick up bargains. This year Parke-Bernet's auctions, (December 10 and March 11) on Manhattan's pace-setting 57th Street, were held at night and achieved the opulent air of grand opera. Mink coats, Sophie originals and Alajalov smiles were the order of the evening. At the March fete all seats in the hall and gallery were filled before the auctioneer ascended his podium and standees occupied every inch of wall space, crowded the doorways.

Such interest was more than academic. Bids by the seasoned buyers who attend these sales are regarded as the acid test of an artist's value, set his asking price for the coming year. Price-marked copies of the sale catalogues become standard reference guides for dealers and buyers throughout the country. The rise and fall of an artist's popularity is charted by whether bids exceed or fall short of advance estimates based on paintings sold in the previous year's auctioning. Seventy per cent of the estimate is considered a good price.

(Continued on page 156)
PLANNED LIGHTING with PITTSBURGH PERMAFLECTOR LIGHTING EQUIPMENT

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At the March sale the audience was a knowing one. Between bids (as between acts) came the buzz of surprise, satisfaction or dissent. The appearance of favorites on the stage—Renoir, Chagall, Matisse—brought murmurls so loud that the auctioneer had to call for order. When he made the mistake of mispronouncing the name of Pierre Puvis de Chavannes, a titter spread through the hall.

By the end of the auction, Modern Art had arrived so definitely that longtime devotees saw its price-scale soaring out of reach. Most of the paintings were not even the best work the artists they represented. For a few Paul Klee, the size of an ordinary envelope, brought $300 (estimate $150). A Chagall pastel estimated at $500 whirled up to $1,075. Matisse consistently lived up to his already high rating, one handsome still life bringing $4,900. Picasso wavered from time to time, but amazed everyone by commanding $2,600 for an early impressionistic flower study on the block at a hoped-for $1,800. The total told the story: paintings estimated to go for a top of $40,000 ($20,000 would have been considered a good take) brought in a thumping $50,970.

Meanwhile, like most movements, Modern Art was finding that, while gaining respectable sanction, revolt had broken on the front rank—this time among previously friendly critics. The artist-jury which awarded the Taos Pearl Contest first prize to Nicholas Vasilieff's Still Life found itself uproariously condemned for the choice. The esthetic standards of New York's Museum of Modern Art were challenged at its showing of recent acquisitions. In a gesture that smacked a little of publicity Boston's Museum of Modern Art joined the dissenter's, announced that henceforth its name would be the Museum of Contemporary Art—modern art having become in its opinion "something unintelligible, something meaningless.

In varying tones of intensity, one cry was being heard more and more often. None denied the artist his hard-won right to experiment. But most critics agreed with the blunt comment of the New York Sun's Henry McBride: "It happens that most of the pictures by the new young people are evasive and confused in a way to suggest not only that their training has been scant but that they have not yet arrived at having ideas about a life that are worth adult attention." Perhaps the truth was this: Modern Art had become a classic. New artists would have to stage a new rebellion.

BOOKS


It seems hardly possible that any angle of renting, buying or building has not been covered once, twice or three times by the steady flow of "house books" rolling off the presses since VJ Day. But, believe it or not, the Sleepers have turned up a new approach that, while lightly touched on before, has never been fully explored. Their book is aimed at the layman of average IQ who, having read everything on design, material and equipment, still hasn't the vaguest notion how all these elements are calculated, coordinated and assembled. The authors obviously have neither the time nor the inclination to enter the arena of modern versus traditional and, probably wisely, assume that their readers will derive more profit from information from the book if individual tastes and preferences are left unbridled. In other words, the book has no esthetic mission and no axe to grind.

(Continued on page 160)
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<td>5.</td>
<td>Flauto Dolce</td>
<td>8'</td>
<td>13.</td>
</tr>
<tr>
<td>7.</td>
<td>Dulciana</td>
<td>8'</td>
<td>15.</td>
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<tr>
<td>8.</td>
<td>Celeste</td>
<td>8'</td>
<td>16.</td>
</tr>
<tr>
<td>9.</td>
<td>Octave</td>
<td>4'</td>
<td>17.</td>
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<tr>
<td>10.</td>
<td>Flute</td>
<td>4'</td>
<td>18.</td>
</tr>
<tr>
<td>12.</td>
<td>Fifteenth</td>
<td>2</td>
<td>20.</td>
</tr>
<tr>
<td>15.</td>
<td>Chimes (Stop Tablet and Stop Tablet Switch only)</td>
<td></td>
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</table>

#### SWELL ORGAN

<table>
<thead>
<tr>
<th>Pitch</th>
<th>Note</th>
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<tbody>
<tr>
<td>16.</td>
<td>Bourdon</td>
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<tr>
<td>17.</td>
<td>Stopped Flute</td>
</tr>
<tr>
<td>18.</td>
<td>Flauto Dolce</td>
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<tr>
<td>19.</td>
<td>Viola</td>
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<td>22.</td>
<td>Major Bass</td>
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<td>Dolce Gedeckt</td>
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<tr>
<td>24.</td>
<td>Duetto</td>
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<td>25.</td>
<td>Octave Bass</td>
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<td>26.</td>
<td>Flute</td>
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#### PEDAL ORGAN

<table>
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<th>Note</th>
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<tbody>
<tr>
<td>27.</td>
<td>Major Bass</td>
</tr>
<tr>
<td>28.</td>
<td>Major Bass</td>
</tr>
</tbody>
</table>
| 29.   | Dolce Gedeckt | 16' | 36.  | Combination Pistons: (Standard Equipment) Pistons Nos. 1-2-3-4-5, Actuating Stops in Great, Swell and Pedal Divisions (Under Great Manual)
| 30.   | Dolce Gedeckt | 16' |

#### CONTROLS

<table>
<thead>
<tr>
<th>Playback</th>
<th>Channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>34.</td>
<td>Echo to Main</td>
</tr>
<tr>
<td>35.</td>
<td>Echo On—Main Off</td>
</tr>
</tbody>
</table>

**CONVENIENCE PISTONS:** (Standard Equipment) Pistons Nos. 1-2-3-4-5, Actuating Stops in Great, Swell and Pedal Divisions (Under Great Manual).

**PEDAL MOVEMENTS:** Balanced Swell Expression Pedal. Balanced Grand Crescendo Pedal with Indicator Light.

**ACCESSORIES:** (Standard Equipment) Model 42 Tone Cabinet, with cable. Concave Radiating Pedal Clavier A.G.O. Bench with Music Compartment, Hinged Top.

---

THE RUDOLPH WURLITZER CO.

N. Tonawanda, N. Y., Dept. F0 4.

Gentlemen: Please send me, without obligation, your 16-page Reference Manual... "Important Facts On Organs And Their Installation."

Name: ____________________________

Company: _________________________

Address: __________________________

City: _____________________________

Zone... State

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167
ALUMINUM GARAGE DOOR is soundly constructed, simply installed, easily operated.

A four section overhead type garage door operating along generally conventional lines, the new Calder aluminum door boasts durable construction, simple operation and positive protection as its main features. Door sections are built-up of a combination wood and aluminum framework with a tough, thick aluminum alloy covering sheet applied by a lock seal arrangement. Hardware is all steel, aluminum painted. The door uses galvanized steel cable for lifting and runs on Neoprene tire, ball-bearing rollers in the steel tracks. Finely counterbalanced with tempered springs it operates quietly and rolls up and down smoothly at the touch of the fingers. According to the manufacturer, the new door is engineered to resist dents, take hard knocks without damage and eliminate maintenance costs. It fits in an opening 8 ft. wide by 7 ft. high, requires 12 in. headroom and 4 in. clearance at each side. Manufacturer: The Calder Mfg. Co., Lancaster, Pa.

REINFORCING BARS in new shape increase yield point and bonding property over conventional shape intermediate bars.

Webrib concrete reinforcing bars in a new shape, cold spiral bent, are claimed to increase the yield point of the intermediate grade steel, from which they are formed, by 50 per cent over conventional rods. The minimum yield point of these new bars is guaranteed to be not less than 60,000 lbs. per sq. in., high enough to permit, if local building codes allow, design stresses of 30,000 lbs., per sq. in., as against the normally specified 20,000 lbs. per sq. in. According to the manufacturers, these bars meet the prescribed head test requirements for intermediate grade deformed bars, and provide very high bonding property between the bars and the concrete because of the shape of the bar and the design of its transverse ribs. With a bar of such high yield, large savings by weight on the quantity of steel required for reinforcement on jobs using intermediate grade rods would be possible. Savings on freight, cutting, bending, and placing would also be high. In bearing, the height and spacing of the ribs are designed to balance their capacity in gripping the concrete with the shearing strength of the concrete between the ribs. Manufacturer: Webrib Steel Corp., 120 Broadway, New York 5, N.Y.

BUILDING INSULATION reflects radiant heat, blocks heat transfer by conduction and convection.

Cellulite-Silvercote is a new double action building insulation that is reported to be up to 70 per cent more efficient than other types of insulation. Made with two non-corroding reflective metallic membranes, completely enclosing a fluffy fiber blanket, it reflects radiant heat in addition to blocking heat transfer by conduction and convection. It offers permanent protection and will not sag or settle. According to the manufacturer, the reflective surfaces of Cellulite-Silvercote will not oxidize or corrode and are not subject to electrolysis. The Cellulite filler is flameproof. Gilmanweld reinforced nailing flanges speed and simplify installation. Manufacturer: The Gilman Brothers Co., Gilman, Conn.

PREFABRICATED PIPE UNITS for overhead distribution of oil, fluids and steam, are factory insulated to specifications.

Ric-wil, Foilchad Pipe Units are prefabricated, highly efficient, durable, insulated pipe lengths for overhead distribution of oil, viscous fluids, process liquids and steam. The pipe is insulated at the factory to meet individual project specifications, and units are shipped in 21 ft. sections ready for installation. In the prefabrication process, asbestos, cork or other insulation, as specified, is machine coated with high temperature asphalt and tension wrapped with asphalt-saturated asbestos felt. A second coating of asphalt is followed by a tension wrapping of aluminum or copper foil. As a variant of the basic Foilchad Unit the company is also manufacturing a two-pipe unit, a pipe supported within a pipe with insulation around the outer pipe. Manufacturer: The Ric-wil Co., 1562 Union Commerce Building, Cleveland, Ohio.

LIGHTWEIGHT ALUMINUM RAIN CARRYING EQUIPMENT insures maximum efficiency with minimum of maintenance.

Reynold's new line of aluminum rain carrying equipment, composed of gutters, conductor pipes and fittings, is lightweight, rustproof and non-staining. A conventional design insures maximum efficiency while the inherent qualities of the aluminum provide for a minimum of maintenance. Units weather to a soft, gray-white without painting, are rot, rust and termite proof and are so light in weight that a 10 ft. length of gutter weighs less than 3½ lbs. Gutters, made of sheet aluminum .027 in. thick, come in round or square styles. Conductor pipes are available in round, corrugated and square forms. Installation is by the traditional slip joint method. The cost is said to be less than half that of commonly used non-rusting material. Manufacturer: Reynolds Metals Co., 2500 S. Third St., Louisville, Ky.

THREE NEW HOME HEATING LINES include packaged, easily installed, gas and oil-fired units.

The Richmond Radiator Co. has recently announced the addition of three new home heating lines: Gas Boilers with built-in domestic hot water coil; Horizontal Gas Winter Air Conditioners and Oil Winter Air Conditioners. In the Type K gas boiler, the same cast iron sections can be used with different sets of controls for hot water, steam or vapor heating systems. The built-in domestic hot water coil, available in either tankless or tank type, is optional. In the gas-fired cast iron Horizontal Winter Air Conditioner line the smaller size units come completely assembled and ready for use. Requiring a relatively small amount of floor space for the size of unit, its dimensions also allow ample headroom to ease installation of duct work. Richmond's Oil Winter Air Conditioner, vaporizing type, marks the company's entrance into the oil heating business. Designed for installation in low cost homes, the unit boasts a low pilot fire, comes completely assembled and wired for simple, economical installation. The new Gas Boiler with hot water coil comes in 31 sizes ranging from 95,000 BTU to 3,900,000 BTU input while the Horizontal Gas-Fired Winter (Continued on page 172)
You safeguard your reputation when your fixtures are equipped with Certified Ballasts.

Fixtures with Certified Ballasts assure you and your customers of these advantages...

- Rated light output
- Quiet operation
- Full lamp life
- Trouble-free performance

Certified Ballasts deliver this superior performance because they are...

- Built to rigid specifications
- Tested and checked regularly by impartial Electrical Testing Laboratories, Inc.

Certified Ballasts are used in all Fleur-O-Lier fixtures, in RLM Certified Equipment and in Certified Lamps with circline tubes.

CERTIFIED BALLAST MANUFACTURERS

Makers of Certified Ballasts for Fluorescent Lighting

2116 KEITH BLDG., CLEVELAND 15, OHIO
Weigh all the advantages

In the York Allis-Chalmers Turbo Compressor

26 Pounds of Prevention are worth a ton of cure

Shaft-thrust on higher speed machinery, such as turbo-compressors creates thrust bearing wear.

York meets the thrust problem by eliminating virtually all of this force. By means of the Balance Disc, an exclusive York feature, the thrust built up in one direction by the differential in gas pressure between suction inlet and discharge outlet, is equalized by directing suction pressure against one of the balance disc faces to impose an equal thrust in the opposite direction. The result is a balance so complete that there is but little for the thrust type bearing to do, other than position the shaft.

York Corporation, York, Pennsylvania.

York's Engineering Assistance backs up York's Outstanding Equipment

Experience and practical technical assistance unequalled elsewhere are available to you as a York customer wherever you may be.

In the Southern District, for example, Manager Crout located in Atlanta, assisted by ten York-trained sales engineers, is at the service of York customers in this district. The highly practical, up-to-the-minute assistance and advice of these gentlemen are available to you at all times, whether you are planning, purchasing, installing or operating refrigeration or air conditioning systems or equipment.

M. M. CROUT
District Manager

Assisted by
R. C. Barnes
R. A. Chandler
M. P. Echols
E. C. Harper
O. W. Hogan, Jr.
J. C. Malone, Jr.
Walter May
D. P. Schiwetz
Ned C. Scott
R. A. Warnock

YORK Refrigeration and Air Conditioning

HEADQUARTERS FOR MECHANICAL COOLING SINCE 1885

170 The Architectural FORUM April 1948
Architects prefer stainless steel because it is a proven functional material in the modern style. Stainless steel is beautiful . . . everlasting . . . and available right now.

Builders prefer stainless steel because its instant eye appeal and permanent beauty make a better, more salable product. Corrosion-proof stainless steel gutter, downspout, conductor pipe and flashing are light, water-tight . . . never need replacement . . . can be erected with or without paint. And stainless steel is available right now.

Home Owners prefer stainless steel because it is more attractive . . . permanent . . . reduces upkeep . . . does not stain painted, stucco, masonry or brick walls and surfaces. Building need not be delayed because stainless steel is available right now. Full details upon request. Write .

SHARON STEEL CORPORATION
Sharon, Pennsylvania
Air Conditioner is available in eight capacities ranging from 90,000 BTU to 420,000 BTU input. The Oil Winter Air Conditioner has a capacity of 75,000 BTU. All units are neatly encased in white enamel jackets.

Manufacturer: Richmond Radiator Co., 19 East 47th St., New York 17, N. Y.

"CONVERTIBLE" FURNACE contains basic heating system for use with coal, gas, or a newly developed oil burner.

Norge Heat Div. of Borg Warner has developed a new hot air furnace which may be run on any of the three basic fuels, with the insertion of "package" coal, gas, or oil burners. Conversion is a simple matter, say Norge engineers, and any unit in the furnace which is replaced may be stored for possible future use should fuel situations change. Common features of the various combinations are: an all-steel electrically welded heat exchanger; a humidifier; a high-capacity air blower; and filters to strain dust and other foreign matter out of the room air. Combustion chamber for use with all packages is of all-steel, electrically-welded construction. The furnaces are available in four sizes, ranging in bonnet output capacities of 01.8,960 BTU to 195,647 BTU.

Norge is also introducing a new automatic "gun-type" oil burner, designed to operate with straight-run or catalytic stock fuel oil, for installation in new or old furnaces, including their "convertible" furnace. Easily set oil and air controls are a feature of the new oil burner, to maintain the mixture at maximum efficiency for whatever grade fuel is used. An oversize blower is another feature.


OIL BURNER for hot air furnaces, steam and water boilers has low fuel consumption.

A small Jetronic oil burner which burns on less than a gallon of oil per hour, has been designed to perform at 90 per cent efficiency, according to manufacturers' statements, and is claimed to reduce oil consumption in small homes as much as 50 per cent. The unit has only one moving part, a less than 1/2 HP motor, and eliminates transformer, electrodes, stack switch, fuel pump, and nozzle. Burning at a tip temperature of 2,300°F, the burner is a shallow compact assembly suitable for flange or floor mounting.

Manufacturer: Consolidated Industries, Inc., Lafayette, Ind.

KITCHEN VENTILATOR captures heat, grease, odors and vapor at the source, vents them to the outside.

Drawing cooking odors and vapors directly from the range and exhausting them to the outside, the new Sprouse Kitchen Ventilator System helps maintain a clean, cool kitchen. It removes odors and vapors with their oil and fat contents at the source and conducts them to the outside before they can circulate or condense on the walls and ceiling. The ventilator system consists of three parts: a complete front and wall panel, a power unit and wall outlet box. Either sheet metal or asbestos ducts are used for connecting the power unit and the wall outlet box. With a flip of a switch cooking odors and vapors are drawn from the range into the louvers of a white porcelain coved white porcelain coved hood placed behind and above the stove, are forced down an air duct to the power unit and through another duct to the outside. Heart of the system is the power unit. Containing a filter, motor and patented Stanamic balanced blower wheel in a square metal box, it is designed to safely fulfill the ventilating requirements of any home kitchen and has all of its parts readily accessible for servicing. Its motor chamber is sealed off from the ducts carrying the vapor and is equipped with vibration dampers for quiet operation. The Sprouse Ventilator can be used on any standard gas or electric range, is easy and inexpensive to install, is quiet and economical to operate. Retail price is about $129.50.

Manufacturer: V. E. Sprouse Co., Inc., Columbus, Ind.
Dear Mr. Coleman:

We believe you should know about one "by-product" of Coleman Floor Furnaces, which we have encountered. We were originally interested in this type of heating because it allowed us to feature automatic heating for small homes, at a reasonable price. However, we are constantly impressed with the acceptance a Coleman furnace has with the public.

Though they are money-savers, we find many home-buyers look on them as evidence of "quality construction" in the finished house. In these times, when home building costs seem well above what prospects want to pay, public acceptance like this is a real asset to the seller, since the customer is better satisfied with the value he gets for his price.

Sincerely,

[Signature]

Turned To Coleman Floor Furnace
To Cut Building Costs — Found It Really Helped Sell Houses, Too!

How It Works! Cutaway view shows how Coleman Floor Furnace produces the modern automatic, warm-floor heat that helps sell homes! Note how floor-level air is drawn through cool-air-chamber (A); how air is heated in warm-air chamber (B); how 75% open register (C) lets warm air flow into house fast. Patented streamlined bottom (D) speeds up warm air flow 50%.

"Clean, Automatic Heat"—3 Golden selling words for you! "No fuel-carrying nor fire-building; no ashes or fuel-dirt; no dust in furniture, clothing, curtains and drapes"—this is powerful selling ammunition, to convince women they want your houses. Coleman Floor Furnaces, gas or oil or LP Gas models, help you make good this promise of a cleaner, easier-to-keep house.

Easy, economical installation. This photo shows a Coleman Floor Furnace in place—in the floor, not on it and not in the basement. No basement is needed, so often you can save the cost of excavation; and you save much costly duct work. Easy to connect with chimney and fuel line. Models from 25,000 to 70,000 BTU input or equivalent; single or multiple installations.


AUTOMATIC HEATING Coleman
Bathing and toilet facilities are separated in this new Crane bathroom. Twin lavatories make each section complete... all fixtures from the Crane Oxford Group.

CRANE

...always "most likely to succeed"

- It's hard to please Mr. and Mrs. Home Owner with everything you suggest. But nothing is so likely to succeed as Crane plumbing... Crane is the name they themselves have chosen over all other plumbing brands.

Home owners like Crane quality, Crane styling. They like the completeness of line that gives them a style for their taste and a price for their budget.

Popularity... Quality... Completeness. All three are characteristic of the Crane line of bathroom, kitchen, and laundry fixtures. You can have Crane quality in heating, too—everything required for any system, any fuel.

Your Sweet's Builders' File carries a representative selection of Crane plumbing and heating. Some fixtures are still more available than others—check your wants with your Crane branch or wholesaler.
If it's a "flat roof"... you can't do better than to specify a cold-applied Flintkote Built-up Roof.

Why? Because Flintkote Static® Asphalt, the heart of the Cold Process System, is bitumen in its most modern form... a stabilized, mineral-colloid type emulsion. This means:

- Flintkote Static Asphalt will not flow under heat nor crack at low temperatures... craze, alligator or carbonize under exposure. It outlasts any other known form of bituminous coating.
- Flintkote Cold Process Built-up Roofs are easy and safe to apply. They go on cold. No special heating equipment necessary. Easy application means fast application... and fast application lowers roofing costs.
- Flintkote Cold Process Built-up Roofs are equally adaptable for new construction, re-roofing, renovation or maintenance. Static Asphalt, the top coating for Flintkote Cold Process Built-up Roofs, is non-inflammable in liquid state; will not support combustion in final form.

For complete specifications and application data see Sweet's, Architectural File, or write THE FLINTKOTE COMPANY, Building Materials Div., 30 Rockefeller Plaza, New York 20, N. Y. Offices in Principal Cities.

FLINTKOTE MAKES A COMPLETE LINE OF BUILDING MATERIALS... Asbestos-Cement Shingles and Siding • Asphalt Coatings • Asphalt Shingles and Sidings • Building Papers • Decorative Insulation Board • Fiberglas® Insulating Wool • Hot and Cold Built-Up Roofings • Insulated Sidings • Roll Roofings and Sidings • Structural Insulation Board.

FLINTKOTE BUILDING MATERIALS... the extra years of service cost no more!
Your sales are made and your houses stay sold when they have the features customers want. The trend of home-buyers' preference today is for automatic Electric Water Heaters.

How to reduce construction costs and add customer features...

Construction costs can be reduced with Electric Water Heaters because there’s no flue or vent, so installation can be made anywhere—in a closet, in the kitchen, in the bathroom, in the utility room. Hot water lines can be short, cutting piping cost. Customers like Electric Water Heaters because they are: (1) Automatic (continuous hot water, no attention); (2) Clean (smokeless, sootless); (3) Dependable and Trouble-Free (as electric light); (4) Economical (fully insulated storage, short hot water lines); (5) Safe (all-electric, dependable temperature control); (6) Flexible (can be installed anywhere, even in living quarters; no flue or vent).

KITCHEN VENTILATOR removes grease-laden vapors at the range, can be conveniently installed in new or existing homes.

Type C Dome Turbo Package
Kitchen Ventilating Unit for clean, cool, at-the-range kitchen ventilation includes a Monocast Aluminum Turbo Blower, an over-the-range suction intake and a weather hood with automatic, counter-balanced shutter. The range-length polished aluminum intake is connected by a Transite or metal duct concealed in the wall back of the range to the Turbo Blower which may be mounted in the basement, attic or soffit over the cabinet. A 6 in. pipe connects the blower and exhaust weather hood. The suction intake, placed approximately 28 in. above the range burners captures the hot grease laden vapors and odors at the source before they can cool and condense on the walls. It serves the whole cooking surface with uniform suction, has a pilot light at the left and a switch or 3-speed control at the right. The duct leading to the Turbo Blower fits between the wall studs and may lead equally well up or down. The Dome Turbo Blower is said to develop high efficiency in pressure delivery and will not quickly congest from kitchen grease. The motor-and-blower unit, housed in the Turbo Blower are conveniently detachable and the counter balanced shutter closes snugly upward inside the weather hood. Type C can be conveniently installed in new or existing homes, retails for about $96.75.

Manufacturer: Electro Specialty Mfg. Co., Inc., 1900 Third St., N. E., Minneapolis 18, Minn.

PORTABLE, PLUG-IN AIR CONDITIONER provides year round comfort in average size room.

A small, 22 lb., self-contained, portable air conditioner that cools, heats, filters, humidifies and circulates air, Airette is said to be capable of keeping a 12 x 15 ft. room comfortable the year round. To operate, it is simply placed near a window, plugged into an ordinary electric socket and switched to either "cool" or "heat." No plumbing or special connections are necessary. Cooling is by forced evaporation of water through a specially treated asphalt filter in the unit’s built-in reservoir. Of 3 gal. capacity, water is added as needed through a convenient water inlet. Heat is provided by a specially engineered high capacity nichrome electric heating element. Heat output is 5,000 BTUs. Temperature controls, a humidity control valve and the asphalt filter pad which also acts to remove dust, dirt and pollen from the air are other features. Airette is said to be engineered for quiet, trouble-free operation, is fully guaranteed. Operating costs are reported to be low with the cooling action using about the same current consumption as a 75 w. light bulb. The cabinet, finished in metallic gray or brown with an aluminum grille, measures 26 in. x 13 in. x 12 in. Conditioner is priced at $99.95.

Manufacturer: Airette Mfg., Inc., 1041 N. Sycamore Ave., Los Angeles 38, Calif.

PLUG-IN AIR CONDITIONER circulates clean, cool, dehumidified air at the rate of 185 cu. ft. per minute.

Designed for installation in almost any household or office window, Frigidaire’s new compact window type room conditioner provides low cost cooling for rooms up to approximately 250 sq. ft. It circulates clean, filtered (Continued on page 180)
How to make Home-buyers jump with joy!

People are really pleased when you give them what they want. In homes, the trend today is to Electric Ranges. Another million American families switched to Electric Cooking last year. Conservative estimates indicate that this year at least a million more Electric Ranges will be installed.

This is a definite trend that cannot be ignored. Progressive builders recognize this trend. Electricity is a "must" in any house, and it's simple and economical to include wiring for an Electric Range leading to a range outlet in the kitchen at the time of construction. This is assurance that the houses you build are not only modern today, but will stay modern for years to come!

Follow the trend... Wire for Electric Ranges

Another 1,000,000 American families switched to Electric Cooking last year
Sophisticated Beauty...
FOUND ONLY IN THE BEST PLACES

Of course, we're speaking of the beauty of these fine, book-matched architectural panels shown above.

Before the war, Weldwood Plywood of this high grade was custom-made to architectural specifications only. Now we are making it in large stock sizes and maintaining inventories in selected areas. Every painstaking step in its manufacture is a specialized operation calling for highly skilled craftsmen.

From the world's finest woods, flitches are chosen which will yield the largest number of beautifully figured panels. The veneers are carefully matched and made up into sets. Each panel is carefully belt sanded and polished, then numbered in sequence for easy installation. Construction is 13/16" thickness, all resin glued.

Write today for list of panels currently in stock, together with their location.

UNITED STATES PLYWOOD CORPORATION
55 W. 44th St., New York 18, N. Y.

WELDWOOD Plywood
From Weldwood Plywood and Mengel Flush Doors are products of
UNITED STATES PLYWOOD CORPORATION THE MENGEL COMPANY
New York 18, N. Y. Louisville 1, Ky.
Anyway you look at it, you'll find WHEELING EXPANDED METAL the perfect answer to many problems. Makes non-slip, self-cleaning walkways for OIL INDUSTRY and other outside use... inside stair treads and platforms... ventilating partitions... lockers... shelving... window guards... drying racks... ad infinitum.

WHEELING ExM is serving all industry in hundreds of ways. And each day imaginative executives find new, practical uses for it. In the oil industry, for example, it provides a great variety of installations that contribute to safety, economy, cleanliness, ventilation, protection against intruders.

Wheeling ExM is stronger than sheet metal of the same weight because its metal "diamonds" are all of one piece. It may be the solution to many of your construction problems. Available in various mesh sizes and weights. Write for details.

WHEELING CORRUGATING COMPANY
WHEELING, WEST VIRGINIA
Decay like this means added maintenance costs, and may affect safety. Prevent such decay by the use of Pentachlorophenol treated wood when building or repairing. Tested under the most adverse conditions, Pentachlorophenol has proved itself a lasting, effective protection against both decay and termites. It is applied at low concentrations in petroleum oils by established pressure and nonpressure treating methods—a scientific wood treatment that offers measured toxicity. Pentachlorophenol treated wood is clean, easy to handle, and paintable if the proper solvent is used.

You will want to specify Pentachlorophenol treated wood. It's a sound investment that pays dividends in reduced maintenance. A list of treating plants is available on request.

The Dow Chemical Company
Midland, Michigan

Egg-Crate Lighting System, featuring Vinylite louvers, provides uniform high level illumination with low brightness.

Benjamin Electric's "Sky-Glo" Luminous louvered ceiling system for offices, schools, stores and commercial installations, is a recent development in egg-crate lighting. Consisting of standardized stock louver sections, "U" shaped supporting channels, channel couplings and suspension rod assemblies, it provides a means of supplying uniform high level illumination in the order of 100 to 175 footcandles with extremely low brightness. A feature of the new system is the use of transparent Vinylite plastic for the louver panels. This material with a light transmission factor of 71 per cent and a reflection factor of 19 per cent, actually glows with light. The result is higher efficiency than obtainable with louvered ceilings made of steel, aluminum or painted wood with the same degree of shielding. The annoying specular reflections characteristic of glossy surfaces on opaque materials are also eliminated. Louver sections are available in four basic sizes with various notching arrangements and may be combined to accommodate all square and rectangular shaped ceiling areas. The openings in each section are 2 in. x 2 in. x 2 in. affording a crosswise and lengthwise shielding angle of 45°. Channels for supporting the louver sections come in six lengths, are enameled, 20 gauge steel. Couplings for joining supporting channels are furnished in three types, steel suspension rod assemblies in four lengths. Sky-Glo Ceilings can be easily and quickly installed, provide a practical method of concealing pipes, ducts and individual lighting fixtures.


Incandescent Spotlights for use with recessed fluorescent troffers dramatize merchandise displays.

An improved incandescent spotlight for use with recessed fluorescent troffers, Leader's

(Continued on page 184)
The only material of its kind!

PC FOAMGLAS INSULATION

PC Foamglas is not a fiber, not a wool, not a board, not a batt. Foamglas is cellular glass, in the form of big, lightweight blocks, each composed of millions of minute, air-filled glass cells. And as such, Foamglas has excellent insulating properties. On roofs and ceilings, in walls and floors, PC Foamglas is helping to maintain required temperature levels, to minimize condensation and to withstand humidity in buildings from Canada to Mexico.

When installed according to our specifications for recommended applications, PC Foamglas retains its original insulating efficiency permanently. It is highly resistant to moisture, fumes, vapor and acid atmosphere — elements that frequently impair the insulating value of other materials.

We shall be glad to talk over your clients' insulating problems, to find out where and how PC Foamglas can best meet their requirements. Also we have recently published booklets that contain valuable information. Mail the coupon and we'll gladly send you free copies. Pittsburgh Corning Corporation also makes PC Glass Blocks.

Pittsburgh Corning Corporation
Room 423-A, 822 Duquesne Way
Pittsburgh 22, Pa.
Please send me without obligation, your free booklets on the use of PC Foamglas insulation for:

- Roofs
- Walls
- Floors

Name: ____________________________
Address: ____________________________
City: __________________ State: ____________

When you insulate with FOAMGLAS . . . you insulate for good

THE MAGNIFIED CROSS SECTION of PC Foamglas shows its cellular structure . . . glass bubbles solidified into strong, rigid blocks. In the millions of cells of glass-enclosed air, lies the secret of its insulating value.
Sixteen pages of specification data, grade description and application suggestions—a basic manual for all who buy, sell, specify and use Douglas fir plywood in construction.

SEND for free copy of this new Basic Plywood Catalog—a reprint of the sixteen pages appearing in the 1948 Sweet's File, Architectural. It covers the full range of Douglas fir plywood data, from panel sizes to finishing procedure. Single copies mailed free to any point in the United States.
The Ingersoll Utility Unit is a single, engineered assembly of fixtures, appliances, controls and fittings of Kitchen, Bath, and Heating Plant, plus basic plumbing and electrical lines.

Ingersoll Utility Unit

Now Available To Meet Local Code Requirements, Fit Individual Plans, Schedules and Needs

Permits Architects and Builders To Give Greater Value, Speed Up Small Home Construction
You can give greater value, come out with a good profit, and do the job easier and faster if you figure the Ingersoll Utility Unit into your small home construction plans. With installations in 416 cities throughout the country, architects and builders have found that the convenience, adaptability and economy of the Unit is giving them a real competitive advantage in housing projects, large or small.

Now being produced to more efficiently help you meet local code requirements and to fit individual needs, the Ingersoll Utility Unit is adaptable to a wide variety of plans in single homes and multiple dwellings. Its completeness and compactness simplifies time-consuming specifications, helps cut construction time, and its quality parts insure homeowner satisfaction. Send for complete details on how Ingersoll's "One Purchase, One Package, One Installation" plan will benefit you.

MAIL THIS COUPON TODAY
INGERSOLL UTILITY UNIT DIVISION
Borg-Warner Corp., Dept. F-4
321 Plymouth Court, Chicago 4, Ill.
Please send me your new "Architects Design Data" manual.

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Check the double advantages of:

Eagle RTU is pure white lead. It has all the famed durability, beauty and economy of this most famous of painting materials.

And Eagle RTU comes factory-mixed for perfect brushing. It goes to the job in the original container, all set to open, stir and apply.

Eagle RTU spreads smoothly and easily. It covers completely, leaving no brush-marks, has real white lead hiding and staying power.

And Eagle RTU makes a smooth, gleaming elastic coat that won't crack or scale. It defies time and weather, ages evenly by gradual chalking.

Eagle RTU is favored by builders for time and labor saving convenience... because it enables them to do a better job more efficiently.

And Eagle RTU is preferred by homeowners because of its beauty and durability... because of its whiter white that stays white longer.

Eagle RTU is white lead paint in a modern form.

And Eagle RTU is backed by Eagle-Picher's 104-year-old reputation as well as by the 2,000-year-old reputation of white lead.
Check All These Easy-to-See Advantages of American Kitchens

Women who like their houses praise their architects and builders...recommend them to their friends. Which is a very sound reason for specifying AMERICAN KITCHENS. Women like them! You'll see why from the features below...Raymond Loewy has so designed American Kitchens as to make ordinary steel kitchens seem old-fashioned by comparison!

Check These Easy-To-See Advantages!
(Just a few of many incorporated in American Kitchens)

1. Drawers rounded inside for easy cleaning.
2. Flush-sealed linoleum counter tops between cabinets—waterproof, dirtproof...smooth, continuous work surface.
3. Drawers glide on special nylon slides—open and close silently, effortlessly.
4. Finger-tip, lever-type faucet handles—on or off with a flick of a finger!
5. Back splash faucet mounting eliminates dirt-catching ledge, permits larger bowl.
6. All corners rounded—protects against scratches and torn clothing.
7. Concealed cutting board, special cutlery drawer (lined with linoleum).
8. Concealed pulls for streamlined beauty.
9. Extended Counter tops—permit continuous knee room for natural stance.
10. Double-wall, insulated construction—for noiseless operation of doors and drawers.

Despite these, and many more equally important advantages, American Kitchens are moderately priced. So ask your local distributor or dealer for full information.

FREE!
Architects-Builder File...gives blueprints of outstanding kitchen treatments, equipment specifications, etc. Ask your nearest American Kitchens supplier. If you don't know his name—write today.

AMERICAN CENTRAL
Division—AVCO Manufacturing Corporation • Connersville, Indiana
The sign of the times is...

"Certified Adequate Wiring"

PROOF ADEQUATE — another home-building project featuring Certified Adequate Wiring
— the Wymewood development in Dallas, Texas.

What It Means To You: Certified Adequate Wiring makes today's home buyers tomorrow's boosters. It helps you build houses that stay modern for years to come. It helps you sell houses easier and quicker because: (1) it overcomes today's buyer resistance; (2) it assures you of promotional support from your local electrical industry.

What It Means To The Home Buyer: Adequate Wiring makes even a moderate-cost house, or a re-modeled home, modern. It provides not only for today's electrical needs but for those of tomorrow—including such things as kitchen and laundry appliances which can be covered by a "packaged mortgage."

What "Adequate Wiring" Means: An adequate electric service entrance; enough circuits, enough convenience outlets; permanent lights and switches.

Here's What You Can Do About It:

1. Use the services of your local Adequate Wiring Bureau in preparing complete wiring layout for every floor plan.

2. Install Adequate Wiring in accordance with this layout.

3. Obtain your "Proof Adequate"—a certificate to present with each deed.

4. If there is no Adequate Wiring Bureau in your area, write us for details of how to take advantage of "Adequate Wiring" as a sales feature.

CLIP AND MAIL TODAY for free information and material!

NATIONAL ADEQUATE WIRING BUREAU, Dept. AE-4
155 E. 44th Street, New York 17, N. Y.

Please send me, without charge, information on how to take advantage of Adequate Wiring as a sales feature.

NAME...

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STATE...

186 The Architectural FORUM April 1948
Architect: Richard J. Neutra, Los Angeles

Says Mr. Neutra: "The owners, Mr. and Mrs. Marvin Goodson, picked their architect from an article in TIME—and think they fared well. Their new house on Grandview Cliff will overlook Hollywood and the world." And needless to say, when they move into it, the magazine in which they have confidence (TIME subscription #14-50-ZCCH-085-407) will go with them.

Showing Homes

Presenting

THE SHOW-ROOM HOMES

of the Nation

Your building materials get their best display when they're actually in use—as part of "show-room" homes like the Goodsons'...

These are the homes that are most admired by other members of the community—most frequently visited and talked about by the kind of people who are your best prospects.

And more than a million better homes across the nation are owned by the million-and-a-half families who read TIME.

The incomes of TIME readers average $7600—double the average U. S. family's. TIME readers can afford to build and buy well. What's more, they hold influential positions in business and society, set better living standards for millions of other households.

When your product name is written into the building plans of TIME families, you get an extra helping of publicity—and sales—in widening circles of good customers coast to coast.
 Here is perfect window control without weights and pulleys combined with all the advantages of weatherstripping.

This spring balance makes any double-hung window easy to open and close, prevents binding, and sticking and quickly saves its cost in fuel saving because it provides an efficient weatherstrip seal in the sash runways.

Master No-Draft Sash Balances are easily installed in new or old windows. They will not rust and never need painting. Properly tempered, correctly tensioned springs give both upper and lower sash perfect balance and finger-tip control.

Get rid of window trouble now. Mail the coupon below for complete information about easy-to-operate, weatherstripped windows obtained with Master No-Draft Sash Balances.

Here are the specifications and advantages:

- **...has finger tip control**
- **Complete information about Master No-Draft Sash Balances**
- **Provides an efficient weatherstrip seal in the sash runways**
- **Easy installation in new or old windows**
- **Non-rusting and maintenance-free**
- **Saves fuel by preventing binding and sticking**
- **Offers easy-to-operate control without weights and pulleys**

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**MASTER NO-DRAFT SASH BALANCE**

**Patents U.S. 2,135,840—210,671**

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The springs in the Master No-Draft Sash Balance are furnished with the correct tension for all sash sizes. Strong and permanent they have been tested for 25,000 operations.

The spring housing is a flexible self-adjusting unit (two to each sash) which compensates for ordinary misalignment of sash and frame. Rusted or rusted and corrosion resistant metal, maintenance and replacement costs are eliminated.

For complete weatherstripping we recommend Master cross strips at top center and bottom of window.

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**MASTER METAL STRIP SERVICE**, 1724 W. Kilbourn Ave., Chicago 39, Ill.

Please send me, without obligation, complete information about Master No-Draft Sash Balance.

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**BUILDING REPORTER**

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the one piece base casting for extension legs which can be adjusted in height. The machine will wash a basket of dishes in approximately one minute, including rinse. Two and a half gallons of water are pumped under pressure through double revolving spray tubes in washing, while the rinsing uses one gallon, introduced through separate sprays. Standard equipment includes two baskets, one for dishes, another for glassware.

Optional equipment for the new machine model H-1A includes electric immersion heater and thermostat control for maintaining and controlling water temperature. Price: $275.

Manufacturer: Jackson Dishwasher Co., 3703 East 93 Street, Cleveland 5, Ohio.

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**HOTPOINT REFRIGERATOR LINE** features combination refrigerator-freezer unit and a standard 10 cu. ft. model.

Hotpoint's 1948 refrigerator line includes in addition to improved conventional type units, a standard 10 cu. ft. model and a new two zone combination refrigerator-freezer known as Model EG-8. This unit is actually a complete home freezer and a high humidity refrigerator combined in a two-door cabinet. The upper 1.5 cu. ft. section both freezes and stores frozen food while the lower 6.7 cu. ft. section provides normal refrigeration storage. The freezer compartment maintains a zero temperature which freezes or preserves 52 lbs. of food, makes ice, yet requires defrosting but twice a year. The regular refrigerator storage compartment has its cooling coils located within the wall and maintains a humidity of 80 per cent. Other features of this compartment include two sliding drawers, a butter conditioner and a hinged rack with three jars. Like other Hotpoint refrigerators, Model EG-8 is powered by a Thiftmaster unit which is vacuum sealed against air, moisture and dirt, and is completely insulated with Fiberglas or Thermocloth. With a total of 8.2 cu. ft. capacity, the new model occupies no more space than the prewar 6 cu. ft. box, sells for $399.75. Then there is the EA-10, a 10 cu. ft. standard refrigerator for families with limited budgets which retails for $299.75.

Manufacturer: Hotpoint Inc., 5600 W. Taylor St., Chicago, Ill.

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**HOT WATER CONTROLS** for panel systems and domestic hot water regulators temperatures with new thermostat.

Taco's Panellrol and Adjustable Tempering Valve are two new controls to be put on the market in the next two months which use patented hermetically sealed thermostatic elements to actuate valves controlling the temperature of hot water delivered to panel radiant heating systems and faucets. The Panellrol can be adjusted to send water to radiant heating panels at any temperature between 110° and 150° F,—provided of course, the boiler water temperature is higher than these settings. Using this control, domestic hot water may be taken from the same boiler by carrying the boiler water temperature at 180° F, or higher if necessary.

The Adjustable Tempering Valve—made in ½ in. and ¾ in. sizes for one and two family residences—is readily adjustable to deliver water to the faucet at any desired temperature between 120° and 150° F. Adjustment is made by an external pointed knob.

Manufacturer: Taco Heaters, Inc., 137 South Street, Providence 3, R. I.
heating and cooling for year-round comfort—both from a single system

There's no winter lay-off for Carrier Conduit Weathertm air conditioning...no planning a separate, costly heating system for the cold months. With this modern, flexible air conditioning, any multi-room building can have economical comfort in every room any season with a single system.

Both cooling and heating are furnished by the same compact individual room unit located under the window. That's space and money saved. The room units have no moving parts to need service and replacement. That means quiet operation, low maintenance costs.

Individual room control lets tenant or guest choose the temperature he wants at the twist of a simple valve. Since there is no interroom recirculation, there's no transfer of noise or odors. Space saved by small-diameter conduit gives the owner more rentable area. For buildings up to five stories, there's the Carrier Duct-type Weathertm system. This, too, provides room-by-room temperature control and year-round heating and cooling.

Carrier systems are designed and built with the same unrivaled skill that created the air conditioning industry. They're bringing dependable air conditioning to the world's best-known hotels, office buildings, hospitals, apartments, stores, factories and steamships. Carrier's experienced engineers for years have worked closely with architects and consulting engineers to bring the utmost in air conditioning comfort to each individual installation. Carrier Corporation, Syracuse, New York.
A power system that thinks of all the angles

And we mean all the angles . . .

Expensive angles like machine layout changes, maintenance, unnecessary power outages, safety hazards, lack of salvability. Did we miss one? No matter. When you specify a BullDog BUStribution system, you’re covered even on hidden-cost items.

Take machine layout changes: With BullDog “Plug-In” BUStribution DUCT, moving a machine is almost as simple as moving a table lamp to a different outlet. Remove the plug . . . move the machine . . . reconnect. No turning off the power. While your client moves one machine, all the others still produce.

Pays off again and again

Or look at it from this angle: Maybe your client wants to change his whole plant set-up. This system thinks of that, too. Both BullDog Ventilated “Lo-X” Feeder Duct and “Plug-In” DUCT for branch circuits can be taken down, moved, and reinstalled . . . without scrapping a part. This investment makes good over and over again . . . and gratified clients will approve your recommendation every time.

Here’s another costly plant angle—power losses. BullDog “Lo-X” Feeder Duct with its exclusive paired-phase bus bar arrangement, keeps voltage up, keeps operating costs down. Natural ventilation, plus the paired-phase principle, increases current carrying capacity, reduces temperature rise, and increases the life of the system.

Learn more about these and other angles so completely covered by this modern electrical distribution system. Call your local BullDog Field Engineer. He can show you an installation of BullDog BUStribution DUCT near your own office.

BullDog’s Field Engineers welcome the chance to sit in on planning stages of a building project. Their knowledge of electrical distribution layout can mean savings in installation and maintenance costs, as well as highest efficiency and reliability in actual operation. Why not take advantage of this pre-building service?
Watch Houston! In fifty years this thriving Texas city has grown to be the third largest ocean port in the United States. And as Houston reached out into the world, it also reached up. Even its skyline has become famous. And skylines are the business of OTIS. In Houston, for example, OTIS has 893 elevators. That’s more than three times the number of all other makes combined!

CONFIDENCE IN SAFETY.

In 1852, Elisha Otis applied the first ‘safety’ to a freight elevator. It was intended to prevent the elevator car from falling if the hoisting ropes should break.

To convince a doubting public he actually cut the ropes to prove its dependability.

HOW DO PEOPLE TRAVEL?

Mostly on elevators. Surprising? Last year, elevators handled eleven times more passenger traffic than all domestic airlines, inter-city bus lines and railroads combined.

TRY THIS FOR SIZE.

The newest look in an Escalator is the OTIS "32". It's 32" wide 5" below the handrails.

That's exactly where width is needed to permit mother and daughter to ride side-by-side in comfortable safety.

And the price of the OTIS "32" permits it to fit comfortably into any store's budget.

With 257 offices located in every state of the Union, OTIS is ready to help you plan, erect and maintain freight and passenger elevators and Escalators for use anywhere.

"Escalator" is a U. S. Patent Office-registered trademark of the Otis Elevator Company. Only Otis makes Escalators.
FARMHOUSES. A Basic Farmhouse Plan, Circular Series C 72. 
Small Homes Council, Mumford House, University of Illinois, Urbana, Ill. 8 pp. 8 1/2 x 11 in.
The farmhouse presented in this circular has been designed by the College of Agriculture and the Small Homes Council. It is adaptable to typical requirements and conditions for living on owner-operated farms in the North Central States. Text includes an analysis of design considerations distinctive to the farm and farm life; such as the need for office and clean-up facilities. Following sections discuss the type of plan; the two rectangular basic elements of the plan and how the one-story, partial basement house meets the family needs. Detailed sections deal with the homemaking area, the basement and exterior. Closing pages present various arrangements of the rectangular units and cite how the construction method and modular planning simplify building.

A revision of the first edition which was published in 1940, Professor Gissel's new text includes a chapter on the design of light-gauge steel construction. This chapter is part of the book's second section, a design discussion which includes fastenings, timber, steel tension, and reinforced concrete. The first section of the textbook "for non-civil engineers" is given to stress analysis. Many examples and problems are included in the chapters.

STRUCTURAL SYSTEMS. Stran-Steel, Great Lakes Steel Corp., Penobscot Building, Detroit 26, Mich. 24 pp. 8 1/2 x 11 in.
This well-illustrated booklet describes the component elements of the Stran-Steel system, its advantages and erection methods. Typical examples of its application to a wide variety of building types are followed by model specifications, tabulated engineering data and construction details. Also included are descriptions of various accessories and packaged frames for residential application.

CORRUGATED ROOFING AND SIDING. Dorn Asbestos Catalog No. 42. R. J. Dorn Co., Inc., New Orleans, La., 48 pp. 8 1/2 x 11 in.
A thorough exposition of Dorn's corrugated Portland cement-asbestos sheets, defined by the manufacturer as manufactured stone, is contained in the pages of this booklet. A short exposition of composition and qualities of the material is followed by 33 pages of typical detail drawings, and general information, from hoisting to sawing.

GLASS FOR THE ARCHITECT. Libbey-Owens-Ford Glass Co., Nicholas Bldg., Toledo 3, Ohio.
Descriptions, qualities and uses of principal Libbey-Owens-Ford products are featured in this new illustrated booklet. The booklet covers such L-O-F products as Thermopane glass insulating units, polished plate and window glass, Tuf-flex tempered polished plate glass, Vitrolite colored structural glass and Blue Ridge patterned and wire glass.

GLASS BLOCKS. Daylight in Public Buildings. American Structural Products Co., Ohio Building, Toledo, Ohio. 12 pp. 8 1/2 x 11 in.
The increasing use of glass block in public buildings, especially in schools, is emphasized in this booklet. Examples of Insulux installations in school gymnasiums, domestic science kitchens, swimming pools, shops, stairways and libraries are featured. Also illustrated are extensive glass block installations in hospital operating rooms, kitchens and laundries. Booklet concludes with typical glass block installations in pumping stations, power plants, and sewage disposal units—operations which run the whole gamut of moisture, corrosion, insulation and maintenance problems which Insulux helps solve.

The Standing Committee in charge of reviewing Old Growth Douglas Fir Standard Stock Doors has approved a revision of this standard, first issued in 1938 and since revised in 1943 and 1945. Copies of the new recommended revision have been sent to manufacturers and other interested groups for consideration and approval. The recommended revision proposes to eliminate several sizes of house doors and also a number of the designs or layouts which are no longer in large demand. It will permit the use of Sitka spruce and Western hemlock, as well as Douglas fir, in the manufacture of doors. In the lower quality doors, a mixture of these woods would be permissible.

(Continued on page 194)
For heating equipment, architects specify heating equipment that delivers healthful carefree INDOOR CLIMATE and heating equipment whose physical form will be “at home” in its surroundings.

The MOR-SUN line of pressed steel FURNACES permits the architect to deliver both — form and function!

MOR-SUN . . . the oil or gas-fired heating equipment designed for both small and spacious homes . . . heats, conditions, circulates, filters, humidifies and continuously renews the air.

MOR-SUN . . . the furnace that gives both BEAUTY and BTU’s!

WHY DOES AN ARCHITECT SPECIFY HEATING EQUIPMENT?

There are two concepts that determine architects’ specifications . . .

FORM and FUNCTION

MORRISON STEEL PRODUCTS, INC.
BUFFALO 7, N.Y.

Another in the booklets issued by alert manufacturers covering radiant panel, baseboard, and radiator systems, this is intended for use by the architect and heating contractor explaining to prospective home builders the factors involved in choosing heating equipment. Non-technical language is used to explain the principle of radiant heating.


This big book is an addition to the row of technical references that sit heavy and well worn on the complete designer's book shelf. Compiled primarily for engineers and contractors, it has much to offer students and designers, especially those designers who have not been educated in the technical aspects of piping, air handling and cooling. A great deal of data—with specimen computations on how to use—supplemented by charts and tables on recent developments in the field. Included is a section of contract law, heating, ventilating, and air conditioning contracts.


The foreword of this booklet quotes the Industry Report to Senator Tobey of New Hampshire: "In the U. S., fuel oil supply this winter is as much a short of demand." The book then sets us the cutting fuel oil consumption 15 per cent on central installations, or of bettering that mark to release for installations. In analyzing heat losses and other factors—especially the human one—the book presents a simple explanation of the different kinds of heating use in homes, with excellent diagrams of gravity warm air and hot water heating systems, and one system. The booklet is in some ways better than representations of the systems, though it does present their simplest forms. Radiant panel heating, however, is not discussed.


Helpful information on the operation and care of Kewanee pressure power boilers is contained in this brochure, which begins with ten important rules to remember. Then sections then discuss: boiler construction, washing the boiler, putting boiler in service, handling boilers, care of grates in service and boiler out of service.

STEAM TRAPS. Selecting the Right Type of Steam Trap. O'Brien Corporation, Inc., 350 Fifth Ave., New York, N. Y. 4 pp. 8½ x 11 in.

In "Selecting the Right Type of Steam Trap," an illustration permits the reader to select the right type of trap for particular application at a glance. The features, advantages, and recommendations for each type are listed. Photographs illustrate the text.


Designed for architects, builders, engineers this book contains over 40 illustrations, charts, tables. It gives complete exposition of general principles of home insulation. Radiant Heat Loss, Air Stratification and Draught Exposures, Coolness Balance, Radiant Heat, Attics and Floors; Vapor Sealing. The booklet also contains Kimsul insulation including Choice of Thickness, Sound Deadening and Sound Absorption; Corrosion-Insulated Fastening Edges, Flexibility, Callability; Moisture, Mold, Rot, Vermic, Fire; Many-Layer Construction, Cleanliness and Lightweight.


In the ten years since introduction of fluorescent lighting to the commercial market, the fluorescent lighting industry has grown faster than any other industry in recent memory, in the radio and automobile industries. (Continued)
"ACOUSTIMETAL" is the last word in sound conditioning! It provides maximum noise reduction and high light reflection. It's practically indestructible, and of course, it's fireproof to fit new building code specifications.

"Acoustimetal" is adaptable to remodeling as well as new building. The perforated Acoustimetal Pan, containing spacer-grid and sound absorbing Acoustipad, is quickly and simply snapped into the patented T-Bars mounted on the ceiling. Ideal for use with modern troffer type lighting. The satin-smooth baked enamel finish is smart in appearance and can be washed repeatedly and repainted again and again without loss of sound absorption. The 12" x 24" pans are quickly removable, for repair to wiring, piping, and air ducts. True, Acoustimetal costs more than ordinary inflammable sound conditioning, but the savings in maintenance more than cover the difference. For complete details, write for our new illustrated Acoustimetal folder!

You'll build or remodel better with Gold Bond

NATIONAL GYPSUM COMPANY • BUFFALO 2, N. Y.
Over 150 Gold Bond Products including gypsum lath, plaster, lime, wallboards, gypsum sheathing, rock wool insulation, metal lath products and partition systems, wall paint and acoustical materials.
HOW TO REDUCE COSTS
WITH STANDARD PARTS
—without limiting individuality

Fenestra Residence Casement Type 2414N. Specially designed to provide a high-quality window at lowest cost. Sized to fit 2'10" x 4'6" opening. Single ventilator provides 50% opening—more than you get with ordinary windows—yet it costs much less than windows with two ventilators.

Fenestra Casements, used singly or combined into complete walls of windows, can help you keep window costs down.

Standardization makes this possible. It permits mass production that results in lower first cost. It minimizes installation problems—speeds construction.

The benefits of standardization are obtained without restricting individual design. Fenestra’s family of Steel Casements is so planned that there is a right window for every location in the house. There's a wide range of widths and heights with vents that swing right or left. Muntin bars can be removed when clear glass areas are desired.

Of course, the popular benefits of Fenestra Casements are all there... easy opening... better ventilation... safe cleaning of both sides from inside the room... more glass area per opening... easy application of storm sash and screens... horizontal muntin lines that enhance architectural beauty.

The benefits of standardization apply to all Fenestra Windows—Pivoted, Commercial Projected, Combination, Projected, Casement, Security, Basement, Utility. Likewise to Fenestra Swing, Slide and Turnover Doors. And Fenestra Metal Building Panels for floors, walls, ceilings, roofs and partitions.

The Mueller Climatrol Type 202 Oil-Fired Winter Air Conditioner can be supplied with either a pressure-atomizing or a vaporizing-type burner. Both the 202 and its companion 201 Gravity Furnace (above) are convertible to AGA-listed gas-fired units at low cost.

If you could make a trip through Mueller's modern factory, you'd know why you can always count on Mueller Climatrol to deliver the superlative comfort home-owners want. The Mueller factory covers a broad expanse of over 15 acres. Every square foot is devoted to the manufacture of quality products by the latest methods and equipment — to give modern homes truly modern heating equipment — and to give your clients extra-dollar value.

The heart of this great modern plant is the Mueller Climatrol engineering laboratory. Its job is to keep Mueller Climatrol products in the lead. That standard has built the 91-year reputation of the Mueller name. That standard has kept Mueller Climatrol comfort a favorite in American homes.

Experience has taught you that you can chalk up another happy home every time a Mueller Climatrol is installed on your recommendation. That's because Mueller Climatrol delivers years of satisfying comfort with sound economy.

So recommend Mueller Climatrol for every job — it really pays! For additional information — write for bulletins today! L. J. Mueller Furnace Co., 2001 W. Oklahoma Ave., Milwaukee 7, Wis.
For satisfied clients, specify this fully automatic kitchen ventilator! Locate the ventilator in any outside wall, control its operation from a conveniently placed wall switch. It's quiet, it has plenty of capacity for overage size rooms (500 c.f.m. and the rating is certified), it's designed and built to operate for decades, it's handsomely styled for modern interiors. Phone nearby Branch Office (consult classified director) or send coupon for Booklet No. 521 giving complete specifications.

Auxiliary motor, operated from wall switch, controls opening and closing of weathertight outer door, causing ventilator to start or stop.

ILG ELECTRIC VENTILATING CO., CHICAGO 41, ILL.
2899 N. Crawford Ave., Offices in more than 40 Principal Cities

FREE! Get your copy of this new, complete home ventilation booklet.


This trade-developed standard provides a uniform basis of quality for bathtubs, lavatories, kitchen sinks, laundry trays, and other plumbing fixtures having an acid-resisting porcelain enamel coating on an iron or steel base pressed to shape from sheet metal. The requirements, which are general and not limited to specific types or sizes, include minimum thickness, quality of enamel coating, and certain maximum tolerances, together with tests for the enamel coating, and for rigidity and warpage. The standard, which has been widely endorsed by all branches of the industry, is intended for incorporation in plumbing codes and purchase specifications, and may be made effective for ordinary purchase by means of labels bearing a statement of compliance with the standard, though no form of government control or regulation is involved. (Continued on page 202)
There are three reasons why DeLashmutt Brothers, owners and contractors, and Albert D. Lueders, Architect, selected J&L Steel Junior Beam Floors for the modern $3,500,000 Barcroft Apartments just being completed in Arlington County, Virginia, near Washington, District of Columbia.

First—they cost less, in both time and labor. The extreme simplicity of construction with J&L Junior Beams cuts labor cost and saves time on the job—factors of vital importance under today’s conditions.

Second—they cut maintenance cost to a minimum. Because they are rigid, vibration-free and shrink-proof, J&L Junior Beam floors eliminate the “settling” which causes plaster cracks, sagging doors, sticking windows—and costly repairs.

Third—J&L Junior Beam floors are fire-safe, which means an additional saving through the lowest possible insurance rates.

There is a nation-wide trend to this modern type of steel floor construction—for residences, apartments and other light occupancy buildings. This trend is a “natural,” because J&L Steel Junior Beam floors are: Rigid and Vibration-free, Shrink-proof, Termite-proof, Fire-proof, Permanent, Easy to install, Adaptable to any finished floor, Economical.

When you build, build better at lower over-all cost, with J&L Steel Junior Beam Floors.

Junior Beams, made exclusively by Jones & Laughlin Steel Corporation, are available now through your favorite steel warehouse—or through J&L service warehouses at Chicago, Cincinnati, Detroit, Memphis, New Orleans, New York and Pittsburgh.

ARCHITECTS! CONTRACTORS! BUILDERS!

Send for descriptive literature and engineering data on J&L Junior Beams and J&L Junior Beam floors. Use the coupon!

Jones & Laughlin Steel Corporation
Room 401, 311 Ross St., Pittsburgh, Pa.

Gentlemen: Please send me complete data on J&L Junior Beams and Junior Beam Floors.

NAME: ____________________________

COMPANY: ________________________

ADDRESS: ________________________
For insulating

Cold Air Ducts or

Plumbing Pipes

Balsam-Wool

gives Better Protection

What is the modern way to protect plumbing pipes placed in outside walls? What is a more effective way of insulating cold air ducts? Balsam-Wool Sealed Insulation has the answers. You’ll find them in Balsam-Wool Application Data Sheets—a comprehensive collection of data you’ll want for your files.

Prepared by qualified architects, the 32 Balsam-Wool Data Sheets provide hard-to-get facts on insulation application problems. A complete set is yours for the asking—mail the coupon!

SEND NOW FOR YOUR SET!

Balsam-Wool

SEALED INSULATION

WOOD CONVERSION COMPANY
Dept. 147-48, First National Bank Building
St. Paul 1, Minnesota

Please send me a set of Balsam-Wool Application Data Sheets.

Name: __________________________

Address: _________________________

City: ____________________________ State: ___________________

BALSAM-WOOL Products of Weyerhaeuser • NU-WOOD
Ingenious use of compactly designed Case vitreous china plumbing fixtures turns "problem" space into a powder room—one of the most convenient rooms in a house and one valued highly by owners and buyers. With its 19" overall height, the one-piece Case T/N* water closet offers the flexibility of placement required. This is a quiet free-standing fixture with positive non-overflow. The Cosmette Lavatory, in overall size as small as 20" x 13½", is a perfect companion to the T/N*. Wall hung or with chrome legs, it features an extra large basin, handy shelf space and concealed front overflow. Case plumbing fixtures are distributed nationally—see your Classified Telephone Directory or write to W. A. Case & Son Mfg. Co., Buffalo 3, N. Y. Founded 1853.

This addition to the passenger elevator file describes the Otis Full Collective Control Elevator equipped with the Optional-Attendant feature, which—by means of an attendant switch on the car operating panel—may be set for either passenger or attendant operation. Primarily considered in this folder are the characteristics of the "attendant" type of operation ("Automatic" type of operation is discussed in a separate bulletin, B-2026). Many situations which arise in elevator operation are mentioned and explained.

INDUSTRIAL ELEVATORS. Pow-R-Truck Elevators. Otis Elevator Co., 260 11th Avenue, New York 1, N. Y. 8 pp. 8½ x 11 in.

The increasing use of power trucks for pallet stacking in sorting and loading of banks of small cartons has created the need for very rugged elevators in warehouses and other industrial buildings. The difference in load to be raised is often that between 500 lbs., the usual hand truck load, and 8,000 lbs., which is not unusual for a loaded power truck. Not only must the straight problem of increased power be considered, but the less obvious problems of impact loading, off-balance loading, and extra static loading must be met. This pamphlet describes Otis' answer, their Pow-R-Truck freight elevator.


Industrial uses of the synthetic fiber, nylon, since its discovery in 1930 and release on the market in 1938, are listed in this book. The text is intended not only to suggest to the reader specific places where the product may be well used in his business, but also to stimulate constructive thinking to find new uses possibly in building. Industrial uses of nylon enumerated include application in the automotive field, such as car, track, and bus tires; marine application, and uses in the laundry industry. Sections are devoted to nylon's properties of strength, lightweight, toughness and abrasion resistance, elasticity, low moisture absorption, heat setting, resistance to light, chemicals, heat; and attack by mildew, mold, and insects; non-flammability, and non-toxicity.


American Cyanamid's new brochure, produced in full color and available on request, describes the company's products, illustrates the wide range of applications where they have been found effective, and indicates the extent of savings and sales advantages which, the company claims, may be gained through their use.

BUSINESS. Sched-U-Graph, Remington Rand Systems Div., 315 Fourth Avenue, New York 10, N. Y. 6 pp. 8½ x 11 in.

As housing continues to show reluctant signs of becoming a real industry, real industrial methods in product control are becoming important to fabricators and other key men in the new picture. Checking or reversing the sharp rise in break-even points is of direct importance to men in such operations. Sixteen lines of attack on break-even points through methods of reducing costs and increasing production are outlined in this illustrated brochure. Specific procedures, based on case history experiences of successful operations, these include suggestions that can be adopted directly, or adapted to fit special requirements of manufacturing, purchasing, planning, scheduling, and storing departments of large and small companies.

(Continued on page 206)
A $10 added investment in NICHOLS "neverstain" ALUMINUM WOOD SIDING NAILS on this 5-room house would have saved a $200 repaint job.

No more rust streaks to ruin a nice paint job when you use Nichols "Neverstain" Aluminum Wood Siding Nails. They are the greatest improvement in nails since the wooden peg. Siding installed with Nichols "Neverstain" Aluminum Nails can never become rust streaked or discolored as in the case of the steel-nailed siding shown in the photo below. Hammer blows on the heads of galvanized nails may chip off the zinc, exposing steel to rust. Copper nails may give off a dark hued oxidation.

RUST PROOF • EASY TO DRIVE • ETCHED TO HOLD
More Nails per Pound

Made of a special alloy, these aluminum nails are rust proof all the way through, as aluminum cannot rust. They are etched for added gripping power and drive easily and straight. You get about three times more aluminum nails per pound than steel nails of the same size.

Available in 50 lb. kegs in sizes 6d (2" long, 12 Ga., 17/64" head), 7d (2½" long, 12 Ga., 17/64" head) and 8d (2½" long, 11 Ga., 19/64" head).

OTHER TYPES OF NICHOLS "neverstain" ALUMINUM NAILS
COMMON — Sizes 4d to 20d.
SHINGLE — (Standard) — Length 7/8" and 1⅜", Ga. 12½, head 9/32".
ROOFING — Length ¾" to 2½", Ga. 10, head 7/16".
PLASTER BOARD — Length 1½", Ga. 17½, head 5/16".
ASBESTOS SHINGLE — Length 1⅛" and 1¼", Ga. 11½, head 10/32".
CEDAR SHAKE — Length 1¼" and 1½", Ga. 14, head 9/32".

SPECIFY NICHOLS "neverstain" ALUMINUM NAILS ON YOUR BUILDINGS

OTHER Famous NICHOLS "neverstain" Products

Will not rust or stain buildings

ROLL VALLEY
14" and 20" and 28" widths, One continuous coil of 50 ft. per carton.

FLASHING SHINGLES
Available in 5" x 8" and 8" x 10" sizes, 50 pcs. per bundle, 8" x 10" size packed 250 pcs. per bundle.

EAVES TROUGH
5" half round, 10 ft. lengths, .027 thickness (23 U.S. Std. Ga.).

CONDUCTOR PIPE
3" Plain and Corrugated Round, 10 ft. lengths, .020 thickness (34 U.S. Std. Ga.).

All necessary fixtures for gutters and down spouts are also available.

Write today for circulars illustrating, describing and pricing Nichols products.

NICHOLS WIRE & ALUMINUM CO.
Main Office: Davenport, Iowa
Warehouses: Mason City, Iowa and Battle Creek, Mich.
Stainproof Mill Cove

It's Stainproof beyond any other wall covering ever created, resisting stains of all kinds caused by public or domestic wear. Resists fire, water and vermin, too!

It's Durable and comes up smiling-fresh after 25,000 soap and water washings...over 20 years' normal care! Varlar's stainproofness completely penetrates and lasts for life!

It's Beautiful with stunning new tone depths achieved by an entirely new process giving rich, warm hues because the coloring is built from the ground up...goes clear through...not just a surface coating.

It's Versatile, offering a complete line of 92 handsome styles suitable for lasting, satisfying use in every room or passageway...public or private, domestic or commercial.

It's Available Now with all 92 styles in full production to supply the demand for this completely new, revolutionary wall covering medium of enduring beauty.

SEE AND TEST VARLAR YOURSELF...FREE!

Splatter, smear, write on, even walk on amazing Varlar...and watch it come clean with soap and water. Send this handy coupon for your free sample of durable, stainproof Varlar.

VARLAR INC.
DIVISION OF UNITED WALLPAPER CHICAGO INC.
With 1637 steel H-beam piles, Raymond fulfilled difficult specifications to provide adequate support for a 26-story addition to the John Hancock Mutual Life Insurance Company building in Boston's Back Bay area.

The piles were 14-inch-17-pound H-beams and 33-inch-200-pound wide flange beams which were driven through silt, clay and hardpan to reach bedrock at a depth of 155 feet below the street level. The piles were driven in a deep excavation by a powerful, Raymond designed and built rig, manned by Raymond men who take pride in a long record of satisfactorily completed "tough" jobs. Illustrated is the hoisting of a 33-inch-200-pound wide flange beam 122 feet long preparatory to driving.
Facts you'll want to know about Cabot's Paints

By the patented Collopaking process the pigments in Cabot's Collopake Paints are reduced to particles many times as fine as in ordinary paints and colloidally dispersed in the vehicle. Because of this, Cabot's Collopakes have tremendous hiding power and are extremely durable. And because pure pigments with no filters or adulterants are used, Cabot's Gloss Collopakes retain their fresh, lively colors for years.

Cabot's Collopakes offer you a wide variety of colors

5 Greens, 9 Reds and Browns, 4 Blues, 2 Creams, 2 Grays, Old Virginia White and Cabot's famous Double White.

Write for color cards and complete information. Our laboratory will gladly help you with your color problems.

Samuel Cabot, Inc.
2122 Oliver Building, Boston 9, Mass.


Prepared as part of a program to help retail stores in the remodeling of rug departments, Planned For Selling presents design and fixture recommendations for every size rug and carpet department and store. Featuring sketches and photographs accompanied by detailed descriptive text and 15 working drawings of various display fixtures, the guide also contains a series of eight layouts for floor covering departments ranging in size from 600 to 2,400 sq. ft. Innovations in fixtures, carpet racks and cabinets, display units and architectural details are illustrated. Such fundamental subjects as the correct use of color and proper balance of light are discussed. The work, based on national field surveys of department and furniture stores of all types and sizes, was prepared by Robert Heller Associates, Industrial Designers.


The significant regional movement in construction activity throughout the country during the war and reconversion years are documented and interpreted in this special report prepared by Sidney Gertler and Henry B. Schechter of the Department of Commerce's Construction Economics Section. The shifting of construction activity westward and southward during the eventful years covered in the report is analyzed by Schechter and Gertler in terms of population changes and growth, income payments and also the war-created increase in industrial facilities. Emphasis is placed on the wartime construction role of the Pacific States, especially California which became the leading state in construction after 1939 and has maintained that position. In the postwar pattern, however, the East North Central States replaced the Pacific States during 1946 and the Middle Atlantic States, which in 1939 had been in first place, occupied third place during that year.

The report is intended to supplement data on State distribution of types of construction activity between 1939 and 1946, which appeared in the May 1947 Statistical Supplement to the Construction and Construction Materials Industry Report.


This report outlines the significance of the record production year 1947 in the construction and construction materials field. Difficulties caused by short supply of vital construction materials after the war were alleviated considerably by last year's production. Eighteen of the 20 materials included in the Commerce Department's Composite Index of Production for Selected Construction Materials recorded higher production levels during the first 11 months of 1947 than in the corresponding period of the previous year. National shortages of several materials and local shortages of many others were still a factor at year's end, however. Extension of the 11 month's data indicates that the Composite Index will slightly exceed the previous all-time peak level of production reached in 1925 and will be at least 5 per cent above the recent high figure reached in 1941.

Estimates of the dollar volume of total construction activity for 1947 and 1948 are also included in the report. Total new construction estimate for 1948 is $15,200,000,000 presupposing that approximately 970,000 dwelling units will be placed under construction this year.

(Continued on page 210)
"The finest range we've ever built—in 73 years of fine range building."

THE NEW AUTOMATIC L&H ELECTRIC RANGE

with SIX "STELLAR" FEATURES TO MAKE YOUR SALES SPARKLE!

- Duo-Cook Combination deep well cooker and surface unit.
- Super "5000" Oven, extra large, recessed broiler and bake units.
- Automatic temperature control regulates oven heat.
- Time Control for oven, outlet, duo-cook and left unit.
- Vari-speed Switches, unlimited range of cooking heats.
- Monotube hinged surface units, faster and easiest to clean.

HERE's the range that's so beautiful and has so many time and work-saving features that it catches the eye of every woman inspecting one of your model homes! Ultra modern in every detail... from electronically matched panelling to newest type precision-adjustable heating units. Fully automatic time control of oven, deep-well cooker, appliance outlet and surface unit. Meeting your highest specifications, it is typical of the quality and craftsmanship which have made L&H products favorites with homemakers and home planners for nearly three-quarters of a century.

A. J. LINDEMANN & HOVERSON CO., Milwaukee 7, Wis.

Also manufacturers of L&H Electric Water Heaters and L&H KERO GAS Oil Ranges.
To the architect, IBM offers this service:

**Planning**—IBM time experts are available to help with specifications and to provide wiring diagrams and technical information, either for new tower clocks or for electrifying and modernizing existing ones.

**Installation**—An IBM Master Control, installed by technicians backed by many years of IBM's experience, keeps all faces of the tower clock on accurate, uniform time. This same Control can be used to regulate any number of time indicating, recording, and signaling units throughout the building.

**Maintenance**—Maximum coverage and prompt, efficient service to installations is given by the many IBM branch offices located in principal cities and towns throughout the United States. IBM representatives will be glad to give you further information on this service. Write or call the IBM office nearest you.

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**TIME RECORDERS AND ELECTRIC TIME SYSTEMS**

Proof Machines • Electric Punched Card Accounting Machines and Service Bureau Facilities • Electric Typewriters

International Business Machines Corporation, World Headquarters Building, 590 Madison Avenue, New York 22, N. Y.
Recognizing the need of using the right building paper for the right job, F.H.A engineers asked the Waterproof Paper Manufacturers Association in consultation with the U.S. Bureau of Standards, to finance a series of tests “to investigate certain condensation problems inherent to the use of building papers.” These tests were started last Fall at The Engineering Experiment Station of the Pennsylvania State College under the supervision of F.H.A. technicians. As a result of these tests, along with data accumulated over a 12 year period by the country’s outstanding research men and laboratories, F.H.A. Field Order 771, dated Feb. 5, 1948, was issued. Building Papers in this Order conform to the new Federal Specification U. U. P.-51, (to supersede U. U. P.-536, Paper: Sheathing, Waterproof).

Progressive Architects and Builders will welcome F.H.A. Field Order 771, requiring a vapor barrier on the warm side of the wall in all frame walls where insulation is added. Anyone who has read The Small Homes Council Circular, F6.2, published by the University of Illinois Engineering School, will recognize this new F.H.A. requirement as one long needed in the design of all structures—not just homes alone! Informed authorities the country over call it one of the greatest contributions ever made by a public agency to protect the investment of the home buyers of America.

Write us for this informative data which shows how approximately $50.00 for building paper will control the serious problem of condensation facing architects, builders and prospective home owners.

Only Richkraft offers a complete line of building papers which permits the use of the RIGHT building paper for every job. Our nation-wide distributor organization and their thousands of dealers have the full Richkraft Line of papers in stock waiting to serve your specifications and bills of material. Write us for the name of your nearest Richkraft distributor.
The clients you satisfy now are your best boosters in the years ahead. "But", you ask, "why do Norge automatic electric water heaters give my clients greater satisfaction?" We would like to answer that with a few simple facts.

More homemakers want them

A recent NEMA survey reveals three times as many women want electric water heaters as own them. Their reasons, in order of preference, are: Safe; Clean; Modern; Adaptable; Automatic; Economical.

Homemakers get more with a Norge

...more features to assure satisfaction on every "reason for preference": No fumes, flame, smoke, soot or vent. Accurate thermostatic control. Smoothly baked white enamel on heavy-gauge steel jacket containing three-inch wall of glass fiber insulation. Cold water baffle. Heat trap in outlet. Direct-contact "Nichrome" heating elements, embedded and sealed, project into water and reduce operating cost. Easy-to-install electrical connection. Modern in every detail! And in seven sizes, from 12- to 82-gal.

Norge Division, Borg-Warner Corporation • Detroit 26

Requests for Literature

Alexander S. Cochran, architect, 411 N. Charles St., Baltimore 1, Md.

M. P. David, 48 Bridge St., Merthyr Tydfil, Glam., South Wales.

Ray N. Faulkner, Department of Art, Stanford University, Stanford, Calif.


M. Schleyen, c/o Prof. Tcherenziaski, 6 Frishman St., Haifa, Palestine.

Roy M. Schoenbrod & Associates, architects and engineers, 1253 N. La Salle St., Chicago, Ill.

Edward Shatz, designer-draftsman, King St., Croton-on-Hudson, N. Y.

Lambert J. Soucek, Jr., architect, 623 York Rd., Hinsdale, Ill.

Joseph Steig, architect, 110 Grand St., Waterbury, Conn.

William King Stubbs, Amman Building, 102 North Second St., Monroe, La.

Alan Vanstone, architectural student, 92 Kimberly Rd., Cardiff, Great Britain.

James E. Westphall, architectural student, 310 N. Kenmore, Los Angeles 4, Calif.

James B. White, engineering student, Virginia Polytechnic Institute, Box 1350, Blacksburg, Va.

Richard Wiggins, architectural student, 867 Joslin St., S. E., Grand Rapids, Mich.

Walter Wiznia, Wiznia-Schenker Industrial Designers, 1111 Buford Ave., Corpus Christi, Tex.

(Continued on page 214)
A Mechanical BRAIN that precisely controls admission of heat to continuously circulating water—in amounts to exactly offset heat losses

That is what heating engineers sought to do for years—that is exactly what Hoffman’s Series 90 Controller adds to any hot water heating system—having either panels, baseboards or radiators. The Series 90 Controller is sensational in its automatic maintenance of even room temperature... in its ability to conserve fuel by completely eliminating wasteful over-heating, such as occurs in the ordinary intermittent type operation. These features and advantages of Hoffman Controls are an asset you should use in closing contracts for new radiant heating projects and remodeling jobs. Zoning of apartments or sections of large residences to suit personal preference or functional activities of the building may be obtained with Series 90 Systems. The diagram at left shows the basic operating principle of this system. Thousands of installations now in operation acclaim its merits.

HOW THE HOFFMAN SERIES 90 SYSTEM COMBINES CONTINUOUS CIRCULATION WITH WATER TEMPERATURE CONTROL

When the Control Valve is closed, continuously circulating water by-passes the boiler without withdrawing heat. When water has lost heat, as noted by the Water Temperature Bulb, the Comfort Controller slowly opens the Control Valve, permitting hot water from the boiler to enter the circulating stream. When sufficient hot water has been admitted to restore the proper temperature to the circulating water, the Valve is closed by the Controller. This cycle repeats automatically in anticipation of weather changes.

HOFFMAN SPECIALTY COMPANY, Dept. AF4, 1001 York St., Indianapolis 7, Ind.
Why be a weightlifter?

Briggs bathtubs are only \( \frac{1}{2} \) as heavy!

Briggs takes the grunts and groans, the heaves and ho's out of bathtub installations—with the easiest-to-handle tub you've ever lifted. And that's just the beginning. Add the tub's Safety-Bottom... leakproof edges, tub to wall... wide rim seat. Add its stainproof (acid-resistant) porcelain enamel at no extra cost. Gives you an idea of why these die-formed steel fixtures are breaking all records... why Briggs Beautyware is the biggest news in plumbing today! Write now for new catalog featuring Briggs plumbing fixtures and Briggs brass. Briggs Manufacturing Company, 3023D Miller Avenue, Detroit 11, Michigan.

BRIGGS Beautyware

Briggs tubs eliminate all unnecessary weight: tip scales at only 110 lbs. Why should any tub weigh more? Another big feature: Briggs' patented Safety-Bottom.
HERE'S WHY. Learning is 85 percent visual. With Westinghouse Planned Lighting, you give every pupil an equal chance for learning. No matter where he sits, he has the same quality and quantity of light.

Properly lighted schoolrooms mean . . . an equal seeing opportunity for every student . . . reduced eyesight depreciation . . . and fewer "backward pupils" who suffer from poor lighting.

THE RIGHT EQUIPMENT. Westinghouse has engineered the LW-160 for schools. It provides these quality factors vital to classroom lighting . . . freedom from harsh shadows . . . prevention of direct and reflected glare . . . uniformity of illumination. Easy to install . . . costs little to operate.

Westinghouse makes every type of school lighting equipment . . . for vocational training shops . . . gymnasiurns . . . sportsfields . . . swimming pools. Write for B-3970 on Quality School Lighting. Westinghouse Electric Corp., P. O. Box 868, Pittsburgh 30, Pennsylvania.

Your local power company and electrical contractor will be glad to help with your planning
The COLOR is here!

No more "fumbling" with colors! Time is saved, controversies are averted when you have the Moleta COLOR GUIDE. This handsome book is winning round-the-world honors ... serving users in Europe, Arabia, Africa, China, all over the globe!

The Moleta COLOR GUIDE gives a page-by-page display of 150 beautiful colors ... each tint from the palest to the darkest shown on a large page (9" x 15"). The correct mixing formula is given on the reverse of each page.

Write for your copy of the Moleta COLOR GUIDE — 55c postpaid, delivered anywhere in the U. S. A.

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Moleta
The Truly Washable
FLAT OIL PAINT

J & C Laboratory

I & C Units being Tested in Laboratory.

PROVES PERFORMANCE

PRECISE MEASUREMENT ... Of exact static pressure drop across each I & C unit and proper blower size for each I & C Model.

EXHAUSTIVE TESTS ... of I & C units provide installation engineers with the data needed for correct installations.

ONLY IN THE LABORATORY ... no technician definitely establishes:

Correct Pressure Loss Measurements
Proper Temperature Rise
Accurate Flue Gas analysis
Known Heat Transfer

NO GUESSWORK ... The J & C laboratory, working for you, permits accurate installations because performance capabilities are precisely determined.

THE COMPLETE LINE ... COMPLETELY PROVEN

J & C, America's largest and most complete Warm Air Heating Line, offers over 100 types and sizes with outputs from 3,800,000 down to 100,000 Btu in the Famous Tubular Series ... other models down to 52,500 Btu. Exact engineering plus endless testing provide the J & C features that give you an "edge" when you specify or install J & C.

A PRODUCT OF
JACKSON & CHURCH COMPANY, SAGINAW, MICHIGAN
WORK WELL DONE SINCE '81

TECHNICAL LITERATURE

REQUESTS FOR INFORMATION

WILLIAM ARLEH JOHNSON, architect, First National Bank Building, Everett, Wash., requests manufacturer's data on mechanical and electrical equipment.

N. KOLOZITZ, furniture manufacturer, Designed Furniture Manufacturers, 23 Pedersen St., P. O. Box 2538, Capetown, South Africa, requests literature on modern furniture, office and store fixtures, etc., for all types of building interiors, offices and shops.

WALTER B. LEVERING, 120 Broadway, New York, N. Y., requests information on wood and steel residential windows.

WALTER MARCH, 136 W. 88th St., New York City, requests literature on farm buildings of all types.

SIDNEY MARTIN, builder and developer, 96 Front St., Worcester 8, Mass., requests information on materials and equipment suitable for use in small and medium-size dwellings.

CHARLES MCKENNA, contractor, 1415 New York Ave., Union City, N. J., desires literature on materials and equipment for residential construction, especially radiant heating.

GORDON MCKNIGHT, architect, 1 Rosapenna Dr., Belfast, Ireland, requests literature on products applicable to medium-size residential and commercial work.

JOSE LUIS MOTA, architect, Freire 891, U. T. 73 Pampa 8975, Buenos Aires, Argentine, requests information on materials and equipment for homes.

F. V. NELSON, 67 Decatur Court, Dale Park, Oxnard, Calif., requests information on air conditioning and radiant heating; electrical, structural, mechanical and sanitary design data for construction of administrative buildings, supersonic wind tunnels, hospitals and airports.

(Co(mhitted on page 218)
COSTS DOWN!

You'll be amazed at the savings in costs—when you figure your bill of materials in aluminum! Try it—on a single job!

Insulated wire and cable with Alcoa E.C.* Aluminum Conductor gives your client everything he wants in a conductor. No problems of conductivity, of joints and terminals, or of conduit layout. And the lighter weight of aluminum makes it easier to handle and pull—less weight to support.

Alcoa supplies light, conductive E.C. Aluminum to leading wire and cable manufacturers who draw, strand, insulate, and sell it under their own trade-marks. Insulated aluminum wire and cable is available now to help you bring down costs—when you figure it in aluminum. ALUMINUM COMPANY OF AMERICA, 1475 Gulf Building, Pittsburgh 19, Pennsylvania.

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ALCOA ALUMINUM FOR ELECTRIC WIRE AND CABLE
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Chicago Tribune's

$26,250.00

"BETTER ROOMS"

COMPETITION of 1948

offering 161 cash prizes ranging from $100.00 to $1,000.00 each for the best ideas for furnishing and decorating various rooms of homes

ALL ENTRIES MUST BE RECEIVED BY 5 P. M. OF JUNE 7, 1948

Do you have fresh and interesting ideas for furnishing and decorating a living room, a combination living-dining room, a dining room, bedrooms for single and double occupancy, a kitchen, or a one room home?

So that it may present again this year to readers the widest range of the latest, best and most effective ways to furnish and decorate various rooms of homes, the Chicago Tribune is conducting the "Better Rooms" competition of 1948, offering $26,250.00 in 161 cash awards ranging from $100.00 to $1,000.00 each for the best entries presenting ideas on this subject.

Just as the Chicago Tribune's competition last year was highly productive of ideas which set the pace in this field of popular interest, so the 1948 project has been designed to set new high standards of excellence in home interior fashions.

Here is an opportunity to give your talent and ability free play in planning one or more interiors just the way you would have them, without compromising in any detail. Here is a chance to win substantial monetary reward and national recognition for your efforts.

After the prize-winners have been selected, the Tribune plans to give them the widest publicity. It is the newspaper's intention to reproduce the winning ideas, or adaptations of them, week after week, in full color in the Sunday Tribune with its more than 1,600,000 circulation.

Everyone is eligible to compete, except Tribune employes, members of their families, and of the Jury of Awards, which will be composed of persons competent and skilled in this field.

For complete information about how to submit an entry, write today for a free copy of the rules which will be sent postpaid. It is made plain by the anonymity provision of the rules, all entries will enjoy equally fair consideration in the judging.

MAIL THIS RULES REQUEST FORM TODAY

BETTER ROOMS COMPETITION OF 1948
Chicago Tribune, Room 2319
Tribune Tower, 435 N. Michigan Ave.
Chicago 11, Ill.

Without cost or obligation to me, please send by postpaid mail complete details and rules of the Chicago Tribune's $26,250.00 "Better Rooms" Competition of 1948 to me at the address below.

My Name
Street and Number
City State Zone Number, if any

(Please PRINT plainly)
Like a stroke of magic out of Arabian Nights this modern elevator entrance by Dahlstrom adds charm and grace to the decor of the new Shaker Boulevard Apartments in Shaker Heights, Ohio.

Whether your next job may be an office building, an apartment house, a public institution, a theatre or any other structure that requires fast, efficient floor-to-floor transportation, make sure the finish and design of your elevator entrances conform to the architectural beauty and interior appointments you have incorporated into your plans. Specify Dahlstrom elevator entrances and be sure!

To assist architects and other building planners, Dahlstrom offers a host of free planning services that include full color sketches, color decks and informative booklets on elevator entrance door design. We cordially invite you to avail yourself of any or all of these Dahlstrom services without obligation.

*Write for information today!*

*DAHLSTROM METALLIC DOOR COMPANY, JAMESTOWN, N. Y.*

*Representatives in Forty Principal Cities*
READY NOW!

SPECIFY
amazing new permanent vinyl wall covering—

For homes, stores, hotels, hospitals, restaurants, clubs, offices, schools! Grease stains, dirt stains, ink stains, food stains, other stains whisk right off this miracle wall covering!

FREE:
For homes, stores, hotels, hospitals, restaurants, clubs, offices, schools!

Grease stains, dirt stains, ink stains, food stains, other stains whisk right off this miracle wall covering!

Because it's so very flexible, LIFEWALL conforms perfectly to any wall contour, including any angle inside or outside corner, without use of any expensive metal molding. Applies directly to surface without expensive preparatory work. Ideal for wainscot installation without seams! Choose from 17 lovely decorator patterns and colors each selected by experienced colorists!

Write today for free 4-color brochure illustrating uses of LIFEWALL to The Pantasote Company, Dept. A-4, 444 Madison Ave., New York 22, N.Y.

THE PANTASOTE COMPANY
PASSAIC, N.J.

New York Sales Office: 444 Madison Avenue, New York 22, Phone Plaza 9-4200

REQUESTS FOR INFORMATION

ROY E. PHELPS, INC., architects-engineers, 232 Franklin St., Michigan City, Ind., requests literature pertaining to hospital construction and equipment.

IRSHAN M. SHIRZAD, engineer, Arbil, Iraq, requests literature on residential design and construction, also data on engineering instruments.

SHERWELL PLANT HIRE LTD., Bowcombe Farm, Newport, Isle of Wight, desires information on building materials, equipment and precast concrete products—which could be manufactured under license in Great Britain.

Robert R. Sowder, architectural student, University of Virginia, 350 14th St., Charlottesville, Va., requests literature on various types of brick and stone exterior surfacing materials.

STRUCTURAL DISPLAY CO., 73-01 51st Ave., Woodside, Long Island, N.Y., requests information on exhibition methods, materials and constructions.

THE BUILDING DEPARTMENT, SUNDERLAND TECHNICAL COLLEGE, Garden St., Sunderland, County Durham, England requests information on current building developments.

GEORGE VAMOS, consulting engineer, P.O. Box 1427, Wellington, New Zealand, desires catalogs and specification sheets on heating, ventilating and air conditioning equipment.

KEN WHITE ASSOCIATES, industrial designers, 20 E. 35th St., New York City desires information on materials and methods related to commercial interiors and exteriors.

WRIGHT & KREMERS, INC., engineers and contractors, Pine & Main Sts., Niagara Falls, N.Y., would like literature on the design of women's dress shops, particularly sportswear departments.

CORK INSULATION CO., INC., 155 EAST 44th ST., NEW YORK

Gentlemen: Please mail me more information about:

☐ Cork Tile Flooring ☐ Cork Stair Treads

Name ____________________________

Street ____________________________

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There's nothing underfoot like Corinco Cork Flooring. It's warm to walk on, warm to look at. It keeps its resilience for years. It's quiet. It's easy to install on old and new construction, on metal, concrete or wood. It's so easy to maintain that a dry mop does the trick. Any wonder that so many progressive architects and contractors recommend Corinco Cork Flooring for homes, offices, churches, schools and public buildings of all kinds? Write our engineering office for specifications, details and layouts.
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Celluloid Sheet Covered

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In LAKE VIEW SANATORIUM
Mendota, Dane County, Wis.
Pair of Stoker Fired KEWANEE Heavy Duty
Boilers for 50,000 square feet of steam radiation . . .
To have plenty in reserve for unusual demands is characteristic of Kewanee.

STOKER FIRED

KEWANEE
HEAVY DUTY BOILERS

In every Kewanee there are extra values which mean longer life and lower fuel bills.
Built extra well of extra stout steel. There is also extra sturdiness and extra fine finish in all castings so doors and frames fit tight.
There is extra room and height in the fireboxes to burn the fuel completely and extra long gas travel to extract all the usable heat. Extra wide waterways insure rapid circulation and steaming without turbulence. Extra steam space and height to take care of sudden emergencies with plenty of extra dry steam.
For Power, Process Steam or Heating the Kewanee Heavy Duty Series is built in sizes for 10 to 304 horsepower with mechanical or hand firing at 100, 125 or 150 working steam pressure.
The Q-Floor is available in a variety of depths suitable for whatever load-bearing strength is required. They are welded to the steel frame. Two men can lay 32 sq. ft. in half a minute, the main reason for the speedy construction. The dry steel floor becomes an immediate working platform for all other trades.

National Standard Bldg., in Houston, Texas, was designed by Alfred C. Finn, Architect, R. J. Cummings, Struct. Eng., and R. F. Taylor, Mech. Eng. By using steel Q-Floors by the H. H. Robertson Co., of Pittsburgh, Pennsylvania, construction time is usually reduced 20 to 30%. These complete 4-hour floors, weighing less than forty pounds to the sq. ft., account for the remarkable building feat told in this story.

Construction is dry, free from forms and shoring; incom- bustible and clean. There is no delay for wet materials, another factor making for early completion date, a point much in mind with owners. Q-Floor, with suspended ceiling, weighs less than forty pounds per sq. ft., yet earns a four-hour fire rating.

NATIONAL STANDARD BLDG. USES Q-FLOOR
originally designed for 8 extra floors... got 14

The largest and most progressive postwar buildings have specified steel Q-Floor by the H. H. Robertson Company. Main reasons are that construction time saved makes for early occupancy date, offsetting possible occasional delay in delivery of steel.

Also, the electrical availability over the whole floor appeals to architects and owners alike. It saves architects great expense in the drafting room and increases the building's earning power. The Q-Floor fittings can be seen at any General Electric construction materials distributor's.

National Standard Building in Houston was originally designed for eight monolithic stories to be added. W. A. Bellows, Houston contractor, was able to add fourteen stories because of the light weight of steel Q-Floor.

For details and cost (they cost less than the carpet that covers them) write to the

H. H. ROBERTSON CO.
2403 Farmers Bank Building
Pittsburgh 22, Pennsylvania

Tremendous amount of drafting room headache is saved by Q-Floor's electrical flexibility. The steel cells are crossed over by raceways for wire of all electrical services. An outlet can be set up on every six-inch area of the exposed floor. Layouts are permanently flexible. Outlets and partitions can be located after occupancy.

An electrician merely drills a small hole to establish an outlet. No fuss, no trenches. This relieves architects of need for costly electrical planning. The floor plans are always modern because Q-Floor is prepared for any electrical device, even those not yet on the market.
**SPECIFICATION AND BUYING INDEX**

The advertising pages of FORUM are the recognized market place for those engaged in building. A house or any building could be built completely of products advertised in this FORUM. While it is not possible to certify of products advertised in this FORUM, it is possible to open these pages only to those manufacturers whose reputation merits confidence. This FORUM does.

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What's my Name?

(A 63-second quiz about typical products in our big family of wiring materials.)

1

I never make a bit of noise, yet my smooth, efficient operation results in long service life that is something to shout about! Your clients like to see me in bedrooms, theaters, offices, and many other places where silence and top performance are especially desirable. What's my name?

Cost-conscious builders have found that it is often advisable to use me in place of lead-covered cable for installations in raceways in wet locations. They find that I am easy to install and can use smaller conduit. I really have two names. What are they?

When you step into a smart, modern store, you don't see me, but the fluorescent lighting will need less maintenance, and will stay on the job longer than ever if I'm there. You'll find me in ceiling and showcase fixtures, protecting them from the effects of heat and moisture. My name is a famous synonym for "heat beater." What is it?

I am coated inside and out. It's difficult to hurt me with even the toughest treatment. My color is white when I fight atmospheric corrosion, black when I fight chemical action. Many types of boxes and fittings have been designed to go with me perfectly. My name is so well known that it should be easy to identify.

5

I have thousands of parts, of many sizes, types, and capacities. I am readily available in any quantity—all from a single source. My parent has the best-known name in electricity. Know what it is?

See answers below.

ANSWERS

1

It's General Electric's silent mercury switch, the specification-grade switch that helps you plan to make good wiring better. We'd like to remind you, too, that it is now rated 10 amperes, at 125 volts, to meet today's heavy loads.

2

My name is either G-E RW— for rubber-insulated, moisture-resistant wire — or G-E TW, for thermoplastic-insulated wire of the same type. We suggest you specify RW or TW for economy on the next raceway installation in any of the following: (1) underground; (2) in permanently moist locations; (3) in concrete slabs or masonry in direct contact with the earth.

3

It's Deltabeston fixture wire, the best protection you can specify for the wiring of lighting and fixture installations. And don't forget that anywhere you need to "beat the heat," Deltabeston wires and cables are the answer.

4

If you've ever specified conduit, you've probably guessed that these names are G-E White and G-E Black—rigid conduit. They are bywords for top quality wherever conduit is used. The rest of the General Electric line of raceways includes boxes, hangers, fittings, "flex," and EMT—all made to work to the best advantage with one another.

5

The answer should be easy—General Electric's full line of wiring materials. Whatever you need—wire, cable, raceways, wiring devices, fluorescent accessories, of every variety—your best single source of supply for dependable quality is always General Electric. We'll be glad to give you full information on any products in this full line. Just write to Section K9-44, General Electric Company, Bridgeport 2, Connecticut.
YOUR SUGGESTION
WILL FIND QUICK
ACCEPTANCE....
when you Specify

ELJER

Architects and builders can be sure that millions of American families take pride and satisfaction in their Eljer-equipped bathrooms...that they enjoy the extra convenience, long-life styling and superb quality of Eljer's Fine Plumbing Fixtures. And this year, Eljer advertising in consumer magazines like The Saturday Evening Post will reach 75,000,000 people, many of whom will want Eljer Fixtures. Some of them will be your clients.

PLUMBING FIXTURES ARE OUR EXCLUSIVE BUSINESS...17 Acres of It!

FORD CITY, PA.
SALEM, OHIO
LOS ANGELES, CALIF.
Enjoy the convenience of a bathtub with an end-seat . . . comfortable for foot bathing or a sitting shower. Think of the advantages of a low, wide front rim-seat . . . easy to step in or out, and ideal for bathing the children. It's a bathroom that lives, by making life more enjoyable for the entire family.

For almost half a century Eljer has been making quality fixtures . . . the best that can be made . . . in a wide variety of related styles and colors that match harmoniously to create a beautiful bathroom ensemble.

Our bathtubs are made of rugged, rigid cast iron . . . coated with a heavy enamel finish. Lavatories and closets are real vitreous china. Every Eljer fixture resists scratching, stains and the effects of all ordinary acids. That is why the glass-like finish is so easy to keep spotlessly clean and new looking.

Ask your plumbing or building contractor about Eljer products, or write for Eljer's booklet "Fixtures of Beauty and Distinction". Eljer Co., General Offices, Ford City, Pa.

Eljer's complete line of plumbing fixtures includes units for kitchen, laundry and bathrooms . . . in a variety of styles to satisfy every purse and purpose. Modernly-styled sinks, acid-resistant enamel fused on cast iron, especially designed to be used alone or in counter and built-in cabinet arrangements.

Manufacturers of fine plumbing fixtures since 1904

ELJER

Factories at Ford City, Pa., Salem, Ohio and Los Angeles

There are over Ten Million Eljer Fixtures in Use
Doors

of LASTING SERVICE

- Specify The "OVERHEAD DOOR" with the firm assurance that it will blend with any style of architecture, that its handsome appearance will always be preserved, and that its performance will always be instant and dependable. This quality door with the Miracle Wedge is known to millions of users as a door of quick, convenient operation and uninterrupted service. It is built as a complete unit for residential, commercial and industrial structures.

TRACKS AND HARDWARE OF SALT SPRAY STEEL

- Any "OVERHEAD DOOR" can be operated manually or electrically.

Sold and installed by National Overhead Door Sales—Installation—Service.